



Australian Government

Australian Centre for
International Agricultural Research

An evaluation of the ACIAR Transformative Agriculture and Enterprise Development Program



2

ACIAR OUTCOME
EVALUATION SERIES

An evaluation of the ACIAR Transformative Agriculture and Enterprise Development Program

Clare Hanley and Luke Passfield
Alinea International



2022

The Australian Centre for International Agricultural Research (ACIAR) was established in June 1982 by an Act of the Australian Parliament. ACIAR operates as part of Australia's international development assistance program, with a mission to achieve more productive and sustainable agricultural systems, for the benefit of developing countries and Australia. It commissions collaborative research between Australian and developing-country researchers in areas where Australia has special research competence. It also administers Australia's contribution to the International Agricultural Research Centres.

The Chief Executive Officer of ACIAR reports directly to the Australian Government Minister for Foreign Affairs. ACIAR operates solely on budget appropriation from Australia's Official Development Assistance (ODA).

The use of trade names constitutes neither endorsement of nor discrimination against any product by ACIAR.

ACIAR OUTCOME EVALUATION SERIES

By understanding the diverse outcomes delivered by ACIAR-supported research collaborations, ACIAR can demonstrate the value of investment of public funds and continuously improve research designs. ACIAR commissions independent outcome evaluations approximately 3 years after the conclusion of a project. These evaluations are designed to investigate the extent to which ACIAR projects have contributed to intended outcomes, whether these were sustained post-project and how these catalysed short-medium term development outcomes. Over time, these outcome evaluations support the development of effective agricultural research-for-development practice. Reports in this series are available on the ACIAR website (aciarc.gov.au) or as hard copy, in limited numbers.

© Australian Centre for International Agricultural Research (ACIAR) 2022

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from ACIAR, GPO Box 1571, Canberra ACT 2601, Australia, aciarc@aciarc.gov.au.

Suggested citation: Hanley C and Passfield L (2022) *An evaluation of the ACIAR Transformative Agriculture and Enterprise Development Program*, ACIAR Outcome Evaluation No. 2, Australian Centre for International Agricultural Research, Canberra.

ACIAR Outcome Evaluation Series No. 2 (OE002)

ISSN 2653-6811 (print)

ISSN 2653-682X (pdf)

ISBN 978-1-922787-88-0 (print)

ISBN 978-1-922787-87-3 (pdf)

Technical editing by The Write Path

Design by Redtail Graphic Design

Foreword

This report is the second in a new series of reports that are based on outcome evaluations of research programs supported by the Australian Centre for International Agricultural Research (ACIAR). ACIAR initiates, brokers, funds and manages international research partnerships between scientists from Australia and partner countries in the Indo-Pacific region to improve the productivity and sustainability of agriculture, fisheries and forestry for smallholder farmers.

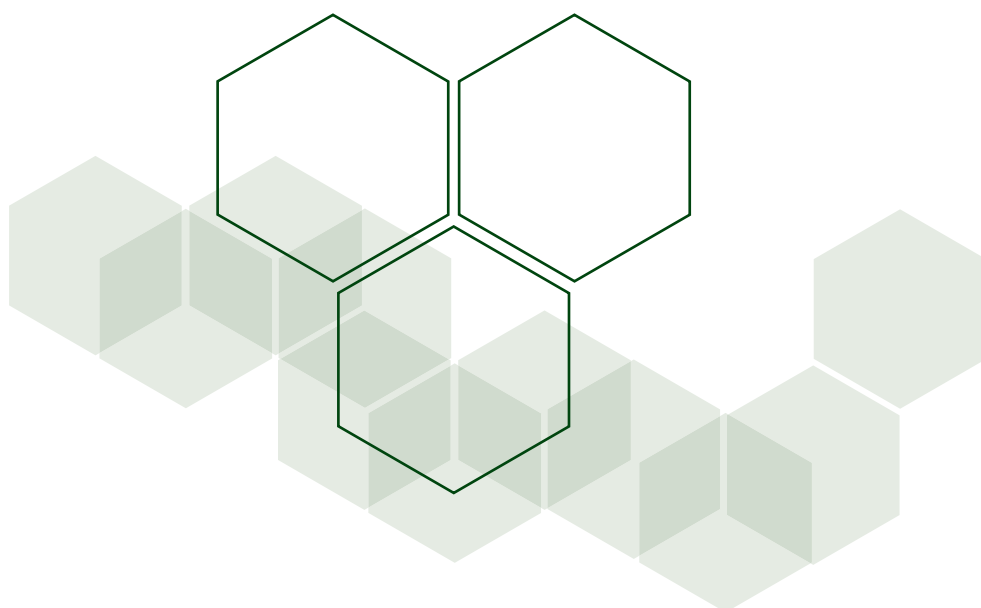
As a learning organisation, ACIAR is committed to understanding the diverse outcomes delivered by the research collaborations we develop, to demonstrate the value of investment of public funds, to inform research design and to boost the capacity of our research to improve the lives of farming communities in partner countries. An important mechanism for achieving our aims is to work closely with the wider Australian aid program to transition promising research into better agricultural practices and more profitable enterprises at scale.

This report presents a suite of evaluations of the Transformative Agriculture and Enterprise Development Program (TADEP), co-funded by the Department of Foreign Affairs and Trade (DFAT) and ACIAR from 2015 to 2021. The program was an opportunity for the 2 agencies to promote agricultural development in Papua New Guinea by leveraging a foundation of strong scientific research. It focused on opportunities to scale up successful innovations from previous ACIAR projects focused on cocoa, galip nut and sweetpotato, as well as a project developing extension methodology through the family farm teams approach. The program was also an opportunity to engage the private sector, expanding reach of the projects over larger areas and to more people. The DFAT and ACIAR investment sought to deliver efficiencies and co-benefits by linking a group of 5 projects into a programmatic structure.

The evaluations ultimately seek to understand the value that this programmatic structure delivered and identify lessons for future research-for-development investments. To inform these insights, a series of project-level outcome evaluations were conducted to see how the funded projects contributed to short-term development outcomes. Outcome evaluations adopt a largely qualitative, theory-based approach and seek to empirically test project logic and underpinning assumptions. These outcome evaluations are also intended to generate data for cross-case analysis that, over time, will help us to improve our research-for-development practice.



Andrew Campbell
Chief Executive Officer, ACIAR



An evaluation of the ACIAR Transformative Agriculture and Enterprise Development Program

Part 1: Programmatic approach	1
Part 2: PNG cocoa project	43
Part 3: Bougainville cocoa project	81
Part 4: Galip nut project	125
Part 5: Sweetpotato project	169
Part 6: Family Farm Teams project	207



Part 6: Family Farm Teams project

An evaluation of the ACIAR Transformative
Agriculture and Enterprise Development
Program Family Farm Teams project

Abbreviations and acronyms

ACIAR	Australian Centre for International Agricultural Research
ASLP	Agriculture Sector Linkages Program
BWF	Bougainville Women's Federation
DFAT	Department of Foreign Affairs and Trade (Australia)
DoE	Department of Education (PNG)
DPI	Department of Primary Industries (PNG)
FAITH Garden	Food always in the home
FFT	Family Farm Teams
FPDA	Fresh Produce Development Agency
IATP	Integrated Agriculture Training Program, University of Natural Resources and Environment
NARI	PNG National Agricultural Research Institute
PAU	Pacific Adventist University, PNG
PD	Professional development
PNG	Papua New Guinea
TADEP	Transformative Agriculture and Enterprise Development Program
UC	University of Canberra, Australia
UniTech	University of Technology, PNG
VCE	Village community educator

Acknowledgements

The evaluation team would like to thank Professor Barbara Pamphilon, the project leader, for her time and effort in supporting the evaluation. The efforts of Professor Pamphilon to link the evaluation team with stakeholders in Papua New Guinea (PNG) were particularly appreciated.

The evaluation team would also like to thank Australian Centre for International Agricultural Research (ACIAR) staff who supported the evaluation.

The evaluation team would like to express its appreciation of all the project stakeholders who gave their time to be interviewed and to review the evaluation findings.



Part 6 contents

Abbreviations and acronyms	208
Acknowledgements	208
Summary	210
Key findings.....	211
Conclusion and lessons learned.....	215
Introduction	216
Purpose, scope and audience.....	216
Methodology	218
Data collection and analysis.....	218
Limitations.....	218
Ethical considerations.....	219
Overview of project	220
Context.....	220
The project.....	221
Findings	223
1. What was the project’s theory of change and how did this evolve during implementation?.....	223
2. What outcomes (intended and unintended) has the project achieved or contributed to?.....	225
3. How did project activities and outputs contribute to the outcomes achieved?.....	235
4. What strategies were adopted to address gender equity and social inclusion and how effective were these?.....	237
5. How did management arrangements impact delivery of the project?.....	238
6. How well did the project align with and contribute to the overall goals of its umbrella program?.....	239
Conclusions and lessons learned	241
References	243
Appendices	244
Appendix 6.1: Stakeholders consulted.....	244
Appendix 6.2: Project impact pathway.....	245
Appendix 6.3: Project team members.....	246
Appendix 6.4: Research outputs.....	247

Summary

From 2015 to 2021, the Australian Centre for International Agricultural Research (ACIAR) oversaw the Transformative Agriculture and Enterprise Development Program (TADEP), which was a multidisciplinary research program that aimed to improve the livelihoods of rural men and women in Papua New Guinea (PNG). The program involved 5 research-for-development projects: PNG cocoa, Bougainville cocoa, galip nut, sweetpotato and Family Farm Teams.

This evaluation focuses on 'Improving opportunities for economic development for women smallholders in rural Papua New Guinea' (ASEM/2014/095), commonly known as the Family Farm Teams (FFT) project.

This project sought to **support women's economic development in order to improve gender equality, family livelihoods and food security**. The aim was to enhance the economic development of PNG women smallholders by building their agricultural and business acumen. The project was implemented from June 2015 to March 2019.

The budget for the project was A\$3,000,000.



Family Farm Teams participants Maureen Trison and her son Richard Trison inside their poultry shed, holding lanterns they use to keep young chicks warm. Photo: Conor Ashleigh, ACIAR

The FFT project followed on from a previous pilot, which involved FFT training¹¹ alongside training on financial and business management, and agricultural planning techniques, as well as training of village community educators (VCEs) to deliver peer education. During the pilot, this training enabled women (and men) farmers to improve their agricultural and family farming business practices. The FFT project built on the findings of that pilot by expanding these strategies into 5 new areas of PNG, using different types of community partners and focusing on new commodity crops.

The FFT project had 5 objectives, noting that the fifth objective was added to the project scope after the mid-term review in recognition that partner agencies required significant capacity development to effectively implement the approach:

1. To examine the capacity development of women as community-based agricultural leaders.
2. To explore ways in which communities can develop partnerships with the private sector, schools and training providers that are relevant to the local context and culture.
3. To further develop the peer education model of agricultural extension.
4. To examine the uptake and impact of a FFT approach to farming for women and girls.
5. To explore the capacity development of PNG agricultural-focused agencies in gender inclusive and gender sensitive extension delivery.

This project evaluation is Part 6 of a suite of evaluations of TADEP, which assess the effectiveness of each of the 5 individual projects (Parts 2–6) and the lessons learned from the overall TADEP programmatic approach (Part 1).

A similar evaluation was conducted on the Agriculture Sector Linkages Program (ASLP) and is reported in ACIAR Outcome Evaluation No. 1.

A separate synthesis report, ACIAR Outcome Evaluation No. 3, will summarise lessons from the 2 ACIAR programs, ASLP and TADEP.

11 FFT training comprises 4 modules focused on working as a family team for family goals; planning your family farm as a family team; feeding your family team; and communicating and decision-making as a family farm team.



Key findings

1

What was the project's theory of change and how did this evolve during implementation?

The project design was underpinned by an impact pathway which gave a strong articulation of change pathways at the village level. The project's localised, adaptive approach meant that the impact pathway was appropriate across diverse locations. The notable area where assumptions require greater evidence and testing is the extent to which the project contributed to reducing family violence.

The scope of the impact pathway meant that it reflected the research questions which focused on the village level, rather than the changes required to institutionalise new approaches, which were out of the scope of this 3-year project. This meant that institutional change components were not addressed, such as the institutionalisation of the FFT approach by partners. The introduction of the fifth objective after the mid-term review was in some part a mechanism to begin addressing this priority. Pathways to training agencies, the private sector and schools adopting and institutionalising new training approaches were also not explored in the impact pathway. A longer project timeframe may have enabled the impact pathway to encapsulate these areas, noting they lend themselves to more development-oriented interventions, and would contribute to the sustainability of project outcomes.

2

What outcomes (intended and unintended) has the project achieved or contributed to?

The project has demonstrated significant **scientific achievements**, with extensive use of the FFT model and concepts, as well as financial literacy and business skills resources by researchers, practitioners and other development partners. By refining and testing the FFT model in new locations and with new commodities, the project has demonstrated the applicability of these approaches in diverse contexts. Refining the model of peer education has shown how this approach can support the acquisition of skills and knowledge by female farmers. Trials of brokered training by a variety of partners has provided insight into how training providers can best work with communities to maximise capacity development. Driving uptake of the new knowledge generated through this project by government agencies has been more challenging.

The project has also delivered important **economic outcomes**. There was evidence of widespread adoption by VCEs of family team-based farming practices, new agricultural practices and business-like approaches to farming, which led many farmers to increase their incomes and food security. New family-based farming practices contributed to women's economic empowerment by leading families to make joint decisions about money more regularly. There was some evidence that other farming families have begun to adopt these practices from VCEs, and ripple effect mapping undertaken on previous pilot locations suggests some uptake is likely. As this productivity grows, it will be important that farmers have access to markets to translate their improved productivity into increased income and realise their family and farming goals.

Key findings (cont.)

The project contributed to **capacity development at multiple levels**. First, female and male VCEs built their capacity as peer educators, training more than 2,500 farmers (60% were women) during the project, mainly through their wantok and existing community networks.

Not all VCEs developed the confidence to deliver training independently, with previous skills and the level of support provided by project partners key factors influencing this. Also, it is unclear how many or to what extent VCEs will continue as peer educators beyond the project. Training of FFT trainers has built individual capacity to deliver the FFT approach, and evidence that these trainers have integrated this knowledge into broader work indicates it is likely they will continue to employ the FFT concepts into the future. Leadership training for women also built their skills and capacity as leaders, with some women taking up community leadership roles. Training providers built their capacity in areas such as participatory research, and designing and delivering training in low-literacy contexts. Development and piloting a professional package for teachers has led to new agricultural teaching materials being incorporated into teaching resources in East New Britain and New Ireland.

As a project focused on empowerment of women smallholder farmers, the project delivered strong **gender equity outcomes at the individual, household and community level**. Many farming families improved communication within their households and began to better understand and re-balance gender roles around household and farming labour. There were many examples of women broadening their goals and taking up leadership roles following their participation in leadership training. In all project areas some women indicated that they gained respect in their village due to their new skills and knowledge, and some men shifted their attitudes towards women's leadership, though it is important to note that many women continued to face barriers and resistance. While these were very positive steps to improve family dynamics and relations, there were mixed reports on whether, and the extent to which, this led to a reduction in family violence and further exploration of this is required.

Policy influence was not a focus of the project, with the primary focus remaining at the village level rather than institutionalisation of new approaches. While several government stakeholders indicated they were interested in the FFT model, there is no evidence that it has been integrated into agricultural extension policy. There is evidence of some new teaching materials being used by teachers involved in the project but no evidence of broader uptake as yet.



3

How did project activities and outputs contribute to the outcomes achieved?

Key factors influencing adoption and project outcomes were the **localised, participative approach**, which meant project activities were tailored and responsive to farming families' needs and contexts. The explicit focus on context-appropriate approaches also empowered VCEs to further adapt the modules during delivery to meet participant needs. Education levels of VCEs influenced their adoption of new approaches, despite resources being adapted to low-literacy contexts. The **importance of partner agency capacity and buy-in** to achieving project outcomes was evident in many components of the project, particularly in their level of support for VCEs during and beyond the project. Engaging beyond individual staff to have a concerted strategy for building partners' institutional capacity and commitment to embed the FFT concepts into their policies and practices is key to sustainability.

Gender and cultural norms were a strong influence on project results, particularly given the explicit focus of the project on shifting gender norms. Gendered conceptions of women's roles were embedded in the design of the FFT approach and its focus on working in family teams, and also underpinned the risks, barriers and opportunities for women to take on peer educator and leadership roles. Wantok obligations and relations were determinative in terms of how knowledge was shared by VCEs and the capacity of different women to act as leaders.

4

What strategies were adopted to address gender equity and social inclusion and how effective were these?

The project achieved outcomes for women farmers across 3 domains of gender equity: **improving gender equity at the household level, advancing women's economic empowerment, and increasing women's participation and leadership**. There was evidence that the gender impacts of the project were closely monitored and that risks which emerged during implementation were followed up. However, given high levels of gender inequality and family violence in PNG, it is recommended that all projects undertake gender analysis and develop a gender strategy at their outset to mitigate risks and maximise benefits of projects for women. While the project was not informed by a social inclusion strategy, there were several examples of marginalised groups (widows and youth) being included in the project. There was no reference to inclusion of people with disability. Developing a social inclusion strategy at the outset of the project could have provided a concerted approach to reaching diverse groups.

Key findings (cont.)

5

How did management arrangements impact delivery of the project?

Partners welcomed the **respectful, collaborative relationships** between the University of Canberra project team and implementing partners. While donor partners Department of Foreign Affairs and Trade (DFAT), Pacific Women, and ACIAR were supportive of the project and its outcomes, coordination arrangements needed to be clarified at the outset to avoid confusion during implementation. The **large number of implementing partners meant that management and coordination requirements were extremely intensive**, especially given mixed levels of buy-in and capacity of partners to deliver on their responsibilities. Establishing an in-country project lead could have helped to address these issues. In addition, while minimising engagement between partners in order to assess their different approaches was a deliberate research strategy, it is important to note that the consequence is limited whole-of-project understanding, relationship building and peer learning between partners. These types of development benefits need to be considered side by side with research aims in the future.

6

How well did the project align with and contribute to the overall goals of its umbrella program?

The **FFT project was central to TADEP**, collaborating with all other projects in some way. As a participatory research project, the FFT project contributed both materials on the FFT model, as well as knowledge of participatory research, monitoring and evaluation, and approaches to building capacity in the education sector. As the FFT project pre-dated TADEP's inception, the strategic value of TADEP to this project was less evident. However, key points of value highlighted by stakeholders include **knowledge and learning opportunities, the availability of collaborative research grants to pursue activities outside of the scope of existing projects, and demonstrating the value of the FFT approach to other agricultural initiatives**. National partners in particular gained a lot from participation in annual learning events and consideration should be given to how any future umbrella programs can facilitate ongoing engagement between these stakeholders. Reporting requirements were overly burdensome for all stakeholders. Any future program should consider what strategic value can be delivered at the programmatic level, focusing on knowledge and learning across projects and also potentially a strategic capacity development approach for core partners engaged across multiple projects.



Conclusion and lessons learned

The FFT project has demonstrated the value of the FFT model in encouraging more effective, sustainable and gender-equitable farming practices in PNG. The project demonstrated how the FFT approach can advance women's empowerment through agricultural development programming and also support uptake of new knowledge and practices by women and men farmers, particularly in low-literacy contexts. All projects engaging with smallholder farmers in PNG should engage with farming families to ensure approaches are sustainable and gender-equitable, and the FFT approach offers a valuable model for how this can be done effectively.

The approach should also form a central component of any future program that follows TADEP in PNG given its broad relevance and applicability.

Building on these findings, it is now important to extend the approach beyond village level to address the systemic institutional changes required to sustain delivery of the FFT approach into the future. It is also important to address broader systemic factors to ensure that farmers can translate their increased productivity into increased sales and income from commodity crops to provide the incentives to continue new family-oriented and business-oriented farming practices.

Lessons learned

Key lessons learned through the project for future ACIAR programming include:

- 1. Institutionalising the FFT approach to embed it into ongoing practice is challenging and concerted efforts are required to engage and build the capacity of partners in order to achieve this.** This requires engagement with relevant agency leaders in a co-design process to build a shared commitment to the approach, as well as institutional capacity building at multiple levels. Given the important role of community organisations such as churches in uptake of the FFT approach, further exploration of how these partnerships could support uptake of the FFT approach would also be valuable.
- 2. As production grows due to new farming practices, it will become increasingly important that market access and market development programs are delivered to complement the FFT approach** so increased production can be translated into greater sales and income generation. This will be central to enabling farming families to achieve their family and farm goals and will provide a key incentive for continued adoption of new practices.
- 3. Given the high levels of gender inequality and family violence in PNG, all projects should undertake gender analysis to inform their design and develop a gender strategy to guide their approach throughout implementation.** Similarly, developing a social inclusion strategy at the outset of projects would be highly valuable to ensure that projects maximise inclusion of diverse groups, including youth and people with disability, in their design and implementation.
- 4. Consideration should be given to establishing in-country project teams** to co-lead project implementation, particularly in light of new limitations and risks posed by COVID-19. In particular, where projects involve larger numbers of implementing partners with mixed buy-in and capacity, having a local lead institution can provide critical support. While limiting engagement between partners may be warranted for research purposes, it is important that this is balanced with the development and sustainability benefits of peer learning, networking and collaboration between partners. In many ways this relates to larger considerations for ACIAR (and others) about the scope and objectives of research-for-development projects.
- 5. The value of a programmatic approach would derive from consideration of the common objectives across subsidiary projects – such as institutional capacity building of common project partners – that could be implemented more strategically at a programmatic rather than project level.** Importantly, this does require designing the program in advance of projects, and resourcing it accordingly. In addition, a greater focus on sharing learning across all levels of project partners and minimising reporting requirements would be valuable.

Introduction

Purpose, scope and audience

Since 1982, the Australian Centre for International Agricultural Research (ACIAR) has brokered and funded research partnerships between Australian scientists and their counterparts in developing countries.

As Australia's specialist international agricultural research-for-development agency, ACIAR articulates its current mission as 'achieving more productive and sustainable agricultural systems, for the benefit of developing countries and Australia, through international agricultural research partnerships'. ACIAR receives a direct funding appropriation from the official development assistance budget, as well as contributions for specific initiatives from external sources including the Department of Foreign Affairs and Trade (DFAT).

From 2015 to 2021, ACIAR managed the Transformative Agriculture and Enterprise Development Program (TADEP) in Papua New Guinea (PNG). The program focused on opportunities to scale up successful innovations from previous ACIAR projects in PNG, with impetus provided by private sector involvement, over larger areas and for more people. It was expected to achieve economic benefits, especially increased employment and incomes in rural areas, and enhanced rural-urban supply chains. It worked in the sectors of greatest benefit to rural communities and had a particular focus on the empowerment of women and commodities that could be brought to market.

ACIAR commissioned project-level evaluations of the TADEP projects shown in Table 23 to identify lessons that will inform the design and implementation of future ACIAR projects and improve the quality of outcomes. These evaluations form Parts 2–6 of Outcome Evaluation 2.

Drawing on these project evaluations, the program-level evaluation (Outcome Evaluation 2, Part 1) includes an analysis of the program structure and the value-add from these management arrangements.

A similar evaluation has been undertaken for the ACIAR Agriculture Sector Linkages Program (ASLP) in Pakistan (Outcome Evaluation 1), and the ASLP and TADEP evaluations will be synthesised into a final report to outline common lessons from ACIAR programs (Outcome Evaluation 3).

This evaluation focuses on the Family Farm Teams project.

Purpose

The project-level evaluation has 2 key purposes:

1. Compile performance information from each project under TADEP and investigate the contribution to specific project outcomes, with a particular focus on differential effects for women and men.
2. Generate project-level case studies for use in a qualitative cross-case analysis.

Table 23 Projects in TADEP

Program / Project	Project full name
PNG cocoa	Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu provinces of Papua New Guinea
Bougainville cocoa	Developing the cocoa value chain in Bougainville
Sweetpotato	Supporting commercial sweetpotato production and marketing in the Papua New Guinea highlands
Galip Nut	Enhancing private sector-led development of the <i>Canarium</i> industry in Papua New Guinea
Family Farm Teams	Improving opportunities for economic development for women smallholders in rural Papua New Guinea



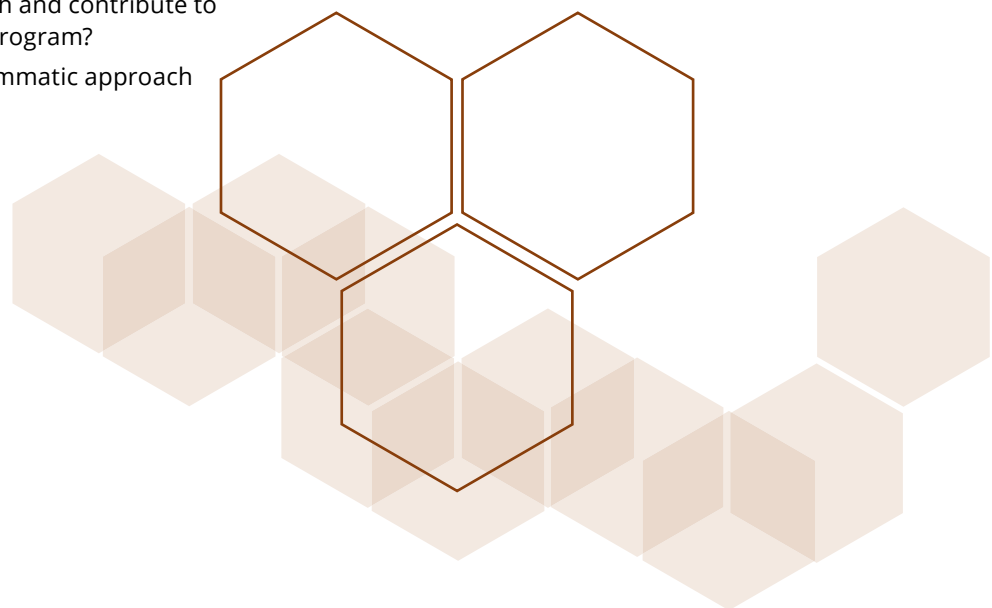
Scope

This project-level evaluation assesses 'Improving opportunities for economic development for women smallholders in rural Papua New Guinea' (ASEM/2014/095). It provides an assessment against the following key evaluation questions:

1. What was the project's theory of change and how did this evolve during implementation?
 - Was the theory of change appropriate to the project context and desired results?
2. What outcomes (intended and unintended) has the project achieved or contributed to?
 - What was the unique knowledge contribution of the project/cluster that was/is expected to influence practice/policy?
 - To what extent is there evidence of adoption of new practices based on research process and findings?
3. How did project activities and outputs contribute to the outcomes achieved?
 - To what extent and how did they differ from what was planned?
4. What strategies were adopted to address gender equity and social inclusion and how effective were these?
 - How did the project impact men and women differently?
5. How did management arrangements impact delivery of the project?
 - What other factors influenced project performance?
6. How well did the project align with and contribute to the overall goals of its umbrella program?
 - To what extent has the programmatic approach added value at project level?

Audiences

The primary audience for this evaluation is ACIAR staff with direct responsibilities for programs and/or their constituent projects. This includes Canberra-based research program managers and field-based program managers and coordinators.



Methodology

Data collection and analysis

Data was primarily drawn from existing project reports, reviews and evaluations, supplemented with semi-structured interviews with key stakeholders. Stakeholders were intentionally selected in consultation with Australian Centre for International Agricultural Research (ACIAR) and the project leader (see Appendix 6.1). Interviews were conducted online using Zoom, and via telephone calls. Thematic analysis of data collected through these processes was undertaken using NVivo qualitative data analysis software to distil findings.

ACIAR working definitions and assessment frameworks for project outputs, outcomes and 'next users' were used to analyse, categorise and summarise findings (see Table 24). In addition, economic and gender equality outcomes were assessed in line with the project design. Preliminary findings were shared and tested in a project verification workshop involving key project stakeholders and ACIAR. These workshops provided the opportunity to 'ground-truth' the assessments, identify any key issues not addressed, clarify any areas of uncertainty and correct any misinterpretations. A draft evaluation report was then prepared for review by ACIAR and finalised in accordance with feedback received.

Limitations

The evaluation relied heavily on data produced through project analysis and reporting. While overall the evidence base was strong, it was difficult in some instances to ascertain how widespread change was amongst the populations involved in the project. For example, several evaluations and reports tended to describe the proportion as 'some farmers', 'most farmers' or simply 'farmers' and provide examples to illustrate the type of change experienced. In addition, in some reports it is not possible to identify whether results relate to changes for village community educators (VCEs) or changes for farmer families who were trained by VCEs.

Conducting online interviews presented limitations as the evaluator had limited ability to build rapport with participants or interpret non-verbal communication in phone or Zoom interviews.

Direct consultations mostly focused on the project team and implementing partners. The evaluator was unable to visit project sites or speak with direct beneficiaries of the project. Given the lapse of time since the project finished, stakeholder reflections may be less accurate, and several stakeholders had difficulty separating the results of this project from follow-on projects currently being implemented.

Interviewees for the project were intentionally selected by ACIAR and the project leader (so they were not a representative sample). Given the selection process, it is also likely that respondent experiences fall at the positive end of the spectrum, meaning data from interviews is likely positively biased.

Table 24 ACIAR project outcome assessment terminology

Outputs	Next users	Outcomes
Scientific knowledge: New knowledge or current knowledge tested in other conditions, locations, etc.	<ul style="list-style-type: none"> Individual scientists/researchers/ agricultural professionals Individuals responsible for the management of research or a government institution 	Scientific achievement: Researchers use scientific knowledge outputs to make new discoveries or do their work differently.
Technologies: New or adapted technologies and products that offer added value to intended end users	<ul style="list-style-type: none"> Producers that the project engages directly or influences outside its immediate zone of operation (for instance, at scale), including crop and livestock producers as well as fisherfolk 	Capacity built: Project partners or stakeholders use enhanced capacity to do something differently
Practices: New practices and processes	<ul style="list-style-type: none"> Public and private extension service providers Public policy actors 	Innovation enabled: Includes the adoption of improved technologies, systems or processes, access to new markets, or changes in the opinions or practices of policymakers and advocates
Policy: Evidence for policy formulation	<ul style="list-style-type: none"> Public and private value chain operators Consumers 	
Capacity building: Short courses, academic training, coaching and mentoring		

Ethical considerations

The evaluation was conducted in accordance with the *DFAT Monitoring and Evaluation Standards (2017)*. This included considering:

- **Informed consent:** All participants in consultations were provided with a verbal overview of why they are being consulted, how the information will be used and that their participation is voluntary prior to the consultation. Consultations were only undertaken once verbal consent was obtained.
- **Privacy and confidentiality:** The identity of any program beneficiaries involved in the evaluation is protected. Key informants in professional roles may be referred to by their position title in the report where explicit consent has been obtained; otherwise they are referred to as a representative of the organisation they work with.



Waiting for community members to arrive for a Family Farms Team meeting. Photo: Conor Ashleigh, ACIAR

Overview of project

Project number	ASEM/2014/095
Project title	Improving opportunities for economic development for women smallholders in rural Papua New Guinea
Collaborating institutions	University of Canberra National Agriculture Research Institute Pacific Adventist University Baptist Union Bougainville Women's Federation Fresh Produce Development Agency Oxfam CARE PNG New Ireland Department of Primary Industries University of Technology Voice for Change
Project leaders	Professor Barbara Pamphilon Associate Professor Katja Mikhailovich Dr Jo Caffery Dr Deborah Hill
Project duration	June 2015 to March 2019
Funding	A\$3,000,000
Countries involved	Australia and Papua New Guinea
Commodities involved	Sweetpotato, coffee, vegetables, <i>Canarium</i> and cocoa
Related projects	ASEM/2010/052

Context

Women smallholders are key to the livelihoods of Papua New Guinea (PNG) families; they produce essential subsistence crops while undertaking valued social roles such as family care. However, women smallholders face significant agricultural constraints including limited access to productive resources, low banking rates, limited financial skills, lack of access to credit, poorly developed transport systems, lack of understanding of and access to markets, unequal gendered family roles and division of labour, restrictions to mobility, and overall safety. They have educational disadvantages due to low school completion rates and limited access to training or extension services.

The Australian Centre for International Agricultural Research (ACIAR) pilot 'Examining women's business acumen in Papua New Guinea: Working with women smallholders in horticulture' (ASEM/2010/052) (conducted by the implementers of this project) identified that although most women have strong aspirations to improve their family livelihoods, and invest in their children's education and wellbeing, very few women smallholders have the business knowledge and acumen to improve their family livelihoods. The pilot demonstrated that Family Farm Teams (FFT) training, financial literacy, banking and saving education, agricultural planning techniques as well as the training of village community educators (VCEs) to deliver peer education can support participants to improve their agricultural and family business practices. The pilot supported families to move to more business-focused agriculture in targeted vegetable growing communities in Western Highlands and East New Britain.



The project

The FFT project (ASEM/2014/095) investigated the expansion of the strategies that had been piloted in 'Examining women's business acumen in Papua New Guinea: Working with women smallholders in horticulture' (ASEM/2010/052) by scaling out into 5 areas of PNG and focusing on new commodity crops. It was structured around 2 hubs:

- Highlands Hub (Eastern Highlands, Jiwaka, Western Highlands), with a focus on sweetpotato, coffee and vegetables.
- Islands Hub (Autonomous Region of Bougainville, New Ireland), with a focus on *Canarium*, cocoa and traditional vegetables.

This project aimed to improve women's agricultural productivity through agricultural extension, improve banking, saving and skills in financial management for agricultural small business activities, increase capability to access micro-finance, and build gender inclusive decision-making capacity within the family and community through the FFT training approach.

The project had 5 objectives, noting that the fifth objective was added to the project scope after the mid-term review in recognition that partner agencies required significant capacity development to effectively implement the approach:

1. To examine the capacity development of women as community-based agricultural leaders.
2. To explore ways in which communities can develop partnerships with the private sector, schools and training providers that are relevant to the local context and culture.
3. To further develop the peer education model of agricultural extension.
4. To examine the uptake and impact of a FFT approach to farming for women and girls.
5. To explore the capacity development of PNG agricultural-focused agencies in gender inclusive and gender sensitive extension delivery.

The research questions that framed the project were:

- What are the critical skills, knowledge and processes needed to develop women's leadership in rural agricultural settings?
- What are the opportunities and challenges in the development of private sector, school and training partnerships with farming communities?
- What is the uptake and impact of the family teams approach for women and girls?
- In what ways does peer-based agricultural extension support the development of women as learning facilitators?

The Family Farm Teams (FFT) approach

One female and one male family head from a household is provided with a series of workshops and family activities that will enable them to work as a family team and to plan together the further development of their agricultural activities. The approach can be used with full family teams (adults, young adults and youth) and with other types of families, such as a widow and adult son, or with polygamous families. The FFT approach helps men and women to look at the work done by women, men and youth and to work towards making it equal and shared. It also helps families to learn to plan and make decisions together. There are 4 modules:

- Module 1: Working as a family farm team for family goals
- Module 2: Planning your family farm as a family team
- Module 3: Feeding your family farm team
- Module 4: Communicating and decision-making as a family farm team

Project methodology

The project used a participatory action research, asset-based community development approach. Capacity building was key and the project focused on understanding the success factors and challenges in the development of women's leadership teams and the local teams of VCEs. The FFT modules aimed to enable women and men to move to more gender-equitable agriculture while providing an opportunity to research the enablers and challenges for women smallholders' economic development. Local training, private sector and extension providers were subcontracted to deliver specific training to connect communities to local resources and enabled an analysis of the brokered training model and scale-out issues.

Project partners

In each region, the project worked with different partners to explore how to widen the range of agencies engaged in agricultural development and to provide capacity development.

A number of PNG partners contributed significantly to the research, as shown in Table 25, Table 26 and Table 27.

Table 25 Communities and partner agencies, Highlands Hub

Region	Districts	Partner agencies
Eastern Highlands	6 communities in Goroka and Daulo districts	Fresh Produce Development Agency (FPDA), an agricultural training and extension agency
Jiwaka	6 communities in North Wahgi, South Wahgi and Anglimp districts	Voice for Change, a feminist human rights agency
Western Highlands	6 communities in Alona ward (Lumusa), Mul-Baiyer district	Baptist Union, a church organisation

Table 26 Communities and partner agencies, Islands Hub

Region	Districts	Partner agencies
Autonomous Region of Bougainville	10 wards in Halia constituency	Bougainville Women's Federation (BWF), a women's network agency
New Ireland	4 communities in Ward 7 and Ward 11	Tikana Local Level Government New Ireland Department of Primary Industries

Table 27 Partner agencies and their contributions

Partner agency	Contribution
CARE PNG	<ul style="list-style-type: none"> Ripple effect study
PNG National Agricultural Research Institute (NARI)	<ul style="list-style-type: none"> Baseline and end-line surveys (hard copy and digital) Farm observations Regional agricultural data
Our Lady of the Sacred Heart School (New Ireland)	<ul style="list-style-type: none"> Teacher professional development and resources
Pacific Adventist University (PAU)	<ul style="list-style-type: none"> Independent evaluation end-line interviews Farmer financial literacy Teacher professional development and resources
University of Technology (UniTech)	<ul style="list-style-type: none"> Master student projects (women's adoption of new practices; poultry production uptake) Farmer-to-farmer learning facilitation study (Jiwaka) Advanced VCEs study (Baiyer Valley)



Findings

1. What was the project's theory of change and how did this evolve during implementation?

Project theory of change

The project **goal** was to support women's economic development in order to improve gender equality, family livelihoods and food security. The **aim** was to enhance the economic development of Papua New Guinea (PNG) women smallholders by building their agricultural and business acumen.

The impact pathway that underpinned the project's design and implementation is provided at Appendix 6.2, noting that this pathway describes the assumptions at the beginning of the project rather than in light of what was learned about change pathways through the project. At a high level, this impact pathway is:

- If more women hold community leadership roles, this will contribute to women's economic empowerment in villages and farming families. In order for this to take place, women need to have:
 - local networks to support their leadership
 - skills and knowledge to underpin their leadership
 - recognition and support from male community members for their leadership.
- Women's economic empowerment relies on peer education approaches that empower women. This requires:
 - Women and men peer educators being able to work as a team, facilitate and evaluate training.
 - Women and men peer educators having the skills and knowledge to be role models in their communities.
 - Women and men peer educator teams being able to engage women farmers in trainings.
- If family farm planning, communications and decision-making are increasingly shared between women and men, this can result in greater household gender equity and reduced family violence. This requires:
 - Greater understanding and a more equitable division of household labour for household and farming work.
 - Women and men to understand and increasingly work together as family teams.
- The shift towards a family-based, more gender-equitable approach, combined with financial, business and agricultural training, can lead to overall improvements to families' food security and livelihoods, families' financial viability and the business viability of farms. This requires:
 - Women and men to jointly plan and diversify food and commodity farm production.
 - Women and men to jointly plan savings and budgeting goals, and to use banking and financial services to achieve these goals.
 - Women and men having the skills to keep business records, understand and plan marketing, and engage in entrepreneurial activities to increase their income.

Analysis of the theory of change

The scope of the impact pathway reflects the design of this project as **a research-for-development project, rather than a development project per se**. It describes the research questions that were being tested through the project rather than the development process which is required to institutionalise these changes. The impact pathway is positioned at the village level, mapping the expected impacts of the Family Farm Teams (FFT) approach for farming families and communities. Several project activities extended beyond the official impact pathway:

1. During implementation it became apparent that implementing partners did not always have the gender awareness and capacity to effectively deliver the FFT approach. **Consequently, a fifth project objective was added to the project scope: 'To explore the capacity development of PNG agricultural focused agencies in gender inclusive and gender sensitive extension delivery'**. This involved training agency staff in the FFT modules and approach. The training was also provided to staff of other agencies who were interested and whose work aligned with the FFT approach. While there is evidence that activities delivered under this fifth objective did lead to uptake by multiple other programs, stakeholders indicated that a more comprehensive approach to capacity development is required to build institutional commitment and capacity to deliver gender sensitive extension services in the long-term.
2. The project sought to trial and assess how training providers, private sector organisations and schools could partner with communities to support adoption of new farming practices.

The **causal logic set out in the impact pathway was strong**, and accurately described the change process towards more gender-equitable and productive farming practices by families in the project sites. The project's core assumption was upheld – that supporting semi-subsistence farmers to move towards more planned, equitable and effective family farming requires 3 key and complementary components: working as a family farm team; financial literacy and business skills, and agricultural production skills. While adaptations were made throughout the project, these tended to be changes to the delivery approach. For example, in response to evaluation of the Highlands Hub engagement with communities, the training schedule was extended from 12 to 18 months as it was found to be too intensive for farming families.

One assumption in the impact pathway that was not clearly demonstrated through the project was that adoption of the FFT approach would result in reduced family violence. As detailed in Section 3, while there is evidence that some families adopted improved communication approaches and more inclusive decision-making, there is mixed evidence on the impacts of these changes on levels of family violence. Further analysis and exploration of the pathways to reduce violence, and the potential for FFT-style interventions to address this, are required.

At the village level, the localised, community driven approach meant that the project was inherently grounded in and adapted to each context. Significant changes to the overarching impact pathway were not required between project sites and the approach was readily adapted to a diverse range of contexts, including more and less remote communities, matrilineal and patrilineal contexts, and across commodities. While results varied across sites, these appear to be related less to the assumptions about how change happens in different contexts and more to contextual factors such as inter-tribal relationships, implementing partners' capacity and previous experience of farming families with training programs.

While stakeholders acknowledged the effectiveness of the project in bringing about change at the village level, project results and stakeholder interviews revealed questions over the sustainability of some changes beyond the project's conclusion. There were 3 main areas where this was raised:

- The extent to which shifts in household-level gender relations would be sustained or would revert to pre-existing norms.
- The extent to which peer-based educators would continue to share knowledge and learning.
- Whether changed approaches to commodity cropping and the increased incomes this should generate could be sustained without complementary market access and market development programming to address demand-side constraints.

Ripple effect mapping undertaken on the previous pilot areas provides an indication of the possible longer-term results in these areas. In villages that participated in the ASEM/2010/052 pilot project, the ripple effect mapping indicates that production of food for selling by some farmers did increase, and subsequently these families earned additional income. It identifies that some farming families considered selling larger quantities of produce outside their immediate locality, but that is not common practice and support to access larger formal markets would be required (Nema 2018).



2. What outcomes (intended and unintended) has the project achieved or contributed to?

Outputs

Scientific knowledge

A full list of research publications is included in Appendix 6.4. **The project trialed and refined the FFT model. Results from the Highlands and Islands Hubs indicate that the approach is broadly transferrable across diverse contexts** and relevant for a broad range of contexts and with different commodities. The FFT model was compiled and documented in a public manual (Pamphilon, Mikhailovich and Gwatirisa 2017). **Project evaluations demonstrate that the FFT approach was effective in beginning to reorient women and men towards a gender-equitable and more planned approach to farming.**

They also reported that it is an effective approach for families to assess the work done by women, men and youth in households, and for family farms, and to work towards a more equitable distribution of agricultural and household work. By assisting farming families to plan and make decisions together and foster women's income-generating activities, the FFT approach advances opportunities for women to have access to their own income and promotes the wider benefits of women having a voice within the family and community.

Pilots were conducted to assess whether the FFT materials could be adapted to different delivery formats and contexts, both associated with other Transformative Agriculture and Enterprise Development Program (TADEP) projects and outside the TADEP umbrella. While project reporting indicates that the pilots found that training materials could be adapted, there is not yet evidence of how the different formats would influence the impact of the FFT approach for training attendees. The pilots were:

- Bougainville cocoa project (HORT/2014/094). The aim was to train key staff in the cocoa project who could then deliver the training to farmers attending the resource hubs developed as part of that project.
- PNG cocoa project (HORT/2014/096). The aim was to determine how to deliver intensive training for farmers.
- Training for fishing families. This trial assessed whether the FFT modules could be adapted to meet the needs of fishing-based communities.
- Family farm planning concepts for farmers. This trial assessed whether one-day introductory FFT training run at a local agribusiness would be appropriate for the business and of interest and value to farmers (Pamphilon et al. 2017a).

The project refined the model for peer education as a means of agricultural extension for women farmers.

Village community educators (VCEs) were provided with training on the FFT approach as well as training to facilitate their role as peer educators (designing training programs, planning and facilitating training sessions, group dynamics and evaluating training sessions). This peer education model and associated resources were compiled into a public manual (Pamphilon 2017).

The project also trialed approaches for brokering training for communities by training providers and the private sector.

The project identified that community learning plans can be an effective tool for communities to determine their learning needs. It identified that financial literacy, business management and agricultural training for women and men are highly complementary with FFT training in both reinforcing women's empowerment by building their skills and knowledge and enabling uptake of new skills and practices. It found that the financial, business and agricultural training should be delivered after the FFT training so that household gender roles have begun to shift before households take on additional workloads and generate additional income, and that FFT training should be followed by financial literacy training to enable better uptake and impact of new business practices. Further, it identified that agricultural agencies are most effective in delivering agricultural training, drawing on tools such as the seasonal cropping calendar. The training materials and approaches used were compiled into a public manual (Vanua with Simeon et al. 2019).

Capacity building

The project equipped selected male and female farmers to act as peer educators in their villages.

In the 5 areas, a total of 266 farmers were trained as VCEs (165 female, 101 male). Around half of VCEs in Eastern Highlands and Bougainville, and almost all VCEs in Jiwaka, who completed the full training course went on to deliver training in their communities and participated in reporting and evaluation. Due to a lack of records this data is not available for New Ireland.¹² Attrition of VCEs was largely attributed to the level of support for VCEs by partner agencies, indicating the important role partner agencies play in VCE success.

There is some evidence that VCEs assessed that their skills as peer educators had increased.

However, data on this is more limited because respondent numbers were low in the end-line surveys in the Eastern Highlands and Jiwaka, and an apparent misunderstanding of evaluation questions in New Ireland which meant the data had little validity. Unsurprisingly, those VCEs with previous experience as trainers were more confident and skilled (ACIAR 2019). Key stakeholders also reported that some VCEs had the skills and confidence to adapt the training to different contexts and participants, demonstrating their skills development as peer educators. **It is important to note that not all VCEs developed the confidence to deliver training in their villages** and many indicated that follow-up refresher trainings and skills development were required. Through brokered training from service providers, VCEs also received training on 4 areas of farm business development:

- agricultural livelihood concepts
- basic business skills
- financial literacy
- income-oriented agricultural development.

This training demonstrated how training resources and delivery could be effective in diverse low-literacy contexts, where female and male farmers had low education levels. The use of games-based and pictorial resources was particularly effective.

Approximately 100 women undertook leadership training as part of the program, with each woman leading a team of approximately 6 VCEs who delivered the peer education activities in their own village.¹³ These women leaders were supported by a project leader from the implementing partner. Evaluations of each hub indicate that these **women built an understanding of their own leadership capacities and developed their leadership skills through the training.** A key outcome of the training for women was new networks, and roles and aspirations as leaders. All women were able to name their strengths as leaders in their family and a number of women indicated that they had used their leadership skills in their communities and churches (Pamphilon et al. 2017 and AISC 2017). Project reporting indicates that beginning with women-only leadership training and then moving to mixed-gender sessions was more effective.

Following the mid-term review **the project added an additional training of trainers activity to build the capacity of agencies to implement the FFT approach.** A total of 98 people (45 female and 53 male) from Fresh Produce Development Agency (FPDA), Oxfam and other agencies funded by Pacific Women Shaping Pacific Development (Pacific Women) and Pacific Governance Facility were trained as FFT trainers. There is not comprehensive data on how many, or how effectively, trainers went on to apply the training, however there are multiple examples of the FFT being applied as a result of the training.

In recognition that most children in rural communities of PNG only complete primary education, and mostly become farmers, **the project trialed and developed a professional development (PD) package for teachers on culturally relevant practices for agricultural and livelihood learning.** A total of 193 female and 180 male teachers were involved in trialling and developing the materials. Once the resources were developed, secure digital cards that can be used with low-cost mobile phones were pre-loaded with agricultural and livelihood teacher materials as well as additional teaching resources. The PD package was launched in July 2018 with the New Ireland, East New Britain and national departments of education.

12 According to the Highlands and Islands Hub reports, Certificates of Completion were awarded when VCEs attended all modules, rolled out the training in their community, and contributed to the reporting and evaluation processes. Certificates of Participation were awarded to all those who completed part of the training and to New Ireland participants.

13 In Bougainville, equal numbers of female and male leaders were appointed and trained (16 female, 13 male) to align with the community governance structure that mandated equal numbers of female and males in all committees. In addition, at the request of the Bougainville Women's Federation the leadership training was also provided to young women from a separate project (5 females) and women community government committee representatives (7 females). At the request of the New Ireland Department of Primary Industries, the first 2 New Ireland leadership trainings involved both female Department of Primary Industries staff (4), and VCEs and leaders (16). However, all women VCEs were unexpectedly invited to the last 2 trainings, reaching a total of 46 women VCEs. See Islands Hub Report.



The project built the capacity of some researchers in participatory action research, as well as supporting some researchers to gain qualifications.

Four researchers based in PNG gained Master qualifications (2 each at University of Technology (UniTech) and Pacific Adventist University (PAU)) through the project. Stakeholders also valued the networks they developed through the project, which they felt provided a foundation for potential future collaboration.

Policy

Two aspects of the project – the FFT approach and teacher professional development resources and materials – have significant potential for policy uptake. There were limited activities undertaken through the project to support embedding outputs into relevant policy frameworks or building institutional capacity to implement them. For example, the *Educating Children for Farming Futures Report* (Simoncini and Pamphilon 2018) indicates that inviting PNG Department of Education (DoE) officials to pilot trainings and arranging meetings with departmental officials to discuss the project with them in person would have helped promote uptake (Simoncini and Pamphilon 2018). Future projects should be designed (in terms of duration, resourcing and so on) to maximise the uptake of high-value knowledge and resources generated through TADEP projects by government policy and programming.

Adoption

ACIAR uses a 4-level classification scheme to indicate the level of uptake of key outputs. This has been used by the evaluation team to summarise output adoption for the projects reviewed under each program, as illustrated in Table 28.

New technologies or practical approaches

In all project areas both men and women farmers reported increasingly working as a team after the project. For example, in Bougainville there was a 60% increase in the number of women who reported ‘always’ or ‘often’ working in a team at the end of the project. Greater understanding of the inequality in workloads between men and women, and some changes of roles and sharing workloads, were evident in all areas (Pamphilon et al. 2017a). Reports also indicate that **in some instances the project increased women’s burden of work** as women undertook the majority of labour on farms on top of a challenging training schedule, which placed high demands on women’s existing farming and household responsibilities, and this was not matched by a redistribution of roles within the family (Pamphilon et al. 2017b). In all areas women reported that they retained the responsibility for marketing, and one evaluation suggested that this was likely because women preferred to retain this role as it provides them with access to cash (Pamphilon et al. 2017a and 2017b). A critical factor influencing changes in household relations was having at least 2 participants from a household involved in the training, and ideally the husband and wife. The Highlands Hub evaluation indicated that having pre-agreement on roles for women, men and youth should be a prerequisite for families’ participation in project activities. In addition, shifting gender norms is a very slow process and several interviewees felt that changes would not be sustained within farming families without ongoing engagement and support.

In all sites, a high percentage of farmers (both VCEs and farmers trained by them) indicated that they had developed goals for their farms and families and were planning both subsistence and commodity crops. Common family goals are listed in Table 29. Evaluations also found that **women’s planning of home gardening and knowledge of nutritional eating had improved across all project areas.** In the Island Hub, VCEs reported that ‘nearly everyone’ now has a FAITH garden¹⁴, and that women who had been purchasing vegetables now tend to grow them in their own garden. Interviews highlighted the uptake and impact of these gardens for producing food for families during the COVID-19 pandemic when access to markets had been limited.

14 A FAITH garden stands for ‘Food Always In The Home’. This was a central concept of FFT training.

Table 28 Levels of adoption of key project outputs

Category	Output	Users	Level of adoption
New technologies or practical approaches	Family team-based farming practices	<ul style="list-style-type: none"> VCEs are initial users Other farming families are final users 	Nf*
	New agricultural practices	<ul style="list-style-type: none"> VCEs are initial users Other farming families are final users 	Nf*
	Business-like approaches to farming	<ul style="list-style-type: none"> VCEs are initial users Other farming families are final users 	Nf*
New scientific knowledge	Family Farm Team model	<ul style="list-style-type: none"> Individual researchers and practitioners who were involved in the project are initial users Use of these approaches and materials beyond the project constitutes final users 	NF
	Business in farming approaches and training materials	<ul style="list-style-type: none"> Individual practitioners who developed and delivered the training materials are initial users Use of these approaches and materials beyond the project constitutes final users 	NF
Knowledge or models for policy and policymakers	Teacher professional development and curriculum	<ul style="list-style-type: none"> Teachers involved in developing the approaches and resources and trained to use them are initial users Uptake of the approaches and resources into broader education policy or programming constitutes final users 	N
	Agricultural extension policy	<ul style="list-style-type: none"> Work areas involved in the project are initial users Uptake of the approaches or ideas into broader policy or programming constitutes final users 	O

Notes:

* While there is evidence that some families have taken up these approaches, there is insufficient evidence of the level of uptake

O No uptake by either initial or final users

N Some use of results by the initial users but no uptake by the final users

Nf Demonstrated and considerable use of results by the initial users but only minimal uptake by final users

NF Demonstrated and considerable use of results by the initial and final users

Table 29 Common family goals across all project sites

New assets	Farm production	Family life	Cultural
<ul style="list-style-type: none"> Permanent / semi-permanent house PMV (bus) Sewing machine Set up a food bar Build a guesthouse Trade store 	<ul style="list-style-type: none"> Vehicles to transport produce Feed mill for animal feed Piggery and/or poultry Vegetable nursery Increase food crop volume Set up local market 	<ul style="list-style-type: none"> House renovations Electricity/solar Water tank Generator Fridge School fees Adult education courses 	<ul style="list-style-type: none"> Set money aside for bride price, funerals, compensation Contribute to community feasts Contribute to the church every week

Source: ACIAR 2019



The majority of farmers' households (both VCEs and farmers trained by them) reported that they had diversified their crops and farming practices to grow new crops specifically for sale, rather than simply selling any surplus. This included significant increases of women growing new crops.¹⁵ In the Highlands Hub some participants had bought new equipment since becoming involved in the project though it is not clear whether this was directly attributable to the project. Reports indicate that **moving from subsistence to commercial crop production was very challenging for farmers**. Importantly, farmers indicated that they require continued training, particularly in the use of fertilisers and pesticides, and that they are concerned about the viability of these expenses to continue their use in commercial crop production on their farms (Pamphilon et al. 2017b). This reflects findings in the ripple effect mapping from the ASEM/2010/052 pilot, where farmers reported that they needed ongoing technical agricultural extension and training to continue implementing new practices (Nema 2018).

In all project sites, **training on budgeting and savings goals led to an increase in budgeting by VCE families, with greater increases in the Highlands Hub than the Islands Hub** (see Table 30). While increases are lower in the Islands Hub, the overall rates of VCE savings were higher in that Hub as more were already saving prior to the project. This data was not available for the Islands Hub. **Access to and use of bank accounts by VCEs also increased as a result of the project**. In the Highlands Hub where access to banks was more limited, training project members as Nationwide Microbank agents enabled some women and families to conduct banking in their own villages. Nationwide Microbank reported the majority of the transactions in both Eastern and Western Highlands were by women, noting that agents were not yet active in Jiwaka at the time of data collection (Pamphilon et al. 2017b).

Changes in **record keeping and bookkeeping practices were more challenging and reported to be not as readily implemented by VCEs**. Reports indicate that this was primarily due to low numeracy among participants. That said, in the Highlands Hub, 69% of VCEs reported keeping records individually or as a couple after the project, noting there is not a baseline to compare this against. In the Islands Hub, fewer VCEs reported that they keep records and there were also inconsistent responses about who is the household record keeper, indicating the lack of a clear or shared approach (Pamphilon et al. 2017a).

Changes in VCE marketing practices were evident in households that participated in the project. In the Highlands Hub, many households had changed where they sold their crops (46.7% in Eastern Highlands, 42.3% in Jiwaka, 65.4% in Western Highlands) and all areas reported selling more often. Marketing practices were reported to have changed less uniformly in the Islands Hub, with a similar percentage of households reporting an increase in market sales as those that reported a decrease in market sales (Pamphilon et al. 2017b). The Islands Hub evaluation attributes this to farmers increasing their commercial cropping and selling whole harvests less frequently, as opposed to selling small surpluses frequently.

Table 30 Changes in VCE budgeting practices

Location	Change in VCE budgeting practices
Highlands Hub	<ul style="list-style-type: none"> • 22% increase in monthly budgeting • 46% increase in weekly budgeting
New Ireland	<ul style="list-style-type: none"> • 17% increase in budgeting
Bougainville	<ul style="list-style-type: none"> • 7% increase in budgeting

Source: Pamphilon et al. 2017a and 2017b

15 In the Islands Hub a majority of households (83% in New Ireland and 86% in Bougainville) reported growing new crops. Exact figures are not provided for the Highlands Hub but graphs in the *Islands Hub Report: Developing farming families through training and development activities* indicate significant increases in the numbers of men and women who 'often' and 'always' grow new crops.

Knowledge or models for policy or policymakers

There is limited evidence that the project has been integrated into agricultural extension policy and approaches by FPDA and Department of Primary Industries (DPI). Project reports indicate that the FFT approach was anticipated to be integrated as a formal component of the FPDA village extension worker program and incorporated into extension policies, however this appears to have been driven by one key stakeholder within FPDA and has not proceeded since that individual left the organisation (ACIAR 2019). Stakeholders within DPI indicated that there is awareness of the FFT approach and a commitment by some individuals to incorporating the approach into their work, however this has not yet happened in practice. According to an interview, policy influence appears to have been heavily reliant on individual champions within these organisations, which has limited uptake as staff turnover and the lack of broader organisational buy-in stalls momentum.

At this stage there is limited evidence available to assess the extent to which teaching PD resources and new approaches have been adopted. However, of the 373 teachers involved in piloting the resources, 19 stakeholders were interviewed to assess uptake (these interviews were not undertaken as part of this evaluation) and all 19 had implemented ideas from the PD workshops (Simoncini and Pamphilon 2018). While the PD package was officially launched in July 2018 with the New Ireland, East New Britain and national DoE, there is no evidence that the teaching PD resources have been incorporated into education policy as yet. Turnover of key champions of the resources has also hampered progress. As with agricultural agencies, this highlights the risk to sustainability of reliance on individuals to drive uptake of project outputs rather than an institutional capacity development strategy.

Outcomes

Scientific achievement

In demonstrating the effectiveness and adaptability of the FFT model in diverse contexts, the project supported its uptake by a range of organisations as an effective model of gender-inclusive agricultural extension. Other programs that integrated the FFT approach include:

- The 'PNG Women and Extractives' project uses the 4 FFT modules and the games-based financial literacy and business training developed by PAU as the foundation for community development activities.
- The 'FHI 360' pilot of a savings and loans model in communities in the Western Highlands province includes foundational training by PAU using the games-based financial literacy and business skills trainings developed through this project.

- The 'From Gender-Based Violence to Gender Justice and Healing in Bougainville' project's economic pilot is using the FFT modules.
- The International Fund for Agricultural Development 'Markets for Village Farmers' project included FFT modules as foundational training for 23,000 farming households.
- The World Bank's new 'Papua New Guinea Agriculture Commercialisation Development' project references the FFT approach.

Other TADEP projects have integrated the FFT approach into their programming:

- Developing the cocoa value chain in Bougainville (HORT/2014/094)
- Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu provinces of Papua New Guinea (HORT/2014/096)
- Supporting commercial sweet potato production and marketing in the PNG Highlands (HORT/2014/097)
- Enhancing private sector-led development of the *Canarium* nut industry in Papua New Guinea (FST/2014/099).

The games-based financial literacy and business skills training developed through the project is being used by multiple Pacific Women partners, including:

- The 'Women and Extractives' project, which used the FFT modules as the foundation activities for community development projects to generate support for women's decision-making roles in mine-agreement making forums.
- The Kommuniti Lukautim Ol Meri, and Gender Justice and Healing projects, which are using the family-based approach and basic business skills training manual developed through the FFT project for their economic empowerment pilots (Pacific Women Support Unit 2020).



Capacity built

Key project stakeholders including VCEs, PNG partner organisations and communities achieved greater capacity throughout the project, as summarised in Table 31.

The extent to which VCEs continued to be active as peer educators and share their knowledge with others in their villages during the project varied between project sites.

VCEs reported having trained 2,541 other farmers across all 5 areas (noting these should be considered estimates). Importantly, 63% of the farmers trained were female, demonstrating the effectiveness of this approach in reaching women farmers. Most VCEs offered training to members of their family, wantok and neighbours, and in some cases church groups (ACIAR 2019). Sharing knowledge outside of the wantok was a common challenge in the highlands due to inter-clan jealousy. VCEs in the Islands Hub reported sharing their learning far more widely, including through ward committees, churches, community events and with other non-government organisations. It would be valuable to explore how more formal partnerships with these community groups could be incorporated into future programming to promote more widespread sharing of learnings by VCEs, particularly as these groups may be well placed to provide ongoing support and mentoring to VCEs.

It is not clear how many VCEs continued to act as peer educators beyond the project duration. The evidence above and several stakeholder interviews for this evaluation indicate that some VCEs did embed the FFT approach and continue to deliver trainings. Other interviews indicate that VCE activities ceased once the project concluded and that key changes such as shifts in gender relations at the household level are likely to revert back to pre-existing norms.

Reports indicate that training providers have built their capacity in areas such as participatory research, and designing and delivering training in low-literacy contexts. Reports indicate that several universities are applying knowledge gained through the project in the extension arms of their departments, both in terms of delivering activities but also teaching students new research and training techniques. Examples include:

- A researcher from the Integrated Agriculture Training Program (IATP) at University of Natural Resources and Environment who was involved in the project and is now integrating the FFT approach into training modules at the IATP.
- PAU academic staff have built their capacity in place-based and low-literacy teaching in rural communities and are using this in their teaching curriculum and extension arm.
- PAU School of Business academics have been trained in the FFT First Steps to Financial Literacy 'games-based' training and are developing other modules based on this approach.

Reflections of training partners on capacity built through the project:

'We built our capacity working alongside ACIAR partners ... we were learning at the same time and they were learning from us.'

'[the organisation] has taken on the FFT, we are doing it on our own ... we've picked up everything from ACIAR and what is online and we are adopting and using it.'

Table 31 Capacity built relevant to project objectives

Who	Skills and knowledge
Village Community Educators (VCEs)	<ul style="list-style-type: none"> • Peer education and facilitation skills • Leadership skills • Greater understanding of the importance of a more equitable division of household labour • Agricultural livelihood concepts • Basic business skills • Financial literacy • Income-oriented agricultural development
Male and female community members	<ul style="list-style-type: none"> • Greater understanding of the importance of a more equitable division of household labour • Agricultural livelihood concepts • Basic business skills • Financial literacy • Income-oriented agricultural development
Training partners	<ul style="list-style-type: none"> • FFT approach • Participatory research • Designing and delivering training in low-literacy contexts

Project reporting indicates that in 2019 the **teaching materials developed through this project were incorporated into New Ireland teaching resources for primary and secondary schools** and provided to primary and secondary schools across the province. Stakeholders indicated that the departure of a key supporting school principal has led to this process stalling. The evaluation was not able to assess the extent to which these resources were used.

Economic outcomes

A majority of the **highlands VCEs indicated that they had increased their usual income** from selling food crops and these increases were statistically significant (Pamphilon et al. 2017b). Almost all households surveyed in this hub had increased the amount of crops they grew for sale, but income increases were lowest in Western Highlands where there is more limited access to markets than in Eastern Highlands and Jiwaka (Pamphilon et al. 2017b). It is too early to assess income changes in the Islands Hub, however a high proportion of VCEs reported that they had increased their income from selling cash crops and attributed this to the project (Pamphilon et al. 2017a). Increased income was commonly spent on family, farming and social obligations such as contributing to problem resolution, bride price or church payments. Women and men reported that spending on gambling and alcohol had reduced (Pamphilon et al. 2017b).

A majority of households in both hubs reported that they now **'always' or 'mostly' have enough food in their home to feed the family**. Baseline figures were not available, so it is not possible to assess the extent of change and how the project has influenced this. However, evaluations in both hubs indicated that many participants identified improvements in food availability as a key result of the project and this was also supported by stakeholder interviews conducted for this evaluation (Pamphilon et al. 2017a). In addition, evaluations in both hubs reported that many households had improved their diets (Pamphilon et al. 2019).

In all project sites there was an increase in families more regularly making shared decisions about money. While exact data was not available for the Highlands Hub, a similar trend followed across all highlands project sites with a shift towards families more regularly making joint financial decisions (Pamphilon et al. 2017b), as shown in Table 32.

Gender equity outcomes

Men as well as women reported that they had implemented new ways of communicating due to the project and acknowledged the importance of good communication between all family members. Importantly, this was not the case for all families with some VCEs reporting that little had changed or that change was very slow to eventuate (ACIAR 2019). The project identified that it was important that at least 2 family members (including a male family member) participated in the FFT training in order to influence change, reinforcing the importance of maintaining a gender balance to maximise the impacts of the FFT approach. In the highlands there were a number of reports that communication and family relations also improved in polygamous families due to the project, demonstrating the adaptability of the approach to different family structures.

Project reports, along with interviews conducted for this evaluation, demonstrate that the **skills, knowledge and confidence that some women gained through the project enabled them to take on greater leadership roles** in their communities. Evaluations of both hubs reported that generally women's goals and aspirations had expanded since involvement in the training and that many women spoke confidently about their leadership roles in the community (Pamphilon et al. 2017a). Women took on roles with the school board of management, ward committees, and ran awareness and reconciliation for the local government. The exception to this was New Ireland, where women had not taken on new roles.

'I have seen impact on the lives of [people] in terms of how they were able to speak up, speak out, their status in the community, for the women especially.'

– Project partner

Table 32 Changes in the proportion of families where women and men make joint financial decisions

	Location	Baseline	Endline
Percentage of women who report 'always' or 'often' making decisions about money together with men	Bougainville	20%	80%
	New Ireland	24%	44%

Taking on leadership roles was challenging for some women and many women faced barriers to exercising their leadership (Pamphilon et al. 2017b).

Inter-tribal tensions and resistance from some women and men to women taking on leadership roles were particular barriers (Nema 2018). Those who had previous leadership training and experience, or came from families that were clan leaders reported facing fewer barriers (ACIAR 2019). Managing conflict within their groups was a particular challenge for many women and they highlighted the need for additional training on communication, conflict resolution and handling criticism (ACIAR 2019). Support from partner agencies, including mentoring, was identified as playing an important role in building and sustaining women's leadership, in maintaining linkages with the women, drawing on their skills, and providing continued opportunities and training beyond the project (Pamphilon et al. 2017b).

In all areas some women reported that they gained increased respect in their village through their training and role as a peer educators.

There is evidence that some men also began to acknowledge and support women as leaders in their villages and recognised their own roles in supporting women to become leaders (Pamphilon et al. 2019 and 2017). There is also evidence that the FFT project helped to create space for women's leadership by equipping them with skills and knowledge which was valued by their communities. For example:

- In Jiwaka, young women were encouraged by the community to build a training shelter.
- In New Ireland, women regularly spoke at 'community day'.
- In Bougainville, many women VCEs were invited to join community committees (ACIAR 2019).

There is evidence that the FFT approach made valuable progress addressing some contributing factors to family violence and providing avenues for non-violent family relations in project areas.

As described above, this included awareness and adoption of improved non-violent communication approaches by many households as well as greater shared planning and decision-making within many families. By addressing household-level gender norms and behaviours and promoting strong families as a central part of successful farming, the project promoted family cohesion and respect, which may have an impact on reducing violence. However, evidence from project reports and evaluations indicate that while there was a decrease in violence in some families, in other families, men continued to perpetrate violence against women (Pamphilon et al. 2017b).

Environmental outcomes

Project reports indicate that farmers are now more aware of the safe use of chemicals and pesticides and of the importance of maintaining their soil and management of their land. These outcomes were not assessed through this evaluation.



Bernadette Lasin, one of the Family Farm Teams' leaders on Buka Island. Photo: Conor Ashleigh, ACIAR

The impact of the project on family violence

Family violence was highly prevalent in project areas, primarily perpetrated by men against women but also by women against men and other women, and by adults against children. There is evidence that the FFT approach made valuable progress addressing some causes and triggers of family violence in project areas. This included awareness and adoption of improved non-violent communication approaches by many households, as well as greater shared planning and decision-making within many families. These changes in household-level behaviours were largely attributed to the project's focus on cooperation and teamwork as a family, which promoted family cohesiveness. In addition, the skills, knowledge and leadership opportunities built by women through the project led to women being more respected by their partners and communities.

'The FFT program has provided another enabling discourse of gender cooperation and teamwork.'

– Highlands Hub report (Pamphilon et al. 2017b)

However, reports on the impacts of these changes on levels of family violence were mixed. Some families reported that these changes had contributed to reduced family violence in their households, for example, by avoiding triggers for violence such as control over money.

'In the past, every money I earned in a day would be taken and used by my husband. He would ask for the money and I used to be scared so I would give him everything. The training has changed all those practices. My family today plans and works together to make our family budget and we are saving our money. This is the greatest thing that has happened to my family.'

– ASEM/2014/095 Final Report (ACIAR 2019)

However, both hub evaluations reported that some men continued to perpetrate violence against women, noting that data was not available on the extent to which this violence occurred and its relationship to project activities. Project reports indicated that this occurred when women returned from training – with suggestions both that it was because women returned late or men did not accept women participating in the training – and also due to the demands on women's time of the model farms (ACIAR 2019).

'Although family violence continues to be a barrier for women, the project has provided enablers for women through the development of new community roles as peer educators and leaders. Women who have increased knowledge capital from the training potentially have increased power and community status.'

– Islands Hub and Highlands Hub reports (Pamphilon et al. 2017a and 2017b)

Several examples were provided of women providing support networks for other women who experienced family violence. For example:

'I had 6 VCEs and after the first training we conducted some of them were beaten by their husbands. I supported them when their husbands beat them.'

– ASEM/2014/095 Final Report (ACIAR 2019)



3. How did project activities and outputs contribute to the outcomes achieved?

Factors influencing adoption and outcomes

At the village level, a critical success factor for adoption of outputs was the localised, participative approach that the project was inherently grounded in, allowing adaptation to each context.

The participative approach of working with VCEs to identify their priorities and goals, culminating in a tailored manual specific to each context, was critical. Stakeholders felt that this empowered VCEs to adapt the content to their context to ensure it was relevant and likely to be effective, as well as building their confidence to adapt the materials for diverse training participants. Tailoring project materials to rural, low-literacy contexts was also key in influencing adoption. The use of pictorial-based materials and story books proved highly appropriate, as well as games-based and participatory learning approaches. Results in the Highlands Hub indicated that even trainings using low-literacy resources, participatory methods, and translation into local languages remained challenging for participants who had no previous educational experience (Pamphilon et al. 2017b). While VCEs tended to become more familiar with training processes over time, some VCEs with low education levels did not build sufficient confidence to deliver the training in their villages. In the Islands Hub, selection of VCEs who had completed primary school and had basic Tok Pisin and English literacy proved more effective, particularly in enabling use of written materials.

Partner agencies' capacity to implement the FFT approach and the level of support they provided has been consistently highlighted as critical for VCE success as peer educators, both during the project and beyond. This includes mentoring for women leaders and peer educators, support to build and facilitate networking by VCEs in a community of practice, and ongoing training and capacity development of VCEs in core areas. Project documents and stakeholder interviews identified that whether organisations have a genuine commitment to supporting women's economic empowerment in agricultural development as part of their core business was a critical success factor, as it resulted in higher levels of engagement in the project and would likely be conducive to higher levels of ongoing commitment beyond the project.

'If we could put different [VCE] teams together they can empower each other, support each other. This would be good for sustainability.'

– Project partner

Having the organisational capacity to deliver the FFT approach, including skills, culture and management buy-in, was key for sustainability. The addition of the fifth objective and subsequent delivery of FFT training to some partner agencies was a first step in working beyond the village level with implementing partners to drive increased capacity to deliver the approach. However, **building organisational commitment and capacity to genuinely adopt and embed the FFT approach into policies and practices requires a concerted strategy beyond training individual staff.** This needs to include extended engagement with senior management and policy support to embed the approach into internal systems and practices. While this work was beyond the scope of this project it should be considered for future projects to maximise uptake of the FFT approach by extension service delivery agencies, as well as ensure they are positioned to provide support for VCEs as part of their ongoing agricultural extension activities.

Gender and cultural norms were a strong and significant influence on every output and outcome delivered by the project.

Given the project's core focus on women's economic empowerment, gender norms were highly influential on project performance. Key learnings were that the family approach and male-female composition of VCE teams (as opposed to all-female teams) were effective approaches in supporting household-level changes in gender roles. The project also identified that supporting changes to household-level division of labour for family and farming responsibilities needed to precede improved farming practices and income generation if women were to benefit from the latter. If not, there is a risk that the approach can add to women's existing workloads.

The most influential cultural norms on project outcomes typically related to wantok relations.

This affected women's leadership, as some women were not able to act as leaders for women outside their wantok, while others were more able to adopt leadership roles because of their family's higher status. In addition, project reports indicate that VCEs tended to provide training to existing community networks, with most working within their wantoks. This demonstrates the limitations of the approach in building knowledge and implementation of new practices across wantoks.

Table 33 provides key findings against the categories and factors influencing adoption and outcomes as part of the ACIAR evaluation framework.

Table 33 Factors influencing adoption and outcomes

	Factor	Key findings
Knowledge	Do potential users know about the outputs?	<ul style="list-style-type: none"> Peer-based education is an effective method for influencing adoption at village level, significantly driven by the demonstration effect.
	Is there continuity of staff in organisations associated with adoption?	<ul style="list-style-type: none"> A stronger partnership approach and organisational capacity development (as well as individual staff) of implementing partners would enable more sustainable uptake of the FFT approach.
	Are outputs complex in comparison with the capability of users?	<ul style="list-style-type: none"> Low gender awareness and lack of skills/experience of agricultural extension services does limit adoption of the FFT approach without ongoing individual and organisational capacity development.
Incentives	Are there sufficient incentives to adopt the outputs?	<ul style="list-style-type: none"> There are strong food security and income incentives to adopt the FFT approach and new farming practices at the village level. Incentives for VCEs to continue acting as peer educators and share knowledge beyond their immediate family or wantok need to be assessed. Access to markets to sell commodity crops also needs to be addressed so that demand for produce can influence and enable farmers' farm goals to be achieved.
	Does adoption increase risk or uncertainty?	<ul style="list-style-type: none"> There is a risk that the approach results in increased workloads for women if household labour is not redistributed between women and men before training, model farming and commodity cropping commences.
	Is adoption compulsory or effectively prohibited?	<ul style="list-style-type: none"> Not identified as a constraint for these projects.
Barriers	Do potential users face capital or infrastructure constraints?	<ul style="list-style-type: none"> Some farmers questioned the feasibility of buying fertilisers and other inputs beyond the project duration.
	Are there cultural or social barriers to adoption?	<ul style="list-style-type: none"> Gender norms and community expectations are a key barrier to adoption of the FFT approach. The community-driven, adaptive approach enables it to be grounded in the norms and context of each community, however these norms are slow to change and adoption of new family farming practices will be gradual. Ongoing support is required to ensure that families do not revert to pre-project gender roles and farming practices once the project has concluded.



4. What strategies were adopted to address gender equity and social inclusion and how effective were these?

Gender equity and women's empowerment were central to the project's objectives and approach. As outlined in the impact pathway, this approach comprised 3 interrelated focus areas:

- Improved gender equity at the household level, focusing on building understanding of the burden of work undertaken by women and men within the household and instigating a more equitable distribution of labour.
- Women's economic empowerment, focusing on increasing women's incomes and financial decision-making.
- Women's participation and leadership, focusing on building women's skills, confidence and opportunities to exercise leadership roles in their communities.

There is strong evidence that the project impacted to some extent across all 3 focus areas and contributed to the economic empowerment of women smallholder farmers. The adaptive approach to gender equity was critical to the project's effectiveness. For example, when evidence emerged that VCE teams should be mixed gender, the project adapted to encourage mixed male-female teams rather than all-female.

It is recommended that future projects include up-front gender analysis and a gender strategy to ensure appropriate measures are in place to manage risks. This project scaled out a previous pilot which was informed by a 'do no harm' process. Gender indicators were included in the project's monitoring and evaluation framework to assess performance on gender equity. There were incidents of backlash against women for having taken on leadership roles, both from other women in their villages and men, and there was mixed reporting on whether the project contributed to a decrease in family violence or increased incidents of family violence. It was reported that once risks of family violence emerged, the project leadership raised and discussed this issue with project partners across all sites and were advised that peer support networks were in place to support women who experienced violence. Given the high rates of family violence and gender inequality in PNG, it is essential to identify risks and risk management mechanisms at the outset of all projects and put in place strategies to mitigate and manage risks for women.

Developing a strategy for social inclusion at the outset of the project would have enabled a more strategic approach to be taken towards engagement with diverse groups. There was no specific social inclusion strategy for the project. However, **project reporting includes some examples of marginalised groups being included in project activities.** The primary examples are in Bougainville where the Halia Widows Association was selected as the project delivery partner, meaning female VCEs in that project area all came from households with females at the head. The final report indicates that this did spark backlash from other groups who were not included in the project. No data was available to assess that concern during this evaluation. **Youth were also involved in some project areas as core members of farming families.** Several stakeholders indicated that a greater focus on youth is warranted and should be considered in future programming. Other examples included a number of VCEs training youth and those with drug and alcohol problems in Bougainville, and provision of a training session for female secondary students with the aim of helping them as future family leaders and to avoid early marriage and/or pregnancy (Pamphilon et al. 2019). There is no reference to people with disability being involved in the project.

5. How did management arrangements impact delivery of the project?

Project partners consistently reported that project management arrangements between partners and University of Canberra (UC) were strong and welcomed the highly respectful and engaging approach of project leaders. Partners reported that relationships with the UC research team were collaborative and based on two-way learning, and felt that the knowledge they brought to the project was valued by the project team. This is particularly commendable given the complexity of project delivery for the UC project leader, who faced **significant challenges coordinating 2 hubs and 5 project locations, 6 major partner agencies, and other partners for specific activities.** All stakeholders indicated that **project timelines were extremely challenging**, particularly given the high number of partners and complexity of the project, as well as the impacts of holiday periods, community events, and obligations on VCE availability.

At the individual partner level, **the commitment and capacity of project partners to implement the FFT approach was mixed.** In some areas, levels of commitment were high, and stakeholders felt there was a strong shared agenda between implementing partners and the project objectives. However, there was evidence of a period of absence of a partner agency in one project area, as well as a lack of commitment and resourcing for the area leader's work in another area, which undermined continuity and effectiveness of project activities. Project documents indicate that greater support for partner agencies and mentoring of area leaders throughout the project was required, including collaboration with partner agencies on key issues such as recruitment or appointment of appropriate project staff (Pamphilon et al. 2017).

'At the end of the day, ACIAR only funds projects forward for a certain time, but afterwards someone needs to carry it forward.'

– Project partner

There was minimal collaboration or engagement between project implementation partners. This was a function of the project design, with partners purposefully separated to understand strengths and weaknesses of different organisations in establishing partnerships with communities. As such, stakeholders were brought in to collaborate with the UC research team on pre-determined research objectives and had limited engagement across the project. While this may have delivered benefits in terms of comparing the approach of different partners, several stakeholders reported that they would have appreciated greater understanding of the broader project they were contributing to, and that a more collaborative approach would have increased the quality of their engagement (such as ensuring the right personnel would be available) as well as building learning networks that could endure beyond the project. The limited involvement of institutions in the up-front design of the project meant that while some agencies took great ownership of the activity results and genuinely adopted the learnings for use in their own work, in others the findings were primarily held by an individual and have been impacted by staff turnover. Consideration should be given to engaging partners in the project design process, and promoting collaboration to maximise networking and learning between partners.

Coordination arrangements with Department of Foreign Affairs and Trade (DFAT) and Pacific Women Shaping Pacific Development (Pacific Women) needed to be clarified at the outset of the project.

There was limited understanding of the role of Pacific Women in relation to DFAT as the project funder, which led to a lack of clarity around project reporting as well as participation in project events. Recognising the value of the FFT approach and its applicability across multiple programs, Pacific Women was well-placed to support uptake of learnings from this project, however again, a lack of clarity around the relationship between the FFT project and Pacific Women meant that these opportunities were not maximised. While there were efforts to share learning across Pacific Women projects (particularly after the addition of Objective 5), this could have been greater if coordination between the 2 project teams had been closer.



6. How well did the project align with and contribute to the overall goals of its umbrella program?

Awareness of the TADEP umbrella and its objectives varied significantly across project stakeholders.

While project leaders had a deep understanding of the TADEP objectives and purpose, PNG-based project stakeholders had a more limited awareness of TADEP, if at all. Several PNG-based stakeholders recognised the value in cross-project collaboration and learning – within and beyond ACIAR-funded projects – and recommended greater ongoing engagement throughout implementation.

Alignment with TADEP objectives and projects

The project aimed to support these TADEP objectives:

- **To create economic opportunities for rural women through small enterprises.** Project activities and collaborative activities enhanced women's engagement in cocoa, *Canarium* and sweetpotato projects.
- **To build capacity across the program, ensure gender equity in all aspects of the program, and create effective monitoring and evaluation.** The project shared data collection methods for gender-specific research questions and impact measures; and shared participatory monitoring and evaluation methods, especially for smallholders with low literacy.

Collaboration with other projects

The FFT project was central to the TADEP umbrella in that opportunities were identified for collaboration with all 4 other TADEP projects:

- 'Developing the cocoa value chain in Bougainville' (HORT/2014/094). Key staff from this project were trained in the FFT approach in a one-week intensive session in 2018.
- 'Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu provinces of Papua New Guinea' (HORT/2014/096). Key staff from this project in the New Ireland site were trained in the FFT approach.
- 'Supporting commercial sweet potato production and marketing in the PNG highlands' (HORT/2014/097). Communities that had participated in the Highlands Hub of ASEM/2014/095 were selected for inclusion in this project.
- 'Enhancing private sector-led development of the *Canarium* nut industry in Papua New Guinea' (FST/2014/099). This project provided training on Galip Nut production to the FFT project.

Knowledge and approaches developed through the FFT project and shared with TADEP projects included:

- trialling capacity development of key extension service officers and farming families (men and women) in the FFT modules
- the development of children's books to build knowledge of children and their parents
- approaches to building capacity in the education sector
- participatory research, monitoring and evaluation knowledge.

It is notable that this project provided significant knowledge transfer to other TADEP projects but there is **only one example that knowledge generated through other TADEP projects was applied in the FFT project (galip nut training)**. The key reason for this was the unique focus of the FFT project on participatory research and gender-sensitive approaches to uptake of new agricultural practices, which had relevance across the breadth of the TADEP portfolio.

While project documents indicate that the engagement of multiple projects, including the FFT project, with National Agricultural Research Institute (NARI), DPI and FPDA provides opportunities for greater capacity building, **evidence of a coordinated TADEP-wide capacity development approach was not identified during this evaluation**. This could potentially form a key program-level objective in future iterations of the TADEP umbrella.

Knowledge transfer and learning

TADEP reviews and annual meetings were cited as the most effective mechanism for sharing project results and cross-program learning. Most partner agencies had attended at least one TADEP meeting, which demonstrates a commitment to inclusion and engagement of PNG-based partners in this learning by the project leadership. These stakeholders reported that the events were extremely useful for building knowledge and networks and recommended mechanisms be introduced for ongoing engagement. **TADEP collaborative grants were also valuable in providing a mechanism to undertake program-wide collaboration and learning**, given this was not built into project designs and budgets. Collaborative grants were provided to support collaboration with the Bougainville cocoa and PNG cocoa projects, allowing the FFT approach to be built into those projects.

Several stakeholders reported that **having the TADEP umbrella in place enabled better communication of the results** of the FFT project to other projects and partners. For example, sharing the combined TADEP results, including showcasing the FFT, at Pacific Women learning workshops was reported to have supported uptake of the FFT approach by other Pacific Women-funded projects. In addition, it supported communication of the FFT approach to DFAT as an effective and relevant part of agricultural development programming, rather than sitting separately as a Pacific Women-funded project.

While stakeholders appreciated the approach and efforts of the program coordinator in bringing the TADEP portfolio together, **the fact that TADEP commenced after the FFT project meant that it was not built into the project activities or budgets, and there was insufficient time and resourcing available for TADEP engagement.** Any future programmatic approaches need to be positioned to offer more strategic value and drive efficiencies, and be adequately resourced, primarily by being developed in advance of the projects that sit under them.

Reporting

All stakeholders indicated that the frequency of TADEP reporting was burdensome. Any future programmatic approaches should seek to align programmatic reporting with project-level requirements to avoid any additional reporting being required by each project at the program level.



Village community educators undertaking Family Farm Teams training.
Photo: Barbara Pamphilon



Conclusions and lessons learned

Results from this project have confirmed that the **Family Farm Teams (FFT) approach is an effective approach for encouraging more sustainable and gender-equitable farming practices in Papua New Guinea (PNG)**. The general consistency of results across the 2 hubs and 5 sites involved in this project demonstrated the adaptability and applicability of this model across diverse contexts and commodities. This project also demonstrated the value of combining agricultural and business-oriented training with FFT training for empowering women farmers. It provided women with technical skills and knowledge that increased their status in their communities and there are examples in many villages of this opening up opportunities for women to take on leadership roles.

This project has also demonstrated the **effectiveness of peer-based education as a method of building the capacity of farmers, particularly female farmers**, acknowledging its limitations around knowledge transfer beyond peer educators' wantoks and networks. Ensuring that peer educators worked as male-female (preferably husband/wife) family teams was critical for the educators to act as role models in their communities. While village community educators (VCEs) developed significant training and technical skills through their involvement in the project, ongoing support for them is required to sustain these new approaches to family farming and continue their roles as peer educators. This should include careful consideration of the incentives for VCEs to continue these new approaches as well as supporting VCEs to build and engage in a network with other VCEs to enable peer learning and support.

Beyond the village level, 2 key factors were identified as influential to sustainable uptake of the FFT approach. First, **partners' commitment and capacity to implement the FFT approach is critical**, and capacity development and organisational change support is likely to be required to drive and support government partners to take up the model. Second, building on increased agricultural outputs and marketing, **farmers need to have access to larger markets for their commodity crops in order to realise their goals and to provide an incentive to continue uptake of new practices**. This would require positioning implementation of the FFT approach alongside market access and market development programming to address these broader access and demand-side constraints. Given women are largely responsible for marketing and that many indicated they value this role for the access to cash income it provides them, these broader projects should focus on women's specific barriers, capacities and needs.

The **respectful and collaborative approach of the University of Canberra (UC) research team was welcomed by PNG-based partners** and provided the basis for strong two-way learning and uptake of new approaches. However, the number of project locations and partners was a major challenge and establishing an in-country project team should be considered for projects of this complexity, particularly given new risks associated with COVID-19. Consideration should also be given to how organisational capacity development and buy-in can be balanced with research on partners' performance to maximise both research and development outcomes.

The FFT project was a central component of the Transformative Agriculture and Enterprise Development Program (TADEP) umbrella and TADEP learning events were important for sharing the findings from this project across the portfolio.

A more strategic programmatic approach, which would require the program to be designed in advance of its subsidiary projects, a greater focus on learning and knowledge sharing between all partners, and reduced reporting requirements would enable the umbrella program to provide more value to the FFT project.

Lessons learned

Key lessons learned through the project for future ACIAR programming include:

1. **Institutionalising the FFT approach to embed it into ongoing practice is challenging so concerted efforts are required to engage and build the capacity of partners in order to achieve this.** This requires engagement with relevant agency leaders in a co-design process to build a shared commitment to the approach, as well as institutional capacity building at multiple levels. Given the important role of community organisations such as churches in uptake of the FFT approach, further exploration of how these partnerships could support uptake of the FFT approach would also be valuable.
2. As production grows due to new farming practices, **it will become increasingly important that market access and market development programs are delivered to complement the FFT approach** to ensure that increased production can be translated into greater sales and income generation. This will be central to enabling farming families to achieve their family and farm goals and will provide a key incentive for continued adoption of new practices.
3. Given the high levels of gender inequality and family violence in PNG, **all projects should undertake gender analysis to inform their design and develop a gender strategy to guide their approach throughout implementation.** Similarly, developing a social inclusion strategy at the outset of projects would be highly valuable to ensure that projects maximise inclusion of diverse groups, including youth and people with disability, in their design and implementation.
4. **Consideration should be given to establishing in-country project teams** to co-lead project implementation, particularly in light of new limitations and risks posed by COVID-19. In particular, where projects involve larger numbers of implementing partners with mixed buy-in and capacity, having a local lead institution can provide critical support. In addition, while limiting engagement between partners may be warranted for research purposes, it is important that this is balanced with the development and sustainability benefits of peer learning, networking and collaboration between partners. In many ways this relates to larger considerations for ACIAR and others about the scope and objectives of research-for-development projects.
5. The value of a programmatic approach would derive from **consideration of the common objectives across subsidiary projects – such as institutional capacity building of common project partners** – that could be implemented more strategically at a programmatic rather than project-by-project level. Importantly, this does require designing the program in advance of projects, and resourcing it accordingly. A greater focus on sharing learning across all levels of project partners and minimising reporting requirements would also be valuable.



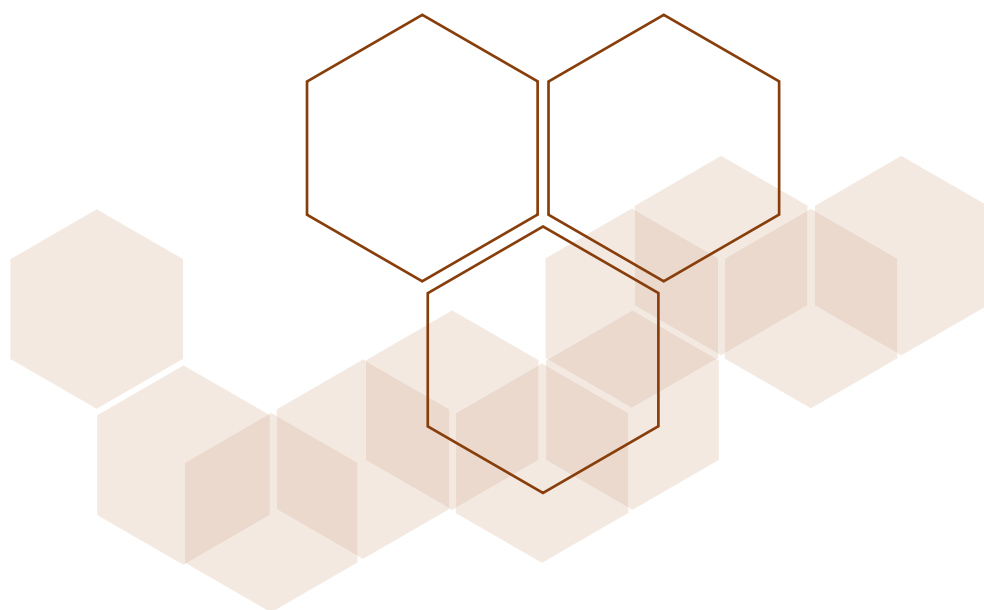
References

- Australian Centre for International Agricultural Research (2019) *Improving opportunities for economic development for women smallholders in rural Papua New Guinea (ASEM/2014/095): Final Report*, Australian Government.
- Department of Foreign Affairs and Trade (2017) *DFAT Monitoring and Evaluation Standards*, DFAT, Canberra, accessed 8 December 2021.
- Nema G (2018) *Opening our family's eyes: The PNG Family Farm Teams Research Report*, University of Canberra, Canberra.
- Pacific Women Support Unit (2020) *Pacific Women in Papua New Guinea Performance Report 2019–2020: Pacific Women Shaping Pacific Development*, Department of Foreign Affairs and Trade, Australian Government, Canberra.
- Pamphilon B (2017) *The farmer-to-farmer adult learning manual*, Australian Centre for International Agricultural Research, Canberra.
- Pamphilon B, Mikhailovich K and Gwatorisa P (2017) *The PNG Family Farm Teams Manual*, Australian Centre for International Agricultural Research, Canberra.
- Pamphilon B, Mikhailovich K, Caffery J, Hill D and Gwatorisa P (2017a) *Islands Hub Report: Developing farming families through training and development activities*, University of Canberra, Canberra.
- Pamphilon B, Mikhailovich K, Gwatorisa P and Harri S (2017b) *Highlands Hub Report: Developing farming families through training and development activities*, University of Canberra, Canberra.
- Simoncini K and Pamphilon B (2018) *Educating PNG rural children for their farming futures: an exploration of the role of teacher professional development*, University of Canberra, Canberra.
- Pamphilon B, Mikhailovich K, Gwatorisa P, and Harri S (2017) *Highlands Hub Report: Building the capacity of rural farmers as peer educators and leaders*, University of Canberra, Canberra.
- Pamphilon B, Mikhailovich, K, Caffery J, Hill D, and Gwatorisa, P (2019) *Islands Hub Report: Building the capacity of rural farmers as peer educators and leaders*, University of Canberra, Canberra.
- Vanua H with Simeon L, Kakap R, Vai C, Flowers E and Pamphilon B (2019) *Business Training for Family Teams A Facilitator's Manual: First steps to starting a small business*, Pacific Adventist University, Port Moresby.

Appendices

Appendix 6.1: Stakeholders consulted

- University of Canberra: Katja Mikhailovich, Jo Caffery, Deborah Hill, Pauline Gwahirisa, Sanna Harri, Kila Raka
- National Agriculture Research Institute: Norah Omot/Sim Sar, Jeromy Kavi, Doreen Tunama
- Pacific Adventist University: Lalen Simeon, Elisapesi Manson
- Baptist Union: Susan Trapu
- Bougainville Women's Federation: Judith Oliver, Margarete Kiroha, Ian Viore
- Fresh Produce Development Agency: Robert Lutelele
- Oxfam: Lynn Asaro Ibu
- CARE PNG: Anna Bryan, Gloria Nema
- New Ireland Department of Primary Industries: Gideon Bogosia
- University of Technology: Veronica Bue
- Voice for Change: Lilly Be'Soer





Appendix 6.2: Project impact pathway

	Women's leadership training	Village Community Educator (VCE) training	Family Farm Teams training	Business acumen training	Financial literacy training	Agriculture training
Outcome	Enhanced ability to network	VCEs who can facilitate training	Women and men understand and begin to work as a family farm team	Women and men understand planned family livelihoods and income streams	Women and men agree on a family budget and saving goal	Women and men see their agricultural activities as a small family business
	Women's local network established	VCEs who can work individually and as a team	Increased number of families working as a family farm team	Women and men have skills to keep business records	Women and men work together on a saving plan	Women and men decide how to diversify and increase income from agriculture
	Increased community building skills	VCEs who can evaluate training	Increased family farm planning involving women	Women and men understand how to access and develop markets	Families have a bank account	Women and men plan annual food and commodity crop production
	Increased leadership capacity	VCEs who are role models	Women and men understand and apply joint farm planning	Families have a planned approach to marketing	Families use their bank account	Families develop FAITH* gardens for food/nutritional security
	Community recognition of women's ability to lead	Increased involvement of women in training	Women and men understand and apply shared communication and decision-making	Families demonstrating business-like approach to farming	Women and men understand the role of formal and informal loans	Women are involved as decision makers for farm production
	Increased number of women in community roles	Increased number of village peer educators (women and pairs)	Improved communication and reduction of violence in families	Some women and families engaging in entrepreneurial activities	Women are part of family financial decision-making	Diversified family farm production
Impact	Greater gender equity in community leadership	Villages as learning communities	Greater gender equity and cohesiveness in families	Improved family farm business viability	Improved family financial viability	Improved family food/nutritional security and farm livelihoods
SDGs	<ul style="list-style-type: none"> • Achieve gender equality and empower all women and girls • Lifelong learning opportunities for all 					<ul style="list-style-type: none"> • End poverty • Sustainable agriculture, healthy lives, food security and nutrition

* Food Always In The Home.

Appendix 6.3: Project team members

#	Team member	Gender	International/National Researchers
1	Dr Barbara Pamphilon	F	International
2	Dr Katja Mikhailovich	F	International
3	Dr Kym Simoncini	F	International
4	Dr Jo Caffrey	F	International
5	Dr Deborah Hill	F	International
6	Sanna Harri	F	International
7	Pauline Gwatorira	F	International
8	Dr Norah Omot	F	National
9	Doreen Tunama	F	National
10	Jessie Abuida-Mitir	F	National
11	Jeromy Kavi	M	National
12	Dr Lalen Simeon	F	National
13	Dr Elisapesi Manson	F	National
14	Joros Sawi	M	National
15	Heather Vanua	F	National
16	Iga Anamo	F	National
17	Fredah Wantum	F	National
18	Rose Koiea	F	National
19	Lilly Be'Soer	F	National
20	Anna Umba	F	National
21	Ian Viore	M	National
22	Sherdrick Nana	M	National
23	Milton Tenemi	M	National
24	Stella Itam	F	National



Appendix 6.4: Research outputs

Publication	Peer-reviewed	Author (gender, nation)
Monographs		
Pamphilon B and Mikhailovich K (2016) <i>Building gender equity through a Family Teams approach: a program to support the economic development of women smallholder farmers and their families in Papua New Guinea</i> , ACIAR Monograph No.194, Australian Centre for International Agricultural Research, Canberra.	No (internal review only)	Pamphilon (Female, Australia) Mikhailovich (Female, Australia)
Pamphilon B, Mikhailovich K and Gwatorisa P (2017) <i>The PNG Family Farm Teams Manual</i> , ACIAR Monograph No.199, Australian Centre for International Agricultural Research, Canberra.	No (internal review only)	Pamphilon (Female, Australia) Mikhailovich (Female, Australia) Gwatorisa (Female, Australia)
Pamphilon B (2017) <i>The farmer-to-farmer adult learning manual: a process and resources for the development of farmers as peer educators</i> , ACIAR Monograph No.198, Australian Centre for International Agricultural Research, Canberra.	No (internal review only)	Pamphilon (Female, Australia)
Books / book chapters		
Pamphilon B, Bue V and Wantum F (2019) <i>Research and Learning from the 'Inside Out': Processes, Practices and Pedagogy of a Women's Agricultural Economic Empowerment Project in Papua New Guinea</i> , in Singh-Peterson L and Carnegie M (Ed.) <i>Integrating Gender in Agricultural Development</i> , Emerald Publishing Limited, Bingley, pp. 135–147	Editor review	Pamphilon (Female, Australia) Bue (Female, PNG) Wantum (Female, PNG)
Pamphilon B, Simoncini K and Veal D (2019) <i>Maria's Family Team</i> , Australian Centre for International Agricultural Research, Canberra.	No	Pamphilon (Female, Australia) Simoncini (Female, Australia) Veal (Male, Australia)
Pamphilon B, Simoncini, K and Veal D (2014) <i>Maria's family saves their kina [Femili bilong Maria sevim moni]</i> , Australian Centre for International Agricultural Research, Canberra.	No	Pamphilon (Female, Australia) Simoncini (Female, Australia) Veal (Male, Australia)
Pamphilon B, Simoncini K and Veal D (2014) <i>Maria's family goes to market [Femili bilong Maria go long maket]</i> —East New Britain edition, Australian Centre for International Agricultural Research, Canberra.	No	Pamphilon (Female, Australia) Simoncini (Female, Australia) Veal (Male, Australia)
Journal articles		
Caffery J and Hill D (2018) 'Expensive English: an accessible language approach for Papua New Guinea agricultural development', <i>Development in Practice</i> , doi:10.1080/09614524.2018.1530195	Yes	Caffery (Female, Australia) Hill (Female, Australia)
Gwatorisa P, Pamphilon B and Mikhailovich K (2017) 'Coping with Drought in Rural Papua New Guinea: A Western Highlands Case Study', <i>Ecology of Food and Nutrition</i> , doi:10.1080/03670244.2017.1352504	Yes	Gwatorisa (Female, Australia) Pamphilon (Female, Australia) Mikhailovich (Female, Australia)
Mikhailovich K, Pamphilon B and Chambers B (2015) 'Participatory visual research with subsistence farmers in Papua New Guinea', <i>Development in Practice</i> , 25(7):997–1010.	Yes	Mikhailovich (Female, Australia) Pamphilon (Female, Australia) Chambers (Female, Australia)

Appendix 6.4: Research outputs (cont.)

Publication	Peer-reviewed	Author (gender, nation)
Mikhailovich K, Pamphilon B, Chambers B, Simeon L and Romero Zapata J (2016) 'Exploring the lives of women smallholder farmers in Papua New Guinea through a collaborative mixed methods approach', <i>Cogent Social Sciences</i> , doi:10.1080/23311886.2016.1143328	Yes	Mikhailovich (Female, Australia) Pamphilon (Female, Australia) Chambers (Female, Australia) Simeon (Female, PNG) Romero Zapata (Male, Australia)
Pamphilon B (2015) 'Weaving knowledges: the development of empowering intercultural learning spaces for smallholder farmers in Papua New Guinea', <i>Multicultural Education Review</i> , 7(1–2):108–121.	Yes	Pamphilon (Female, Australia)
Pamphilon B and Mikhailovich K (2017) 'Bringing together learning from two worlds: Lessons from a gender-inclusive community education approach with smallholder farmers in Papua New Guinea', <i>Australian Journal of Adult Learning</i> , 57(2):7–32.	Yes	Pamphilon (Female, Australia) Mikhailovich (Female, Australia)
Simoncini K, Pamphilon B and Mikhailovich K (2017) 'Place-based picture books as an adult learning tool: supporting agricultural learning in Papua New Guinea', <i>Adult Learning</i> , 28(2):61–68.	Yes	Simoncini (Female, Australia) Pamphilon (Female, Australia) Mikhailovich (Female, Australia)
Simoncini K, Pamphilon B and Simeon L (2018) 'The 'Maria' books: the achievements and challenges of introducing dual language, culturally relevant picture books to PNG schools', <i>Language, Culture and Curriculum</i> , doi:10.1080/07908318.2018.1490745	Yes	Simoncini (Female, Australia) Pamphilon (Female, Australia) Simeon (Female, PNG)
Reports / program manuals		
Nema G (2018) <i>Opening our family's eyes: the PNG 'Family Farm Teams' research report</i> , University of Canberra, ACIAR and Care International.	No	Nema (Female, PNG)
Vanua H with Simeon L, Kakap R, Vai C, Flowers E and Pamphilon B (2019) <i>Business Training for Family Teams A Facilitator's Manual: First steps to starting a small business</i> , Pacific Adventist University, Port Moresby.	No	Vanua (Female, PNG) Simeon (Female, PNG) Kakap (Male, PNG) Vai (Female, PNG) Flowers (Female, Australia) Pamphilon (Female, Australia)
Conference paper		
Pamphilon B and Mikhailovich K (September 12–15 2017) 'Bringing together learning from two worlds: Lessons from a gender-inclusive community education approach with smallholder farmers in Papua New Guinea', <i>Australian Council for Adult Literacy 2017 National Conference</i> , Darwin, Australia.	No	Pamphilon (Female, Australia) Mikhailovich (Female, Australia)

40
YEARS



ACIAR
EST. 1982

**Australian
Aid** 