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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*



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BARBARA PAMPHILON AND KATJA MIKHAILOVICH



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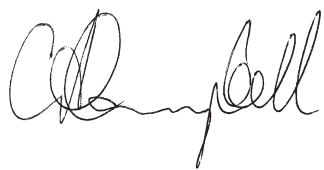
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Cover: Family team in Alona ward, Mul-Baiyer district, Western Highlands province
(Photo: Jo Caffery)

Foreword

Smallholder farming families are the backbone of food production in Papua New Guinea. For generations, they have successfully fed their families through subsistence practices. Today however, these farming families need support through the transition into the cash economy. The ACIAR-funded Family Teams program outlined in this monograph illustrates that when men, women and youth work together as a family unit, more gender-equitable and effective farming practices lead to improved family livelihoods. Key to success of the Family Teams approach is the support of village community educators who are able to tailor the program to suit their particular community and sustain the learnings well beyond its formal implementation. The program has been widely praised by its participants, and there is much scope for it to be successfully used elsewhere.



Professor Andrew Campbell
Chief Executive Officer, ACIAR

Contents

Foreword	3
Acknowledgments	7
Abbreviations	7
Introduction	9
Gender and empowerment in the PNG agricultural context	10
PNG women and agricultural extension	11
The Family Teams pedagogy and learning process	13
The Family Teams pedagogy	13
The Family Teams learning process	15
The community development process	16
The Family Teams program	19
Module 1: Working as a family team for family goals	20
Module 2: Planning your family farm as a family team	23
Module 3: Feeding your family team	24
Module 4: Communicating and decision-making as a family team	26
Understanding the impact of the Family Teams approach	28
What PNG families say about the Family Teams approach	29
Challenges and lessons learned	31
Conclusion	33
References	35

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Abbreviations

ACIAR	Australian Centre for International Agricultural Research
ENB	East New Britain (province)
PNG	Papua New Guinea
UC	University of Canberra (facilitation team)
VCE	village community educator
WH	Western Highlands (province)

Introduction

This monograph outlines a program designed to contribute to the economic empowerment of women subsistence farmers and their families in Papua New Guinea (PNG) through the development of their agricultural business acumen.

It describes an approach to farmer learning and agricultural extension termed the 'Family Teams' program. The approach was developed within a research for development project implemented between 2012 and 2015 (*Examining women's business acumen in Papua New Guinea: working with women smallholders in horticulture*). The research was funded by the Australian Centre for International Agricultural Research (ACIAR) (<http://aciarc.gov.au/project/asem/2010/052>) and was conducted by the University of Canberra (UC) in partnership with the Pacific Adventist University PNG, the Baptist Union PNG and the National Agricultural Research Institute of PNG.

The aim of this project was to improve the uptake and impact of training and small business development for women smallholder food crop producers in three regions of PNG (Central Province, and East New Britain (ENB) and Western Highlands (WH) provinces) (<http://pngwomen.estem-uc.edu.au/>).

The project integrated research that explored how the sociocultural and contextual issues of each region impacted on the business and farming practices of women subsistence food crop producers and their families. Key aspects of the project included the development of teams of local village community educators (VCEs), a model of brokered training for improving agricultural production and financial literacy, and the development of a program that would begin to address issues of gender equity in farming households—the Family Teams program.

The Family Teams program enables farming families to explore issues of gender and culture within families, seeking to encourage more effective, sustainable and gender-equitable farming and business practices. The program helps families

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look at the work done by women, men and youth and to work towards a more equitable and effective distribution of agricultural and household work. The program assists smallholder families to plan and make decisions together. It encourages 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.

The program consists of four modules that are integrated with agricultural production and financial literacy training to ensure communities are connected to local resources.

Gender and empowerment in the PNG agricultural context

PNG has a population of approximately 7.5 million people (UNDP 2015) and is one of the most linguistically diverse countries in the world, with 836 distinct Indigenous languages, known collectively as Tok Ples. English, Tok Pisin and Motu are the official national languages (CIA 2014). Economically, PNG is rich in mineral resources (PNG Chamber of Mining and Petroleum 2014); however, the majority of the population lives and works in rural agricultural areas where poverty remains a significant problem. Over 80% of the poor are rural-based subsistence smallholder farmers (Asian Development Bank 2012). Rural livelihoods, predominantly in agriculture, support the majority of the PNG population.

Development progress in PNG has been slow due to significant challenges, such as population growth, populations spread across difficult terrain, land shortages, conflict over customary land, high levels of crime and violence, low levels of school completion, high maternal and child morbidity and mortality, and the growing prevalence of HIV/AIDS (Anderson 2010; Asian Development Bank 2012; McCalman et al. 2012; Lakhani and Willman 2014). The median number of years of education remains low, at 3.9 years (UNDP 2015), and low literacy and numeracy continue to hamper development. PNG ranks 158 out of 187 countries on the Human Development Index (a composite measure of health, education and income) (UNDP 2015), and 140 out of 155 on the Gender Inequality Index (UNDP 2014).

Women smallholders are the major producers of food in PNG (Bourke and Harwood 2009; Peter 2012) and contribute considerably to diverse, local, informal economic activities (Gibson-Graham and Roelvink 2011). Despite this, women are particularly marginalised in PNG, where the cultural belief that women are inferior has been deeply embedded.

As in other developing countries, women's roles in family care and household management are overly privileged, so their contribution as agricultural producers and economic agents are not always recognised (Manchón and Macleod 2010). Although the informal exchange economy continues to coexist beside the cash economy, women generally hold low bargaining power concerning the distribution of household income. Typically, cash income belongs to, and is in the control of, whoever produces the sale—but in many cases, even though women produce goods, men may still control the resultant income (Cahn and Liu 2008).

Key constraints to a more productive role by women in agriculture include: poor access to land, water, machinery, seeds and fertiliser; lack of access to credit; land pressure due to population growth; poorly developed transport systems; and educational disadvantages due to low literacy and limited access to training and extension services (Burke and Harwood 2009).

Violence against women is an overarching issue. A number of studies suggest that between two-thirds and three-quarters of women report they have been beaten by their husbands (Kopi et al. 2010, p. 22). Other than directly influencing the physical and psychological wellbeing of women, violence undermines confidence, inhibits women's ability to move freely in the community, and impacts on their levels of participation and choice in all aspects of society (Potek 2009; Chang et al. 2010).

Despite many challenges, women in PNG repeatedly display strength, confidence and assertiveness in their lives (Finch 1992). Such confidence as individuals can be harnessed and enhanced through training (Cahn and Liu 2008). As traditional restrictions have weakened, there are opportunities to enhance women's independence and opportunities for economic success (Finch 1992).

PNG women and agricultural extension

Across the developing world, agricultural extension has been a major platform for enhancing agricultural productivity. Such training has been the most common vehicle for technology transfer within modern, scientific, industrial farming practice (Pamphilon et al. 2014). Until very recently, technology transfer has been the dominant agricultural training model in PNG. It relies on a top-down 'train and visit' hierarchical structure, with agricultural trainers at 'the bottom' who are given the technical information and then 'are responsible for disseminating training to different villages and conducting visits on an often predetermined time basis to assist in the successful uptake of training information' (Collett and Gale 2009, p. 71). Such activities are typically delivered in a 'train the trainer' format in which groups of local trainers are provided with manuals and training materials to deliver a package of information to village members. This one-way model focuses on the transfer of knowledge from the knowing expert to the less knowledgeable village individuals.

This form of farmer education has primarily benefited men, who are the cash-crop producers, and overlooks women's work in the informal, subsistence sector (Fairbairn-Dunlop 1997). There are several sociocultural factors as to why PNG women have not benefited from the agricultural extension that has been offered. Cahn and Liu (2008, p. 135) note that a number of factors have created an 'invisible barrier' for women in accessing training. Culturally, PNG women may not be permitted to attend training run by men. Further, most extension is held in a central town location rather than at a local village level. Hence, because of the time needed for family responsibilities and issues of cost and safety when travelling—even if their husbands or fathers permit them to attend—PNG women smallholders are not easily able to attend training (Cahn and Liu 2008). Also, female youth and adult literacy rates are significantly lower than men's, at 43.9% and 55.2%, respectively (Government of Papua New Guinea and United Nations in Papua New Guinea 2010, p. 82). However, in studies that do not rely on self-reports, as the census does, women's literacy rates are reported as being much lower—as low as 12.9% in the Highlands province of Chimbu and 2.5% in Gulf province (ASPBAE 2011, p. 8). Low literacy is a specific barrier to women's engagement in agricultural extension in PNG.

In the last 10 years, growing attention has been paid to participatory or farmer-demand-driven extension. This has been an important shift in training and extension thinking, as the focus

of the extension work goes beyond training to collaborative problem-solving. This approach deliberately makes links across communities, in which the agricultural scientist and local farmers share their expertise in order to understand the best solutions to local problems (Pamphilon et al. 2014). Participatory modes of extension currently being used in PNG include the farmers' field school concept, participatory action research and participatory technology. However, as Cahn and Liu (2008) note, the very strongly delineated gender roles in agriculture and a lack of understanding of PNG women smallholders' learning context and training needs create an 'invisible barrier'. They conclude (Cahn and Liu 2008, p. 143):

it is clear that training must focus on the needs of women, and ensure their confidence is enhanced through appropriate training topics, training materials, and village-based training, and training processes that take account of gender educational gaps and differences in the way that men and women act in public.

It was within this context that the Family Teams program was designed to provide a participatory learning model that is accessible and effective for women smallholders, who are the essential food providers for the country.

The Family Teams pedagogy and learning process

This chapter outlines the underlying pedagogical foundations of the Family Teams program (critical, place-based, participatory, two-way and gender-inclusive pedagogy, and experiential action learning). The following section explains the program's community development and capacity-building processes.

The Family Teams pedagogy

Critical pedagogy

The critical dimension of our pedagogy arises from the work of Freire (1970) and the popular education paradigm. Freire's (1970) theory of *conscientizacao* (conscientisation) invites learners and teachers together to interrogate the social worlds in which they live and, in doing so, move towards greater autonomy and agency. Critical pedagogy has an important place in developing countries where formal education is limited—indeed, where it is often limiting—and where many adults privilege a 'banking' form of education. Such banking education understands learners as empty vessels into which knowledge is deposited (Freire 1970). Many farmers have not had an opportunity to look at the big picture in which they live their lives. Critical pedagogy overtly makes this world visible.

Place-based pedagogy

In PNG, a critical engagement with place and space is especially relevant. Although the people share a Melanesian culture, the country is one of the most linguistically diverse—more than 800 distinct languages—and separate clans that each inhabits long-standing customary land. Hence, a place-informed pedagogy overtly addresses the social, cultural and ecological places that people inhabit in their daily lives. Roberts and Green (2013) argue for spatial thinking

The underlying foundations of the Family Teams program are critical, place-based, participatory, two-way and gender-inclusive pedagogy, and experiential action learning.

(space and place) that acknowledges local demography, economy and geography as well as the more macro social dimensions. Place is not a singular geographical entity but is created and constructed by individuals and collectives through relationships with the natural world, through time, space and cultural reading (Coughlin and Kirch 2010). It is essential to provide processes by which participants can value and contribute to the places they know.

Participatory pedagogy

As Sen (1999) reminds us, a person is 'poor' not only when their income is below the poverty line but also when they have the 'unfreedoms' of capability and participation. Such 'participatory poverty' exists when a person's identity is negatively ascribed and their community or family contributions are invisible or taken for granted (such as women's family care roles). As a result, poor women, for example, are not heard or valued, or may even be silenced. Similarly, 'capability poverty' arises when people are deprived of the full learning and knowledge they need to be autonomous, independent and productive (Preece 2010). Participatory pedagogy seeks to acknowledge these dynamics by providing environments in which adults can name and value their own knowledge, share their knowledge, and have the confidence and skills to initiate the changes they value.

Two-way pedagogy

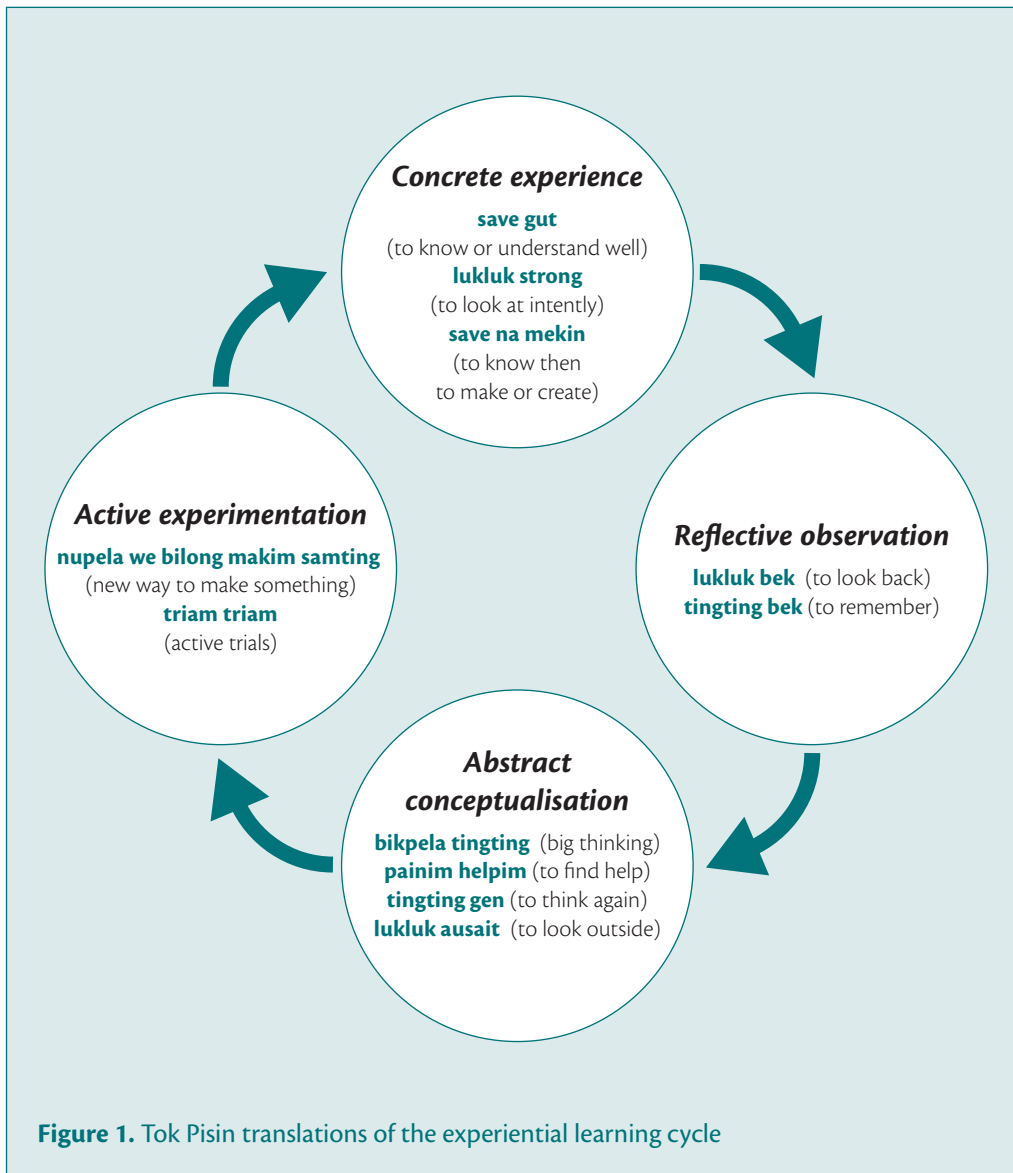
This pedagogy enables both members of the training team and trainees to be in dialogue with each other. There is a commitment to creating a space 'between', one that resists hierarchies of knowledge and disrupts the dichotomy of 'our knowledge' and 'their knowledge'. When there is a two-way learning environment, it is possible for the trainees and the training team members to co-construct a learning program that responds to the needs of the farmers and provides opportunities for learning new skills and knowledge. Both the facilitator and the learner are changed in such a learning environment. Two-way dialogues enable a co-construction of meanings across the learners as a group and between the facilitators and the group (Pamphilon 2015).

Gender-inclusive pedagogy

In strongly patriarchal PNG, it is crucial that both men and women engage in dialogue, in order to bring issues to the surface in a manner that will enable both genders to determine ways to move forward. When gender roles are in transition, men need to be challenged to acknowledge the impact of their behaviour and to work towards alternative and positive culturally appropriate expressions of masculinity (Hoang et al. 2013). A gender-inclusive pedagogy has the greatest potential to empower women and men to consider their relative roles in the family and in their farming practices. Such a foundation can support the whole family to make collaborative decisions and lead to greater equity. This changes the lives of women and becomes an empowering process.

The Family Teams learning process

The experiential learning cycle is used to assist farmers to become active adult learners (see also Percy 1999). This adaptation of Kolb and Fry's (1975) learning cycle is explained as: (1) concrete experience/issue/challenge; (2) individual reflection/analysis; (3) big-picture thinking/ideas from outside; and (4) trial of new ways. The concept of an 'action cycle' is applied to family changes, farm planning and financial management, as well as explaining how adults learn. Figure 1 illustrates how the learning cycle was interpreted in Tok Pisin in PNG.



The community development process

The Family Teams program uses a strengths- and assets-based community development orientation.

Strengths-based community education

The program works through local teams of VCEs, as the Family Teams approach seeks to develop the capacity of local people as facilitators of learning, rather than just as people who deliver course content. Workshop content and learning activities are built up from material provided from outside the community (the University of Canberra (UC) team) and from inside the community (from the VCEs' understanding of the typical local knowledge base and practices, and from their own observations and practices as smallholder farmers). This strengths-based process is designed to empower local educators as experts on their own local community, as well as supporting them to use the insights from adult learning principles to design activities that will maximise the learning style preferences of local people.

Assets-based community development

The assets-based community development (ABCD) process (Kretzmann and McKnight 1993; Green and Haines 2012) supports community members to identify existing local resources, potential training providers and key topics in the areas of agricultural development, financial skills and business skills.

The process for the community learning assets and needs analysis workshop is first to present the aims of the project and ask people to think about the training topics that would be of most value in their community to help meet those aims. These topics are sorted into themes in front of the group. The second step is to ask the community which providers, groups or individuals they already know who can help with these learning topics. This is displayed for community awareness. It is also used to identify preferred providers and to prioritise the training program. If a community does not know local providers for certain topics, training agencies will be recommended. Finally, a community learning plan is constructed and returned to community members for their future use.

This approach helps communities become more resourceful and to identify and mobilise the assets already in their community. The process is one that communities can continue themselves after the project ends, and in this way it contributes to sustainability.

Brokered training

Once the community learning plan is completed, local training providers in specialist areas are approached. The typical areas for brokered training include: financial literacy (banking, saving, credit, loans); agricultural development (crop production, pest management, fertiliser use, postharvest management); business practices (budgeting, record-keeping, production planning, marketing); and general principles of sustainable livelihoods. This brokered training does not commence until after the first modules of the Family Teams program have been worked through, so that families have begun to work as a family team and have an awareness of gender inequities in their families.

Community engagement and VCE selection

The community engagement and selection of local teams of VCEs are conducted by local partner agencies (for example, non-government organisations, churches, agricultural development agencies). These partners have local affiliations and respect and are able to follow the local protocols with community leaders and elders.

Selected men and women smallholder farmers are invited to participate in the Family Teams program and to train as VCEs (Figure 2). They are encouraged to use the Family Teams program for their family and then further disseminate the training to other community smallholder families through farmer-to-farmer peer education or through their affiliations, such as churches. These VCEs are offered the first places in the brokered training. In this way, the VCEs' families become the first beneficiaries of the collaborative training and are role models for their communities.

VCEs are often couples or family pairs, such as a widow and son, and work in teams of 6 to 10. However, the knowledge of women is carefully integrated by ensuring that at least 60% of all VCE team members are women. VCEs are not required to be literate, as the learning activities are either experientially based or can be adapted by using symbols. Where an activity does require some writing, VCEs work in groups and appoint a scribe. However, to support the further development of the VCEs' literacy, learning materials and workbooks are provided in plain English and Tok Pisin.

The VCEs are sequentially introduced to the theory and practice of facilitating adult learning, and the Family Teams modules are the vehicles for applying this learning.



Figure 2. Proud village community educators from Alona ward, Mul-Baiyer district, Western Highlands province, with their learning kits

Across the four modules, in parallel, the VCEs cover:

- planning a course (writing course aims, determining the target group, choosing a location and best time of day)
- designing a course (identifying the topics, planning sequential topics, considering how adults learn, writing session aims, designing activities, planning the resourcing and timing of activities, writing a session plan, designing flip charts and posters, designing handouts, designing role-plays, planning a process evaluation)
- running a course (giving a talk, leading large group discussions, encouraging group interaction, managing questions, leading pair activities, getting feedback as you go, following up after the course)
- monitoring and evaluating a course (follow-ups to training, looking for change and impact, evaluation surveys, collecting stories of change)
- reporting on training (what to collect on the day, what to collect in follow-ups, formats for a training report).

The process encourages the VCEs to become a 'community of practice' (Wenger 1998) which will enable them to continue their development through peer and action learning, rather than becoming over-reliant on external material, guidance and direction. Most importantly, these facilitation skills remain in the community once the program has concluded.

The Family Teams program

The Family Teams program is a series of four family-based learning modules presented in a workshop format. The workshops are held in local venues to ensure that women do not have to leave their families and farms for extended periods of time. Children are welcome at all workshops. As many participants have low levels of literacy, the program uses visual activities, small group work, role-plays and discussion (see Mikhailovich et al. 2015). The length of each module depends on literacy levels and group size and can range from a half-day to a full day.

The aim of the Family Teams program is to provide one male and one female head of a household with a series of workshops that encourage them to work together as a family team and to collaboratively plan the further development of their agricultural and family activities. Participants can also include other family members, such as extended family and youth, or other family types, such as women-headed households or polygamous families.

The four modules are:

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

The following sections highlight some of the key activities used in the modules. Further information can be found at <<http://pngwomen.estem-uc.edu.au/>>.

Module 1: Working as a family team for family goals

This workshop is focused on daily life and gender relations in the family and on the farm. It introduces the concept of a family team as an effective and inclusive way to work as a farming family. Family heads of households learn how to map their current division of labour and then consider more equitable ways to work as a family. The family heads consider possible family goals and determine farming goals, financial goals and general family goals.

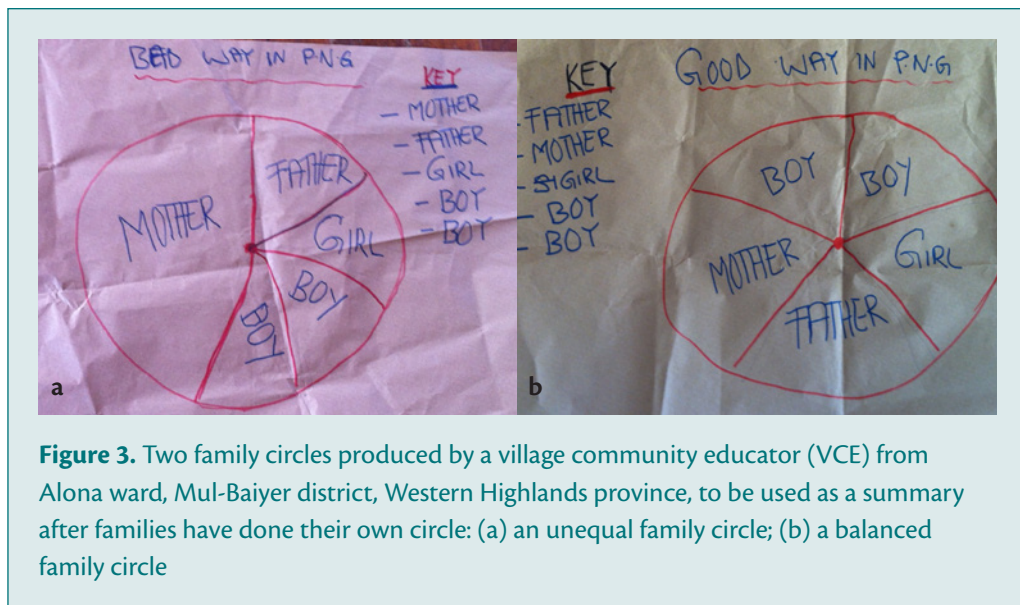
The family team circle

This activity helps families to look at the workload of men, women, grandparents, youth and children. It helps family heads and others in the family to discuss together how the work can be equally shared. Each family is given a large sheet of paper. They list their family members, then draw a circle and divide it to illustrate the percentage workload of men, women and youth. An example is displayed and coloured in with red for women and blue for men to show the gendered workload percentages. At the end of the workshop, after a number of gender-awareness activities, this activity is repeated so that families can draw a new family circle to guide them to become a more 'balanced' family (Figure 3).

A day in the life of a PNG farmer

The aim of this activity is to enable families to explore and share their perceptions of the main activities of a typical village farmer. This enables families to understand gender roles and potential workload disparities.

The full group is divided into four smaller groups: young women, older women, young men and older men. Each group is given a large sheet of paper and asked to list the hours of the day, from waking to going to bed. The group then enters their activities on a typical day (Figure 4). Each group is then given a new piece of paper and asked to do the same process for what they know as the typical day of the opposite gender—for example, young women then record a typical day of a young man. The two sheets of a group are then displayed and discussed in the large group.



Role-play

Role-plays (known as dramas in PNG) are a popular way of telling local stories in PNG. A drama can raise issues in a non-threatening way and is often more readily remembered.

In the workshop, the UC team first shows a role-play of a negative Australian family situation involving male bullying in the family. The VCEs then work in groups to create and perform their own PNG example. A second role-play is then performed by the UC team, showing the same family working together in a positive way. The VCEs then construct and perform the positive PNG family example. After small-group discussions on the messages that can be learned from the role-play, the final step is a demonstration of a role-play debrief. This involves each 'actor' explaining how they are different in life to the negative role they played and noting what community supports might be used by a family person caught in the negative situation; for example, seeking advice from extended family or the church. PNG VCE leaders then provide an account of the processes and supports that are culturally appropriate and available in their context. Although this is a debrief from the actors' negative role, this final step enables families to see that there are always first steps that can be taken towards improved family dynamics by both men and women.

Men, women and money

The aim of these activities is to raise awareness of the gender differences in how men and women earn and use money, especially as women may have limited options for earning money and usually spend that money for the benefit of the family.



Figure 4. Women farmers from Tinganagalip village, Gazelle district, East New Britain province, developing their chart of a 'day in the life' of an older woman farmer

The first activity allows people to map out how money is earned and to consider if there are inequities between men and women. This can be done as a large group or in male-only and female-only groups. When the lists are aggregated and displayed to the full group, a facilitated discussion can highlight gender issues; for example, comparisons of the different earning opportunities for men and women, the impact of seasonal income and who controls the money are just a few topics for discussion.

The second activity uses a modified World Café (Brown and Isaacs 2005) that we call the 'talking tables', in which men and women work in separate gender groups to rotate around four tables and add their own perspectives on key questions. Because the groups rotate, at the end, the piece of paper for each table shows an amalgamation of perspectives from both genders, without identifying who wrote what. This enables a safe process, where neither women nor men are shamed for writing any particular comment. The table topics include:

- What do women spend money on?
- What do men spend money on?
- What are the positives and negatives of *wantok*¹ (culturally obligated) giving?
- Why don't people use banks?

Farm and family goals

These activities are designed to help families think about both short- and long-term goals that they want to achieve. If families have agreed goals, they will be more effective in their work as a family. Families will also be able to build their family futures step by step. There are three main areas for family goals: general family goals, farm goals and financial (savings) goals. The financial goals are linked to the other two goals, so families can plan their short-term saving (e.g. farm equipment, school fees etc.) and their long-term saving (e.g. a permanent house, larger scale cash crops).

After family teams are presented with an overview of the types of goals they might identify for their families, they work together on a piece of paper divided into three columns (one for each type of family goal). They then decide on the family goals they want to achieve (Figure 5). On the reverse side of the paper, family teams list the strengths they have as a family. The last step is to identify barriers the family teams might face. The first types of barriers are those they cannot change. These are written up in advance and displayed (e.g. climate change, bad roads, no electricity, no local banks). The barriers that can be changed are then written up so that each family can individually discuss them and decide on the actions they might take. The UC team recommends to family teams that they work together on reviewing their goals every 6 months.

¹ *Wantok* is a widely used Tok Pisin term that means 'one talk'. The *wantok* system can be loosely defined as the system of relationships (or set of obligations) between individuals characterised by some or all of the following: (1) common language, (2) common kinship group, (3) common geographical area of origin and (4) common social associations or religious groups (Asian Development Bank 2012).

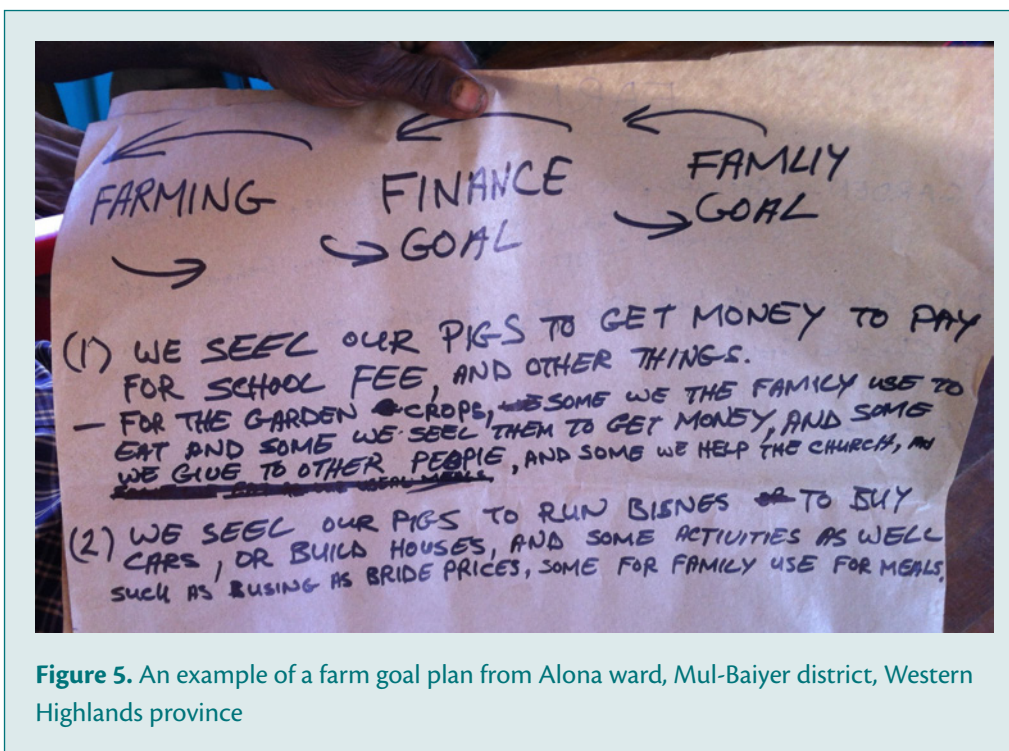


Figure 5. An example of a farm goal plan from Alona ward, Mul-Baiyer district, Western Highlands province

Module 2: Planning your family farm as a family team

In this module, family heads/teams work together to map their crop plots (known in PNG as gardens) in order to identify their agricultural activities and space allocation, water sources, housing, animal shelters and other assets. They then consider their long-term vision of their farm in 5 years. The final step is to identify the assets, constraints and challenges, and possible solutions in order to design 1-year and 3-year plans for their farm development.

Mapping your family farm

The first part of this activity explains the concept of a family farm as the sum of all the family's agricultural activities. Use of the word 'farm' is encouraged as a shift from the subsistence mindset to seeing the 'family farm' as the beginning of a family business.

Each family team prepares their family farm map, which includes the year, village, family name, family team by gender and age, and a key for the symbols used. As well as important components such as water supplies, fences, houses and crop plots, a gender analysis is encouraged by noting who looks after each plot, how long the walk is, how long it takes to collect water and so on. The importance of planning for the future is then explored further, both in the short and long term. Families turn over their paper and work together to work through the process in the following order: farm goals, family strengths and assets, challenges, solutions, long-term plans (3 years plus) and the short-term steps needed to achieve those goals (1–3 years). The final process is to draw a map of how they would like their farm to look in 5 years (Figure 6).



Figure 6. In Mul-Baiyer district, Western Highlands province: (a) families from Kumbareta village creating their farm maps; (b) Lane Tabora, a Kwinky village community educator (VCE), displaying her farm map example

Module 3: Feeding your family team

This module uses group activities to enable participants to consider the food and nutritional security of the whole family. The activities focus on typical conditions but they can also be undertaken for times of drought to enable families to have greater knowledge of how to adapt in times of food shortage.

Planning a balanced daily diet

Participants work in village groups to draw or write down every food crop that is usually grown in the region. Each crop is listed on a separate piece of paper. These are compiled from all groups and displayed on the floor by crop type (Figure 7). This shows the prevalence of all crop types. The facilitator then uses a food group poster that illustrates the three essential food groups; namely, foods that give energy (carbohydrates), foods that build our body (proteins)

and foods that protect our health (vitamin-rich foods and vegetables). Local crops are then placed under the headings. The large group then creates lists of foods that are bought—for example, rice and tinned fish—and of animals that are eaten, frequently and occasionally. These items are also mapped to the chart to show to which food group they belong.

Families are encouraged to note the variety of locally grown foods, and how a balanced diet can be achieved from foods they already grow. The opportunity to replace store-bought food with food from local crops is emphasised. The range of food crops available in drought is then mapped onto the food group chart, also drawing out the bush foods that may have been used in the past, and concluding with a discussion on how to maintain a balance in times of shortage.

Planning a FAITH garden

In this activity, the concept of planning a FAITH (Food Always in the Home)² garden is introduced. The aim is to assist families to plan to always have foods from each food group (as identified in the last activity) growing in their gardens. Families list their favoured crops under each of the three headings and plan if/how they may need to increase the number or types of certain crops.

Where possible, a men's cooking class led by another man is added to this module. Here, the male family heads work together to try new, balanced recipes and serve them to the women and children of their family.



Figure 7. Village community educators (VCEs) from Daulo and Asaro districts, Eastern Highlands province, sorting the large number of food crops they grow into food groups

² We thank Dame Carol Kidu for this concept.

Module 4: Communicating and decision-making as a family team

This module enables family heads to explore communication issues within the family and to consider the importance of shared decision-making, especially in the areas of family farm activities and financial decision-making. The activities cover skills and attitudes as well as exploring the cultural and gender dimensions of communication.

The body language guessing game

The aim of this activity is to make visible the non-verbal aspects of communication. Non-verbal Australian scenarios are played out by the UC team and the VCEs are invited to interpret what was happening. PNG teams then play out local scenarios and the Australian team is invited to guess the body language message.

This activity is concluded with a pie chart that shows that communication is 25% verbal and 75% non-verbal.

The anger body map

This activity aims to help families identify how the body responds to anger in order to recognise early signs of anger in themselves and others. In separate groups of men and women, the participants use a large sheet of paper showing the outline of a body to draw and describe the parts in which anger is felt. Men's and women's ways of feeling and responding to anger are then discussed. Ways to manage anger and the anger of others are also explored.

One-way communication game

The aim of this activity is to highlight the importance of two-way communication in the family. Two people sit back to back. Person 1 is the speaker/instructor; person 2 is the listener/follower. Both person 1 and person 2 have a blank piece of paper and a pen. Person 1 draws a series of shapes on a page then instructs person 2 how to draw an identical picture. Person 2 cannot speak but only follows the instructions. Persons 1 and 2 then compare the drawings and together identify what went wrong with the communication. Typically, the drawings are quite different from each other. The group then shares what they see as the lessons for good communication.

The talking stick

This activity provides a practical process by which people can listen and give feedback in a constructive way. Pairs of participants choose a common problem or concern, then speak about it and explore the problem in a structured way. This involves speaking one at a time by passing a stick back and forth to indicate turn-taking. Only the person with the stick is allowed to talk; when one person is finished, they hand the stick to the other person. Emphasis is placed on encouraging, non-blaming language—for example, saying not 'you' but 'I feel'. The process continues until both agree that the problem is understood and agree to a solution.

Financial decision-making cards

The aim of this activity is to provide culturally relevant triggers for discussion about the range of ways that families may make decisions about money. A set of illustrated flash cards produced

by Carnegie et al. (2012) is used. The depictions of family financial decision-making range from abusive situations though to collaborative decision-making. Men and women work in separate groups to look at each card in turn and discuss what is happening in each picture (Figure 8). They then consider the relevance to their own lives. Each group is asked to summarise a card and explain the lessons of that card as the group sees them. What are the impacts on men and women in the community? This activity enables a safe but open discussion of positive and negative decision-making processes around money at the family level.



Understanding the impact of the Family Teams approach

In determining how the Family Teams approach was experienced by PNG farming families, the model of Kirkpatrick and Kilpatrick (2006) was used to examine learning outcomes in the areas of:

- **Reaction:** Were the participants pleased with the program? This measures the learning activities and process.
- **Learning:** What knowledge, skills and understandings did participants gain? This measures short-term learning outcomes.
- **Behaviour:** What changes in behaviour resulted? This measures the application of the learning.
- **Results:** Did the changes in behaviour positively affect the family/community? This measures progress towards achieving the long-term aim.

Several data collection methods were utilised, including a baseline study incorporating community workshops, a small-scale livelihood survey, participation and activity records, observations, participant feedback activities, focus groups, interviews and end-line surveys and workshops. In all, 666 people (547 women and 119 men) participated in the project baseline activities and 264 (170 women and 94 men) participated in the end-line evaluation through surveys, interviews and workshops.

A total of 1,432 people were trained through the Family Teams approach. Of these, 194 were VCEs (115 women and 79 men) and a further 1,238 were farmers (701 women and 537 men) who received the Family Teams training through the rollout by the VCEs. The age range of participants was 17 to 70, with a median age of 43.

What PNG families say about the Family Teams approach

The information below provides some key trends in what families had to say about the Family Teams approach and the parallel brokered training in crop production, budgeting, banking and saving undertaken in ACIAR project ASEM/2010/052.

Changes in gender roles, attitudes and behaviours

- More men and women are now working together as a family.
- Young people are more involved in family farming and decision-making.
- Men and women have changed attitudes and practices in their households and agricultural roles.
- Families report that more decisions are made together.

Earlier, women only used to do cooking and all the household duties. After this training, men have learned to work with women to do household duties also like fetching water, cooking food, washing clothes. That has been a big change in our way of life. (female farmer, ENB)

This program has been good because it has brought the whole family to plan and work together. Earlier, everybody used to go their own ways but now even children can bring their own ideas; for example, when we make our new garden. Earlier, men followed women and women made all decisions but now [we] plan together and men realise they have a duty in farming matters. (female farmer, ENB)

It is our custom, more or less, in this matrilineal society, I as the father, I am married to my wife, I am not responsible for my children, I am responsible for my sister's children in the transfer of [inheritance] ... What training is giving us now is insight so we must work as a family ... For men, we have started to realise that we are [responsible] for our children so we are trying to break barriers ... (male VCE leader, ENB)

Changes in family financial management

- More families budget and have financial goals.
- Families have learned to save.
- Families are now earning greater incomes.
- Family assets have improved, such as permanent houses, water tanks and home improvements.
- There has been an increase in the number of farmers reporting they have enough money for daily living.

I have a big picture now in my mind. My future will be different than the last 34 years. It [the training] changed my life ... I am starting my savings ... my aim is I want to run a piggery ... I've started ... it's a big picture in my mind but I'll try... (female VCE leader, single head of household, WH)

In our village, a women's business group has been formed, which has brought a big change into our village. Before, women used to plant the crop only for their own families but now grow and sell it at the market. (older female farmer, WH)

Changes in agricultural planning and production

- There has been an increase in those who have farm goals.
- Farm production/yield of produce has increased.
- Families are now growing to sell and trying new ways of selling produce.
- More farmers are engaged in longer term farm planning.

One of my children was a dropout from Grade 10 and came back to the village. We had no money to put him back to school ... With this project, we learned effective farming and got more money from our crops, we learned to work as a family and my son went back to school and is now doing teachers' training. (male pastor and farmer, WH)

Agricultural training has made a big change to us. We learned to separate different seeds into different areas in the garden; they grew really well. As a result, we have been able to increase the crop so that we can sell products at market also. This has given us more finances [and] we have learned to budget and save part of it. (male farmer, WH)

Changes in training knowledge and capacity

- Each community has teams of men and women who have trained as VCEs.
- VCEs work effectively with farmers in their daily context rather than taking farmers away from their families and farm work.
- Women farmers are able to attend training and also report benefits from one-on-one training from local VCEs.

I have made awareness to³ other women and have been sharing my life and experiences with them and I believe others will catch this vision and do what I am doing for my family. (female farmer, WH)

My family is doing well in practising all the valuable lessons we got from the training and in return we are influencing others to follow what we are doing. I see a lot of changes in families in our community right here. Most of them are now planning and working together as families. (female farmer, ENB)

I go out in the community and teach what has been taught to us. The same information that you give to us we translate in our own language, in Pidgin, or their own language ... Well, instead of doing it in writing on the blackboard, I saw that it was good that we could go out and really do it in the community. Yeah. If we go out, they learn more. In here [training centre] they will learn but less than when they go out in the community. (female VCE leader, WH)

The main change you see is with PNG ladies [VCEs]. The main change is coming out and showing their true colours as if they are talking to their own immediate family. (female PNG project leader)

³ 'Made awareness to' is a common PNG term for sharing information/knowledge.

I have really developed my own skills in facilitation and communication and I now have a passion to help other women through the delivery of the modules—these modules have the potential to change a whole family's life. (female project leader, WH)

Challenges and lessons learned

A number of lessons have been learned from the challenges that have arisen in the PNG context. These provide important guidance for further work in PNG and may have relevance to the use of the approach in other developing countries.

Language

With more than 800 languages spoken in PNG, the VCE trainees work with at least three languages at a time: English, Tok Pisin and Tok Ples. This requires the availability of local interpreters who also understand how to work with the learner-centred participatory approach. The design of any handout material must allow for the linguistic strengths of VCEs by including the two major languages and leaving space for Tok Ples notes.

Literacy

Low levels of literacy in rural areas, particularly among women, require a creative approach to the use of materials and ways of working. Visual materials and experiential group-based learning must be core processes.

Education levels

As a number of rural women and men have only attended primary school to Grade 3 or 4, initially they are more comfortable with didactic teaching. Those who have never attended school find most organised learning activities challenging. As a result, the progress in workshops can be extremely slow. However, with appropriate support and encouragement, most farmers quickly learn to become active adult learners in the workshop context.

Gender-inclusive practices

When the Family Teams approach was trialled with women-only groups, the impacts were less evident. Mixed-gender groups, where males and females from a family work together, are essential to the Family Teams process. Men are more likely to support women in their goals and aspirations if they can see the benefits for the family as a whole. A gender-inclusive approach is essential in cultures where gender-based violence can be a risk if the development process focuses solely on women.

Cultural practices and traditions

These can be both an enabler and a barrier to the implementation and effectiveness of the Family Teams approach at the community level. The strength of family and *wantok* connections is that ideas and information can easily be disseminated across large family and cultural networks. However, in PNG, many farmers will not share the knowledge and skills beyond those cultural groups. Therefore, other social networks, such as the church, are important places for further community engagement.

Local leadership

The uptake and sustainability of the Family Teams approach relies on the development and support of local leaders and champions. Family change will always be a gradual process and therefore follow-up visits by local team leaders are essential. These local leaders then have the potential to become a 'community of practice' at a regional or provincial level.

Regional and provincial government engagement

The project leaders found that many government institutions paid lip-service to 'including women' but had little commitment or understanding of how to empower and build the strengths of farming families. The Family Teams approach did resonate with individuals within government; however, it would be more effective to include key people in the program and its delivery from the start so that they have the opportunity to hear, see and contribute to the inclusive approach of supporting farming families to work as family teams.

Measuring gender equity and empowerment

This is a complex process, and many frameworks now exist that provide strong and widely accepted indicators of women's economic empowerment and gender equity (World Bank 2010; Golla et al. 2011; Markel 2014; DFAT 2015). Using gender-sensitive participatory evaluation processes (Parker 1993) enable family voices to be heard and added to these international indicators.

Conclusion

Reaching gender equality in PNG farming families remains the long-term goal of the Family Teams program. To achieve gender equality, the Family Teams approach begins from a position of gender equity, recognising that men and women need different kinds of support and encouragement to achieve gender equality in their farm and family lives. When a family commits to a Family Teams approach, it is enabled to use the talents and skills of all family members. This facilitates change in the aspirations of women, men and youth in the family. In turn, this contributes to a more cohesive and committed family farm team.

To support gender equity, the Family Teams approach focuses on three areas:

- equitable distribution of family and farm labour
- whole-of-family farm production and family financial decision-making
- shared ownership and equal access to productive resources.

The activities designed for the Family Teams modules seek to contribute to the improvement of these dimensions in the lives of women smallholders and their families. There is now an opportunity to further develop complementary topics, such as family health, that will support more-effective family teams and improve the lives of women. Fundamental to the approach is the capacity development of local VCEs, who retain the control to select what they take or adapt from the modules that they believe will benefit their specific community and culture. The Family Teams approach prepares farming families to recognise and take up the increasing commercial opportunities of existing and new cash crops in PNG. The essential first step is for families to see their agricultural work as a small family business that will improve the wellbeing and future livelihoods of each and every member of their family team.

In the community where man work on their home and woman in their home, some of us were struggling to unify a family. Some men were excited about what they were seeing in the training about men and women working together ... In broader perspective, the men, even the elders, the elder men in the community, that were leaders, see that they are better men for the training.

*Without plans, women work in isolation from her husband, her husband is working with men ...
Equal work for family, that's an eye opener. (male farmer, ENB)*

*Now a good change has come to our ways of doing things: people are busy to look after their
gardens, families, hospitals and schools. Men have given up their drinking beer, they have stopped
beating their wives, sitting idle, and playing cards. This teaching has motivated men and women
to work hard. We have taught these skills to others who couldn't participate in this course. This
has changed the whole outlook of life. We work as a family. Men are helping wives in heavy work.
We even go to church together now. We are simply happy. (female farmer, WH)*

References

- Anderson T. 2010. Land registration, land markets and livelihoods in Papua New Guinea. Pp. 11–20 in 'In defence of Melanesian customary land', ed. by T. Anderson and G. Lee. Aidwatch: Sydney.
- Asian Development Bank 2012. Papua New Guinea: critical development constraints. Country Diagnostic Studies Series. Asian Development Bank: Manila, Philippines.
- ASPBAE (Asia South Pacific Association for Basic and Adult Education) 2012. The power of literacy: women's journeys in India, Indonesia, Philippines and Papua New Guinea. ASPBAE: Mumbai. At <<http://www.aspbae.org/sites/default/files/pdf/The%20Power%20of%20Literacy.pdf>>, accessed 3 July 2016.
- Bourke R.M. and Harwood T. (eds) 2009. Food and agriculture in Papua New Guinea. ANU Press: Canberra.
- Brown J. and Isaacs D. 2005. The World Café: shaping our futures through conversations that matter. Berrett-Koehler: San Francisco.
- Cahn M. and Liu M. 2008. Women and rural livelihood training: a case study from Papua New Guinea. *Gender & Development* 16(1), 133–146.
- Carnegie M., Rowland C., Gibson K., McKinnon K., Crawford J. and Slatter C. 2012. Gender and economy in Melanesian communities: a manual of indicators and tools to track change. University of Western Sydney and Macquarie University: Sydney and International Women's Development Agency: Melbourne. At <<http://melanesianeconomies.files.wordpress.com/2010/09/gendered-impact-manual-final-141112.pdf>>, accessed 3 July 2016.
- Chang H.-S.C., Be'soer L., Wali C., Anjan J. and Ramita I. 2010. Women in sweet potato marketing in Papua New Guinea. Presented at 54th AARES Annual Conference, Adelaide, South Australia, 8–10 February 2010. Australian Agricultural and Resource Economics Society (AARES): Canberra. At <<http://ageconsearch.umn.edu/bitstream/58887/2/Chang%2c%20Christie.pdf>>, accessed 3 July 2016.
- CIA (Central Intelligence Agency) 2014. The world factbook—East & Southeast Asia: Papua New Guinea. CIA: Washington, DC. At <<https://www.cia.gov/library/publications/the-world-factbook/geos/pp.html>>, accessed 3 July 2016.
- Collett K. and Gale C. 2009. Training for rural development: agricultural and enterprise skills for women small holders. City and Guilds Centre for Skills Development: London.
- Coughlin, C. and Kirch S. 2010. Place-based education: a transformative activist stance. *Cultural Studies of Science Education* 5(4), 911–921.
- DFAT (Australian Government Department of Foreign Affairs and Trade) 2015. Gender equality and women's economic empowerment in agriculture: operational guidance note. DFAT: Canberra.
- Fairbairn-Dunlop P. 1997. Pacific women's triple role: food security, informal trade and cash cropping. *Journal of South Pacific Agriculture* 4, 139–144.
- Finch J. 1992. 'Women work harder than men'. *Cultural Survival Quarterly* 16(4). At <<https://www.culturalsurvival.org/ourpublications/csq/article/women-work-harder-than-men>>, accessed 3 July 2016.
- Freire P. 1970. *Pedagogy of the oppressed*. Continuum International: London.
- Gibson-Graham J.K. and Roelvink G. 2011. The nitty gritty of creating alternative economies. *Social Alternatives* 30(1), 29–33.
- Golla A.M., Malhorta A., Nanda P. and Rekha M. 2011. Understanding and measuring women's economic empowerment: definition, framework and indicators. International Center for Research on Women (ICRW): Washington, DC.
- Government of Papua New Guinea and United Nations in Papua New Guinea 2010. Millennium Development Goals: Second National Progress Comprehensive Report 2010 for Papua New Guinea. Government of Papua New Guinea: Port Moresby.
- Green P.G. and Haines A. 2012. *Asset building and community development*. Sage: Los Angeles.

- Hoang T.-A., Quach T.T. and Tran T.T. 2013. 'Because I am a man, I should be gentle to my wife and my children': positive masculinity to stop gender-based violence in a coastal district in Vietnam. *Gender & Development* 21(1), 81–96.
- Kirkpatrick D.L. and Kirkpatrick J.D. 2006. *Evaluating training programs: the four levels*. Berrett-Koehler: San Francisco.
- Kolb D.A. and Fry R. 1975. Toward an applied theory of experiential learning. Pp. 33–58 in 'Theories of group processes', ed. by C. Cooper. John Wiley: London.
- Kopi M., Hinton R. and Robinson S. 2010. *Violence and insecurity in the highlands of Papua New Guinea*. Oxfam Research Report. Oxfam (New Zealand): Auckland.
- Kretzmann J. and McKnight J. 1993. *Building communities from the inside out: a path toward finding and mobilizing a community's assets*. Institute for Policy Research: Evanston, IL.
- Lakhani S. and Willman A. 2014. *The socio-economic costs of crime and violence in Papua New Guinea: recommendations for policy and programs*. Research and Dialogue Series No. 5. World Bank: Washington, DC.
- McCalman J., Tsey K., Kitau R. and McGinty S. 2012. Bringing us back to our origin: adapting and transferring an Indigenous Australian values-based leadership capacity-building course for community development in Papua New Guinea. *Community Development Journal* 43(3), 393–408.
- Manchón B. and Macleod M. 2010. Challenging gender inequality in farmers' organisations in Nicaragua. *Gender & Development* 18(3), 373–386.
- Markel E. 2014. *Measuring women's economic empowerment in private sector development: guidelines for practitioners*. Donor Committee for Enterprise Development (DCED): Cambridge.
- Mikhailovich K., Pamphilon B. and Chambers B. 2015. Participatory visual research with subsistence farmers in Papua New Guinea. *Development in Practice* 25(7), 997–1010.
- Pamphilon B. 2015. Weaving knowledges: the development of empowering intercultural learning spaces for smallholder farmers in Papua New Guinea. *Multicultural Education Review* 7(1–2), 108–121.
- Pamphilon B., Mikhailovich K. and Chambers B. 2014. Training by Papua New Guinea women, for Papua New Guinea women: lessons from the development of a co-constructed course for women smallholder farmers. *International Journal of Lifelong Education* 33(6), 721–736.
- Parker A.R. 1993. *Another point of view: a manual on gender analysis training for grassroots workers*. United Nations Development Fund for Women (UNIFEM): New York.
- Percy R. 1999. The experiential learning cycle and its application towards the transformation of governmental extension services in Sub-Saharan Africa. *International Journal of Lifelong Education* 18(5), 370–384.
- Peter R. 2012. Women farmers and market access: the PNG context. Pp. 44–48 in 'The supermarket revolution in food: good, bad or ugly for the world's farmers, consumers and retailers?', ed. by A. Milligan and A.G. Brown. Proceedings of the Crawford Fund 17th Annual Parliamentary Conference, 14–16 August 2011, Canberra. Crawford Fund: Canberra.
- PNG Chamber of Mining and Petroleum 2014. *Mining and petroleum industry's contribution to nation building*. At <<http://pngchamberminpet.com.pg/industry-contribution/>>, accessed 3 July 2016.
- Potek S. 2009. Gender issues for women teachers in Papua New Guinea. *Contemporary PNG Studies: DWU Research Journal* 10, 102–123.
- Preece J. 2010. Response to learning through life: thematic area of poverty reduction. *International Journal of Lifelong Education*. 29(4), 475–485.
- Roberts P. and Green B. 2013. Researching rural places on social justice and rural education. *Qualitative Inquiry* 19(10), 765–774.
- Sen A. 1999. *Development as freedom* (1st edn). Oxford University Press: New York.
- UNDP (United Nations Development Programme) 2014. *Gender Inequality Index 2014*. At <<http://hdr.undp.org/en/composite/GII>>, accessed 18 July 2016.
- UNDP (United Nations Development Programme) 2015. *Papua New Guinea country profile*. At <<http://hdr.undp.org/en/countries/profiles/PNG>>, accessed 3 July 2016.
- Wenger E. 1998. *Communities of practice: learning, meaning, and identity*. Cambridge University Press: Cambridge.
- World Bank 2010. *Participatory monitoring and evaluation*. At <<http://go.worldbank.org/E4KHKJUOP0>>, accessed 3 July 2016.

Building gender equity through a Family Teams approach

This monograph outlines the development of a program designed to support the economic empowerment of women subsistence farmers in Papua New Guinea. The document describes the 'family teams' approach to farmer learning and extension.



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