



The Future in Every Cup Towards a Sustainable Coffee Economy in Papua New Guinea

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August 2025

Forward

Coffee, the morning beverage of choice for many, is deeply entrenched in our culture. However, there is the issue of the environmental impact of coffee production, raising questions about our role as consumers, coffee farmers or suppliers in supporting sustainable practices.

In our pursuit of a greener future, understanding the environmental impact of our daily coffee habit is a crucial first step. By making informed choices, we can make our coffee consumption or production a part of the solution rather than the problem.



This publication, while outlining the broader environmental impacts of coffee, shows how the **PNG Agriculture Commercialization and Diversification (PACD)** project helps deal with that by promoting sustainable coffee practices in PNG.

The paper provides key insights on PACD - CIC co-investment in partnerships that promote coffee honey processing, a method that is gaining now popularity in PNG due to unique coffee flavour that suits experimental and adventurous consumers (and roasters) who also value ethical sourcing, and environmental sustainability. It shows how a co-investment by the project, at the right time with the right partnership, could double the production of honey coffee in the country, while also diverting, annually, 1,442,000-3,364,000 kg CO₂ eq from the environment, more than twice the current trends. Equally, that better quality and more sustainable coffee can also impact positively the companies' bottom line, with benefits trickling down the supply chain, to our coffee producers.

I want to thank my team at PACD Project Management Unit - Coffee and our parent organization, Coffee Industry Corporation Ltd, for their unwavering support. Also, to our partners under 3.1 Partnerships and 3.2 Matching Grants and their farmers and supply chain which worked with us and co-invested to make these sustainable practices happen in the country. Nothing would have happened without them.

This publication shows the choices exporters and farmers are increasingly making to reduce coffee carbon footprint in the country.

Potaisa H. Hombunaka (Mr.)

PROJECT MANAGER
Project Management Unit – Coffee Component
PNG Agriculture Commercialization Diversification (PACD) Project

Government of PNG with loan funding from World Bank funded the PNG Agriculture Commercialization and Diversification (PACD) project, a US\$40million investment in commercialization and diversification of cocoa and coffee value chains. Building on the PPAP and its achievements, PACD aims at increased productivity and volumes sold to markets by smallholder producers, their organizations and MSMEs, while also promoting diversification from cocoa and coffee. Through its US\$40m investment, the programme will facilitate the emergence of other value chains (spices, coconut, and small livestock) while also addressing infrastructure challenges to fast-track products to markets by investing US\$7.8 million (PGK32+million) in rehabilitation of feeder roads.

This paper provides key insights on PACD co-investment in partnerships that promote coffee honey processing, a method that is gaining now popularity in PNG, due to unique coffee flavour that suits experimental and adventurous consumers (and roasters) who also value ethical sourcing, and environmental sustainability. It shows how a co-investment at the right time with the right partnership could double the production of honey coffee in the country, while also diverting annually 1,442,000-3,364,000 kg CO2 eq from the environment, more than twice the current trends.

Ever wondered what makes honey coffee so special? Honey processed coffee is a standout in the coffee world, known for its eco-friendly processing and unique flavour. While washed coffee is still preferred overall, especially for consistency, clarity, and traditional taste profiles, honey processed coffee is gaining popularity. Sweet, syrupy body, fruity, rounded acidity of coffee suits experimental roasters, adventurous consumers who value uniqueness, ethical sourcing, and environmental sustainability. Globally Honey (Pulped Natural) processing is niche. Currently, less than 10% found globally, mostly in Costa Rica, El Salvador, Papua New Guinea, targeting specialty markets.

In Papua New Guinea (PNG), the overwhelming majority of coffee is traditionally processed using the washed (wet) method, but honey-processing is increasingly gaining traction, especially in specialty coffee circles. Around 95% of Papua New Guinea's coffee is produced using the washed method, according to the national statistics. The remaining 5% is processed by honey or natural methods. The PNG Agriculture Commercialization and Diversification (PACD) co-investment in coffee value chain through its Partnerships and Matching Grants components aims to promote more sustainable production, including in the coffee sector, and honey-coffee production is one way to make it happen.

The overall objective of PACD is to facilitate the development of competitive and diversified value chains in East and West New Britain, New Ireland, Morobe, Madang, Eastern Highlands, Simbu, Jiwaka, Western Highlands provinces and Autonomous Region of Bougainville.

In 2021 the US\$40 million (approximately PGK120 million) loan agreement on a five-year **PNG Agriculture Commercialization and Diversification (PACD) project** to support the growth and diversification of PNG's agricultural sector, particularly cocoa and coffee was signed by the PNG Government and the World Bank. The project will enable 20,000+ farmers, producer organizations and micro, small and medium enterprises (MSMEs) commercialize and expand further into emerging agricultural opportunities on coffee and cocoa but also diversify into other value chains.

We hope you will find these insights useful to promote similar initiatives in the country and beyond, towards a world where quality, sustainability and ethical production have become much more important.

PACD at a Glance

US\$40m four-year project running until December 2025

42% invested in strategic partnerships with MSMEs, POs and Cooperatives

22% in rehabilitation of six feeder roads

36% in institutional capacity building for DAL and commodity boards and project management

75 partnerships between Private sector/Cooperatives & 20,000 farmers

20 MSMEs/Producer Organisations co-funded under Matching grants

+US\$1million private sector investment leveraged

+130,000 farmers and their families supported and benefiting from PACD

+100,000 new or better jobs



The context

A relative newcomer to the specialty coffee scene, PNG faces unique challenges in showcasing their coffee to the world — but those who have tasted the best the country has to offer know of its enormous potential. The country, celebrated for its rich coffee heritage and diverse processing methods, has embraced honey processing as a way to enhance coffee's natural sweetness and complexity. Unlike the more common washed (fully washed) or natural (dry) processes, honey

Coffee honey processing is particularly popular among PNG specialty coffee farmers, as it preserves flavour, adds complexity, and reduces water consumption, making it a sustainable yet flavour-enhancing process.

processing is an innovative method that retains some of the coffee cherry's mucilage during drying, giving the beans a distinctively fruity, syrupy, and complex flavour profile. PNG's Highland regions—Western,

Eastern Highlands, and Jiwaka—have seen a rise in experimental processing, including honey, to capture flavour diversity and market premiums.

Special Farming Practices for Honey Processed Coffee

Honey processing involves removing the outer skin of the coffee cherry and allowing the beans to dry with some or all of the mucilage (sticky fruit layer) still attached. This mucilage contributes to the coffee's flavour profile. This process is one of the more sustainable practices, reducing water consumption.

Honey processed coffee commands very high price than the conventional wet processed coffee. The ripe cherries are pulled immediately upon harvest with one tenth of water and immediately sun dried hence most of the nutrients are still intact with the coffee beans hence very high quality. Environmentally there is significantly less pollution as very little water used to pulled the coffee.

Processing honey coffee is not easy for producers. Not only does it take time, but having special equipment is the best way to make it a sustainable,

replicable product for the market. Harvesting is also more complicated, since the ripest cherries make the process both easier and more impactful, but this requires extra labour and visits to the same land six or seven times during a season, since coffee ripens at different rates. Why do they do it? If they have specialty coffee, honey processing could make the coffee taste unique and sweet, which fetches a higher price on the market.

Roasting honeyed coffee can be challenging because there are sugars remaining on the silverskin of the beans, which can burn and be bitter, but skilful roasters can turn that into a caramelized, molasses, brown sugar, "spun sugar," or "crème brûlée" note. Despite the complexity of the flavour profile, honey-processed coffees often have a clean finish with a pleasant aftertaste that lingers on the palate.

Pulped natural or honey process is a method in which the fresh coffee cherries are de-pulped, but allowed to dry without washing. Some of the fruit is still there, but not nearly as much as in the natural process. Most of the cherry is gone, but the remaining golden, sticky mucilage is reminiscent of honey, which is where the process gets its name. Allowing the fruit to dry on the bean means that it can be physically removed during milling rather than being washed off as is typical of washed coffee. One benefit to producers is that honey processing uses less water.

Environmental Footprint

PNG's economic growth heavily relies on agriculture, with coffee production being a key sub-sector. Coffee processing consumes significant surface water, generating coffee water as a by-product, which contaminates downstream water sources and affects local communities. Studies around the world¹ indicate negative impacts on local communities due to water pollution from coffee

processing, with high acidity, organic matter, nutrients, and suspended solids degrading water quality. Honey processing is a way to reduce these negative impacts.

Not only is honey processing beneficial for consumers' taste buds and health, but it also promotes environmental sustainability. Honey processing uses less water compared to the conventional washed process, **90–98% less water**, making it a more eco-friendly alternative. Honey processing emits **30–60% less GHG compared to washed coffee**.

Environmental Footprint Comparison			
Impact Area	Washed Coffee	Honey Processed Coffee	Comparison
Water Use	15–60 litres/kg of parchment coffee	~1–5 litres/kg of parchment coffee	Honey uses 90–98% less water
Wastewater BOD²	2,000–10,000 mg/L	Very low (minimal wastewater generated)	Honey produces much less pollution
Wastewater COD	5,000–15,000 mg/L	Very low	Much less COD in honey process
Organic Waste (Pulp)	40–50% of cherry weight (same in both)	40–50% of cherry weight(*)	Equal or less (depends on if by-product processing practices) ³
Energy Use	Moderate (machinery + water systems)	Low (less machinery and no water treatment)	Honey is less energy-intensive
GHG Emissions	~0.5–1.5 kg CO ₂ -eq/kg of green coffee	~0.2–0.8 kg CO ₂ -eq/kg of green coffee	Honey can emit 30–60% less GHG
Land Use Impact	Moderate (wastewater disposal risk)	Lower (no wastewater runoff)	Honey is safer for ecosystems
Complexity / Labor	High (more equipment and steps needed)	Moderate (needs care in drying, less tech)	Honey requires skilled drying

The vast majority of PNG's coffee (95%) is wet-processed (washed) at the farm or cooperative level. The rest is estimated to be honey-processed or natural dry. Water use is high in wet-processed system, and not all mills have treatment systems in PNG—this is why honey and natural processing are slowly gaining attention, including in areas with less water or where specialty value chains exist.

PNG produces an estimate of 752,000 bags (60 kg each) of coffee annually. If 5% of that is honey-processed, the volume is under 37,600 bags (~2.26 million kg of green coffee beans). This means that use of honey processing in PNG leads to 678,000 – 1,579,000kg CO₂ eq reduction in

carbon dioxide (CO₂) emissions. If this practice is scaled up, the positive impact on the environment could increase dramatically.

Furthermore, coffee processing generates organic by-product, waste (pulp). Globally, the coffee industry generates more than 40 million tonnes of organic by-products every year. Until recently, these were considered unavoidable externalities — nuisances to be managed or ignored. But the PNG farmers reframe them as untapped assets within a circular coffee economy. The discarded mucilage from honey processing is rich in organic material, making it a useful composting material to enrich the soil and foster

sustainable farming practices in the country.

The minimization of waste alongside the maximization of resources & innovative processing practices along the coffee supply chain is a testament to the honey process's contribution to sustainable agriculture in PNG

The sustainability of different coffee processing methods is important, and honey coffee or/and use of coffee processing by-products can have a positive impact on the environment and MSMEs and coffee farmers bottom-line.



The Response

The Department of Agriculture and Livestock (DAL) - World Bank PNG Agriculture Commercialization and Diversification (PACD) Component 3.1 On Farm and Post-Harvest Productivity, and Formation of Producer Organizations (POs) and 3.2 Matching grants (MGs) is supporting these practices by offering tailored investment to some MSMEs, Cooperatives or POs in the Highlands and Jiwaka that want to trial or scale up honey coffee processing as a sustainable yet flavour-enhancing process.

A total of 24 partnership grants worth US\$4.82 million (PGK 20.1 million) to boost coffee production and commercialisation in PNG have been awarded and are currently implemented in Morobe, Eastern Highlands, Chimbu, Jiwaka, and Western Highlands provinces. 20 more matching grants worth US\$1.60 million have been co-invested with legally established MSMEs and POs on initiatives that would contribute, amongst others, to climate change adaptation and/or mitigation in the country.

Some of these initiatives focus specifically on sustainable coffee practices. As honey processing is becoming more popular in the specialty coffee sector, a rise in experimental processing in the Highlands—Western, Eastern Highlands, and Jiwaka— has been observed. Of the 24 partnerships and 20 MGs, 11 are supported by PACD with special equipment, new markets, supply chain expansion etc. to trail or scale up coffee honey processing or

“Honey Processed Coffee is not just a trend—it’s a pathway for PNG coffee to access niche, high-value markets that will directly benefit growers and their communities if done right.”
Allan Oliver , Team Leader World Bank

other sustainable coffee practices. They are: Lass Malo Factory, Jiwaka Coffee Factory, ANGNA Cooperative, Tenenga Cooperative, Mambgu Investment Limited, Roots#1 Coffee Ltd. and Roots Farmers Association under Matching grants, and Kualga Women Development Association, Nunga Plantation, Kulki Plantation and Kore Mani under PACD Partnership component.

For example, Jiwaka Coffee has implemented a “Proceso Puro” zero-waste system specifically for honey-processed coffee and now works with around 900 farmers across multiple villages. At Nunga Plantation in Western Highlands, a new honey-processing facility was launched in May 2025, supported by a PGK1 million PACD grant, marking significant infrastructure investment specifically for honey-processed coffee. Kugla Women’s Development Association followed suit: it exchanged pulper to, instead, set up a honey processing plant. Kulki Plantation and Kore Mani’s PGK1 million investment will also be used for honey processing plants.

The support provided by PACD will double the current PNG production of honey processed coffee. Over 5million tons per year is expected to be exported when all the coffee

of these 11 PACD initiatives are sustainably processed. Currently, only 2.26 million is honey processed in PNG. This increase will impact positively on the environment. 1,442,000-3,364,000 kg CO₂ eq emissions is expected to be reverted from the environment annually, more than double the current trends⁴.

In the first 12 months of operation with the new equipment, the 11 PACD supported businesses are expecting to have 25% of the coffee honey and natural processed. This will contribute to 30% increase in the country’s honey coffee production, and 867,000-2,022,000 kg CO₂ eq emissions reverted from the environment.

While this practice remains a relatively small but premium niche, focused on Highlands’s specialty regions, PACD expects it will scale up in the coming years, as other businesses will crowd in, with positive impact on environmental footprint of coffee production in the country, with less greenhouse gas emissions, water pollution, or soil degradation.

Some specific examples of PACD supported initiatives in The Impact section below.



The Impact

The Case of Jiwaka Coffee The drive towards honey processed coffee

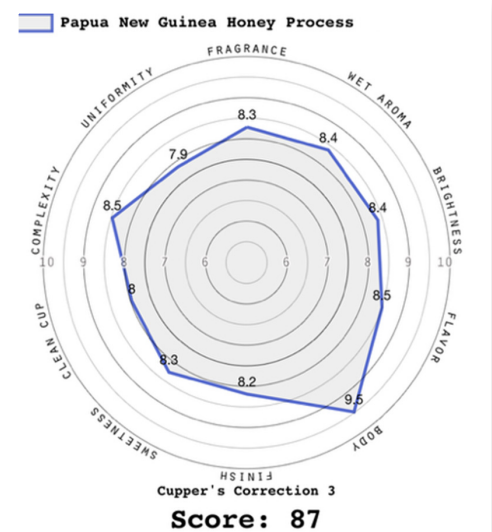
Jiwaka Coffee Ltd stands out for its emphasis on honey and natural processing, especially within smallholder groups. While their total output is modest relative to national volumes, their specialty coffee exemplifies drying honey methods with rich sweetness and fruit-driven profiles.

Jiwaka Coffee Limited (JCL) buys cherry from over 900 farmers in Jiwaka and Eastern Highlands Province. Most farmers are second and third-generation farmers cultivating coffee gardens passed down to them by their parents and grandparents. JCL began using specialty processing in 2018 when they started using a colour sorter right in the villages. JCL buys only ripe, red cherry and processes it at their washing station. They have cars that circulate around the province and make it easier for farmers to selectively handpick ripe, red cherry each day, rather than strip pick and walk several kilometres to sell their cherry.

In order to minimize their environmental impact, JCL uses only natural and honey processing to drastically reduce water usage. Once the cherry is purchased and sorted, cherry is pulped and the parchment and remaining mucilage is laid on patios to dry. Workers rake drying parchment frequently to ensure even drying. It takes approximately two weeks for parchment to dry. The waste, pulp and mucilage from

processing, is distributed to coffee farmers to use as fertilizer, and parchment is used as 'biochar' to fertilize the soil. As Emma Wakpi, Director and owner of JCL, explains, climate change is affecting the weather and the amount of rainfall, which is in turn affecting the pH of the soil. Biochar helps improve water management for coffee plants and adjust the pH balance of the soil to retain nutrients for coffee trees.

Emma is a dedicated community development worker who has collaborated with local communities across Papua New Guinea. Her work focuses on promoting ownership and sustainability over donor dependency. The question she keeps asking is: How can we become sustainable? The answer lies in agriculture. Some communities cultivate sweet potato, others grow cocoa—but for Emma and her team, the focus is coffee. She began researching niche markets in coffee—specialty coffee, honey-processed, natural pulped, and other premium types. She connected with professionals and organizations such as ECO Asia, Bolaven Farms, and Laus, who were also engaged in similar social enterprise work to learn. Emma secured a soft loan to acquire coffee processing machinery in 2023. In 2024, the PACD project PGK360,000 co-contributed to the business, which help fast track her loan repayments and improve the business cash-flow.

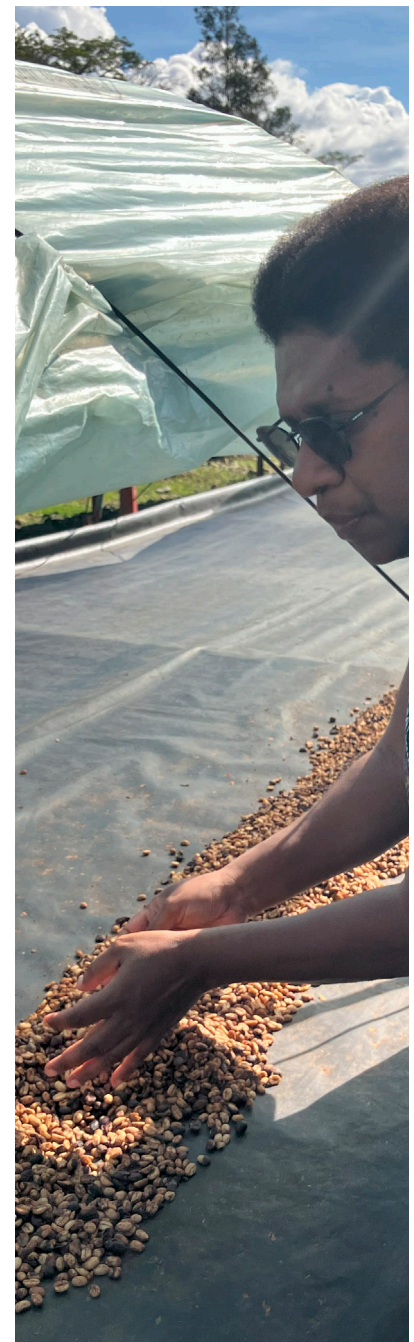


Emma's work in coffee is an example of sustainability and minimising waste. During harvest from mid-February to June, Jiwaka's coffee cherries undergo "Proceso Puro": a patented zero-waste coffee cherry processing system. This creates their signature honey processed coffee, which scores 86 points or higher. Emma explains that the process is quite labour-intensive; the coffee is dried on stretched tarpaulin beds and covered at night to protect it from dew, before being milled on-site.



Emma and her team train farmers on best practices—particularly picking only ripe, red cherries. Most farmers had never seen a green bean or understood how their coffee tasted once roasted. They simply sell their cherries and buy cheap 3-in-1 instant coffee—often made from off-grade beans. To change this mindset, Emma brought farmers into the process—showing them how their beans were cupped and graded, and what their coffee was worth on the international specialty market.

During 2024 Jiwaka coffee processed and sold one container of honey processed coffee, followed by another 250 GB bags and then slowly scaled down to 100 bags due to market demand. A container of specialty coffee would need 320 bags, so she turned to doing micro lots, sending between 60 to 100 GB bags based on request. With the support from PACD Jiwaka Coffee is expected to export more than 1920kg to 6000 kg per year depending on its financial capacity.





The Impact

When Business Extends Beyond Profit

The story of Roots Number 1 and its supply chain, Roots No. 1 Farmers Association

PACD co-invested in both Roots No. 1 Coffee Ltd and its supply chain, the Roots No. 1 Farmers Association Inc, under the project Matching grant component.

The Association stands as the philanthropic cornerstone of Roots No.1Coffee, a distinctive organization operating independently from Roots No. 1 Coffee Ltd. Their mission revolves around utilizing coffee production as a means to source services, deliveries, and assistance for the betterment of their communities.

The heart of the Okapa District of the Eastern Highlands is where the Association operates. The area has an altitude range of around 1800 –2000 meters above sea level. The Roots no. 1 area can be reached by road from Goroka. This is a magnificent drive of approximately 3 hrs that will show you a wide variety of landscapes and coffee scenery. The district is famous for its high quality coffee production and is the most populous district among 7 other districts in the province. Okapa is the home of more than 60,000 people of 33 tribes who depend entirely on coffee farming (mostly smallholders) for their livelihoods.

The Roots no. 1 supply chain is a very active smallholder group that is successfully managed by Tony Tokah. He is one of the founding fathers of the Roots no. 1 group, and is at the

helm of its coffee operation that completed a dry mill in the area in 2016. Their line of thought is that even though they consider themselves "grassroots farmers", the group has aspirations to become the number 1 coffee supplier in PNG. As a firm reminder of this ambition the group adopted this as its trade and brand name: Roots no. 1 Coffee. Shortly after its first parchment purchases and green bean deliveries to Goroka, the consistency and frequency of deliveries was well noted by Monpi Coffee Exports, which led to a collaboration with SMS-PNG to increase the support to this supply chain. It currently has over 1,500 registered and certified smallholder

farm households contributing to the supply of Roots No. 1 coffee. The collaboration with SMS-PNG has elevated the group from organised road-side buying to fully traceable high quality sales. The supply chain achieved a certified status for various international certification standards (Utz certified, Fairtrade in late 2020, Organic, Rainforest Alliance, 4C, CAFE Practices) and saw its first sales of micro lots entering the specialty market in 2016.

They sell to Monpi Coffee Exports. In 2025 Roots No. 1 Coffee shipped its first batch of honey processed coffee to Korea. They plan to expand honey-processed coffees from 2026.



“The honey process is so unique and intricate method that enhances the flavor profile of coffee beans, creating a sweet and complex cup, very well appreciated by the buyers”. (Tony Tokah).

The company exported over 3,600,000 kg of coffee in 2024, and is expecting 30-40% increase in

2025, to reach over 4.8 million, with positive impact on its supply chain, the Association and its members. They also created two more jobs, and two other staff have been upskilled to work with the new equipment. Roots No. 1 Coffee has big dreams. The support from PACD will see them having their own mini quality control laboratory machinery, a key step for

the company to export directly. They have the warehouse constructed now and a green bean machinery (huller) already installed. The Association has now high quality coffee driers. All through PACD co-contribution. All to the benefit of the business, the association and its 1590+ members.





The Impact

Mambgu Investment Ltd A company with a mission to reduce environmental footprint in Jiwaka

Thomas Kennedy is a hard-working coffee green bean producer and exporter based in Jiwaka Province. He embarked on establishing Mambgu Investment Ltd, a dry coffee mill in 2017, equipped with a McKinnon processing line. The initial infrastructure included a building measuring 30 meters wide by 84 meters long, of which only 30 meters by 60 meters was completed. The remaining 30 meters by 24 meters consisted solely of steel frames and bars, with no roofing iron or V-crimp walling. The company operated like that for eight years by processing coffee from and for neighbouring communities.

The owner, Thomas Kennedy, felt it was time for a change.

Upon submitting a request to PACD, Mambgu Investment Ltd was approved and funded K432,000, including PGK36,500 worth of building supplies to finish the building, a 250 KVA generator, and one Large Scale Dry Mill (Honey & Natural Coffee) that is shipped from Hong Kong. The company contributed an additional 20% to this investment. This investment will boost the factory's production capacity, have an additional warehouse dedicated to honey coffee that will help Mambgu tap into

specialty coffee market—a valuable suggestion from the PACD team in Jiwaka, thus, overall impact positively the company's bottom line and its suppliers, which includes smallholder farmers and communities around that Thomas so much care of. The energy requirements for honey processing are slightly higher than for natural processing due to the partial removal of the cherry's mucilage, but lower than washed processing. This is critical for the company and its energy consumption.

Mambgu Investment Ltd sold over 153,000 kg of green beans in 2024; they expect it to double in 2025-2026 season with a good proportion of these exports as honey coffee via third-party exporter (KMSL).

“Moderate energy usage, means honey processing we are using has a smaller carbon footprint than washed processing. A positive outcome on our environmental footprint as well”.
Thomas, Owner

“The entire team at Mambgu Investment Ltd expresses its profound appreciation for PACD's substantial contribution, steadfast support, and invaluable advice, all of which ensured the successful completion of this important development project”,
Thomas, Owner





The Impact

The Case of Kore Mani Organic Coffee Growers

The beginning of a new era in South Waghy district of Jiwaka province

Wednesday 14th May 2025 is the day the people of Kore Mani Organic Coffee Growers Ltd will never forget. The 9th World Bank Implementation Support Mission led by Team Leader Allan Oliver witnessed and officiated the opening of the honey processed coffee mill building next to Kurumul Tea in Jiwaka Province.

The Kore Mani Organic Coffee Growers Ltd is supporting 300 Coffee farming households through a grant signing under Coffee Industry

Corporation Ltd-Papua New Guinea Agricultural Commercialization and Diversification (CIC-PACD) at the cost of K855,100.

The Owner, Konts Yengin, graduated from Popondetta Agriculture College in 1995 with a Certificate in Tropical Agriculture. In 1996, he joined WR Carpenters as a Trainee Field Manager, and after a six-month probation, he was confirmed as a Field Manager overseeing a coffee plantation. From 1996 to October 2021, Mr Yengin

worked extensively across the coffee value chain—from plantation to export. His responsibilities covered coffee nursery establishment, field transplanting, harvesting of ripe cherries, wet parchment processing, green bean quality control, coffee cupping, and ultimately exporting green beans. These 25 years gave him broad and in-depth knowledge of coffee production, quality management, and export standards.



With the skills and experience gained, Konts developed a deep passion for helping local farmers rehabilitate their coffee blocks. While still employed, he began organizing and mobilizing smallholder farmers during weekends.

He resigned from his job on October 21, 2021, to fully dedicate to supporting farmers in improving their coffee production. From 2021 to 2023, he worked directly with them on their coffee blocks. In 2023, Kore Mani signed a two-year contract under the PACD/CIC Project, through which 300 household farmers have already benefited.

They have already constructed a wet mill factory for honey coffee processing, and all seedlings have been distributed to farmers. In addition, CIC Jiwaka has provided 50,000 nursery seedlings, which we have successfully established and distribution will start in 2026.

Kore Mani will be exporting honey coffee through a third-party exporter (KMSL) in the upcoming coffee season. In 2027 the group will set up its first green bean roasting and packaging facilities to move up the value chain.

Kore Mani and its 300 coffee farmers will export 10.7 containers (205,440 kg) per year, of honey coffee.

“Bipo Kore Mani and PACD came to help, I make money from planting pineapple, orange, peanut and raise pigs. The income I get now from helps me buy my families basic needs like soap, salt and my children’s school fees”.
Romeo Kumi, Coffee Farmer



“I received 70 coffee seedlings and planted already in my coffee farm. I used my bush knife to cut my coffee trees, and use knowledge I received during PACD coffee husbandry training”.
Kore Tapingal, Coffee Farmer

“Bepo Kore Mani and PACD came onboard to assist us the farmers, Coffee was my main source of income and little bit of income came from vegetable garden like peanut, sweet potato and greens that I sell and get basic needs for my family. However, when picking coffee, I carelessly pick both ripe and unripe and sell. But after sitting under the coffee husbandry training and financial literacy training, I changed.

This training thought me a lot to pick only ripe cherries for quality and do budget and manage the little money I received from the sales I make. I have to sit with my wife and make good decisions before spending the money. It made a big change.”

Alice Nickson, Coffee Farmer





The Impact

Kuagla Women's Development Association

How a women driven organisation turns coffee into a force for change in Nebilyer Valley of Western Highland Province



In the highlands of Papua New Guinea, a powerful transformation is unfolding. Once scarred by tribal conflict, the Nebilyer Valley of Western Highlands is now a symbol of peace, unity, and economic revival — all thanks to coffee and the leadership of women. Led by Cecilia Kauga, a former banker turned community champion, the Kuagla Women's

Development Association (KWDA) is working with over 200 farmers to turn coffee into a force for change. Supported by the PNG Government and the World Bank through the PACD Project, this grassroots initiative is building infrastructure, restoring livelihoods, and healing a once-divided community.

Kuagla Women's Development Association was founded in 2017 by Ms. Cecilia Kauga, a former banker, and Mr. Peter Wila, a resigned teacher. Both saw a pressing need to bring development initiatives to their community. They began by mobilizing 65 members—both women and men—with the vision of creating a community-driven association. In 2019, the group was formally registered with the Investment Promotion Authority (IPA) as the Kuagla Women's Development Association (KWDA). The association's initial project involved planting bulb onions. However, due to limited knowledge and technical skills, the project was unsuccessful. They then tried cultivating rice, which also failed. Despite these setbacks, the group remained committed and re-mobilized to plant peanuts and taro, eventually earning PGK4,000 from the sales. These funds were used to support the association's office administration. In 2021, the association formed a partnership with NGO Promotion Inc., an organization based in Madang. NGO Promotion provided PGK15,000 to assist in setting up an office base and purchasing essential items such as a laptop, mobile phone, and generator. Both Ms. Cecilia Kauga and Mr. Peter Wila attended training on good governance, financial management, and monitoring and evaluation, delivered by NGO Promotion.

“The trainings I received from this project helped me a lot in managing my six existing coffee trees in the garden plus the new seedlings I received from the project. First, I received 126 coffee seedlings and second distribution I received 278 coffee seedlings. All these seedlings are already planted in the coffee farm. The coffee husbandry training I received with coffee quality training I received helped me a lot to make good decision to plant more coffee and these seedlings are growing, and I should harvest next year 2026”.

Stephanie Yap, Coffee Farmer

In 2023, KWDA applied for funding under the PACD project after seeing a call for proposals. They were successfully awarded PGK654,600.

With this support, the association procured 10,000 coffee seedlings from CIC Panga and distributed them to local farmers, established a nursery with 12,000 additional coffee seedlings to reinvigorate coffee production in the region, and participated in their first-ever formal Coffee Quality Training, Coffee Husbandry, and Coffee Nursery Management and Planting training sessions. This was a milestone for the community—many of whom, including Ms. Kauga and Mr. Wila, had never received such training before, despite coming from generations of coffee farmers. Their grandparents and parents had grown coffee, but this was the first time the community was exposed to professional agricultural training, which they greatly appreciated.

Additionally, the PACD project funded the construction of a PGK106,000 Coffee Storage Shed, which now serves as a secure facility for storing coffee and tools.



KWDA Vision is to improve the standard of living for the Kuagla Community. The support from the PACD Project directly aligns with and contributes to KWDA's vision by helping transform the Kuagla community through improved agricultural livelihoods and organizational capacity.

KWDA and its 200 farmers will aggregate 581,995 kg of cherry per year as honey coffee. This means that they will be able to sell 5-6 containers to Jiwaka Coffee, through an arrangement between two organisations, facilitated by PACD.

“I received 1,300 coffee seedlings and planted in my coffee farm. Before we removed coffee trees and planted tobacco and garden food and sell to get fast income but when garden crop finish, money also finish. Now I see this coffee storage shed built in the community. I saw no more of fighting between couples, no more of drunk people. All I see is people busy in their coffee farm and I am really grateful that KWDA brought this project changed the communities' approach in so many ways”. **David Kokia, Coffee Farmer**

“I am from Southern Highlands and married here, I don't know coffee, my grandparents never planted coffee so as my mother and father. We work and leave in town until was retired so had to come to the village and started planting vegetables and learned how to plant coffee. I received 260 coffee seedlings in 2023 and planted already and I know I will harvest next year”. **Anna Nema, Coffee Farmer**



The Impact

Highlands Arabica Limited and its Strategic Partnerships in WHP

A story of determination of two cooperatives, Mt. Mul Co-operative Society and Geg Women's Organic Coffee Growers Association

In 2007, Cathy Rumints retired from the National Development Bank at the age of 50 after 30 years of service. During her career, she gained valuable experience in supervising and managing loans for rural and commercial farmers. Upon retirement, she decided to continue serving rural farmers by coordinating Personal Viability courses and other programs to help improve the livelihoods of families in rural communities and council wards.

In 2008, Cathy attended a three-month Entrepreneur Development/ Personal Viability course at Kairiru School in East Sepik, conducted by Dr. Samuel Tam, founder of the PV Programme. While undergoing training on the island, she developed a comprehensive coffee business development plan for her home province, Western Highlands. Her vision was to mobilize coffee farmers to export their own coffee. This plan was later featured in one of Dr. Tam's journals.

Upon returning home, she presented the plan to the provincial government, but it received no consideration and was set aside. Undeterred, Cathy continued coordinating PV courses and working with rural women, men, and youth. She made multiple trips into the districts of Dei Council, Mul Baiyer, Hagen Central, and Tambul Nebilyer, forming Viability Clubs in various communities. Among all the rural PV Clubs, the women's group from Baiyer, led by Maria Watinga, stood out. Maria was persistent in her engagement with Cathy from 2012



onwards. In one of Cathy's awareness programs, Maria—recognized as a strong, committed leader and coffee farmer—emerged as a key partner. Together, in 2014, they formed a coffee farmer group in the Baiyer Geg area.

After five years of dedicated work and visits, the Geg Women's Organic Coffee Growers Association was officially formed in 2019, with Maria elected as chairperson. Cathy was appointed coordinator, in recognition of her years of support and commitment, especially as 95% of members were illiterate and relied on her guidance.

Around the same time (2023 onwards), Cathy also began working with women from her own Mt. Mul community to rehabilitate abandoned coffee gardens. Low coffee prices had caused many farmers to neglect their coffee and shift to other crops. A household survey identified 5 hectares of Pakmong coffee owned by farmer Peter Pena.

“What is coffee? Coffee grows in the bush, I don't clean my coffee garden. When coffee is ready, I walk into the bush to harvest the coffee. No coffee training on how to look after my coffee garden. When PACD came they taught me how to look after my coffee garden and I'm grateful”. Cathy Daniel



In 2020, members voted to register their group with the government. The Mt. Mul Women and Families Co-operative Society was formally registered with the PNG Co-operative Society Office, with Cathy elected chairperson. They chose the co-operative model because coffee is an exportable commodity, and they wanted to work together to secure better market prices.

In 2022, cooperative member Peter Pena acquired Madan Coffee Plantation under Highlands Arabica Limited (HAL). In 2022 and 2023, the women's groups mobilized coffee and sold it to HAL. Impressed by their potential, HAL applied for and secured the PACD Project, partnering with both Mt. Mul and Geg women's groups. Cathy and Maria, as chairladies of their respective groups, led their members in this new partnership.

Guiding these two rural-based groups on their coffee journey since 2023 has not been easy. It has been a challenging path for a woman without initial government support—until the PACD Project came along. Cathy is deeply grateful to her family for their unwavering support and to Highlands Arabica Coffee Limited, the PACD Project, and the Western Zone leadership for helping turn their dream of exporting their own coffee into a reality. “No pain, no gain.”

Mul and Geg women coffee farmers under HAL work with 200 coffee farmers and expect to export 2.33 containers (44,736 kg) in a year.

“We are happy we received these coffee seedlings to plant. Everyone received 100 each seedling and planted; we had Coffee Berry Borer training, Gender & Nutrition Training. Those trainings have equipped us on how to control CBB during CBB infestation, GESI training on how we can share responsibilities at home and help each other and appreciate each other's effort. Nutrition training, made us reconsider what we grow and eat: we need the right food for our health”. Rachael Joseph



“Before PACD came and supported us, we grew vegetable garden to help ourselves. We plant sweet potato, peanut and greens to sell and make a little income from that. Coffee is in the bush as we don't have any knowledge and skills to look after our coffee trees. Only when the coffee cherries are ripe and ready to be harvested, we go in the bush to harvest our coffee and sell. We did not know the importance of coffee until PACD Project came to help us”. Puk Mark



Key takeaways

Papua New Guinea remains a predominantly washed coffee origin, with 90–95% of all coffee processed using the wet method. Washed processing, while producing high-quality coffee, has the most significant environmental footprint due to its water and energy demands. However, it is recently that larger initiatives have started encouraging specialty coffee production and use of natural and honey processing, though, it still represents a small percentage of the country's coffee growers.

Many coffee farmers whose lots routinely score above 80 points have started to work together, often coalesce around an exporter, learn new ways of sustainably processing coffee and move away from subsistence-level agriculture. Honey and natural processed coffees are now emerging niche segments in PNG, supported by specialty exporters or/and initiatives, such as, PACD, and actively responding to

change in consumers demand. This move is slowly growing the origin's profile in the specialty coffee sector for the country.

It is expected that the co-investment by PACD with lead and matching grants partners will double the current PNG production of honey processed coffee.

Over 5 million tons per year will be exported when 100% of the coffee in the PACD supported initiatives will be sustainably processed. Currently, only 2.26 million is honey processed in the country. The increase in sustainable practice will impact positively on the environment. 1,442,000-3,364,000 kg CO₂ eq emissions will be reverted from the environment annually, more than double the current trends⁵. Better quality and more sustainable produced coffee will also impact the companies' bottom line with benefits trickling down the supply chain, to coffee producers.

While Papua New Guinea (PNG) is a relative newcomer to the specialty coffee scene, what these promising results show is that farmers and MSMEs are working towards innovative solutions that lead to better quality coffee, better income while also reducing the environmental footprint.

It is now time for producers and policymakers to focus on upscaling sustainable coffee production. Sustainable practices, such as natural and honey coffee production, composting organic waste and treating wastewater, are essential for minimizing the ecological footprint of the coffee industry while also bringing additional price point advantages for businesses and their supply chain, through increased consumer willingness to pay a premium for ethically sourced and high-quality products. By doing this, at scale, PNG will ensure potential brand differentiation in a crowded coffee market.

Footnotes

¹ https://ijaer.in/2024files/ijaer_10_23.pdf

² Biochemical oxygen demand is the amount of oxygen consumed by bacteria and other microorganisms while they decompose organic matter under aerobic conditions.

³ this is addressed by PACD partners by processing it further into fertiliser or coffee tea

⁴ currently, 678,000 – 1,579,000kg CO₂ eq

⁵ currently, 678,000 – 1,579,000kg CO₂ eq

Sustainability

www.pacd.org.pg

