



## TADEP+ Collaborative Research Grants Final Report

This Collaborative Research Grant funding is designed to enable newly-identified opportunities for cross project collaboration, cross-project capacity building, new activities that could directly address high-level targets of the Australian aid program and in doing so, enhance the value of the Program beyond the sum of its five component projects.

This reporting template is provided to capture the key activities, outputs, impacts and learnings from the Collaborative Research Grant project. This report will be uploaded to the TADEP+ website and circulated as part of the TADEP+ Updates.

Summary (as per application)	
Title	<b>Enhancing the roles of women and the whole family in cocoa production</b>
Goal	To build the confidence and skills of women and families to enable the development of equitable family cocoa production and sales enterprises
Summary	The new practice of growing cocoa as a small horticultural tree with intensive management makes the crop more amenable to the involvement of women and youth in its production, and requires the sort of close management women have always applied to food crops. This collaboration of the Family Farm Teams with the TADEP cocoa projects supported two of PNG's most experienced agricultural scientists (Josephine Saul, Kiteni Kurika) and an experienced community worker (Robert Taula) as Family Farm Team trainers to work within the networks of farmers' groups already established under the cocoa projects to support women to become equitably and effectively involved in family cocoa production and to benefit equitably from cocoa sales.

<p>Number and title of projects with which this application was associated</p>	<p>1. ASEM/2014/095: Improving opportunities for economic development for women smallholders in rural PNG (Family Farm Teams, FFT)</p> <p>2. HORT/2014/096: Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu Provinces of PNG (PNG Cocoa)</p> <p>3. HORT/2014/094: Developing the cocoa value chain in Bougainville (Bougainville Cocoa)</p>
<p>Partner organisations</p>	<p>Departments of Agriculture and Livestock/Primary Industries in New Ireland, Bougainville, East Sepik and Madang provinces</p>
<p>Program objectives this activity addressed</p>	<p><input type="checkbox"/> Private sector-led development</p> <p><input checked="" type="checkbox"/> Agricultural productivity, quality and value</p> <p><input type="checkbox"/> Access to market and value chains</p> <p><input checked="" type="checkbox"/> Gender equality and women’s empowerment</p> <p><input checked="" type="checkbox"/> Individual and institutional capacity building</p>
<p>If this activity <u>specifically</u> addressed higher level targets of the Australian aid program, which ones?</p>	<p><input type="checkbox"/> Engaging the private sector</p> <p><input checked="" type="checkbox"/> Empowering women and girls</p>

## Executive summary

The goal of this project was to build the confidence and skills of women and the whole family to foster the development of equitable family cocoa production and sales enterprises. It was a partnership between ASEM-2014-095: *Improving opportunities for economic development for women smallholders in rural PNG*, HORT/2014/096: *Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu Provinces of PNG* and HORT/2014/094: *Developing the cocoa value chain in Bougainville* and the PNG Departments of Agriculture and Livestock/Primary Industries in New Ireland, Bougainville, East Sepik and Madang provinces.

The New Ireland site was used as a pilot site to adapt the FFT training for cocoa farmers and to develop a three-day model of training. This was then delivered to Cocoa Model Farmer Trainers (CMFTs) and other local leading farmers by Dr Josephine (Josie) Saul and Mr Robert Taula in Chimbu, East Sepik and Madang. A second model of training was conducted in the Autonomous Region of Bougainville and involved the training of trainers from across Bougainville who then went back to their own areas and conducted training with local cocoa farming families.

The training and pre-tests were completed by October 2019. Post-tests and impacts are planned to be completed by October 2020. Key learnings and recommendations to date include:

*Cocoa farming families benefit from FFT concepts and engaging family pairs is key.*

**Recommendation**—All technical and social training sessions should be attended by male/female partner teams.

*Further integration of technical and social training for staff is needed.* More structured integration of the FFT with cocoa production training stages for extension staff with community roll-out plans would maximise the farm impact of both. FFT program materials can readily be adapted to a particular cash crop and could be (re)written in collaboration with commodity groups, such as the Cocoa Board, Coffee Industry Corporation etc. This would be a way to engage these bodies in effective gender integration.

**Recommendation**—partnerships to further integrate FFT training into cocoa production development be explored.

*Gender balanced training teams are essential, especially given the great dearth of female extension officers in PNG.*

**Recommendation**—ways to identify and train female cocoa extension staff should be explored

## **Background**

Women farmers are key agricultural workers in PNG. They grow essential subsistence crops, generate income from surplus crops as well as provide a lot of the labour inputs in cocoa production. Women also play significant roles in the informal economy, in community networks and as caregivers for children, the elderly and the ill. Therefore for sustainable cocoa production, the role of women also needs to be sustainable, for the women themselves and for the future of the family livelihoods.

The Cocoa projects have found that in order to obtain good production from cocoa farms, they need to be managed with the same day-to-day attention that women have always given to food crops. Men have traditionally done only occasional work in food gardens (clearing the bush, some planting, some harvesting) and they have transferred this attitude to cocoa, which leads to very poor cocoa results. A major impediment to improved cocoa production in PNG is that women, who are expected to do a lot of the work in cocoa farming, are not rewarded adequately for their work and so don't contribute as much as they could or as much as is necessary to intensify cocoa management to the extent needed to control the two most important pest/disease problems of cocoa, Black Pod (*Phytophthora* spp) and Cocoa Pod Borer (*Conopomorpha cramerella*) . The FFT project has demonstrated the importance of families working as a family unit in order to plan and work together to develop more effective, sustainable and gender equitable farming and sales practices.

## Methodology/approach

The project was conducted in the Autonomous Region of Bougainville, Chimbu, East Sepik, New Ireland, and Madang. The New Ireland site was used as a pilot site to adapt the FFT training for cocoa farmers and to test the five-day model of training (photo). From the pilot, the FFT activities and the farmer workbook was adapted by Dr Josie Saul for cocoa-growing families. The adapted training program of three days was then delivered to the PNG Cocoa project CMFTs (husband/wife teams) and other local leading farmers by Dr Josie Saul and Mr Robert Taula in Chimbu, East Sepik and Madang. A second model of training was held in the Autonomous Region of Bougainville in collaboration with the Bougainville Cocoa project and involved the training of trainers from across Bougainville who then went back to their own areas and conducted training with local cocoa farming families.



### *The Family Farm Teams training overview*

Each module uses experiential learning activities where a family female and male work through the activities and then consider how these might be used for their own family and farm development.

**Module 1: Working as a family team for family goals.** — introduces the concept of a family team as an effective and inclusive way to work as a smallholder family. Family heads map their current division of labour and then together consider better ways to work as a family. The family heads also look at possible family goals and together determine farming goals, financial goals and general family goals. (Day 1)

**Module 2: Planning your family farm as a family team.** — helps farming families see their agricultural activities as a family farm business. Family teams map their gardens/blocks in order to identify their agricultural activities, space allocation, water sources, housing, animal shelters and other assets, terrain, travel time, noting gender inequities and inefficiencies. They develop seasonal calendars for major food and commodity crops. They then draw a plan for their farm in five years. (Day 2 morning)

**Module 3: Feeding your family team.** — participants identify the range of foods they grow and the food they buy. The group works together to sort foods into food groups (energy, body-building, health protection) and

consider how to plan family meals that cover all groups and to reduce their costs of low nutrition store-bought food. Families draw a plan for a FAITH garden (Food Always In The Home).<sup>1</sup> (Day 2 afternoon)

**Module 4: Communicating and decision-making as a family farm team.** — enables family heads to explore communication issues within the family and to consider the importance of shared decision-making, especially in the areas of family farm activities and finances. The activities cover skills and attitudes, as well as exploring the cultural and gender dimensions of communication. (Day 3)<sup>2</sup>

### **Research methods**

The project used pre and post testing, trainer reports and participant feedback to assess the immediate response and impact of the project activities.

- Pre-test: this self-administered survey collected demographic data, farm practices, roles by gender and family practices
- Post-test: this self-administered survey will be conducted at least 6 months after the workshop to collect data on changes to farm and family practices
- Trainer reports: Lead trainers provided qualitative data from observations of the group and farmer reactions
- Participant feedback: farmer direct feedback and comments were collected by the trainers and ACIAR project team members

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<sup>1</sup> We thank Dame Carol Kidu for this important acronym.

<sup>2</sup> For further information on the FFT modules, see Pamphilon, Mikhailovich & Gwatirisa (2017), *The PNG Family Farm Teams Manual*, ACIAR Monograph No. 199. <https://www.aciar.gov.au/publication/PNG-Family-Farm-Teams-Manual>

## **Collaborative Research Grant project objectives**

**Objective 1:** Agricultural productivity, quality and value—training of cocoa families in FFT approaches to planned farming, budgeting, annual production plans and reinvesting in agricultural resources

**Objective 2:** Gender equality and women’s empowerment — training of cocoa families in FFT gender equity activities: shared family goals, family role planning, time budgets, fair sharing of the profits from cocoa production, managing conflict, communication.

**Objective 3:** Individual and institutional capacity building—building knowledge and skills of women and men farmers family units, gender-inclusive training skill development of agricultural extension officers and ACIAR project staff, FFT training skills, FFT lead trainers M&E skills.

## **Project variations from the original Collaborative Research Grant application**

This project was to commence in February 2018, however due to restructuring of a major PNG partner (Cocoa Coconut Institute) the timeline was significantly delayed. The administration of the project was transferred from Latrobe University to the University of Canberra in August 2018 and an extension was granted to the end of 2019 in June 2019. Project activities were as follows:

- 02/2018: New Ireland trial of intensive FFT training model (FFT project)
- 10/2018: FFT training for Bougainville staff (FFT and Bougainville Cocoa projects)
- 06/19: Presentation to TADEP Annual Meeting
- 06/19: FFT training for Madang cocoa model farmer trainers
- 08/19: FFT training for East Sepik cocoa model farmer trainers
- 09/19: FFT training for Chimbu cocoa model farmer trainers

FFT is also a component of a TADEP CRG project *Initiating vegetable cultivation to improve nutrition in Bougainville* which aims to improve nutrition and vegetable cultivation in selected villages in Bougainville with high rates of stunting.

Project activities to be completed in 2020<sup>3</sup>

- Follow-up survey with FFT training participants : by November 2020;
- Presentation and contributions to the TADEP Showcase: September 2020 (tbc)

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<sup>3</sup> Subject to lifting of COVID-19 travel restrictions

## **Achievements against Collaborative Research Grant activities and outputs**

The achievements and outputs are described in chronological order by site.

### ***New Ireland pilot of intensive FFT training model (02/2018)***

This trial was conducted in Namatanai, a remote area of New Ireland, in order to pilot how many days were needed to deliver the FFT in an intensive mode. Despite instructions to select a pilot village and 20 family pairs, the FFT project manager selected two large villages (Punam, Ward 3 east coast), Matakan, Ward 14 west coast) and approximately 120 people attended. This led to considerable challenges however it also provided significant insights into the politics of community engagement, the interaction of formal and non-formal cultural obligations and the management of large groups of participants. The training team was Josie Saul, Kiteni Kurika, Robert Taula and Barbara Pamphilon. The participant survey was conducted with a purposive sample of those who were literate in Tok Pisin (21 women and 18 men). Most were married and had children. Education levels were similar for women and men with under 50% having completed more than primary school. The training team agreed that the FFT modules can be covered adequately in three days. Josie Saul and Robert Taula were selected as the two Lead Trainers to extend the training into the other four sites. This decision was based on their skills as agricultural and/or social issues trainers, their advanced level as a FFT trainer and on the need to model gender equity.

### ***Family Farm Teams training adaptations for cocoa growing families***

The FFT training and workbook was adapted for cocoa communities as follows:

- Module 1—focus on cocoa production farm goals and potential distribution and use of the large incomes from cocoa
- Module 2—add plans for cocoa plot sizes and new gardens, adding other income streams, seasonal calendar focus on crops complementary to cocoa, reinvested cocoa income into family and farm goals.
- Module 3—reducing store bought food from cocoa cash and using own vegetables.
- Module 4—ensure effective communication about financial decisions — equitable sharing of the relatively large cocoa income and the equitable allocation of time and work (e.g. women involved more in frequent removal and disposal of infested pods and harvesting and breaking of healthy ripe pods, men involved more in pruning of cocoa and shade trees and slashing weeds).

### ***FFT training for Bougainville staff (10/2018)***

This training of trainers (ToT) was held at the Malasang 1 Women's Resource Centre, Buka, and was conducted by Josie Saul and Barbara Pamphilon to determine if the FFT ToT program could be covered in three days. Participants were drawn from each of the three Bougainville regions: Bougainville Women's Federation—10 women, DPI staff—three women and three men, Bougainville Cocoa project—six women and 16 men. Most participants were in their thirties or forties, married and had children. Six women and seven men had degrees or diplomas and all but three women had attended high school. The pre-course survey showed that women and men had similar views on the training needs and challenges for PNG farmers. Both men and women recognised the impact on

women farmers of lack of training, low skills levels and literacy levels of women, with many noting that there were gender inequities in roles and responsibilities and workloads. At the end of the workshop, the trainers reported that they would implement the FFT activities in their own families as well as integrate the training in their own agency and work.

The impact of the training will be followed up by the Bougainville Cocoa project as part of their final project evaluation. The Bougainville FFT trainers have also been incorporated in the TADEP Collaborative Research Grant, *Initiating vegetable cultivation to improve nutrition in Bougainville*

#### ***FFT training for Madang cocoa model farmer trainers (06/19)***

This training was conducted at the Catholic Training Centre, Alexishafen, by Josie Saul and Robert Taula. Participants: 9 F, 12 M—mostly in their thirties or forties, all were married, with only two women and three men having gone beyond primary school. The crops frequently grown for sale were cocoa, sweet potato, yams, coconut and bananas. Taro, sweet potato, yam, and aibika were grown for family use. Key roles for women—planting, weeding, harvesting. Key roles for men—clearing land, cutting trees, digging and some weeding. All families had farm plans, family goals and sent their children to school, however under 50% reported that their family was peaceful, had shared roles, worked well together, had enough money to save and had enough food. Four Cocoa Board staff were involved (1 F, 3 M). The impact study of the training will be conducted in late 2020.

#### ***FFT training for East Sepik cocoa model farmer trainers (08/19)***

This training was conducted at the Hawain Station, Wewak, by Josie Saul and Robert Taula. Participants: 14 F, 14 M—women were aged 20 to 40, men 30 to 60, all were married, with two women and eight men having gone beyond primary school. The crops frequently grown for sale were cocoa, vanilla, coconut, vegetables, banana and sweet potato. Taro, yam, coconut, banana and many vegetables were grown for family use. Key roles for women—burning rubbish, preparing sites, fencing, planting, weeding, harvesting. Key roles for men—clearing land, cutting trees, digging, fencing, rehabilitation of cocoa and vanilla. All families sent their children to school and all but one had agreed family goals, however again under 50% reported that their family was peaceful, had farm plans, shared roles, worked well together, had enough money to save and had enough food. The impact study of the training will be conducted in late 2020.

#### ***FFT training for Chimbu cocoa model farmer trainers (09/19)***

This training was conducted at Karimui EBC church ground by Josie Saul and Robert Taula. Participants: 8 F, 23 M—both genders were mainly in their twenties to forties with 12 men over 50. All were married except for two men. No farmers had gone beyond primary school. The crops frequently grown for sale were cocoa, coffee, peanuts, cabbage, sweet potato and rice. Sweet potato, rice, vegetables and peanuts were grown for family use. Key roles for women—planting, weeding, harvesting and making sweet potato mounds. Key roles for men—clearing land, drainage, pruning, planting sugar cane and banana and growing export crops. All families with school age children sent them to school and all but one had enough food to eat and had family goals and a plan for their farm. Only 50% reported that their family was peaceful, shared roles, worked well together, and had enough money to save. The Karimui team have collected each family's long term plans and will use these as a comparison at the one-year impact study to be conducted in September 20

### ***Summary***

Overall, the training was well received in each of the locations. The trainers reported that both women and men were highly engaged in the activities and they could see how to use the learning in their family. Agency staff also commented on the value of the training—for example, the Karimui project implementation team immediately used the ‘Talking Stick’ for planning their next project implementation stage. However, staff also reported on the need for follow-up training and support as they work in this new area of family farm development.

As discussed in the following section, the base-line data that has been collected in the PNG Cocoa project sites will be compared with end-line data to be collected in 2020. This will show if, where and how the training has been applied by cocoa farming families and the types of changes that have emerged.

## **Impacts against TADEP+ program objectives**

Whilst there have been immediate impacts on farmers and/or trainers mindsets and gender equity awareness, it is too early to measure actual impact. As one woman noted with the analogy of a flower : *an unopened flower still in the bud stage, one cannot see the beauty of the colours enclosed within however, when it opens the colour and beauty can be seen*. The following sections report on early qualitative data on mindset changes that have been reported/observed by both women and men and then outline how the impact will be measured in 2020.

### ***Agricultural productivity, quality and value***

Both women and men were able to see the logic of planned farming and a family farm business. One officer reminded the participants that what they presented is *the start of their Small to Medium Enterprises (SME)*:

- Different crops being planted in different portions of the family farm ... create a good cash flow (F)
- A male farmer noted that he hadn't been to school but grew cocoa and earned money which he saved and this has bought him and his family two vehicles. He spoke to the group as a witness to cocoa as an income earner for achieving plans, visions/dreams.
- Another male explained that increasing production needs the family working together as a team, the socio-economic factor. It's biblical, 7 years of famine and 7 years of abundance.

Participants had clear and concrete plans for their income for improved family well-being:

- A female farmer presented her future Family Farm explaining that money earned from their cocoa will be used to purchase a chain saw to harvest timber to build their permanent house.
- A male farmer told the group that he planted cocoa, and as he has eight children he has eight blocks, however he has earned money but misused so now his wife is in-charge of the money and it is all good.

An early indicator of change was reported from the Madang site where, after they attended the FFT training, two CMFTS (Jacob and Christine Imala) returned home and started a cluster group of farmers at Amele village on their own initiative and using their own resources. They have established a nursery and budwood garden and six other group members have already planted their gardens with a view to field budding seedlings. They are building up small nursery beds with banana trunks and sowing cocoa seeds directly, then transplanting bare root seedlings into their block in a rainy period. Three other villages are now interested in following Amele's initiative. The Amele site was visited by Josie Saul and staff from the ACIAR cocoa project in February 2020. A large and enthusiastic farmer meeting led by Jacob and Christine was observed. It is clear that Jacob and Christine have integrated both technical ideas and the social that they absorbed at the FFT training.

### ***Impact measurement***

The key contributions of the FFT training to agricultural productivity, quality and value will arise from changes as farming families move from semi-subsistence to planned farming. This will be measured

in the following post-training survey questions. Field staff will be asked to report on observed farm practice changes.

#### General farming

1. Are you growing any new crops for sale – if yes, please list
2. Have you got any new animals – if yes, please list
3. We have a plan for our farm — yes, no, sometimes
4. Do you have a FAITH garden
5. We have enough food to feed our family — yes, no, sometimes
6. We save money from our farm sales — yes, no, sometimes

#### Cocoa

1. What are the roles on the cocoa farm now — women, men, youth
2. Are women more involved in the day-to-day management of cocoa trees — yes, no, sometimes
3. Who make decisions on the cocoa income — mainly women, mainly men, shared
4. Have you invested cocoa income for any family ventures — please list

#### ***Gender equality and women's empowerment***

Many participants have shown that they can link the concepts across the modules, and that gender equity will help their family. In particular, men have expressed their connection to the ideas:

- *In order for dreams and goals to be achieved for the family, they must all work collectively and contribute together as a team— for a healthy, business-minded and consistent family*
- *A successful business minded family will be effective and [have] informative communication*
- *To achieve a farm goal you need to have a good family farm meeting—what needs to be done and the responsibility of each family farm members*
- *Equal sharing of work, family members participating for the good of the family.*

There was also evidence that women had adopted some new concepts:

- *I like the idea about not allowing the father to be the boss of the home and the mother boss over the children*
- *The best thing I learnt today was dealing with anger which may be a destructive force to a good family working together with love, peace and joy, to reach their goals*



**Figure 2:** Anger body map

Staff present also commented on the impact of the training activities —The best part for me was the entire family inclusive discussion and planning using the talking stick concept (M). This staff member elaborated:

*There was certainly some “real eyebrow raised” when we touched the family transparent discussion, using the “talking stick concept”. The real potential of the family could be realised if family communicate, plan and implement activities together for common good of the family, I thought that was very “catholic”. The dynamic and explosive development would be achieved by the family when we take this approach.*

#### *Impact measurement*

The key contributions of the FFT training to gender equality and women’s empowerment will arise from changes in family work allocation and sharing of the income from cocoa fairly between men and women for the benefit of the whole family, family communication and shared goals. This will be measured in the following post-training survey questions. Field staff will be asked to report on observed family changes.

- Have there been changes in how your family gardens
  - For men
  - For women
  - For youth and children
- Have there been changes in how your family works in the home
  - For men
  - For women
  - For youth and children
- The income from cocoa is shared equitably between the husband and wife (i.e. in proportion to the work contributed by both) — yes, no, sometimes
- We have agreed goals in our family — yes, no, sometimes
- We have shared roles in our family — yes, no, sometimes
- Our family is peaceful — yes, no, sometimes
- Men and women in our family work well together — yes, no, sometimes
- Children in our family work well together — yes, no, sometimes
- How often will you have a family retreat for planning?

### ***Individual and institutional capacity building***

The staff within partner institutions in PNG have strongly supported the relevance of FFT training for cocoa farming families. The FFT learning activities appear to be a logical adjunct to the work of technical trainers. For example, Dr Josie Saul, a highly experienced plant pathologist and cocoa technologist, has enthusiastically adopted the FFT approach and now considers that the main impediment to improvement in cocoa farming and cocoa production has a social rather than a purely technical basis. In a similar vein, one male Australian scientist noted:

*I myself have learned during the PNG cocoa and Family Farm Teams projects that the social improvements are as important as technical changes. I guess they are linked, but previous emphasis on transfer of purely technical knowledge has not been enough to improve the effectiveness of extension. In fact, improvement in technical aspects of cocoa farming depend on social changes such as greater involvement of women, driven by them receiving a fair share of the income from cocoa. You can claim a change in my own understanding as a positive outcome of the FFT project and collaboration.*

### ***Impact measurement***

Individual surveys and phone interviews will be conducted with key PNG-based staff who were involved in the PNG Cocoa project: Josie Saul, Robert Taula, Trevor Clarke and John Konam. Further data on individual and institutional strengthening will be collected in collaboration with Bougainville Cocoa staff. This will explore two areas: how the project impacted on their own knowledge and skill development and how it has built the individual farmers and their families. Any ripple effects will also be documented.

## **Collaboration**

The collaboration between agricultural scientists/extension staff (cocoa projects) and the social scientists (FFT) is providing valuable two-way lessons.

### *Collaborative activities*

**The adaptation of the FFT materials for cocoa-growing families**—this work, led by Josie Saul, has demonstrated that the FFT activities can be tailored to a particular cash crop, in this case cocoa. The piloting of the resultant FFT workbook for cocoa farmers has shown the value of focused materials that specifically build cocoa with other income generating activities. The trial suggests that this would be transferable to other cash crops such as coffee where there are similar gender issues and periods of large cash inflow to a family. The major incorporations were:

Module 1—balanced family roles in cocoa production, especially for women and youth, can be linked to effective cocoa farm businesses where roles are shared for sustainable and efficient production, as well as for gender equity. For example, a nursery or fermentary near the house can enable women to be readily involved whilst still engaging in family care roles. Short and long-term family goals can be linked to cocoa income by allocating the amount of money that can come into a family from cocoa over a year. The family balance tree can focus on equal ‘roots’ for both women and men’s roles in cocoa production and identify where branches can be pruned (gambling, alcohol) and then provide roots (funds) for equipment, seedlings, fertiliser and the like.

Module 2— farm mapping can identify the places for new/regeneration of cocoa plots and shade trees, and nursery placement; seasonal planning can ensure that other vegetable crops are planted in a way that ensures labour and production complement the cocoa production timing and location; budgeting and a family saving plan can ensure that the large cocoa funds are further invested in cocoa production and equipment and shared equitably between men and women.

Module 3—this did not need tailoring for cocoa farming but did ensure that families understood the importance and cost benefit of local nutritious plants to maintain a healthy family workforce. While farmers in PNG always tended to combine food crop production with cocoa farming, this is now emphasised in extension advice. It is evident that as women attend their food crops interplanted with or adjacent to cocoa, they tend to also give attention to the cocoa trees. In future, all extension advice to cocoa farmers will emphasise mixed cropping with the aim of maintaining food supplies for the family, as an alternative cash crop if the cocoa crop fails (e.g. during the Cocoa Pod Borer crisis women maintained family income by selling food crops), and as a way of improving the management of cocoa through greater involvement of women. The need was identified for new topics on safe water and sanitation which goes hand in hand with improving nutrition and addressing stunting.

Module 4— the ‘talking stick’ example can focus on a typical cocoa family dispute such as who should do the regular garden maintenance; financial decision-making cards can be adapted to ask ‘how might this picture story affect a cocoa family farm business?’ A new financial decision making activity is need to help families consider that when women do much of the regular management of a cocoa block how do receive a proportionate share of the income and/or should the income be put in a family pool and distributed in accord with agreed family goals.

**Lesson**—the FFT program materials can readily be adapted to a particular cash crop and could be (re)written in collaboration with commodity groups, such as the Cocoa Board, Coffee Industry Corporation etc. This would be a way to engage these bodies in effective gender integration.

**Training models**—the project has enabled trials of different training cohorts, ranging from mixed groups (DPI officers, NGO staff and project staff —Bougainville cocoa) to farmer groups (CMFTs— PNG cocoa). Although initial responses to the FFT training have been similar, it is clear that as the CMFTs are also being trained and supervised in cocoa production they are more readily and quickly able to apply and share the FFT training, especially as they each have an agreed groups of neighbour farmers to train.

**Lesson** — more structured integration of the FFT with cocoa production training stages for extension staff with community roll-out plans would maximise the farm impact of both.

## Key learnings and recommendations

Both female and male staff reported that cocoa farming families benefit from the FFT concepts. This was well expressed by a PNG male staff member:

*The FFT training, to me, is trying to explore a key area of humanity that if tapped into family daily activities will impact long term family progress. Open family discussion/communication to achieve long term family goals are essential. The Talking Stick concept gives opportunity to all family members to have a say in family affairs for enhanced impact.*

Many staff stressed the importance of FFT being integrated into cocoa projects across PNG. One staff member suggested that *maybe a social worker, a religious worker, Catholic nun could be part of the team.*

*I recommend this FFT to be included in all cocoa projects. I can also see that, when we get this to our farmers, it will make our work adoption/uptake easier. It is a useful tool for counselling husband/wife team and make them a strong family (M).*

**Recommendation**—partnerships to further integrate FFT training into cocoa production development be explored.

*Engaging family pairs is key*

As noted in the ASEM 2014/095 final report (p.77), to be successful both women and men from a family need to be engaged in the FFT activities. As women and men work through the activities together and in gender-specific groups where relevant, the new concepts are introduced and then embedded. It is clear that for sustainable change both women and men from a family need to be exposed in an ongoing way to the concepts. The PNG Cocoa project reported that initially mainly men put themselves forward, but as most spouses attended the first training, women became partners in the initiative. In one case, an unmarried man was accompanied by his mother. It was evident that women wanted to be involved and were often the most vocal at CMFT training sessions.

**Recommendation**—All technical and social training sessions should be attended by female/male partner teams.

*Gender balanced training teams*

The several training meetings in different provinces have reinforced the importance of having a female/male team of trainers. Some prominent women scientists have realised that their efforts are better directed towards socio-economic education of farming families than towards research station based research. They have welcomed the opportunity that the FFT training has afforded them to develop what they see as a more relevant use of their experience and talents. The activity of women trainers in all forms of extension greatly boosts the involvement and confidence of women farmers in supporting their partners and families.

One key to effective gender change is to ensure that females and males have visible and equal roles as trainers. This was a key to the success of the FFT training in this project. However, as the technical training staff are primarily male, this is a significant challenge. Many more female extension staff should be trained and employed at all levels of government extension services.

**Recommendation**—ways to identify and train female cocoa extension staff should be explored

Please note further recommendations may arise from the 2020 impact evaluations.