



Women's Participation in Agricultural Development Interventions in Timor-Leste: A Case Study in Ermera Municipality

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Abstract

Women have become a key target of the global development agenda, particularly in developing countries. In Timor-Leste, several development partner agencies have helped initiate support for the government in agricultural development to ensure that women benefit from this intervention. This article focuses on women's participation in agricultural development interventions in Ermera municipality in Timor-Leste. This qualitative research uses a case study approach to have a better understanding of women farmers' everyday lives in rural areas. It uses a transformative worldview because the findings of this research will contribute to transforming the agricultural development of rural women in Timor-Leste in the future. The discrimination against women in agricultural development interventions continues to occur, which has contributed to the lower success outcomes of the interventions. The lack of women's participation in decision-making processes, limited access to agricultural resources and information, and gender-discriminatory cultural practices are acknowledged as the main contributing factors to the failures of current agricultural interventions for rural women in Timor-Leste.

Keywords: *Rural Women; Women Farmers; Agricultural Development; Transformative Worldview; Timor-Leste*

Introduction

After its independence, Timor-Leste remains classified as one of the least developed countries in the world. Its main revenue depends on oil. Yet agriculture is one of the priorities for diversifying the

country's economy. The majority (80%) of the population in Timor-Leste lives in rural areas and depends on the agricultural sector for their livelihood (RDTL, 2018). 66% of Timorese women do farming to sustain their lives (RDTL, 2018). Most of the Timorese population are farmers, including women, who have the highest percentage that depend on the agricultural sector for their livelihood. Since independence, several development partner agencies have initiated support for the Government of Timor-Leste (GoTL) in agricultural development programs to improve rural people's livelihoods, especially rural women, and to diversify the country's economy. To achieve this, rural women's active participation in the agricultural development interventions in every cycle of the program needs to be discussed.

Several literatures have debated about the importance of rural women's participation in agriculture development intervention programs in every stage of the program cycle (Food and Agriculture Organization, 2011; Kaaria *et al.*, 2016; Asadullah and Kambhampati, 2021; Ghosh *et al.*, 2021; Quisumbing *et al.*, 2021). Besides, there are also several references in the academic literature that highlight agencies continue to experience poor participation rates of women in development programs/interventions (Egwuonwu, 2018; Rashid, Kamruzzaman and Mustafa, 2018; Amusan, Akokuwebe and Odularu, 2021; Mulema *et al.*, 2021; Kebede, 2024). Meanwhile, studies have indicated that participation is part of women's empowerment to improve women's knowledge and skills, to be more confident to actively participate in development interventions in the community, and to ensure the sustainability of the development (Olawuyi and Anjorin, 2011; Malapit *et al.*, 2019; Mulema *et al.*, 2020; Shradha and Kumar, 2020; Umar *et al.*, 2020; Ghosh *et al.*, 2021; Pratiwi, Baga and Yusalina, 2021; Smet and Boro, 2021; Tavenner and Crane, 2022).

This article will discuss rural women's participation in agricultural development interventions in Timor-Leste, since rural women's issues have become the priority in development interventions because women are the key contributors to agriculture and rural economics (Rashid, Kamruzzaman and Mustafa, 2018). There were several agricultural interventions done by diverse international development agencies in Timor-Leste; hence, this study will just be focusing on the United States Agency for International Development (USAID) interventions on agricultural programs for rural women in Timor-Leste. USAID's agricultural programs would like to ensure women can become financially independent to improve their livelihoods and to be able to access the same agricultural resources, training, and services as men do (USAID, 2011). Women's empowerment is also part of the United States (US) government's agenda to support developing countries, including Timor-Leste, to stimulate economic growth by increasing incomes and reducing hunger, poverty, and undernutrition. The USAID has highlighted five domains to be prioritized in agricultural development interventions: 1) decisions about agricultural production, 2) access to and decision-making power regarding productive resources, 3) control of the use of income, 4) leadership, and 5) time allocation (Alkire *et al.*, 2013).

This study more specifically focuses on USAID interventions in the horticulture sector for rural women in Timor-Leste to improve their incomes, to become leaders, entrepreneurs/agribusiness, and to be financially independent. Previously, the majority of Timorese were subsistence farmers and had not adopted the technologies and practices required for commercial and sustainable agricultural production. Although USAID has supported the GoTL since its independence to develop the horticulture sector in several municipalities, including Ermera municipality, it is interesting that the project does not have an accurate number of women beneficiaries from Ermera municipality (Social Impact Inc, 2020). Women became the main beneficiaries because gender discrimination in Timor-Leste is more associated with economic inequalities between women and men. In practice, rural women have very limited spaces to access work and information, and even when they do, but mostly as unpaid labor. In this case, rural women continue to be dependent on men financially and continue to be underestimated in family and society because of economic inequalities. USAID's agricultural intervention intends to ensure rural women are financially independent, reduce gender discrimination, and improve livelihood sustainability.

To achieve this purpose, women's participation in agricultural development interventions is one of the main indicators to measure this achievement.

Based on the above thoughts, this research aims to distinguish and identify the effectiveness and the barriers of the agricultural development programs/interventions for rural women in Timor-Leste. A key aspect of this study involves closely examining the efforts of USAID to ensure the participation of rural women in the agricultural development process and how rural women are positioned within development programs, given that this is purportedly the cornerstone of national and global interventions. The study has found that failures of agricultural development interventions for rural women in Timor-Leste continue to occur because women's participation in the design process is very low and there is a lack of women's ideas in the early discussions and consultations. However, in other stages, such as the implementation phase, women were more actively participating in agriculture or horticulture. As well as in monitoring and evaluation processes, women were involved in providing their ideas and suggestions to improve the project. Yet, in capacity-building or training activity within these agricultural interventions, women's participation was not really considered, and women have very limited involvement in this stage. The intervention also aims to empower rural women to be leaders, entrepreneurs, and financially independent.

The details of the findings of this research will be described in the results section regarding women's participation in each stage of agricultural interventions in Timor-Leste, mainly in Ermera municipality. Besides, this article contributes to the women and gender in the agricultural sector debates on the issues surrounding women's participation in development interventions in developing countries, principally by analyzing the importance of rural women's participation in every phase of the program development cycle in Timor-Leste. In previous literature, there has been general discussion and debate about women's participation in agricultural interventions in developing countries, but not specifically about rural women's participation in each stage of the development period. Therefore, this study will describe the differences in women's participation based on each cycle of the program interventions, contributing to debates on women and gender in the agricultural sector.

Research Method

Setting

This study was conducted from November 2024 to January 2025 in Ermera Municipality. This municipality is located in the west-centre of Timor-Leste with a total area of 756.5km² and a population density of 179.1km², with the total population of Ermera being 138,080 and 68,187 females (RDTL, 2022). This rural area has several agricultural interventions for women from development partner agencies, including one of the big donors, USAID in Timor-Leste, through the Avansa Agrikultura Project, which aims to improve rural women's skills, knowledge, economics, and participation in agricultural development. Preferring this area is also because the intervention of agricultural programs, mainly in horticulture, has been done since after independence to really improve women's skills and knowledge in terms of agricultural production, as well as link rural women to the agricultural input suppliers and markets.

Research Design

This research is qualitative, and the information in this study was gathered from rural women who were targeted as beneficiaries of agricultural development intervention. In this study, the transformative worldview is used because it is change-oriented, and the research needs to be intertwined with politics and political agenda to confront social oppression at any level at which it occurs (Creswell and Creswell,

2018). This research uses a case study approach in gathering comprehensive data and information related to the agricultural development interventions for rural women in Timor-Leste, because the case study is to explore processes, activities, and events (Creswell and Creswell, 2018). Case studies are a strategy of research where the researcher tries to explore in detail and thoroughly a process, event, programme, activity, or better still one or a number of individuals (Stake, 1995, 2000). Then, the data or information is collected in the location where the research participants experience the issue (Creswell, 2009). In this research, the data were gathered from interviews, Focus Group Discussions (FGDs), and observations. Interviews and FGDs were conducted with the key informants, rural women, and women's farmer groups in Ermera Municipality because Ermera was one of the targeted areas of the agricultural interventions for women through the USAID's program. The interviews were conducted with 16 women farmers and the Ermera Horticulture Association President. Then, in this study, two FGDs with women farmers were conducted. Afterward, the observations, through direct observations in the field, related to rural women's situation, activity, and other relevant objects for this research. This is a qualitative and primary research study that also uses the relevant secondary data to gather information.

In this study, sixteen rural women were selected in this area who were the direct beneficiaries of the agricultural development intervention, mainly in horticulture, including the President of the Ermera Horticulture Association. As in qualitative studies, the researcher has the right to choose or select the research participants based on the purposes, issues, and context of the study. Thus, in this research, purposefully selected the participants and locations of research that will best help the researcher understand the problem and the research question (Creswell and Creswell, 2018).

Data Analysis

This is a qualitative study and, by using a case study approach, the data were analyzed by describing the emergence of findings, comparing, and reporting (Schoch, 2020). Describing the reading notes and all the information that was collected during the fieldwork to deeply understand the context of the study and find the patterns. The emergence of findings is coded step by step, such as a priori coding, and then continues with in vivo coding, and the last step is selective coding to create the categories. Next, comparing the findings or triangulation of data from interviews, FGDs, and participant observation. As Creswell and Stake highlighted, case study analysis involves the description, categorical aggregation, and interpretive phase to create the naturalistic generalizations from the data as a whole and reporting on lessons learned from the case study (Stake, 1995; Creswell, 1998).

Results

The results or findings of this study are described based on each theme, which is relevant to this research. In the first, the theme defines women's participation at the program planning stage or in the early design processes. In this theme, elaborate on the findings of how women's involvement in the early process of agricultural development interventions. Then, the second theme is concerning women's participation in the implementation stage. Based on the data and findings, there are some differences between women's participation in each phase of the agricultural development program cycle. Furthermore, the last theme in this study's findings is about women's participation in monitoring and evaluation processes in these agricultural development interventions. The comprehensive findings and results of this study are explained in the following sections:

Women's Participation at the Program Planning Stage

The interventions would like to engage more women to participate and ensure women have enough skills and knowledge, and also, through this intervention, aim to empower women to be leading

farmers and entrepreneurs in agribusiness. However, according to the FGDs, women were not involved in the planning processes of this project. Although there were consultations or discussions with the community, the majority of male voices were dominant, rather than hearing from women. Some women participated at the beginning of the consultations, but were just present and without a voice relating to women's needs to be included in the planning stage because it was dominated by men, including their spouses. Therefore, mostly the ideas for the design processes came from male communities and the project itself.

Women farmers had no chance to provide their thoughts and recommendations, or suggestions related to the project design. It means that women's ideas and needs were not included in the early design of the project. Besides, those activities that are identified mostly from the project or based on the project itself, said Women Farmers Informants 1, 2, and 4, rather than from women's perspectives. Then, women farmers mentioned during the FGDs that the idea of transforming the land to focus on horticulture production was also a recommendation from the project. Previously, those lands were used for cultivating rice and maize, but when the project became engaged with the local communities, to change the land to horticultural land. The project confidently emphasized that the farmers' land is more suitable for horticulture compared to rice and maize. Likewise, as affirmed by the Horticulture Association President, the project also convinced the rural people that, if the farmers focus on horticulture production, they will get more benefits and profits, because horticulture production can make money every week, since those people who live in the city or urban areas need vegetables every day. If compared to rice and maize, it takes time to harvest or get its results. Further, people do not buy rice and maize for everyday use.

In addition, this study found that the USAID project did encourage and influence rural women to focus on horticulture because it is easiest to implement for women farmers compared to rice and maize production. Based on the FGDs with women, horticulture is not hard work for women to be involved in. Then, through horticulture, rural women could earn more income every week, and it could ensure the stability of their finances. Besides, as explained by the Women Farmers Informants 1, 5, 6, in doing horticulture activities, rural women could be financially independent, since women could make more money, similar to men, at the family level. There were some guarantees as well that the project would introduce new agricultural technologies to farmers, link the farmers with agricultural input suppliers to facilitate the farmers to be able to access the agricultural inputs and technologies, and also link farmers to supermarkets in Dili (the capital of Timor-Leste) to be the buyers or output buyers of the horticulture productions every week (Women Farmers Informant 1 and Horticulture Association President).

Formerly, the farmers used traditional farming methods and continued with subsistence farming before the project. The project came with the promise to rural people that through this project, the use of agricultural technologies to facilitate farmers in cultivating horticulture would be demonstrated, and there would be no problems or challenges for women to be involved. Due to the agricultural technologies that the project introduced to the farmers, the proposal was to facilitate women's work as farmers and also free up time, so women could still do other domestic responsibilities at home. Since it sounded promising to the rural people, they agreed to change their land to focus on horticulture production only. Besides, rural people considered those people from the project side to be smart and intellectual people. Thus, they just obeyed what had been introduced or informed by the project. The intervention objective was, the project would like to transform rural farmers from subsistence farming to profitable commercial production and to increase the women farmers' income, but a lack of consideration was given from the outset to the intersecting contexts of rural women; the intervention was unsuccessful as discussed further below.

Women's Involvement in Project Implementation

Although women were not involved in the early project consultations and women's needs were not included in the design processes, women were energetically involved in the implementation stage.

Women were more active in the implementation phase because doing horticulture is easier for them, and it is not really far from home. Besides, the project introduced a new approach to growing vegetables; women were actively involved in learning, understanding, and applying it to their farms. Based on Women Farmers FGDs, women participated in the whole horticulture farming stages such as: nursery, seedling, land preparation, organic composts and fertilizers production, planting, watering, controlling, harvesting, selling, and management. Actually, before this implementation, the project required establishing farmer groups to could be easily controlled and managed by the project. The project has introductory training for the farmers at farms through implementing the demonstration plot (demo plot), hence the farmers could learn from it (Women Farmers Informant 1, 3, 6, and 8, and Horticulture Association President). The demo plot was implemented in each group and allowed every group member to participate, so they could have enough skills and knowledge when doing the horticulture. Rural women farmers participated in this training, and after that, they immediately practiced it on their farms (Women Farmers FGDs).

Furthermore, the project also has a capacity-building program of activities that aim to empower rural women to improve their ability and knowledge in terms of horticulture production, leadership, and management. As mentioned by Women Farmers Informant 1 and Women Farmers FGDs;

The capacity-building program was realized through training, workshops, and/or seminars at local and national levels, including at the international level, such as in Bandung, Indonesia. However, the majority of the participants of these trainings, workshops, and/or seminars were dominated by men. From this targeted municipality, one woman was involved in these activities.

Based on Women Farmers Informants 3, 4, 7, and 9, the participants of these activities were chosen and decided by the project staff. Although there were other women interested in also being involved, they were not selected from the project staff. The project staff chose and decided by themselves who to be involved in the training or workshops. The women farmers did not provide a clear reason related to this matter, and most of them confirmed that it was a project decision. However, some of the women farmers also informed that they were not designated by the project to participate in the activities mentioned, because they are illiterate, since all these activities were through presentations, writing, and/or through a mechanism that prohibited illiterate people from participating.

Besides the training, workshops, and/or seminars, there were some activities that were also part of the capacity-building, such as exchange visits and Farmers' Field School (FFS). The exchange visits were conducted in one targeted municipality, and the project brought together the beneficiaries from the other targeted municipalities to learn and share. As mentioned in FGDs, the exchange visits were just within the targeted municipalities of this project, but women farmers from Ermera Municipalities had very limited access to them. Similarly, in the trainings, workshops, and/or seminars, only one woman farmer from Ermera was able to participate in exchange visits during the project implementation periods. While there were some other women farmers who were interested in participating in this activity, as mentioned earlier, this was also decided by the project staff. Although several women are willing to be involved in this activity but in some part, some women are able to participate because of family reasons. Since there are elderly and/or children under five years old at home, women decided to stay because they considered and sensed that this is part of their responsibility to take care of the elderly and children. Therefore, they will be represented by their spouse or their elderly son if they have a chance to be selected by the project staff.

In addition, the Farmers Field School (FFS) on horticulture program is implemented every year in the country, also as part of the learning program for farmers in Timor-Leste to improve their ability and knowledge in terms of agricultural technologies, improved techniques for growing vegetables, and marketing. This learning platform focuses on practical learning in which farmers from different

municipalities and different program donors come together to share and discuss their experiences in horticulture. This learning process is interactive and uses a participatory approach to encourage all farmers to share their knowledge and experiences with each other. Likewise, FFS promotes gender inclusion, which encourages women farmers to participate in the learning processes. However, as stated in Women Farmers FGDs, women farmers in Ermera municipalities have no experience or information related to this learning program. They never participated in this program during the stages of this project implementation. Yet, the farmers from other municipalities participated in FFS except from Ermera municipality.

Women's Participation in Monitoring and Evaluation

Since women are more active in the farms doing horticulture, women participated in the monitoring and evaluation through this project. Monitoring was conducted through the project implementing partners regularly or every semester to ensure the project activities achieved each indicator. Besides, women did participate in monitoring sessions to provide information and/or suggestions for improving the quality of the productions and their knowledge and ability regarding technical matters (Women Farmers FGDs). Furthermore, project monitoring could improve the methods or mechanisms of the interventions to ensure the activities reach their outputs. On the other hand, women farmers in FGDs said that, through women's participation in monitoring, women have ideas to improve their farming system to get suitable results for their crops or productions.

During the monitoring processes, women farmers also informed project staff about the challenges they faced and some recommendations to project staff, but similar things continued to happen from period to period (Women Farmers FGDs). Mostly, women farmers in FGDs are concerned about access to agricultural technologies, seeds, water, plastic mulch, greenhouses, and some recommendations related to the output buyers or supermarkets. Women farmers could not access those facilities because they were very expensive. Therefore, they could not afford to have them. Although the project has linked them with agricultural input suppliers and there is an opportunity for farmers to loan, women farmers have the impression that they cannot do it because those materials or technologies are the high prices (Women Farmers Informant 4, 7, and 8). Similarly, in Ermera municipality, many times the farmers have obstacles related to water supply for their farms because they depend on the river, and they do not have any facilities, such as electric water supply and other facilities to supply water from the river to their farms (Women Farmers FGDs and Horticulture Association President). Furthermore, in the monitoring periods, they also informed the project staff about the grading and prices that were provided by supermarkets. Sometimes the women farmers reflected that the grading and prices prejudiced them (Women Farmers FGDs). Since they produced more, the supermarkets did not collect it all, and the price of each crop was not stable. Those challenges and recommendations informed the project during the monitoring stages, but it remained unchanged from time to time.

Besides monitoring, which was conducted internally for the project, there was also an evaluation that was conducted externally. The evaluation was implemented at the mid-term and end of the project. The evaluation is mostly conducted by international companies or organizations with support from local or national consultants. Women farmers participated in the evaluation processes through focus group discussions and semi-structured interviews to provide their ideas, experiences, and recommendations for the project (Women Farmers FGDs). In the evaluation, the evaluators classified women farmers to be in a group, hence women farmers could freely talk and provide suggestions or recommendations for the project. Women farmers' voices are certainly heard throughout the evaluation process, and the evaluators did consider women to be involved in this phase of the project. Women farmers mentioned in the FGDs that, while participating in the semi-structured interviews and group discussions, women farmers had a chance to communicate with the evaluators confidently and provided relevant information about the project implementation to the evaluators. The information provided includes the positive impacts,

challenges, lessons learned, and recommendations to improve the project in the future. However, rural women face similar obstacles today. Therefore, in Women Farmers FGDs mentioned that they decided not to continue selling their horticulture products to output buyers but to local markets, because they gained more profits.

Discussion

Discriminatory Practices

Women's participation became a priority in development interventions, mainly rural women's participation in the agricultural sector. Rural women have worked in farming as unpaid laborers in Timor-Leste, mainly in rural areas where 66% of women work as farmers compared with 62% of men in agriculture (RDTL, 2018). This study provides the value of rural women participating in agricultural development interventions in their community. It showed that rural women's participation in agricultural interventions varied in every phase. Besides, to transform subsistence farming into large-scale production, the project also prioritized capacity-building and women's empowerment to improve women farmers' skills and knowledge through various trainings or learning, including training on agricultural technologies. Since those agricultural technologies were new to the rural farmers, several training sessions were conducted to guarantee that farmers had enough abilities and expertise to use those technologies. Then, in this article, the author focuses more on women's participation in every stage of the program interventions.

This study provides insights relating to issues of women's participation in agricultural development interventions. The majority of the women farmers did not participate in the early design or planning stages, but women were actively involved in the implementation processes and also the feedback phase. The research shows that rural women were not involved in the consultations or discussions for the project design, although they were physically present as listeners only. Women's needs were discussed and recommended by men and the project itself. Therefore, in the early design phase, rural women were not involved in the decision-making and agenda-setting processes about women's needs, interests, and challenges that they were facing, and were to be included in the project design (Women Farmers FGDs). This process is mostly exogenous and uses a top-down approach or international or external people's decisions about what should be done at the local level, not a bottom-up approach for locally defined issues related to local needs (Tavener and Crane, 2022). The external design is the development of interventions based on an agency's understanding and requirements, rather than constructed regarding local people's needs, cultures, and contexts. Rural women's participation in the early stage of the design process is vital for problem identification, selection of main actors to be involved, and outlining potential intervention pathways (Mulema *et al.*, 2019). In this study, the findings suggest the intersectionality of the realities of women's lives in Timor-Leste: as mainly solely responsible for domestic duties; as inhibited in realizing opportunities for participation in the public sphere, due to the constraints of patriarchy; and, as under-educated due to these factors, thus inhibiting further equal participation in international project development.

Women continue to be excluded from the decision-making processes, either at the family or community level. Women's perspectives are not considered in the program design processes, since the majority of people recognize men as the head of the family, and anything that has been decided by men is essential and final. This habit fortifies rural women's subordinate roles (Carnegie *et al.*, 2020) as development partners reinforce the thinking that women will just obey men's decisions, because women should be dependent on men mainly in rural areas. Especially in rural areas, which have strong beliefs in the traditional patriarchal systems and culture, where men automatically have more power either because of the social or the political/economic structure (Rippey, Haan and Hewitt, 2024). Gender discrimination

endures in societies even after development interventions. The project design mostly uses external people's knowledge and ideas rather than the local community's perspective, especially women. This practice is contributing to the failure of the development interventions for rural women because the interventions did not consider or involve women in the earlier processes. As stated in some previous studies, women's participation in agricultural development interventions in the initial stage is very limited (Ghosh and Ghosh, 2014; Rashid, Kamruzzaman and Mustafa, 2018). Although the majority of women work in farming, women's ideas about contributing to the program design are ignored. Women continue to be discriminated against in accessing information (Bala, 2010; Carnegie *et al.*, 2020).

Cultural Practices and Gender Discrimination

While women farmers were not involved in the design processes, the reality showed that they do actively participate in the implementation phases. Since the international perspective assumes rural women have very limited skills and knowledge (Crookston *et al.*, 2021), every intervention always starts with and includes capacity-building. The capacity-building was created to empower rural women to improve their knowledge and ability through training, workshops, conferences, and exchange visits. Although it aims to improve female farmers' skills and knowledge, based on information from the field, these activities predominantly involve male farmers. The majority of women farmers also participated in training, but in the farms with the project technical assistance, not through workshops, conferences, or exchange visits. It is impressive to have more debates on it, because women remain discriminated against through the project implementation, especially in the capacity-building activities. Since the development authors considered rural women's lack of skills and knowledge and limited access to information and other resources (Hanafi *et al.*, 2024), though the interventions have been implemented to reduce gender disparities and ensure rural women are active as farmer leaders and agro-entrepreneurs, in reality, women continue less participated in the training or capacity-building that the project implemented. Although there is a majority of rural women farmers, the contribution of participation in leadership (project) training is the majority by farming men, i.e., women continue to do more agricultural labor, but the agricultural information is mostly provided by males.

In addition to this, USAID itself says that women farmers could perform as efficiently as male farmers if women farmers had the opportunity to access similar resources, services, and training (USAID, 2011; Rashid, Kamruzzaman and Mustafa, 2018), and this could also increase women's income through agricultural production. However, it is challenging for rural women farmers to access productive resources and empowerment programs related to agriculture (FAO, 2011; Njobe and Kaaria, 2015). Implementation processes are not always efficient and inclusive as written in program design or planning, and also because the design stage did not integrate women's ideas or voices into it. It was a top-down process related to the activities that should be realized at the bottom-up community level, minimizing the full potential for agricultural development interventions to create meaningful opportunities for rural women to be autonomous and empowered. Women's empowerment in agriculture has a positive impact on agricultural productivity, food security, and health outcomes (Diirro *et al.*, 2018; Crookston *et al.*, 2021). In reality, women are the ones responsible for ensuring the family has enough food and nutrition, because women often take a 'leadership' role in food production, food preparation, and food purchasing (Wenda *et al.*, 2024), therefore requiring women to know about nutrition, management, and leadership, as it does impact to sustain family health, family life, and family income. The project's goal is a horticulture value chain project that is aimed at addressing the key challenges of rural poverty, natural resource degradation, food insecurity, and under-nutrition in Timor-Leste.

Although rural women did not participate in design processes, and even in the implementation stage, few women from the case study in Ermera were involved in the capacity-building, such as training, workshops, seminars, and exchange visits to improve their knowledge in terms of production, management, leadership, agricultural technologies, and other subjects that the project provided. However,

rural women were effectively involved in the regular monitoring because they spent every day on the farms. In the monitoring sessions, women farmers also provided their ideas, recommendations, and challenges that they are facing in cultivating horticulture. Likewise, in the evaluation process, women were designated as key informants to participate in semi-structured interviews and women's group discussions. Women farmers' participation in the monitoring and evaluation stages is categorically fundamental to improving the quality of production and the strategy or mechanism of agricultural development interventions in the future. Moreover, the majority of the development interventions' designs need to integrate gender in the monitoring and evaluation to improve the project performance during the implementation, facilitated mid-term adjustment, and as lessons learned for future interventions. In addition, the integration of gender in the monitoring and evaluation of agricultural development interventions is essential, as women farmers represent the majority of the rural poor people, and although women play a major role in livelihoods and communities, many times remain unconsidered in reporting and assessment provisions (World Bank, 2012). Thus, women remain discriminated against in society when accessing agricultural resources such as land, technology, input suppliers, and output buyers, and financially, women remain dependent on men, reinforcing the tropes of patriarchy, even as several interventions are made. Such practices highlight the gender discrimination against women, which certainly contributes to the failures and ineffectiveness of the agricultural development interventions for rural women in Timor-Leste.

Conclusion

Women farmers' participation in agricultural development interventions varies at every stage of the program. The majority of women actively participated in production processes, but not in the early stages of the project design, such as community consultations and discussions. Women had very limited access to capacity-building/training, not only because of cultural restrictions but also because of project decisions. Women are involved in the monitoring and evaluation that is conducted by the project. However, the recommendations or ideas from rural women were not really considered because a similar issue remained after that. The lack of women's involvement in some stages of agricultural development interventions has an impact that contributed to unsustainable agricultural development interventions for rural women in Timor-Leste.

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References

- Alkire, S. *et al.* (2013) 'The Women's Empowerment in Agriculture Index', *World Development*, 52, pp. 71–91. Available at: <https://doi.org/10.1016/j.worlddev.2013.06.007>.
- Amusan, L., Akokuwebe, M. and Odularu, G. (2021) 'Women Development in Agriculture as Agency for Fostering Innovative Agricultural Financing in Nigeria', *African Journal of Food, Agriculture, Nutrition and Development*, 21(7), pp. 18279–18299.
- Asadullah, M.N. and Kambhampati, U. (2021) 'Feminization of farming , food security and female empowerment', *Global Food Security*, 29(March), pp. 1–4. Available at: <https://doi.org/10.1016/j.gfs.2021.100532>.

- Bala, N. (2010) 'Selective discrimination against women in Indian Agriculture - A Review', *Agricultural Reviews*, 31(3), pp. 224–228.
- Carnegie, M. *et al.* (2020) 'Gender, decision-making and farm practice change: An action learning intervention in Myanmar', *Journal of Rural Studies*, 1(002), pp. 1–13. Available at: <https://doi.org/10.1016/j.jrurstud.2020.01.002>.
- Creswell, J.W. (1998) *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. California: Thousand Oaks: SAGE.
- Creswell, J.W. (2009) *Qualitative, Quantitative, and Mixed-Methods Research*. Third, Thousand Oaks. Third. Los Angeles: SAGE Publications, Inc. Available at: <https://doi.org/10.1128/microbe.4.485.1>.
- Creswell, J.W. and Creswell, D.J. (2018) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Fifth, Thousand Oaks. Fifth. Los Angeles: SAGE Publications, Inc.
- Crookston, B.T. *et al.* (2021) 'Understanding female and male empowerment in Burkina Faso using the project-level Women's Empowerment in Agriculture Index (pro-WEAI): a longitudinal study', *BMC Women's Health*, 21(1), pp. 1–12. Available at: <https://doi.org/10.1186/s12905-021-01371-9>.
- Diirro, G.M. *et al.* (2018) 'Women's Empowerment in Agriculture and Agricultural Productivity: Evidence from Rural Maize Farmer Households in Western Kenya', *PLoS ONE*, 13(5).
- Egwuonwu, H.A. (2018) 'Awareness and participation of rural women in the selected development interventions in Imo State, Nigeria.', *International Journal of Agricultural Policy and Research*, 6(8), pp. 127–134. Available at: <https://journalissues.org/wp-content/uploads/2018/08/Egwuonwu.pdf>.
- FAO (2011) *Women in Agriculture: Closing Gender Gap for Development*.
- Food and Agriculture Organization (2011) *The State of Food and Agriculture: Women in Agriculture: Closing the Gender Gap for Development*. Rome.
- Ghosh, M.K. *et al.* (2021) 'Women Empowerment through Agriculture in Chapainawabganj, Bangladesh', *European Journal of Agriculture and Food Sciences*, 3(1), pp. 153–160. Available at: <https://doi.org/10.24018/ejfood.2021.3.1.235>.
- Ghosh, M.M. and Ghosh, A. (2014) 'Analysis of Women Participation in Indian Agriculture', *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 19(5), pp. 1–6.
- Hanafi, A. *et al.* (2024) 'Women's Development Organisations in Rural Areas of Tunisia: Rethinking Support to Strengthen Their Autonomy', *Cahiers Agricultures*, 33(36), pp. 1–11. Available at: <https://doi.org/10.1051/cagri/2024031>.
- Kaaria, S. *et al.* (2016) 'Rural Women's Participation in Producer Organizations: An Analysis of the Barriers that Women Face and Strategies to Foster Equitable and Effective Participation', *Journal of Gender, Agriculture and Food Security*, 1(2), pp. 148–167. Available at: <http://dx.doi.org/10.22004/ag.econ.246035>.
- Kebede, A. (2024) 'Opportunities and Challenges of Women's Participation in Decision-Making at Local Government Administration: The Case of Debre-Tabor City Administration, South Gondar Zone, Amhara Regional State, Ethiopia', *Advance*, 4(1), pp. 1–11.

- Malapit, H. *et al.* (2019) 'Development of the Project-Level Women's Empowerment in Agriculture Index (pro-WEAI)', *World Development*, 122, pp. 675–692. Available at: <https://doi.org/10.1016/j.worlddev.2019.06.018>.
- Mulema, A.A. *et al.* (2019) 'Women Farmers' Participation in the Agricultural Research Process: Implications for Agricultural Sustainability in Ethiopia', *International Journal of Agricultural Sustainability*, 17(2), pp. 127–145. Available at: <https://doi.org/10.1080/14735903.2019.1569578>.
- Mulema, A.A. *et al.* (2020) 'Spiraling up and down: Mapping Women's Empowerment through Agricultural Interventions Using the Community Capitals Framework in Rural Ethiopia', *Community Development*, 00(00), pp. 1–18. Available at: <https://doi.org/10.1080/15575330.2020.1838589>.
- Mulema, J. *et al.* (2021) 'Barriers and Opportunities for the Youth Engagement in Agribusiness: Empirical Evidence from Zambia and Vietnam', *Development in Practice*, 31(5), pp. 690–706. Available at: <https://doi.org/10.1080/09614524.2021.1911949>.
- Njobe, B. and Kaaria, S. (2015) 'Women and Agriculture: The Untapped Opportunity in the Wave of Transformation', *Background Paper for the Feeding Africa Conference*, pp. 5–26.
- Olawuyi, S.O. and Anjorin, T.D. (2011) 'Analysis of Women Participation in Agricultural Production in Egbedore Local Government Area of Osun State, Nigeria', *International Journal of Agricultural Economics & Rural Development*, 4(1), pp. 1–11.
- Pratiwi, D., Baga, L.M. and Yusalina, Y. (2021) 'The Relations of Internal and External Factors with Women Farmers' Participation in Rice Farming Activities', *Caraka Tani: Journal of Sustainable Agriculture*, 36(2), p. 238. Available at: <https://doi.org/10.20961/carakatani.v36i2.43729>.
- Quisumbing, A. *et al.* (2021) 'Designing for empowerment impact in agricultural development projects: Experimental evidence from the Agriculture, Nutrition, and Gender Linkages (ANGeL) project in Bangladesh', *World Development*, 146. Available at: <https://doi.org/10.1016/bs.hesagr.2021.10.009>.
- Rashid, M.M., Kamruzzaman, M. and Mustafa, E. (2018) 'Women Participation in Agricultural Extension Services in Bangladesh: Current Status, Prospects and Challenges', *Bangladesh Journal of Extension Education*, 29(1&2), pp. 93–107.
- RDTL (2018) *Census Analytical Report on Agriculture 2018*. Dili.
- RDTL (2022) *Timor-Leste Population and Housing Census 2022*. Government of Timor-Leste.
- Rippey, P.L.F., Haan, M. and Hewitt, C. (2024) 'Gendered Power Differences At Home, at Work, and at Large: Sex Differences in Patterns Of Commuting', *Journal of Rural and Community Development*, 19(4), pp. 208–237.
- Schoch, K. (2020) *Case Study Research*. London: SAGE Publications, Inc.
- Shradha and Kumar, M. (2020) 'Women Empowerment in Agriculture Sector', *Journal of Critical Reviews*, 7(10), pp. 1434–1438.
- Smet, S. De and Boro, S. (2021) 'Revisiting Women Empowerment Through a Cultural Lens a In-Depth Analysis of Empowerment Methodologies in Horticulture in Rural Ethiopia', 12(November), pp. 1–15. Available at: <https://doi.org/10.3389/fpsyg.2021.536656>.
- Social Impact Inc (2020) 'Avansa Endline PE Final Report'. Dili, Timor-Leste.

- Stake, R. (1995) *The Art of Case Study Research*, Thousand Oaks. California: SAGE Publications, Inc. Available at: <https://doi.org/10.1108/eb024859>.
- Stake, R.E. (2000) 'Case Study', in *Handbook of Qualitative Research*. Norman K. Thousand Oaks: SAGE.
- Tavener, K. and Crane, T.A. (2022) 'Hitting the target and missing the point? On the risks of measuring women's empowerment in agricultural development', *Agriculture and Human Values*, 39(3), pp. 849–857. Available at: <https://doi.org/10.1007/s10460-021-10290-2>.
- Umar, B.B. *et al.* (2020) 'Women's Empowerment, Land and Donor-Driven Agricultural Interventions in Eastern Zambia', *World Development Perspectives*, xxx(May), pp. 2452–2929. Available at: <https://doi.org/10.1016/j.wdp.2020.100208>.
- USAID (2011) *Women and Agriculture Improving global Food Security*. Washington DC.
- Wenda, B.D.S. *et al.* (2024) 'Women, Income Use and Nutrition Quality: Effects of Women's Decision - Making in Rural Households in Cameroon', *Agriculture & Food Security*, 6, pp. 1–20. Available at: <https://doi.org/10.1186/s40066-024-00480-6>.
- World Bank (2012) *Gender Issues in Monitoring and Evaluation in Agriculture*. Washington DC: The World Bank.

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