



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

PHAMA IN PAPUA NEW GUINEA

PROGRESS REPORT





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Acronyms

AUD	Australian Dollar
CIC	Coffee Industry Corporation
EU	European Union
FPDA	Fresh Produce Development Agency
HACCP	Hazard Analysis and Critical Control Point
HVCP	Higher Value Coconut Products
IFAD	International Fund for Agricultural Development
IWG	Industry Working Group
KIK	Kokonas Industri Koporesen
MFAT	Ministry of Foreign Affairs and Trade (New Zealand)
NAQIA	National Agriculture Quarantine Inspection Authority
NARI	National Agricultural Research Institute
PFL	Paradise Foods Limited
PGK	Papua New Guinea Kina
PHAMA	Pacific Horticultural and Agricultural Market Access Program
PNG	Papua New Guinea
Q-Grading	Quality Grading
SME	Small to Medium Enterprises
UK	United Kingdom
USA	United States of America
VCO	Virgin Coconut Oil

Executive summary

Agriculture is of central importance to Papua New Guinea's society and economy. Over 80 per cent of Papua New Guineans gain their livelihoods from agriculture¹. PNG's Vision 2050 identifies the agriculture, forestry and fisheries sectors as pivotal to the future of the country². Developing these sectors will ensure economic growth is more broad-based, with greater reach to rural and poor groups, and provides greater disposable incomes for the people of PNG.

The Australian Government recognises the importance of agriculture to the Pacific and has invested AUD 41.3 million in a seven-year (2011-2018) program of assistance to six Pacific Island nations: Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu.

PHAMA began in PNG in November 2015. In its first 2.5 years, it has established relationships with private and public sector partners and identified key industry priorities to increase horticultural and agricultural exports.

Critical to all of PHAMA's achievements in PNG, and to future sustainability, has been support to set up Industry Working Groups. These working groups bring together private and public stakeholders to facilitate international market contacts, improve networking and collaboration, and improve market confidence.

Achievements to date are in the sectors of cocoa, coffee, coconut and spices. For example, PHAMA supported a trade visit to PNG by specialty cocoa buyers from Belgium, France the United Kingdom and the United States of America. PHAMA helped establish export pathways for cocoa producer groups who are now generating additional income from these higher priced markets. This achievement entering higher value export markets is replicated in the coffee and coconut sectors. In the spices sector, PHAMA has helped Pacific Foods Limited to confirm market access requirements and test pathways for high-end processed spices. As a result, this company has gained additional income in export sales and other industry stakeholders have learned about market access requirements.

Other priority sectors, that hold future prospects, are fresh produce, handicrafts and fisheries. For example, PHAMA has brought fresh produce stakeholders together to better access existing opportunities available domestically. Transport logistics companies, retail and institutional buyers and producer organisations are working together through the Fresh Produce Industry Working Group to address quality issues along the domestic supply chain.

PHAMA LAUNCHED in November 2015 in PNG

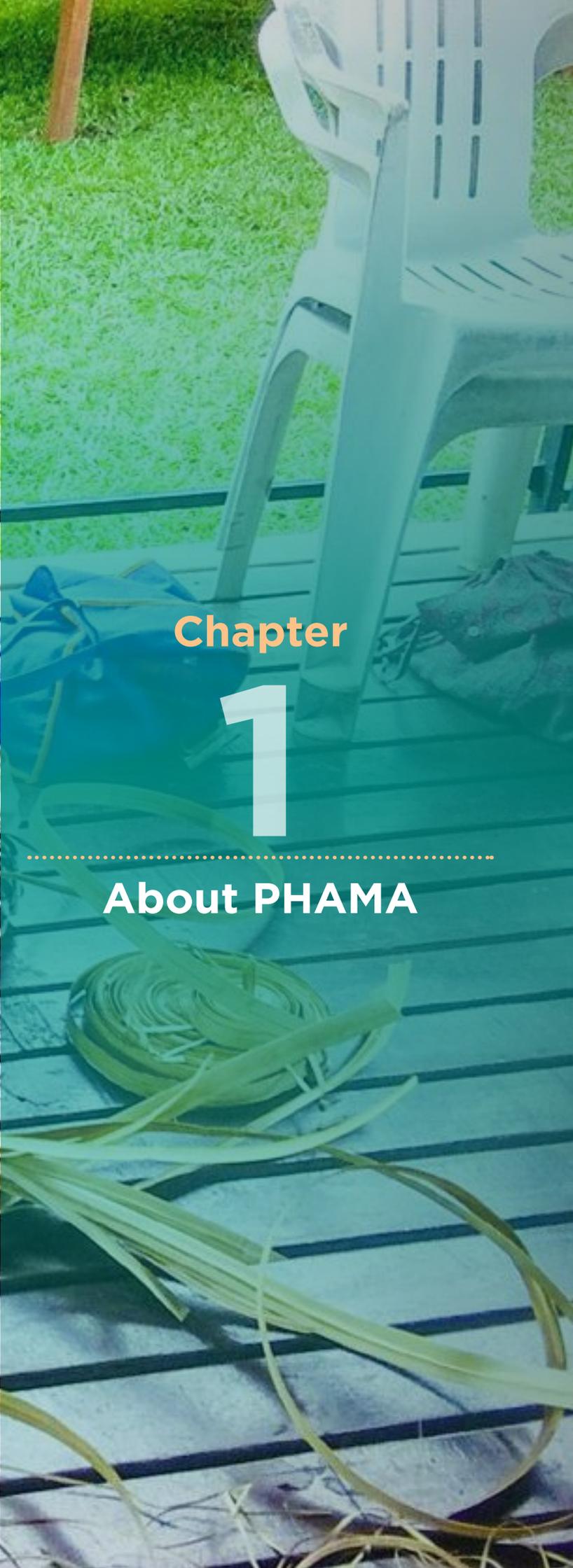
PHAMA PNG HAS SUPPORTED SET UP
of five industry working groups: cocoa, coffee, high value coconut products, fresh produce and handicrafts

PHAMA PNG HAS SUPPORTED PNG COMPANIES TO ACCESS HIGHER VALUE MARKETS
for cocoa, coffee and high value coconut products

PHAMA PNG HAS SUPPORTED TESTING
of market access requirements and pathways for high-end processed spice exports

¹ CIA, World Factbook – Papua New Guinea, accessed online: <https://www.cia.gov/library/publications/the-world-factbook/geos/pp.html>
² National Strategic Plan Taskforce of the Government of PNG, Papua New Guinea Vision 2050, 2007, p 3





Chapter

1

.....
About PHAMA

What PHAMA is

The Pacific Horticultural and Agricultural Market Access Program, or PHAMA, is a seven-year (2011–2018) program funded by the Australian Government and MFAT operating in six Pacific Island nations: Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu.

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.

How PHAMA works

PHAMA builds market access for Pacific Island commodities in four ways:

- Opens new market access pathways
- Re-opens and maintains existing pathways
- Improves the quality of export commodities
- Facilitates access to higher priced markets for export commodities.

Most of PHAMA's work, and most of PHAMA's impact, has come through re-opening and maintaining existing pathways and accessing higher priced markets.

PHAMA in PNG

PHAMA PNG was launched in November 2015 and commenced operations in early 2016. PHAMA has focused on addressing constraints to PNG's access to international markets, as requested by private and public agriculture stakeholders in PNG. PHAMA's focus will remain on PNG's agriculture sector under the new phase – PHAMA Plus – a four year program which is due to start in late 2018.

PHAMA's activities in PNG have focused on the following priorities:

- Developing private sector-led bodies (Industry Working Groups and a Steering Committee) focused on export development and promotion of agricultural products in response to industry demand.
- Reviewing existing and potential new pathways for fresh produce into Australia, New Zealand and Melanesian Spearhead Group countries.
- Providing capacity building in market access and risk assessment to the National Agriculture Quarantine Inspection Authority (NAQIA).
- Assisting businesses to further develop spice and chocolate products for export.
- Assisting ongoing improvements to cocoa and coffee quality standards and accessing higher priced markets.
- Supporting quarantine compliance awareness for artefacts/handicrafts.

PHAMA's analytical work has identified high domestic prices and demand as both a challenge to export development in some products and also a significant opportunity. PHAMA sees opportunities for industry partners to benefit from the domestic market whilst simultaneously developing quality standards and supply for export pathways.



About this report

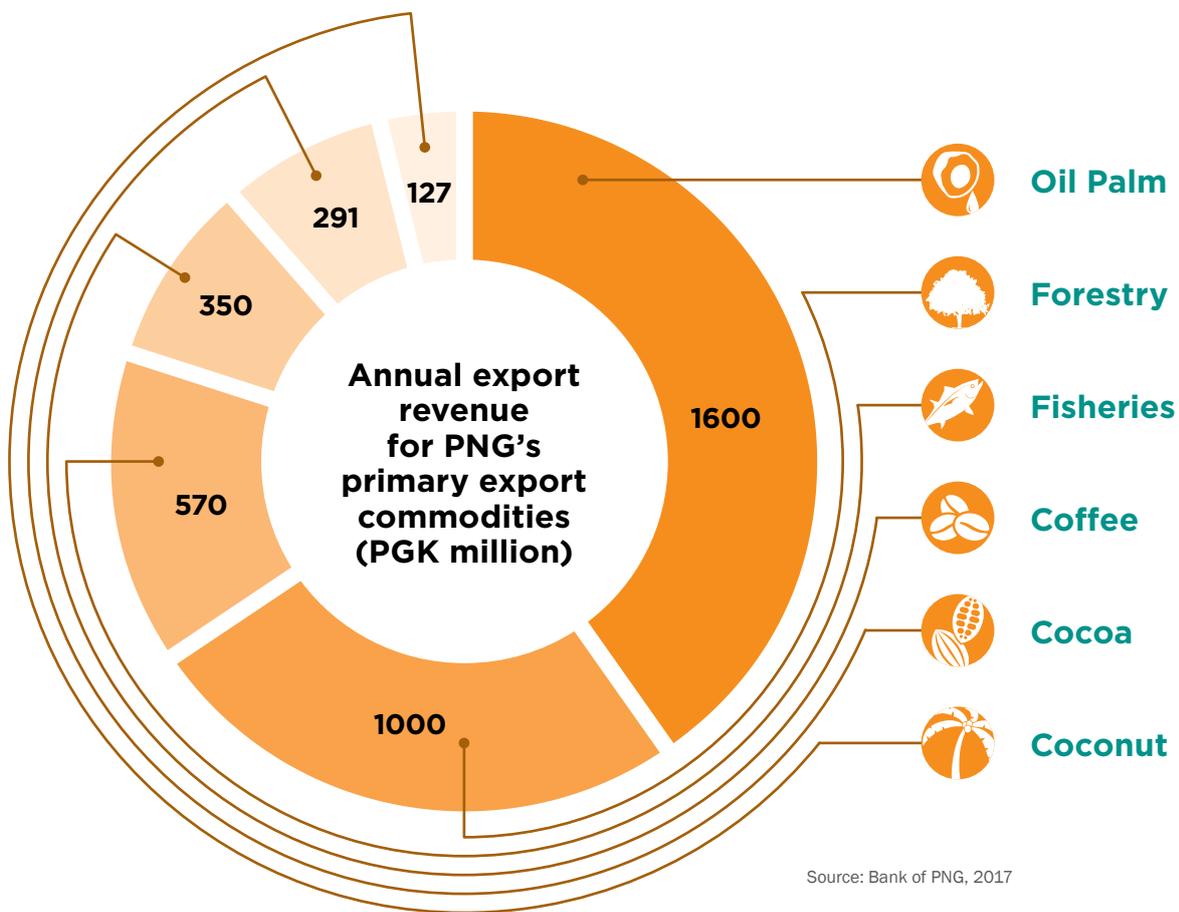
The PHAMA PNG Progress Report follows on from the 2017 PHAMA Impact Report, that provided information about PHAMA’s impact since late 2010. As work in PNG only commenced in 2016, there was relatively little information on PHAMA in PNG included in the Impact Report. The PHAMA PNG Steering Committee considered it appropriate to highlight PHAMA’s progress and achievements in PNG to date in a separate progress report.

PHAMA has concentrated its support to PNG’s most important export commodities, as illustrated in

Figure 1. This report shows PHAMA’s progress in the cocoa, coffee, coconut and spice sectors, and prospects in fresh produce, handicrafts and fisheries.

PHAMA does not currently work in the palm oil or forestry sectors. This is because PNG’s oil palm industry does not require external support to address export market constraints. In contrast, there are potential gains in the forestry sector but the current legislative environment is not conducive to interventions supporting in-country value-adding.

Figure 1: Annual export revenue for PNG’s primary export commodities (PGK million)



The remainder of the report is divided into three parts. Chapter 2 provides information on the support to PNG’s agricultural industries to underpin their sustainability and growth. Chapter 3 shows the progress PHAMA has achieved in relation to the cocoa, coffee, coconut and spice sectors. For each commodity, the report describes the context, issues, PHAMA’s role, and progress to date. Chapter 4 illustrates three future prospects PHAMA is supporting; fresh produce, handicrafts and fisheries.





Chapter

2

Industry support

In 2016/17, PHAMA worked with stakeholders to establish five Industry Working Groups (IWGs): cocoa, coffee, high value coconut products, fresh produce and handicrafts. The IWGs are generally comprised of 60-80 per cent private sector members with the remainder from the public sector. Each IWG has equal representation of men and women. The IWGs proactively identify issues affecting their respective industries and work together to address them.

The commodity IWGs are recognised by both private and public sector stakeholders as being the greatest contribution that PHAMA has made to PNG's agricultural export sector. As noted by the National Agricultural Research Institute (NARI) Director, Dr Sergie Bang, through the IWGs PHAMA has facilitated: international market contacts, especially in cocoa and coffee; vastly improved networking and collaboration among PNG's industry and government players; and improved market confidence for those PNG producers exporting for the first time, particularly into Australia and New Zealand, bringing goodwill and hope for the sector.

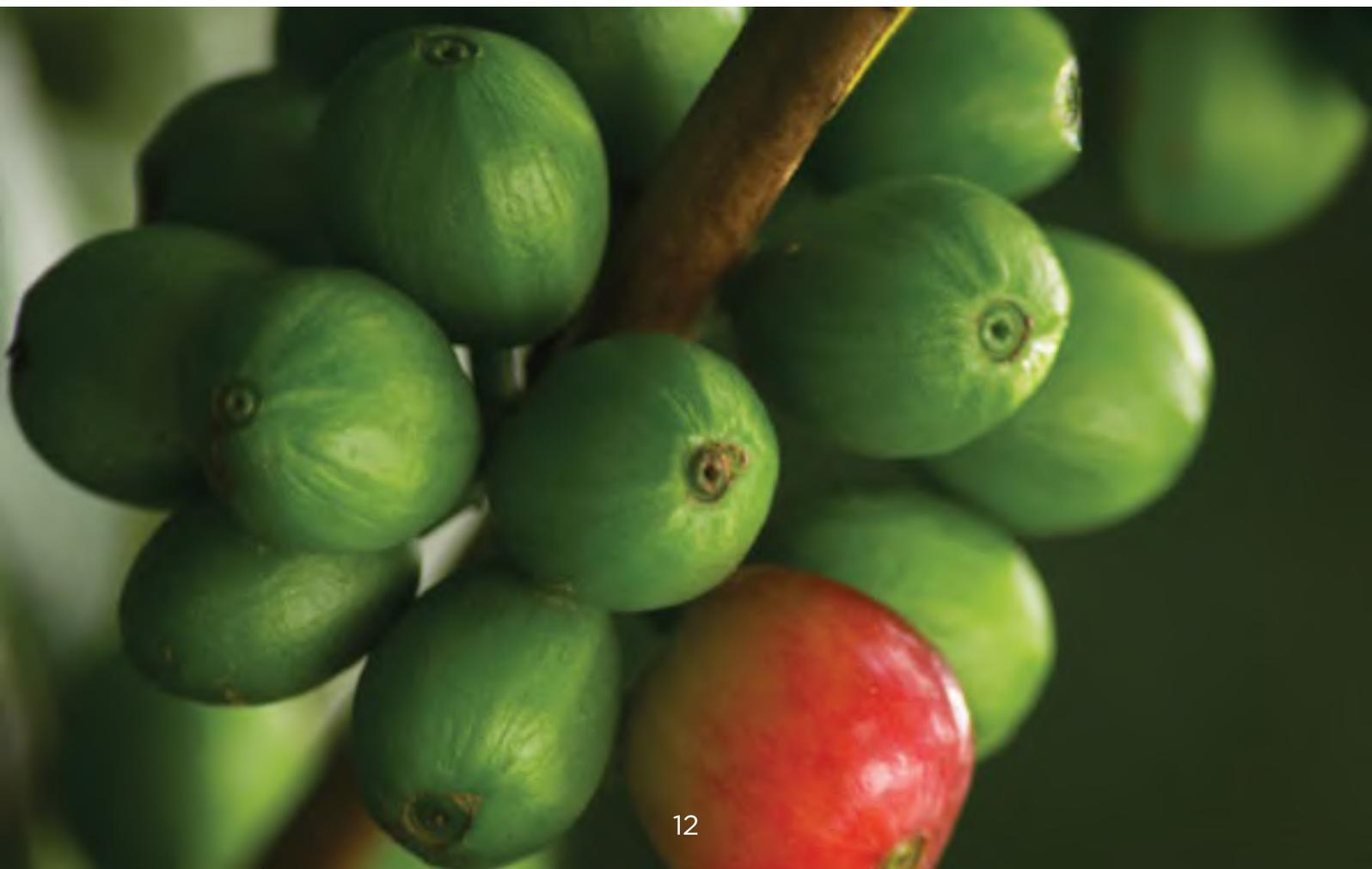
There are three models of IWG currently operating in PNG. The first has a functional link to a commodity organisation: coffee – the Coffee Industry Corporation (CIC), cocoa – the Cocoa Board, and coconuts – the Kokonas Industri Koporesen (KIK). Each of these commodity organisations co-funds the IWG, providing a secretariat and contributing to travel costs. Sustainability relies on industry boards for their mandate and funding. The linkage with the commodity organisation places the IWG at the centre of industry

decision-making, but members retain an independence to determine the direction and priorities of the IWG.

A second model is typified by the Fresh Produce IWG, which has temporary secretariat services provided by PHAMA. The Fresh Produce IWG includes the big transport and logistics players such as Mapai and Consort Shipping, as well as institutional buyers and as public sector organisations – the Fresh Produce Development Agency (FPDA) and NARI. Over time it is expected that the Fresh Produce IWG will link with the International Fund for Agricultural Development's (IFAD) Village Market Program.

The final IWG model has no involvement from government – Handicrafts. There is currently no government regulation of the handicrafts' sector nor any regulation considered required as issues can be solved without additional regulation. The Handicrafts IWG may eventually link with the Tourism Promotion Authority or similar organisation.

Mindful of sustainability, PHAMA has been working with partners to promote cost-sharing to cover IWG costs - primarily travel. PHAMA conducted a study on IWG sustainability to gain a better understanding of the value of the IWGs, their appropriate scope and role in the context of the industry particularly in regard to the commodity boards, and potential for sustainable funding support. The findings are being used to further develop the IWGs to maximise private/public sector collaboration on export and industry development in PNG.



PHAMA worked with stakeholders to establish five Industry Working Groups (IWGs): cocoa, coffee, high value coconut products, fresh produce and handicrafts.



Industry Working Groups (IWGs)

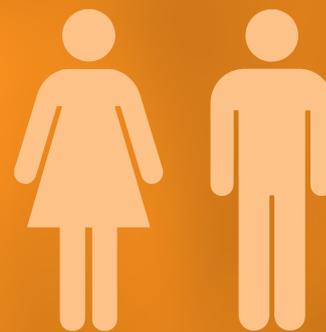
IWGs are comprised of 60-80 per cent private sector members and 20-40 public sector members.



Through the IWGs PHAMA has facilitated: international market contacts; vastly improved networking and collaboration among PNG's industry and government players; and improved market confidence for those PNG producers exporting for the first time.



IWGs have equal representation of men and women.







Chapter

3

**PHAMA's progress
in PNG**

Cocoa

Context

Cocoa beans are sourced from cocoa pods grown on cocoa trees. Cocoa beans are fermented and dried prior to further processing into chocolate and chocolate products. Africa produces over two-thirds of world cocoa, followed by Asia/Oceania and the Americas as shown in Figure 2. Over 150,000 PNG households, or 16 per cent of households, are engaged in cocoa production in Papua New Guinea as shown in Figure 3. Whereas PNG's cocoa industry was historically based in East New Britain and Bougainville, a total of 12 provinces now produce cocoa including some in the Highlands Region and notably in East Sepik and Morobe.

Figure 2: Average PNG cocoa production (2012/13-2016/17) relative to key world cocoa producers

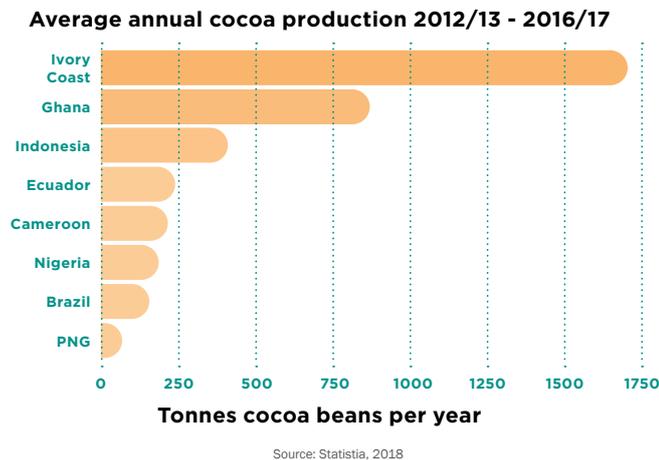
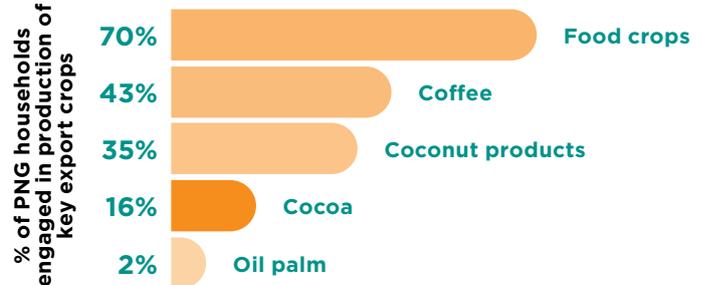


Figure 3: Percentage of PNG households engaged in Cocoa production relative to other key exports in 2017



Sources: Fresh Produce Development Agency Strategic Plan (2010-2030), Papua New Guinea Coffee Industry Strategic Plan 2008 - 2018 Coconut Industry Strategic Plan (2016-2025); Cocoa Industry Strategic Plan 2016 - 2025; Sustainability Report 2012/13, New Britain Palm Oil Limited

Issues

PNG's cocoa industry faces a range of production issues, including: managing cocoa pod borer – an insect pest impacting production; replanting aged cocoa trees that limit productivity; and addressing the shortage of certified seed and seedling materials for replanting.

Market and processing issues are also significant. Cocoa beans exported from PNG can be smoke-tainted because of poorly maintained cocoa dryers. As a result, a high proportion of PNG's cocoa is sold into the lower quality bulk-grinding markets. On top of this, the world market price is notoriously fickle due to the fortunes of major producing nations such as Ivory Coast and Ghana – bountiful harvests in these countries tend to cause significant decreases in world prices, whereas prices rise when harvests are poor. As a result, prices received by PNG's smallholder farmers vary considerably for reasons outside of their control. Gains will be made by improving cocoa quality and identifying markets willing to pay premiums for high quality cocoa.

The PNG Cocoa Board has set an annual production target of 310,000 tonnes by 2030, up from around 60,000 tonnes in 2018. To achieve this would require a dramatic improvement in commitment to production by smallholder farmers – something that will only be achieved by providing greater returns on their labour efforts.

PHAMA's role

PHAMA supported the establishment of the Cocoa Industry Working Group to identify industry priorities. To increase income and returns for farmer cooperatives 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. PHAMA currently works with seven exporters

and seven farmer cooperatives, which each have more than 100 members including women.

Progress

PHAMA's Cocoa Market Study identified significant demand and supply side barriers to enter the specialty cocoa market. The high cost of conducting business, due to both high domestic transport costs and regulatory constraints make it very difficult for small producers to export cocoa themselves. Buyers have been deterred by poor security in the region, a lack of industry information and PNG's reputation for inconsistent quality.

PHAMA supported a trade visit by four specialty buyers/chocolatiers from UK (Chocolate Wave), Belgium (Cercle du Cacao), France (Raoul Boulanger Chocolates) and USA (TCHO), exposing the local industry to the expectations regarding cocoa quality, traceability, contract terms, insurance arbitration, shipping options and quality control. PHAMA also organised the inaugural Cocoa Warwagira (festival) in May 2017. PNG's first commercial-scale chocolate manufacturer, Queen Emma Chocolates, was introduced to 15 potential buyers for their chocolates and semi-processed cocoa products. In addition, other buyers have also expressed their interest in buying cocoa from PNG after the trade visit and Cocoa Warwagira festival.

Export pathways were established for several producer groups, with corresponding exporters providing transparent pricing and freight arrangements. PHAMA also developed a 'cocoa directory' to address the lack of publicised industry data. PHAMA's marketing support has already delivered significant results, with an additional PGK150,000 being generated by four producer groups from accessing higher priced markets.



SMOKE-TAINTED COCOA BEANS
exported from PNG are sold into
the lower quality bulk-grinding
markets



PHAMA developed a
COCOA MARKET STUDY



PHAMA SUPPORTED
a trade visit by **4** specialty
buyers/chocolatiers from UK,
Belgium, France and USA



EXPORT PATHWAYS
were **ESTABLISHED** for **7**
producer groups



4 producer groups
have generated an additional
PGK150,000 from accessing
HIGHER PRICED MARKETS



Barbara and Paul's story

Paul and Barbara Goodyear operate the Kulkul Plantation on Karkar Island in Madang. Barbara administers the business and manages the store and Paul is the General Manager of the cocoa plantation.

PHAMA's assistance to Kulkul Plantation has helped the business expand. Kulkul Plantation is now exporting to Australia and Malaysia based on new relationships developed and the increased profile of the company after winning second place at the PHAMA supported Cocoa Warwagira show.

"People in Malaysia and other countries thought PNG cocoa was smoke tainted but now can say PNG has good cocoa. This has helped Kulkul and the greater cocoa Industry. The positive feedback about good cocoa supplied by Kulkul now puts Karkar Island on the map and PNG back on the Cocoa map, which is positive for PNG as a country."

Exports to Australia and Malaysia are more lucrative than selling locally in Madang. The higher price enables Paul and Barbara to grow their business and is also passed on to workers.

Paul and Barbara intend to focus on the cocoa export market through ensuring both volume and continuity of supply. Their goal is to identify buyers who are willing to buy more cocoa and pay higher prices.

Coffee

Context

Coffee is produced from the fruit of the coffee plant – a bush or small tree. The fruits, called cherries, are harvested by hand and processed to produce the green beans that are exported to the USA for roasting. A small proportion of PNG’s green beans are roasted and ground in PNG for retail sale.

Most of the world’s coffee is produced in Brazil, Vietnam, Colombia, Indonesia and Ethiopia as shown in Figure 4. Coffee production in PNG is dominated by approximately 400,000 village-based households or 43 per cent of households as shown in Figure 5. These households are responsible for 85 per cent of the annual coffee crop. Production is centred in four provinces in the Highlands Region but is grown across 16 provinces in total.

Figure 4: Percentage of coffee production relative to other key coffee producing countries

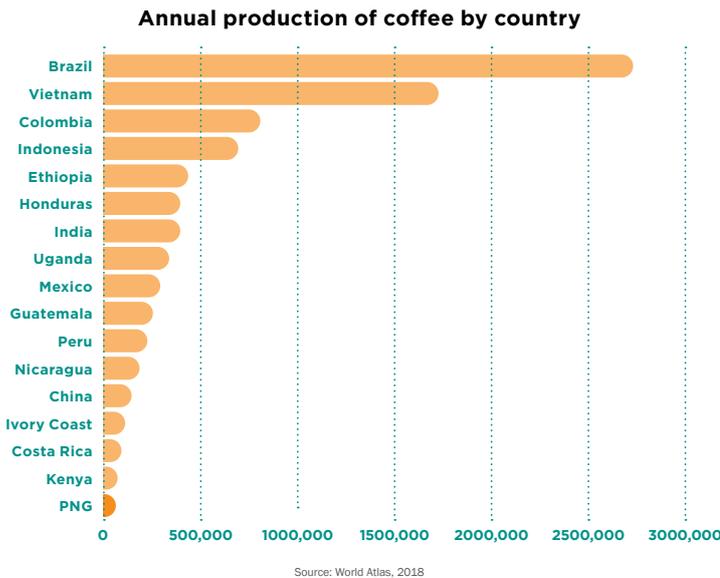
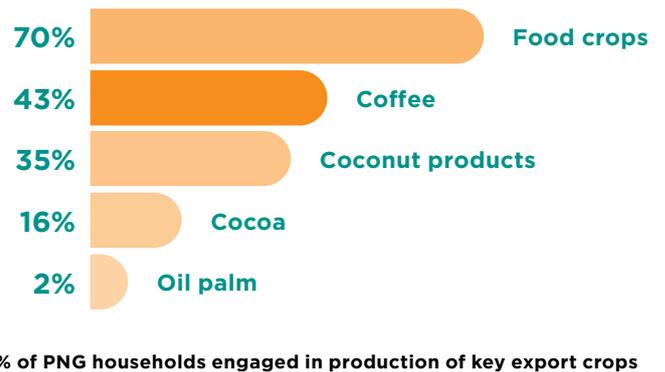


Figure 5: Percentage of PNG households engaged in Cocoa production relative to other key export crops in 2017



Source: Fresh Produce Development Agency Strategic Plan (2010-2030), Papua New Guinea Coffee Industry Strategic Plan 2008 - 2018 Coconut Industry Strategic Plan (2016-2025); Cocoa Industry Strategic Plan 2016 - 2025; Sustainability Report 2012/13, New Britain Palm Oil Limited

Issues

60 per cent of PNG’s coffee achieves only low-prices with smallholder grades based on bean size rather than flavour. The commercial industry peak body, the Coffee Industry Corporation, has realised the need to change the grading system to one based on flavour. To do this, the industry needs the necessary equipment and skilled personnel to establish a certified laboratory to undertake quality testing and to deliver training in quality grading – known as Q-Grader training.

The high cost of trade logistics is a significant constraint to the profitability of all of PNG’s primary sector, and the coffee industry is no different. There are regulatory constraints to shipping and terms of trade that need to be addressed that will deliver direct benefits to the industry.

PHAMA’s role

PHAMA supported the establishment of the Coffee Industry Working Group to identify industry priorities. PHAMA is supporting industry to develop opportunities in specialty coffee markets, including for roasted coffee beans, and to improve industry’s capacity to monitor export quality. PHAMA has supported CIC to deliver internationally certified courses for traders, buyers and farmers, as well as for buyers and guests from abroad on grading coffee by quality. PHAMA has also supported cupping competitions, contested by 127 local coffee growing groups in 2016 – almost double the number of competitors in 2015.

PHAMA used an International Finance Corporation report to address some of the trade and logistics issues such as trans-shipments to export ports, consolidation, customs and quarantine clearance, storage and shipment logistics.

Progress

Twelve coffee companies have been supported to complete training in coffee roasting. An additional four trainees successfully completed the highly demanding Q-Grading training. Further, there was a significant improvement in the cup quality for coffee prepared for the 2016 competition. The competition also led to new links established between buyers and exports. These capabilities prepare PNG for its move to a quality-based grading system that is currently progressing through the legislative process³.

Four medium-sized coffee factories, Kosem, Colbran Coffeelands Ltd, Vitis Industries and Superior are now selling high quality, Q-graded beans to roasters within PNG at above standard prices. A further two factories are also roasting a small percentage of their green beans to value-add for sale either in PNG or export. Working in partnership with CIC, PHAMA’s support in 2017 resulted in additional value of approximately K30,000 above normal green bean sales from these processing factories. Whilst only modest at present, this figure will grow significantly once the Q-grading system becomes law.

³ As PNG’s coffee exports are controlled by legislation, the move from the current size-based grading system to a quality-based system requires changes to the Coffee Act.’



Over **60%** of PNG's coffee achieves only **LOW-PRICES**



PHAMA SUPPORTED cupping competitions, contested by **127** local coffee growing groups in 2016 – almost double the number of competitors in 2015



12 coffee companies have been **SUPPORTED** to complete training in coffee roasting



4 factories are also roasting a small percentage of their **GREEN BEANS TO VALUE-ADD** for sale either in PNG or export



An additional **4** trainees **SUCCESSFULLY COMPLETED** Q-Grading training



PHAMA's support in **2017** resulted in additional value of approximately **K30,000** above normal green bean sales from these processing factories



Sirigine's Story

Paul Sirigine, started out as a smallholder coffee farmer in the 1990s. He went on to found Sirigine Coffee Producers, located in Chimbu Province in the Highlands of Papua New Guinea. The company works in partnership with coffee-growing communities in the Bomai regions of the province and now roasts coffee for the domestic and international markets and exports single-origin premium coffee under the Bomai Coffee brand.

Sirigine Coffee Producers took part in the 2016 Coffee Cupping Competition and also attended coffee roasters training at Wolff College of Coffee in Brisbane, Australia in 2017. PHAMA provided funding support for both events, working in partnership with the Coffee Industry Corporation and the Productive Partnerships in Agriculture Program. Sirigini Coffee Producer Executive Officer, Samuel Raffana (pictured) and his wife Monica Raffana operate the business. Samuel says the exposure to both events made a significant difference for Sirigine Coffee Producers.

“Before, we used to produce one to two cartons of roasted coffee per month. Production depends on the orders we receive from our clients. After the roasters training, we have been producing 10-15 cartons per month.”

Samuel says the most significant benefit for the company has been the increase in its client base for roasted coffee.

“In 2016, we didn't have many (roasted coffee) clients, maybe about four. But after the training, we now have 49 new clients for roasted coffee.”

Coconut

Context

The coconut palm is found throughout the tropics. It is particularly important in the lowland and island regions of PNG where it provides food, drink, oil, medicine, timber, thatch, mats, fuel, and domestic utensils. Coconut remains an important economic and subsistence crop in many coastal communities.

PNG exports 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.

PNG currently exports approximately PGK 84 million in coconut products annually, mainly copra and coconut oil. Higher Value Coconut Products (HVCPs) refers to products such as virgin coconut oils, cosmetics and specialty soaps. These make up a very small proportion of exports and PNG is a small producer by world standards as show in Figure 6. The Kokonas Industri Koporesen (KIK), PNG’s statutory regulatory institution for the coconut industry, is actively supporting the move to HVCPs.

Coconut production is important to livelihoods in PNG where over one third of rural households produce coconuts for subsistence use and sale as copra or nuts as shown in Figure 7.

Figure 6: Annual production of coconut oil by major producers in 2017 (Mt)

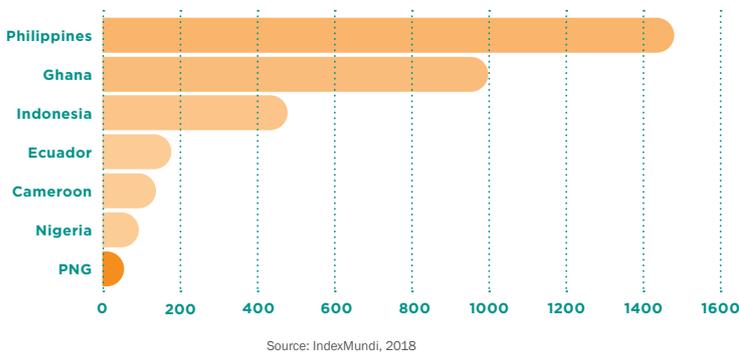


Figure 7: Percentage of PNG households engaged in Coconut production relative to other key export crops in 2017



Source: Fresh Produce Development Agency Strategic Plan (2010-2030), Papua New Guinea Coffee Industry Strategic Plan 2008 - 2018 Coconut Industry Strategic Plan (2016-2025); Cocoa Industry Strategic Plan 2016 - 2025; Sustainability Report 2012/13, New Britain Palm Oil Limited

Issues

PNG’s coconut industry faces considerable competition from the Philippines, Indonesia and India for low value coconut products – primarily copra and oil extracted from copra. PNG exporters also find it difficult to compete in the production of virgin coconut oil (VCO) as a bulk item for subsequent re-packaging and distribution in destination markets, which tend to be extremely price conscious. A focus on the production of HVCP products for speciality markets and online sales in Australia, USA, Europe, New Zealand and Japan, holds best prospects for PNG’s industry.

PHAMA’s role

PHAMA has assisted with coordination of the HVCP industry through establishment of an HVCP Industry Working Group. The IWG’s aim is to increase export returns through value adding. PHAMA is providing assistance through:

- Identifying market opportunities for increased HVCPs exports;
- Assisting industry to meet market requirements on quality, and
- Assisting producers to market their products appropriately for the selected markets.

Progress

In late 2016, PHAMA completed a market study to explore opportunities for increased HVCPs exports to Australia, New Zealand, China, USA and Japan. This study identified the many challenges facing HVCP producers and exporters in PNG and their capacity issues in terms of marketing, branding and quality. The findings were used by the HVCP IWG and KIK to plan the following series of interventions:

- Development of quality standards: Technical assistance to KIK and industry to develop quality standards for VCO products and consultation with stakeholders on the proposed quality standards;
- HACCP⁴ accreditation: Assist agribusinesses to achieve HACCP accreditation; and
- Market development: Provide targeted marketing support to selected Small to Medium-sized Enterprises (SMEs) such as branding, e-marketing, packaging, and support for potential improvements in processing, market visits and trade samples.



PNG currently exports approximately **PGK 84 million** in coconut products annually however only a small proportion of exports are higher value such as virgin coconut oils, cosmetics and specialty soaps

.....



PHAMA completed a market study to **EXPLORE OPPORTUNITIES** for increased HVCPs exports to Australia, New Zealand, China, USA and Japan

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The findings were used by the HVCP IWG and KIK to plan:

- Quality standards
- Agribusiness HACCP accreditation
- Targeted marketing support to selected SME's

.....



Theresa's story

High value coconut products or HVCP are gaining more popularity over copra production in PNG's coconut industry. Although they make up a small proportion of exports in PNG, HVCPs offer a source of regular income for families living in rural areas and small to medium enterprises (SMEs) which produce virgin coconut oil, soaps and other coconut-based cosmetics for local and international markets.

PHAMA helped establish a HVCP Industry Working Group (IWG). HVCP IWG chair Theresa Arek said for the first time in the industry's history, stakeholders from the public (government) and private sectors came together - as part of the IWG - to a place of discussion and collaboration.

"PHAMA actually helped to make the industry an industry by bringing the relevant people together," she said. "The IWG has given entities the platform to voice opinion. It has enabled linking with other bodies and through the Kokonas Industri Koporesen (KIK) has enabled promotion of HVCP to other government statutory bodies."

Theresa runs a family-based business, Amruqa, that produces virgin coconut oils, soaps and other essential oils on Vunakanau Estate in Rabaul, East New Britain Province. She said PHAMA had helped SMEs to explore market opportunities by connecting them to potential buyers abroad. For example, PHAMA supported the company to attend the conference mentioned below.

"PHAMA offers market accessibility and has helped to open up new markets. Amruqa exhibited at Cosmoprof Hong Kong in 2017 and that event is a business hub for cosmetics. It was really phenomenal to be there and meet people face to face. We now have markets waiting to buy from us."

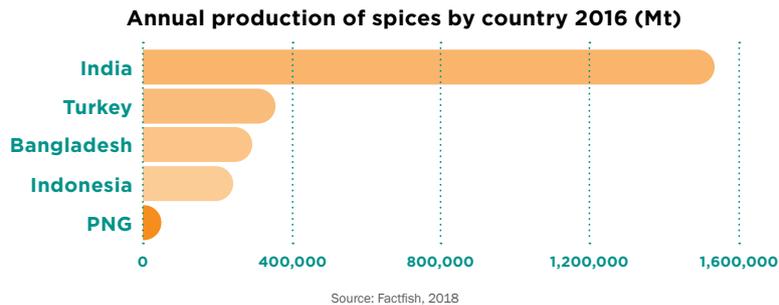
Spices

Context

PNG ranks 54th globally for production of spices as shown in Figure 8. PNG produces high quality spices such as chilli, ginger, nutmeg, pepper, turmeric, and vanilla. Whilst there are well-established export markets for vanilla, other spices have not been consistently exported. PNG's spice industry involves a small number of small-scale processing companies that buy product from smallholder farmers in the coastal and

Islands regions. Whilst the spice industry is of minor importance in monetary terms, it provides livelihoods for several thousand rural households. Furthermore, spices are an important source of income for women in coastal communities. There are several hundred growers of vanilla, mainly in East Sepik Province, and a similar number of growers of other spices spread throughout PNG's provinces.

Figure 8: PNG spice production relative to other key spice producing countries



Issues

With the exception of vanilla, spices have not been exported from PNG for many years. Ease of access to Australian markets was unknown and could be expected to attract testing for a high percentage of quarantine inspection, which diminishes profitability and buyer interest.

PHAMA's role

PHAMA has been working with Paradise Spices, an existing export-ready processor, to confirm market access requirements and test pathways for high end processed spices. Results from four trial shipments to Australia have been circulated among spice industry stakeholders.

Progress

To confirm market access requirements and test pathways for high-end processed spices into the Australian market, PHAMA assisted Paradise Spices, a division of Paradise Foods Limited (PFL) to export trial shipments of chilli, ground ginger, nutmeg, white pepper, black pepper, and turmeric. Positive market feedback on quality was received and small-scale commercial exports of those products to Australia are now ongoing. Information on the trial shipment was then disseminated to all of PNG's export-ready spice producers.

PFL is now also exporting to New Zealand. At the same time domestic demand has increased by approximately 40 per cent. The challenge for Paradise Food is to scale up its marketing of spices at a rate that matches the ability of spice producers to supply high quality product.

Future support

The PHAMA team will disseminate the information gained on Australian market access to industry stakeholders to stimulate interest in exports and promote supply of raw materials to PFL to process and export. Any future assistance to the spices industry from PHAMA will be provided in response to issues identified by the industry.

Benefits from initial PHAMA support

- Approximately AU\$15,000 in export sales by Paradise Spices in 2017. Steady growth in exports is expected in coming years.
- Support for the livelihoods of 40 farmers (approximately 27 of whom are women) who sell small quantities of spices directly to Paradise Spices.



PNG produces **HIGH QUALITY** spices such as chilli, ginger, nutmeg, pepper, turmeric, and vanilla



PHAMA SUPPORTED

Paradise Foods Limited conduct trial shipments of chilli, ground ginger, nutmeg, white pepper, black pepper, and turmeric to Australia



Only **VANILLA** is currently being exported



PFL now **EXPORTING** spices to Australia and New Zealand

Benefits to PFL are approximately **AU\$15,000** in export sales in **2017** and support for the livelihoods of **40** spice farmers (approximately **27** of whom are women)



Karina's story

From where Paradise Foods Limited was when we first met PHAMA to where we are now, we have more technical knowledge about markets, where we want our products to be and knowledge on biosecurity laws." So says Karina Makori, General Manager of Paradise Spices a division of Paradise Foods Limited (PFL). Karina oversees the operations of PFL based out of Gordons district in Port Moresby.

PHAMA supported trial shipments of PFL spices to Australia and New Zealand have helped generate buyer interest. The company is planning to increase its exports based on this interest. Next year PFL plans to export vanilla into NZ and Australia and possibly the UK. PFL is in talks with a company to export turmeric into Taiwan and looking to export turmeric and ginger into China working in partnership with Duffy's. Recently there have been enquiries from buyers in NZ for cardamom and PFL has liaised with farmers in Simbu and Mt. Hagen to grow cardamom.

Increased exports brings value to local farmers as well as PFL. 'Because PFL has been able to increase their production and export, it can buy more from the farmers so there is more market opportunity for them... This has opened doors and helped farmers increase their production and people along the value chain (eg Personalised Motor Vehicle that takes the products into town) as a rippling positive impact along the way.



Tabu

Tabu (shell money) was used by the Tolai, who were originally known as Gunantuna before the arrival of Westerners, and it is still used today in everyday transactions. The pointy top of the Nassau shells is removed and strung on cane strips.

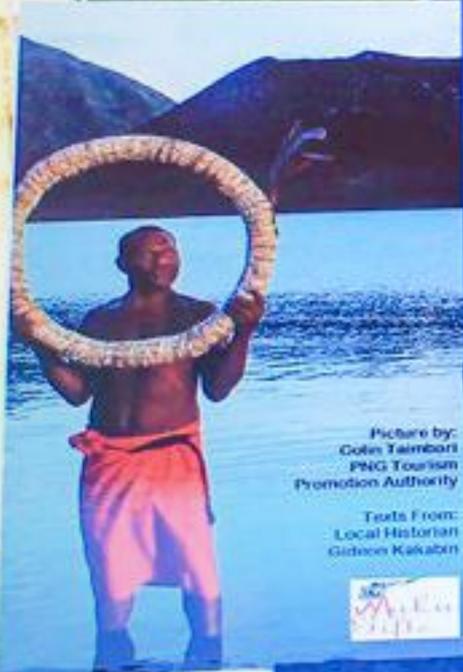
The lowest denomination is a tip, which consists of 12 strung shells. Fathom length strips (1.8m each) are joined into a group of ten worth K50.

Groups of 10, or lots called Arip, are wound to form a loop called a loloi, which is covered in pandanus leaf. In this form loloi represent a bank. "Wheel Tabu" as it is called now.

Nassau shells are used also for decoration and magic rituals, and in this case they convey importance, but are not seen as currency. Important transactions such as Bride Price cannot be completed without Tabu.

A 'Warkukul' – Bride Price

A Tolai Marriage is a cauldron of past rituals into which modern ingredients are mixed, creating a loud, alcohol infused riotous affair. A man's initiation - warkinin - test his strength and marriageable status - he cannot marry without it. Marriage negotiations take into account the two Tolai moieties, the 'Mama' and 'Pikalaba'. A couple cannot marry from within their own moiety. Upon acceptance of a marriage proposal a fathom of shell money is presented to the bride's family. With this "brideprice" - warkukul - the man's family pays recompense to the woman's family for redirecting her labour and service up until her husband's demise. Today, Christianity has changed the status of women and men and the warkukul is usually followed by a church wedding and feasting.



Picture by:
Golin Taimbort
PNG Tourism
Promotion Authority

Texts From:
Local Historian
Gideon Kakabin





Chapter

4

Future prospects

Fresh Produce

Context

Papua New Guinea produces a large range of fresh produce for domestic consumption, including cool season crops such as broccoli, cauliflower and onions, to hot season crops such as tomatoes, watermelons and leafy greens. A wide range of tree crops are also produced, such as citrus and avocados. This diversity is possible due to PNG's diverse environments – from hot, humid coastal climates to cool-temperate, high-altitude climates. The bulk of production is consumed in

the household for subsistence use, but over 70 per cent of households sell surplus production into domestic markets as shown in Figure 9. The quality of produce grown on-farm is commonly excellent, but tends to deteriorate, particularly along the extended supply chains from the Highlands to the major coastal centres of Lae and Port Moresby.

Issues

Domestic marketing pathways are poorly developed and expensive, so that locally-grown fresh produce struggles to compete with imports. The Australian market for horticultural products is by far the largest in the region with more than 23 million relatively affluent consumers. However, there are currently no established export pathways for PNG's fresh produce.

Numerous constraints affect domestic marketing pathways in PNG, including: weak transport and storage infrastructure and high transport costs; lack of access to affordable finance; law and order issues in rural areas; the subsistence orientation of production; price expectations by growers that are beyond global prices and market willingness to pay; overcrowded local markets; limited trust among value chain actors; and lack of timely market information. There are also additional barriers to exports, such as PNG's unfavourable fruit fly status and the high prices achieved in major domestic markets.

Whilst some potential opportunities for export have been identified, by far the greatest opportunities for growth of PNG's fresh produce sector will come from more efficient marketing into domestic markets.

PHAMA's role

PHAMA implemented a comprehensive study of the fresh produce sector in late 2016⁵. This report identified several opportunities for profitable export in PNG, and that investment in the development of domestic marketing systems should be given higher priority. Only one of the four medium/high priority commodities, coconuts, currently has access to the Australian market and is in abundant local supply. Asparagus also has access but is not produced in commercial quantities. Major investments would be required to develop export marketing pathways for sweet potatoes, chillies and asparagus.

Figure 9: Percentage of PNG households engaged in food crop production relative to other key export crops in 2017



Source: Fresh Produce Development Agency Strategic Plan (2010-2030), Papua New Guinea Coffee Industry Strategic Plan 2008 - 2018 Coconut Industry Strategic Plan (2016-2025); Cocoa Industry Strategic Plan 2016 - 2025; Sustainability Report 2012/13, New Britain Palm Oil Limited

Given the scale of domestic opportunities, PHAMA has worked to improve dialogue and coordination amongst the sectors and between projects or programs. Importantly, PHAMA has supported the establishment of the Fresh Produce Industry Working Group (IWG), collaborating particularly with PNG's Fresh Produce Development Agency. The Fresh Produce IWG combines transport logistics companies with retail and institutional buyers and producer organisations. Early success has been achieved in addressing quality issues along the domestic supply chain.

Prospects

Whilst there has been some demand for targeted assistance to develop export pathways of any viable products, greater return on investment is likely to be achieved through improving supply chains targeting domestic markets. Driven by the Fresh Produce IWG, gains will continue to be made in improving quality and lowering costs along various supply chains by focusing on cold chain efficiencies, optimal storage and transport environments, integration of new technologies and scheduling of production / supply. The market for fresh produce in Port Moresby was estimated to be approximately 190,000 tonnes in 2016, with a conservatively estimated value of over PGK2.5 billion. It was estimated that up to 80 per cent of the fresh produce supply to resource construction projects was imported.

⁵ Duthie, R. and Young, D., 2016. Technical and Economic Feasibility of Selected Fresh Produce Export Pathways in Papua New Guinea, PHAMA Technical Report #098 available at www.phama.com.au

Handicrafts

Context

PNG produces a diverse range of quality handicrafts that are sold primarily to tourists from cruise ships and at duty-free shops and handicraft shops in PNG's major centres. Sale of handicrafts is often linked to locally-managed tours relating to history and culture, World War II and other features specific to PNG. There is also a growing domestic market for locally-produced, culturally inspired fashion items.

Issues

Surveys of cruise ship passengers have revealed that tourists are reluctant to buy handicrafts for fear of confiscation by biosecurity authorities back home. They want better biosecurity information about what handicrafts they can and cannot take back.

Progress

Drawing on its work in Vanuatu in 2015, PHAMA has produced vendor guides to inform stakeholders and tourists on standards, backed by training of local agencies such as quarantine and tourism to deliver ongoing awareness programmes. PHAMA also produced a video specific for PNG handicrafts for screening on cruise ships, airplanes, and in tourist areas. These materials are aimed at informing tourists about quarantine issues and the value of handicrafts to local livelihoods, with the aim of increasing sales. The vendor guide will be used as the basis for training of producers and vendors, and will be provided to tourism operators and agencies for distribution. The video and vendor guide have been completed and were launched in September 2017.

Prospects

Maku Gift has signed a contract with Rabaul Discovery to make and supply locally made gift tags for tourists on their tours. The production of these locally made gifts will target approximately 500 passengers on 12 tourists' boats per cruise targeted for 2018. Annual sales of this contract are projected at K60,000.

Fisheries

Context

Fisheries is an important industry for PNG, earning PGK573 million in export revenues in 2016, primarily from whole tuna exports to the European Union. Approximately 1000 tonnes of prawn tails are also exported to Japan, and Singapore or are sold domestically. PNG also exports barramundi, beche-de-mer, inshore reef fish, sharks, shells and shell meat, and lobsters.

Issues

PNG's access to the European Union (EU) tuna market is becoming increasingly complex due to strict regulatory requirements, particularly in relation to food safety and illegal, unregulated and unreported fishing. There is also increasing competition from other more cost-effective tuna processing sites.

PNG's prawn industry currently brings in about PGK55 million of export income annually and employs around 300 people, mainly men on trawlers. With existing markets in Japan and Taiwan becoming less profitable, there is an impetus to diversify markets, including Australia if market access issues can be appropriately addressed.

There is generally a limited understanding of the market potential in Australia, New Zealand or PNG's other neighbours for tuna or other marine products.

PHAMA's role

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. Initial opportunities identified include potential exports of prawns and finfish to Australia and mud crabs to New Zealand.

Progress

PHAMA has undertaken a market survey for a selected range of seafood products to Australia and New Zealand. Survey findings indicate that there are a range of opportunities, mainly to Australia, for canned tuna, prawns and finfish. The findings have informed scoping of follow up activities on market access for prawns and potential food safety (HACCP) support for selected fish processors. PHAMA PNG is also considering supporting a feasibility study for establishment of a seafood processing facility in Port Moresby.

In 2018, PHAMA is supporting the National Agriculture Quarantine and Inspection Authority and the National Fisheries Authority (NAQIA) with their application for prawn market access to Australia. This will involve a survey of prawn diseases in the Gulf of Papua. PHAMA is also supporting a feasibility study for a Port Moresby-based seafood processing facility.

