



IMPACT REPORT



THE PACIFIC HORTICULTURAL & AGRICULTURAL
MARKET ACCESS PROGRAM (PHAMA), SEPTEMBER 2017



Taro plant, Samoa

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PHAMA **Pacific Horticultural & Agricultural** **Market Access Program** An Australian Government initiative

The Pacific Horticultural and Agricultural Market Access (PHAMA) Program is an Australian Government initiative co-funded by the New Zealand Government. PHAMA is implemented on behalf of the Australian Government by AECOM, in association with KALANG Consultancy Services.

Authors: Farida Fleming and Ben Mullen

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Cover images: (clockwise from the top left) Lucy Kasimwane from Solomon Islands, Handicraft seller in the Pacific, SolTuna factory in the Solomon Islands.

Acronyms

ACIAR	Australian Centre for International Agricultural Research
AQSIQ	Administration of Quality Supervision, Inspection and Quarantine (China)
BSE	Bovine Spongiform Encephalitis
CA	Competent Authority
CEO	Chief Executive Officer
CODEX Alimentarius	International Food Standards
DAWR	Department of Agriculture and Water Resources (Australia)
DFAT	Department of Foreign Affairs and Trade (Australia)
EU	European Union
FAO	The Food and Agriculture Organization (United Nations)
FFA	Forum Fisheries Agency
GDP	Gross Domestic Product
GESI	Gender Equality and Social inclusion
HACCP	Hazard Analysis and Critical Control Point
IUU	Illegal, Unregulated and Unreported
IWG	Industry Working Group
MA	Market Access
MAFFF	Ministry of Agriculture, Food, Forestry and Fisheries (Tonga)
MAWG	Market Access Working Group
MFAT	Ministry of Foreign Affairs and Trade (New Zealand)
MoA	Ministry of Agriculture (Fiji)
NEPCon	Non-profit organisation focused on mainstreaming sustainability
NZ	New Zealand
PEAG	Pacific Export Alliance Group
PHAMA	Pacific Horticultural and Agricultural Market Access Program
PNG	Papua New Guinea
SITPEA	Solomon Islands Timber Processors and Exporters Association
SROS	Scientific Research Organisation of Samoa
TIWG	Timber Industry Working Group (Solomon Islands)
TLB	Taro Leaf Blight
USA	United States of America
WTO	World Trade Organisation



Executive summary

The purpose of the Pacific Horticultural and Agricultural Market Access Program (PHAMA) is to have a positive impact on jobs and income in six Pacific countries – Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu by increasing exports of fresh and value-added agricultural products.^{1,2}

PHAMA provides technical assistance and funding to help governments and private sector partners open new market access, re-open and maintain existing access, and improve the quality of export commodities.

This report presents PHAMA's impact on jobs and income based on a conservative assessment methodology. It looks at nine commodities where PHAMA has had the most impact: seafood products, kava, sawn timber, beef, coconut, taro, squash, cocoa and watermelon. The nine commodities that have

realised most impact constitute over 70 per cent of PHAMA's investment. PHAMA's remaining investment into commodities that have had less, or have not yet, realised impact is not covered in this report.³

Due to the fact that agricultural interventions often take time to materialise, this assessment is based on the projection that impact will continue to be measurable three years after funding (2018–2020).

PHAMA's total impact to the end of 2020 is conservatively estimated at AUD 78.7 million.⁴ This represents a significant return on the AUD 41.3 million investment.⁵ PHAMA has had a positive impact on over 142,200 livelihoods and 5,600 jobs. PHAMA's impact is illustrated in the infographic on pg. 5 and is described in more detail in the report.

The term 'livelihoods' is used to describe people who earn a cash income from their agricultural work but have no formal recognition of their job, by way of employer or entitlements, and generally pay no tax. This is the most common way people are employed in

the agricultural sector in the Pacific. The term 'jobs', on the other hand, is used to describe people whose employment is recorded, are paid at set rates, and income is taxed.

PHAMA has also strengthened the capacity of public and private sector counterparts through the Market Access Working Groups (MAWGs) and Industry Working Groups (IWGs). These have been described as the 'engine rooms' of PHAMA. These results are discussed in more detail in the 'Sustainability' chapter.

Figure 1: PHAMA's MAWGs and IWGs contribute to sustainability



Figure 2: PHAMA's impact

AUD 41,300,000 INVESTED IN PHAMA

by Australia & New Zealand to 30 June 2018



AUD 36,200,000



AUD 5,100,000



OUTPUTS PROVIDED BY PHAMA INCLUDE:



New market access submissions



Trade infrastructure



Treatment protocols



Accredited facilities



Quality standards

PHAMA'S POSITIVE IMPACT ON AT LEAST

142,200 Livelihoods



5,600 Jobs



44,000 taro



29,000 cocoa



3,100 seafood



39,000 kava



13,000 beef



1,500 timber



7,000 handicrafts



9,000 sawn timber



400 watermelon



800 coconut



100 beef



400 watermelon



500 handicrafts

PHAMA'S TOTAL ECONOMIC IMPACT TO 2020



AUD 78,700,000



Export incomes protected to end of 2020

AUD 59,700,000

Increased income from agricultural exports to end of 2020

AUD 19,000,000



AUD 30,000,000 seafood



AUD 6,200,000 cocoa



AUD 3,700,000 seafood



AUD 14,500,000 kava



AUD 2,300,000 coconut



AUD 2,600,000 taro



AUD 11,000,000 sawn timber



AUD 800,000 handicrafts



AUD 2,000,000 squash



AUD 4,200,000 beef



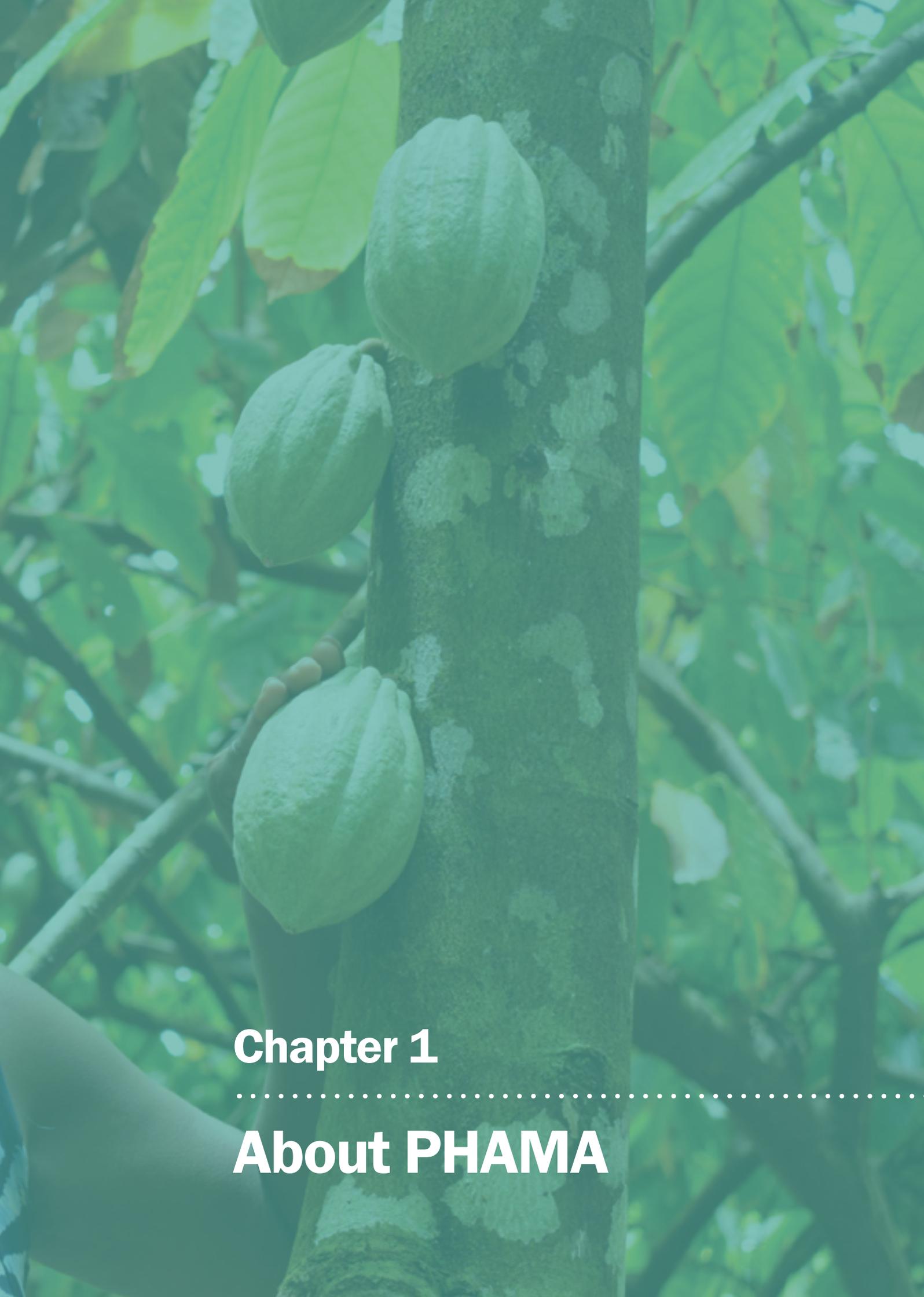
AUD 800,000 kava



AUD 600,000 watermelon



Lucy Kasimwane, owner of Lukasco Group, examines cocoa pods on her farm in Makira-Ulawa Province, Solomon Islands

A close-up photograph of a tree trunk with several large, green, textured seed pods (likely from a tree like the 'Tree of Life' or 'Ficus religiosa') attached to it. A person's hand is visible on the left, touching one of the pods. The background is filled with green leaves and branches, creating a lush, natural setting. The entire image has a semi-transparent green overlay.

Chapter 1

About PHAMA

What PHAMA is

The Pacific Horticultural and Agricultural Market Access Program, or PHAMA, is a seven-year (2011–2018) program of Australian and New Zealand assistance to six Pacific Island nations: Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu.⁶

The goal of this AUD 41.3 million ‘aid for trade’ and private sector development program is to increase exports of fresh and value-added agricultural products, contributing to economic growth and improved rural livelihoods.⁷

The Department of Foreign Affairs and Trade defines ‘aid for trade’ as: supporting developing countries’ efforts to better integrate into and benefit from global rules-based trading system, implement domestic

reform, and make a real economic impact on the lives of their citizens.

See <http://dfat.gov.au/aid/topics/development-issues/aid-for-trade/pages/aid-for-trade.aspx> for more.

How PHAMA works

The PHAMA design identified three market access needs that could be applicable for any given commodity:

- open new market access pathways
- re-open and maintain existing pathways
- improve the quality of export commodities.

The design, however, did not prioritise between these three issues. This assessment has found most of PHAMA’s work, and most of PHAMA’s impact, has come through re-opening and maintaining existing pathways.

Figure 3: Countries of PHAMA activity and Pacific trade

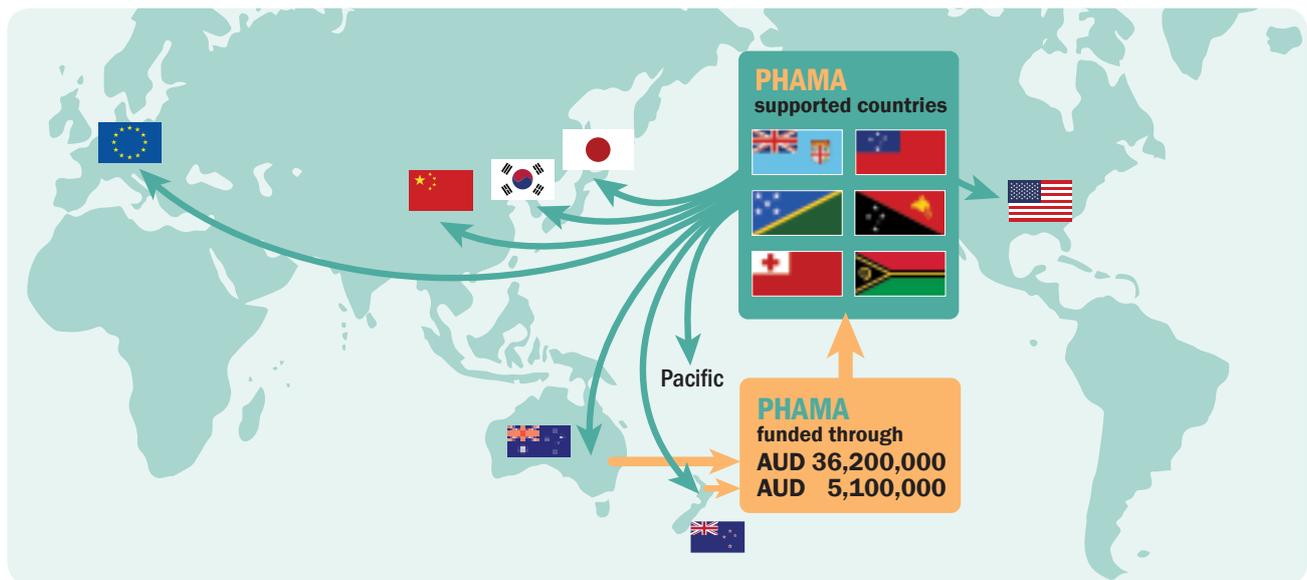
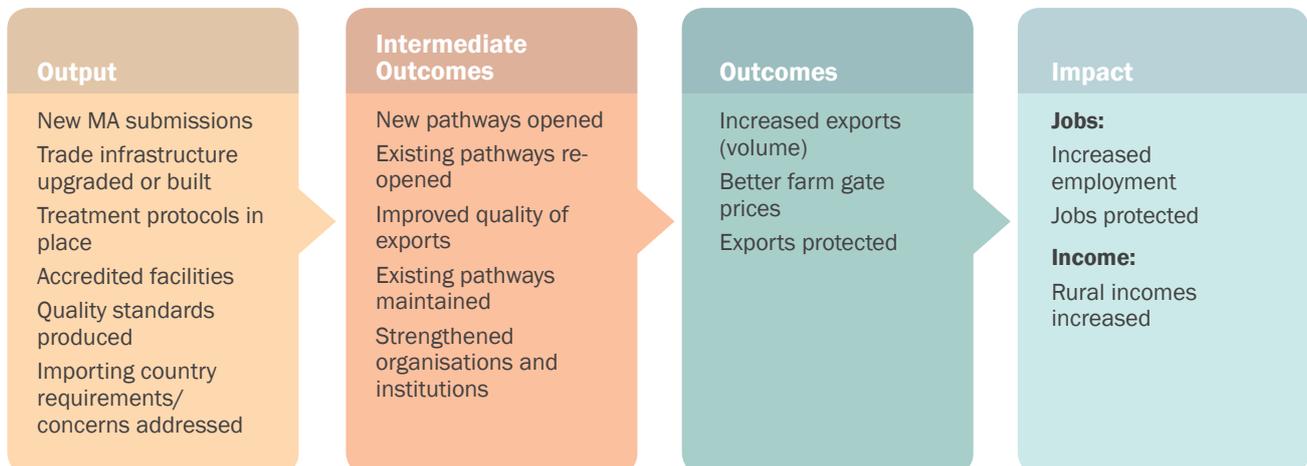


Figure 4: PHAMA Theory of Change



Why PHAMA supports agriculture

Agriculture is central to the economy of Pacific Island nations and is a major employer. It is also the second largest contributor to Gross Domestic Product in the countries in which PHAMA works.⁸

Agriculture is also central to the society of Pacific Island nations. For example, in most Pacific Island nations a large proportion of the population is engaged in subsistence agricultural activities.⁹ In this way, agriculture provides most people with their livelihoods.¹⁰

Small-holder agricultural production is the most important sector for island nations of the Pacific when agriculture's economic activity is measured by its contribution to human livelihood through food security, employment, and capacity to generate cash.¹¹

A major focus of PHAMA's work is to ensure greater numbers of poor people are included in trade and export, to facilitate a lift in incomes and an improvement in people's lives.¹²

Gender Equality and Social Inclusion (GESI) is a priority for the Pacific Island nation governments and PHAMA donors. Several policies and strategies guide PHAMA's approach to GESI. These include the Pacific Leaders Gender Equality Declaration, DFAT's Gender Equality and Women's Empowerment Strategy, DFAT's Strengthening Disability-Inclusive Development Strategy and New Zealand's Ministry of Foreign Affairs and Trade Gender Analysis Guideline.

PHAMA has undertaken a more systematic approach to GESI as the program has progressed. PHAMA has

undertaken gender analyses of value chains and industries to inform interventions that progress gender equality. In 2016, PHAMA developed a GESI strategy and engaged a GESI Adviser. Gender equality and women's economic empowerment have been included as criteria in activity approval forms. PHAMA has developed training and guidance material for PHAMA staff and partners on gender equality, women's economic empowerment and social inclusion.

About this report

This report demonstrates PHAMA's impact and focuses on its support for nine export commodities that constitute the bulk (over 70 per cent) of PHAMA's investment.¹³

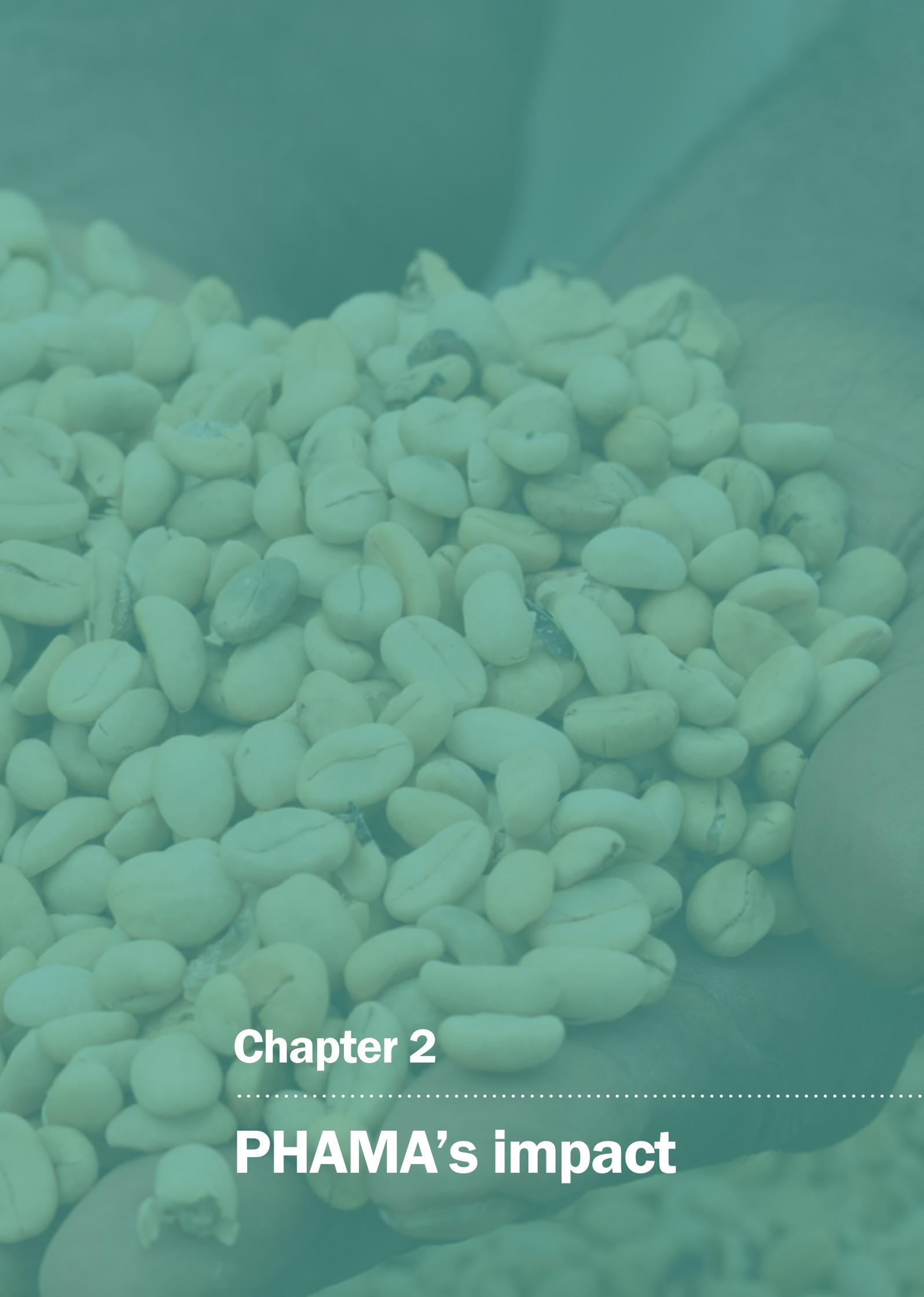
The impact assessment used a theory-based approach to investigate impact and a contribution approach to calculating economic impact. The value of PHAMA's contribution was assessed by dividing the amount of value created for each commodity by the number of actors supporting change at the same time as PHAMA.

The calculations of economic impact were then tested with stakeholders. For more details on the methodology, see Appendix 1.

The remainder of the report describes PHAMA's impact on jobs and incomes (Chapter 2); PHAMA's prospects (Chapter 3); and how PHAMA supports sustainability (Chapter 4).







Chapter 2

PHAMA's impact



Seafood products



Context

Fish products are the second largest export commodity of Solomon Islands, contributing approximately 15 per cent of export revenue. Revenue is generated from the licencing of national and international fishing vessels and onshore processing of fish at two domestic facilities. Licencing income is negotiated with assistance from the

Forum Fisheries Agency (FFA).

Whilst export income from fisheries has been dwarfed by income from round log exports over the past two decades, the round log resource is in rapid decline and fisheries revenue is expected to become increasingly important to the Solomon Islands Government.

Fig. 5: Tuna income for Solomon Islands 2011–2014



Fig. 6: Tuna employment for Solomon Islanders

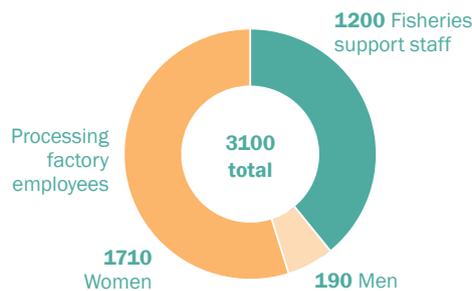
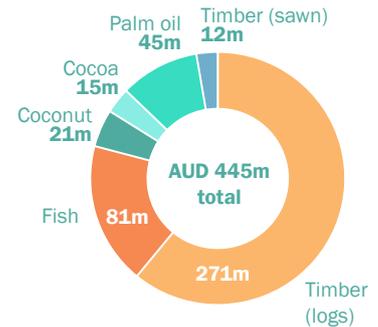


Fig. 7 Major primary sector exports Solomon Islands 2011–2014



Source: Central Bank Solomon Islands and FFA

Issues

The European Union (EU) is the major destination for Solomon Islands’ tuna products but imposes stringent standards on tuna imports to ensure products are safe to eat and the tuna has been legally caught. It requires a ‘Competent Authority’ (CA) to monitor and control compliance in both areas.

A PHAMA assessment in 2012 identified significant deficiencies in health certification systems due to technical capacity and resourcing issues. Both health issues and illegal, unregulated and unreported fishing (IUU) issues determine market access to the EU. The identified deficiencies put Solomon Islands’ access to EU at critical risk.

In 2014, the EU issued the Solomon Islands Government with a ‘yellow card’ on IUU requirements, threatening to withdraw access if improvements were not made. A list of recommended action items was provided. A ‘red card’ would mean loss of EU access, resulting in exports ending until the removal of the card. This would have had huge economic impacts including significant loss of employment, and licencing and export income.

PHAMA’s role

PHAMA provided a range of support to build the capacity of the CA for Health. PHAMA supported benchmark audits of CA Health against EU requirements. PHAMA also provided support for the National Public Health Lab to improve its testing capacity, and provided food safety training for the fish processing industry. The Solomon Islands Government responded by significantly increasing the CA Health’s recurrent budget and addressing staffing issues. PHAMA also facilitated the establishment of the Seafood IWG. This group has played an important role in

advocating for capacity improvements and resourcing of the two CAs so that critical non-compliance and market access challenges can be addressed.

PHAMA worked with the CA for IUU, Forum Fisheries Agency and the New Zealand-funded project, Mekem Strong Solomon Islands Fisheries, to address the yellow card on IUU fishing certification.

Impact

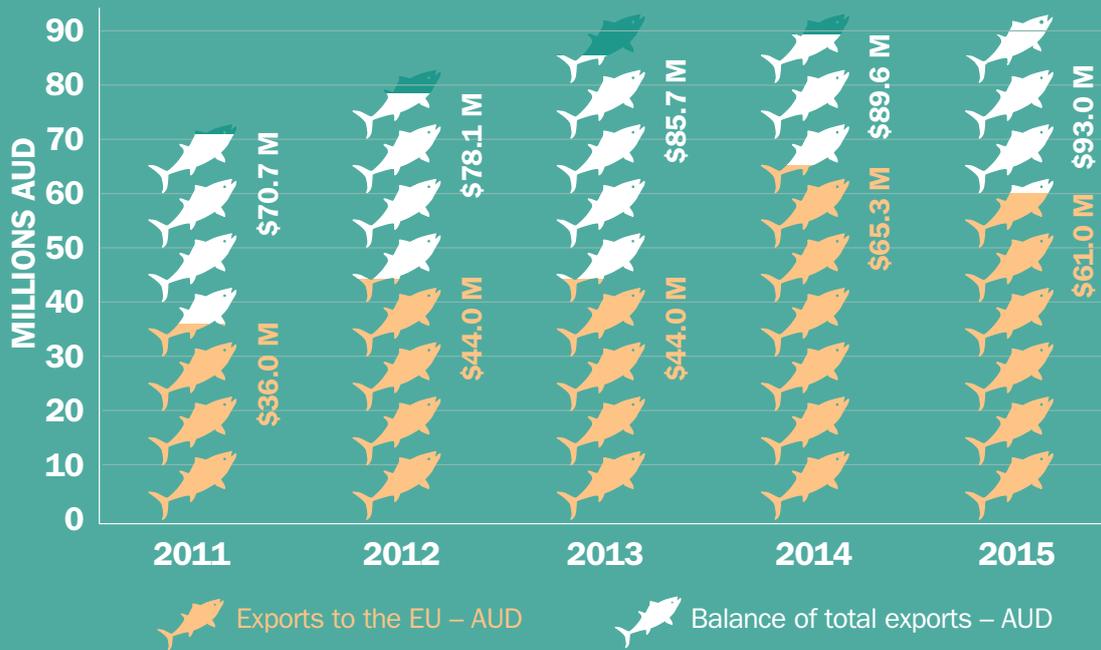
PHAMA’s inputs with the CA Health significantly strengthened Solomon Islands’ market access position for the EU; this was confirmed by a FFA benchmarking audit in 2016. The IUU yellow card was lifted in February 2017, ensuring ongoing access to EU markets. This means exports to the EU valued at over AUD 60 million per year since 2014 have been protected for the immediate future.

PHAMA’s contribution to protecting the EU market for Solomon Islands’ seafood exports, based on being one of three main supporters, is valued at AUD 30 million from 2012 to the end of 2020. PHAMA’s contribution to increased income for seafood over the 2018-2020 period is AUD 3.7 million. This calculation assumes Soltuna can access markets paying a 10 per cent premium due to Hazard Analysis and Critical Control Points (HACCP) accreditation for 10 - 15 per cent of it’s exports.

PHAMA has also helped to protect 3,100 jobs for Solomon Islanders at seafood factories and on tuna fishing boats.

Furthermore, new, high-priced markets are currently being developed into the EU and the USA, building on improved food safety processes and training supported under PHAMA. The value of the EU market continues to grow along with the overall industry (Figure 8).

Figure 8: Returns to Solomon Islands from fish exports



Ethel’s story

‘One of the things I always remind myself about, is if I don’t do my job well in overseeing the sanitary conditions of the facilities that export to the EU, these people in the factory will lose their jobs’, says Ethel Mapolu, a key figure in the development of the Solomon Islands Competent Authority Health. Ethel was Team Leader for the Competent Authority (CA) Health from 2015 to 2016.

During her time as team leader, Ethel worked closely with PHAMA. She credits PHAMA and other organisations and the support they gave for the success of CA Health. ‘PHAMA has been instrumental in assisting CA in terms of capacity building for the staff to meet market access requirements’ she says.

According to Ethel, PHAMA’s assistance has also helped Solomon Islands retain its access to European Union (EU) markets. ‘The factory itself employs around 1800 workers and for the fishing operations there are about 500 employees. Without PHAMA’s assistance and if we didn’t do our jobs well, many people could’ve lost their jobs and the communities around the fish factory in Noro wouldn’t benefit from these two establishments.’

Visit PHAMA website or [click here](#) to learn more about Ethel’s story



Kava



Context

Vanuatu and Fiji are the main kava growing and exporting nations in the region. The roots and stump of the kava plant are consumed as a traditional beverage, either fresh or after being dried and powdered.¹⁴ Kava is an integral part of Pacific society.

Over the last three decades, kava has evolved from being a ceremonial or social drink to an established cash crop sold on the domestic and export markets throughout Oceania, the USA and Europe. Modern use of kava includes as a dried product that can be made into a beverage, and as an ingredient in nutraceuticals

as an alternative to pharmaceutical products. Given the increased commercialisation of kava, the industry has needed to improve quality along the production and marketing chain.

Tens of thousands of people in Vanuatu and Fiji are engaged in growing kava. For example, in Vanuatu nearly all kava production is undertaken by small farming households in the remote islands.

In Vanuatu, approximately 18,000, or 32 per cent, of all rural households grow kava.¹⁵ In Fiji in 2015, 21,000 farms¹⁶ or 58.3 per cent of farms produced kava.^{17, 18}

Fig. 9: Top five agricultural exports of Vanuatu averaged 2013 – 2016

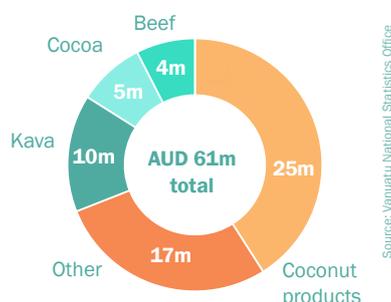


Fig. 10: Top five agricultural exports of Fiji in 2015

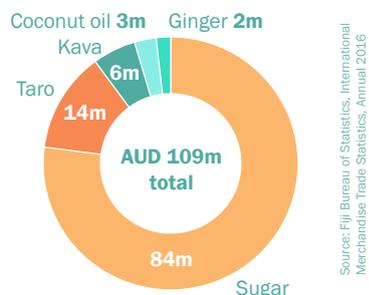
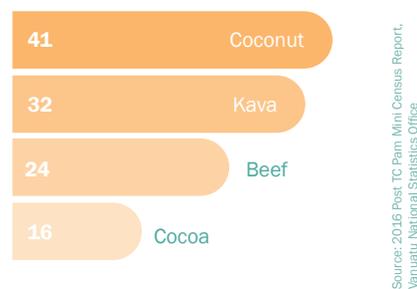


Fig. 11: % of Vanuatu households engaged in production of key crops



Issues

In 2002, Germany, followed by other European countries, banned kava imports due to health and product safety concerns. This had a severe effect on kava farmers and exporters from Pacific Island nations. For example, in Fiji the kava ban resulted in a dramatic reduction of kava exports from the 1998 high of AUD 22 million to just over AUD 3 million in 1999. While the ban was overturned by German courts in 2014, kava exports have not yet returned to previous levels.

There is a risk that further bans could be put in place unless trading partners can be assured of the quality of kava from the Pacific. There is therefore a need to develop and implement quality systems, including national standards.

PHAMA's role

PHAMA has been working to put in place quality systems to demonstrate that kava exported from the Pacific is fit for human consumption.

In Vanuatu and Fiji, PHAMA has worked with government and industry partners to: develop a national kava quality standard, produce a kava quality manual which explains key production and processing methods to farmers and exporters, and develop and validate a robust, practical and cost effective kava quality screening test.

Impact

PHAMA has helped to protect approximately AUD 15 million of annual exports of kava and 39,000 livelihoods through its work in Fiji and Vanuatu. PHAMA will be directly responsible for protecting AUD 14.5 million of exports of kava from

Fiji and Vanuatu to the end of 2020. PHAMA's direct contribution to increases in kava sales, based on increased quality of kava, is valued at \$800,000 up to 2020.

The EU kava export market would have closed again without the work of PHAMA supporting national kava quality in Fiji, according to interviewees. This work contributed to the protection of Fijian exports of kava valued at AUD 4.9 million annually. PHAMA's direct contribution is valued at approximately AUD 3.5 million to the end of 2020. This takes into account the contributions of the Fiji Ministries of Agriculture and Health, Government agencies responsible for Codex Alimentarius, who were also active in assuring kava quality and progressing the development of national and regional standards over the same time. PHAMA's work in protecting kava exports protects the livelihoods of approximately 21,000 farming families throughout Fiji who grow kava.

In Vanuatu, PHAMA's work contributed to the protection of annual kava exports of AUD 10 million. Through the Vanuatu Kava Industry Association, PHAMA will be responsible for maintaining over AUD 11 million in kava exports from Vanuatu to the end of 2020. This calculation assumes PHAMA was one of three actors responsible for maintaining kava exports into more restrictive markets (50 per cent of exports). The other actors were the Vanuatu Government, specifically Biosecurity Vanuatu and Department of Agriculture, and the Food and Agriculture Organisation (FAO). PHAMA's work in maintaining the kava export market protects the livelihoods of the approximately 18,000 farming families throughout Vanuatu who earn income from kava.



Kava Seedling, Vanuatu

Figure 12: PHAMA's role and results for kava

PHAMA has helped to protect approximately

39,000
LIVELIHOODS

through its work in Fiji and Vanuatu



PHAMA has helped to protect approximately

AUD 15,000,000
ANNUAL KAVA EXPORTS

through its work in Fiji and Vanuatu



Visit PHAMA website or [click here](#) to learn more about PHAMA's impact in the kava industry

Vio's story

'Without PHAMA, most of our mission would have failed.' That is the overall conclusion of Vio Veretawatini, an Economics Officer at the Fiji Ministry of Agriculture and the Secretariat of the Kava Taskforce. Vio believes the Ministry has many priorities and PHAMA's funding and advice has helped focus the Ministry's attention on kava.

'We are the Secretariat to the Kava committee, which is chaired by the MoA Permanent Secretary. PHAMA is part of the committee that includes farmers, exporters and government. We have worked together with PHAMA to get this kava manual out. We have worked closely with PHAMA in the past few years. The project has been very successful.'

PHAMA's impact for the MoA has been the production of documentation needed to maintain market access to the EU. 'Now we have the documents that the Germans, EU, and WTO want: the chemical analysis of kava, the kava quality manual, the kava standards. Now we can say that kava is safe as a food and safe for humans to consume.'

Vio uses a sporting analogy to describe PHAMA's role, 'PHAMA has been like our 'forward' in yaqona (kava). They have been very helpful.'



Vio Veretawatini, Fiji Ministry of Agriculture Economics Officer, and the Kava Taskforce Secretariat, Fiji



Sawn timber



Context

Round logs are the highest dollar value export from Solomon Islands generating revenues of AUD 380 million in 2015. By comparison, the sawn timber industry is small with an annual value of between AUD 10 and 14 million.¹⁹ While the logging sector is currently the largest earner of export income, it faces rapid decline due to unsustainable extraction rates over the past three decades. In contrast, the sawn timber industry is growing and is on a sustainable

footing because of its relatively low extraction rates and the fact that round log exporters are prohibited from logging a range of restricted species that can only be sold as sawn timber. These include the high value hardwoods: rosewood (*Pterocarpus indicus*), vitex (*Vitex cofassus*), taun (*Pometia pinnata*) and kwila (*Intsia bijuga*). The Solomon Islands Government's stated policy is to encourage further development of downstream processing of timber.

Fig. 13: Major primary sector exports from Solomon Islands (average 2011–2015)

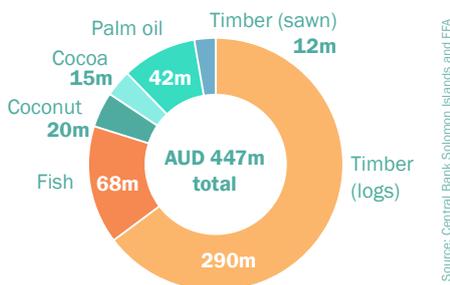


Fig. 14: Industry impact on employment and livelihoods in Solomon Islands



Issues

Due to consumers' concerns, governments and retailers in the EU, USA, Australia and New Zealand require evidence that imported forestry products have been legally sourced and are from sustainable sources. In 2013, the Australian Government made clear its intention to restrict imports of timber from countries failing to comply with legal sourcing requirements. In 2014, the New Zealand industry also indicated its intention to close market access for Solomon Islands' timber unless it saw adequate progress on improved legality assurance and sustainability.

PHAMA's role

In 2013 PHAMA established a Timber Industry Working Group (TIWG) to assist industry and government to develop a timber legality assurance guideline for Solomon Islands. As a result, in 2014 the 'Country Specific Guidelines for Solomon Islands were recognised under Australian legislation (the first country to have such country specific guidelines recognised).

With help from New Zealand industry and facilitated by PHAMA, Solomon Islands established a recognised third party legality verification system (utilising standards by an international recognised accreditation body NEPCon). PHAMA co-funded support for implementation including part of NEPCon costs.

PHAMA has also supported a number of trade missions for Solomon Islands industry and government officials to Australia and New Zealand to meet with timber buyers

and industry representatives to clarify standards and establish new business-to-business relationships. PHAMA supported the establishment of the Solomon Islands Timber Processors and Exporters Association (SITPEA) out of the TIWG. SITPEA, government and NZ importers have established a one per cent certification levy, to ensure that SITPEA can meet the costs of NEPCon certification on an ongoing basis – a great example of a sustainable funding mechanism.

Impact

PHAMA has played a leading role in protecting the market for Solomon Islands' sawn timber into Australia and New Zealand, valued at AUD 10 million annually and representing almost 70 per cent of sawn timber exports. Further, the value of this trade has almost doubled over the past six years and its importance will escalate rapidly as round log exports decline. PHAMA's direct contribution to ensuring ongoing market access is valued at approximately AUD 11 million to end 2020. The calculation attributes up to 30 per cent of export value to Australia and NZ to PHAMA. This is for work maintaining market access in 2013 when PHAMA undertook specific measures to protect the failing market in Australia and again in 2016 to protect the NZ market.

As a result of industry visits to New Zealand and Australia facilitated by PHAMA, a significant opportunity to improve export pricing (estimated at 20 per cent) has been identified through kiln drying.

Visit [PHAMA website](#) or [click here](#) to learn more about PHAMA's impact in the timber industry

Figure 15: PHAMA's role and results for sawn timber

PHAMA's leading role in **PROTECTING** the market for Solomon Islands' sawn timber into Australia & New Zealand

70%
AUS/NZ
MARKET SHARE



The value of this trade has almost **DOUBLED** in

6 YEARS

2010
\$5M

2016
\$10M



DIRECT CONTRIBUTION TO ENSURE
ONGOING MARKET ACCESS

2020

AUD 11,000,000

20%  
PROJECTED INCREASE
in export pricing identified through
dry kilning



Beryl's story

'I think the sawn timber industry has a bright future in Solomon Islands,' says Beryl Pitatina, the Yard Manager at Pacific Export Alliance Group (PEAG). The sawn timber industry is dominated by small-scale community forestry which provides valuable income to remote villages without causing the environmental degradation of the round log industry. 'We buy timber from local people from our provinces. Our main sawn timber suppliers are from Choiseul, Makira, Malaita and Guadalcanal,' explains Beryl.

Beryl studied economics and worked in another milling company for seven years before starting at PEAG three years ago. She started in accounts but became interested in milling and logistics. Now with 10 years of industry experience, she leads PEAG's efforts to increase timber prices through improved quality, handling and certification and is the contact person at PEAG for the NEPCon certification program that PHAMA helped support. Beryl ensures the company's compliance to the Timber Legality and Chain of Custody Certification Programs that support sustainable forestry and ongoing market access to New Zealand and Australia.

Beryl Pitatina, Pacific Export Alliance Group Yard Manager and NEPCon Certification Program contact person, Solomon Islands



Beef



Context

Vanuatu is known regionally for its grass-fed, high quality beef. Domestic demand continues to rise, both in Port Vila's tourism industry and throughout the islands, where beef is consumed during celebrations. Beef cattle production has been a major source of income for smallholder farmers and large-scale commercial producers for over 100 years. In 2007, 39 per cent of

rural households raised cattle as a component of their livelihoods.²² In addition, beef is an important export commodity contributing approximately AUD 4.5 million annually. Production has, however, been declining in recent years due to a range of factors including pasture management, land development, and high transport and processing costs.

Fig. 16: % of Vanuatu households engaged in production of key crops



Fig. 17: Top five agricultural exports of Vanuatu averaged 2013–2016

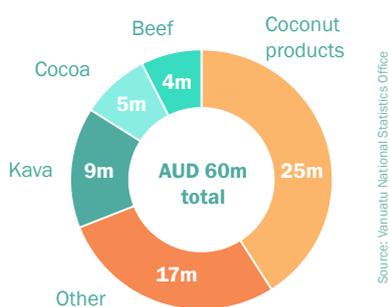
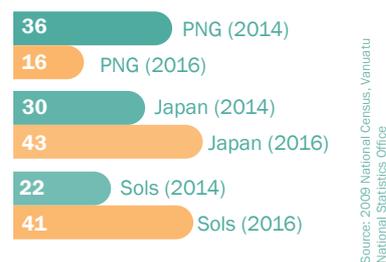


Fig. 18: Beef exports showing changes in destination markets 2014–2016 (%)



Issues

In order to maintain access to international markets, Vanuatu needs to prove it is free of diseases such as mad cow disease (Bovine Spongiform Encephalitis or BSE), tuberculosis and brucellosis. This requires demonstrating it has the animal health surveillance and meat inspection systems necessary to detect such diseases.

Vanuatu has market access to countries such as Australia and New Zealand, with high quarantine and health food standards. However, due to budget constraints, government investment in animal health surveillance and testing systems has been limited. Additionally, there is a strong likelihood of losing access to other markets if market access to Australia is lost. It is therefore essential to keep standards at a level that maintains current access.

PHAMA's role

PHAMA has supported a range of activities to improve Vanuatu's capacity in the area of animal health surveillance including:

- facilitating a country inspection visit by veterinary experts from the World Organisation for Animal Health
- refurbishment of the animal health laboratory to handle diagnostic samples
- support for establishing a national BSE testing program

- cattle disease surveys
- technical training of meat inspectors
- funding to support the appointment of a well-qualified Principal Veterinary Officer.

PHAMA also facilitated the formation of the Livestock IWG in 2013, a mechanism for the industry and relevant Government of Vanuatu agencies to identify industry priorities, communication and cooperation.

Impact

PHAMA's support has resulted in export markets to Australia, New Zealand, Japan and other destinations being successfully maintained, worth approximately AUD 4.4 million per year since 2013. For example, following PHAMA's technical support, Australia reconfirmed Vanuatu as being BSE free in 2011. Without this, Vanuatu would have lost access to Australia, with probable knock on effects on access to other markets.

PHAMA's direct contribution to ensuring ongoing market access is valued at AUD 4.2 million through to end 2020. This calculation is based on PHAMA's two key inputs relating to disease surveillance and compliance support. Its support has also helped protect the livelihoods of approximately 13,000 smallholder households and well over 100 jobs in the meat processing industry.

Figure 19: PHAMA's role and results for beef

PHAMA's support has resulted in

AUD 4,400,000

**BEEF EXPORT MARKETS
SUCCESSFULLY MAINTAINED**

per year since 2013 (approx.)



PHAMA's direct contributions ensure ongoing market access

AUD 4,200,000

through to end 2020



PHAMA support reconfirmed

Vanuatu as BSE free

in 2011 to confirm access to Australian market and probable knock on effects on other markets.



PHAMA support has

HELPED TO PROTECT

13,000

LIVELIHOODS

of smallholder households



PHAMA support has helped

PROTECT

100 JOBS

on large holdings in meat processing operations



Jimmy's story

Jimmy Toara, a young farmer from Epule, North Efate has long been involved in the cattle sector. He formed a small cooperative of farmers from his area of which he is the chairman. Jimmy is also an active member of the Livestock Industry Working group, established with PHAMA's facilitation, which has been involved in maintaining export markets.

Jimmy shares information with other farmers after the IWG meetings. 'After I attend the Livestock IWG meetings I let the other farmers in my area know what was discussed. PHAMA helps both large farmers and smallholders.'

PHAMA's support for maintaining beef export markets has had a personal impact for Jimmy and his family. 'The cash from selling cattle pays for my children's school fees and other essential items for daily living,' says Jimmy. 'I grew up with cattle. The benefit to our family has been big. We want to keep going with livestock because it's so important to us'. Jimmy continues the cattle-raising business his father started in the 1980s.



Jimmy Toara, cattle farmer and Livestock Industry Working group member, Vanuatu



Coconut



Context

The coconut palm is found throughout the tropics. It is particularly important in the low islands of the Pacific where it provides food, drink, oil, medicine, timber, thatch, mats, fuel, and domestic utensils. Coconut remains an important economic and subsistence crop in many small Pacific Island nations.²³

Pacific Island nations export a range of commodities derived from the coconut palm. The most important exports are: copra (the dried flesh of the coconut), coconut oil (oil extracted from copra), copra meal (the by-product of the oil extraction from dried coconut kernels), coconut cream, whole green coconuts, and coconut water.

Coconut production is important to livelihoods in both Samoa and Solomon Islands where PHAMA has supported exports of copra meal and coconut oil. For example, nearly 70 per cent of the 28,119 major crop households in Samoa produce coconuts.²⁴ In Solomon Islands as many as 40,000 households grow and harvest coconut for cash and food.²⁵

Coconut products constitute the third, fourth and fifth largest exports from Samoa: copra meal, coconut oil, and coconuts. In Solomon Islands, coconut products are the third largest export after timber and fish products.

Fig. 20: Solomon Islands major primary sector exports

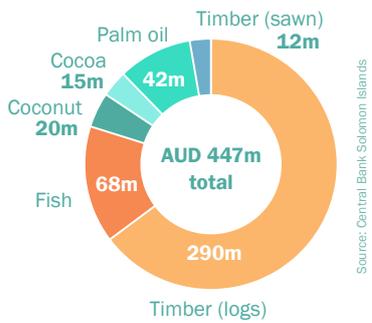


Fig. 21: % of Solomon Island households engaged in production of key crops

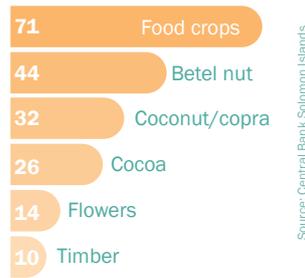


Fig. 22: Samoa's top five agricultural exports 2015

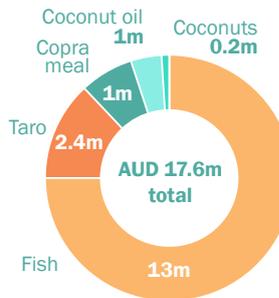


Fig. 23: Relative importance of coconut to livelihoods in Samoa



Issues

Exporters of coconuts and copra meal in Samoa and Solomon Islands were subject to a new Australian policy in 2011 that limited their access to the Australian market. The new policy required Australian Department of Agriculture and Water Resources (DAWR) inspections of copra meal exporting company facilities. These inspections would determine whether exporting companies were meeting Australian standards.

PHAMA's role

PHAMA provided technical assistance and funding to three companies in Solomon Islands (2011) and one company in Samoa (2012–2013) to ensure they complied with Australian Quarantine standards.

PHAMA has also recently provided technical advice and support to the Samoan company to gain HACCP accreditation.

In addition, PHAMA provided Biosecurity Solomon Islands with training and systems development to prepare them to conduct ongoing audits to provide assurance to DAWR that companies were meeting

Australian standards. Discussions on how this may potentially reduce compliance-visit frequency are ongoing.

Impact

The major coconut exporter in Samoa was accredited by the DAWR. PHAMA's intervention has meant the company could export to Australia, a reliable and large market. PHAMA's interventions have been directly responsible for AUD 2.3 million in expected improved income by the end of 2020 with improved prices flowing to approximately 800 coconut farmers in Samoa.

The three copra meal processors in Solomon Islands and a palm oil processor were certified and continue to export their meal products into Australia and New Zealand.

PHAMA's work with Biosecurity Solomon Islands meant companies gained the ability to conduct pre-audits of processors. These pre-audits highlighted compliance issues which the companies were able to resolve leading to those companies passing their second audit.



Figure 24: PHAMA’s role and results for coconut in Samoa



With **PHAMA’S ASSISTANCE**
Samoa’s major coconut exporter
ACCREDITED
by the Department of Agriculture
& Water Resources



AUD 2.3M

Expected improvement to income by the
end of 2020

Improved prices
flowing to
approximately



800 rural households
in **SAMOA**



Etuale’s story

PHAMA helped Samoan company Pacific Oil gain access for its copra meal exports to Australia. ‘PHAMA brought in someone to advise us on how to comply with Australian Quarantine which is quite strict. That advice was quite important,’ explains Etuale Sefo, CEO of Pacific Oil.

PHAMA helped Pacific Oil prepare for the auditor – right down to the level of having all relevant process manuals in place. ‘It would have taken much longer if we did it ourselves,’ says Etuale.

Selling to the Australian market has been advantageous to the company. ‘The Australian market is a lot more stable. New Zealand is up and down. Same with the States... Australia takes everything that we produce. From that point of view it is better for us. It is a lot more reliable market.’

Asked about the future, Etuale’s focus is on adding value to current products and ensuring supply. ‘We’re entering into a slightly different phase of our operations in the next two or three months which is to produce organic coconut oil. We’re also trying to put a re-planting program in place so we are assured of having a current resource. A lot of the trees are past their current productive life.’



Taro - Fiji



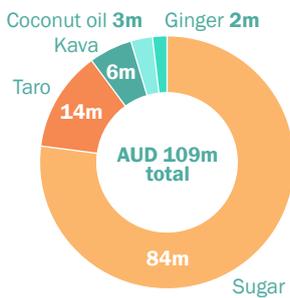
Context

Taro is one of the most important staple food items in the Pacific and is widely cultivated for sale in local and international markets. Taro has tremendous cultural significance to Pacific Islanders. It is the crop of choice for royalty, gift-giving, traditional feasting, and the fulfilment of social obligations.²⁶ People of Pacific Island

origin continue to consume taro wherever they live in the world, fuelling international markets in cities such as Auckland and Sydney.

PHAMA supports Fiji and Samoa to improve its exports of taro. This section outlines PHAMA's work and impact in Fiji. The following section is on Samoa.

Fig. 25: Top five agricultural exports of Fiji in 2015



Source: Fiji Bureau of Statistics, International Merchandise Trade Statistics, Annual 2016

Fig. 26: Top three crops grown in Fiji



Source: Fiji National Agricultural Census, Department of Agriculture, 2009

Fig. 27: Fiji taro export markets



Source: Taro Commodity and Activity Update, PHAMA, 2016

Issues

Leading Fijian taro exporters were looking for opportunities to sell their product to Australian and New Zealand supermarkets in order to increase volumes and achieve better pricing. However, large supermarket chains in these countries generally require food safety (or HACCP) accreditation of their suppliers.

PHAMA's role

PHAMA led the process for six major taro exporters in Fiji to gain HACCP accreditation. PHAMA funded a HACCP specialist to train and advise each exporter on necessary improvements to business processes and infrastructure, and supported exporters through the formal audit and accreditation process.

Impact

By helping exporters to become HACCP certified, PHAMA has helped open up new higher priced markets which benefits the 37,000 households farming taro. For example, the main exporter of taro in Fiji, one of the six companies PHAMA has supported, was able to secure

new contracts with a higher paying supermarket client due to HACCP accreditation. This exporter reports paying farmers more for taro - meaning increased farmgate prices, and improved livelihoods for more than 13,000 taro farmers supplying that company. Additionally, at least 110 new formal jobs were created by the new contract, most of them for women in processing plants. HACCP accreditation has had a direct impact on contract prices for the same exporter. The new contract was a contributing factor to a 20 per cent increase in the taro price per kilo. Over the 2014–2017 period these gains in taro prices were worth AUD 3.6 million and over the 2018-2020 period are projected at over AUD 5 million. PHAMA's contribution to these price increases takes into account investments by the exporter, the Fiji Ministry of Agriculture, the EU and the Market Development Facility (DFAT), and is valued at over AUD 900,000 over the 2014–2017 period and over AUD 1.7 million for the 2018-2020 period.



Taro corm

Figure 28: PHAMA's role and results for Fiji taro

6 
ACCREDITED EXPORTERS

PHAMA led HACCP accreditation of six main taro exporting companies in Fiji.

5 
EXPORTERS IMPROVED

Improvements for five exporters in:

- entering new markets
- gaining new clients
- increasing volume of exports
- increasing export profits
- increasing productivity of staff.

20% 

**Increase in value of taro exports for
TOP TARO EXPORTER**

Projected increase of AUD 5M over
the period 2014–2020.

IMPROVEMENTS FOR TARO FARMERS

 **37,000**

up to 37,000 households farming taro benefit
from improved taro prices

Krupali's story

Food Processors Fiji now exports taro to the USA because of the HACCP certification gained through PHAMA's support. 'We had the USA as our major target market. The program helped us streamline production to meet export requirements for some of our vegetables and frozen root crops,' says Krupali Ben, from Food Processors Fiji.

Going through the HACCP process has meant the company has improved labelling, undertaken audits of vendor suppliers and improved traceability. As a result Krupali says, 'We now have more customer satisfaction and compliance with USA Food and Drug Administration (FDA) regulation.' Attaining HACCP certification has been very important to the company. 'By 'very important' we mean improving productivity and identifying bottlenecks.'

The HACCP certification has meant that Food Processors has been able to add value to their products and has achieved a higher margin for the products exported to the USA. While the overall HACCP operation is a cost to the business, this cost is balanced out across the company. Food Processors sees HACCP as a long-term investment.

Krupali Ben, Food Processors Fiji





Taro - Samoa

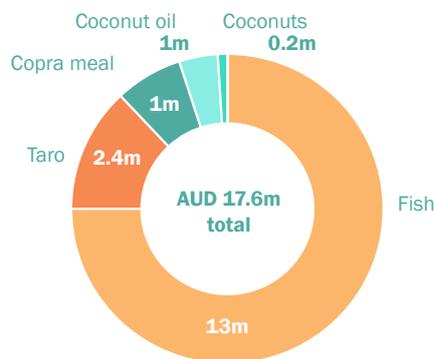


Context

Taro dominated Samoa's agricultural exports in the 1980s and early 1990s.²⁷ The World Bank estimates taro exports peaked in 1989 at USD 5.59 million.²⁸ However, exports were devastated by Cyclone Ofa in 1990 and the onset of taro leaf blight (TLB) in 1993. Research and development of TLB-resistant varieties of taro has helped rejuvenate production and it is once

again one of the most important staples in Samoa, grown on over 17,000 farms or nearly three-quarters of all major crop households in the country.²⁹ There has also been a steady rise in taro exports since 2013 and it is now Samoa's second largest agricultural export, after fish, worth AUD 2.4 million in 2015.³⁰

Fig. 29: Top five agricultural exports of Samoa in 2015



Source: Exports by Commodity, Samoa Bureau of Statistics, September 2016

Fig. 30: Relative importance to taro livelihoods in Samoa



Source: Agricultural survey 2015 report, Ministry of Agriculture and Fisheries, 2015

Issues

Samoa needed to rebuild its taro export trade after recovering from taro leaf blight (TLB) which decimated production and meant Samoa could no longer export to Australia (which bans taro from countries with TLB). When PHAMA started, Samoa's exports of taro had reduced to almost nothing from the 1989 high of USD 5.59 million.³¹

PHAMA's role

PHAMA has been involved in three main initiatives aimed at revitalising taro exports from Samoa:

- i) analysing the New Zealand market and barriers to entry, and then assisting the government and industry to develop a strategy to recapture the NZ market
- ii) undertaking research into the possibility of exporting TLB-resistant varieties into Australia
- iii) assisting the Scientific Research Organisation of Samoa (SROS) to develop a frozen taro product that, unlike fresh taro, can be exported to Australia.

PHAMA's support for increased taro exports built on work by the Government of Samoa, DFAT, the Pacific Community (SPC), the University

of the South Pacific, and the Australian Centre for International Agricultural Research (ACIAR). These partners supported the development of disease-resistant taro for Samoa and supported production through the provision of planting material.

Impact

PHAMA's support for exports of fresh taro has contributed to the over six-fold increase in exports from AUD 350,000 in 2011 to AUD 2.2 million in 2015.³² PHAMA's support contributed directly to approximately AUD 300,000 of exports over the 2014-2017 period when considering PHAMA's role in relation to other partners. Future projections for fresh taro exports are difficult to make as they depend on opening the fresh taro pathway to Australia. Opening this pathway within the 2018-2020 timeframe is not guaranteed.

PHAMA supported the successful product development and export trials of frozen taro from Samoa to Australia. A Samoan exporter has now taken advantage of this and has so far exported five 20 foot containers worth AUD 64,000 to Australia. Exports are projected to grow and estimated to be worth at least AUD 500,000 over the 2018-2020 period with PHAMA's contribution valued at approximately AUD 300,000.

Figure 31: PHAMA's role and results for Samoa taro

AUD 1.8M 

INCREASE IN EXPORTS over the period 2011–2015, partly due to PHAMA's support for fresh taro

PHAMA's **SUPPORT** contributed directly to approximately **AUD 300,000** of exports from 2014–2017 

PHAMA supported **PRODUCT DEVELOPMENT & EXPORT TRIALS** of frozen taro leading to **AUD 64,000** of exports to **AUSTRALIA**

7000 
TARO FARMING HOUSEHOLDS will benefit from new markets as a result of PHAMA's support through to end of 2020

FROZEN TARO EXPORTS ARE PROJECTED TO GROW TO AUD 500,000  over the 2018–2020 period with **PHAMA's CONTRIBUTION** of **AUD 300,000**





Squash



Context

Squash is a high-value export crop in Tonga, and was the country's most important agricultural export in the 1990s-2000s. Exports averaged AUD 7 million annually, mostly to Japan and New Zealand.³³ Unfortunately, Tonga's share of the Japanese market declined substantially due to competition from exports from the Philippines and Mexico.

Squash remains an important agricultural export for Tonga. It is the fifth most important primary sector export commodity after fish, crustaceans and molluscs, root crops and kava. However, current exports of squash are a fraction of peak levels. In 2014 Tonga exported only AUD 1.1 million of squash.

Fig. 32: Tonga's top five primary sector exports

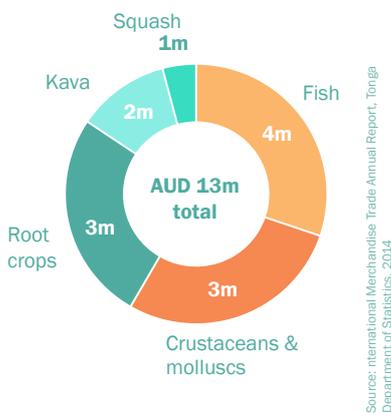


Fig. 33: Value and destination of 2014 Tonga squash exports



Fig. 34: Importance of squash to livelihoods in Tonga



Issues

Tonga needed to identify other export markets for squash given the substantial decline of the Japanese market. Tonga identified China as a potential market for its squash but had no market access.

PHAMA's role

PHAMA supported one exporter to meet China's specified standards and funded two verification visits from the Chinese Quarantine Agency (the Administration of Quality Supervision, Inspection and Quarantine agency or AQSIQ).

PHAMA funded 75 per cent of the costs for improved infrastructure of one Tongan squash exporter to meet the standards specified by the Chinese authorities. The improved packhouse facilities have been made available to all Tongan squash exporters on a cost recovery basis. PHAMA supported a trial shipment of squash to China.

Impact

A 24 tonne trial shipment of squash was sent to China in late 2016. Based on the success of this shipment, Tonga and China plan Ministerial sign-off of the market access protocol in October 2017. The exporter has a 500 tonne order from a Chinese importer worth approximately AUD 300,000.

Three-year projections for squash exports into China show a steady increase from 1,500 tonnes in year one to 5,000 tonnes in year three, or over AUD 6 million in total over the 2018-2020 period.

PHAMA's work is valued at AUD 120,000 to the end of 2016 and over approximately AUD 2 million by the end of 2020.

The impact on farmers is currently small with only 25 registered growers of squash in Tonga in 2016. Opening access to the China market will help address market volatility with the potential to grow the number of farmers and families benefiting from squash export. For example, when the Japanese export market was at its peak, over 800 farmers produced squash for export.

Figure 35: PHAMA's role and results for squash

A trial shipment of squash sent to China in 2016 has led to a planned Ministerial sign-off of the market access protocol in October 2017 with the exporter having received an order for



500 TONNES OF SQUASH TO CHINA

Number of squash farmers projected to grow to previous highs of

800 



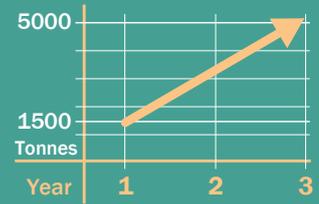
PHAMA's work is valued at **AUD 120,000**

to end of 2016 and over

AUD 2,000,000 

by the end of 2020

Projections for **SQUASH EXPORTS INTO CHINA** 



expected exports over

AUD 6,000,000 

in total between 2018 and 2020



Minoru's story

'I think we exceeded their expectations,' says Minoru Nishi who runs Nishi Trading. Minoru is explaining the changes that his company put in place to meet AQSIQ's standards to export squash to China.

'Getting our squash into China was a real collective effort between all parties,' explains Minoru. 'The Tongan Ministry of Agriculture (MAFFF) developed the initial submission to AQSIQ, MAFFF's equivalent, and negotiated the bilateral agreement. PHAMA supported the verification. They brought the Chinese team to Tonga to verify the squash pathway, supported modification of the packhouse and food safety systems, and sent a team to China to inspect the cargo on arrival, including the head of Biosecurity Tonga.'

Nishi Trading also made a significant investment to export squash to China. 'We invested over \$1 million in infrastructure. We put in a lot of training for our farmers and our staff... there were a lot of sleepless nights but it was worth the work,' says Minoru.

Minoru is looking to the future. 'There are other things this market access can facilitate, not just squash.'

Visit PHAMA website or [click here](#) to learn more about Minoru's story



Cocoa



Context

Cocoa beans are sourced from cocoa pods grown on cocoa trees. Cocoa beans are fermented and dried prior to export for further processing into chocolate and chocolate products.

Africa produces the majority of cocoa, over two-thirds of world production, followed by Asia/Oceania and the Americas.³⁴ Papua New Guinea is one of the three top producers in the Asia/Oceania region. Other Pacific

Island nations are small cocoa producers by world scale. Despite the small scale of cocoa production in the Pacific, cocoa production has a large impact in the Pacific as it provides a livelihood for many farmers. For example, there are over 150,000 cocoa producing households in PNG and between 20,000–25,000 in Solomon Islands.

Fig. 36: Solomon Islands major primary sector exports

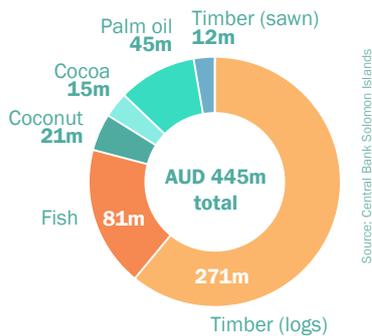


Fig. 37: % of Solomon Island households engaged in production of key crops



Fig. 38: Vanuatu's top five agricultural exports 2013–2016

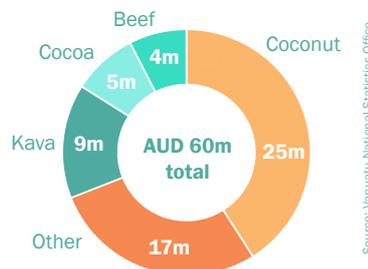
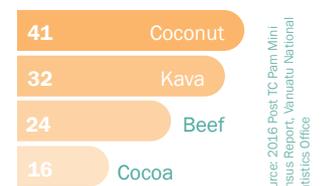


Fig. 39: % of Vanuatu households engaged in production of key crops



Issues

Cocoa beans exported from the Pacific have a reputation for being smoke-tainted. For this reason, most cocoa beans from Solomon Islands and Vanuatu are sold into the lower quality bulk-grinding markets in Malaysia, Singapore and Indonesia at lower prices. Cocoa exporters in the two countries have also been locked into a situation where almost all of their exports have been sold at discounted prices through one trading house rather than directly to overseas buyers.

PHAMA's role

PHAMA has provided support for two cocoa value chains: bulk market to Asia, and boutique market to USA, Europe, Australia and New Zealand.

Bulk market: PHAMA has introduced exporters to new bulk buyers in Asia and supported them to negotiate improved pricing, engage with freight forwarders and coordinate with marketing and biosecurity authorities. PHAMA has also been exploring trade finance options for exporters, as the lack of export finance is a major barrier to direct sales to overseas buyers.

Boutique market: There is a growing market for boutique chocolate around the world but quality standards are demanding. PHAMA has supported a range of initiatives to link Pacific cocoa exporters to boutique buyers and improve the supply of quality cocoa for example through the procurement and trial of solar dryers.

Impact

Bulk market: In Solomon Islands, PHAMA has assisted bulk cocoa exporters to negotiate better contract terms resulting in a 12 per cent price improvement for over 50 per cent of all cocoa sold (over 2,000 tonnes). This intervention alone is expected to return AUD 4.5 million in additional income for Solomon Islands' cocoa industry through to 2020.

Boutique market: PHAMA has facilitated sales of improved quality into boutique markets attracting a premium of more than 100 per cent above standard bulk prices. Six Solomon Islands' cocoa businesses are now exporting to boutique cocoa buyers in Australia, New Zealand, England, Belgium and France, sharing in over AUD 900,000 in extra income through to 2020.

In Vanuatu, PHAMA successfully assisted with improving contract terms for exporters, resulting in a price improvement of 10–12 per cent. Improved contract terms for bulk cocoa are expected to return an additional AUD 0.75 million through to 2020.

In Samoa, interviews with cocoa farmers show that PHAMA's support has resulted in improvements to the quality of the export bean.

The additional income facilitated by PHAMA filters through to over 20,000 rural households in Solomon Islands, 9,000 households in Vanuatu and 100s of households in Samoa.

Visit PHAMA website or [click here](#) to learn about PHAMA's impact in the cocoa industry



Solar cocoa dryers, Vanuatu

Figure 40: PHAMA’s role and results for cocoa

Better contract terms for bulk cocoa exporters will return almost

AUD 4.5M



to exporters in the Solomon Islands through to 2020



AUD 0.75M

to exporters in Vanuatu through to 2020

Boutique market sales will result in

AUD 900,000



in extra income to six Solomon Islands cocoa businesses in 2020

20,000



rural households in SOLOMON ISLANDS

9,000



rural households in VANUATU

100s of



rural households in SAMOA

Diana’s story

‘Selling into the normal market I can only get a low price, but I can get more than double selling to the buyers introduced by PHAMA’, explains Diana Yates, a cocoa processor and exporter from Solomon Islands.

Diana was one of three female recipients of the PHAMA-funded solar driers – a technology focused on improving quality. Solar drying combined with improved post-harvest practices to segregate, store and ship specialty cocoa beans bring out the best natural flavours.

Diana has also participated in PHAMA-supported finance training to empower exporters to better manage their accounts, collect data, negotiate cocoa sales contracts and forecast cash flow. These skills are invaluable as Diana meets new buyers through PHAMA. Her contract terms have improved significantly as a result of PHAMA negotiations with buyers, shippers and insurers.

‘The finance training has been very useful. Before we didn’t know if we were making money or losing money. We can also negotiate better contracts with buyers,’ says Diana.



Diana Yates, Cathliro Cocoa, CEO, Solomon Islands



Watermelon



Context

Watermelon is a high-value export crop for Tonga, and was the country's second most important agricultural export in the 1980s (after coconut oil) worth USD 650,000 in 1983.³⁵ The presence of fruit fly and inconsistent fumigation, however, saw New Zealand close the trade pathway several times since the 1980s, most recently in 2006.

Watermelon is regaining its importance as an export commodity. It is one of the commodities, along with root crops, coconuts and kava, that has led to the steady increase of Tongan agricultural exports since 2009/2010.³⁶ In 2014, watermelon exports were worth over AUD 150,000.

Fig. 41: Importance of watermelon to livelihoods in Tonga

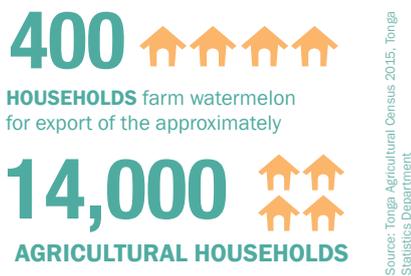


Fig. 42: Value of watermelon exports



Fig. 43: Top 4 destinations for watermelon exports



Issues

The export pathway for Tongan watermelons to New Zealand was closed in 2006 because of inconsistent fumigation and non-compliant farming and export processing. Contract volumes for Tongan watermelon decreased as a result, as did export returns.

PHAMA's role

PHAMA audited the watermelon export pathway in 2011 and mapped out steps to improve compliance by watermelon growers, exporters and the Tongan Quarantine Service.

PHAMA provided fumigation training to the Ministry of Agriculture, Food, Forests and Fisheries (MAFFF) staff, and exporters so these parties understood the correct application of fumigation for watermelons.

PHAMA's timely and flexible financial and technical support complemented larger investments from the EU and Government of Tonga.

While PHAMA's inputs were small in relation to other investments, all parties interviewed agreed the pathway would have stayed closed without PHAMA's support.³⁷

PHAMA provided further support in 2016 for the maintenance of the fumigation facility and associated equipment and training of government and private

sector stakeholders in how to conduct safe and effective fumigation treatments.

Impact

Tonga regained market access for watermelons to New Zealand, partially due to PHAMA's support, and maintained market access following an audit by NZ Ministry of Primary Industries in early 2017. Passing the audit would not have been possible without PHAMA's support for the maintenance of the facility and training of the MAFFF staff operating it.

Tongan watermelon exports to NZ from 2011-2016 were worth approximately AUD 800,000. Industry projects watermelon exports could grow to 1,000 metric tonnes annually, worth AUD 1.3 million. This would return Tongan watermelon exports to their previous historic highs. Over the 2018-2020 period exports are projected to be worth approximately AUD 4 million.

PHAMA's intervention, along with the 2010 EU investment in building the fumigation chamber, supported Tonga to regain its watermelon access to New Zealand. PHAMA was directly responsible for over AUD 600,000 in increased watermelon exports. Improved exports of watermelon impacts positively on over 400 watermelon farmers in Tonga.

Figure 44: PHAMA's role and results for watermelon

Industry projects   
WATERMELON EXPORTS
could grow to
1,000 METRIC TONNES
annually, worth
AUD 1,300,000

PHAMA has been directly responsible for over  
AUD 600,000
IN INCREASED WATERMELON EXPORTS

Tonga regained market access for watermelons to New Zealand, partially due to PHAMA support, and maintained market access following an audit by NZ Ministry of Primary Industries in early 2017 

Over the **2018–2020** period exports are projected to be worth approximately 
AUD 4,000,000

IMPROVED EXPORTS of watermelon impacts positively on over  
400 WATERMELON FARMERS



Mapa's story

Mapa Uhila grows watermelons for an exporter who supplies the New Zealand market, Tonga's biggest export market for watermelons. Without PHAMA's support for fumigation this market would have remained closed.

For Mapa, PHAMA's impact is personal. Growing watermelon for export has made farming easier and less risky.

Watermelon crops are easier to grow than traditional crops. 'Watermelon are short term crops, of about 90 days from planting to harvest or even 100 days maximum.' says Mapa.

Exporting watermelon is less risky than selling watermelon locally. 'With export you sell all your watermelon off at one time, it goes overseas and you get your money,' says Mapa. 'If I sell these in the local market, I should be prepared to sell these over a longer period of time, and if the market is flooded with excess supply, then of course there will be loss due to damages and rot, let alone give-aways to friends and relatives.'



Handicraft 'Mama' displaying her woven mats and handicrafts, Vanuatu



Chapter 3

Prospects



Ginger



Context

Ginger is a flowering plant whose root is widely used as a spice. Ginger can be consumed in fresh and processed forms. Fresh ginger comes from mature plants that are harvested around 10 months after planting. Processed ginger comes from immature ginger harvested around five months after planting. Ginger is grown on about 700 farms across Fiji though most of the ginger produced is immature and processed into crystallised ginger for export.

Issues

Fiji used to export large quantities of fresh ginger to the USA, Canada and New Zealand³⁸ but lost these markets to Thailand and China. While Fiji has found new markets for ginger it did so primarily by exporting processed

ginger. Processed ginger has several disadvantages compared to fresh ginger: higher processing costs thus lower returns, using only immature ginger, and not retaining Fiji product identity due to being sold for further processing.

Fiji identified Australia as a potential market for fresh ginger for two reasons: export and shipping costs to Australia were lower than to the USA and Canada, and Fiji's fresh ginger competitors (China and Thailand) do not currently have access into Australia.³⁹ Australia's market is estimated at AUD 7 million annually. Fiji aimed to gain market access for fresh ginger into Australia, and had begun the market access request for fresh ginger in 2003.

PHAMA's role

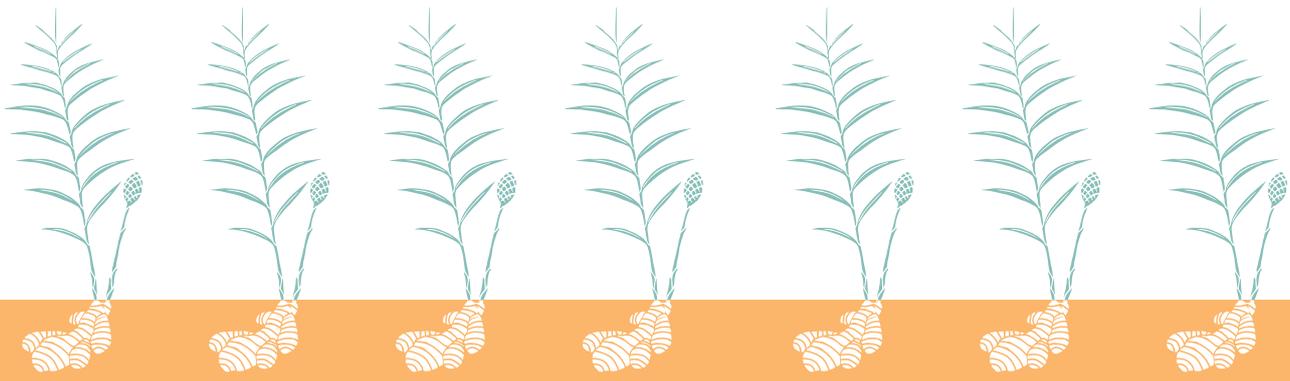
PHAMA supported the Government of Fiji to gain market access for fresh ginger into Australia. PHAMA provided a preliminary analysis of ginger production and export issues and constraints in 2011. PHAMA supported trial runs and facilitated field and audit visits by Australian

officials of the fresh ginger pathway. PHAMA has also built the capacity of the Fijian Ministry of Agriculture in the area of nematode identification to support the Fiji Government's efforts to attain and retain market access to Australia.

Prospects

There have been limited exports since market access was obtained in 2013. This is primarily due to a fall in prices in Australia, which, for now, makes exporting from Fiji unprofitable. Should prices return to previous levels, Fijian exporters should be in a position to take

advantage of Australian market access. However, given the current commercial challenges of exporting fresh ginger, PHAMA is now shifting its focus to supporting the export of processed ginger from Fiji.





Handicrafts



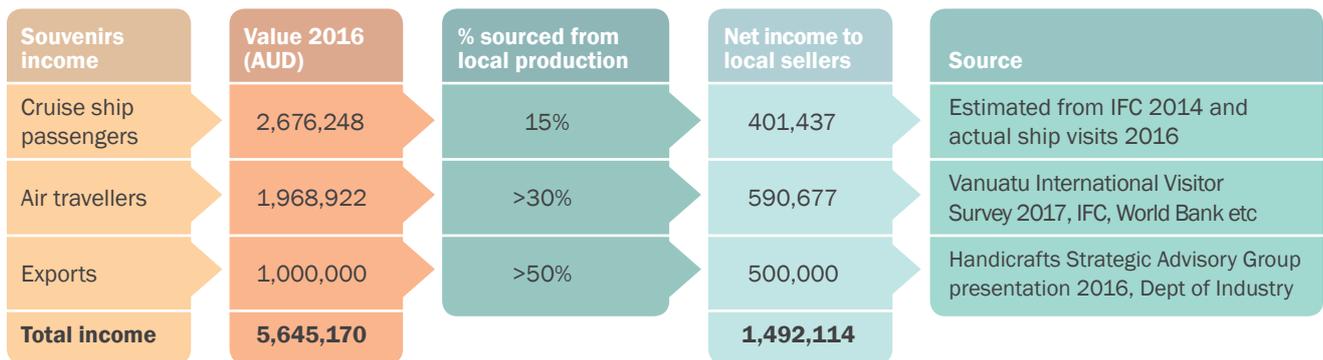
Context

Visits by cruise ships to Vanuatu are steadily increasing with almost 350 port visits expected in 2017 to the islands of Efate, Santo and Aneityum, resulting in over 600,000 passenger day visits. A further 110,000 passengers will arrive by air. Cruise ship and air travel passengers will spend over AUD 1 million on locally produced handicrafts and a similar amount will be exported – primarily to New Caledonia. Handicrafts represent 18–20 per cent of informal household

revenue and are produced by 7,500 households across Vanuatu, according to the 2010 Household Income and Expenditure Survey.

Cruise ship passengers spent about 9 per cent of their total onshore spend on souvenirs and are expected to spend over AUD 3 million in Vanuatu in 2017, including on souvenirs. Despite this, only a very small percentage of the total spend will be on locally made handicrafts.

Figure 45: Percentage expenditure by cruise boat passengers on various items in 2013



Issues

Vanuatu’s handicrafts sector has grown significantly with the expansion of the cruise ship industry. Similar potential exist for PNG’s and Solomon Islands’ tourism and handicraft sectors. However, sales are constrained because Australian and New Zealand tourists generally avoid purchasing handicrafts because they think they will be confiscated by quarantine officials when they return home. A recent study found visitors would spend significantly more on local handicrafts if more options were available and there was certainty of smooth quarantine entry. Consequently, tourists spend below their potential.

PHAMA’s role

PHAMA developed biosecurity awareness materials – vendor guides and posters – to help inform tourists and vendors about quarantine issues, and supported the Department of Tourism and Biosecurity Vanuatu to deliver training workshops to handicraft vendors. Training workshops were delivered to over 170 women selling handicrafts, known locally as the ‘Mamas’, and 21 producers of wooden items –predominantly men. Training also covered preparation and presentation of items and use of the vendor guide when selling handicrafts. PHAMA also funded quarantine cabinets and posters placed on board cruise ships.

PHAMA-supported Training-the-Trainer workshops have built capacity of key Vanuatu Government departments to deliver the handicrafts awareness training in remote islands where the cruise ships also visit. Cumulatively, since initiating this awareness work in 2015/2016,

PHAMA has supported the delivery of training to more than 400 vendors. PHAMA has recently produced a series of videos entitled ‘Take it home’ for Vanuatu, Solomon Islands, and PNG that will be screened on board cruise ships (and possibly airlines). The videos explain the importance of handicrafts to local livelihoods, and that many handicraft items can be taken home as they are not restricted by biosecurity in Australia and New Zealand.

Early results and prospects

The Department of Industry in Vanuatu has recently independently formed a Handicrafts Industry Working Group (IWG), building on the PHAMA working group concept being used by livestock, kava and cocoa. The Handicrafts IWG includes representatives from the Departments of Industry, Cooperatives and Tourism, local handicraft Non Government Organisations, Vanuatu Technical and Vocational Education and Training, the Vanuatu Chamber of Commerce and Industry, and international donors.

It is too early to report impact as the videos have only recently been finalised. However, it is hoped the video and vendor guides will convince more cruise ship passengers to purchase handicrafts in Vanuatu, Solomon Islands and PNG by providing clearer information on quarantine restrictions and demonstrating the richness of locally produced handicrafts. The Vanuatu souvenir and handicrafts sector is worth around AUD 6 million annually but has the potential to grow on the back of increased cruise ship visits.



Context

Papua New Guinea (PNG) is by far the largest of the Pacific Island nations with a population of almost eight million people. Agriculture is an important part of PNG's economy and life, with 85 per cent of the population involved in some way in farming and agriculture.

Agricultural activities contribute to a quarter of the country's GDP. Forestry products (including round logs), fisheries and agricultural products, accounted for 21 per cent of total exports in 2015 totalling over AUD 2 billion. Forestry products (round logs) are the largest export, the main agricultural exports are commodities such as cocoa, coffee and coconuts. PNG Government policy for agriculture is to promote and increase agricultural export revenues as well as improve sustainable domestic supply.

PHAMA's role

PHAMA started in PNG in late 2015. PHAMA is bringing lessons learned from delivery in the other PHAMA countries to its work in PNG. The focus of the first 12–18 months has been the establishment of IWGs in key commodity sectors; cocoa, coconut, coffee and fresh produce. The IWGs have strong engagement from all parties and there is a clear role for PHAMA to act as an industry facilitator. Initial activities have focused on analysis of market access issues both in terms of potential areas for improvement and new market opportunities, and examining the feasibility of meeting those opportunities. PHAMA will focus on improving industry coordination and logistics through the IWGs and helping Small and Medium Enterprises with linkages to overseas buyers and meeting buyer requirements. Given implementation of the Program is only in its formative stages it is too early to demonstrate economic impact.

Early results and prospects

Cocoa: To increase income and returns for farmers and exporters, PHAMA is: improving understanding of market opportunities in higher end boutique chocolate markets; facilitating linkages with buyers; and assisting producers to meet market requirements.

Coffee: PHAMA's objective is to: improve understanding of market requirements and opportunities in specialty coffee markets and for direct exports of value roasted coffee beans; improve capacity to monitor export quality; develop value adding capacity; and assist producers to market their products.

Coconut: To increase export returns through value-adding, PHAMA is: identifying market opportunities for increased high-value coconut product exports; assisting industry to meet market requirements on quality; and assisting producers to market their products.

Fresh produce: PHAMA's objective has been to assess the viability of exporting specific horticultural and agricultural products, and then provide targeted assistance to develop export pathways of any viable products.

Spices: PHAMA has worked with existing export-ready processors to confirm market access requirements and test pathways to Australia as a suitable market for high-end processed spices. It then disseminates this information to all spice producers who may wish to export.

Fisheries: PHAMA's objective has been to clarify market opportunities for PNG's seafood products, and then provide appropriate assistance to enable exporters to meet market requirements. Opportunities identified include potential exports of prawns and fin-fish to Australia and mud crabs to New Zealand

Handicrafts: As in Vanuatu and Solomon Islands, PHAMA has produced a video (for cruise ships and airplanes) and a handicrafts vendor guide to inform tourists about quarantine issues, with the aim of increasing sales. The guide will be used as the basis for training of producers and vendors, and will be provided to tourism operators and agencies for distribution.

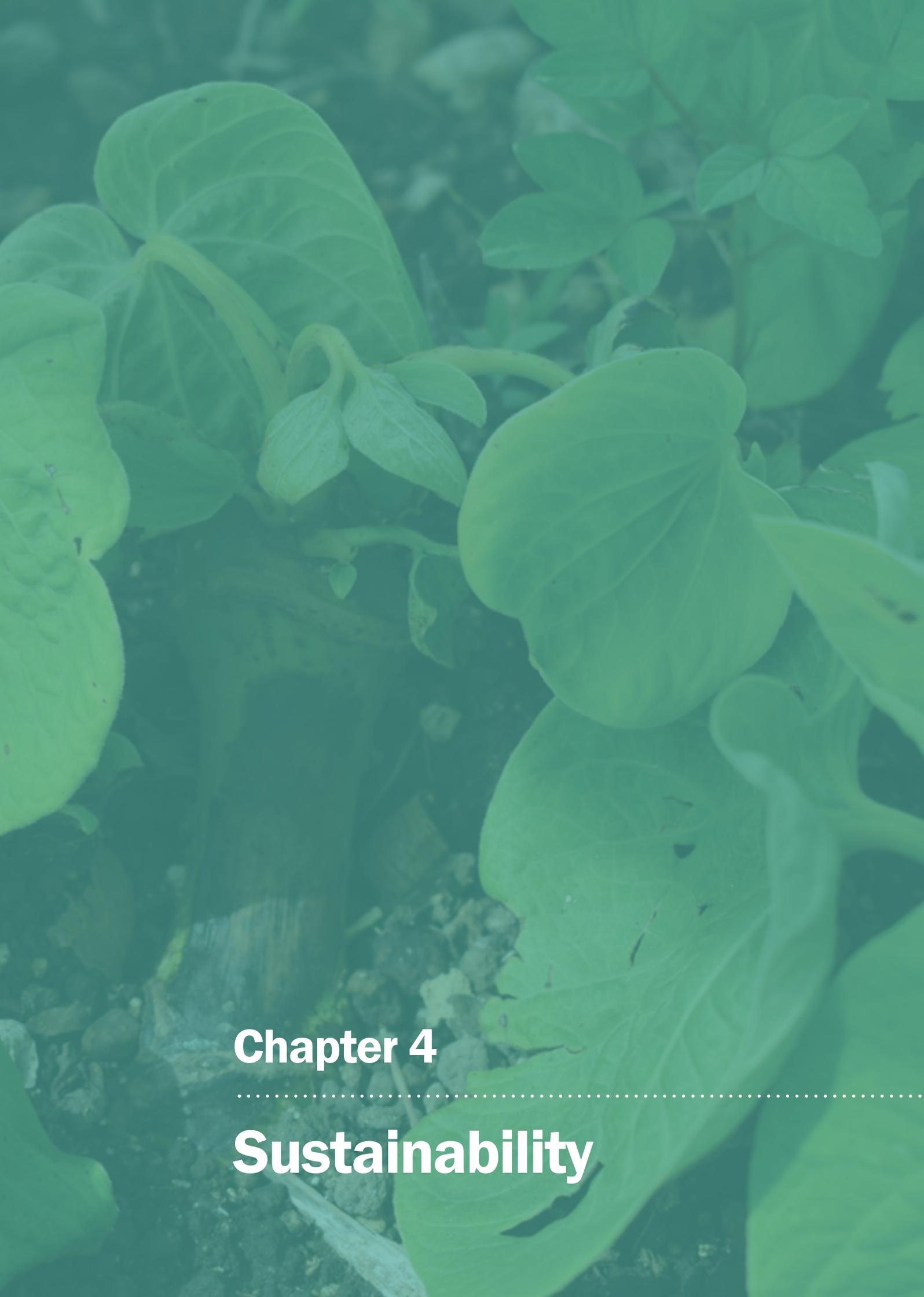
Sawn timber: PHAMA has examined the regulatory frameworks and barriers for export of sawn timber from PNG to help stakeholders better understand the issues faced.

In its analytical work so far, PHAMA has found a common theme across the commodities has been the high domestic pricing and demand, and the challenge that represents to export development in some products. Going forward there is the opportunity for PHAMA to look at working with industry partners on value-chain improvements focusing initially on the domestic market as a staging point for development of export pathways.



PRISTINE MILL
MA



A close-up photograph of various green leafy plants, possibly in a garden or greenhouse, with a semi-transparent green overlay. The plants have different leaf shapes, some heart-shaped and some more rounded. The background is dark, making the green leaves stand out.

Chapter 4

Sustainability

Sustainability

Program sustainability can be measured in two main ways:

(i) sustainability of export pathways and the business relationships brokered by PHAMA

(ii) sustainability of the public private partnership mechanisms (i.e. the MAWGs and IWGs)

Efforts to promote (i) have already been described throughout this report e.g. PHAMA's work to link Solomon Islands, Vanuatu and PNG cocoa buyers to international boutique and bulk buyers resulting in improved prices and incomes. There is also PHAMA's work to create quality control systems that will preserve long-term market access for products such as kava and sawn timber.

The IWG/MAWG model

In terms of (ii), the MAWGs and IWGs are the primary structural element that underpins sustainability of PHAMA activities. They are a key innovation under PHAMA and exist in each PHAMA country. They bring together members of the private and public sector to prioritise market access issues and activities to gain, maintain or improve market access that will be funded under PHAMA.

Typically, a MAWG has 8–10 members, including representatives from relevant government agencies, such

as Quarantine/Biosecurity, Trade and Agriculture, and the private sector (exporters and producer groups).

IWGs operate in a similar manner to MAWGs but are focused on single industries. They have been established for several strategic industries in Solomon Islands, Vanuatu, and in PNG. In addition, PHAMA has worked collaboratively with similar local mechanisms in Fiji such as the Kava and Ginger Taskforces.

Full-time national coordinators have been employed by PHAMA in each country and are responsible for providing secretariat support and guidance to the MAWGs and IWGs and for maintaining operational linkages with the PHAMA program.

PHAMA has worked with industry and government in each country to ensure the MAWGs and IWGs are well-placed to continue beyond PHAMA's duration. This has included examining future funding options.

Local program ownership

From the outset, PHAMA has acted as a support facility ensuring ownership of industry activities and initiatives rests with local stakeholders through the MAWGs and IWGs. Key recommendations on activities and priorities for PHAMA support are made by these local groups.



Collaboration between the Vanuatu Kava Industry Working Group and the Fiji Kava Taskforce

Donor collaboration

Some of the MAWGs and IWGs have become the go-to point for donors looking to provide targeted industry support into the future. Examples include:

- Vanuatu beef – NZ MFAT, ACIAR and FAO have all used the Livestock IWG as the primary point of engagement when designing technical assistance investments.
- PHAMA has established a strategic partnership with the Solomon Islands Rural Development Program on cocoa which is progressing the idea of direct funding with a number of the IWGs.
- Solomon Island fisheries – PHAMA has worked extensively with FFA to address EU market access issues; FAO/WTO's upcoming activity to improve the National Public Health Laboratory capacity is led by the Seafood IWG.

Policy influence

MAWGs and IWGs have supported evidence-based policy development for some commodities. The most successful example to date has been in the kava industry in Vanuatu, with the Kava Act to safeguard the future prosperity of the industry. Similar policy initiatives have been led by the Kava Taskforce in Fiji.

In Solomon Islands, the Government has been similarly supportive in the timber and tuna industries, making policy decisions to support market access in consultation with industry through the IWG structure.

Leveraging private and public sector funds

An essential component of sustainability started under PHAMA is ensuring the funding base for initiatives.

Solomon Islands Timber Processors and Exporters Association

PHAMA established a Solomon Islands Sawn Timber Industry Working Group in 2013. The IWG proved pivotal to addressing market access issues for sawn timber into Australia and NZ by bringing together industry and government stakeholders. The group evolved into a stand-alone industry association in late 2015 – the Solomon Islands Timber Processors and Exporters Association (SITPEA).

SITPEA now functions as the key contact point for the industry. SITPEA is working with government, external markets and other stakeholders on a number of initiatives to develop the industry. It is now a robust organisation able to initiate change within the industry, and provide a unified and credible body to address market issues.

SITPEA, with PHAMA support, has achieved two key

There are several examples of levies and industry funds being established for this purpose, for example:

- Solomon Islands' fisheries – an industry-funded trust fund has been established to pay for scheduled product tests and other aspects of catch certification and food safety requirements.
- Solomon Islands' sawn timber – a levy is being paid by exporters in collaboration with timber buyers in New Zealand to fund the 3rd party legal verification system.

Fostering south-south cooperation

PHAMA has supported numerous opportunities for Pacific Island nations to collaborate and build networks on market access initiatives. Once established, these networks will persist beyond the life of PHAMA.

Examples include:

- Kava – Vanuatu and Fiji have collaborated extensively, sharing information on kava varieties, propagation techniques, and the application to Codex.
- Cocoa – Vanuatu, Samoa and Solomon Islands have shared experiences in producing smoke-free cocoa, including use of solar driers; collaboration among cocoa testing authorities in Vanuatu with those in Solomon Islands and training resources being shared by cocoa related agencies in PNG.
- Fisheries – Solomon Islands' and Tongan fisheries staff training in audit, fish inspection, e-certification and other compliance issues utilising training resources from Fiji's Competent Authority.

milestones. Firstly, SITPEA has established a certification group comprising eight companies who are working towards certification to an international timber legality and chain of custody standard. Secondly, SITPEA has implemented a certification levy charged to buyers in New Zealand and Australia, to create an independent revenue stream that can finance its certification initiatives and organisational functions on an ongoing basis. New Zealand timber industry groups (who represent a key market) have offered to provide direct funding support for SITPEA to continue its certification initiatives.

'PHAMA's support has helped the industry to establish and operate the Solomon Islands Timber Processors and Exporters Association, through which we hope to strengthen the local timber industry and better manage our high-value timber resource.'

Adam Bartlett, President, SITPEA

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- ¹ PHAMA Contract, Scope 1 of Services, pg. 56.
- ² Fiji, Samoa, Solomon Islands, Tonga and Vanuatu were included from the beginning of the program in 2011. PNG was included in the program in late 2015.
- ³ An overview of the evaluation's methodology is in Chapter 1 and details are in Appendix 1.
- ⁴ All figures cited are in Australian dollars (AUD).
- ⁵ PHAMA Contract, Pricing Schedule, pg. 1.
- ⁶ PNG joined the program in late 2015.
- ⁷ PHAMA Contract, Scope of Services, pg. 56.
- ⁸ The main contributor to GDP in the countries in which PHAMA works is services – notably tourism and labour migration.
- ⁹ ESCAP (2003). *Improving employment opportunities in Pacific Island developing countries. Small Island Developing States Series, No. 1*. Bangkok, United Nations Economic and Social Commission for Asia and the Pacific.
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- ³⁰ Samoa Department of Statistics, Exports by Commodity, September 2016.
- ³¹ Fleming, E. and Blowes, A. (2003), *Export Performance in South Pacific Countries Marginally Endowed with Natural Resources: Samoa and Tonga, 1960 to 1999*, Working Paper Series in Agricultural and Resource Economics, University of New England.
- ³² Export figures from Samoan Central Bank.
- ³³ Fleming, E. and Blowes, A. (2003), *Export Performance in South Pacific Countries Marginally Endowed with Natural Resources: Samoa and Tonga, 1960 to 1999*, Working Paper Series in Agricultural and Resource Economics, University of New England.
- ³⁴ (2014). Cocoa Market Update, World Cocoa Foundation.
- ³⁵ Fleming, E. and A. Blowes (2003). *Export performance in south pacific countries marginally endowed with natural resources: samoa and tonga, 1960 to 1999*, University of New England.
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Appendix 1: Detailed methodology

The Assai assessment Team used a program theory approach to the assessment, a consistency approach to causal inference, and a contribution approach to calculating economic impact.⁴⁰

A program theory approach to assessment involves matching the evidence to the program theory and testing whether the theory holds true given the evidence. It is important to consider evidence which confirms and disputes the theory as well as consider rival explanations.

A consistency approach to causal inference is one of three main approaches, the others being counterfactual and alternative explanations, to establish whether an intervention either caused or contributed to observed changes. The consistency approach was chosen to determine the impact of PHAMA as there was limited baseline information and it was not possible or appropriate to establish a control group within the Program as almost all PHAMA interventions impact the entire industry.

The contribution approach to calculating economic impact involved identifying the number of actors involved in supporting change for particular commodities at the time of PHAMA's support. The percentage of credit apportioned to PHAMA was calculated based on the number of actors and their level of investment. For example, if there were two other significant actors whose investments were all similar then PHAMA was allocated 33.3 per cent credit for

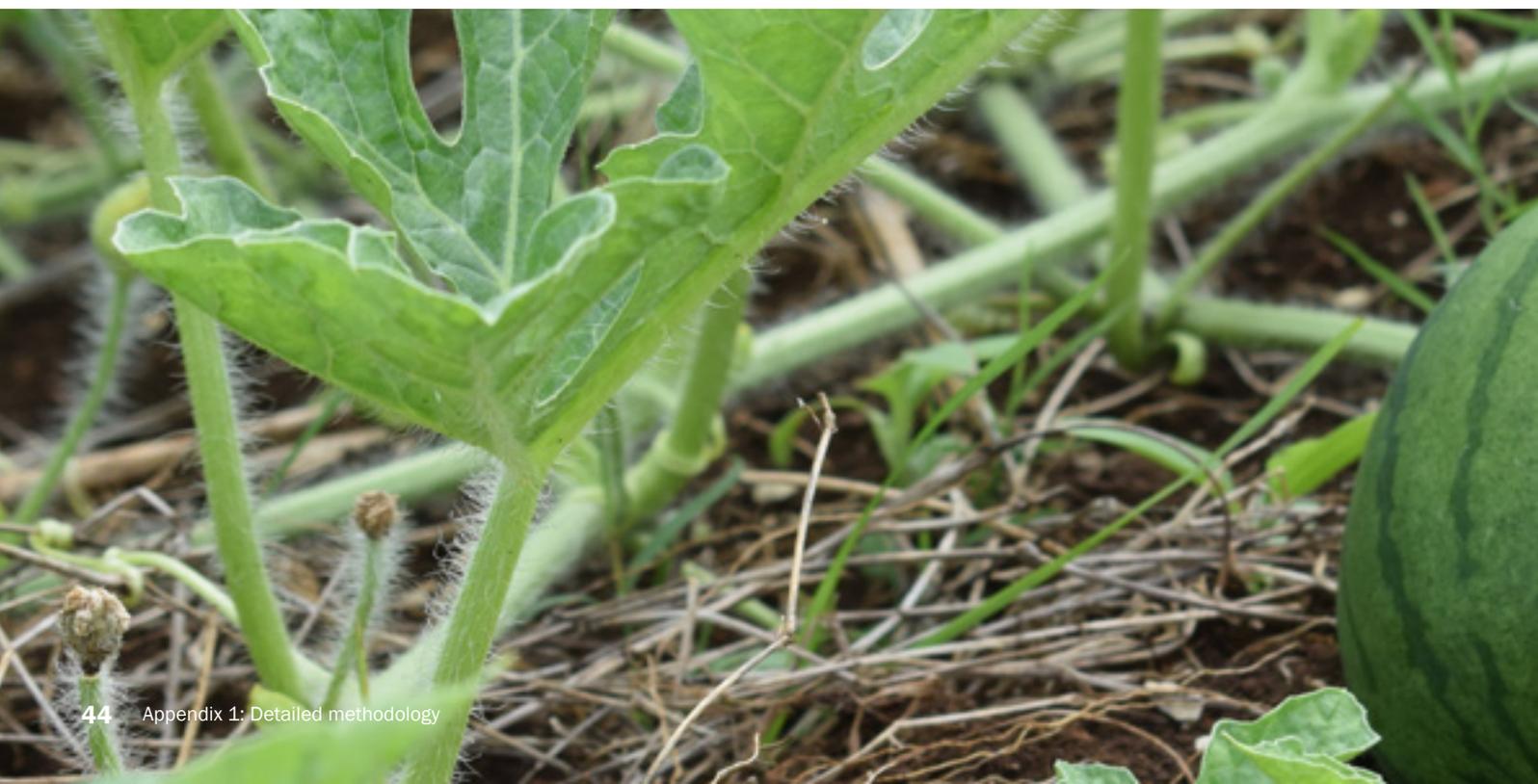
that year. We used a three-year drop-off rate, based on historical analysis, which assumes that impact of outcomes persist for three years. After that time, other issues arise which need to be attended to.

The team collected evidence from the following range of sources:

- over 40 Program documents
- over 40 pieces of research
- over 50 stakeholder interviews
- five stakeholder surveys
- quantitative data from counterpart agencies, specifically the national statistics agency and Ministry of Agriculture, on each of the nine focus commodities and three prospects included in the study

The team checked the extent to which the evidence supported or disputed the overarching theory of the Program and theory of support for each of the nine main commodities that are the focus of the impact report:

- beef
- cocoa
- coconut products
- kava
- sawn timber
- squash
- taro
- tuna
- watermelon



The impact assessment focused on these nine commodities as they form the bulk of work undertaken by PHAMA, accounting for over 70 per cent of the budget-spend and for most of PHAMA's impact.

The evaluators were each responsible for data review, collection and preliminary analysis in three countries. One evaluator conducted fieldwork in: Fiji, Samoa and Tonga. The other evaluator conducted fieldwork in: Papua New Guinea, Solomon Islands, and Vanuatu.

The evaluators reviewed Program documents in depth, and the quantitative data collected by national country coordinators, prior to arriving in-country. Each evaluator developed semi-structured interview questions for each interview to fill data gaps and to test the impact hypothesis developed from the review of preliminary data.

Evaluators focused fieldwork in the following two areas:

1. Effectiveness: Evaluators examined evidence of the outcomes of PHAMA's work. For each commodity, the evaluators tested the extent to which PHAMA had contributed to the Program's three key objectives:

- i. increased employment
- ii. increased rural incomes
- iii. jobs protected.

Evaluators reviewed and compared PHAMA data from Program documents, compared PHAMA data with other key sources of employment and income data in the Pacific (Asian Development Bank and World Bank), and

surveyed and interviewed industry, government, and donor stakeholders on their perceptions of outcomes of PHAMA's work.

2. Contribution to change: Evaluators examined the extent to which PHAMA contributed to change by:

- identifying the other actors supporting change for each commodity
- identifying the timing of each actor's contributions
- apportioning credit for change to each actor based on their investment and role
- determining the contribution of PHAMA to the outcomes in relation to the role of other actors
- testing the contribution allocated to PHAMA with stakeholders during interview.

The evaluators conducted preliminary data analysis and tested draft findings with stakeholders, PHAMA staff and DFAT. The evaluators worked collaboratively with PHAMA to finalise the analysis and report.





PHAMA

Pacific Horticultural & Agricultural Market Access Program

An Australian Government initiative

30 Des Voeux Rd, Suva
P.O Box 2090
Government Building, Suva

phama.com.au

info@phama.com.au

InternationalDevelopment@aecom.com



AECOM

