Gender Dimensions of Farming Practices in Root and Tuber Crops and Proposed Gender and Social Considerations for Interventions

Technical Report

Nozomi Kawarazuka and Gordon Prain
Summary

FoodSTART+ currently works in four target countries in Asia to improve the food resilience of vulnerable households. It has found that understanding and working with prevailing gender norms is vital to rendering technologies related to root and tuber crops (RTCs) more relevant and available to local populations in these countries. The target countries, India, Indonesia, Vietnam and the Philippines, have very different gender and social norms. Furthermore, diversity of gender norms exists even within one country. The project therefore initially needed to identify the context-specific social factors in order to provide appropriate gender-responsive interventions to each field site. The team developed the Gender Checklist to help reveal gender differences in the communities we work in, and critically consider those power dynamics and hierarchies in the families and communities which could facilitate or hinder technology innovation by certain social groups. Field facilitators from the four countries applied the gender checklists as part of their responsibilities and provided rich and detailed information about gender issues that will contribute to decisions on possible interventions.

This report documents those detailed gender dimensions of RTC farming practices, showing how differently men and women engage in them, and it also provides a critical analysis of the gender considerations required for interventions. There are certain commonalities across field sites in the four countries. Firstly, RTCs are very important food crops for poor households, and while men are predominantly in charge of large-scale commercial farming, women have some autonomy for small-scale crop and livestock production, especially in marginal spaces such as homegardens, and for small-scale processing businesses. This suggests that interventions that strengthen small-scale production and/or processing of RTCs are likely to directly support women from poor households in strengthening food resilience. Secondly, there are clear gender divisions of labour in the RTC production and trading cycle. Men and women have different responsibilities for specific activities such as weeding, spraying, processing and storage management. This means that it could be a man or a woman who is, for instance, responsible for the spraying. The tasks are not consistently divided along particular gender lines, but whoever does a task is solely responsible for it. We need to be careful to facilitate technological innovation that can meet the different needs of men and women in their gender roles. Thirdly, there are clear differences in the interests and capacities for investment between the poor and better-off households. Women and men from poor households are more interested in small input and small return innovations while those from better-off households are more interested in high returns from bigger investments. If the project is intending to support the food resilience of the poor, we need to identify their capacities and any risks of proposed technologies for them, as they often lack male labour and have limited financial resources. Fourthly, all the women across the field sites are busy, having many domestic tasks, and therefore face constraints in finding time to attend trainings. It is clear that we need to have specific arrangements for young mothers of childbearing age to facilitate their participation, considering location, timing and provision of child-minding services. Lastly, in all field sites, there are innovative male and female farmers or strong leaders, who are keen on learning new things. This is promising and we shall work with those supportive people to disseminate ideas and technologies further.

The report also presents the tentative action plans discussed during the gender training held in December 2017. Based on this documented information, we are going to propose gender-responsive support for proposed activities for both men and women farmers. The context-specific gender constraints and challenges written in this report will be shared with partner organisations and carefully addressed in each case.

Nozomi Kawarazuka and Gordon Prain
Gender Advisors for FoodSTART+
International Potato Center
Indonesia

Haryanti Koostanto

FoodSTART+ Field Facilitator, CIAT

A) Gendered interests and preferences

1) Gender and/or age divisions of labour

In Indonesia, there are clear gender divisions of labour. Men do the man-specific-hard tasks, such as transporting large amounts of materials and operating machineries, while women are responsible for domestic work such as caring for children, food preparation and cooking, and cleaning. For better-off families such as those living in close proximity to markets or transit areas, where women are more mobile than in isolated areas, women’s domestic tasks, in particular the food preparation role are more limited because it is easier for them to buy prepared food.

The gender division in domestic work starts from childhood with boys helping their mothers take water from wells and girls helping to wash dishes or care for younger children. Collecting water from distant natural sources for the household supply and sanitation is usually done by men. When men are too busy with their other work to collect the water, this difficult access to piped/clean water can worsen the sanitation conditions in the household. In some remote areas in eastern Indonesia, natural water sources are a 3-5 km walk away, and bathing is done every 2-3 days, and the lack of hand washing therefore contributes to poor health.

In the agriculture sector, including RTC, men do the overall land clearing and preparation, ploughing, purchasing fertilisers and pesticides, obtaining and managing planting materials, storage, transportation to market by their own vehicles or by negotiating with transportation services and middlemen. Middlewomen might exist in some areas, buying products from farmers and renting man-driven trucks to transport products to the province market. Although women help men in the aforementioned activities, their main tasks are postharvest processing, making processed and or intermediary products by using traditional methods and selling them. There is not much sweet potato and tuber-yam processing at industrial level since the processed product (boiled, fried) is mostly for household consumption or being sold for direct consumption. But cassava processing is included in the process to produce intermediary products, such as cassava starch, flour and raw cake of grated cassava, conventionally held by women. The process included grating and pressing the cassava. Poor women are doing the grating using conventional manual equipment, while the machinery is mostly operated by men. By using small-scale machines and by accompanying the husband or through group activities, women could learn to operate the grating machines and develop small businesses in order to sell the cakes or provide cake making services. The conventional pressing that employs heavy stone is still utilised. In general, it is women who are completing this process in the absence of men at home, while the use of semi-manual / hydraulic press equipment is mostly assigned to men. Nevertheless, women are also granted the opportunity to start operating the equipment. The women who are accessing the machine have further access to income generation and the availability of the cassava raw cake making service has facilitated their work and saved time for many other women who made raw cake from the cassava.

Some input-intensive seeds and other necessities (for example maize, non-organic fertilisers, pesticides) are available in the market/agriculture supply stores. Usually, purchasing fertilisers and pesticides is done by men because of the need for transport. Men also decide which seeds and products are to be used based on the information received from the government agriculture extension worker and farmer association. In SOLID project areas, men and women groups are notified of a natural disaster and how to respond when it happens, such as how to find cassava and sweet potato when food is not available during a disaster, but there is no knowledge-culture-practice
observed/informed in which farmers specifically observe the climate or rainfall, for instance, and use the observation results in order to determine which varieties are resistant to climate change. In other areas in Java (Indramayu-exCIP-Field Indonesia project), the rainfall observation results allow men and women to discuss and learn which varieties / seed products are best suited to the estimated planting calendar and season.

In the harvesting and post-harvest handling, there are some machineries (grinding, shelling) that are more commonly operated by men than women. Training to operate such equipment seems more accessible to men than women. Within SOLID SHGs (small-holders’ self-help group) working areas, in order to facilitate agricultural work, generator powered water pumps and hand tractors are the priority proposed machineries by men and women SHGs that will increase the access for men rather than women. A women-oriented design (small size and easy handling) and training to operate such equipment could increase accessibility for women.

Women usually handle field work that is located in remote fields without adequate roads / paths. The improvement of infrastructure and transport facilities will provide better conditions for women, reducing the time for work and providing more time for family, childcare/ parenting, as well as develop RTCs processed products and recipes for family nutrition.

Youth are not much involved in any field work for RTC, harvesting, processing or marketing, except that girls are usually involved in food processing for family consumption. At the province and district level, the availability of vocational high school or the so-called SMK (Sekolah Menengah Kejuruan) has encouraged teenagers and young people to become involved in agricultural activities. In particular, food processing and nutrition subjects could improve their knowledge. The opportunity to continue into higher education and gain further knowledge in the agribusiness subject could improve farming and agriculture related business human resource quality, skill and competency. Improving the facilities of the vocational training (boarding and scholarship program) could attract encourage more young people from villages to continue studying.

2) Differences between the poor and the better-off households

In general, men do the farming activities that are considered tough, poor men who have no land work in coconut harvesting, while the better-off men transport produce to the market. Some poor men work in motorcycle transportation as soon as they leave school. Poor women handle product processing at household level using traditional methods, but men and better-off women do their product processing using middle technology. Poor women may work as labourers in such businesses. In some areas, low paid planting work, for example of rice, is available for women labourers.

In SOLID areas, tricycles are the most commonly used equipment by men and women alike in order to address the transportation problem due to poor infrastructure. Better transportation could provide a reduced workload for men and women transporting their products.

Related to cassava, poor families keep using dried cassava cakes ($35) for their monthly food stock. Local men and women from poor families are those who predominantly lack the necessary nutrition knowledge, while in addition, those living in isolated areas also lack access to transportation. For this reason, they just consume and buy any products available. The study activity through the question of interview and interaction process with villagers, traders, processors and stakeholders have made many people pay attention to the nutrition aspects and the implications to health and nutrition rather than just growing and consuming RTCs. Further knowledge transformation, communication and campaigning as well as policy changes could potentially improve people’s mind-set to grow the RTCs with a high vitamin content for their consumption, and for the food micro-small business to provide healthier products for sale. Understanding men and women’s gendered knowledge and information sharing processes is a first step to effectively delivering information to men and women, respectively.
3) Targeted social groups for interventions

Women of a low-middle economic status will be targeted for our planned interventions especially in relation to product development and products for consumption and marketing. Men could be more easily involved in selling because they are more capable of handling transport, but the adoption of women-friendly technology for food / product processing could in turn provide more opportunities for women.

The new technologies implemented in the past mostly required electrical power and are in favour of men with medium-large scale agriculture fermentation systems. A simple energy-efficient technology would be easier for women and men from poor households to improve their small business.

Some potential proposed intervention /opportunities that will be recommended in the NSVC study result include:

- Developing nutritionally balanced food products for institutional markets at local/village level that covers: Health centres (the program is for male and female children under five years of age and malnourished girl and boy elementary school age children: Elementary schools: through canteens whose consumers are girl/boy elementary school children).
- Awareness/educational campaigns on nutrition, diets and local foods: involve schools, health centres (the beneficiaries will be mothers / caregivers with children under five years of age): The roles and responsibilities of kiosks (food/snack sellers mostly held by women).

The participant criteria and selection process is key to ensuring the involvement of women and poor men and youth.

- What are the potential risks and financial investments for the planned new interventions for the targeted groups? (in particular for women, poor men and young men)

SOLID areas have experienced extreme conditions and volcano activity. Flooding had severed some areas in the past that made food vulnerable and a long drought occurring last year resulted in the failure of harvest. The identification of climate adaptive RTCs, which have a nutritional function will be improved along with the development of the planting calendar through FS and demonstration plots.

The current government priorities are not choosing RTC and local food, and women, poor men and youth empowerment are not mentioned, compared to the existing wheat based biscuit provision scheme that acknowledges poor women as tangible benefit receivers. The policy and strategies without empowerment programs run the risk of supporting better-off households only. The education and empowerment integrated scheme is more promising and has a potential to effectively support those marginalised social groups. Gender awareness training for men (maybe inserted in every training for men) could be a strategic approach to have more support for women, poor men and young people.

- What is the level of labour/time inputs required by women and/or men to implement the new potential activities?

Technologies without gender consideration have potential risks for a low adoption rate. Women cannot avoid domestic duties that take much of their time. Easy handling methods or technology will
help them manage their business. For example, the adoption of a new cassava chips processing method could generate income for them. Adequate skills training and financial management could reduce the risk of business failure. Financial investments in saving and credit activities might have miss-management risks in men and mixed groups unless there is adequate financial management capacity building. Investment in high technology, such as electrical / machinery equipment should consider local capacities and competency as well as the availability and sustainability of electricity and fuel. Some unused equipment with expensive costs is found in some areas, and more efforts are needed in order to render it usable.

The potential new activities such as training on nutrition, healthy cooking, women business development and others that adopt women-friendly equipment would require a more intensive use of their time but the better result in the latter case could make their children and family members healthier and with better incomes, thus involving a reduced time and cost allocation for the recovery of health and nutrition incidence. Besides, the healthier and better-off condition could improve access to education for children.

- Does the planned intervention influence/attract girls or boys’ labour? If there are any risks of children dropping out of school for supporting their family through the planned intervention, are there any supporting conditions for their education?

For commodities such as coconut, or more valuable commodities, boys, especially those who drop out of school, are usually involved in harvesting and transportation. Their involvement is aimed at earning money, and they drop out of school because of their poor economic situation. FGDs with girl and boy youth groups resulted in more boys than girls dropping out for economic reasons. The provision of semiformal education facilities (Package A-B-C semiformal learning system) held by the village / sub-district administration will hopefully fulfil the child's right to education if any child participates in work.

In SOLID areas, poor women who have no land and trees, work for a cooperated harvesting service in growing cloves through fifty-fifty product-yield sharing with the owners. Boys (teenagers) could help their mothers harvest the cloves, which could potentially pose a risk of child labour and safety (e.g. a ten-year-old boy may be allowed to pick cloves at trees while his mother is taking the mature cloves on the ground).

Within the study areas, it was observed that school aged children (both boys and girls) were asked to help selling the food (bread or fish) that their parents produced or caught. Sixth grade elementary school girls often help their mothers after school hours to sell fried bananas and juice in front of the house, from which they could learn food processing, while conversely 3rd and 4th grade elementary school girls and boys selling bread and fish before/during the school hours constitutes child labour. A small business development scheme, which includes the socialisation of children’s rights could reduce the risk of child labour while improving the capacity of parents/adults.

4) Gender considerations and gender-sensitive approaches

Time constraints for men and women of childbearing age.

In the health-related activities that mothers attend with their babies, giving biscuits or drinks is largely practised so as to make the baby comfortable although wasteful at the same time. Setting a specific space in the meeting / event with toys and assigning a child per person could increase the participation of the women of childbearing age. Women with breastfeeding should be provided with a comfortable breastfeeding system and facilities during the training session / event. In SOLID areas child caring is women’s responsibility also but it is common for men to look after young children when the wife participates in a SOLID meeting or is busy with other work. This situation allows women
members/groups to benefit from more education and economic activity with SOLID and help women access income generation and higher education through meetings as well as participation in Farmer Field School and demonstration plots. A gender sensitive meeting hut facility at the demonstration plots or field is beneficial for farmers when young children need to be with caregivers in the field, similarly to what a man does in SOLID demonstration plots when he is taking care of his 2-year-old boy while farming. However, the sanitation condition and hand washing station facility need to be concerned since children or people could perhaps be having meals in the meeting hut.

Within the study area, some families stay in temporal huts in the field for one month for harvesting and selling their produce, waiting for buyers to come and buy their produce. Infants and young children are often in the hut with their parents because mothers have to take part in harvesting, storage and selling. Water and sanitation conditions are so poor and entail a high risk of disease infection. Farming activities with improved water and sanitation facilities in the field and home could help the family live in a healthier environment.

Language barriers for ethnic minorities and/or those who have limited education:

During the FGDs in the scoping study, female elders and some women were not familiar with writing and drawing, but an intensive and friendly exploration resulted in dynamic discussions exploring much information. Men are mostly literate and have no language barriers, but some men and women elders are more familiar with their local language.

During the study, most respondents were literate, but women in some isolated areas and who were bearing a baby seemed to be more silent and lacked an expression of their condition. This condition encouraged for further investigations in order to address this lack of information, particularly in order to know the day to day behaviour of food consumption and the practice of preparing food for children and family. This condition indicates the lack of educational interaction with them and their lack of information. A more inclusive approach could help improve the communication, such as through more intensive mentoring and interaction, a friendly approach as well as having smaller groups in the discussion that could make them feel more comfortable and hopefully more expressive and communicative.

Social relations among the participants:

In male groups, the different social strata constrain poor men from speaking openly, so giving turns to each person by nominating each of them could ensure that everybody speaks and shares their opinion while appreciating the main speaker. In female groups, young women are friendly and help the elderly to speak.

Across different cultures, in highly educated communities (e.g. academic or government officers), people respect others’ religion and live in harmonious relationships. But within a community or SHG with a similar culture, some poor people, especially women from remote locations might have fewer opportunities to attend the group meeting of FFS. Some leaders are constrained to find affordable land to rent, which is also located in a strategic place for their FFS and demonstration plots. Some SHGs membership is unstable due to a lack of timely repayments that made the group vulnerable to sustain.

During the household case study where the study team was doing interview, the presence of the group/community leader created an uncomfortable atmosphere, making it difficult for the interviewee to express their opinions and conditions. Careful attention is given to relationships with and the role of group/community leaders.
B) Understanding the gender aspects of the decision-making power

1) Men and women farmers’ past experiences in trainings and innovations

It was observed during the scoping study that those at the board level in a group have experienced a successful yield because of the fund used to purchase good seeds. While there were some unsuccessful cases, this was due to a lack of leadership because the group leader did not exist.

Women have limited experiences in participating in new innovation activities and their knowledge and skills for new agricultural practices are limited. Therefore, we need to provide a lot of support for them.

2) The social pathways in which the proposed interventions benefit men and women

• Are they dependent on others (participants or non-participants) who may control the benefits?

In the revolving fund and loan intervention by SOLID, all members get the same amount of money. But there might be a few members who cannot repay on time while the board members being unable to urge them and collect money from them because of the social relationships with them. If there are members who do not repay, it affects all members’ future loan scheme. The better capacity of the board will encourage a better management to collect the repayment.

The project design is constituted by market oriented activities and so when the value chain developed, the benefit will depend on the market. However, the support from the key decision maker would be useful for program implementation and result for example in proceeding with an inclusive approach that ensures the benefit and involvement of the poor as well as women.

• Does the project need to engage with those individuals to improve the distribution of benefits? (e.g. involving husbands in interventions targeting women?)

It was not observed that any husband or mother-in-law constrained women from participating in the project activity, rather they were supportive. However, some layers within the group could dominate the distribution of benefits. An intensive participatory monitoring and evaluation system could reduce domination by certain individuals or layers within the group and ensure the fair distribution of benefits. In some groups, agriculture production management constrained the attempts to find a strategic location for the demonstration plots ensuring easy access for members who live in a remote area. But some male leaders have limited capacities in managing the revolving fund.

Men engaging in child care allows women to participate in activities with SOLID such as the Farmer Field School and demonstration plots. Well educated women can assume a leadership position and provide better book keeping and more accountable fund management. During the M&E, gender is considered (e.g. the number of men and women attending FS that will ensure benefits for men and women).

As mentioned above, the inclusion of men within the development process (training etc.) could support the participation and benefit of women, poor men and young people.
3) Social dimensions that may facilitate or impede the adoption of new technologies

- Can we influence these gatekeepers to strengthen the incentives for involvement in the intervention?

It could influence the innovation gatekeepers, maybe through intensive mentoring and leadership training. Another thing is that in the SOLID project, the group leaders seem to be mostly men while women sit in the secretariat/finance management. Gender balance in positions at the managerial level will help both men’s and women’s successful involvement in interventions.

There is opportunity to influence the gatekeepers to proceed with a better distribution of benefits by developing the market opportunity that they are part of and thus benefitting people. For example, when the gate keeper is part of the production, improving cultivation and postharvest handling and processing a particular commodity will benefit them too.
A) Gendered interests and preferences

1) Gender and/or age divisions of labour

**Farming:** Husband and wife negotiate to make decisions on choosing crops. Men make decisions on planting high yield cassava and selling products to factories whereas women make decisions on planting local varieties of cassava and on the use of the products. This implies that our interventions on high-yield cassava need to involve men. Without men’s understanding, women cannot change the existing practices as the final decision-makers are their husbands. Men and women are working together in their field but they have different tasks in RTC production. Men always do heavy tasks such as ploughing; they will dig beds and their wives are responsible for planting. In the same vein, the husband carries the fertiliser with the support of cattle, and the wife drops the fertiliser. Men are also responsible for pesticides spraying, while the wife will care for crops such as weeding and fertiliser application. Information and technologies on pesticide management are therefore more relevant to men but we should also involve women who play hidden important roles related to pesticide management such as through weeding and monitoring cassava every day. Women’s labour burden on weeding is often neglected in agricultural intervention but it is time consuming, restricting women’s participation in other activities in a particular season. All family members are involved in cassava harvesting because farmers have to harvest cassava in bulk at the same time for industrial purposes. In some cases, during cassava harvesting, farmers hire more people to help them. The men discuss with their wives to which collectors they should sell and for which price. While only women are involved with sweet potato roots and leaves. Women’s autonomy with sweet potatoes mean that if we have interventions potation this area, we will target women who have the freedom to change practices or initiate new practices without asking for permission from their husband. There are no machines involved in harvesting, all activities will be completed by human power and cattle support. Therefore, any interventions that involve more labour and time can be a burden for either men or women or both.

**Marketing:** in cassava marketing, some men are involved in part-time trading work for around 3 months per year. They will buy fresh cassava from farmers in the field and sell them to starch processing factories. When selling cassava, couples discuss the price, but cassava will be sold under the decisions of men. Hence, our intervention on disseminating information and knowledge about choosing healthy planting material and/or market prices should involve men. For RTC-human consumption, women work as collectors or retailers in the local market. They are free to decide what price they want because the economic value is much lower than that of high yield cassava. Almost all actors of RTC human consumption are female. This implies that interventions on local cassava processing and trading can significantly support women to strengthen their autonomy and power.

**Preparing food** is the mission of women, they go to buy food in the local market and prepare it for all family members. Besides this, they are also responsible for doing other chores such as taking care of children and washing. Daughters also help the mother to do domestic work as opposed to boys, even if they are younger than their brothers. Sometimes, the husband helps carry and pick up children for schooling. Labour-saving machines and equipment have become more and more common, which helps a great deal in the farmers’ work, both domestic and productive, and women benefit significantly from them too. Thus, women can have more time to do hiring work to get more income as well as attend trainings or other social activities. Women from poor families have more time constraints than those from better-off families due to their manual labour for domestic work and their
economic needs to earn cash income by working as wage labourers. Our intervention needs to have a careful consideration for time and location to enable women from poor families to attend.

Nowadays, due to the significant economic change, males would like to become involved in some jobs in construction sites or in factories, even if they have to live far from their family but they can earn more income meaning that females will be responsible for and decide on tasks and issues related to their crops.

For cropping news updating, although women are now more equal to men than in the past, most women are still housewives, they have less contact with the outside society than men do. Men have more chances to go out and meet other people, so men’s vision is different from that of women. Therefore, the decisions made by men might be better than those made by women.

2) Differences between the poor and the better-off

The poor have fewer opportunities than the better-off households in terms of taking out loans from banks, even though the government has several programs to support small-scale households in agriculture. Middle-income farmers can take out a loan to invest in big worthy materials and machine for their agriculture such as an excavator or a big truck and even they can invest in postharvest and processing machines, which will be hired by other farmers, and they can earn more income. In contrast, due to a lack of property to mortgage and information, low-income households cannot earn money to invest in their production and children’s education. Poor females cannot decide anything in their family, they depend on their spouses’ and parents-in-law’s opinions. Their participation in training/interventions, if any, has to be negotiated with their husbands and in-laws. The poor also do not have enough land for production, they tend to hire land from the government or neighbours. Otherwise only the wife stays at home to become fully involved in agricultural tasks, while the men do other jobs such as masons and factory workers. Even they have to move to other provinces working there. The vulnerable groups whom we target in FoodSTART+ therefore have many constraints to invest in the labour and agricultural input.

The differences of perception on new cropping practices between the poor and the middle-class should be considered. The poor desire applying a new variety of cassava and raise hybrid oxen, as well as a new breed of acacia and oxen; obtaining knowledge on raising hybrid oxen targets the demands of middle income men. Similarly, the new agricultural practices of females also depend on economic-classes. How to produce cassava flat planting and fertiliser application are cropping practices that poor females want to engage in, and they would also like to recognise and apply new varieties of cassava and pepper. While middle class women prefer to know about feeding their livestock and applying fertiliser and weed cassava. For the youth, young women would like to gain knowledge on new techniques in animal husbandry and cassava cultivation, however their counterparts prefer to get new agricultural machines and high yield cassava.

One youth woman from Quang Thach said that applying new technologies helped her to increase her income. Therefore, her husband stopped yelling and hitting her.

3) Targeted social groups

- What are the potential risks and financial investments for the new planned interventions for the targeted groups? (in particular for women, poor men and young men)

The government does not provide any support such as training and funding for the RTC production. The potential purpose of the FS+ VN interventions is to encourage the participation of women and poor farmers in RTC- value chains, and also increase the livelihoods for the poor. Farmers’ groups will be established with a participation rate on behalf of the poor and women of at least 70%. During
the observation of the female group, we investigated that they were facing difficulties in relation to the varieties and planting material supply. Interventions are designed based on the needs of farmers, especially those of the poor and women. Participants to the interventions will be trained in how to be more resilient in the RTC market.

- What is the level of labour/time inputs required by women and/or men to implement the new potential activities?

Interventions will be based on the farmers’ needs in the field. We will carefully monitor the processes of adoption in order to avoid negative impacts that the introduced practices burden specific gender and social groups.

- Does the planned intervention influence/attract girls or boys’ labour? If there are any risks of children dropping out of school for supporting their family through the planned intervention, are there any supporting conditions for their education?

School age girls and boys are not encouraged to partake in interventions. Moreover, parents in Cao Quang and Quang Thach are always aware of the importance of education for their children. Farmers even borrow money from neighbours, relatives or banks for their children’s education. They believe that good education is a window to new opportunities and bright lives for their children. For example, in the Quang Thach commune, after finishing their studies at school, many young women choose to find jobs in factories and other non-agricultural sectors. Only some of them choose to stay with parents to work in the fields. Therefore, the youth in rural areas are free to choose whatever they desire to do and in this respect; there is a little risk for our interventions to encourage children to drop out of school.

4) Gender considerations and gender-sensitive approaches

- Time constrains for men-women with childbearing age.

Young married women who have small children may not be able to move freely over a long distance because they have to take care of their small children. We will arrange the training schedule and location to facilitate their participations.

- Language barriers for ethnic minorities and/or those who have limited education:

There are no language barriers for the targeted social groups who all speak Vietnamese as their mother tongue. However, all of our interventions will focus on vulnerable people. FS+VN will design training curriculums which can be easily understood, and trainers will always be informed that we desire to have an open discussion style in trainings in order to make women with limited education comfortable to participate.

- Social relations among the participants:

Farmers including males and females are members of the Farmer’s Union, Women’s Union, Youth’s Union, which will assist farmers to share their experiences, handle difficulties or even help to take out loans from the Agri-bank (Vietnam Bank for Agriculture). We will take advantage of those unions as agents to facilitate the adoption of new technologies. The rapid development of communication
networks through those unions allows farmers to easily obtain information on price and planting calendars through their neighbours.

B) Understanding the gender aspects of the decision-making power

1) Men and women’s past experiences in trainings and innovations
   - Women nowadays are quite dynamic, if they fail in doing something they try something else, if the income from the work is not enough to support their living expenses then they can change jobs.
   - Women in the Quang Thach commune nowadays have more empowerment as many of them live separately from their parents-in-law compared to 10 years ago.
   - Many women are keen on applying some new advanced techniques to get more income, and also create more benefits for the surrounding community. Intervention will also support the youth, as younger men and women are more innovative than older people.

2) The social pathways in which targeted social groups can benefit from the interventions
   - Are they dependent on others (participants or non-participants) who may control the benefits?
     At the moment, we do not have any concerns about it. However, we will carefully monitor this during the interventions.
   - Does the project need to engage with those individuals to improve the distribution of benefits? (e.g. involving husbands in interventions targeting women?)
     Some women need to get permission from their husbands. It is important that we explain about trainings for both male and female farmers so that husbands understand that what their wives are doing will be important for their households.

3) Social dimensions that facilitate or impede the adoption of new technologies
   - Can we influence these gatekeepers to strengthen the incentives for involvement in the intervention?
     There are some senior men and women who are respected in the village and they can encourage other farmers to participate or adopt the introduced technologies.
A) Gendered interests and preferences

1) Gender and/or age divisions of labour

The present targeted crop is potato and here we describe the gender divisions of labour in potato production.

**Ploughing:** In Khasi Hills, initial ploughing is done by males with the help of spades, while the fine tilling is done by females. Fine tilling usually takes days. However, in the plain of Garo Hills, ploughing is done by males using tractors/power tillers and females are not involved in ploughing. **Planting:** Both males and females are involved in planting. While males are involved in digging/making rows, females are involved in planting. **Purchasing fertilisers and pesticides:** Both males and females are involved in the purchase of fertilisers and pesticides but men do it more commonly. **Land preparation:** Both in Khasi hills and Garo Hills it is mostly done by males. **Weeding:** It is done mostly by females. **Irrigation:** In the Khasi Hills farming is mostly rain-fed but in the Garo Hills irrigation is operated by males. **Seeds/tubers/manure/fertilisers procurement and application:** In the Khasi Hills, the procurement of those materials is mostly done by males and the females do the screening of seeds, cutting of tubers if to be done, placing the seeds, manures and fertilisers. **Harvesting:** In the case of the Khasi Hills the harvesting of potatoes is done in traditional way by use of spades and baskets. **Marketing:** Both males and females do the marketing and we found more traders in the Shillong market to be females. Also, it is seen that females are commonly the financial managers/keepers for all the farming investments and returns in the Khasi Hills but this is not the case in the plain belt of Garo Hills. **Food preparation:** Mostly done by females.

2) Differences between the poor and the better-off households

- **Men from poor families:** They do not have enough land and they work for wealthier people as wage labourers. They use traditional tools for cultivation and lack access to credit, a formal seed system, farm machinery, information and knowledge. Some need to rent cultivable land close to the village. They are also involved in other activities not related to farming.
- **Women from poor families:** They do not have enough land and they work for wealthier people as wage labourers. They use traditional tools for cultivation and lack access to credit, a formal seed system, farm machinery, information and knowledge. Some need to rent cultivable land near the village.
- **Men from better off families:** They are less involved in agriculture and usually own bigger plots of land than the rest. They have better access to improved facilities due to better information and knowledge. Sometimes they rent their land to poorer people.
- **Women from better off families:** They are less involved in agriculture and usually own bigger plots of land than the rest. They have better access to improved facilities due to better information and knowledge.
3) Targeted social groups

- **What are the potential risks and financial investments for the planned new interventions for the targeted groups? (in particular for women, poor men and young men)**

  For organic pest and disease control, it is rather positive as women can also use it. For the new potato storage, investment is high and so it is not suitable for poor households.

- **What is the level of labour/time inputs required by women and/or men to implement the new potential activities?**

  There are some households who have limited male labour, and these households do not spray. If organic spraying is as time and labour consuming as current chemical spraying, those women may not adopt it. If it is not time consuming and not heavy, it will be a great opportunity for women-only households.

- **Does the planned intervention influence/attract girls or boys’ labour? If there are any risks of children dropping out of school for supporting their family through the planned intervention, are there any supporting conditions for their education?**

  There are some children who drop out of school for various reasons. Our interventions are less likely to encourage children to drop out of school. However, we will carefully monitor if children are used as labour due to additional labour being needed to adopt new technologies.

4) Gender considerations and gender-responsible approaches

- **Time constrains for men-women of childbearing age.**

  Women of childbearing age may have difficulties to participate in training. We will consider time constraints for them and organise the training with the child-caring service if required.

- **Language barriers for ethnic minorities and/or those who have limited education:**

  If there are such individuals, then we need to include at least one person in the team who can translate into the language of the ethnic minorities. In terms of limited education, the language barrier during the experiment/training can be addressed in more practical than theoretical trainings and the feedback is to be assessed every few hours to know how much all the stakeholders are able to grasp what is being discussed or shown.

- **Social relations among the participants:**

  As in the Khasi and Garo societies we do not have a class or caste system, so no societal barrier to any intervention. There are very active and innovative farmers in each village who can encourage other farmers to follow.

B) Understanding the gender aspects of the decision-making power

1) **Men and women’s experiences in participating in trainings and innovation**
Some men and many women in the Kashi hills have not attended any trainings organised by the government or attended but they did not apply the new technologies and practices in their own field. Both men and women tend to follow the traditional practices and only learn from peer farmers. There are some innovator farmers who conducted experiments on their own farm and advised peer farmers. We will involve those innovative farmers as leaders.

2) Differences between the poor and the better-off

- Are they dependent on others (participants or non-participants) who may control the benefits?

  It is less likely that a small number of powerful people dominate. The society is quite equal and people are very open and willing to share.

- Does the project need to engage with those individuals to improve the distribution of benefits? (e.g. involving husbands in interventions targeting women?)

  Women have relative autonomy and they do not need to ask for permission to attend the training or initiate new activities on the farm.

3) Social dimensions that facilitate or impede the adoption of new technologies

- Can we influence these gatekeepers to strengthen the incentives for involvement in the intervention?

  There are very active male and female farmers. The village headmen are also very supportive. They will positively act as facilitators who encourage farmers to participate.
A) Gendered interests and preferences

1) Gender and/or age divisions of labour

Most FishCORAL participants said that women are more or equally active to men when it comes to the livelihood responsibility. The women are the ones to take charge of the house and the children while men are for the heavy work/activities. Other women also said that they usually go with their husbands and help them with fishing. Planning is usually done by women as well as more of the alternative jobs such as food vending and “sari-sari” stores. Women are also more willing to venture in money-lending than men.

In the case of INREMP in Bohol, men still direct the house and do the heavy work. Women serve as their support for everyday livelihood activities, taking care of the children and household chores.

It is interesting to note that women are more involved in food processing than men in both study areas. Five women’s’ groups in Tolosa, Leyte have undergone trainings on root crop processing and are beneficiaries of a JICA-provided processing facility. Although they have not been systemically organised to develop livelihoods or enterprise, they express a strong desire to be assisted. A cooperative has been a pilot of the VSU-Tolosa campus in Sweetpotato with fish noodles in 2008. [FoodSTART+ Scoping Study Report Philippines, 2016]

Some women process RTCs in their own homes to supplement income to the household while men do jobs outside the home. In some cases, women process the food at home at night or early morning while the men bring it to them to sell in their workplace.

2) Differences between the poor and the better-off households

Poor farmers get most of their income by being employed as farm labourers of their better-off counterparts. Poor farmers also grow RTCs mostly for subsistence through small patches of land close to their home. Pockets of commercial production are found in the Dulag, Leyte (camote, taro), Calbiga-Pinabacdao areas (taro, aroids, camote, cassava) in Samar, and Hinunangan-Silago (camote, cassava) in Southern Leyte. While RTCs are grown in most areas by fisherfolk-farmers, they seriously lack access to information and technology, except to those who had undergone training supported by Local Government Units (LGUs) or other projects. Only through the food relief and rehabilitation efforts post-Haiyan were these areas introduced to the high-yielding nutrient-rich varieties from PhilRootcrops.

3) Targeted social groups

Post-harvest intervention, specifically assistance on RTC processing, targets mainly women because of the nature of work.

• What are the potential risks and financial investments for the planned new interventions for the targeted groups? (in particular for women, poor men and young men)
The Philippines, particularly the Visayas regions, are prone to catastrophic weather conditions. Most typhoons entering the country make its first landfall in the Eastern Visayas region, which saw a complete devastation brought by the super typhoon Haiyan in 2013, as the typhoons get stronger and stronger every year. Severe rains, which could cause landslides, are an increasing possibility and are potentially devastating in INREMP areas where communities reside atop of mountains and within watersheds, in which flooding could also occur. As more typhoons enter the country, this also poses a dangerous threat to the livelihoods of FishCORAL fishing communities as farmers/fisherfolks have fewer days in the year working in the waters. It would be a good investment for future interventions to focus on mitigation rather than disaster response, e.g. enrich women’s capacity for livelihood diversification outside the men’s livelihood structure so that when men’s livelihood fails, say for example fishing in open waters, there will still be a source of household income through the women.

- **What is the level of labour/time inputs required by women and/or men to implement the potential new activities?**

Most FS+ activities demand more time from women because they are the ones that have “spare” time or paid labour time, aside from doing their household maintenance activities. Men are more employed than women in heavier farm activities. Men are only available during their “free time” or when they are not employed as paid labour for other farms or are not working in their own farms. Poor male farmers are most uncommonly seen participating in FBS activities partly because they do not have their own farms and will prioritise paid labour time over non-paid time.

- **Does the planned intervention influence/attract girls or boys’ labour? If there are any risks of children dropping out of school in order to support their family through planned intervention, are there any supporting conditions for their education?**

It was not closely studied if the planned interventions influence/attract girls or boy’s labour. However, in an experiment of OXFAM’s post-Haiyan relief and rehabilitation project where they used CMES, a similar methodology of FBS which is used by FS+, two of their out-of-school youth who graduated from CMES have decided to go back to school to further enrich their education after undergoing CMES. They are both taking business-related courses in their local college. One is even sponsored by their cooperative group.

4) Gender considerations and gender-responsible approaches

- **Time constrains for women with childbearing age.**

Childbearing women may have less time to participate in the activities. Non-pregnant women, even at childbearing age, are not constrained by time because the interventions are only going to take a few hours per week of their time, depending on the intensity of operations.

- **Language barriers for ethnic minorities and/or those who have limited education:**

There is no known gender discrimination in access to education in the Eskaya tribe, an indigenous group in Bohol where INREMP and FS+ is working on through FBS with their cooperative group the Lundag Eskaya Multipurpose Cooperative (LETMULCO). Members of the tribe are treated equally when it comes to access to education and there are no preferences as to who can go to school or not. Language barriers are also not prevalent as the community also speaks Visayan, the common language in Bohol. In the planned interventions, it is always imperative that a facilitator from the tribe who knows the people, language, and is active in the tribe be present whenever there is an activity.
• Social relations among the participants:

In the Philippine setting, rural communities are tightly knit to the household. Most women have equal, in some cases more, voice as the head of the household. Husbands and wives have the same social circles or know their spouse’s social groups. In the FS+ areas Bohol and Eastern Visayas, participants know each other and while there is no social hierarchy in their group, some members that have more in terms of money and connections may have more voice in the group. It would be a good strategy to encourage all members of the group to join the conversation during activities and encourage them to speak their mind if they have ideas that would help the group.

B) Understanding the gender aspects of the decision-making power

1) Men and women’s past experiences in trainings and innovations

Some men and many women have not attended any trainings organised by the government or attended but they did not apply the new technologies and practices in their own field. Both men and women tend to follow the traditional practices and only learn from peer farmers. There are some innovator farmers who did experiments on their own farm and advised peer farmers. We will involve those innovative farmers as leaders.

2) The social pathways in which the targeted groups benefit from the interventions

• Are they dependent on others (participants or non-participants) who may control the benefits?

Six Peoples Organizations (POs) is participating in the Farmer Business School (FBS) in Bohol. PO members are dependent on their elected leaders who get immediate access to benefits from government and non-government agencies. Although there is the risk that these leaders (mostly men) monopolise power, it seems unlikely as seen during visits and observation in the community.

• Does the project need to engage with those individuals to improve the distribution of benefits? (e.g. involving husbands in interventions targeting women?)

The process with which the project engages with these individuals is, instead of engaging with them only and directly, they are incorporated in the implementation of the intervention as in the case of INREMP’s FBS. The PO leaders mentioned above are employed (non-compensated) as FBS facilitators that represents their PO. To avoid the potential of hoarding the benefits that are derived from the interventions, incidentally, the facilitating team is also composed of one from the IFAD project partner staff members and a representative from the local government unit (LGU).

3) Social dimensions that facilitate or impede the adoption of new technologies

• Can we influence these gatekeepers to strengthen the incentives for involvement in the intervention?

PO Leaders could actually function as gatekeepers in the community and are very influential within the community. They also holding power over decisions within the group.
**Action plans**

During the gender training held in December 2017, the team developed action plans for gender-responsive interventions. The table below is a tentative plan for brainstorming. More detailed plans will be developed when the detailed activities are proposed by men and women farmers in each field site.

<table>
<thead>
<tr>
<th>Philippines</th>
<th>Indonesia</th>
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<tbody>
<tr>
<td><strong>Objectives</strong></td>
<td><strong>Objectives</strong></td>
</tr>
<tr>
<td>Assist IFAD involved projects in achieving project objectives (e.g. increase PO income)</td>
<td>Promoting OFSP through NSVC/development +YFC</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td><strong>Activities</strong></td>
</tr>
<tr>
<td>Capacity building of PO through FBS (production, processing, marketing)</td>
<td>Training on cropping practices for men and women through demonstration plots.</td>
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<tr>
<td></td>
<td>Cooking demonstration and sensory tests for men and women</td>
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<tr>
<td></td>
<td>Nutrition education</td>
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<tr>
<td></td>
<td>Training on safe processing skills of men and women to produce high nutrition products</td>
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<tr>
<td></td>
<td>FBS – introduction of concept and so on</td>
</tr>
<tr>
<td><strong>Gender consideration for trainings (contents, methods and approaches)</strong></td>
<td><strong>Gender consideration for trainings (contents, methods and approaches)</strong></td>
</tr>
<tr>
<td>We will develop training contents for men and women to reflect their interests and needs. If the husband is the decision-maker of the household, we will engage men even if activities are implemented by their wives. By so doing, the project facilitates women’s participation and enables women to take small risks for initiating a business.</td>
<td>We shall find a strategic location for the demonstration plots for easy access for women and men who live in remote areas.</td>
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<td></td>
<td>Gender awareness training for men (ensuring men’s participations in each training) is needed to ensure support for women, poor men and the youth. We also use a gender lens in communication strategies. Some women and men have a fear that consuming SP could make their digestion organ uncomfortable. We will identify men and women’s gendered information flows (e.g. women trust informal social networks) and try to deliver knowledge and information in effective ways to both men and women. The targeted social groups (low-and middle-class women) do not have much experience in participating in trainings. Furthermore, participants include child-rearing mothers and therefore, location and time of the training should be carefully considered to allow these women to attend.</td>
</tr>
<tr>
<td><strong>Gender considerations for M&amp;E</strong></td>
<td><strong>Gender considerations for M&amp;E</strong></td>
</tr>
<tr>
<td>Particular attention will be paid to male participants – a minority group to understand their interests and needs. In the evaluation, we will analyse the pathways in which men’s participation benefit their families for food resilience. We also critically analyse women’s burden (negative impacts) as in many cases, men are absent and women have many responsibilities.</td>
<td>We will monitor men and women’s gendered uptake of new information and their challenges in adopting new practices/cooking methods. The training will engage men to facilitate women to participate and adopt new practices. We will monitor and document how men’s involvement in the project interventions positively or negatively affects the adoption of new practices and its implications for food resilience.</td>
</tr>
<tr>
<td>Country</td>
<td>Activity</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>India</td>
<td>Introduction of improved technologies for potato production and storage</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Clean material multiplication for sweet potatoes</td>
</tr>
<tr>
<td></td>
<td>Exchange visit to a Climate Smart Village in Ha Tinh (ICRAFT).</td>
</tr>
</tbody>
</table>
Appendix: Gender Check lists

Gender checklist for introducing new RTC technologies to men and women

This checklist is intended to help FoodSTART+ staff and partners ensure that gender is adequately addressed in their workplans and interventions. Considering gender dimensions of farming activities helps us to identify context-specific social factors that support/hinder uptake of new technologies. The checklist has two sections; understanding gendered interests and preferences; and understanding gendered decision-making power.

A) Gendered interests and preferences

Men, women, young and the old have different interests in new varieties they want to try, new agricultural practices they want to learn, and they have different capacities and willingness to make financial investments and take calculated risks to implement new activities on their own farm. They also take different approaches to learning new technologies and skills. Without considering gender aspects, our project may work in favour of men from better-off families because: their voices are more easily heard; they can more easily take risks in new investments; and they are more used to the conventional learning approaches offered by development agencies.

Guiding question A:
Whose interests and challenges should our planned intervention take into account and why? (e.g. middle income men, poor women, young men, ethnic minority women).

Checklists:

1) Does the targeted crop have gender and/or age divisions of labour?
   - If yes, who are responsible for which activities? (e.g. plowing land, weeding, purchasing fertilizers and pesticide, obtaining and managing planting materials, storage, marketing, processing, food preparation etc.). This helps us understand which interventions are relevant to men and women.

2) What are key characteristics of men and women farmers from poor and better-off households respectively in terms of their involvement in farming activities such as the use of labour, the scale of production and investment, access to influential people, information and knowledge?
   - Through observation of and conversation with men and women from different social groups, we can understand some of the main differences in their livelihood strategies and interests among men and among women as well as between men and women.

3) Which gender/age group is most involved in our planned intervention such as varietal selection, seed, post-harvest etc.?
   - What are potential risks and financial investments for the planned new interventions for the targeted groups? (in particular for women, poor men and young men)
• What is the level of labour/time inputs required by women and/or men to implement the potential new activities?
• Does the planned intervention influence/attract girls or boys’ labour? If there are any risks of children dropping out of school for supporting their family through the planned intervention, are there any supporting conditions for their education?

4) How do we address specific social challenges for the targeted groups in learning approaches (e.g. trainings or experiments)? For example:
• Time constrains for women with childbearing age:
• Language barriers for ethnic minorities and/or those who have limited education:
• Social relations among the participants:
• Are there any supporting conditions for mitigating their constraints?

B) Understanding gender aspects of decision-making power

Taking up new technologies and agricultural practices or participating in training events mean that farmers and their family members often have to change their routine activities which has implications for gender relations. Even if new technologies require men’s labour, wives may end up with more burdens as a result of re-assignment of their labour. Some new technologies may be aimed at supporting women but their husband and mother-in-law may feel jealous and therefore they may not approve of her participation in the project. However, both men and women have certain autonomy and decision-making power in some of their gender domains and if additional labour demand or need for more inputs fits into their autonomous domains, interventions are more likely to be accepted.

It is also important to be aware of how decision-making and other types of expressions of power can have gender dimensions at a community level too. In some conservative villages, it may be socially unacceptable that women (and/or young men) become the first person in the village to adopt new technologies. It may also be the case that a small number of men and/or women can dominate resources, which limits the possibilities of other women (and/or young men) accessing and using new technologies. In such a case, field coordinators need to explore how support and opportunities can be directed towards these marginalized social groups.

Guiding question B:
How might new technologies influence relations between family members and relations among men and among women within the village?

Checklists:
1) Have members of the targeted social groups in our project experienced with initiating new activities? Are they already innovators?
2) How likely is our target group to fully benefit from the intervention?
   • Are they dependent on others (participants or non-participants) who may control the benefits?
   • Does the project need to engage with those individuals to improve the distribution of benefits? (eg involving husbands in interventions targeting women?)
3) Are there innovation gatekeepers in the community who are very influential in agricultural activities in the community and can create constraints or provide incentives for the uptake of the intervention?
Can we influence these gatekeepers to strengthen the incentives for involvement in the intervention?

**Using information on gender for interventions**

Through applying the checklist, it should be possible for the team to list the gender concerns, challenges and social constraints. In some cases, it may be possible to adjust the intervention to address challenges and reduce constraints. Documenting and reporting on how the team addressed interests and decision-making from a gender perspective can help others apply this approach to supporting marginalized people in the community.