Value chain opportunities for women and young people in livestock production in Ethiopia: Lessons learned







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Acronyms

AGP Agricultural growth program
AKC Agricultural knowledge centres

ATVET Agricultural technical and vocational education and training

BoA Bureau of agriculture

CIDA Canadian International Development Agency

GTP Growth and Transformation Plan

IFPRI International Food Policy Research Institute

IPMS Improving Productivity and Market Success for Ethiopian Smallholders project

IWMI International Water Management Institute

LIVES Livestock and Irrigation Value Chains for Ethiopian Smallholders project

MoARD Ministry of Agriculture and Rural Development
OCSSCo Oromia Credit and Saving Share Company
OoARD Office of Agriculture and Rural Development

OoWA Office of Women's Affairs
PLWs Pilot learning woredas

SNNPR Southern Peoples, Nations and Nationalities region

Abstract

Both young people and women contribute significantly to agricultural production in the African continent, although these contributions are not usually explicitly recognized in official statistics and documents. In Ethiopia, women traditionally have been subject to sociocultural and economic discrimination that resulted in fewer economic, educational and social opportunities than men. The traditional development approaches that view the household as a unitary decision-making entity and the assumption that interventions targeted at the household head would trickle down to household members is the foundation of the exclusion of women and young people. In particular, women in married households are usually excluded from development interventions. Many governments in Africa have now started to take policy measures to recognize and enhance the contributions of young people and women in economic growth on the continent. Similarly, there seems to be strong political commitment in Ethiopia to ensure inclusive economic growth that will result in better gender equality and benefit young people. This working paper summarizes the lessons from the experiences of the Improving productivity and market success for Ethiopian smallholders and Livestock and irrigation value chains for Ethiopian smallholders projects in inclusive value chain development aimed at benefiting women and young people. It mainly focuses on the trajectories of the two projects in reaching out to women and young people in order to increase their access to resources, innovation, technologies and knowledge which could consequently improve their inclusion in and benefits from value chain development and governance. Experiences from innovative extension methods for inclusion are discussed. The paper makes recommendations for policy and development practice to improve benefits to women and young people from development interventions.

I. Introduction

Youth unemployment is a growing international and national challenge, particularly in Africa, a continent considered as the youngest population in the world. About 50% of the population in sub-Saharan Africa is estimated to be below 25 years of age (FAO 2014a). In the Ethiopian context, about 27% of the Ethiopian population is classified as young people (15–29 years of age), of which about 76% live in rural areas (CSA 2014). Ethiopian youth have higher unemployment rates than the national average both in rural and urban areas. Young people in Ethiopia contribute labour to agricultural activities in various ways either as member of their rural families, as hired labour or as household heads (FAO 2014b). When young people contribute agricultural labour as members of rural families, agricultural development interventions make little deliberate consideration to ensure their inclusion.

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Both young people and women contribute significantly to agricultural production in the African continent, although these contributions are not usually explicitly recognized in official statistics and documents (African Development Bank Group 2015). Despite the fact that women play a significant role in agricultural productivity, contributing about 40–60% of all agricultural labour (World Bank 2008), women suffer from unequal access to resources, services, information and capacity-building opportunities. That women do not get regular updates about new farming practices and technologies renders them reliant on information being passed on to them from their husbands, other men, or ideas gleaned through their informal networks (Aregu et al. 2011; Lemma and Cohen 2011). Technology adoption among women is also constrained by limited resources to afford the technology compounded with limited availability of credit or savings, and low levels of awareness.

A recent review by the International Food Policy Research Institute (IFPRI) of the 271 World Bank projects concludes that the sustainability of project outcomes increases by 16% when projects address the needs of both men and women (Quisumbing and Pandolfelli 2010). Unless deliberate measures have been put in place to provide women all the required information, knowledge and skills in improving agricultural productivity and marketing initiatives, it is unrealistic to expect sustainable agricultural growth (Aregu et al. 2011).

In addition to their role in agricultural activities, women are also responsible for the vital household tasks such as caring of children, cooking, fetching water and fuel wood and cleaning the house as part of their household responsibilities. Studies report that women work for about 10–12 hours per day both in the wet and dry seasons, an important consideration that interventions aimed at promoting women inclusion in value chain development need to take into account.

In Ethiopia, women traditionally have been subject to sociocultural and economic discriminations that resulted in fewer economic, educational and social opportunities than men. Moreover, 80% of Ethiopian women reside in rural areas, where farming and livestock herding families are primarily engaged in subsistence agriculture. Rural women contribute significant proportion of the agricultural labor in Ethiopia. However, recent studies showed that the contribution of rural women in productive, domestic and community-related activities seem to be undervalued, are often misunderstood and rendered invisible from official discourse and national statistics (Aregu et al. 2010). On the other hand, the recent land certification program has given equal rights to women and men in land rights and recent studies indicate that the land certification program has improved the productivity of plots owned by women more than those owned by men (Holden et al. 2011; Kasa et al. 2015).

Many governments in Africa have now started to take policy measures to recognize and enhance the contributions of young people and women in economic growth in the continent. Policies and development programs and projects are embracing inclusive value chain development approach to ensure that young people and women enhance their contribution and benefit from economic growth.

Similarly, there seems to be strong political commitment in Ethiopia to ensure inclusive economic growth that would result in better gender equality and benefit young people. The vision of the Ethiopian government to bring about gender- and youth-inclusive growth and transformation in the agricultural sector has been duly reflected in the national Growth and Transformation plans (GTP I and II). Various national programs, such as the agricultural growth program (AGP), have made explicit provisions to benefit women and young people (HIRDC 2016).

The Improving productivity and market success for Ethiopian smallholders project (IPMS) from 2004 to 2012 and the Livestock and irrigation value chains for Ethiopian smallholders project (LIVES) from 2012 to 2018 have been implementing value chain development interventions with explicit consideration of inclusiveness to benefit young people and women. The projects recognize that an understanding of gender- and youth-contexts to identify interventions to promote the inclusion of women and young people in value chain development is central to successful inclusive project implementation and sustainability. The projects, therefore, started out by conducting gender and youth analysis related to the projects' priority commodities including understanding dimensions of social capital and networks, and access to technologies and services. The gender and youth analyses had the following specific objectives:

- 1. to increase the understanding of the different roles of women, men and young people in agricultural production, marketing and decision-making, and their share in the benefits
- 2. to identify potential barriers for the participation of women and young people in the different nodes of the value chains or in the alternative supply channels
- 3. to identify priority intervention points for the project in order to promote the inclusion of women and young people in value chain development

The findings from the studies provide evidence on the role of women and young people along the value chain for priority crop and livestock commodities and formed the basis for designing interventions for their inclusion in the development of the value chain. Based on the analyses, the IPMS and LIVES projects designed strategies to involve women and young people in the activities of the projects with the aim of increasing their access to knowledge and information; enhancing their capacity, both technical and non-technical; and increasing their participation in the selected value chains. While some of the strategies were commodity specific, some were more general. The basic strategy used by the IPMS and LIVES projects to increase women's involvement (both from the male and female headed households) in knowledge sharing and capacity building activities like training, field visits, technology demonstration, and other interventions in value chain development was to set a target of 50% female participation.

In addition to reaching women and young people directly, the projects realize that the awareness and skills of regional, district and community level staff of the bureaus of agriculture (BoA) are critical for integrating women and young people in development efforts. Hence, a series of training and awareness raising workshops on gender mainstreaming and inclusive value chain development and governance were conducted to equip supervisors and frontline workers with the knowledge and skills to promote inclusion of women and young people in livestock and irrigation value chains.

This working paper summarizes the lessons from the experiences of the IPMS and LIVES projects in inclusive value chain development aimed at benefiting women and young people. It mainly focuses on the trajectories made by the two projects to reach women and young people in order to increase their access to resources, innovation, technologies and knowledge which could consequently improve their inclusion and benefits from value chain development and governance. The working paper also includes analysis results on the disparities between the role women play in poultry production and marketing, and their access to poultry development intervention services, to demonstrate the stark exclusion of women from development services.

2. Value chain concepts of relevance for inclusiveness as applied in the IPMS and LIVES projects

Agricultural growth has proven to be powerful engine to reduce poverty and improve food insecurity. However, sustained agricultural growth requires the confluence between productivity, increasing uptake of technologies and accessing profitable agricultural markets (Haggblade et al. 2012). Hence, the thinking about agricultural development has shifted from the focus on farm management economics to value chain development. Looking from market analysis perspective, the thinking has also shifted from getting prices right to missing markets, and then to value chain development. This transformation in thinking resulted in the increasing popularity of the value chain perspective for development interventions across the developing world.

The key inefficiencies that affect smallholder producers exist mainly at the producer—first-buyer node. However, economic opportunities for smallholders are profoundly influenced by the dynamic systems in which they participate. Alleviating constraints that limit smallholders', particularly women and young people, participation in profitable markets, therefore, requires systems thinking, and the value chain framework provides an appropriate schematic lens for understanding that dynamic system.

There are various definitions of the concept of value chains and several concepts related to it, depending on geographical locations, commodity type, target groups and desired outcomes (or objectives of the value chain development) (Haggblade et al. 2012). This section provides definitions of value chains and related concepts considered relevant for inclusiveness, as adopted by the IPMS and LIVES projects.

Value chains:

A value chain is defined as the entire network of actors and their activities involved in input supply, production, processing, marketing and consumption. The key in the value chain framework is the management of interdependencies. Distinction is made between value chain actors/operators who exercise ownership of the product or its value addition, and bear the risk of that ownership, and value chain service providers who provide business services to value chain actors at cost or, for free as in the case of public service providers. Young people and women can be beneficiaries of value chain development through involvement as value chain operators, service providers or as employees.

Value chain system:

The value chain operators and the value chain service providers operate within an institutional environment which governs their actions and interactions. The value chain system comprises the value chain actors, service providers and the institutional environment in which the value chain operators and service providers operate. Institutional environment comprises the formal and informal institutions of policies, laws, regulations, trade agreements, customs, norms, and traditions. Therefore, the systemic approach to value chain analysis and development implies analysis and

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development interventions at the three levels: value chain actors, value chain service providers and their institutional environment. A closer look at the institutional environment of the value system is warranted as it can be an important factor of exclusion of women and young people in value chain development.

Supply (market) channels:

"A value chain encompasses a network of competing vertical supply channels that link input suppliers, farmers, processors, distributors and final consumers" (Haggblade et al. 2012). Supply channel refers to a particular route in a value chain through which a product passes from primary production to final consumption. A value chain, therefore, comprises several supply channels. The importance of this concept for the inclusion of women and young people is that different supply channels offer different opportunities, some of which may be more amenable to interventions to benefit young people and women.

Competitive niches:

Value chain operators may find their comparative advantage in a particular node of a value chain or over several nodes. Finding the competitive niches of value chain actors relates to which market segments to target, how many competitive functions to perform (i.e. how much to specialize), and what technology to use in order to meet necessary quantity and quality requirements for the market. Human capital, technology, resources and access to information determine competitiveness of value chain operators.

Vertical coordination:

'Vertical coordination refers to how different enterprises interact with their input suppliers (one or more functional level below them in the value chain map) and with the firms that purchase their outputs (one or more functional levels above the value chain map)' (Haggblade et al. 2012). The performance of a value chain is severely affected by how well the value chain is coordinated. A break or weak interaction of actors in two successive nodes can render a value chain ineffective.

Horizontal coordination:

Horizontal coordination refers to the coordination among like firms for competitive advantages (e.g. farmer associations and cooperatives emerge to increase bargaining power, reduce transaction costs, achieve economies of scale). Value chain operators at a particular node in the value chain may find it beneficial to coordinate their input procurement or output sales efforts to reduce cost and increase profit. Young people and women can be particular beneficiaries of horizontal coordination as it can significantly affect their competitiveness.

Governance:

Governance of value chains reflects the distribution of power and information among various actors. Governance results in varying degrees of market power among the value chain actors, resulting in power differentials to determine standards, prices, mode of delivery of produce, and other aspects of market transaction. Governance in value chains can be a major factor of exclusion.

Inclusiveness:

While the value chain perspective initially focused on improving competitiveness of different supply channels, recent emphasis on reducing poverty and improving food insecurity entailed increasing opportunities for the poor, women and young people (Haggblade et al. 2012). Inclusiveness of value chain development, therefore, refers to overcoming the challenges and seizing the opportunities that can benefit the rural poor, women and young people.

Leverage:

The number of the value chain nodes and the associated supply channels make it imperative to prioritize intervention points in the value chain. Leverage refers to the value chain node(s) which, if interventions are applied on, will have significant impact on upgrading the value chain. The choice of the appropriate leverage point at a point in time depends on the objective of the value chain development effort. Leverage points that are aimed at increasing benefits to women and young people need to be selected carefully to ensure inclusiveness.

3. Background information about the IPMS and LIVES projects

3.1 The IPMS project

Ethiopia has adopted commercial transformation of subsistence agriculture as the underpinning strategy for agricultural development since 2002. However, based on the limited experience of leading and managing that transformation, the need to pilot commercial transformation of subsistence farmers on the ground was apparent. The IPMS project is an outgrowth of that need.

The IPMS project was designed as a five-year project (2004–2009) funded by the Canadian International Development Agency (CIDA) and implemented by International Livestock Research Institute (ILRI) on behalf of the Ethiopian Ministry of Agriculture and Rural Development (MoARD). Following the government's underlying strategy for agricultural development, the goal of the IPMS project was to contribute to improved agricultural productivity and production through market-oriented agricultural development, as a means for achieving improved and sustainable livelihoods for the rural population.

To achieve this goal, the project takes as its purpose, strengthening the effectiveness of the government's effort to transform agricultural production and productivity and rural development in Ethiopia from subsistence to market-oriented. The IPMS project focused on the establishment, development and/ or strengthening of four complementary areas of development and action-research to implement the above stated purpose. These areas of focus were:

- Demonstrating and promoting agricultural knowledge management system highlighting innovations and appropriate technologies.
- 2. Developing innovation capacity of farmers, pastoralists, and public and private agricultural sector organizations that respond to challenges and opportunities in the agriculture sector.
- 3. Identifying and promoting the adoption of appropriate technologies, innovative and participatory input supply and output marketing services, and financial services to develop the market oriented commodities.
- 4. Promoting strategies, policy and technological options, and institutional innovations distilled from research and lessons-learned during project implementation.

Most of the project activities took place in ten pilot learning woredas (PLWs) that were strategically distributed in four regional states (Amhara, Oromia, SNNP and Tigray). In each of these woredas (districts) priority marketable crop and livestock commodities were identified through participatory approaches involving beneficiaries and public and private sector stakeholders.

IPMS Project **Tigray** Atsbi Pilot Learning Woredas(PLWs) Metema Name Tigray: Alamata & Atsbi Affar Oromiya: Adaa; Goma & Mieso Amhara: Fogera; Metema & Bure Alamata SNNP: Alaba & Dale Fogera **Amhara** Region boundary Elevation BSG - High: 4517 Bure Low: -236 Dire Goma Adaa Chukula Mieso Gambella **Oromiya** Somali Alaba Dale SNNP Source: Central Statistical Authority (CSA) 2007

Figure 1: IPMS intervention woredas (districts).

Cautious: all boundaries in the map do not have any official regional or federal endorsements.

The development of these commodities was based on a value chain approach with potential interventions from input supply, to production to markets, including the associated business development services. The project conducted all its activities in a gender-balanced and environment friendly manner. An innovation systems approach and learning alliances help the project in linking various development actors to promote learning from their experiences.

Interventions in the PLWs included introduction of knowledge management processes, tools, and methods; technical and business skills development of producers, input suppliers and marketing partners; development of commodity platforms to stimulate linkages and learning between partners; introduction of market-demanded crop varieties and livestock management practices; promotion of private input production and supply system—including seeds, seedlings, village/cooperative input shops, bull services, and veterinary services; and collective marketing and product promotion.

The project furthermore supported the Ethiopian MoARD with capacity building and knowledge management activities at federal and regional levels. These included building the capacity of the MoARD and agricultural technical and vocational education and training (ATVET) centres to focus their activities on a market oriented commodity-based development strategy and providing support for the development of a national agriculture information resource centre. The interventions also included the development of an agricultural portal which contains information for market oriented agricultural development to be contributed and used by the project actors at all levels. Through action-research, the project analysed and documented the processes involved and outcomes of the interventions and innovations including technologies, knowledge management and capacity building, to distil lessons which formed the basis for the development of policy options.

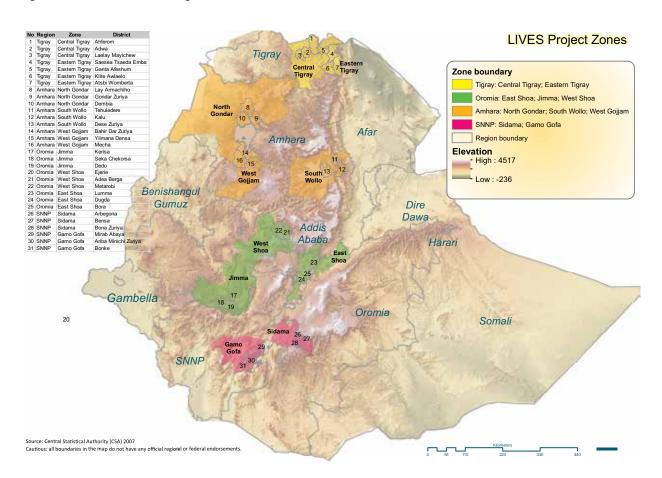
3.2 The LIVES project

The demonstrated successful achievements of the IPMS project led to the initiation of the concept of the LIVES project. The LIVES project has also been funded by the Canadian Government. Led by ILRI in partnership with the International Water Management Institute (IWMI), it builds on the achievements of its predecessor, the IPMS project. Starting in April 2012, LIVES has been scaling out successful approaches and interventions for key high-value livestock and irrigated crop commodities.

The goal of the LIVES project is **to contribute to enhanced income and gender equitable wealth creation for smallholders and other value chain actors through increased and sustained market off-take of high value livestock and irrigated crop commodities.** The project uses a value chain framework to develop targeted commodities. Such a framework recognizes that value chain actors add value at different stages of the value chain and that individuals and organizations provide inputs/services to the value chain actors. Key value chain actors are producers of agricultural inputs and outputs as well as traders and processors at village, district, regional and national levels.

The purpose of the project is to improve competitiveness, sustainability and equity in value chains for selected high-value livestock and irrigated crop commodities in target areas of four regions of Ethiopia. Following this purpose, the LIVES project aims to improve the effectiveness of the research and extension system to support market-oriented commodity development by promoting the use of participatory, market driven, genderand youth-inclusive and sustainable development approaches; promoting the involvement of value chain actors and suppliers of inputs and services in the development process; supporting village and district level development of community, cooperative, farmer and private sector production and supply of inputs and provision of services; and promoting linkages/dealership networks with value chain actors and service providers at regional and federal levels. The LIVES project works with public and private sector partners to develop livestock (dairy, small and large ruminants, poultry, and apiculture) and irrigation (fruits, vegetables and fodder) value chains in clusters of districts in 10 zones of the four regions, i.e. Tigray, Amhara, Oromia and SNNP (Figure 2).

Figure 2: LIVES intervention regions, zones and districts.



The project carries out activities in five focus areas: capacity development, knowledge management, promotion for scaling out and up, commodity value chain development and action research. For all activities the project aims to be gender-balanced and environmentally sustainable.

4. IPMS/LIVES conceptual framework and approach for inclusiveness

4.1 Conceptual framework

The conceptual framework for inclusiveness followed by the IPMS and LIVES projects is based on the value chain concepts defined earlier. It differentiates between the direct (or proximate) causes of exclusion and the underlying (or indirect) causes of exclusion. The proximate causes of exclusion are consequences of the underlying causes. Examples of proximate causes include inability to meet standards, quality and volume requirements for participation in the value chain. The underlying causes of exclusion include productive asset ownership, capacity/skills, access to knowledge/information, and access to services (extension, financial), networks/linkages, and social norms. Unless the underlying causes are addressed, focus on the proximate causes may not ensure participation of women and young people to maximize benefit for them from value chain development. The underlying causes of exclusion are more amenable to value chain interventions than the proximate causes. Hence, the IPMS and LIVES projects focused on addressing the underlying causes of exclusion. The underlying causes created the basis for the main pillars of the two projects.

Based on analysis of the underlying causes, the IPMS and LIVES projects identified major areas of opportunities to include women and young people in value chain development. Women and young people can be involved as actors in a particular node or nodes in the value chain, or select from among the supply channels based on their competitive advantages depending on the technology they use and/or the resources they command. Horizontal coordination through the creation of associations, groups or formal cooperatives offer particular opportunity for women and young people to benefit from value chain development. Moreover, women and young people can be involved in value chains through vertical coordination as contractual suppliers of outputs to traders and suppliers, as out-growers or as contract farmers. Value chain development may also create additional employment opportunities for women and young people.

4.2 IPMS/LIVES approaches for inclusive value chain development

The IPMS and LIVES projects used various approach to involve women and young people in value chain development. This section provides a description of the approaches followed by the two projects.

Improving capacity/skills:

Capacity and skills are critical for women and young people to benefit from value chain development. To develop the capacity/skills of value chain actors and service providers the IPMS and LIVES projects used training, coaching and mentoring, demonstrations and technical support. The projects usually combine training with coaching and mentoring. During coaching and mentoring, male and female adults and young people of the farming households are the major

targets. Experiences of the projects showed that once-off training with no follow-up coaching and mentoring of trainees would result in limited application and eventual dissipation of the capacity and skills developed through the training. Coaching and mentoring may not necessarily be preceded by training, but for training to be effective, it usually needs to be accompanied by coaching and mentoring. As devised by LIVES project as a possible inclusive approach, coaching and mentoring also could enhance the participation of the different members of a farming household. 'To address methodological and learning transfer gaps, the LIVES project introduced household coaching and mentoring approach, which helps address both household members rather than focusing only on household heads, who are usually men. The approach aims to address the knowledge and technology needs of women and young people within the households, as they are the future agricultural workers, entrepreneurs and farm planner' (Lemma and Tesema 2016).

Introduction and promotion of new technologies is usually accompanied with demonstration on farms. In several cases, the demonstration materials are supplied to lead farmers. Farms of lead farmers who successfully adopted the technologies and practices are used as demonstration sites for other farmers. Technical support is usually provided to male and female participants including business plan development and management issues. The key defining element of technical support is that it is usually based on requests from the value chain actors or service providers. For example, the IPMS project together with the OoARD in the PLWs assisted producers including women in the preparation of credit proposals for pullet production and marketing, and small ruminant fattening in selected pilot learning districts.

The assumption that information, ideas, skills and knowledge will trickle down to household members from the head of the household (usually male) who has access to extension or other capacity/skill development services is a fundamental cause of exclusion of married women and young people from benefiting in value chains. Women, particularly the married ones, are not invited to training, meetings and other similar fora. Considering this problem, the project adopted an innovative training approach called 'couples training'.

'Couples' training' is an approach where both husband and wife are trained together (Aregu et al. 2011). It is meant to widen opportunities for women to get the necessary capacity, skills, information and knowledge for the production and marketing of agricultural commodities. Couples training helps the couple to cross-fertilize their knowledge and skills and assist each other technically thereby building their capacity/skills further. Couples training helps women strengthen their role in decision-making in the household regarding which technologies to use and which marketable commodities to produce (Aregu et al. 2011). A recent publication has confirmed that couples training enhanced collaboration between couples by setting a stage for mutual appreciation of each other's contributions to household enterprises of dairy and large ruminant fattening (Lemma and Tesema 2016).

Time and venue are more binding for women than men, since women perform multiple tasks both at the household and in the farm. It is, therefore, very important to consider the daily calendar of women in order to identify the most convenient time and place while organizing training. Unlike the conventional extension approaches, the IPMS and LIVES projects delivered the training in places selected by women, which are usually closer to residences. This approach enabled a larger number of women to attend training comfortably. More hands-on and practical training is preferred by women.

Improving access to knowledge/information:

The IPMS and LIVES projects used a variety of approaches to increase access of women and young people to agricultural knowledge and information. The projects established, equipped and supported woreda (district)-level agricultural knowledge centres (AKC). These are library type rooms that avail both electronic and hard copy documents as reference materials. The centres are supplied with computers, overhead projectors, TV sets, shelves, chairs and tables. The projects facilitated and supported internet connection to the centres.

In addition to establishing the knowledge centres, the projects organized and supported experiences sharing events, commodity platforms, field days, farmer-to-farmer technology demonstration session, study tours, agricultural

exhibitions, livestock and financial fairs. These methods are organized in a manner that could also encourage the participation and contribution of women and young people.

Experience sharing events to areas and farm communities who have adopted technical, organizational or institutional innovations are powerful tools to spread information, lessons and experience among farmers and remain as effective ways of demonstrating new ways of producing and marketing of certain commodities. The experiences of the IPMS and LIVES projects show that experience sharing events are particularly inspiring for women and young people to adopt new ways of working. The experiences also showed that study tours and field days enabled women and young people to become aware of, adopt, manage and master new technologies successfully.

Creating and facilitating linkages and networks:

Technology and inputs utilization are essential to increase productivity and thus productivity of market oriented enterprises, particularly for enterprises led by women, leading to increases in production, to produce new or different products with higher value addition, or to products of higher quality (Everts 1999). Such improvement could lead to higher profits and to greater security and autonomy for women. However, women generally face a lot of difficulties with purchasing inputs and selling outputs and the negotiation processes thereof. The IPMS and LIVES projects tried to create linkages amongst input suppliers (private or co-operatives) and women and men farmers in the intervention districts, along with the provisions of necessary training. For example, women engaged in sheep fattening were linked with feed suppliers; poultry rearing women were linked with buyers; fruit seedling producers were linked with farmers; dairy farmers were linked with dairy cooperatives; and goat fattening groups were linked with traders. A number of innovation and commodity platforms organized by LIVES and its partners played a pivotal role by bringing different value chain actors who are operational at different nodes.

Countervailing social norms:

Countervailing social norms that lead to the exclusion of women and young people from benefiting in value chains has been an area of focus by the IPMS and LIVES projects. The mechanisms used include recognizing the achievements of women/young people, mass media promotion of achievements, contests and awards of merits, couples training, and women's field days. Couples training also helps break taboos about the traditional gender division of labour and contributes to bringing about gender equality and gender role reversals by breaking traditionally endorsed gender roles at domestic and community spheres. Recognizing achievements by women and young people helps break the stereotypical prejudices that communities have towards women and young people as back benchers in the agricultural sector.

Contests and provision of awards of merits to women performers encourage innovation and help break debilitating social norms. The IPMS project organized a contest among sheep fatteners that included both men and women. The contest revealed that most of the women engaged in the fattening program performed better than their male counterparts. The best two performers happened to be women. The contest helped the community members to recognize the capacity of women to manage market-oriented agricultural enterprises (Aregu et al. 2011).

The IPMS project organized women field days in one of its pilot districts where women farmers from all PAs in the district (woreda) were invited to visit model women farmers who engaged in dairy, vegetable and apiculture production and marketing. These events provided opportunity for fellow women farmers in the woreda to demonstrate how women can be successful if they utilized the knowledge and skills they acquired. =

During specialized training such as forage seed production and marketing women trainees in the four project regions were awarded certificate of participation and recognition as potential livestock input suppliers for other livestock keepers. In this particular training which was organized by LIVES, in collaboration with ILRI–Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), 21 female forage seed producers were accompanied by five extension agents and forage specialists for each region to give technical support to the trainees. The extension agents played roles as translators, co-facilitators and also through articulating context specific problems faced by women forage seed producers and suppliers. Such training that involves farmers and extension agents is referred to by the IPMS and

LIVES projects as 'mixed training.' One of the lessons drawn from the 'mixed training' approach is that involving both smallholders and extension agents promotes shared responsibility and accountability, and the development of practical action plans where both parties take responsibility to implement.

Promoting our approach in the public extension:

The IPMS and LIVES projects realize that sustainability strategies are essential to ensure continuation of project approaches for successful inclusion. The projects involve district-level experts and frontline development agents in all the activities organized and implemented to promote the inclusion of women and young people in value chains. Moreover, various training sessions were organized for the experts and DAs to increase their awareness about the need for gender- and youth-inclusive approaches and build their capacity in extension methods to benefit these groups in the development of the agricultural sector. The district agricultural knowledge centres are supplied with electronic and hard copy materials on gender equality to create access for extension agent and their supervisors to reading materials on gender and young people.

5. Mismatch between the role of women in poultry production and marketing and their access to services

Poultry management and marketing:

Analysis of household survey data from 5000 households in the highlands of Ethiopia show that, in rural Ethiopia, poultry production and marketing is predominantly female's job (Tables I and 2). In male-headed households, about 77.7% of the women are engaged in poultry management (Table I). Similarly, in female-headed households, about 80.7% of the women are involved in poultry management. On the contrary, only 2.2% and 5.1% of the men in male-and female-headed households, respectively, participated in poultry management. The data shows that feeding, vaccinating and housing the birds is a task largely left for women in the household.

Table 1: Family involvement in poultry management

| Sex of household head | Member of the household involved in poultry management | Frequency | Per cent |
|-----------------------|--|-----------|----------|
| Male | Head only | 51 | 2.2 |
| | Spouse only | 1788 | 77.7 |
| | Head and spouse | 126 | 5.5 |
| | All household members | 176 | 7.6 |
| | Others | 161 | 6.9 |
| | Total (N) | 2302 | 100 |
| Female | Head only | 443 | 80.7 |
| | Spouse only | 28 | 5.7 |
| | Head and spouse | 2 | 0.4 |
| | All household members | 57 | 10.4 |
| | Others | 19 | 3.5 |
| | Total (N) | 549 | 100 |

Source: Nicola, S. (2016).

Similarly, women overwhelmingly dominated poultry selling (Table 2). About 59.2% and 86.9% of the women in male-and female-headed households, respectively, sell poultry. Only about 27% of the men in male-headed households, and about 2.6% of men in the female-headed households are engaged in poultry selling.

Table 2: Family involvement in poultry selling

| Sex of household head | Member of the household involved in poultry selling | Frequency | Percent |
|-----------------------|---|-----------|---------|
| Male | Head only | 383 | 27.0 |
| | Spouse only | 841 | 59.2 |
| | Head and spouse | 75 | 5.3 |
| | All household members | 2 | 0.1 |
| | Others | 120 | 8.4 |
| | Total (N) | 1421 | 100 |
| Female | Head only | 373 | 86.9 |
| | Spouse only | 11 | 2.6 |
| | Head and spouse* | 0 | 0 |
| | All household members* | 0 | 0 |
| | Others | 45 | 10.4 |
| | Total (N) | 429 | 100 |

Source: Nicola, S. (2016).

Income control:

In spite of the large female participation in the selling and management of poultry production in rural Ethiopia, when it comes to controlling the income, women do not have comparable decision-making power (Table 3). In the male-headed households, 11.5% and 30.3% of the men and women, respectively, control the income from poultry, while in 53.7% of the cases, income from poultry is controlled jointly by the husband and wife.

Table 3: Family involvement in decision-making of income from poultry

| Sex of household head | Member of the household that controls the income from poultry selling | Frequency | Per cent |
|-----------------------|---|-----------|----------|
| Male | Head only | 164 | 11.5 |
| | Spouse only | 431 | 30.0 |
| | Head and spouse | 764 | 53.7 |
| | All household members | 9 | 0.6 |
| | Others | 54 | 3.7 |
| | Total (N) | 1422 | 100 |
| Female | Head only | 400 | 93.2 |
| | Spouse only | 7 | 1.6 |
| | Head and spouse | 4 | 0.9 |
| | All household members | 5 | 1.2 |
| | Others | 13 | 3.1 |
| | Total (N) | 429 | 100 |

Source: Nicola, S. (2016).

Access to extension service:

Results showed that the majority of the households did not have access to extension service on poultry. When asked if the households received any type of training referring to poultry production, 76.3% of the male-headed households answered on the negative. A larger proportion, 84.0%, of the female-headed households also answered on the negative (Table 4).

Table 4: Households' access to extension training on improved poultry production

| Sex of household head | Did the household receive training on poultry production form an extension? | Frequency | Per cent |
|-----------------------|---|-----------|----------|
| Male | Yes | 956 | 23.7 |
| | No | 3981 | 76.3 |
| | Total (N) | 4037 | 100 |
| Female | Yes | 155 | 16.0 |
| | No | 812 | 84.0 |
| | Total (N) | 967 | 100 |
| | | | |

Source: Nicola, S. (2016).

In the households that received training on poultry production, the heads were the family members who received the direct training (Table 5). In male-headed households, 84.9% of the heads, the men of the households, were the sole direct recipients of training. In male-headed households, only 2.9% of the women received training on production of poultry.

Table 5: Family members that received training on poultry production

| Sex of household head | Member of the household that received training on poultry production | Frequency | Per cent | |
|-----------------------|--|-----------|----------|--|
| Male | Head only | 812 | 84.9 | |
| | Spouse only | 28 | 2.9 | |
| | Head and spouse | 107 | 11.2 | |
| | All household members | 2 | 0.2 | |
| | Others | 7 | 0.7 | |
| | Total (N) | 956 | 100 | |
| Female | Head only | 142 | 91.6 | |
| | Spouse only | 5 | 3.2 | |
| | Head and spouse | 1 | 0.9 | |
| | All household members | 0 | 0 | |
| | Others | 4 | 2.6 | |
| | Total (N) | 155 | 100 | |

Source: Nicola, S. (2016).

Extension service on poultry marketing is rare in the highlands of Ethiopia. About 88.4% of the male-headed households and about 96.3% of the female-headed households did not receive extension service on poultry marketing. Amongst the households that received training on poultry marketing, in the male-headed households, 85.7% of the recipients were men (Table 6).

Table 6: Family members that received training on poultry marketing

| Sex of household head | Member of the household that received training on poultry marketing | Frequency | Per cent |
|--------------------------|---|-----------|----------|
| Male | Head only | 402 | 85.7 |
| | Spouse only | 19 | 4.1 |
| | Head and spouse | 46 | 9.8 |
| | Others | 29 | 5.8 |
| | Total(N) | 496 | 100 |
| Female | Head only | 79 | 96.3 |
| | Spouse only | 2 | 2.4 |
| | Head and spouse* | 0 | 0 |
| | others | 1 | 1.2 |
| | total(N) | 82 | 100 |

Source: Nicola, S. (2016).

6. Value chain opportunities for women and young people in the IPMS/LIVES projects

The IPMS and LIVES projects set targets to involve women in their value chain development interventions. The projects aim to achieve 50:50 women-men involvement as much as possible. However, the 50:50 targets have not been very easy to meet. For example, the projects aim to provide MSc training scholarship in a 50:50 proportion, but manage to achieve only about 35% of women involvement. Even though the equal proportion targets are not being met, the involvement of women in the value chains have been encouraging compared to the very low participation that has been prevalent in the communities.

6.1 Inclusion of women and young people in the LIVES project

About 1190 women were involved in value chain development in the LIVES project sites during April 2014 to march 2015 (Table 7). The number of men involved was 4165, giving 22% of women participation. Although women are involved in all nodes of the livestock value chains, they are more involved in production. Comparison across the livestock enterprises shows that women are more involved in dairy and poultry enterprises. The lowest involvement of women in the processing and marketing of livestock and livestock products was not expected.

| Table 7. Participation of women and men in livestock value chains through LIVES interventions (April 2014–March |
|---|
| 2015) |

| Commodity | Input | supply | Prod | uction | Processing/marketing | | Total | |
|-----------------|--------|--------|--------|--------|----------------------|------|--------|------|
| | female | male | female | male | female | male | female | male |
| Dairy | 127 | 561 | 260 | 836 | 20 | 41 | 407 | 1438 |
| Poultry | 59 | 202 | 241 | 215 | 53 | 33 | 353 | 450 |
| Small ruminants | 29 | 160 | 115 | 715 | 8 | 46 | 152 | 921 |
| Large ruminants | 99 | 139 | 60 | 338 | 9 | 68 | 168 | 545 |
| Apiculture | 28 | 147 | 95 | 569 | 5 | 35 | 128 | 75 I |
| Total | 282 | 1269 | 813 | 2673 | 95 | 223 | 1190 | 4165 |

Table 8 below presents the involvement of young people in the livestock value chains through the LIVES interventions in the Tigray region. About 72 young people were involved in the various nodes of the value chains. Most of the involvement is at the production node, followed by processing/marketing. The data shows that about 31% of youth participants were female.

Table 8: Involvement of young people in livestock value chains in LIVES—Tigray (male/female)

| Livestock Commodity | Input supply | Services | Production | Processing/ marketing | Total |
|------------------------|--------------|----------|--------------|--------------------------|--------------|
| Dairy | 11 (8/3) | 6 (5/1) | 47 (30/17) | 12 (8/4) | 76 (51/25) |
| Beekeeping | 0 | 0 | 59 (42/17) | 11 (9/2) | 70 (51/19) |
| Poultry | 4 (4/0) | 0 | 24 (11/13) | 8 (3/5) | 36 (18/18) |
| Small ruminant | 5 (4/1) | 4 (3/1) | 30 (24/6) | 12 (10/2) | 51 (41/10) |
| Total | 20 (16/4) | 10 (8/2) | 160 (107/53) | 43 (30/13) | 233 (161/72) |

Beekeeping:

Traditionally, beekeeping in Ethiopia has been considered an enterprise for men. Due to the increasing land scarcity and the rising demand for honey and honey products, the LIVES project aims at increasing the involvement of women and young people in apiculture development. The major strategies that the project uses have been the promotion of improved beehives (top bars and box hives), the promotion of bee forages around the homestead, special dearth period management of bee colonies, and improvement in knowledge and skills of women and young people in overall bee colony management.

A typical example of such intervention is observed in the vicinity of Wukro town, in the northern Ethiopian region of Tigray. A high school complete nineteen year old female youth (Mileat Gebrehiwot), who inherited colony management skills from her late father, manages more than 80 bee colonies. Since her apiary is situated in a rocky hillside that barely supports diverse bee flora throughout the year, her colony management strategy is completely based on moving the beehives to different places seasonally. Of the 80 bee colonies, 50 of them are used for honey production, and the remaining 30 are used for colony multiplication. In 2014, she harvested 600 kg of honey, worth ETB 120,000 (equivalent to about USD 5870) and sold 30 bee colonies for ETB 48,000. Her clients are farmers from nearby districts, beekeeping youth associations and honey traders from Mekelle town. The young lady is a member of local beekeepers platform organized by the LIVES project. In addition to managing her own bee colonies, the young lady provides services to her community in wax molding, colony splitting and honey harvesting free of charge.

Figure 3:A young female high school graduate engaged in beekeeping in Wukro district, Tigray.



Photo: LIVES Team in Tigray region.

Feed retail business:

Another area where women and young people can be gainfully involved in livestock production is input supply services. The LIVES project raises awareness about the importance of animal nutrition for market-oriented livestock production through experience sharing tours, demonstrations, and visits to feed processing factories.

In the district of Arbegona in the Southern Peoples, Nations and Nationalities region (SNNPR), livestock production is an important source of livelihood to farmers. Analysis by the LIVES team showed that feed shortage is the major constraint. The LIVES project designed interventions to improve access to concentrate feed supply. The project organized a platform meeting for value chain actors and service providers involved in dairy production, in which a middle-aged woman (Alemitu) picked up the idea of concentrate feed retailing as a business opportunity. The woman later participated in experience sharing visit to dairy farmers and feed mixers in central Ethiopia about 45 km from Addis Ababa. The LIVES project facilitated her linkage with the only factory that produces concentrate feeds in Hawassa town, and some wholesalers who sale agro-industrial byproducts. Coaching and mentoring by the LIVES team in the region has been a continuous engagement.

Her feed retail shop was established in 2013 and she has now become popular feed retailer in the town. Having started out with dairy feed retailing, she has now diversified into feed for fattening cattle. According to her sales records, most of her customers are youth groups engaged in livestock production, followed by urban/peri-urban dairy farmers.



Figure 4:A female concentrate feed supplier (Alemitu) in SNNPR

Photo:LIVES Team in SNNP Region.

Another successful case of a feed retailing business relates to a male youth (Tagel Shibru, who lives in the capital of Bona Zuria district of Sidama zone) in SNNPR. The young man's successful story of feed retailing started when he met the LIVES team at the beginning of 2014 in a dairy platform meeting. Inspired by the knowledge and information he obtained from the meeting, he established a feed retailing shop known as *Chabicho* livestock feed supply¹.

I 'Chabicho' in Sidama language means light.

Figure 5: Tagel Shibiru, a young livestock feed supplier in SNNP region.



Photo: LIVES Team in SNNP region.

Figure 6: Display of concentrate feeds for sale in Tagel's feed retail shop.



Photo: LIVES Team in SNNP region.

The LIVES project has been involving him in various capacity development interventions including training in business management skills, experience sharing visit to areas with better experience in dairy farming and improved fodder development, and commercial concentrate feed processing factories. Coaching and mentoring has become a continuous engagement. LIVES also facilitated contact and marketing linkage with commercial concentrate feed processors. His retail shop now sells mixed commercial concentrate for dairy cattle and beef, wheat bran and oil seed cakes. His sales records indicated that the demand for concentrate and wheat bran is increasing with time. While he sold only 30 quintals of concentrate per annum in 2014, his sales in 2015 has risen to about 150 quintals. Similarly, wheat bran sales has increased six-fold from 20–120 quintals.

Dairy and poultry production and feed retailing:

This story of a successful engagement in dairy and poultry production relates to a couple (Abebe Girazmach and his spouse Birtukan Dula) who reside in Dugda district in eastern Shoa zone, Oromia region. LIVES supported the couple mainly through its capacity development and knowledge management interventions. Primarily, couples training was organized on dairy, beef and poultry production and management in 2014. Following the training, study tours were also organized to nearby towns (Bishoftu and Adama) to visit beef, dairy and poultry farms.

The couple's engagement in dairy and poultry is supported by continuous coaching and mentoring. Notable achievements recorded by the couple include:

- Milk yield of local breeds increased from 1.5–2 litres per day per cow to 3 litres per day, due to improved feeding and management.
- · Local dairy cows were gradually replaced with improved breeds
- · All local chickens were replaced with improved breeds.
- The couple earn ETB 200 per week from sale of eggs alone.

Moreover, according to the couple, nutritional level of the family has improved due to increased consumption of milk and eggs.

Figure 7: Couples training in dairy and poultry resulted in successful dairy and poultry farming in Meki town by Abebe Girazmach and his spouse Birtukan Dula.



Photo: LIVES Team in Oromia region.

During the study tours, in addition to visiting different livestock business activities, the couple got exposure to new business opportunity—feed retailing. The idea of a new business opportunity emerged when the couple visited the Alema Koudis Feed PLC. The visit was facilitated by the LIVES project. Subsequently, the couple managed to be agents of the feed processing company and opened a feed retail shop in Meki town.

Figure 8: Notice board in a feed retailing shop of Abebe Girazmach and his spouse Birtukan Dula in Meki.



Photo: LIVES Team in Oromia region.

6.2 Inclusion of women in the IPMS project

Poultry-pullet supply

Poultry production is a suitable enterprise for landless women and young people, as poultry production does not require much land and capital. The gender baseline survey undertaken by IPMS revealed that women are responsible for most of the production activities such as hatching, rearing, health, feeding, watering, protection and egg collection (Aregu et al. 2011). Women control most of the revenue from the sale of poultry and eggs. Household poultry enterprises are small in scale and producers tend to prefer low productive local breeds which require lower levels of management, which result in low income to women.

The IPMS project, therefore, implemented interventions to improve the productivity and the marketing of poultry through the introduction of various context specific technologies and management practices. Raising day old chicks to twenty weeks was one of the practices introduced in Dale PLW in SNNPR.

An out growers' scheme was initiated by IPMS and the woreda office of agriculture with the participation of 80 women where each woman was provided on credit a hay brooder box with a runner, 50 day old chicks and feed to last for three months (Aregu et al. 2011). Training, continuous coaching and mentoring and technical support was provided by IPMS and the district office of agriculture. Women were able to vaccinate their chickens under the guidance and supervision of regional and district veterinarians. On average, each woman earned gross income of ETB 1072 in three months. Inclusion of women in the value chain as pullet suppliers was the first of its kind in the district.

Small ruminant fattening

In one of the IPMS PLWs located in eastern Ethiopia (Mieso district), women together with their husbands are traditionally involved in sheep and goat rearing. However, in most cases, the women are excluded from selling and controlling the revenue. The IPMS project targeted 189 women organized in three groups and channeled ETB 450 for each woman through the Oromia Credit and Saving Share Company (OCSSCo) in 2009. The loan was enough to purchase two to four goats, for fattening in three cycles per year. Training in goat fattening and technical support accompanied the credit. Members of the fattening groups managed to get net profit of ETB 1000–1600 from fattening six to eight goats in two cycles in six months.

Apiculture

The traditional way of honey production which is based on hanging the beehives on the roofs of residences and on tips of tree branches in the forest has been a major factor of exclusion of women. The modern bee keeping system, that uses top bars or box hives, which can be kept around the homestead near the ground, and under shade makes it easy for women to manage the beehives and benefit from the business. In one of its PLWs in north western Ethiopia, Bure district in the Amhara region, the IPMS project, together with its partners, initiated couple training on modern apiculture. The couple training improved women participation in the production and marketing of honey. Experiences showed that the management of top bar hives could, in fact, be better handled by women than men. Top bar and box hives also make it easier for women to harvest honey relative to the traditional mud hives.

Large ruminants

In one of the PLWS located in northwestern Ethiopia in the Amhara region (Mieso district), IPMS introduced credit and stall feeding interventions for fattening large ruminants. Women found stall feeding attractive to them because the animals were close to home. After three months of fattening, the animals were sold for much higher prices.

The IPMS experience also showed that women feel confident about engaging in enterprises in which they have experience and have developed skills and knowledge related to production and marketing. They also tend to develop interest and confidence to diversify and start engaging in other new enterprises as their capacity in technical and business skills improve further. The new enterprises are often involving higher value commodities which are often dominated by men. For example, many women in one IPMS PLW in SNNPR started sheep fattening business right after selling the first round of pullets they produced. In south western Ethiopia (Goma district), some women bought heifers with the revenue from the sale of fruit seedlings. In eastern Ethiopia (Mieso district), half the women involved in goat fattening moved onto cattle trading. Realizing this trend in Mieso, the project raised the amount of loan provided through the credit fund from ETB 450–1200 per person.

Recognition of women's achievements

In addition to promoting technologies and practices to increase the involvement of women in profitable agricultural enterprises, the IPMS project recognized women's achievements through various events in order to change people's mind set about the potential of women farmers.

In a PLW in southwestern Ethiopia (Goma district), the IPMS project organized sheep fattening contest among the 120 farmers it engaged in sheep fattening business. In this contest, which was organized together with the district Office of Agriculture and Rural Development (OoARD), and the district Office of Women's Affairs (OoWA), the first and the second best performers were women. They were awarded one quintal of feed for their next round sheep fattening (Aregu et al. 2011). This contest was an opportunity for the community members and leaders to recognize and understand women's ability to engage in profitable agricultural enterprises.

In a PLW in central Ethiopia (Ada district), about 45 km east of Addis Ababa, women's field day was organized by woreda OoARD and IPMS where women farmers from all PAs in the district were invited to visit successful women farmers who engaged in dairy, vegetable and apiculture production and marketing. This event provided opportunity for fellow women farmers in the district to demonstrate how women can be successful if they utilize the knowledge and skills they acquired (Aregu et al. 2011).

7. Conclusion and recommendations

Conclusion

While women and young people contribute significantly to agricultural and rural development in Ethiopia, they are usually excluded from benefiting from the opportunities of major agricultural and rural development programs and projects. Agricultural services, such as extension and rural finance, often overlook women and young people, assuming that interventions targeted at the household head will trickle down to all household members. The traditional development approaches that view the household as a unitary decision-making entity and the assumption that interventions targeted at the household head would trickle down onto household members is the foundation of exclusion of women and young people. Development programs with targeted provisions to include young people and women will have a better chance of success in improving livelihoods, fighting food insecurity and poverty alleviation.

In addition to the marginal position traditionally given to women and young people in agricultural development, bottlenecks related to assets, capacity, weak coordination of women- and youth-related interventions at institutional level, limited participation of women and young people as leaders in community and formal institutions need to be revisited. The active involvement of women is required in community level organizations and institutions.

The IPMS and LIVES projects experiences show that understanding of the roles, opportunities and constraints faced by young people and women is a critical first step to promote the inclusion of women and young people in the value chain development. Conducting gender and youth analysis related to the projects' priority commodities including understanding of dimensions of social capital and networks, and access to technologies and services is required. The IPMS and LIVES projects set quantitative targets to include women and young people as beneficiaries of their value chain development interventions. Such targets were implemented in innovation and commodity platforms; capacity development interventions including training, and coaching and mentoring; knowledge management including field days, experience sharing tours, access to knowledge centres, facilitating linkages with input suppliers and output buyers. Innovative extension methods such as couples training, mixed training, women's-only field days, recognition of women's achievements, coaching and mentoring of all household members have proven to be useful in including women and young people in value chain development.

Recommendations

The lessons and experiences drawn from IPMS and LIVES lead to the following recommendations.

- A thorough gender and youth analysis needs to precede the planning and implementation of programs and projects that aim at improving the inclusion and benefits of women and young people in agricultural value chain development.
- 2. High but realistic targets of inclusion need to be set based on empirical evidence so that women and young people can play a proactive role in the agricultural development sector.
- 3. Interventions to increase awareness about the role of women and young people in development should be targeted at both men and women.
- 4. Development programs, including the public extension service, need to provide explicit incentives to frontline workers to include young people and women in rural development services.
- 5. Time constraint for women can be much more binding than for men. Thus, development interventions such as experiences sharing events, technology demonstration and farmers field days need to make sure that the time and the venue fit women farmers' time constraints.
- 6. Women in male headed households are often the most neglected in development interventions. It is important to realize that women in male headed households make significant contributions to agricultural production and marketing. Hence, development interventions need to make explicit targets to reach to women within the male headed households.
- 7. Development interventions need to take stepwise and flexible approach to benefit women and young people. It is important to start from enterprises that are traditionally held by women and that can easily accommodate young people. As capacity, skills and confidence improve, transformation can be made to non-traditional enterprises.
- 8. Successes need to be scaled out by adapting them to particular contexts: value chain opportunities that work for young people and women in one area need to be contextualized for application in other areas.
- 9. In terms of young people, focus should be given to skills development and awareness raising mainly in context specific agricultural enterprises and value chain nodes so that young people can effectively participate as producers, input suppliers, processers and marketers.

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Livestock and irrigation value chains for Ethiopian smallholders project aims to improve the competitiveness, sustainability and equity of value chains for selected high-value livestock and irrigated crop commodities in target areas of four regions of Ethiopia. It identifies, targets and promotes improved technologies and innovations to develop high value livestock and irrigated crop value chains; it improves the capacities of value chain actors; it improves the use of knowledge at different levels; it generates knowledge through action-oriented research; and it promotes and disseminates good practices. Project carried out with the financial support of the Government of Canada provided through Foreign Affairs, Trade and Development Canada (DFATD). lives-ethiopia.org



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The International Water Management Institute (IWMI) is a non-profit, scientific research organization focusing on the sustainable use of water and land resources in developing countries. It is headquartered in Colombo, Sri Lanka, with regional offices across Asia and Africa. IWMI works in partnership with governments, civil society and the private sector to develop scalable agricultural water management solutions that have a real impact on poverty reduction, food security and ecosystem health. IWMI is a member of CGIAR, a global research partnership for a food-secure future. iwmi.org



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