RAISE-FS *Woreda* profile #004

Boloso Bombe *Woreda* Food System Profile

Population

115,883

59,431 | 56,452

Altitude

700–2,370 m.a.s.l

Diets

Predominantly agroforestry production systems

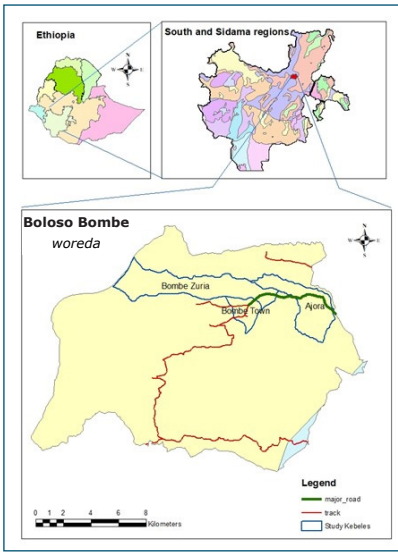
Food insecurity

90% FHH | **97% MHH**

Food gap months

Jan ····· ► Dec

March to July



Boloso Bombe *woreda*

Top 5 crops produced

ginger | Haricot bean | teff | taro | coffee

Climate and soils

- Disease infestation aggravated by the weather condition
- Soil erosion
- floods and water lodging
- Deforestation
- Land degradation

Inclusion

Youth (18–35 yrs) | Women | Men

✕ No access | ⋰ Limited access | ✓ Access

- High workload during the peak agricultural months
- Access to agri-inputs & extension services
- Access to credit
- Decision making
- Job opportunities
- Cooperative membership

WAGENINGEN UNIVERSITY & RESEARCH

RAISE-FS Resilient Agriculture for Inclusive and Sustainable Ethiopian Food Systems

1 Introduction and methodology

This document gives an overview of the current status, dynamics, and behaviour of the local food system present in the Boloso Bombe *woreda* and is called the *woreda* profile. The *woreda* profile was developed in col*labour*ation with the RAISE-FS project, Areka Agricultural Research Centre (AARC) and *woreda* stakeholders to support stakeholders' exercising evidence-based, bottom-up planning based on the existing reality of the *woreda*.

The profile is meant to enable stakeholders to be on equal footing in understanding the complex challenges and realities of the *woreda*, and to use these insights as starting point for the *woreda* planning process. This document describes the current situation of the *woreda* in eight chapters. It endeavours to provide information and data on demography, agro-ecological conditions, production factors, markets and value addition, food and nutrition security, social inclusion as well as policies and government support.

This *woreda* profile is generated based on insights obtained from the baseline survey and rapid food system appraisal (RFSA) that took place in two *kebeles* of Boloso Bombe *woreda*. The two selected *kebeles* represent the more or less the same agro-ecologies and socioeconomic contexts that also represents majority part of the *woreda*.

Officials from the *woreda* administration acknowledge and certify that the RFSA engaged a diversity of stakeholders, and that the findings present a realistic overview representing the entire *woreda* (see figure 2).

Activities conducted to construct the *woreda* profile were done in light of the RAISE-FS project. Boloso Bombe *woreda* is one of the selected implementation areas. A quantitative baseline survey and a qualitative RFSA were conducted in parallel. In addition to the collected primary data secondary data from various sources, such as government reports, academic journals, and online databases were used to complement the primary data. By using secondary data, we were able to enrich our analysis, validate our findings, and fill in the gaps in our primary data.

Data collection was conducted in two of the *woreda*'s *kebeles* (Bombe Zuria and Ajora). These *kebeles* were purposefully chosen because of their potential for the food & nutrition security commodities (common bean, faba bean, ginger, sweet potato and home garden). A structured standard questionnaire and RFSA tools were developed to collect field data. Female-headed (FHH), male-headed (MHH), women in male-headed households (WMHH) and youth were proportionally selected randomly from a total of households living in the selected *kebeles*. Quantitative data were collected from 104 respondents of which 40% were men, 39% were women, 21% youth (of which 50 % men and 50% women). The RFSA comprised a sequence of steps and activities that consecutively build on one another to provide a diverse and integrated perspective on the current food

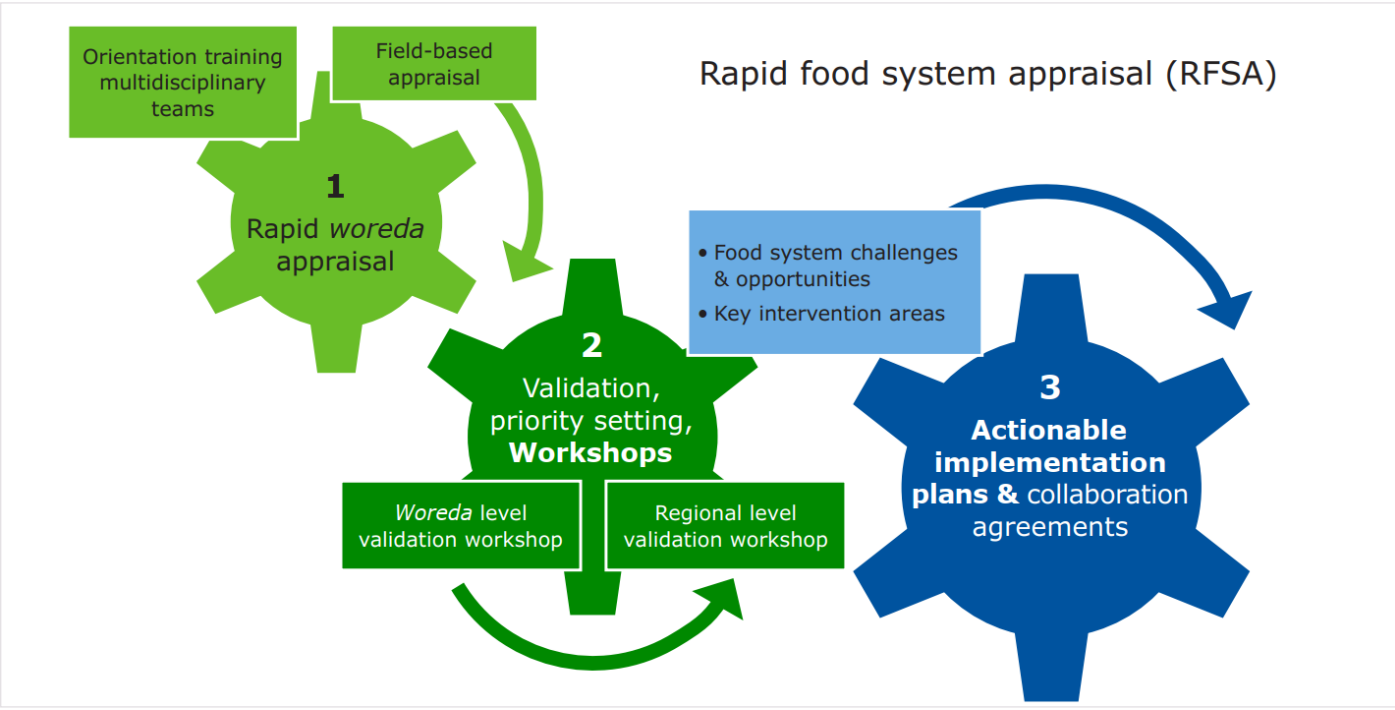


Figure 1: Steps of the rapid food system appraisal (RFSA) process

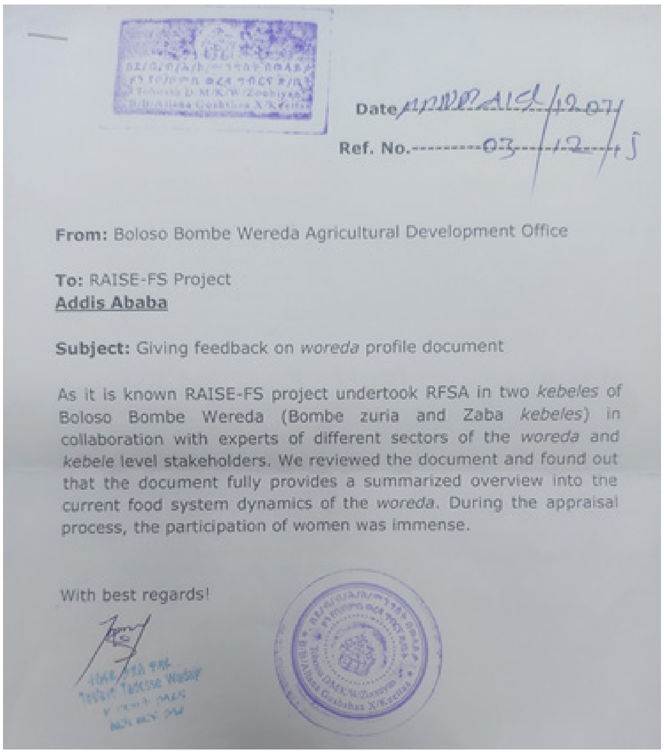
system situation, key challenges and opportunities (see Figure 2). The applied RFSA tools were community mapping, activity calendar, in-depth dialogue and different plate's activity[1].

The RFSA study followed a sequence of steps that involved:

- A desk review of existing data and literature on the food system context, drivers, outcomes and impacts in the country;
- A stakeholder mapping and consultation process to identify and engage with relevant actors from different sectors and levels of the food system;
- A participatory community mapping, activity calendar, and in-depth dialogue were undertaken with purposefully selected community representative men, women, youth, and stakeholders drawn from *kebele* and *woreda*.
- A prioritization exercise to identify key leverage points, action areas, and investments for enhancing food system resilience and innovation.

The RFSA study provides evidence-based insights and recommendations for policymakers, investors, researchers, and practitioners who are interested in supporting food system transformation in the country. The study also contributes to the national dialogues organized in the framework of the UN Food System Summit held in September 2021.
The activities were undertaken with female, male, and stakeholder groups separately. The female group consisted of 12 persons (5 youth <35yrs of age, 4 middle-aged between 35 and 60yrs of age and 3 elderly people >60yrs of age). Similarly, the male group was composed of 12 persons (5 youth, 4 middle-aged, and 3 elderly people). The institutional stakeholder group comprised development agents (DAs), the head of the agricultural office, health extensions, cooperative managers, microfinance managers and land administration experts from *kebele* level and office of agriculture experts (Extension, nutrition, natural resources, and agronomy), Cooperative promotion office, Women, children and social Affairs, Trade and development office), Microfinance , and Job creation from *woreda* offices.

The validation workshop was conducted with the *Woreda* administrator, researchers of the Areka agricultural research center, and heads of different offices of the *woreda* (agriculture, cooperative, women, children and social affairs, job creation, trade, and health). In addition, representatives of the men and women community representative who participated in the RFSA study attended the validation workshop. During the workshops, the key findings from the appraisal and



Date

Ref. No.

From: Boloso Bombe Wereda Agricultural Development Office

To: RAISE-FS Project
Addis Ababa

Subject: Giving feedback on *woreda* profile document

As it is known RAISE-FS project undertook RFSA in two *kebeles* of Boloso Bombe Wereda (Bombe zuria and Zaba *kebeles*) in collaboration with experts of different sectors of the *woreda* and *kebele* level stakeholders. We reviewed the document and found out that the document fully provides a summarized overview into the current food system dynamics of the *woreda*. During the appraisal process, the participation of women was immense.

With best regards!

Figure 2: Official letter from Boloso Bombe woreda Agricultural Office

[1] *An extended description of the tools can be found here: https://doi.org/10.18174/590873.*

Community maps

Figure 2: Community map of Ajora kebele from male focus group

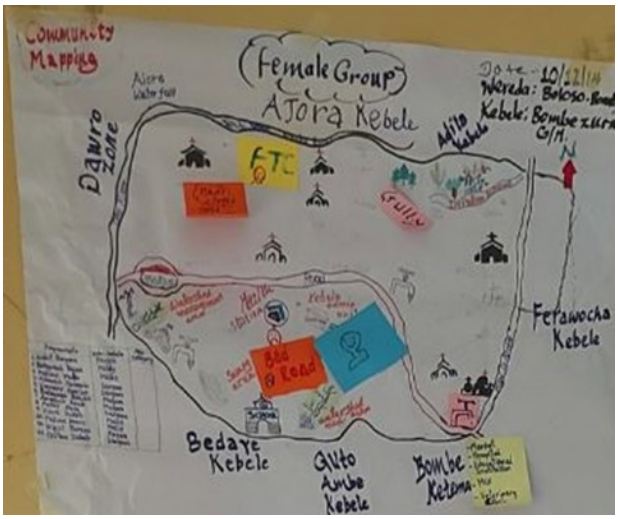


Figure 3: Community map of Ajora kebele from female focus group

Figure 4: Local stakeholders group during Community map drawing in Bombe Zuria kebele

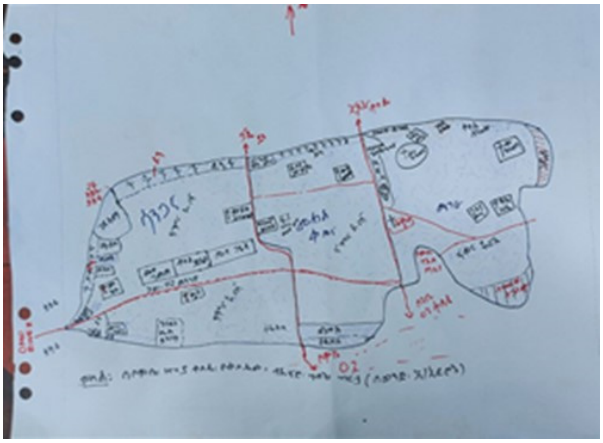


Figure 5: Community map of Bombe zuria kebele from male focus group

Seasonal calendar

Table 1: Seasonal calendar from Bombe zuria kebele from female focus group

No	List of activities	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
1	Expenditures	X	X	X					X	X	X		
2	Income	X	X	X								X	X
3	Seasonal labour activities/				X	X	X	X					
4	High workload in different seasons	X	X	X					X	X		X	X
5	The rainy seasons	X	X						X	X		X	X
6	Moments of critical drought				X	X	X						
7	Key cropping season for different crops	X	X	X					X	X		X	X
8	High Market price months						X	X	X	X	X		
9	Low market price		X	X	X								
10	Busiest months for women	X	X	X	X	X	X	X	X	X	X	X	X
11	Busiest months for men	X	X	X	X				X	X		X	X
12	Pest and disease prevalence	X						X	X				X
13	Prevailing livestock activities	X	X	X	X	X	X	X	X	X	X	X	X
14	Local market demands for local products	X	X	X	X	X	X	X	X	X	X	X	X
15	Periods of food scarcity				X	X	X	X	X	X	X	X	

Table 2: Seasonal calendar from Bombe zuria kebele from male focus group

No	List of activities	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
1	Expenditures	X	X	X				X	X	X	X	X	X
2	Income		X	X	X								
3	Seasonal labour activities	X	X	X			X	X	X	X		X	X
4	Workload in different seasons	X	X	X								X	X
5	The rainy seasons	X	X						X	X		X	X
6	Moments of critical drought				X	X	X						
7	Key cropping season for different crops	X				X	X	X	X			X	X
8	High Market price months										X	X	X
9	Busiest months for women	X	X	X	X	X	X	X	X	X	X	X	X
10	Busiest months for men	X	X	X			X	X		X		X	X
11	Pest and disease prevalence	X	X					X		X	X	X	X
12	Prevailing livestock activities			X	X	X	X	X		X	X		
13	Local market demands for local products	X	X	X	X							X	X
14	Periods of food scarcity					X	X	X	X	X	X	X	

1 Demography

Boloso Bombe *woreda* is located in the northern part of Welaita Zone of SNNPR State (Figure 6). The *woreda*'s administrative town is Bombe which is located 56 km from Welaita Sodo town (Welaita zone capital), 182km from Hawassa, and 321 km from the capital, Addis Ababa. Boloso Bombe has a total of 21 *kebeles* out of which 18 are rural and the remaining three are urban *kebeles*. According to ESS (2022) population projection, the *woreda* has a total population of 115,883, of whom 56,452 are men and 59,431 are women; 1,057 or 1.2% of its population are urban dwellers. The age distribution (Table 3) calculated based on the ESS (2007) data extracted by Nigussie et al (2018) indicates that the majority of population (82%) are within the 0-34 years age category and the remaining are adults and elderly people. The total number of households within the *woreda* is 17,659 with 14,039 male and 3,620 female headed households, respectively.

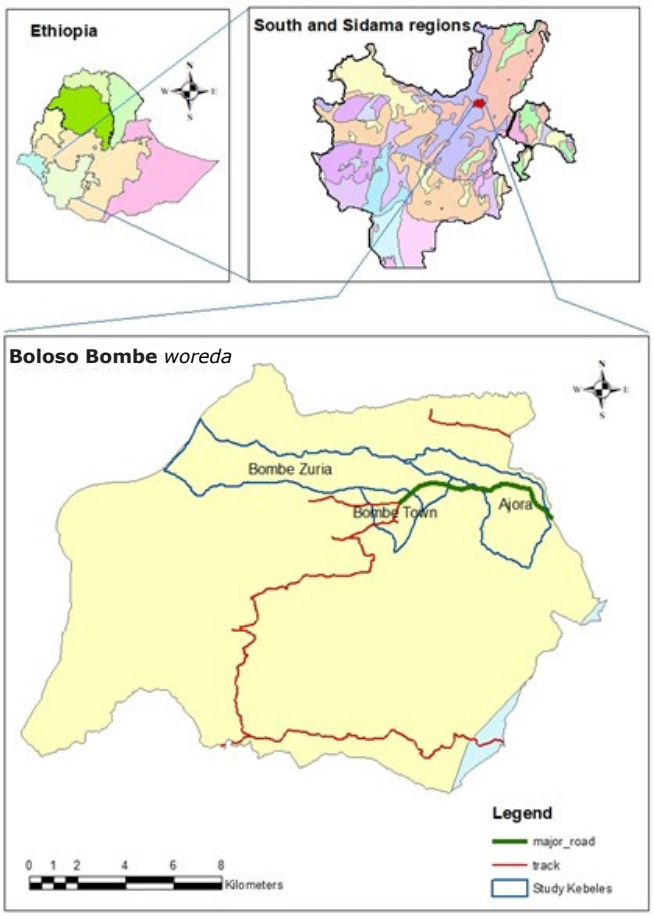


Figure 6: Map of Boloso Bombe woreda

According to the base line survey conducted in two *kebeles* of Boloso Bombe *woreda*, the average family size of surveyed households is 6, with female headed family size is 4 and male headed family size is 7 (Figure 7). The average family size is more or less the same

Table 3: Education level of surveyed household head

Educational level	Male head %	Female head %	Total
Does not read and write	26.7	86.2	43.3
Adult and religious education	1.3	0.0	1.0
Primary school	42.7	13.8	34.6
Secondary school	17.3	0.0	12.5
Diploma and above	12.0	0.0	8.7

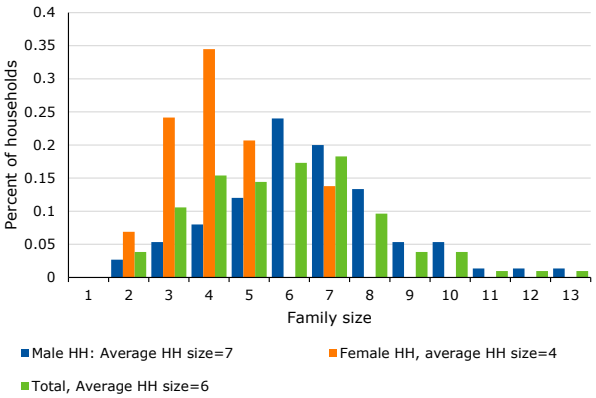


Figure 7: Family size of surveyed households

to national average (5.76) and the SNNPR average (5.96) (Global Data Lab, 2019). The age category of the surveyed households in two *kebeles* (Figure 8) shows that 79% and 72% of male and female, respectively are in the category of youth and children, which is also in similar trend with the *woreda* data mentioned above. Comparing the proportion of male and female adults from both secondary data and baseline survey, females are higher in number than male in those *kebeles*, which might be due the fact that a greater number of males migrates out of the area compared to female ones. Regarding elderly people, in both secondary data of the *woreda* and the survey result of two *kebeles*, males outnumber the females. This may indicate the life expectancy of females is less than males due to different reasons like lifelong workload, less nutrition access at early as well as during active reproductive age and so on. The relative proportion of more female to male children in the survey data contrasting the secondary data, may indicate more male children are migrating out of the two *kebeles* for search of livelihood.

An adult literacy rate of surveyed household heads, who can both read and write in the two *kebeles*, is 56.7% (Table 2) which is greater than the country's literacy rate record of 51.77% in 2017[2]. According to the World

2 https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=ET

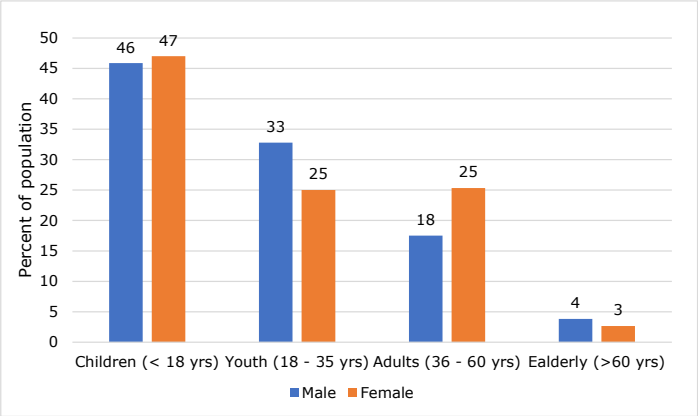


Figure 8: Age category of surveyed households

Bank, the Ethiopian literacy rate increased from 30% in 2005 to 52% in 2017. Data from the household survey indicates that there is still an improvement in the literacy rate. When comparing the male and female household heads, male HHHs are more literate (73.3%) than female HHHs (13.8%) which indicates males have had more access to education opportunities by far than females in the study area.

Priority topics identified and validated by stakeholders

- Utilization of power of the youth for implementation of different development project

Agricultural landscape of Bombe Zuria kebele
Photo taken by: Andualem Tadesse

2 Agro-ecological and environmental conditions

Secondary data sources indicate that the total area of Boloso Bombe *woreda* is about 27,222 ha (Boloso Bombe *Woreda* Office of agriculture) out of which 16,960 ha (62%) is cultivable land (Jokka, 2019). About 1,905 ha is grazing land, and an area of approximately 4001 ha is covered by trees/ agroforestry. The remaining 4356 ha of land is found to be uncultivable. According to focus group discussion, most of the two *kebeles*' land is arable and crops are grown while small proportion is used for grazing, mainly around homestead.

The altitude in the *woreda* ranges from 700 meters above sea level (m.a.s.l) (Omo River basin) to 2,370 m.a.s.l. (Zaba mountain) (Wodajo, 2019). The mean annual rainfall is 1,600 mm, with bimodal distribution in which maximum amount is received during *meher* season (June to September) and the remaining in *belg* season which lasts from March to April. The mean annual temperature of the *woreda* ranges from 120C to 240C. The traditional agro-ecology classification of the *woreda* indicates that lowland dominates (75%) the majority area, followed by mid-land (20%) and high land (5%) (Jokka, 2019). The common soil type in Boloso Bombe *woreda* are Eutric Nitisols associated with Humic Nitisols, which are dark reddish brown with deep profiles. These soil types are also the most prevalent in Wolaita zone (Laekemariam, 2016).

The majority of *kebeles* in Boloso Bombe, including the surveyed ones, are prone to intermittent and variable rain fall distribution, both in time and space, which includes temporary cessations as well as less intense in a very critical growing period of crops under both *belg* and *meher* seasons. Both of the surveyed *kebeles* have no irrigation facility to supplement this rain fed agricultural practices and support crop production. On the other hand, agriculture is challenged with different disease and pests like ginger bacterial wilt, mango scale insect, enset bacterial wilt, and animal diseases like trypanosomiasis. It is clear that those diseases and pests are more aggravated under certain weather conditions. For example, the prevalence, infestation and development of mango scale insect is favoured by high mean temperature and low atmospheric relative humidity (Tariku et al., 2022). Ginger bacterial blight disease was more prevalent during rainy season accompanied by warm and humid weather condition (Habtewold et al., 2015). Ginger was one of the key crops grown in Boloso Bombe (Table 5), however, FGD indicated significant reduction of ginger production due the ginger bacterial wilt menace, which in turn is affecting the livelihood of farming households.

Agroforestry production systems are common in Welaita zone in general and in the surveyed *kebeles* of Boloso Bombe *woreda* in particular, where there are two common dominant fruit crops of agroforestry component, mango and avocado, besides different indigenous and exotic tree species including eucalyptus.
Regarding environmental degradation, the focus group discussion conducted in the two *kebeles* of Boloso Bombe *woreda* involving women, men and stakeholder groups indicated that population pressure created land fragmentation and as a result deforestation is increasing and erosion on cultivable land is aggravated. Households are increasingly using cow dung as fuel which is leading to a decline in soil fertility and as a result productivity of most crops grown in the area is reduced.

One of the surveyed *kebeles*, Ajora, is bordering the Gibe-3 dam lake and Ajora twin waterfalls in which tourism and fish farming can be practiced without any negative effect on the environment.

Table 4: Major crops grown and their area coverage

No	Crop	Ha	%age
1	Maize	640	3.5
2	Haricot Bean	2659	14.4
3	Teff	1450	7.9
4	Wheat	177	1.0
5	Ginger	7867	42.7
6	Coffee	1154	6.3
7	Enset	750	4.1
8	Taro	1220	6.6
9	Mango	584	3.2
10	Avocado	381	2.1
11	Banana	356	1.9
12	Papaya	27	0.1
13	Cassava	255	1.4
14	Sweet Potato	890	4.8
	Total	18410	100

Priority topics identified and validated by stakeholders

- Establish irrigation facility
- Ginger bacterial wilt complex management
- Mango scale insect menace management
- Improve and restore soil fertility and strengthen agricultural input delivery system
- Create off-farm job opportunities for youth

3 Agricultural production system

Agriculture is the dominant livelihood in Boloso Bombe *woreda* which depends mainly on mixed farming system. According to data from the *woreda* office of agriculture, the major livestock species found in the *woreda* with their respective population include cattle (67,576), sheep (9,010), goats (11,851), donkeys (4, 344), mules (166), horses (38) and poultry (42,663). The major crops grown in the area are ginger, haricot bean, cereals, enset and root crops, coffee and fruits (Table 5). According to the baseline survey, maize, teff, haricot bean, taro and ginger are the most important crops grown in those *kebeles* (Table 6). Focus group discussions highlighted that, maize, haricot bean, taro and enset are grown as food security crops while ginger and teff are commercially oriented crops. The survey results also show that a significant proportion of ginger and teff is sold on the market. The production of nutrition dense commodities is not common with the exception of some fruits (mango, banana and avocado) and common bean. Home gardening is limited to the production of spices and aromatic crops (rosemary, ginger in small scale, and herbs) that are used to generate income in the local market.

The baseline survey looked at the use of agricultural inputs for the key commodities produced in this area. Table 6 shows that maize is grown using more or less all the necessary agricultural production inputs required despite the fact that its productivity is low in this area. This is because farmers use own-saved seed of the hybrid maize, which is second generation that reduces the productivity. During FGD farmers explained that they consider the second generation as improved seed since the initial hybrid is coming through the extension system. Though the amount of fertilizers (urea and NPS) applied per plot varies for those major crops, farmers use fertilizers for all major crops. Because of its economic importance, the majority of farmers use fertilizers and pesticides for production of ginger.

Farmers during focus group discussion mentioned that mono-cropping, growing one crop species every year on the same plot of land, is the dominant practice. They further mentioned that farmers in their locality have good practices of intercropping, relay cropping, agro-forestry and crop rotation in the traditional way. However, they complained that the extension support on such agronomic practices is not satisfactory. The survey result indicates that the majority of the household heads (Table 7) practice intercropping (mostly maize with common bean or kale or both), relay cropping (common bean

Table 5: Inputs used for major crops

Crop	HHs produce	%HHS used inputs				Productivity (t ha^{-1})	% Produce sold
		Improved Variety	Urea	NPS	Pesticide		
	%	%	%	%	%		
Maize	76.0	78.5	70.9	98.7	1.3	0.173	2
Teff	55.8	27.6	46.6	91.4	-	0.7	46
Haricot beans	46.2	4.2	20.8	95.8	-	0.99	7
Taro	22.1	-	69.6	21.7	-	0.583	5
Ginger	16.3	-	100	94.1	52.9	0.272	88

Table 6: Experience in agronomic practices

Household head	Inter-crop-ping	Relay cropping	Crop rotation	Agro-forestry	Green manuring
	%	%	%	%	%
Male	88	56	80	60	1
Female	62	45	62	62	-
Overall	81	53	75	61	1

after maize), crop rotation and agroforestry. The green manuring practice is almost nil due to land shortage and a very short growing period to incorporate the preceding green manure crop and grow the target crop for the same reason. Intercropping, relay cropping and crop rotation iare practiced more by male headed households than the female headed households. This might be due to greater family size (Fig.) that contributes to the labour requirement, particularly for intercropping and relay cropping.

Priority topics identified and validated by stakeholders

- Improve inputs supply chain and reduce cost of agri-in puts (including fertilizer)
- Enhance agricultural extension services
- Improving production (crop drought tolerant varieties and breeds) and postharvest technologies
- Promoting sustainable agricultural practices (improving cropping system, IPM & ISFM)

Farmers visiting a ginger field at Boloso Zuria kebele

4 Markets and value addition

In the rural areas, most smallholders sell and buy their staple food products in the local market. Market information access about availability of products, their current price in the local market, major buyers and sellers, and many other related issues can be obtained from different sources. Insights derived from the baseline result indicate that the majority of household heads have access to market information. From the disaggregated data, 72.4% of the female headed and 77.3% of male headed households had market information access, with slight (3%) variation between the two (see Figure 9).

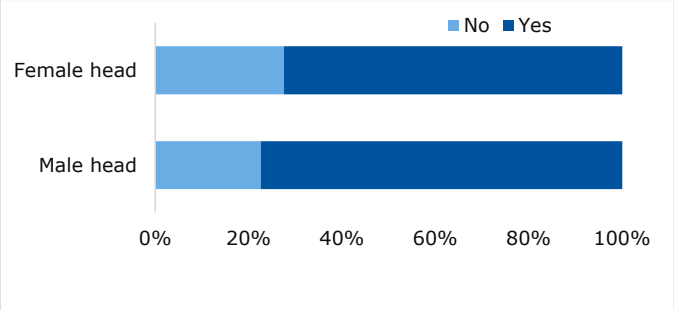


Figure 9: Proportion of access to market information

During focus group discussion with different stakeholder categories, the participants mentioned that there is no marketplace in both *kebeles* and as a result the community members have to travel to distant marketplaces. Distant (physical access) from marketplace can be also a factor for market information access, i.e., the more distant the market, less access to updated market information. Regarding the sources of market information (Figure 10), neighbourhood communication dominates with about 38% followed by traders (22.8%), friend and /or families (13.9%) and

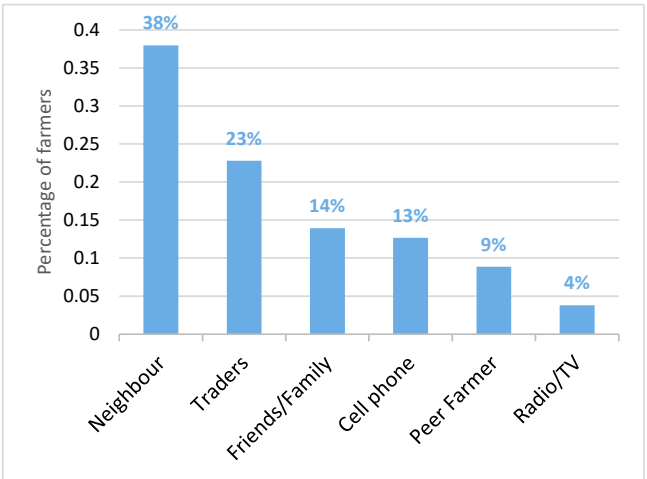


Figure 10: Source of market information

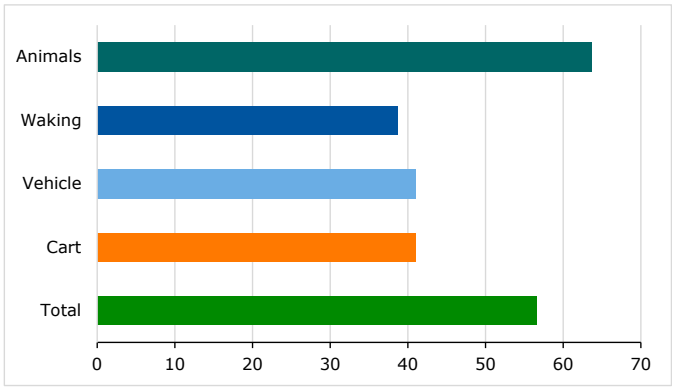


Figure 11: Means of transport to market

cell phone (12.7%). The formal communication and peer farmer influence in the market information transfer is so small, which is 3.8% & 8.7%, respectively.

Regarding the means of transportation, as shown in Figure 11, the baseline study identified animal pack transportation as dominant means (70%) followed by cart (14%), walking (11%) and last option is vehicle/ bajaj (5%). Comparing two *kebeles*, more number of households in Bombe zuria uses cart and walking compared to HHs in Ajora. According to FGD, HHs travel to *woreda* centre for justice, health services, and marketing places (towns) like Areka, Sodo & Hadero. Bombe zuria *kebeles* is nearer to Bombe town, capital of Boloso Bombe *woreda*, compared to Ajora and also short-cut road access to *woreda* town from Ajora is not conducive for either cart or vehicle in which they usually use animal.

As shown in figure 12, the majority of the baseline survey respondents (59%) mentioned high prices of agricultural inputs as major challenge for marketing, followed by lack of transportation facility (46%) for input and produce. Other challenges that determine marketing are undiversified product (37%) and long distances for market places (26%). Small proportion of respondents (18%) described the three challenges including low prices for productions, poor quality of inputs or products and lack of credit facility for the purchase of input as challenges for agricultural marketing. During the focus group discussions farmers mentioned lack of cooperatives for input purchase and distribution and market distance from their *kebeles* are among the determinant factors for input marketing. Besides those challenges, the *woreda* is food insecure and even not producing sufficient for consumption let alone surplus for marketing.

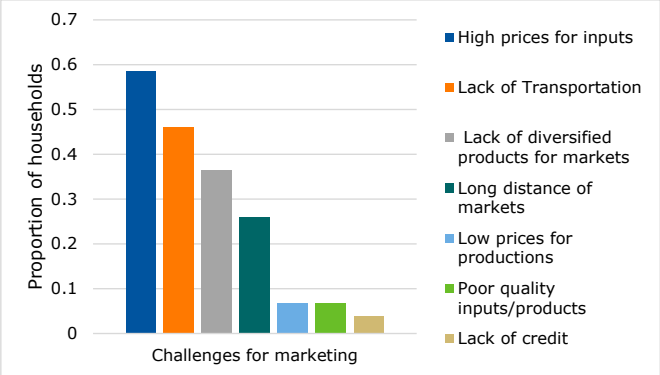


Figure 12: Challenges in marketing

Priority topics identified and validated by stakeholders

- Improve market access (both information and access)
- Diversify products for market and consumption
- Well-functioning cooperative service for efficient channeling of agricultural inputs and other goods

Individuals testing different recipes made by Areka ARC nutritionist (Above)
Farmers and other stakeholders evaluating research activities in the field at Gumer woreda (below)
Photo taken by: Andualem Tadesse

5 Credit and financial services

In rural areas, micro-finance institutions and finance cooperatives can be major sources of finance access. The only financial institution supposed to serve the rural community in the two surveyed *kebeles* is Omo MFI (OMFI) based in the *woreda* town but had agents in the *kebele* in the past. During the focus group discussion, the discussant indicate that Omo MFI is upgraded into a rural bank. The different discussant groups during FGD mentioned that though there was OMFI service in the *woreda* town, the service provision designed through long bureaucratic steps hinders access of women and youth for finance. The stiff collateral arrangement, poor business plan development, the poor commitment of the majority of small business cooperatives, poor repayment rate of loans, and poor commitment of MFI service providers contributed significantly to the poor financial access. Because of such many challenges, credit and financial service is almost nil. Even currently, this MFI is changed to a commercial bank system that will no longer serve the rural community.

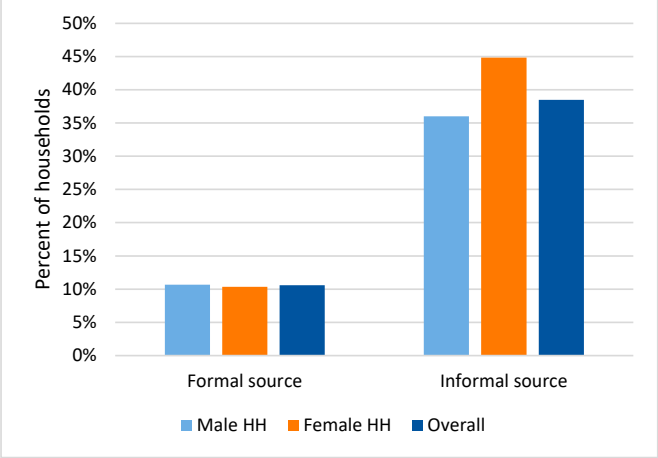


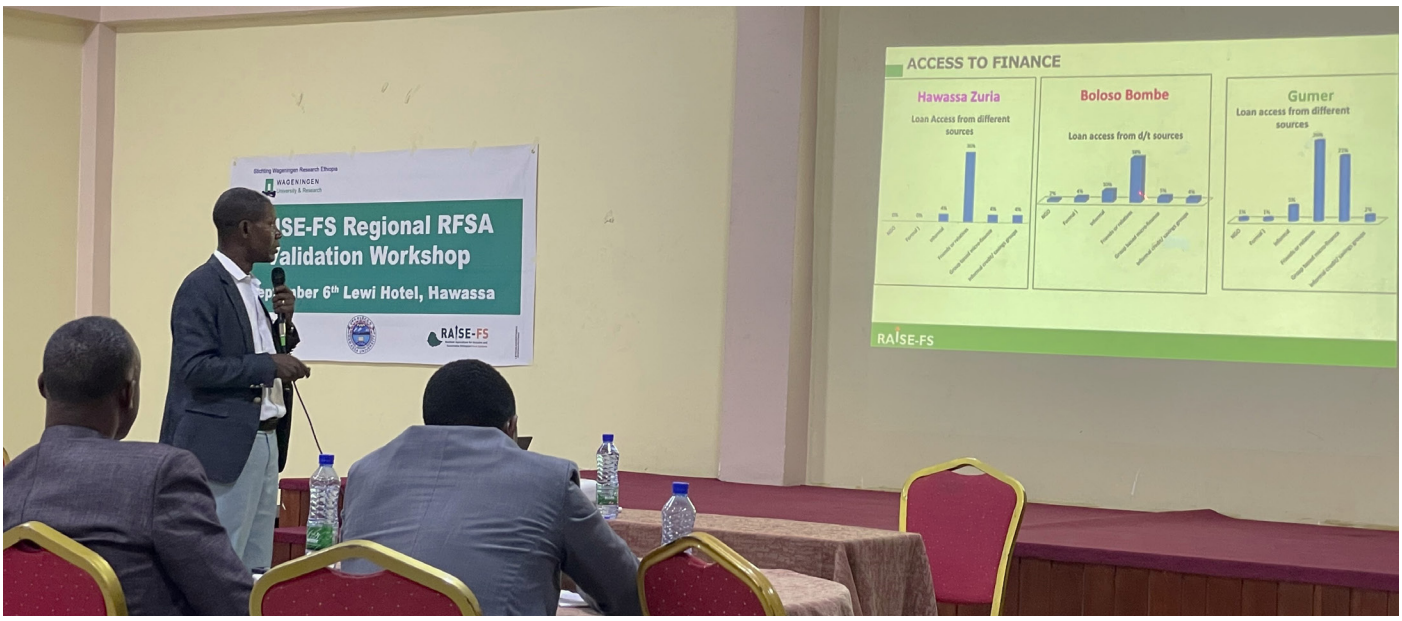
Figure 13: Proportion of households who have access to credit

From the baseline data (Figure 13), one can understand that the formal loan sources (MFI) are not far from 10% while the informal source (idir, equib, friend/or relatives, private lenders) plays a significant role. According to the 2018/19 World Bank survey report (Achew et al., 2021), about 48.3% of the respondents were found reliant on relatives & neighbours both of which are informal sources. The male and female headed households have more or less similar access to formal loan services. However, the female headed households (44.8%) have better loan experience from the informal sources than the male headed households (36%).

Unless financial access is improved, the unemployed rural youth will be more desperate, and it may aggravate social crises. The government programs should be genuine enough to create a conducive environment for the youth by facilitating access to credit facilities.

Priority topics identified and validated by stakeholders

- Improve access to financial institutions particularly for youth and women



RFSA and baseline study result validation workshop at Hawassa
Photo taken by: Andualem Tadesse

6 Food and nutrition security

Both baseline and focus group discussions indicated that the two *kebeles* are under serious food shortage conditions in terms of both quantity and diversity. The dietary of the diet is mainly dependent on seasonal agricultural changes which depend on rain-fed farming. Both *belg* and *meher* season agriculture production falls in the *meher*e harvesting season which extends from October to December. According to FGD, the main factors which influence the dietary diversity in the two surveyed *kebeles* are season of the year, and the economic status of the family. During the bad season, there is a high food shortage and during the good season family consumption depends mostly on production from own farm and homestead. Under both bad and good seasonal situations, in relative terms, wealthy families consume a higher variety of foods compared to poorer ones. The food insufficient months in a year are almost the same for both female and male headed households, with a critical shortage between March to July (Figure 14) and a lean period of May and June. Relatively, food-sufficient periods in a year are short and last between August to November.

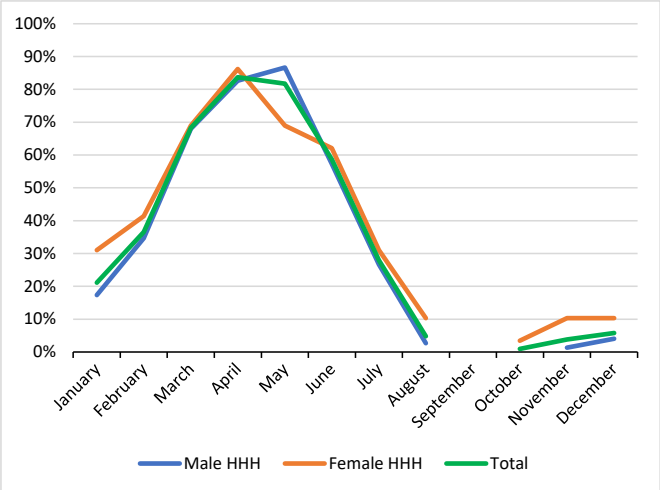


Figure 14: Proportion of households having insufficient food in different months of the study year (2022)

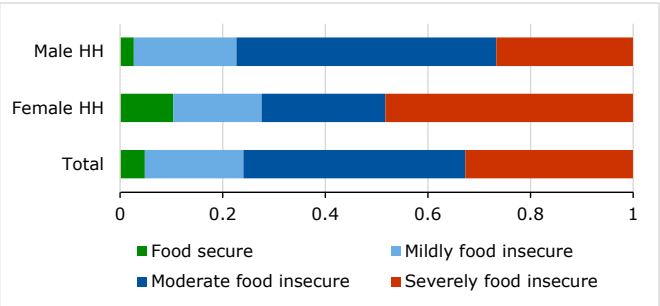


Figure 15: Proportion of households categorized in different stages of food security levels [3]

[3] https://www.fantaproject.org/sites/default/files/resources/HFIAS_ENG_v3_Aug07.pdf

The baseline survey result indicated that majority of the household (both male and female headed) from the two *kebeles* are either moderately or severely food insecure at the household level. A small proportion of the respondents (5%) mentioned that the households are food secure.Whereas 19.2% of the respondents are mildly food insecure (Figure 15). The *woreda* is categorized as one of the PSNP *woredas* in the SNNP Region and this situation was aggravated due to intermittent rainfall patterns in the *woreda*. From the FGD, the interviewee mentioned that the food insecurity situation has been very serious since the incidence of the ginger disease complex in the area and as a result people became dependent on government aids. There are rivers in nearby, however, there is no irrigation facility in those two *kebele* like the way it is practiced in the neighbouring Boloso Sore *woreda*.

An individual dietary diversity score (DDS), count the number of food groups that an individual has consumed over the preceding 24 hours. The food groups including nuts & seeds, meat and egg were not consumed by any of the interviewed individual. Meat and egg were not consumed due to fasting (since most of the residents are

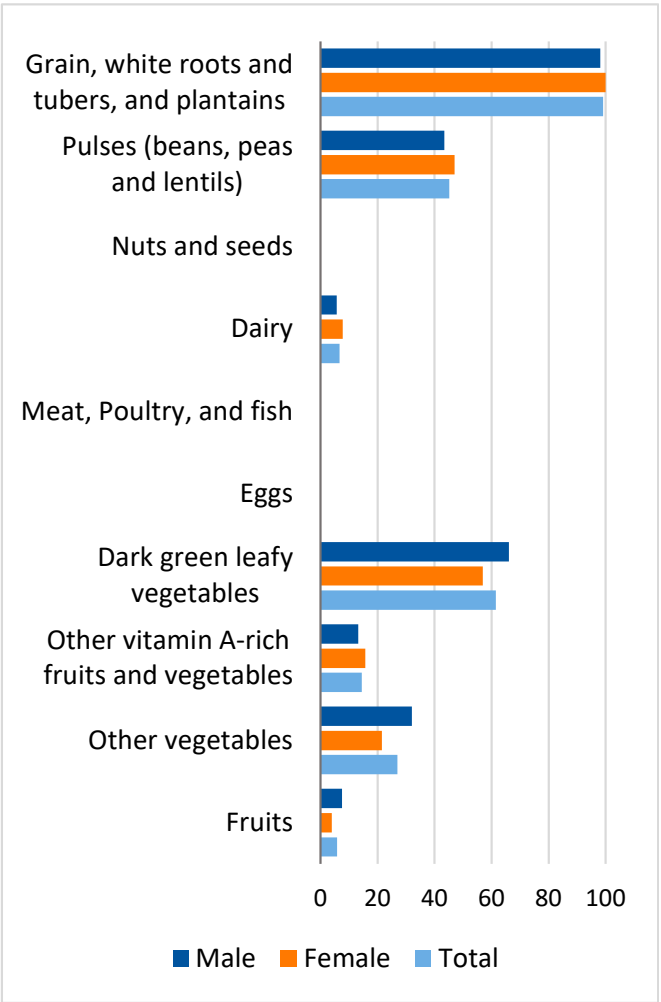


Figure 16: Food groups consumed in the two study *kebeles* of Babile within 24 hours

the Protestant religion followers) but due to unavailability at individual/ household level. The dominant food groups consumed were grains and root/ tubers followed by leafy vegetables (mainly kale), and pulses (mostly common bean). Dairy production is mainly for the market and thereby consumption is limited (7% of people consumed dairy in the last 24h). In the two surveyed *kebeles* avocado, banana and mango are common fruits and during survey period, it was not harvesting season for both mango and avocado that is why the consumption amount is very small. According to FGD, the dominant foods consumed are maize kita (bread) with boiled kale, maize boiled mixed with common bean, boiled taro root with spice chili and fruits (mango and avocado) which is in line with the baseline survey result. From the survey and focus group discussion indicate that consuming a variety of food groups is challenging in the two study *kebeles*.

The mean dietary diversity score for men and women is more or less the same with scores of 2.7 and 2.5, respectively. The same data shows that 56% females of reproductive age (15 to 49 years) consumed maximum of 3 food groups. The majority of interviewees consumed three (Cereals, pulses, and vegetables) or fewer food groups in the last 24 hours. Nutrition-dense food commodities such as lean meat, vegetables and fruits were the least consumed food groups. Only 12% of women of reproductive age consumed the recommended 5 or more food groups. Consuming 5 or more food groups is associated with a lower change of micronutrient deficiencies. This survey was conducted in a period when most of the households experience critical food shortage, and there has not any factor like fasting or taboo related to consumption of lower food groups per day.

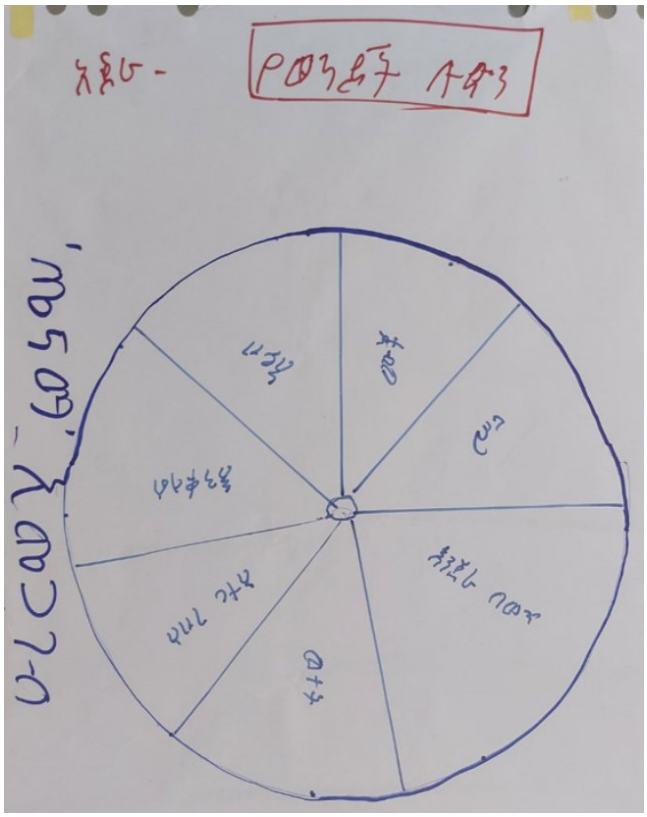


Figure1 17: Healthy diet according to men FGD

The plate of HH diet is influenced by the HH's wealth status and the harvesting season of those food ingredients. Most of the food ingredients are available during the period of August to December, whether the crops are cultivated either in *belg* or *meher* seasons. Though wealth and seasonal variations were mentioned as factors, the FGD respondents agreed that almost all the community members consume similar plate of diets from maize, kale, taro, milk and cheese prepared in different plate typologies. The major standard plates are kita (made from maize flour) with boiled kale, kita with milk or cheese, boiled taro and boiled maize-common bean mixed seed. There is slight variation among the households consuming in the amount and frequency. Relatively better wealthy household families consume larger amount and they can also consume thrice a day compared to the poor, only consumes small amount and maximum of two times a day. The FGD indicated healthy meal as those that contains animal products (milk meat, egg), pulses (common bean, faba bean and dry bean), root crops, vegetables, cereals (tef, maize and barley), fruits (banana, mango, avocado) and butter. Due to lack of availability of those healthy foods in local and poor purchasing power of the rural community, the family members of most households are not using the healthy meal.

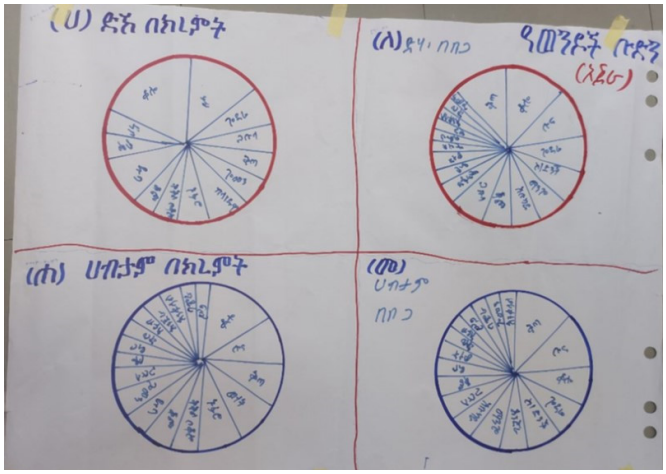


Figure 18: Ssasonal and wealth status variation quadrant of

Priority topics identified and validated by stakeholders

- Increased safe water, dietary diversity and nutrition dense crops
- Safe use of pesticides, especially for ginger
- Improve understanding about healthy diet

7 Inequalities based on gender identity and age

Inequalities based on gender identity and age are pervasive in most communities in Ethiopia and this is not an exception in Boloso Bombe (Gebre 2020). Gender identity and age can intersect with other factors of discrimination and exclusion, such as ethnicity, religion, socioeconomic status, disability, geographic location, and sexual orientation, creating multiple and complex layers of oppression and marginalization.

Insights generated from the baseline survey conducted in two *kebeles* of Boloso Bombe *woreda* shows how women and youth (both female and male) are challenged with different factors that contribute to their disempowerment. From Figure 18 below, we can learn that men, women, and youth are not equal in their availability and access to leisure, workload, speaking in public, group membership, control over the use of income, access to and decision on credit, ownership resources, and inputs in production decisions. Out of the three groups, women are particularly disadvantaged due to less leisure, having a high workload, difficulties with speaking in public, and limited input in decision making about agricultural production and inputs use. The score of disempowerments for youth is far higher (0.446) than for women (0.264) and men (0.161), and this is mainly due to their limited control over use of income, limited group membership, and limited access to and decisions on credit (Table 8). During the FGD in both Bombe zuria and Ajora *kebeles*, respondents explained that youth are highly disempowered and become desperate due to lack of access to credit facilities to solve their unemployment problem. Besides, they further mentioned that youth are not considered to represent household issues in the community and they are not even part of the decision making in case of production and income use decision. Since youth are under their family control, their role is to support men and women in different agricultural activities and different chores in the HHs.

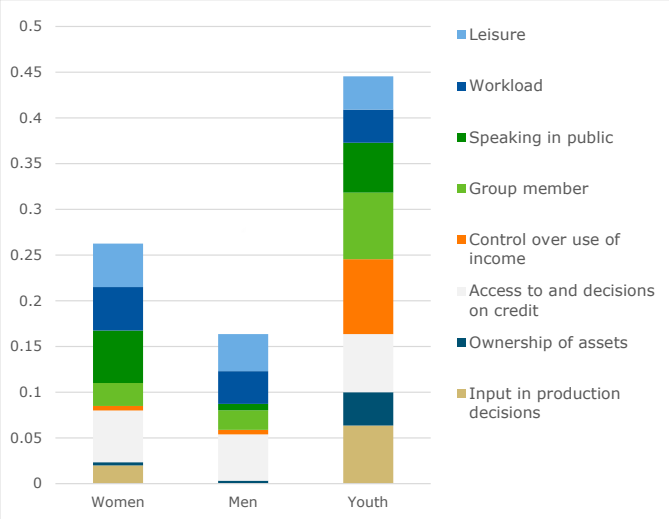


Figure 19: Women empowerment in agriculture (WEIA) score. Weighted score of the % of people classified as disempowered in specific domains[4].

Women's disempowerment and ideal women

The WEIA indicates women are highly disempowered in speaking in public (57.5%) compared to both youth (54.5%) and men (7.1%) groups (Table 8). The cultural norms and the community tradition hampered women from speaking in public. For example, women are not invited to sit with men for a meeting and if so, they are not given chance to comment on point of discussion. Even if they seldom given the chance to comment, women themselves suggest the men to speak on their behalf. In Wolaita culture, married women cannot call the name of her father-in-law in any case as pretext of rejection. The focus group discussion also underscores the ideal woman for the community is one who is calm, decent and does not voice their opinion and perspective in public. Similarly, women also experienced high workloads (50%) and less leisure time (47.5%) compared to both men and youth groups. The FGD confirmed that tasks like food preparation, house cleaning, child care, caring of livestock, fetching water, fuelwood collection, and caring old & senile people are exclusively considered as women task. However, they also fully participate in the farming practices like sowing, cultivating, weeding, harvesting, and threshing practices beside their reproductive activities. Following women, youth female also experienced higher

Table 7: Percentage of women, men, and youth classified as disempowered in different domains using the WEIA cut-off values

Respon-dent	Input in production decisions	Ownership of assets	Access to and decisions on credit	Control over use of income	Group member	Speaking in public	Workload	Leisure
	%	%	%	%	%	%	%	%
Women	10.0	2.5	95.0	2.5	25.0	57.5	50.0	47.5
Men	0.0	2.4	95.2	2.4	21.4	7.1	40.5	40.5
Youth	31.8	27.3	100.0	40.9	72.7	54.5	36.4	36.4
Overall	10.6	7.7	96.2	10.6	33.7	36.5	43.3	42.3

disempowerment on input in production decisions. The ideal women (Figure 19) good characters includes hardworking, loyal, obedient, respectful to any person (irrespective of age and status) and dresses good.

Youth's disempowerment and ideal men

The WEIA score indicated that youth people face sever challenge with access to and decisions on credit (100% of interviewed people is disempowered in this domain). This is higher than for both women and men groups. The collateral requirements to access finance and low social capital for group lending is the main reason for the youth's poor access to credit services. Similarly, the youth disempowerment of control over the use of income (40.9%) and ownership of assets (27.3%) is comparably high vis-a-vis the men and women groups in the indicated domains of empowerment. The group membership disempowerment of youth (72.7%) was also found to be the highest compared to both men (21.4%) and women (25%) groups. It was explained during the focus group discussion that, in the community groups like edir, equb, government administration structure and church services, youth are not part of the group. This drawing also depicts the bad characters for male and female youth. The common bad characters described for young females and males including laziness, disobedience (to parents), abusive, wear purposely torn closes, and disrespectful to people. However, the bad characters specific to girls including cheater, gossip girl and with hair style out of the cultural social norms. In case of the young male exclusive bad characters are being drunkard, looter, disrespectful to social norms and crazy hair style. The men and women FGD respondents clearly indicated those bad characters for youth group and they further described that youth show such type of bad habits due to frustration and hopelessness in their future due to lack of employment opportunity and lack of access to resources (especially land and credit).

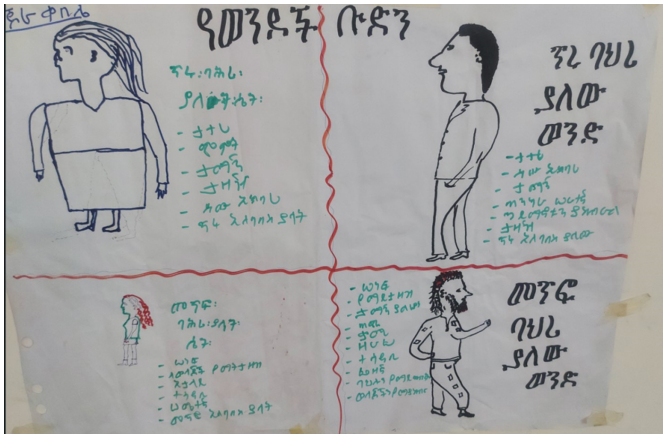


Figure 20: drawing of ideal women and men as described by FGD. Mentioned characteristics: hard worker, responsible, loyal, disciplined, loves his/her family and respect all people, friendly, sociable, genuine, calm, decent , principled, and well dressed

Men's disempowerment and ideal men

Unlike women and youth counterparts, relatively men encountered fewer disempowerments in most domains. However, the men's disempowerment percentage of 95.2% in access to and decision-making on credit is very high. In the focus group discussion, the discussants indicated that the Omo microfinance transition to the formal bank has created a gap in the community's access to credit. Men also experienced less leisure time (40.5%) following women (47.5%) compared to the youth (36.4%) group. The ideal men (Figure 19) good characters includes hardworking, loyal, obedient, respectful to any person (irrespective of age and status) and dresses good. In addition to this good ideal man should be religious which is not necessarily in the case of women.

Priority topics identified and validated by stakeholders

- Reduce workload on women
- Improved finance access for youth and women
- Better employment opportunities for youth
- Increased household level decision power for both youth and women

8 Policies and government support

This *woreda* profile is envisaged to solicit commitment from the government of Ethiopia (GoE) to transform the current food system, as part of the UN Food System summit initiatives. The baseline survey and RFSA, conducted in August 2022, have highlighted six thematic areas that contribute directly or indirectly to the Ethiopian food systems transformation. These six thematic are presented and discussed in the following section.

Diversified and nutritious food system

This thematic area encompasses different aspects including a functional input delivery system, the existence of cooperatives, credit facilities for cooperatives, value additions, and improved storage technologies in case of surplus production to avoid wastage and sustain market linkage. Currently, this *woreda*'s food security is highly dependent on external sources from the market or any other means like the Productivity Safety Net Programme (PSNP) and remittances (both from abroad and in country) that households receive for food. The policy support to encourage local level production and food self-sufficiency is a priority given by the government despite many prevailing challenges (like input shortage, intermittent rainfall distribution, disease and pests of crops and livestock, post harvesting loss, poor market linkage, etc). The policy is also supporting the year-round production by developing irrigation scheme and as a result the diversified food availability, income for the family from sale of surplus product and nutritious food consumption from local production.

Improved government finance provision:

Access to finance in the agriculture sector is very limited and rural communities depend more on informal credit sources. However, at the policy level the government is supporting and requesting banks to arrange different credit schemes for rural farming communities. Credit providers that normally request signing of collateral for credit are favouring those HH with land ownership and excluding youth and women from being able to access credit facilities. In the surveyed *kebeles* the youth feels desperate and increasingly looking for alternative livelihoods. As a result some male and female youth migrate out of their locality to big towns in the country and live on low pay activities and this needs government attention and close follow up.

Agricultural innovations and technologies

Currently, the *woreda*'s production system is mainly dependent on rain-fed agriculture and a limited crop choice. The irrigation infrastructure under construction in Boloso Bombe *woreda* is targeting year-round production of crops and forages for livestock which will contribute in tackling food and feed shortage. This will further have the potential to improve vegetable production, fruit production, soil and water conservation, agro-forestry system, crop rotation, cash crops and strengthen the resilience of the households in the face of climate change and other shocks.

Access to market and market information

Around the area, markets are limited to *woreda* towns and other nearby towns in other *woredas* like Areka (Boloso Sore *woreda*) and Hadero Tunto. Previously market information was mainly associated with ginger production, which was a dominant cash crop, and currently, no other product is sold to other markets. Therefore, input market access and information delivery system are important to boost production, which can be facilitated side by side with irrigation access. Besides, the output market information system should be strengthening to sustainably support production.

Targeting marginalized community parts

In the surveyed *kebeles* of Boloso Bombe *woreda*, youth are the most disadvantaged group followed by women and remotely located rural residents (who often do not have access to roads, government services and marketplaces). Large numbers of youth cannot find job opportunities locally, despite the government's special emphasis to create job opportunities for the youth. For women, one of the key challenges is accessing safe drinking water. The government and different projects have developed water points nearer to each village. However, maintenance of those water points is poor and only a few are functional. Therefore, maintenance issues should remain equally important to development of water points to sustain the availability of water to local community.

Overview of projects implemented in Boloso bombe

Boloso Bombe *woreda* is one of the Productive Safety Net Program (PSNP) beneficiary *woredas* in the region. This program has two components; one is direct support for needy families and the second one payment for labour work for different interventions like soil and water conservation. The yearly campaign of soil and water conservation (SWC) is a national government campaign done during December and January every year, which is also implemented in the *woreda*.

Opportunities and challenges in a food system perspective

An overview of the most important opportunities and challenges, as identified through the RFSA and baseline surveys and validated by the stakeholders, are presented in figure 20. The challenges are formulated into goals, specific activities and interventions and placed into a food systems framework.

This overview illustrates how the identified opportunities and challenges are scattered throughout the different areas of the food system framework. In addition, it portrays how opportunities interlink and mutually contribute in specific ways to specific food system outcome areas.

Understanding and managing trade-offs and synergies in the food system

Food systems are by nature complex and dynamic and are characterised by interconnected, non-linear relations between the system elements and outcomes. When looking at any food system, one must be explicit and intentional to understand how certain activities affect different food systems outcomes, both positively and negatively.

An analysis of potential synergies and trade-offs is essential in understanding how food system outcomes at times compete and conflict with each other. For example, activities focussing on the production and productivity of staple crops have the potential to generate positive benefits in terms of yield increases with synergies that translate to the generation of income for farming HHs and contributions to improve food security at national level. Nevertheless, these activities might also generate negative trade-offs such as the formation of acid soils due to excessive use of fertilizer. In addition, a focus on staple crops might negatively deteriorate HH nutrition security and HH dietary diversity when farming HHs do not utilize the increased income to purchase healthy and nutrient dense food products. Another example of system behaviour is how activities to promote home gardens can improve the production of nutrient dense crops with potential synergies to enhance HH dietary diversity and to create a series of alternative livelihood and employment opportunities for women and youth in sector related support activities such as transport, value addition, distribution etc.

A system analysis reveals that the promotion of home gardens can also potentially generate trade-offs that have a negative impact on producers, consumers and the environment. For example, home gardening has the potential to increase the labour burden for women in the HH. In addition, the excessive use of fertilizers and pesticides in home gardening activities has the potential to negatively affect the health of producers and consumers but also has a negative impact on the environment. When designing any type of food system interventions, one must be explicit and intentional to try to understand and manage how specific interventions can affect different food system outcomes. Understanding how trade-offs and synergies affect the food system and being explicit about how certain interventions can create trade-offs and synergies can support the design of bundled intervention packages, that actively pursue integrated approaches, designed to address multiple systemic food system issues.

Focus group discussion during RFSA with female (left), stakeholder (middle) & men (right) groups at Bombe zuria, Boloso Bombe woreda

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List of abbreviations:

AARC	Areka Agricultural Research Center
AEZ	Agroecological zones
DA	Development agent
DDS	Dietary Diversity score
ESS	Ethiopian Statistical Service (formerly, Central Statistical Authority)
FGD	Focus group discussions
FHH	Female headed households
HH	Household
m.a.s.l.	Meters above sea level
MHH	Male headed households
MFI	Micro-finance institutions
OMF	Omo Micro Finance
PSNP	Productive safety Net Program
RFSA	Rapid food system appraisal
SWC	Soil and Water Conservation
UN	United Nations
WEIA	Women empowerment in agriculture
Qt	Quintals (10 Quintals = 1 metric tonne)

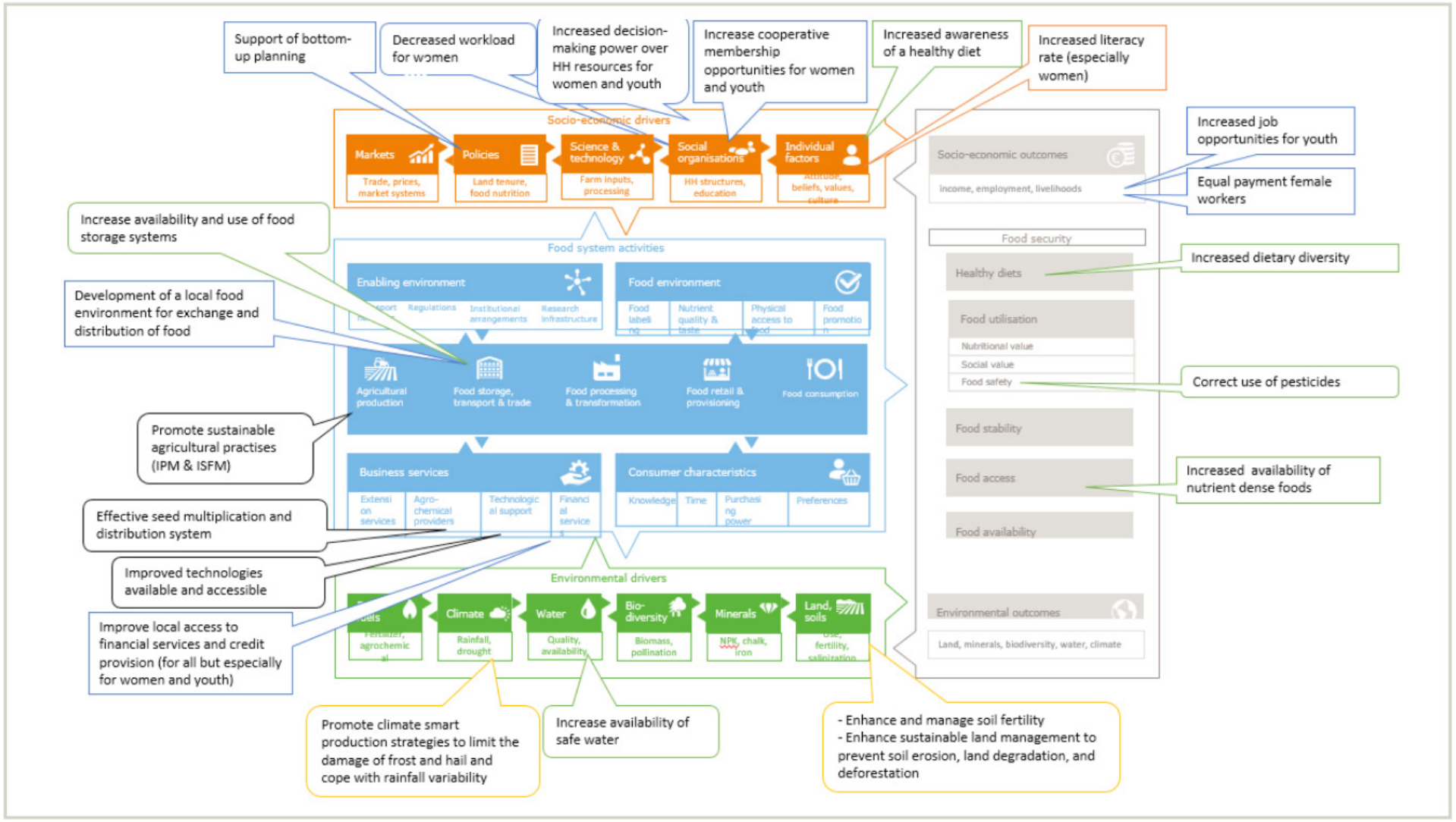

Figure 21: Identified priority topics in a food systems perspective (following van Berkum et al., 2018)

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