

## Summary and Conclusion

This chapter of the study provides summary of the research study and gives an overview of food security and livelihood resources conditions of smallholding farmers in Kilte Awelalo. Kilte Awelalo Woreda is located in the eastern part of Tigray region and has 19 *Kushets*. The areas selected for the study are Ayenalem, Genfel and Tahetay Adikesanded. Moreover, the principal input for the study, primary data, was collected by using structured interview schedule to 370 households coupled with interview for officials and local leaders was conducted. Various data analysis methods ranging from descriptive to econometric regression tools were used to assess the complex issues of food security and livelihood. This chapter presents the summary, recommendations, social work interventions and scope for further studies.

The study aimed to address a gap in the research which revolves around food security and livelihoods of smallholding farmers in Kilte Awelalo. In the Universal Declaration of Human Rights Article 25(1), it has been stated that everyone has the right to a standard of living which is adequate for health and wellbeing of themselves and their family, including food, clothing and shelter. This declaration has been accepted by many states quite long ago, yet, there has not been any significant political commitments which has paved a way for hunger, starvation and malnutrition.

Concomitantly, the purpose of this particular study was to reveal and gain insights in the food security and livelihood conditions of smallholding farmers in Kilte Awelalo. Thus, the specific objectives set were to assess households food security condition, to examine the extent of

control and access that small holder farmers adopt on livelihood resources, to identify factors determining rural food security and livelihood resources at household level, and finally to identify local coping mechanisms employed by the smallholding farmers for food security and livelihood strategies in the study areas.

### **Livelihoods**

One major finding is that, despite the low level of crop productivity which is mainly attributed by local weather and environmental conditions, the livelihoods of majority smallholding farmers remains undiversified. Their primary source of livelihood mainly depends on the rain fed small-scale agriculture. Moreover, the study has employed Sustainable Livelihoods Framework to assess the livelihood resources and strategies of the smallholding farmers. Accordingly, majority were found in child age group (between 0 to 14 years) which requires a huge investment in socio-economic supports like health and education. With regard to education, there is a remarkable participation of children in schools where about 92% were enrolled in a formal primary education typifying Government of Ethiopia's objective of reaching out 'primary education for all'. Another feature which was noticed was average household size was relatively higher which creates a challenge for food security and related parallel costs of living.

In the study areas, farmland holdings was found to be highly fragmented and by far less than the national average land holding figures. Moreover, majority of the respondents own land and the rest who do not own were sharing in or renting a very low fertile land as they are unable to get access to the fertile ones. Moreover, it was found that there was no electricity supply in all the three study areas coupled with water access limitedness which is affecting directly the quality of human capital in households.

Taking into account of the study areas' agro ecological consignations, it was observed that there is a relatively better access to portable drinking water, though the safety and cleanliness are farfetched. As there is no private tap water service and limited protection of the communal tap services, there is a dire need for treatment of the water before consumption, though majority do not use water treatment mechanisms. It was also noticed that the number of communal taps were found to be highly limited and there is a sense of lack of ownership, once broken, there is no one to follow up and fix them up. Furthermore, majority of the respondents use municipal hospital and health centers as important source for treating sick household member/s and only very limited number of households took to traditional healers. The study also found that there was no loss of life due to malnutrition though it was noticed a high prevalence of unnatural deaths from HIV/AIDS.

In addition to this, almost half of the households were not having enough number of oxen which is an important source of traction power. In times of shortages of oxen, majority get access from neighbors and relatives. It was also noticed that there was a slight decrement in the total livestock holdings of households as compared to the previous year mainly due to sale of animals for cash.

The average distance and time taken to cover far off distances to reach nearby markets highly affect the livelihoods of the people especially where means of transportation facilities are very limited. Moreover, majority added that there is no need of having market information as there is nothing much to deliver. In the study areas, traditional associations like *Equib*, *Idir* and labor sharing culture are benefiting farmers in getting access to credit, labor shares and various supports. Moreover, it was observed that there is a high trust among the farmers which is a crucial factor in cases of lending and borrowing. Dedebit Microfinance Institution is the well-known and the

solitary operating microfinance institution in the study areas engaged in provision of saving and credit facilities for smallholding farmers. However, there is yet much to be done in outreaching the services of microfinance institutions in parallel with awareness creation on the importance of credit among the smallholding farmers.

Respondents were composed of both male and female headed households with majority of male headed households. Due to the high demand of more physical force and the socio-cultural attitude towards female farmers, it does not encourage women to engage in various agricultural works and economic activities. It was also noticed that majority of the household heads were in the old age group and more than half of sample household heads were not having any formal education. Nonetheless, the economically productive age group of 21-34 were having a relatively better literacy level comparing to other age groups.

Another major finding was farm land ownership and its great significance in the number of crop varieties production in the study areas, where households owning farmland were having a higher number of crop varieties production. In addition to this, the major types of crops produced by the smallholding farmers in the study areas in descending order are wheat, *Teff*, and sorghum. In addition, cash crops production was found to be one additional source of income generation and better food consumption of nutritionally adequate food types. The major cash crops produced by some of the smallholding farmers in the study areas include onions, tomatoes, potatoes and some fruits. Majority of the smallholding farmers added that their cash crops production is limited due to challenges like capital to gain access to irrigation system, improved seeds, shortage of fertile cultivable land and the intensive time consuming hard work on crop production.

## **Food security**

With regard to food consumption patterns of smallholding farmers in the study areas, households with acceptable food consumption were very limited in number whereas the largest share was seen in the borderline food consumption and finally followed by poor food consumption. It was noticed that the number of households with poor food consumption was as high as half of the total sample population. Moreover, majority of the sample households revealed that their production yield has decreased as compared to the previous years.

In concomitant to this, farmland size was found to be a major classificatory ground for wealth holding differences among the smallholding farmers in the study areas. Basing on this, majority were belonging in the wealth group of ‘poor’ and are the ones with the poorest food consumption while there were no ‘rich’ wealth ranking with poor food consumption score. Similarly, it was found that households whose production yield increased from the previous years had a better position with food consumption pattern. Moreover, it was found that female headed households were having a reduced amount of household food consumption as compared to male headed households. It was also found that there was no female headed household having an ‘Acceptable food consumption’, majority were having a ‘Poor food consumption’ score. Likewise, there was no household with acceptable food consumption who is either running out of food or have a fear of running out of food before reaching the next harvest season.

Regarding food availability, it was found that there is a relatively low average number of months of adequate food supply in the study areas. In addition, there was a significant relationship between Food Consumption Score and Months of Adequate Household Food Provisioning (MAHFP) where households with higher number of months of adequate food supply were the ones with an acceptable food consumption pattern. On the other hand, BMI assessment also showed

that majority of the respondents to be in a normal range of BMI, nevertheless, the number of population who are underweight was not negligible. Lastly, the three indices were combined in order to classify households food security condition and basing on that it was found that more than one third of the total sampled population are chronically food insecure, about half of the population were transitory food insecure and the rest small number of households were food secure.

### **Determinants of Livelihoods**

Regarding the determining factors of livelihood resources and strategies, five significant determining factors were brought to light. The significant variables were education level of the household head, household size, agricultural extension visits, use of modern fertilizers, farm land size and finally farmers' association membership with distinct levels of significance and impact. Majority of the smallholding farmers also asserted that lack of capital, proper credit services and time consuming hard work on their agricultural farmland as major challenges limiting them from engaging in diversified livelihood strategies.

### **Determinants of food security**

With regard to determining factors of food security, eight variables were having a significant impact on food consumption patterns of the farmers, namely; education level of; 'Read and write' and 'Less than 8<sup>th</sup> level', household size, high land fertility, distance from main market, irrigation, total number of livestock, and participation in off-farm activities. Regarding Months of Adequate Household Food Provisioning (MAHFP) nine variables were found to have a significant impact namely; age, education level of 'read and write', land size, farmers with highly fertile land, irrigation, improved seed, fertilizer, access to agriculture extension service and food aid Finally, concerning the determining factors of Body Mass Index (BMI) of household members, education level of; "Read and write", "9-12 level" and "College Diploma", household size, land size, food

aid, use of improved seeds and irrigation were found to be significant at distinct levels of significance impacting BMI of households.

### **Coping Mechanisms**

In the study areas, it was found that majority smallholding farmers to cope up and fulfill the basic necessities of their household's in times of shocks and vulnerabilities, they adopt strategies such as buying less amount of agricultural inputs, taking loan or getting into vicious circle of indebtedness, cutting health/education expenditures, sending member of household for a job abroad and begging in descending order to fulfill their basic necessities.

In concomitant to this, households were also found adopting different strategies in times of food shortages, mechanisms such as cutting the number of meals they consume in a day, eating less preferred foods like wild foods, selling livestock and/or their products, entailing grain/cash credit, engaging in household relief assistances like food aid and finally forming *Equib* in descending order to cover up their food gaps.

Programs such as safety net were designed to strengthen the response ability of households towards various shocks and to build their asset base to combat these shocks. In line with this, the study found out that majority of the respondents were beneficiaries and recipients of safety net program and majority were satisfied with the benefits and services rendered by the program. It was also found that majority of the safety net program beneficiaries were the ones with 'poor' wealth ranking, nevertheless the number of better-off households who are receiving safety net program was not negligible.

## Recommendations

The findings of this study have important implications on food security and livelihood resources and the determinants in the choice of livelihood strategies which in turn would help policy makers in designing and implementing more effective programs and policies for the poor and to help pave a way to improve food security in Kilte Awelalo Woreda.

Besides the recommendations, the study has incorporated social work centered interventions to highlight the significance of social work profession in various segments of the challenges faced in the study areas. Social work is somewhat a new profession in Ethiopia and the benefits of this particular profession to wellbeing and health is not well recognized. Academic, research and professional training institutes in the country should be more encouraged to offer social work as one major field of study to enhance the benefits from this profession. Social work is a young concept in Ethiopian case, yet emphasizing for the government on social workers can support alleviate poverty through facilitating peoples' participation and enhance government roles in the lives of the poor. Rendering assistance with concrete needs in the efficient ways to assist the poor can be better done by social workers. These needs include basic requirements such as food, clothing and shelter coupled with health care, social benefits and child care. Accordingly, the following recommendations were designed in order to benefit for those interested in intervening with the issues under consideration.

1. One of the most decisive factors in the livelihoods and food security condition of the smallholding factors was land. Count of landless and undersized farmland holdings was highly prevalent and policies should be designed or revision of land reform policies are



necessary to increase per household farmland holding sizes such as enhancing voluntary resettlement programs and others.

2. Modern agricultural inputs such as irrigation, improved seeds and fertilizers should be more provided in a subsidized manner coupled with trainings on their adoption especially with regard to irrigation. Moreover, agricultural extension trainings and visits need to be redesigned in a way that will not have an impact on the farmers working time and other crucial times.
3. Cheaper substitutions for motor water pump such as pedal pumps should be introduced for the smallholding farmers in a subsidized and affordable prices. Furthermore, identification of the actual beneficiaries needs to be done to avoid misappropriation of the resources. Social workers can also assist development agents in selection and identification of beneficiaries for various programs such as safety net.
4. Provision of communal tap water services should be increased to decrease the burden of children and women. In line with this, ownership sense and feeling should be created among the community for the protection and better use of taps. Respective village leaders should take in charge after the plantation of the taps to coordinate smooth maintenance and other supporting works. Similarly, NGOs can facilitate the community mobilization to own the process of maintaining the community assets and monitor the same for proper functioning.
5. The involvement of women in economic activities is very negligible and formation of self-help groups in the communities will help them to act collectively towards meeting their livelihood needs. Social workers can help and engage in organizing the vulnerable and poor

for utilizing their assets and join them with additional resources to construct local systems such as community resource identification and utilization approaches, formation and organization of Self Help Groups coupled with follow up supports to such organizations towards self-sufficient economic activities.

6. Moreover, more micro financing services and opportunities should be introduced and facilitated for the poor in the *Woreda*. In line with this, social workers can promote their participation in entrepreneurship activities and enhance financial status through microfinance and bank linkages.
7. Habitual food consumption patterns should loosen up through trainings and awareness creation programs on nutritional values of food for an enhanced food consumption pattern. In line with this, drought resistant varieties of crops and local vegetables should be introduced for a better food consumption. Moreover, direct food aid support should be rendered for the poorest households to avoid devastative impacts of malnutrition. Here, social workers can help promote awareness to the smallholding farmers concerning the significance of food consumption patterns and in empowering them to fight for their right to sufficient food.
8. Supportive trainings and capacity building programs should be provided to help smallholding farmers to actively engage in diversified economic activities.
9. Family planning and HIV/AIDS awareness creation should be promoted for better future of the smallholding farmers in the study areas. Social workers can help in family planning and HIV/AIDS awareness camps through extensive persuasive education and awareness creation programs for the smallholding farmers.

10. One of the most crucial step is the need for a more collaboration of government bodies with NGO's, civil society groups and the private sector to promote people's participation and to make the whole process of implementation transparent and accountable to people. Promoting peoples participation in general and the vulnerable sections of rural society in particular should be treated as a high priority in the decision making process.
11. Social workers can also collaborate with others and use community organization and advocacy skills to start and support social work efforts to enhance livelihood strategies through magnifying the needs of the poor. They can help advocate on the behalf of the vulnerable smallholding farmers who are experiencing discrimination and difficulties to an adequate food supply. Moreover, they can help build cooperation among multiple stakeholders to address local food security issues.

### **Scope for further studies**

The study has come across various scopes for further research which can address different aspects of food security and livelihood resources especially in the study areas as well as in the country. Further studies can be done to assess thoroughly the decentralization and governance system and its impact on food security. Moreover, studies focusing on community resources mapping in the study areas with modern GIS technologies will be a huge plus and asset for development planners and interested stakeholders. Similar research can be extended in such a manner which can comparatively analyze Ethiopia's food security condition with other analogous developing nations in Africa. Moreover, critical studies focusing on limited number of indices such as Body Mass Index of children and women to assess energy deficiency, consumption pattern of children and education status of member of households can be researched at micro level.

Another interesting dimension for further research is on improved seeds and fertilizers adoption status in parallel with food security. In concomitant to this, specific livelihood strategies and resources can be overlooked to assess their impacts on nutrition. Micro financing is also another crucial area which can be researched emphasizing on livelihoods through capacities of local microfinance institutions, loan repayments statuses, savings and etc.