

PAPUA **NEW GUINEA** 2020

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- Economic update
- Business confidence survey
- Sector-by-sector outlook & 'Resources in focus'



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Welcome

Welcome to the 15th annual edition of *Business Advantage Papua New Guinea*.



Over 15 annual editions, *Business Advantage Papua New Guinea* has provided essential snapshots of PNG's economy for those focused on doing business in the country.

This is complemented by PNG's top-ranked online business media, **businessadvantagepng.com**, which has been sending out its regular free e-newsletters since 2013. This website also now provides the ultimate resource for investors, *Doing Business in PNG*, to help you navigate PNG's economy successfully.

Over the past decade, we have also brought investors face-to-face at eight investment conferences focused on the opportunities and challenges of doing business in the Melanesian nation.

The next PNG Investment Conference will be held at the Sofitel Hotel, Brisbane, Australia on 10 and 11 August 2020. Consider yourself invited!

Looking back to our first ever business and investment guide on PNG, in 2006, the Pacific's largest economy was in turnaround after the turbulent 1990s, its GDP was just US\$5.5 billion but business leaders told us that conditions were the best they had been for years.

They've been proven right. PNG has experienced a period of unprecedented growth in the years since 2006 (albeit punctuated by periods of consolidation characteristic of frontier markets).

In 2018, PNG's GDP rose to US\$23.43 billion, indicating an impressive fourfold increase in the size of the country's economy in 13 short years. Over the same period, its central bank recorded the value of exports jumping by 269 per cent – from K12.8 billion (US\$3.78 billion) to K34.5 billion (US\$10.18 billion).

There have been key milestones: the advent of Irish-owned Digicel in 2007 (which brought widespread adoption of mobile phones), the commencement of LNG exports from the ExxonMobil-led PNG LNG project in 2014, the hosting of APEC in 2018, and the recent completion of the Coral Sea Cable System.

These initiatives, alongside many others, have brought new skills, capacity and know-how to PNG. In their wake, a middle class has emerged, and also cashed-up local businesses, which are playing an ever-larger role in the economy.

The period has also coincided with a fundamental shift in the country's trade and investment flows. In 2006, PNG's combined bilateral trade with Asian giants China, Japan, Taiwan and Singapore was less than US\$1 billion. Now, it's ten times as much.

The next decade promises more growth and more opportunities. Our team of experienced business journalists is looking forward to bringing it to you.

Andrew Wilkins

Publishing Director

Business Advantage International

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CONTENTS

14 Special feature

PNG tourism gets ready to sell itself

16 2020 PNG 100 CEO Survey

Our business confidence survey of PNG's top companies

20 Investment conference

Key investors and business leaders discuss PNG's investment climate

24 Special Economic Zones

An initiative aims to attract new investors and generate jobs

26 Resources in focus

From LNG to gold and copper - everything you need to know about PNG's resources sector

30 Economic Map of PNG

37 Infrastructure & transport

Ports and shipping open a new chapter and innovation is key

41 Aviation

Exclusive Q&A with Alan Milne

44 Financial services

Digital banking's rich potential

46 Manufacturing

Lessons from market leaders

49 Agribusiness

The 'food basket of Asia' is ready to deliver

54 Forestry

An industry at the crossroads

55 Who's who in PNG



6

2020 Economic Update

New government, new rules as PNG looks ahead to a possible investment 'super-cycle'

52

Innovation Nation

New ideas in PNG that may translate into economic growth and jobs

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Blast from the past:

The year 2020 looks like being a watershed year for Papua New Guinea, with a number of transformative national projects awaiting the green light and a new government seeking to implement an ambitious agenda. **Andrew Wilkins** talks with some of PNG's business leaders as they wait patiently for a new cycle of investment to begin.

According to PNG's Prime Minister, James Marape, 2020 is to be 'the year of implementation'. The last time a PNG Prime Minister used this phrase was 2013 and Marape's predecessor, Peter O'Neill, was setting about a program to reform state-owned enterprises, increase support for locally-owned businesses and increase expenditure on infrastructure against the background of a slowing economy and a growing budget deficit.

Seven years later, some might have a sense of *déjà vu*.

While the unexpected mid-term ousting of O'Neill in May 2019 changed the country's political rhetoric – the country's new leader promising to 'take back PNG', with the goal of making it the 'richest black Christian nation on Earth' – many of the challenges facing PNG in 2020 appear familiar.

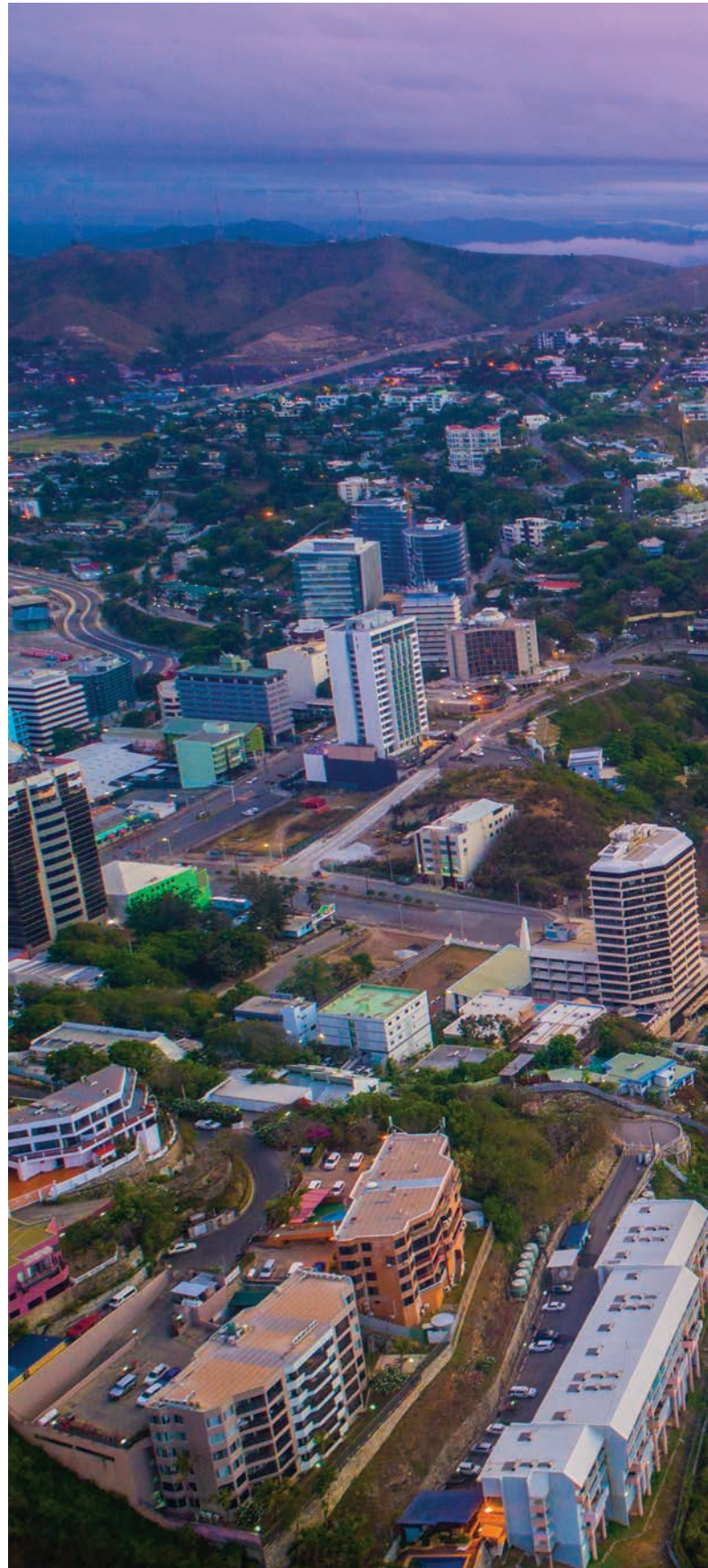
At the end of 2019, new Treasurer Ian Ling-Stuckey delivered a 2020 National Budget with a record K4.63 million deficit, projecting GDP growth of just two per cent for 2020 – down from 2.9 percent in 2019 (both the Asian Development Bank and ANZ Bank have similar 2020 predictions).

The large deficit will ensure that record capital expenditure of K5.98 billion (US\$1.75 billion) will be preserved for spending on infrastructure (including the newly dubbed 'Connect PNG' program, aimed at building economic growth corridors across the country), in spite of lower-than-expected government revenues. The Budget also contained tax concessions aimed at encouraging the development of small and medium enterprises.

Meanwhile, Minister for State Enterprises Sasindran Muthuvel has announced that 2020 will be the year of 'major restructuring' of state-owned enterprises in 'key sectors such as energy and telecommunications.'

PNG's capital Port Moresby is witnessing a steady stream of new commercial and residential developments.

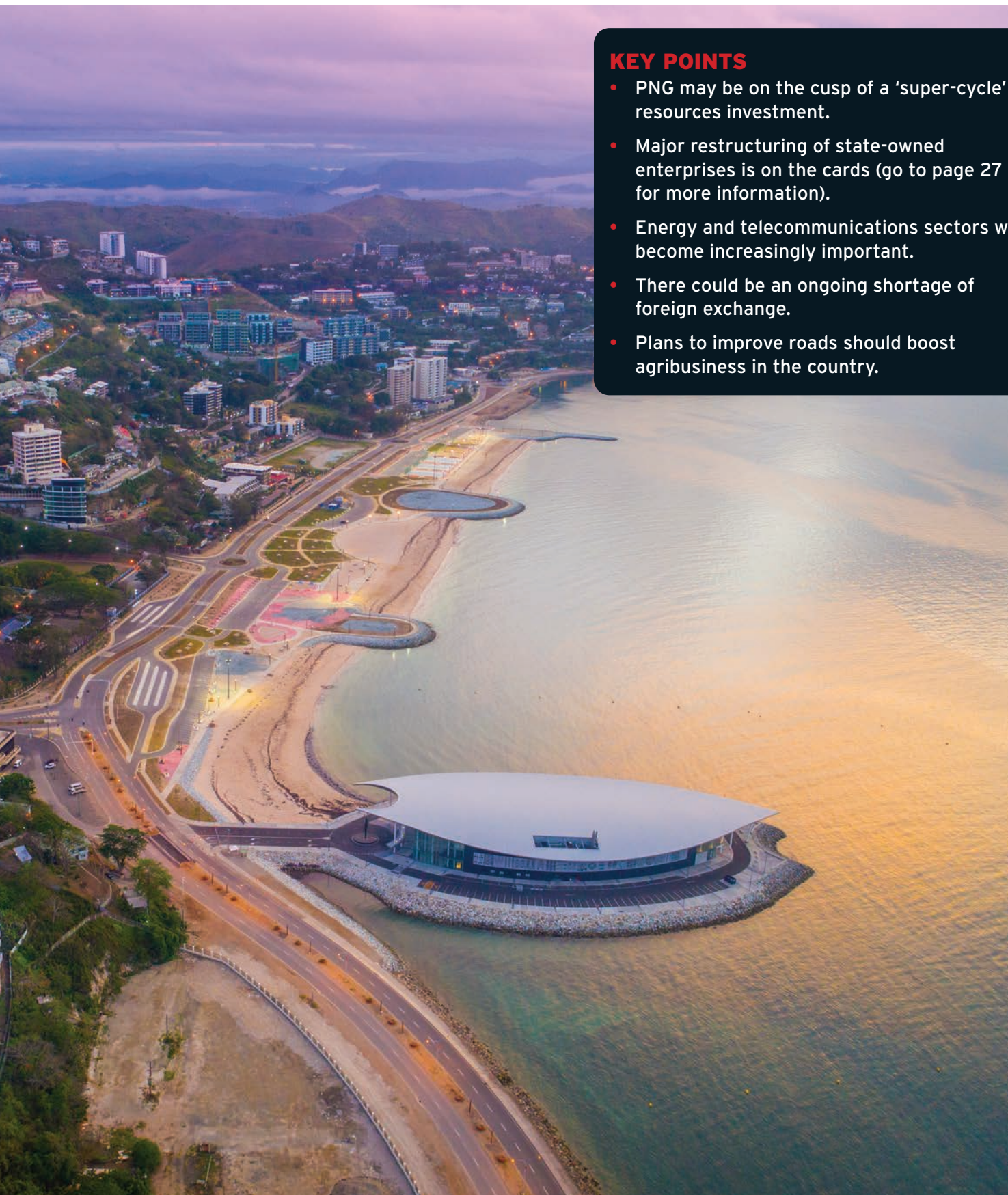
Credit: David Kirkland



PNG's economy in 2020

KEY POINTS

- PNG may be on the cusp of a 'super-cycle' of resources investment.
- Major restructuring of state-owned enterprises is on the cards (go to page 27 for more information).
- Energy and telecommunications sectors will become increasingly important.
- There could be an ongoing shortage of foreign exchange.
- Plans to improve roads should boost agribusiness in the country.



Different times

However, while there are similarities between 2013 and 2020, there are also significant differences.

In 2013, PNG's economy was contracting after a period of frenetic business activity related to the completion of the ExxonMobil-led PNG LNG Project, PNG's first gas project. In 2020, PNG is on the cusp of what ANZ has described as a potential 'super-cycle' of resources investment – potentially the largest wave of investment ever to hit the Pacific's largest economy.

This wave could see the creation of PNG's second LNG project – the US\$10 billion Total-led Papua LNG – together with major new copper–gold projects: the Newcrest Mining/Harmony Gold Wafi-Golpu joint venture and PanAust's Sepik Development Project. (At the time of writing, a third LNG project, P'nyang, looks unlikely to progress promptly but is still a longer term possibility—see page 28.)

Allied to an expansion of PNG LNG, these projects have the potential to transform PNG's economy in the 2020s.

Another difference is the country's capacity to accommodate such major projects.

There is no question that the country suffered considerable growing pains during the last LNG construction boom. Its ports and airports were congested and inefficient; insufficient office space, warehousing and accommodation drove rental prices through the roof and there were major skills shortages.

The country is arguably much better placed in 2020. The capacity and operational efficiency of its two major ports have improved greatly, with the opening of Port Moresby's new port at Motukea Island and the expansion of the country's busiest port in Lae (see page 42). A major program of investment in the country's airports continues, with key airport Lae Nadzab scheduled for major redevelopment this year.

While skilled labour of all kinds remains very much in demand, PNG now possesses a body of expertise in gas projects it did not possess a decade ago, and better training facilities, such as the Kumul Petroleum Academy.

AMBITIOUS PLANS FOR PAPUA NEW GUINEA'S STOCK MARKET

In December 2018, Bank South Pacific sold its 62.5 per cent share to Pacific Capital Markets Development (PCMD), which then became the new owner of Papua New Guinea's stock market, which has been renamed PNGX. Chairman David Lawrence believes the move has created an opportunity to 'tap into the potential' of the country's capital markets.

The new owners have a five-year development plan. One step being explored is listing debt securities, including government bonds, on the exchange. This would for the first time in PNG create a secondary bond market. At the moment, investors who buy government bonds cannot trade them; they must hold them to maturity.

'If you look at a normal development cycle for an emerging market, you develop the government bond market first, then the corporate bond market and then the equity market. PNG had an equity [share] market for 20 years so it's going back to basics, working with the Bank of PNG to develop the corporate bond market. That gives you a base level pricing mechanism.'

Another initiative would be



Frank Dunphy of PNGX Markets Limited (left) with Paul Sayer, CEO of PNG's largest superannuation fund, Nambawan Super.

Credit: BAI

to allow Papua New Guinean companies to list debt securities (corporate bonds) first, then move to listing their shares (offering equity). Lawrence likens this to having 'training wheels' for companies seeking to become publicly owned.

Another priority is to roll out a series of six indices for the PNG market. These will provide investors with performance statistics on industry sectors, rather than individual companies, and are a first step towards

investing in those sectors. They are common in developed markets and are used by investors to spread their exposure.

The government intends to make the Securities Commission of PNG (SCPNG) an independent, standalone regulator for PNG's capital markets.

'We would like to have the Port Moresby Stock Exchange up and going; independent without any influence from the Government or from anyone,' said former Commerce Minister, Wera Mori.



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IN MANY WAYS, IT WILL BE BUSINESS AS USUAL, WITH FOREX STILL TOUGH AND MANY WAITING ON A LARGE PROJECT ANNOUNCEMENT.

John Byrne

The past seven years have also seen a steady stream of new office and residential developments, especially in the capital, Port Moresby. This year is expected to see the commencement of Steamships' 21-storey Harbourside South complex, progress on stage two of Star Mountain Plaza (stage one included PNG's first Hilton Hotel) and the ongoing expansion of Harbour City in Konedobu.

Questions

While, PNG is better placed for the next cycle of investment, what these businesses are asking in early 2020 are: when will the cycle start, and what do we do while we wait for it?

Even assuming resources projects receive a prompt green light, 2020 is set to be a quiet year for business in PNG. The country's largest bank, Bank South Pacific, is reporting 'minimal' growth in lending, and the country's major business chambers reported subdued trading through late 2019 and into 2020.



In spite of the progress of the past decade, telecommunications remains a sector requiring further investment. Credit: BAI

'In many ways it will be business as usual, with forex still tough and many waiting on a large project announcement,' says John Byrne, President of the Chamber of Commerce in Lae, PNG's manufacturing hub, which is set to benefit particularly from Wafi-Golpu.

'We've got to trade through [2020] regardless of whether Papua LNG happens or it doesn't, and I think we're quietly optimistic,' notes Cameron Mackellar, CEO of major retail chain, Brian Bell.

Meanwhile, Byrne's Port Moresby counterpart sounds a note of caution.

'Unless we hear a positive announcement on one or more resources projects, there's nothing new to stimulate the economy, and therefore sales will remain as they are now, which is flat-to-going backwards,' says Rio Fiocco, President of the Port Moresby Chamber of Commerce and Industry.

Indeed, in its December 2019 outlook for PNG, ANZ Research warned that 'loss of business confidence because of political instability, delays to commencement of new large gas and mineral projects, and continued misalignment in the exchange rate and associated unavailability of foreign currency are also important factors behind the weak revenue trend.'

Impediments

The latest annual PNG 100 CEO Survey, run by Business Advantage International in association with Westpac (see page 16), confirms the ongoing shortage of foreign exchange as the major impost on business.

Since 2015, this has prevented the free flow of dividends out of the country and slowed down payments to overseas suppliers. In spite of recent foreign currency inflows from the Asian Development Bank and Australia's Export Finance Corporation, the situation has only intermittently improved.

Hulala Tokome, General Manager of PNG's largest purchaser of foreign exchange, Puma Energy, sums up the challenge:

'It's been a case of tightening our belts as well and, at the same time, being a bit more resilient in the way we do things.'

The main cause of the shortages, Bank of Papua New Guinea Governor Loi Bakani tells *Business Advantage PNG*, is a lack of activity of the kina (the national currency) in the interbank market: 'where banks can sell their surplus foreign currency and those who need it can buy it.'

Until resources investment returns to PNG and overseas demand for kina-denominated assets increases (the central bank's work with the national stock exchange, PNGX, to market government securities internationally should help), the foreign exchange situation in PNG is likely to remain challenging.

Preparations

While PNG awaits the commencement of the next wave of resources investment, there is still plenty to do.

‘We’re using this lull to prepare for the future, putting the systems in place and buying the equipment,’ says Anil Singh, Chief Executive Officer at ICTSI South Pacific, which runs PNG’s two largest ports.

Other infrastructure is also improving, most notably in telecommunications.

PNG’s internet connectivity received a major boost at the start of 2020 with the completion of the Coral Sea Cable System, the fibreoptic undersea cable that now connects the country to Australia and the Solomon Islands. Immediately, industry regulator, the National Information and Technology Authority, mandated a 70 per cent drop in wholesale internet prices, which is likely to provide a boost to business and consumers.

The job of bringing internet to the masses through a National Transmission Network is very much a work-in-progress, but the expected completion by state-owned wholesaler PNG DataCo in 2020 of a domestic fibreoptic network around PNG’s coastline – the Kumul Submarine Domestic Network – will represent another major advance (see map on page 30).

The past few years have also seen a growth in local food production – including fresh fruit and vegetables, dairy produce and meat – partly in response to the difficulties of funding imports and partly due to a growing middle class.

BOUGAINVILLE NEGOTIATIONS

At the end of 2019, the people of the Autonomous Region of Bougainville (ARB) – one of PNG’s more remote island provinces – voted overwhelmingly for independence from Papua New Guinea. This vote, while not binding, will trigger delicate negotiations this year between a national government understandably keen to maintain a unified country and an ARB government with a clear mandate to pursue independence.

Already, the national government has indicated a willingness to provide greater financial support to the ARB, with Prime Minister Marape announcing a 10-year K1 billion (US\$287 million) infrastructure plan for the region. After the referendum result was announced, he also raised the possibility of handing over the state’s 36.4 per cent share in Bougainville Copper Limited (BCL) to Bougainville, which would make the ARB the majority shareholder.

This last move could increase the prospect of BCL participating in the reopening of the giant Panguna copper mine on Bougainville. Many accept that a re-opening of the mine is a necessity if the island is to achieve economic independence. The mine was closed in 1989 due to civil unrest but estimates suggest it still has 30 years of reserves, worth some US\$75 billion (K252 billion).



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Greg Pawson, CEO of Kina Bank. PNG's second-largest bank received a US\$10 million investment from the Asian Development Bank in 2019. Credit: Kina Bank

'We keep growing our local produce and cutting back on the imports,' says Mahesh Patel, CEO of the country's largest retailer, CPL Group. We're encouraging farmers to grow more and more. However, he observes, 'the biggest challenge is logistics.'

The launch of PNG's new 20-year National Road Network Strategy in 2019 was an encouraging start. Business will be hoping that new funding, such as the US\$1 billion being provided by the Asian Development Bank for the renovation of the critical Highlands Highway, will be forthcoming.

In Port Moresby, the electricity generation situation has improved with the commissioning of NiuPower's 58-megawatt power plant – the country's first gas-fired power station – but state utility PNG Power remains under-capitalised.

Economic vision

While the new Marape government is still establishing its credentials, arguably there is still broad political consensus about PNG's long-term economic goals, which are set down in the Vision 2050 national strategic plan, first published in 2011. This is itself broken down into five-year medium term development plans, aligned to the country's fixed five-year parliamentary terms.

The guiding economic goal of Vision 2050 is shifting PNG's economy from a reliance on mining and energy to reliance on agriculture, forestry, fisheries, eco-tourism and manufacturing.

Indeed, Prime Minister Marape emphasised this continuity of policy by urging senior bureaucrats to measure their work programs for 2020 against this national planning blueprint in an address at the start of 2020.

Key to the vision will be the creation of more SMEs. Following recent taxation measures announced in the 2020 National Budget and earlier government procurement guidelines that favour local business, 2020 should see further details on the government's plans to give small and medium enterprises better access to cheap finance, initially through the National Development Bank.

If PNG can manage the current hiatus, generally there is confidence in the country's medium-to-long term prospects among business leaders.

'2020 will be a difficult year but we would also suggest it is a transition year given the government's initiatives,' says Greg Pawson, CEO of what is now PNG's second-largest bank, Kina Bank, following the completion of its acquisition of ANZ's PNG retail banking business in 2019. 'In the immediate future, a decline in discretionary spending and continuance of a two-speed economy reflects the general weakness in the domestic economy. But we expect the resources export sector to remain buoyant.'

With international markets carrying their own uncertainties, having trade and balance of payments surpluses will provide PNG with some stability while its economy transitions. ♦

Papua New Guinea in brief

Population:	8.6 million (2018, World Bank)
Capital:	Port Moresby
Surface area:	463,000 sq km
People:	Melanesian, Papuan, Negrito, Micronesian, Polynesian
Time zone:	GMT +10 hrs
Business language:	English
Political status:	Parliamentary democracy
GDP:	US\$23.43 billion (2018, World Bank)
GDP growth:	2.1 per cent (2020 forecast, Asian Development Bank)
Inflation:	3.8 per cent (2020 forecast, Asian Development Bank)
Currency:	PNG kina
Major industrial sectors:	Mining, gas/energy, crude oil, petroleum refining, palm oil, forestry, coffee, fisheries, construction, tourism, manufacturing
Exports:	Liquefied natural gas (LNG), oil, gold, copper ore, palm oil, cocoa, coffee, seafood, copra, spices
Major export markets (in alphabetical order)	Australia, China, Germany, Japan and the Philippines
Imports:	Machinery and transport equipment, manufactured goods, foods, fuels, chemicals
Major import markets:	Australia, China and Singapore
World Bank Ease of Doing Business 2020 Ranking	120 out of 190 economies



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Tripping point

Papua New Guinea has all the ingredients to become the next 'hot' tourist destination, so why is it so overlooked?

By Robert Upe

Every year, esteemed travel publications release their 'hot' lists of places to go, and rarely, if ever, is PNG mentioned.

National Geographic nominated Mexico, the Peruvian jungle and Oman among its most recent recommendations. *Lonely Planet* said Bhutan is a real-life Shangri-La that should be visited in 2020. *Travel + Leisure*, meanwhile, directed it readers to the Andaman Islands.

'The Andamans seem almost too perfect to be real, with unspoiled beaches, clear water, coconut trees, and tropical mangroves,' the magazine says.

This sounds like PNG to me!

The Australian-based tour company Intrepid Travel rates PNG as the 'most under-touristed' country in the world.

Although tourism numbers to PNG are improving, with more than 95,000 visitors going there in 2018 (up 9.5 per cent from 2017), it remains a mystery destination to most of the world.

That's perfect for those who seek adventure in less-crowded places.

Whether you're hiking the 96-kilometre Kokoda Trail, scuba diving over a World War 2 plane wreck, fishing for a Papuan black bass, or wandering through the rainforest in search of the bird of paradise, the niche is ready to be explored.

In paradise

Where else in the world can you have your own island for the night without spending a fortune?

I have stayed on deserted Kabakon Island in East New Britain Province, organised by Kokopo Beach Bungalow Resort. Villagers from a nearby island garden work on Kabakon during the day but paddle back to their home island each evening. They leave you in peace with an open fire (for cooking) and a



Papua New Guinea's famous Asaro Mudmen.

simple grass-thatched hut for shelter.

Or how about a remote river adventure? A few years ago, I travelled down the Karawari River with Trans Niugini Tours.

We were surrounded by jungle as far as you can see and at one point it was eight hours downstream to the nearest road and then another eight to the nearest settlement.

Our group of six didn't see any other tourists along that stretch of river and were told the next group was not due for several weeks.

Where else in the world can you travel without seeing other tourists?

We stopped at villages where locals greeted us warmly, listened to the songs of the jungle birds and overnighted at Rondon Ridge, a lodge where Rolling Stone Mick Jagger once stayed.

On the same trip, we saw big waterfalls, thriving town markets and came face-to-face with Huli Wigmen and Asaro Mudmen, two of PNG's most distinctive cultural groups.

PNG's festivals and shows – the Mount Hagen Show and Goroka Show among them – are a major drawcard for the country. Here, you can see the gathering of cultural groups in traditional costume and enjoy *sing-sing* performances of dance and music.

Rustic charm

PNG's lodges and resorts have their own charm. Nusa Island Retreat is a short boat ride from Kavieng in New Ireland Province and has overwater bungalows made from bush materials; Doini Island Plantation Resort has beachfront bungalows and access to waters with manta rays; Nuli Sapi is affordable for backpackers; and there are resorts and lodges scattered the length and breadth of the country. One of the latest to open is the world-class Loloata Private Island Resort, about 30 minutes from Port Moresby.

Elephant in the room

Part of the reason for low visitor numbers is that PNG is perceived as dangerous. It's true that you need to take precautions in Port Moresby and Lae but, once out of the larger cities, things calm down a lot.

It really is a case of using common sense and, if in doubt, ask the locals whether it's safe to go out and about.

That way, you'll be able to explore one of the greatest adventure countries in the world – one the magazines won't tell you about. ♦

Robert Upe is Editor of *Paradise*, the in-flight magazine of PNG's national airline, Air Niugini.

Credit: PNG Tourism / David Kirkland

NEW ISLAND RESORT OPENS IN PNG

Port Moresby now has an international-standard resort on its doorstep.

Loloata has changed remarkably over the past few years. You still reach it along the Magi Highway, which has been improved greatly. But, once you are there, set to gaze across the bay to the mainland is a new 68-room resort, complete with two restaurants, a swimming pool, recreational beach, spa, conference centre and 22 eye-catching overwater villas.

The development has been financed by the 555,000 members of local superannuation group Nasfund and was built by PNG's Lamana Group, which also constructed the Taumeasina Island Resort in Samoa, the Grand Pacific Hotel in Fiji and the Heritage Park Hotel in Honiara.

According to Acting General



Credit: BAI

Manager Jayesh Naduvil, the resort is aiming for other markets: conferences and events during the week, and short getaways and day trippers at the weekend.

Its smart new conference centre has already hosted several events for up to 220 people, while the weekend sees the resort transform.

Loloata Island sits on the edge of the Papuan Barrier Reef and there are 29 dive sites around the island where experienced divers can explore its reefs, spectacular sealife, shipwrecks and even a World War 2 Boston bomber.

If you're not a diver, the resort offers boat trips to nearby Lion Island, where there are some remarkable snorkelling opportunities, while paddleboards and kayaks are provided to guests free of charge on the main beach adjacent to the Beach Club.

Free internet, room service and TV are now expected in Port Moresby but it's impressive that you can find them on an island the size of Loloata - and a strong 4G phone signal too.

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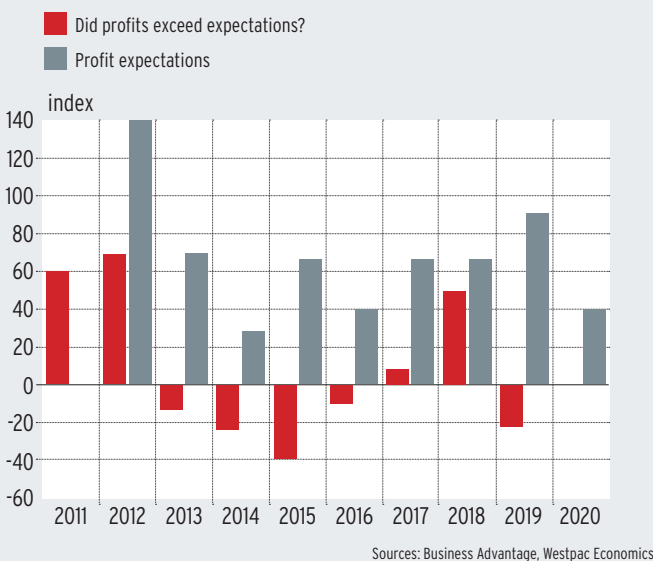
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The 2020 PNG

Business Advantage International has run a survey of senior PNG executives every year since 2012. Known as the **PNG 100 CEO Survey**, its eight years of data reveal enlightening trends about the state of business confidence in PNG. Westpac Bank's Senior Economist Justin Smirk identifies five key highlights from the 2020 Survey.

BUSINESS ADVANTAGE – PNG PROFITS

From the recovery through 2017 and 2018 came the disappointment of 2019



1. Despite significant volatility, PNG businesses remain optimistic

Each year, the survey asks business leaders whether profits had met their expectations. Through the last eight years, profit expectations remained positive, although they did ease through the 2013 and 2014 downturn.

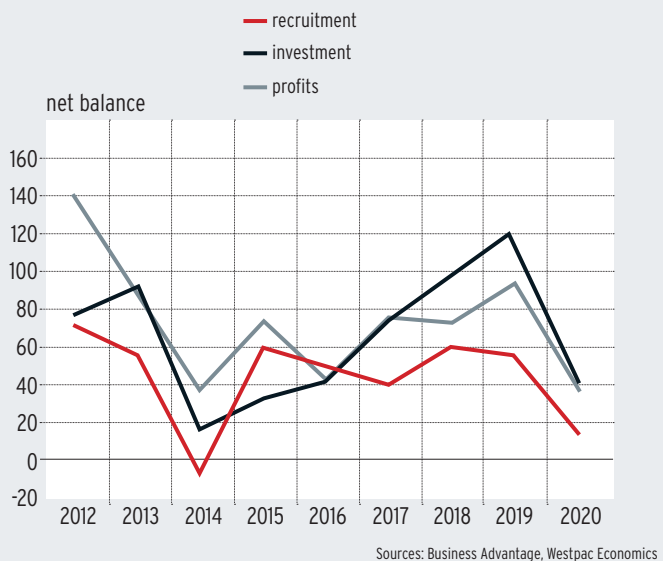
Through 2013 to 2016, reported profits were poorer than expected – local businesses were surprised by the underlying weakness of the domestic economy following the resources boom.

Profits outperformed expectations through 2017 and 2018 as the economy recovered, only to turn south again in 2019 when profits significantly underperformed.

For 2020, profit expectations remain positive but the improvement on the previous year is the smallest since the post-resources boom funk of 2014. Firms are less upbeat than they were in 2019, even though profits underperformed expectations that year.

PNG BUSINESSES REMAIN POSITIVE THROUGH TOUGH TIMES

Weighted percentage expecting a better outcome less those expecting worse



2. Recruitment, investment and profit expectations all eased for 2020, with formal employment expected to stall

The survey also asks executives for their expectations on profits, recruitment and investment for the year ahead.

The weighted net balance of expectations for all three remains positive for 2020 but at less than half of what it was in 2019.

Following a disappointing year, the responses suggest firms are expecting at best a modest rebound in 2020. Investment and recruitment are more upbeat than the 2014 low, while profits are on par.

We should note that, outside of 2014, recruitment has been expected to grow each year in the survey; the official data on formal employment, however, has been more volatile. This suggests that, allowing for the upward bias in employment expectations, PNG businesses' expectations are pointing to formal employment stalling in 2020.

100 CEO Survey

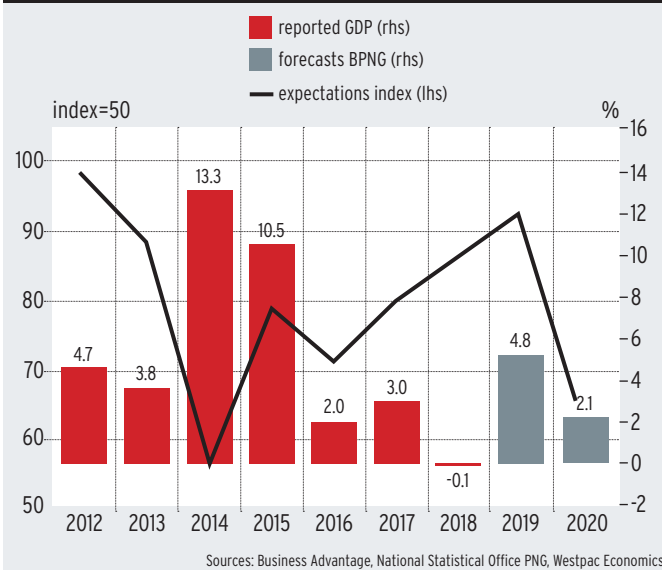


Business Advantage in association with



EXPECTATIONS vs TOTAL GDP

Wild swings in resources driving volatile headline growth



3. The volatility of the resources sector means total GDP is not a good representation of local business conditions

From the recruitment, investment and profit expectations series, Westpac has compiled a single Business Expectations Index for PNG. From the data, it is clear that the index is not being driven by measured GDP growth, which is dominated by the large swings in resources activity. This argues for caution when using headline GDP as a guide for business plans. Westpac has found that non-mining GDP is a better fit.

OUR SURVEY SAYS ...

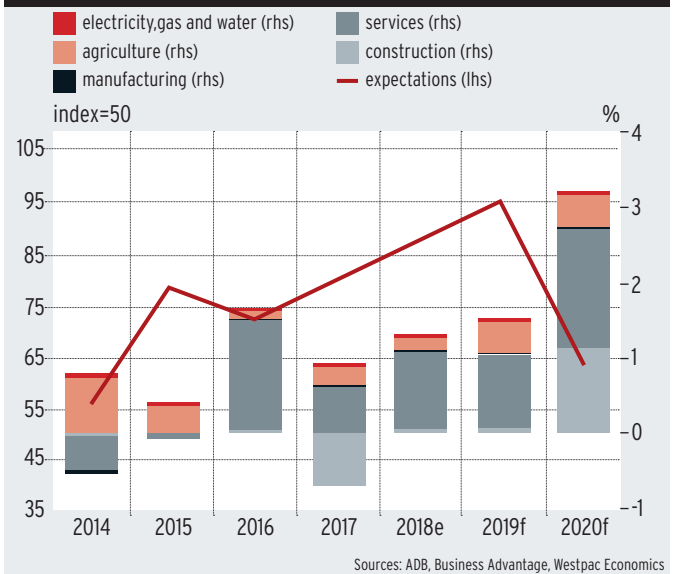
Westpac's Justin Smirk gives us his key points from our 2020 survey.

- Profit expectations for 2020 remain positive.
- GDP in 2020 will be more modest than initially estimated.
- Forex will be a significant constraint this year.
- Formal employment could stall in 2020.



EXPECTATIONS LESS OPTIMISTIC THAN FORECASTS

Questions surround forecast bounce in construction and services



4. The moderation in expectations raises questions about the outlook for 2020

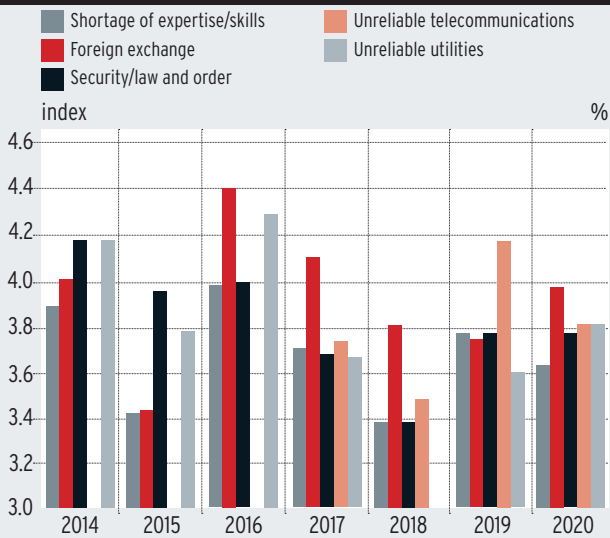
Back in April 2019, the Asian Development Bank (ADB) was forecasting economic growth in PNG to slow from 3.7 per cent in 2019 to 3.1 per cent in 2020. This slowdown is driven by mining growth stalling from 2.1 per cent in 2019 to -0.1 per cent in 2020.

Ex-mining GDP was forecast to lift from 1.6 per cent to 3.2 per cent, driven, mostly, by a large lift in construction employment and an acceleration in growth from services.

The ADB has revised its forecast to 4.8 per cent for 2019 and 2.1 per cent for 2020 (same as the Bank of PNG) but at the time of writing we don't have an update on the industry contributions. As such, we can't be confident what the new non-mining profile would look like. The Business Expectations Index suggests, however, that 2020 should be significantly more modest than the initial estimate.

TOP BUSINESS CONSTRAINTS IN PNG

FX was back as the top concern for 2020



Sources: Business Advantage, Westpac Economics

5. Forex liquidity has improved, but firms see it as a key constraint in 2020; communications have improved, but utilities are seen as more unreliable

Each year, *Business Advantage PNG* asks business what their top constraints are. Since 2014, the top five constraints have been skill shortages, foreign exchange (forex) shortages, security, unreliable telecommunications and unreliable utilities.

From 2016 to 2019, forex liquidity improved and dropped back down the list, but it has popped back to be the most significant constraint for 2020.

Telecommunications have improved from 2019 but are still a bigger constraint than they were in 2017, as are utilities and security. It is disappointing to see these key issues deteriorate further.

But it is not all bad news: logistics have improved significantly from 2016, as have rental costs. And the Bank of PNG can take a bow, as their monetary policy setting has helped to rein in inflation, which is seen as less of a constraint than it was in 2014. ♦

The 2020 PNG 100 CEO Survey was conducted by Business Advantage International between October and December 2019. The survey included senior executives from a representative sample of PNG's largest companies, across all sectors of the economy.

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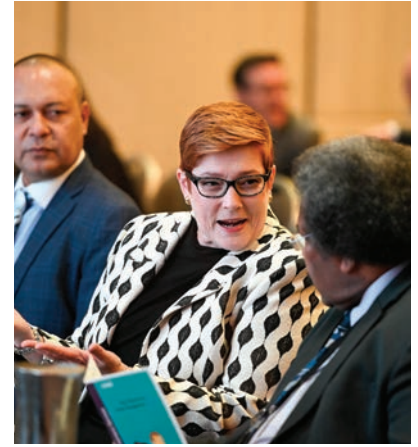


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Left: KPMG PNG's Managing Partner, Zanie Theron. Top: Australia's Minister for Foreign Affairs, Marise Payne. Above: PNG's Minister for Public Service, Soroi Eoe, [left] and PNG's High Commissioner to Australia, John Ma'o Kali.

Credit: BAI

Future-proofing PNG: What the next decade holds

The 2019 Business Advantage Investment Conference showed how technology, entrepreneurship and regional growth will shape the next decade.

By David James

The 2019 Business Advantage Investment Conference, conducted in August at the five-star Shangri-la Hotel in Sydney, Australia, was an opportunity to consider the most pressing business and investment issues facing PNG into the next decade.

The country is 'positioned between the rising wealth of Asia and the established wealth of Australia,' observed keynote speaker Bernard Salt, Managing Director of The Demographics Group in Australia. He evaluated demographic trends in the three export markets that matter most to PNG: Australia, China and Japan.

China and Japan are growing as PNG's trading partners.

In 2010, 46.6 per cent of PNG's trade went to Australia. Japan was its second trading partner with 14.8 per cent, the Philippines was third at 7.3 per cent, and China fourth at 6.6 per cent. However, by the June quarter of 2019, Australia's share had shrunk to 25.3 per cent. China's share had risen to 21.5 per cent, Japan's to 19.9 per cent, and the Philippine's had fallen to 3 per cent.

Salt outlined differing prospects for the three biggest markets, adding that targeting those countries' domestic markets directly may not be the most effectual strategy for Papua New Guinean companies.

'I would say PNG would want to do business with corporations – not necessarily to sell product into the domestic market, but to sell product into companies' supply chains.'

Salt contended that consumers in PNG's key export markets, which he described as 'entitled, ageing, aspirational', are likely to change their consumption habits over the next



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10 years and may undergo a 'fundamental shift in consumer behaviour.'

He warned that PNG and other Pacific nations must navigate the coming decade carefully. 'There may be pressure across the region to align with trading blocs. PNG must also invest in key infrastructure, develop important relationships, and respond to shifts in first-world consumer behaviour. "Steady as she goes" won't be good enough in the 2020s.'

Digital transformation in the 2020s

A major focus of the conference was the opportunities that will flow from improved internet in PNG, with the fibreoptic Coral Sea Cable System now complete.

Futurist and tech entrepreneur Mark Pesce said the configuration of physical digital architecture in PNG was 'likely to be more varied and interesting than almost anywhere else in the world.'

He said the physical layer of digital technology will be a patchwork of different kinds of signal technologies, 'some are optical, some will be electrical, some will be radio, and, as a result, the investment opportunities in PNG will be varied.'

Pesce also noted there has been a dramatic growth in the number of internet service providers (ISPs) in the Pacific nation precisely because these connections are coming in. He anticipated that, once there is cloud computing infrastructure in PNG, businesses will have the capacity to deliver cloud-first services 'for PNG by PNG.'

He also said the internet's ability to enable 'communities

IF WE CREATE THE NECESSARY
STRUCTURAL CHANGES, THEN YOU WON'T
RECOGNISE PNG IN TWO YEARS.

Sundar Ramamurthy

to learn from one another and then put what they learn to work' would benefit the country's agricultural sector in particular.

Meanwhile, Sundar Ramamurthy, Managing Director of Invoc Pty Ltd and former CEO of Bmobile and DataNets in PNG, argued for greater competition in the ICT space.

'If we create the necessary structural changes, then you won't recognise PNG in two years,' he predicted.

A tale of two cities: Lae and Port Moresby

An important discussion that will progress well into the next decade is about the potential synergies between PNG's two biggest cities – Lae and Port Moresby.

Lae, the country's second-largest city, is emerging as a key location for investment. Far from drawing investors away from capital Port Moresby, a buoyant Lae could be good for both cities.

John Byrne, President of the Lae Chamber of Commerce, told the conference that Lae is shaking off its tag of being

THE NEXT DECADE IN PNG: HOT TOPICS FOR INVESTORS

New laws for resources

Gerea Aopi, President of the Chamber of Mines and Petroleum, and Peter Graham, Managing Director/CEO at Ok Tedi Mining, discussed the prospects for the mining and petroleum sectors with new laws on the way. They looked at barriers to mining investment and how the sector will respond to potential labour shortages as and when the Papua LNG and Wafi-Golpu projects start (turn to page 26 for more on the sectors). In spite of the expected regulatory changes, Graham remained confident: 'PNG respects contract sanctity; if they do a deal, they will stick to it. Historically, PNG has never messed with an investment once it has been in place.'

Promotion of SMEs

With the development of SMEs a stated priority for government, three entrepreneurs showed

how they have innovated their way to business success: Vani K Nades, Director of Operations for Emstret Holdings (PNG's first co-working space and an ISP); Bridie Ohlsson, Co-founder and CEO of blockchain-based agritech business Geora, and Akae Pa'asia, Director of Beach Accounting and Advisory, a company using cloud-based accounting software to service SMEs.

Focus on regions

A session on Gulf Province explored the rich potential of the region. An International Finance Corporation study has identified the province as the conduit for a second transport route to PNG's Highlands. Meanwhile, Peter KenGemar, Project Director, outlined plans for the K5 billion Ihu Special Economic Zone (turn to page 24 for more on special economic zones).



Vani K Nades of Emstret Holdings.
Credit: BAI

International finance

The coming decade will see PNG leverage concessionary finance as never before as it seeks to develop the infrastructure necessary to support economic growth. One source of funds is likely to be the newly constituted United States Development Finance Corporation, which will be involved in financing the PNG Electrification Partnership, a joint US-Australia-Japan-New Zealand project aimed at bringing electricity to 70 per cent of PNG's population by the end of the decade.

the 'pothole city' thanks to improvements in its roads and the announcement of a new A\$800 million (K1.87 billion) international airport. 'Once you have an international airport and a highway you have real access – and that is what we are really keenly looking for,' he said.

The Vice-President of the Port Moresby Chamber of Commerce and Industry (POMCCI), Peter Goodwin, said more investment in Lae would be a boost for the capital. 'There isn't any competition between Lae and Moresby; a strong Lae will only complement Port Moresby.'

Goodwin claimed Port Moresby is undertaking a modernisation program to tackle crime and violence, and its informal settlements are slowly being converted into suburbs.

POMCCI's Vice-President also pointed to a strong business community and improvements in local government as reasons to invest in Port Moresby. The PNG Government recognises the growth of the country is closely aligned to that of its business community. If you foster an environment for business people to do their thing with little interference, then there will be results, he said.

Unlocking untapped capital

The investments of PNG's superannuation funds are heavily weighted towards cash and government bonds. But many other opportunities could be developed, senior executives of the country's two big super funds told the conference.



'There's actually enough capital within PNG to do an awful lot of things but it's stagnant in pools,' observed David Brown, then-Chief Investment Officer for NASFUND. What is needed, he said, is more recycling of capital.

'If you're sitting on real estate, you can't liquidate it quickly. But if we were able to put that into a Real Estate Investment Trust (REIT) structure, we would be able to sell portions of that and recycle that capital into more development.'

Brown pointed out that regulations currently don't allow this kind of structure in PNG.

Paul Sayer, Chief Executive Officer of Nambawan Super, said 45 per cent of its K7.5 billion (US\$2.2 billion) fund was in fixed interest and cash.

'Predominately that's in government inscribed stock or treasury bills ... We like the yield that we receive on those bonds, and the government hasn't defaulted on payments.'

He said, however, that, with the national government 'possibly doing further debt raising overseas', it may mean that the market for local debt will shrink.

Another potential source of capital for PNG is in Australia's super funds, which have A\$2.8 trillion (K6.44 trillion) under management. Sayer told the conference they are most likely to be interested in infrastructure investment.

'The big industry funds in Australia have got about eight-to-10 per cent invested in infrastructure: power, ports, utilities.

'They are long-term investors. They're typically looking for that patient capital and getting a return.' ♦



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New economic zones

The development of special economic zones promises to boost the economy and help to create thousands of jobs.

By Kevin McQuillan

At the end of 2019, PNG's Parliament passed the *Special Economic Zone Authority Act*, which provides a new policy and regulatory framework for the setup and operation of Special Economic Zones (SEZ) across PNG. It also lays out the benefits and concessions for investors, operators, suppliers and developers within each zone.

In early 2020, Prime Minister James Marape said a 10-year tax holiday would be available for investments of US\$20 million or more.

Zones are planned for Gulf Province, West Sepik, Manus Island, Madang, Bougainville, Lae and Paga Hill in Port Moresby.

One of the first projects to benefit is likely to be the Ihu Special Economic Zone (ISEZ) in Gulf Province, the 15-year plan that received National Executive Council endorsement in 2018. This transformative project will be developed in part to take advantage of increased business activity in the province expected to flow from the country's second LNG project, Total's Papua LNG project.

Centred in the under-developed Kikori district of Gulf Province, the ISEZ project comprises a free-trade zone, petroleum park, an industrial zone, a technology park, forestry park, marine park, deep seaport and airport, a waste management facility,



Peter KenGemar, Project Director of the Ihu Special Economic Zone.

Credit: BAI

a township with hotels and resorts, and government and administration area, explains Peter KenGemar, its Project Director.

ISEZ has set up an office in Hong Kong to facilitate marketing and promotion, and to cater for discussions and negotiations for foreign direct investment through private equity capital markets.

'It will mean we can go ahead with developing infrastructure for the project, including a road network link to Kerema, wharves and

jetties, township development, an airstrip, and a clean water and power supply,' says KenGemar.

The cost of stage one is expected to be K5 billion spread over five years. 'We estimate that revenue will be about K10 to K12 billion annually when stage one is up and running. We estimate the ISEZ will create up to 25,000 jobs when it is fully operational and another 25,000 jobs indirectly.'

Kikori District currently hosts the Kutubu Oil export

promise jobs and growth

pipeline and offshore Kumul Marine Terminal.

Tax concessions

In mid-2019, Prime Minister James Marape said Manus would be declared 'as PNG's first corporate tax-free zone.' With the closure of the Australia-funded Manus Regional Processing Centre, the government needs to drive growth and financial investment in the area.

PNG's first proposed SEZ was the Pacific Marine Industrial Zone (PMIZ) in 2004, but it is yet to be completed. Using a concessional loan from China of US\$156 million, the zone was designed to cater for up to 10 tuna fishing and processing canneries, employing up to 30,000 people through either direct employment or associated enterprises. Adding to the viability of the project is the PMIZ's multi-function capability to cater for large containers and cargo ships.

The main obstacle for the PMIZ is the provision

of 30 megawatts of power, and water. 'We need about 30 megawatts of power, which we can't get from [state utility] PNG Power,' former Minister for Commerce and Industry Wera Mori told delegates to the 2019 Business Advantage Investment Conference in Sydney. 'We have to look for an alternative source. It's the same with water. The present water supplying the City of Madang comes out of Gum River, which doesn't have the capacity [for the PMIZ]. We're looking at another source or catchment and putting in a business case to secure funding.'

Government officials have also identified the capital of West Sepik, Vanimo, as having high economic potential, partly because of its proximity to neighbouring Indonesia, and its harbour's suitability as a port. Vanimo's harbour is a busy terminal for round log exports and, under the SEZ concept, a zone could be used to process more timber products. ♦

WE ESTIMATE THE ISEZ WILL CREATE UP TO 25,000 JOBS WHEN IT IS FULLY OPERATIONAL AND ANOTHER 25,000 JOBS INDIRECTLY.

Wera Mori

KEY POINTS

- The Marape-Steven government approved the *Special Economic Zone Authority Act* in 2019.
- Special economic zones will be developed in Gulf Province, West Sepik, Manus Island, Madang, Bougainville, Lae and Paga Hill in Port Moresby.
- SEZ investors will need to provide a minimum of A\$10 million (K23.4 million) to obtain concessions.
- Manus will be declared PNG's first corporate tax-free zone.
- The first proposed SEZ was the Pacific Marine Industrial Zone (PMIZ) in 2004. It is yet to be completed.



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Oil Search has a stake in Papua LNG and P'nyang.

Credit: Oil Search



Big projects, big promises: the next LNG move

Papua LNG, Pasca LNG and P'nyang are three key gas projects that will be on the radar in 2020.

By David James

The petroleum industry in Papua New Guinea is the nation's largest export industry. Liquefied natural gas (LNG) accounts for more than half the nation's total exports and there are also sizeable exports of hydrocarbon condensate and crude oil. PNG has some geographic advantages when it comes to exporting to big markets in Asia, including relative proximity and not having to go through the Strait of Malacca.

PNG became a significant player in the gas industry in 2014, when the US\$19 billion PNG LNG project, headed and operated by ExxonMobil, commenced production. Output increased to an annualised rate of 8.8 million tonnes per annum in the second half of 2018, a 46 per cent rise in initial production rates.

A second major project is the proposed US\$10 billion Papua LNG

project in Gulf Province, which is headed by French oil company Total SA. The gas will be liquefied and purified at two facilities to be built at ExxonMobil's PNG LNG plant in Port Moresby.

It is estimated that Papua LNG will have the capacity to produce 5.4 million tonnes of LNG per year. Total will hold a 31.1 per cent stake in the venture, with ExxonMobil having 28.7 per cent and Oil Search 17.7 per cent. The remaining 22.5 per cent will be held by state-owned enterprise Kumul Petroleum Holdings, with 2 per cent allocated to landowners.

A Memorandum of Agreement was

THE KEY IS TO MAINTAIN FAIR ACCESS TO THE MARKET AND FAIR ACCESS FOR THE COMPETITION.

Jean-Marc Noiray

signed for Papua LNG in 2019 and its next stage will be front end engineering and design (FEED).

Another project with potential is based on the P'nyang gas field, 130 kilometres northwest of Hides (the main source of gas for the PNG LNG Project).

The original aim was to share infrastructure with the PNG LNG project, but the Marape government halted negotiations in early 2020, with government and developers unable to reach a benefit-sharing agreement.

Had both Papua LNG and P'nyang received a green light in 2020, it was expected to have meant almost a doubling of PNG's LNG production from 2024–2025 onwards. Now, it looks like they will be de-coupled, with Papua LNG starting first. Meanwhile, stakeholders are looking for a 'Plan B' for P'nyang (see page 28).

The Pasca LNG project in the Gulf of Papua, PNG's first offshore gas field, is operated by Twinza Oil and is moving towards development. The project is expected to produce 220,000 tonnes of liquefied petroleum gas (LPG) annually, of which 55 per cent will be condensate and 45 per cent will be LPG.

Boost to the economy

The Papua LNG gas agreement also contains provisions for supplying some of the gas for domestic use – specifically electricity generation. There are also national content provisions that mandate work for local contractors.

Managing Director of Total E&P PNG, Jean-Marc Noiray, says the principles of providing local content and domestic gas agreements are not new. 'We have been practicing them successfully for years. The key is to maintain fair access to the market and fair access for the competition.'

Large scale oil and gas projects have boosted the PNG economy, and many businesses are preparing for the same effect with Papua LNG. For example, equipment supplier Bishop Brothers is positioning itself to be a major supplier to the Papua LNG project, according to General Manager Len Pianta. 'We are looking to the future in providing potential site stores in Gulf Province to better service the project.' ♦

Oil change: Kumul Petroleum

Wapu Sonk, Managing Director of Kumul Petroleum Holdings, talks about anticipated changes to the regulatory regime in oil and gas.

Q What's the mission of Kumul Petroleum Holdings Limited?

A When Kumul Petroleum (KP) was founded, it started as a national oil company. Our fiscal regime is different to that of countries such as Malaysia or Indonesia, where national oil companies grow out of taking control of their licenses. A typical national oil company, however, can't develop in a fiscal regime such as ours. So, what we have tried to do is legislate and operate it like one.

KP protects the company and allows it to operate like a commercial entity. Because we are 100 per cent state-owned, we are the national oil company. When you look at the *Oil and Gas Act*, there is no special treatment for KP, we are treated like any other oil and gas company. We pay taxes like any other oil company.

Q What do the changes to the *Oil and Gas Act* mean?

A What these changes will do is allow KP to realise its full potential. It will become what it was meant to be: a national oil company.

It is basically going down the path of the Middle Eastern countries such as Qatar, or Malaysia's national oil company, Petroliaam Nasional Berhad (PETRONAS), which was founded in 1974.

If you like, we are making a correction so that we are where we should have been. KP will market the oil and gas and do auctions. It can then be given to development partners.



[KUMUL PETROLEUM] WILL BECOME WHAT IT WAS MEANT TO BE: A NATIONAL OIL COMPANY.

Wapu Sonk

There will be no need for Treasury or any other government agency. The national oil company will do the deal for the people.

Q What's the timeline for this change?

A We had a target of March 2020, but it has been pushed back to June or July. We are already doing most of the commercial work. There will be an add-on in terms of license management. There will be more technical staff, more compliance. The Department of Petroleum will remain as the policy department.

There will be a change from a mandatory 22.5 per cent (equity). It could be starting from 100 per cent. That is a complete change, the 100 per cent start from all explorations will be 100 per cent. It is a transformational change. ♦

A BRIEF HISTORY OF KP

Kumul Petroleum Holdings Limited is PNG's national oil and gas company. It was created through the *Kumul Petroleum Holdings Limited Authorization Act 2015* and replaced the National Petroleum Company of PNG (NCPG).

Through the Parliamentary Act, KP is mandated to 'protect and maximize the value of the country's petroleum assets so that it can contribute to the maximum wealth for the people of PNG.' KP manages the State's 16.57 per cent equity in the US\$19 billion (K64 billion) PNG LNG project through its subsidiary Kumul Petroleum Limited.

P'nyang: what lies ahead

The ExxonMobil-led P'nyang gas project is in limbo after the Government called a halt to negotiations in early 2020. But resources analysts believe it is cost-competitive in world terms. They examine some of the options available to the various players.

By David James

Saul Kavonic, Head of Equities Research for Oil and Gas at Credit Suisse, says that in terms of overall unit costs, the P'nyang gas project is one of the more competitive projects globally, after factoring in full value chain expenses, including transport.

'At the end of the day, it is a very competitive project on a cost basis,' he says, adding that it 'sits around the bottom tercile [third]' for unit costs on a global comparison.

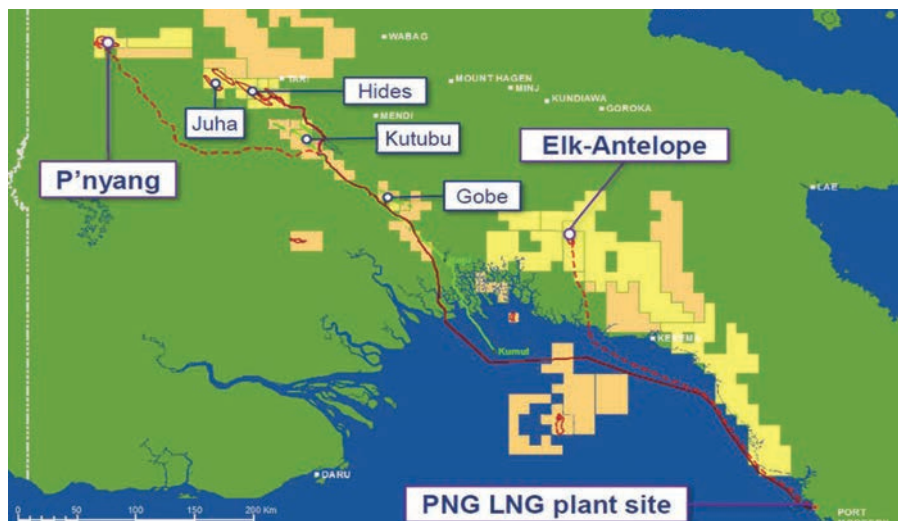
'Despite being one of the more profitable global LNG projects, it still has generous fiscal terms under the old fiscal regime compared to global benchmarks, which goes some way to explaining why the PNG government argued the government should get better terms this time around.'

The concern about the ending of the negotiations, argues Kavonic, is that it will inevitably mean a delay. If the date is pushed out past 2028, he says, 'the appetite to bring on more supply becomes increasingly uncertain'. He believes the 'market window' for the global LNG market will start about 2025.

Logic

David Lennox, Resources Analyst for the Australian investment firm Fat Prophets, agrees that the P'nyang project is 'very likely' to go ahead in some form.

'Logic would tell me it is going to become an operation in due course,' he says. 'It is really the structure around which it all comes together that may raise a few eyebrows.'



Credit: Oil Search

Lennox says the time horizon for LNG investments is 'a lot longer' than five, 10 or 15 years.

'You have a look at the US Energy Information Administration's forecasts and energy demand is going to boom. Within that pie, renewables are going to become a bigger part, but natural gas consumption is forecast to rise quite significantly.'

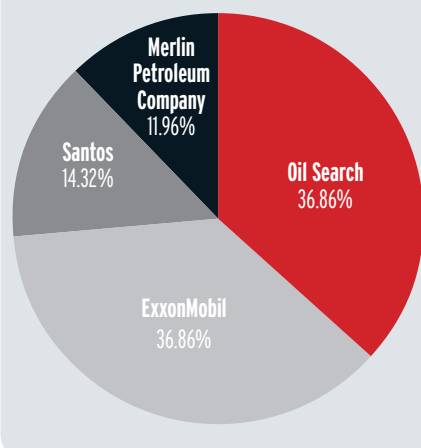
'Maybe the price is \$1.50 btu (British thermal units) now, but in 40 years time you are likely to get \$US50-60 btu. These assets will still be producing then.'

GIVEN THE QUALITY OF THE RESOURCES, THERE IS ALWAYS GOING TO BE INTEREST.

Saul Kavonic

P'NYANG: WHO IS WHO?

These are the companies behind the P'nyang field, which has a certified gross 2C contingent resource of approximately 4.4 trillion cubic feet of natural gas.



National interest

Kavonic says the industry players will now start to look at alternative options.

'Given the quality of the resources, there is always going to be interest and an appetite,' he says.

Kavonic adds that the Government may also start looking at alternative options to monetise their asset.

'You could envisage a situation where the government wants to take back the licences and look to find someone else who is more willing to work with the government on their terms. But that is a long way down the road from where we are today.'

The PNG Government has flagged the possibility of introducing a new *Oil and Gas Act* in 2020, which is likely to give state-owned Kumul Petroleum Holdings Limited the primary role in the development of the country's oil and gas assets (see page 27). ♦

Downstream sector set for expansion

While there is a strong focus on developing PNG's major upstream gas projects, its downstream sector is also receiving investment attention.

This year, gas from the PNG LNG project will power two gas-fired power stations in Port Moresby: the 58 MW plant run by Niupower (a joint venture between Oil Search and Kumul Petroleum) and the 42.2 MW capacity plant run by Dirio Gas & Power, a subsidiary of the Mineral Resources Development Company. Both have power purchase agreements to supply electricity to Port Moresby's grid and will help state utility PNG Power meet the capital's power needs for the foreseeable future.

There is potential to use gas for electricity in other parts of PNG and,

Credit: Puma Energy



A DOMESTIC MARKET OBLIGATION IS EXPECTED TO BE PART OF FUTURE GAS PROJECTS.

notably, a domestic market obligation is expected to be part of future gas projects such as Papua LNG. For example,

Kumul Petroleum is currently examining a project to provide tanks of condensed gas to remote areas to fuel small-scale power plants, as a substitute for diesel.

As well as the supply of fuels and lubricants to business, the presence of major oil companies in the country is also driving the fuel retail sector. ExxonMobil, Total Oil and Puma Energy have fuel retail businesses in PNG and this sector is expanding as the number of vehicles on PNG's roads increases. With many service stations effectively franchised to local businesses, this is helping to develop the SME sector.

At the time of writing, a five-year review by the Independent Competition and Consumer Commission was due to set regulatory arrangements for 2020–2024. This will do much to determine the health of the fuel retail sector in coming years. Puma Energy is the largest player in fuel, and diesel continues to be Puma's largest seller in PNG, followed by aviation fuel and petrol.

The company has just finished a five-year inspection and refurbishment of its Napa Napa refinery plant just outside Port Moresby. ♦


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Economic map of PAPUA NEW GUINEA



Infrastructure

- Airports
- Ports
- Manufacturing
- Thermal power stations
- Hydro power stations
- Power zone substations
- Transmission lines

Mining projects

- Operating mine
- Mine under development
- Possible mine

Petroleum projects

- Oil project
- Possible oil or gas project
- Gas project
- Oil export pipeline
- Gas export pipeline

Primary production

- Livestock
- Fisheries
- Forestry
- Coffee
- Cocoa
- Copra
- Palm oil

Telecommunications cables

- Kumul Domestic Submarine Cable (KDSC)
- Coral Sea Cable System
- PIPE Pacific Cable-1
- Australia-Papua New Guinea-2
- H2 (2022)



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Extracting value in 2020

New mines, new regulations and potential projects may mean a bumper year for the industry.
Business Advantage PNG explores.



Mining has been a critical industry in the PNG economy. Gereia Aopi, President of PNG's Chamber of Mines and Petroleum, observes that it has been the 'backbone' of the economy for over 30 years.

Mining accounted for more than seven per cent of GDP in 2018 and the sector was responsible for 35 per cent of the country's export revenues. Principal mineral exports were gold (24 per cent of export value), copper (6 per cent), nickel (3 per cent) and cobalt (1.8 per cent).

Mineral exports are projected to be worth K10.215 billion in 2020, according to the government's *Medium Term Development Plan 2018-2022*.

Most of PNG's operating mines, however, are located in remote regions. These

Peter Graham, Gereia Aopi and Andrew Wilkins during the 2019 Business Advantage Investment Conference.

Picture: BAI

MINERAL EXPORTS ARE PROJECTED TO BE K10.215 BILLION IN 2020.

include Ok Tedi, Porgera, Ramu Nickel, Hidden Valley, Simberi, Lihir and Kainantu.

There are possible future mines, the most promising of which is Wafi-Golpu, located in Morobe Province, for which a Special Mining Lease has been applied.

Wafi-Golpu is one of the 'premier undeveloped gold-copper projects in the world,' according to Michael Nossal, CEO for Australian miner Newcrest Mining, one of two joint venture partners in the Wafi-Golpu project (the other partner is South Africa's Harmony Gold).

Another prospective project is PanAust's US\$8 billion (K26.5 billion) Frieda River mine on the border of Sandaun and East Sepik provinces, which has been renamed the Sepik Development Project. The developer, a wholly-owned subsidiary of

China's Guangdong Rising Assets Management Co. Ltd, is aiming to create 'a new economic corridor' in PNG's northwest that could give employment to about 5,000 people during construction and increase the GDP by K90 billion over 40 years.

Regulation changes

The regulatory situation for mining is under review. There have been governmental discussions since 2011, which look set to result in legislative changes in 2020.

The revisions being considered could benefit the industry, according to John Lewins, CEO of K92 Mining. 'Exploration licences right now only last two years and then you have to renew them. So, you spend half your life renewing licences. That is going to be pushed out to five.'

Another area of interest is

the variations in the duration of mining licences. A Special Mining Licence (SML) lasts 25 years or more, but a standard mining licence lasts only 10 years. 'They are proposing to do away with that and have a mining licence for 25 years plus. That is quite positive.'

Lewins expects the royalty payments on mining operations to rise. These are currently set at two per cent plus a half a per cent levy for the operating budgets of the Department of Mining and Petroleum and Mineral Resources Authority (MRA). 'We would expect that to go up to three per cent.'

Exploration

Aopi describes exploration for new resource as the 'lifeblood' of the industry but, according to the MRA, mining exploration expenditure dropped by almost 13 per cent in 2018 and it continued to be weak in 2019.

One way to increase it may be to ease restrictions on companies exploring in parallel areas. Lewins says that if a company wants to increase the size of its mining lease in the exploration area because additional reserves were discovered, they cannot do it under the existing *Mining Act*.

'In the new *Act*, we believe

they will bring in something that will allow an extension of a company's mining lease, which should be an easier way of doing things,' he explains.

Debt and equity

Peter Graham, CEO of state-owned Ok Tedi Mining, says that 'one of the real challenges in PNG' is that the government has sought to take significant equity holdings in big resources projects. In order to fund that share acquisition, the government has had to borrow, which has increased the government debt.

'They borrowed extensively to achieve that and then have a huge tail of paying off that debt, with little money flowing to supposed beneficiaries. The government owns 22 per cent of a valuable asset, but it will take the government 10 years to pay off the debt and see something out of the equity ownership,' Graham says.

He believes PNG is likely to focus on different ways of sharing the value.

'Ownership of equity is important, but it is a matter of degree,' says Graham. 'Is 20 to 30 per cent too much? Would it be better to have a lower level of equity and less debt and a higher royalty or export tax to capture some of that value from the resource?' ♦

THE CHALLENGES OF PORGERA

Porgera in Enga Province is a world-class gold mine but, as Executive Director for Barrick (Niugini) Ila Temu explains, it is also one of the world's most difficult mines to operate.

The mine is considered to have good prospects, with the company wanting to increase production by 18 per cent or more. According to Barrick Gold Corporation, Porgera has the potential to deliver 500,000 ounces of gold per year for the next 10 years, with the possibility that the mine will continue for 10 years after that – but the logistical challenges are huge. Temu says the company moves 65,000 tonnes of earth per day (55,000 tonnes is waste). He says that when rainfall is heavy, the mine becomes a 'mud moving operation' rather than a gold mine. 'If you don't have a good dewatering system, you have to stop operations to try to get that water out,' Temu explains.

At the time of writing, Barrick was seeking a 20-year renewal of its special mining lease and negotiations were ongoing.



Credit: Barrick Gold Corporation

THE FUTURE OF OK TEDI

The government-owned copper-gold mine, Ok Tedi, has been a crucial part of the PNG economy since starting operations in 1984. To the end of 2017, Ok Tedi has produced 4.75 million tonnes of copper, 14.6 million ounces of gold and 31.4 million ounces of silver.

Over the 35 years it has been in operation, Ok Tedi has contributed on average almost 8 per cent of PNG's annual gross domestic

product, according to Ok Tedi Mining's CEO, Peter Graham.

The company seems to follow a successful narrative, recently overcoming some operational shortcomings. Between its nationalisation in 2013 and 2018, it increased production by 68 per cent and the amount of ore processed by 10 per cent, and reduced gross costs by 22 per cent. The mine is now in the top quartile of copper mines in

the world. 'Ok Tedi is blessed with a very good ore body, supportive shareholders and a committed work force,' he says.

The current mine life is estimated to be 10 years but, according to Graham, the company is ramping up its exploration, drilling in areas within its lease area that can be developed quickly. He says it is 'imperative' to find additional resources adjacent to the pit.

Hidden Valley
processing plant.

Credit: Harmony Gold Mining

Ready for brownfield exploration

While issues related to its Wafi-Golpu joint venture are resolved, Harmony Gold Mining is evaluating options to extend the life of Hidden Valley.

By Sarah Byrne

Harmony Gold Mining's Hidden Valley mine in Morobe Province has been in operation since 2009. Harmony obtained 100 per cent ownership in 2016 from Newcrest Mining and invested US\$180 million (K613 million). It achieved commercial levels of production in October 2018.

While Hidden Valley has entered the remaining four years of current mine life, mining its stage 5 and 6 cutbacks, Harmony is exploring options to extend the mine's life through brownfield (existing) expansion.

A pre-feasibility life-of-mine extension study is underway to evaluate the economic potential to extend the mine's life by three years, at an annual gold production of 200,000 ounces.

Johannes Van Heerden, Harmony's CEO for South East Asia, says the company is focused on brownfield expansion and exploration near the Hidden Valley mine site as part of its growth strategy.

'Nearby brownfield exploration is focused on identifying high-grade satellite deposits, which can be processed using existing processing and plant

capacity, thereby extending mine life,' he says. 'If successful, we plan to displace low-grade mill feed with ore from satellite deposits and create a pipeline of satellite development options to extend mine life.'

Van Heerden says development of brownfield sites provides the company, in a low-to-moderate gold price cycle, with an opportunity to continue developing projects, while reducing risk.

Safety first

Medium- to long-term extension opportunities at Hidden Valley would be dependent on identifying an alternative, safe and affordable tailings (refuse materials) deposition solution.

Building a new tailings dam would be expensive and in the current market

would not be approved based on the company's capital allocation criteria, he explains.

Managing the steep terrain and high levels of rainfall are other challenges that Harmony is considering in evaluating opportunities for expansion.

Landslides and slope failures due to the mountainous terrain, rapidly changing weather conditions and earthquakes are safety issues for the company.

In response, Harmony implemented real-time slope stability radar monitoring systems to reduce safety challenges associated with landslides and slope failure. 'Safety is our top priority. Implementing risk-based safety standards and systems and a commitment to safe behaviour by employees and contractors has played a fundamental role in achieving two years of operating lost-time-injury-free in April 2019.'

The steep topography of the area, as well as high rainfall and low levels of evaporation, pose significant water management challenges for the company. Harmony mitigates these challenges through controlled run-off of rainfall to prevent erosion and sediment entering the river system.

While Harmony will consider market challenges and project costs as part of the pre-feasibility study in relation to potential expansion, Van Heerden says the company's 15 years of experience in PNG are invaluable. 'We have built a strong management team, de-risked the logistics route for Hidden Valley and supported the localisation of the workforce, meaning Harmony is well-positioned for expansion if approved.' ♦

WAFI-GOLPU: WHAT NEXT?

The unincorporated Wafi-Golpu Joint Venture between Harmony and Newcrest Mining seeks to develop the A\$2.8 billion prospective Wafi-Golpu gold and copper mine, which has estimated reserves of 13 million ounces of gold and 4.4 million tonnes of copper. There were expectations that 2019 might see commencement of the project but legal issues between provincial and national governments over project benefits have pushed back this timeline. PNG's government 'continues to signal its support for the project, and we look forward to progressing the permitting discussions,' Newcrest's CEO, Sandeep Biswas, told investors in late 2019. Once a lease is granted, the mine is expected to become a catalyst for economic activity in Morobe. At the time of writing, the partners were still awaiting the granting of a Special Mining Lease.

Beyond copper and gold

Mayur Resources is pursuing new cement, lime, mineral sands and power generation projects.

By Sarah Byrne

With its abundance of natural minerals, resources and energy, Papua New Guinea has a great capacity to reduce its imports and to export materials to neighbouring countries instead, says Paul Mulder, Mayur Resources' Managing Director.

'We need to diversify the economic base so that the country isn't beholden to the next major project. This will provide consistent GDP growth.'

Cement and lime

The company's Central Cement and Lime Project, the first one aiming to

WE NEED TO DIVERSIFY THE ECONOMIC BASE SO THAT THE COUNTRY ISN'T BEHOLDEN TO THE NEXT MAJOR PROJECT.

Paul Mulder

increase production of cement and lime in PNG, is located 25 kilometres north of Port Moresby.

The project has environmental approval, proven reserve, mining lease submitted and feasibility study completed. Mayur also has conducted a Mining Warden's Hearing, which is a requirement of the mining lease regulatory process. The company expects to enter the construction stage in 2020.

Once completed, the project would boast a US\$330 million (K1.12 billion) processing facility.

Industrial mineral sands

Mayur's Orokolo Bay Industrial Mineral Sands Project in Gulf Province has secured funding and is likely to be in operation in 2020.

Mulder says there is a demand for products from mineral sands projects and sees potential for exports to international markets. As the nation continues to grow, there are growing pains, but Mulder says looking at the development of South East Asia highlights the potential of a continued growth trajectory for PNG.

Power generation

Mayur has also been pursuing the development of the Lae Power Project, part of its Enviro Energy Park (EEP) concept, in Morobe Province. The company plans to use a mix of renewables and clean coal technology as part of its EEP concept.

A feasibility study has been completed. However, for the company to move into the construction stage, a Power Purchase Agreement would have to be confirmed first with PNG Power. ♦



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Lihir employs about 4,500 people (a combination of residential and fly-in-fly-out). Ninety per cent of them are Papua New Guineans.

Credit: Newcrest

PNG's mega project

The National Road Network Strategy will connect the country and open the road for more business.



By David James

A 20-year National Road Network Strategy to improve the country's roads is

set to begin. David Werh, Secretary of the Department of Works and Implementation, says the strategy is to address the maintenance of existing roads and to build new connections.

Werh describes roads as the backbone of the transport system in but believes that, if the current practice of allocating only K310 million a year for road maintenance is continued, then four-fifths of the national roads will be in poor condition in 10 years' time.



David Werh.

Credit BAI

Road investment

PNG's new National Road Network Strategy 2018–2037, launched in 2019, will be undertaken in five-year steps.

The plan is to expend K21.1 billion to improve the condition of the national road network to a point where half is in a good condition and half is in a fair condition.

The strategy will be financed in part by the Asian Development Bank's US\$1 billion Sustainable Highlands Highway Investment Program.

'The road network is still disconnected,' says Werh. 'We have regional highways that are yet to be

Lihir's production shines bright

With a projected life of 26 years, Lihir is set to improve recovery rates and develop greenfield areas.

By David James

Lihir gold mine in Aniolam Island, 900 kilometres from Port Moresby, in New Ireland Province, is considered the most productive mine in PNG. The Chief Development Officer for Newcrest Mining, Michael Nossal, describes it as a 'tier one asset'.

He says the mine is 'one of the largest gold deposits in the world,' with 24 million ounces of gold, 50 million ounces of gold reserves and 50 million ounces of mineral resources

From 2015 to 2019 Lihir generated US\$1.2 billion (K4 billion) in free cash flow and at current production rates has a projected life of 26 years, he explains.

'Large reserves are quite rare in gold,' Nossal says. 'In our peer group, Cadia (in New South Wales, Australia) and Lihir are the only operating assets with an ore reserve base of more than 15 million ounces.'

The company will be looking to improve recovery rates in Lihir, which requires putting in 'a lot' of capital. 'It is a high-return way to grow.' The company's next priority is to develop greenfield (unexplored) areas.

Nossal claims that Newcrest is the lowest-cost major gold producer, with an All In Sustainable Cost of US\$738 (K2,512) per ounce. 'The industry is cyclical. Being low-cost means you have the best chance of generating cash throughout the cycle. Our aim is to safely generate the most cash we can from our existing asset base and sensibly growing the business profitably.'

He added that having 'this large gold endowment' means Newcrest has one of the longest reserve lives in its peer group of gold miners. 'This enables us to be patient with our capital as we look towards growth and gives us time to make decisions which are aligned with our focus on cash generation and shareholder value.' ♦

TOTAL EXPENDITURE IN 2020 IS EXPECTED TO BE K1.837 BILLION, OF WHICH 89 PER CENT WILL GO TO ROADS AND 11 PER CENT WILL GO TO BRIDGES.

connected. Part of the plan is to open up those missing links so that, for the first time, we can create a national network that connects the entire country from one point to another – including Port Moresby.’

The first phase (2018–2022) will be focused on the 2,309 km of core national roads, with K4.49 billion allocated. ‘We want to boost those key economic roads to ensure they are accessible and able to support improvement of business in the

country,’ says Werh.

Phase two (2023–2027) will focus on the 2502 km of priority national roads, and with K4.81 billion allocated. Phase three (2028–2037) will be directed at 4,639 kilometres of non-priority national roads. It is expected that K11.82 billion will be spent.

Total expenditure in 2020 is expected to be K1.837 billion, of which 89 per cent will go to roads and 11 per cent to bridges. Expenditure in 2021 is expected to be K2.165 billion.

Werh explains there will be consulting opportunities in conducting feasibility studies, undertaking site investigations and designs, conducting construction supervision, and developing road user charges systems. The planned investment in roads will be focused on existing highways and roads.

Improving PNG’s roads will help decrease demand for sea and air transport, and reduce the country’s carbon emissions. The aim, he says, is to provide an enabling environment for the agriculture, tourism and manufacturing industries. ‘It will improve national cohesion.’ ♦

ONE NETWORK, FIVE ECONOMIC CORRIDORS

The National Road Network will be built around five economic corridors.

- **Momase corridor** – West Sepik, East Sepik, Madang and Morobe.
- **Highlands corridor** – Eastern Highlands, Chimbu, Jiwaka, Western Highlands and Enga.
- **Petroleum Resource Area-Southern Region (PRASR) corridor** – Hela, Southern Highlands, Gulf, Central, Northern and Milne Bay.
- **Islands Region corridor** – East New Britain, West New Britain, New Ireland, Bougainville and Manus Island.
- **Border corridor** – West Sepik and Western provinces.

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Port Moresby hits the gas

PNG is reaping the benefits of being a gas producer, with new gas-fuelled power plants set to provide affordable power to the nation's capital.

By Kevin McQuillan



Papua New Guinea's first gas-fired power station was commissioned in Port Moresby in late 2019. The plant is owned

by NiuPower, a joint venture between state-owned Kumul Energy Limited and Oil Search Power Holdings Limited.

It will provide power to PNG Power's Port Moresby grid.

The 58 MW station is located near the ExxonMobil-run PNG LNG plant, and represents part of PNG's efforts to switch from diesel fuel to renewable energy and locally-produced gas.

The US\$100 million (K338 million) plant is responsive to fluctuations in demand and is expected to provide reliable power to the city.

The average cost of power generation in NiuPower's plant is US\$0.12/kilowatt hour, versus an average cost for the PNG Power network of US\$0.20/kilowatt hour.

A second, 45 MW gas-fired power plant, run by local company Dirio Gas and Power, is expected to be ready for commissioning in the second quarter of 2020, according to its CEO Ashok Jain. Dirio will also source gas from ExxonMobil and has completed a 25-year power purchase agreement with PNG Power.

'We are working through the regulatory processes. We are a national company so we need to follow the house rules and we are doing that,' said Jain. ♦



Chicken farmers in Lae have started to use solar power.
Credit: Greenlight Planet/Sun King

A bright future

With over 60 per cent of PNG households using solar energy and plenty of opportunities to grow, the solar energy sector is set to shine in 2020 and beyond.

The International Finance Corporation (IFC) reported in 2019 that 60 per cent of households in PNG were using solar energy, compared with just two per cent seven years ago.

The solar market in the country is worth K596 million annually, the IFC estimates – and the prospects for further growth in 2020 and beyond are positive.

'Solar has now effectively replaced kerosene lamps in homes, which is good for people and the environment,' says the IFC's Resident Representative in PNG, John Vivian.

The growth in the solar market can be attributed to people having sufficient income to purchase it and the low connectivity rate to PNG Power's grid electricity of 13 per cent. The IFC's Lighting PNG program has been instrumental

in helping 22 per cent of the population gain access to off-grid solar lighting and mobile phone charging for the first time.

Solar in remote areas

Jon Pittar, Managing Director of Solar Solutions PNG, believes market-based approaches, led by the private sector, are likely to be the most efficient way of distributing solar to remote areas.

He says that, in addition to the market-based endeavours, donor aid and funding will be required to reach 'the last mile' in much of PNG.

Another company active in the space is Sola PayGo, a local solar power company offering a pay-as-you-go system. The company's self-installing power kits include a solar panel, lithium battery, up to four lights, a mobile phone charger, torch and radio.

The socially driven enterprise Greenlight Planet has developed off-grid products with USB charging capability. Sold almost in every PNG province, these have helped many small businesses remain open for an additional four to six hours, which means a potential increase in household income.

The future has arrived

Will the promise of faster and cheaper internet for all Papua New Guineans come true? David James reports.

PNG has waited a long time to enter the era of reliable broadband internet and it has now begun.

The Coral Sea Cable System (CSCS), the undersea fibreoptic cable connecting Sydney, Honiara and Port Moresby, was completed in December 2019, a month ahead of schedule.

The Coral Sea Cable Company will be in charge of maintaining and operating the international cable, which is expected to increase digital capacity by a thousand times to 20 terabytes. Meanwhile, state-owned PNG DataCo will be responsible for the connection domestically and for wholesaling the service to local retailers such as Telikom PNG and Digicel. PNG's capital city will benefit from the improved bandwidth almost immediately.

Already, data costs have fallen sharply and will do so further. According to PNG DataCo, the cost of internet use has fallen from US\$1,300 per Mbps per month in 2014 to US\$54 (K185) per Mbps per month at the start of 2020. The dramatic change is already acting as a catalyst for business to rethink everything, from their back office functions, to communications, investment in technology and to the utilisation of online products and services.

Changes outside the capital

Outside Port Moresby, however, delivering faster internet speeds is a more



complex proposition.

PNG DataCo is responsible for the build-out of the National Transmission Network (NTN), with the goal of delivering connectivity all around the country with at least a point of presence in all the provincial capitals and then an exit point out of the country into neighbouring West Papua.

The Kumul Submarine Cable connects 14 coastal provinces of PNG.

Credit: PNG DataCo

The coast-hugging Kumul Submarine Domestic Network (KSDN), part of the NTN, will be fully operational in 2020. System 1, which connects Jayapura to Arawa with seven branching units connecting to Vanimo, Wewak, Lorengau, Madang, Kimbe, Kavieng and Kokopo, is expected to be running by mid-2020. System 2, which

connects Madang to Port Moresby, with three branching units to Lae, Popondetta and Alotau, has been connected since March 2019.

‘The islands should be done by mid-2020,’ says Une O’Ome, Commercial Director at PNG DataCo. ‘Coastal and island locations should be connected to broadband internet, and it should be 100 gigabytes a second.’

Reaching remote areas

‘If we want to realise the true potential in this country, you have to look not in Port Moresby, not in the cities where fibre is going to be, you have to look out in the Highlands,’ observes Charles Punaha, CEO of the National Information and Communications Technology Authority (NICTA) – and

IF WE WANT TO
REALISE THE TRUE
POTENTIAL IN THIS
COUNTRY ... YOU
HAVE TO LOOK OUT
IN THE HIGHLANDS.

Charles Punaha

other experts agree with him.

Khafra Kambon, Commercial Director at Digicel Pacific, says:

‘For these two strategic initiatives [CSCS and Kumul Domestic Submarine Cable] to meet the expectations of the people of PNG, last-mile gigabit connectivity must be established in rural PNG,’ he says.

Digicel – PNG’s largest telco – services more than 80 per cent of the population through a network of over 1,000 communication towers. Some 22 per cent of the network is covered by 4G LTE. If broadband-quality internet is to reach the Highlands, it would seem clear Digicel must play a role.

In 2020, the challenge for the sector will be to create a competitive environment to

drive the delivery of better internet beyond the major cities and towns.

Much-needed competition

Retail competition, explains Sundar Ramamurthy, a former CEO of state-owned mobile company Bmobile, is the best way to get substantially lower prices, but he is not sure the right incentives are in place yet. He points out that Digicel, which is the dominant provider, does not need to use the new cables. ‘They have their own access points out of the country.’

Punaha agrees the competitive structure of the PNG market is an issue.

‘We have competition; there are plenty of internet service providers (ISPs). But the market structure in PNG has progressed from a state monopoly to a private monopoly. That has been the challenge for us as the regulator.’ ♦



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Alan Milne: turbulence and turnaround

Papua New Guinea's national air carrier, Air Niugini, has experienced a strong turnaround in its fortunes under Managing Director Alan Milne, but what does the future hold for the airline?



Air Niugini's Alan Milne.

Credit: Air Niugini

Q Do you have plans to expand Air Niugini's services?

A We are looking at all options at all times. Some of them are closer to fruition than others and we're trying to take opportunity as it comes up. Cathay Pacific pulling out of its Cairns-Hong Kong route was a really good example – that's an opportunity we've jumped on. I know there are freight companies that are ready to go, but to be able to do both [freight and passengers] – no one, I believe, has been able to do that, and certainly not faster than Air Niugini.

Q What about your relationship with other international airlines, where do you see opportunities for co-chair arrangements?

A Air Niugini is well positioned to take advantage of co-chair arrangements. This falls into our pillar of higher revenue enhancement. We are

investigating three current codeshare arrangements at the moment. One that has been approved is with Cathay Pacific.

Q You've talked before about airline maintenance, is this part of the plans for Air Niugini?

A We did some work on improving processes in our heavy maintenance area and that gives us the opportunity to open up some slots for customer airlines to come in.

The Solomon Islands Dash 8 was the first of the customer airlines to come into Air Niugini, which was a wonderful opportunity. We delivered that aeroplane back to the customer on time, on budget and on quality, which was just an amazing outcome.

Some of the Australian operators are sending their aeroplanes to London to get the heavy maintenance checks done. So, I see that as an opportunity.

Q And Air Niugini's return to profitability after two years of losses?

A The words I've been using are 'cautiously optimistic'. ♦

AIRPORTS TO RECEIVE A MAJOR UPGRADE

At the end of 2019, a K634 million agreement was finally signed between Japan International Cooperation Agency and PNG's National Airports Corporation (NAC) to commence the expansion of PNG's second busiest airport, Lae Nadzab.

Work to upgrade Nadzab will commence in 2020 to widen and extend the runways, taxiways and apron, and to renovate the terminals.

The aim is to make the second-largest city airport in PNG suitable for Boeing 767 aircraft and make it an alternative to Jacksons International Airport in Port Moresby.

Meanwhile, the Asian Development Bank has begun the second part of its Civil Aviation Development Investment Program (CADIP) to help PNG upgrade its airports, and strengthen aviation safety and services.

CADIP is aimed at strengthening the operations of NAC, PNG Air Services Limited and the Civil Aviation Safety Authority. There will also be improvements to airport infrastructure, air traffic management and navigation services.

Upgrades and rehabilitation of airports will be



Nadzab airport redevelopment.
Credit: NAC

undertaken at Wewak, Hoskins, Gurney, Mt Hagen and at Port Moresby's Jacksons International Airport.

The first tranche will finance improvements in pavements and fencing (Kavieng and Goroka are poised to have new security fences installed), provide support for engineering design and preparation of bid documents. During this phase, NAC will also work on investment proposals for subsequent projects.

At the end of 2019, the National Executive Council also approved a submission for the upgrading of Kavieng Airport Terminal, in New Ireland Province.



Credit: BAI

Improving port efficiency

PNG's major ports of Port Moresby and Lae have achieved significant efficiencies since their takeover by the International Container Terminal Services (ICTSI) South Pacific – and their future looks even brighter.

By David James

Philippines-owned ICTSI South Pacific took over Lae's port in February 2018 and Motukea in Port Moresby in May 2018.

Since then, it has been able to achieve significant productivity on both wharves, PNG's busiest.

'We have gone from four crane moves an hour, pre-ICTSI, to fourteen. The average stay of vessels has been reduced from three-and-a-half days to 18 hours, a significant savings to shipowners,' says Anil Singh, CEO of ICTSI South Pacific.

In the process, the company has had to learn about doing business in PNG.

'The most important thing here is to understand PNG and its people. They're great people but you have to understand their way of doing business and how it is merged into international best practices,' he observes.

Information access

'There was no automation, no computer systems in place. It was all clipboards, paper and pencil, and tally clerks. We brought in new systems and digitised a lot of

the work,' Singh says. 'Previously, the exporter or importer didn't know where their container was. Now, each customer can dial into our website, put in the container number and it gives them a location of that container.'

Singh explains information provision is much more transparent, and ICTSI has cut out the middleman, thereby reducing costs for port users.

'Previously, they used to pay a fee to the broker, who used to pay the port, or who used to pay the shipping line who used to then pay the port. Everybody put in a mark-up.'

Alongside ICTSI's own digital project, there have been moves to improve transparency in customs processing at PNG's major ports with the Customs Department's implementation of ASYCUDA, a computerised customs management system that takes into account international codes and standards such as ISO and World Customs Organisation (WCO).

That also means bringing in more physical equipment, such as the three new state-of-the-art rubber-tyred gantries commissioned in Lae. ICTSI is also planning to bring ship-to-shore cranes to the port.

Growth

The goal is to have ports that are fully automated as they are at the ICTSI-run port in Melbourne, Australia, by way of example, although that is some way away.

'Is PNG ready for it now? No. But will it be ready? Sure. Whilst we are planning our equipment, we are planning semi-automation now and future-proofing the business.'

Another opportunity, with so much international sea freight passing along PNG's northern coast, is to position Lae as a regional transshipment hub.

'We want to bring that freight in and make Lae the Singapore of the South Pacific. I don't mean we're going to compete with Singapore, but metaphorically we can compete in the West North-South trades.'

This would require a change of mindset, as transshipment is 'not a local game'. It would also require PNG's ports to be cost-competitive within the region. ♦

WE WANT TO
BRING THAT FREIGHT
IN AND MAKE LAE THE
SINGAPORE OF THE
SOUTH PACIFIC.

Anil Singh

Shipping news: time to get competitive

Papua New Guinea's international shipping is in need of an overhaul.

By Sarah Byrne

PNG's coastal shipping market is competitive, but international shipping is 'among the most expensive in the Pacific region,' according to the Lowy Institute.

Coastal shipping services are provided by companies such as Bismarck Maritime and Consort Shipping. Three international shipping lines service PNG's ports: Swire Shipping runs services between Australia, the Solomon Islands and PNG; ANL connects Australian ports with Lae and Port Moresby, and Maersk runs services between Malaysia and PNG.

Efforts are being made to improve efficiency. Swire Shipping Country Manager Alistair Skingley believes that digitisation and automation of the shipping sector will help bring the industry into the 21st century.

'We are focused on building a platform to improve our operational efficiency and the implementation of e-commerce



LNG or compliant marine diesel oil with a sulphur content of 0.50 per cent m/m or less are potential fuel options for ship owners.

Credit: Swire Shipping

solutions to save time,' he says. Swire's digital solutions will allow customers to conduct business online, make bookings and track and trace shipments easily. Skingley says these digital upgrades could boost sectoral productivity.

Road ahead

Better coordination of road and ferry services might be an important part of more cost-effective transport over water.

A 2018 pre-feasibility study supported by the governments of Australia and New Zealand under the IFC PNG Partnership found that setting up road and ferry connectivity in Gulf Province would reduce travel time by up to 80 per cent. This would change the economics of agribusiness in the Highlands.

PNG's shipping companies, however, face another challenge: they must comply with the global low sulphur fuel regulations that came into effect on 1 January 2020. These cap the content of sulphur in ships' fuel to 0.50 per cent m/m. Ship owners will need to find fuel options to ensure compliance. ♦

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Financial services

Papua New Guinea has the most competitive financial sector in the Pacific and digital banking is expected to further enhance the sector

By David James

PNG's financial services sector saw far-reaching changes in 2019, with the expansion of locally-owned retail financial institution Kina Bank positioning itself as a credible competitor to long-term market leader Bank South Pacific (BSP).

At the same time, the country's financial institutions are being encouraged to embrace technology as a means of expanding services into the largely unbanked informal sector and driving innovation in products and services.

PNG's largest bank and primary lender of local currency, BSP, has approximately 300,000 customers and does 13 million electronic banking transactions a month – seven million of which are executed via mobile banking, according to CEO Robin Fleming.

'We're trying to promote as much as possible people getting into mobile banking,' he says. 'There's a lot of work which still needs to be done on infrastructure to give a customer the confidence that their electronic banking solution's going to work first time, every time. In the absence of that they will be cash-dependent.'

Fleming is referring to the uneven quality of internet services across the country – which looks set to improve as the country's National Transmission Network is built out – and the fact that up to 70 per cent of PNG's population does not have access to electricity.

Nuni Kulu, BSP's General Manager Digital, agrees the banking landscape in PNG is changing, noting that there is an appetite for online payments.

'For BSP, we do expect an increase in our transaction volume, as most of these banks and their cardholders will now start to use the extensive ATM and EFTPOS network that we have throughout the country. That will expand financial access to banking systems.

'The use of social media technologies is connecting buyers and sellers, and

Banking on a digital future



Credit: Kina Bank

MY FOCUS WOULD BE ON IDENTITY AND ANYTHING THAT CAN ASSIST A PERSON OR SME ACCESS FINANCIAL SERVICES.

Loi Bakani.

we're seeing an increase in third party transaction payments from peer-to-peer or peer-to-business activity, especially on our mobile banking platform. Businesses are looking for digital solutions to improve their business outcomes.'

Ready to grow

With its acquisition of ANZ's retail banking operations in PNG complete, and a US\$10 million investment from the Asian Development Bank in place, Kina Bank is a very different-looking institution to a year ago.

Its deposit base and home loan portfolio have more than doubled, and when the integration with ANZ was finalised, the number of its customers also rose from 25,000 to 125,000.

'It is a good example of the small bank taking on the bigger bank. This was one of the biggest and most complex transactions to have happened in PNG in recent years,' says Kina Bank's CEO, Greg Pawson.

Kina's purchase of a 15 per cent stake in microfinance institution MiBank will further expand Kina's reach and help significantly expand financial inclusion services.

'We have gone from the fourth biggest retail bank in PNG to the second biggest overnight,' Pawson explains.

Kina has increased from three branches to 17, and has gone from 'a Port Moresby/Lae-centric bank' to having a presence in all of

PNG's key provincial centres.

'It was really important, because 80 per cent of the business done in this economy is done outside of Port Moresby and Lae, and we didn't have access to that because we didn't have a footprint,' says Pawson

Like BSP and Westpac PNG, Kina is investing heavily in next-generation banking services. Digital banking is a key component of Kina's growth strategy to become the country's leading digital bank (it has digitalised a lot of its internal processes).

'Close to 65 per cent of our customers are transacting with us digitally, whether it's through an ATM, USSD (unstructured supplementary service data) or mobile banking. We also have a number of projects in development to expand our digital services for customers,' he says.

Institutional banking

Westpac PNG continues to maintain a full banking presence, both retail and corporate, and has pioneered secure online payments and banking in PNG.

Although ANZ now has a leaner operation in PNG, it has not left the country, by any means. CEO Mark Baker points out that the sale of its retail operations to Kina Bank was consistent with similar divestments made by ANZ elsewhere in the region.

'It leaves us here a smaller bank by numbers of people employed, but not significantly smaller from a revenue, net profit or balance sheet perspective,' he says. 'It allows us to get really focused on what we want to be: a world-class institutional bank.'

Baker says the bank will focus on delivering services to its multinational clients and larger local corporates.

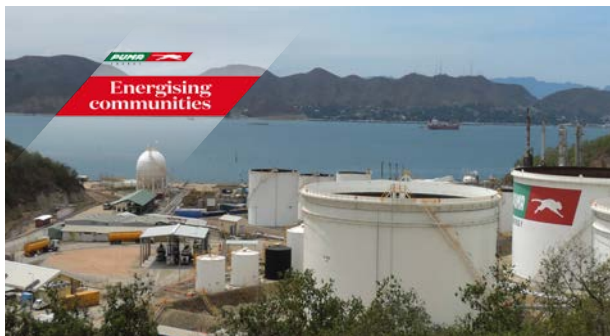
'If you go to our markets in, say, Taiwan or Singapore, we don't have a particularly large local corporate market. Here we do because we've been here for so long,' he explains. 'That's a really interesting group because, depending on which way the economy goes, there's huge opportunities for them. We can really start to get much more focused on how we take it to another level with that group.' ♦

SANDBOX TO ENCOURAGE INNOVATION

In December 2019, the Bank of PNG, the country's central bank, launched a 'regulatory sandbox' to provide a controlled environment for the testing of new financial technologies.

Its Governor, Loi Bakani, says that those who chose to participate in the sandbox 'have to follow the rules or guidelines that we set.' Bakani says it will 'welcome participation' from authorised financial institutions active in the country and enterprises that do not fall under the regulatory purview of the bank but where the nature of their innovation may require regulations.

'I'm open-minded in terms of the type of products,' says Bakani. 'I think my focus would be on identity - and of course anything that can assist a person's or SME's access to financial services.'



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Making the right moves

The manufacturing sector is on the rise and innovation is playing a huge part in its development.

By David James and Sarah Byrne

Manufacturing in Papua New Guinea only contributes about three per cent of the country's GDP, but it employs about half of the people employed in the country's formal economy. It has developed on the back of the nation's comparative advantage in agricultural and resource-based industries.

The Marape–Steven government has adopted a strategy of broadening the industry base in an effort to reduce the impact of volatility in the resources sector. The aim is to move the economy from its dependence on primary industries into higher-value added processing industries. This includes an emphasis on downstream processing of natural resources. Prime Minister James Marape says that all companies who want to participate in the harvest of PNG's resources will need to come up with clearer and quicker ways to do downstream processing.

Expanding operations and facilities

The lack of availability of foreign exchange has led to some import substitution by PNG manufacturers, especially in fast-moving consumer goods (FMCGs) and smallgoods manufacturing. In 2017, PNG's Tariff Reduction Program was suspended and in accompanying legislation about 250 tariffs lines were increased while over 600 decreases were abandoned. Tariffs were increased on clothing, household and consumer items, and some processed food such as ice-cream.

'Those tariff reforms have resulted in significant local investment, including re-capitalisation of existing manufacturers, like Coca-Cola, Pacific Industries and Paradise Foods,' says Chey Scovell, CEO of the Manufacturers Council of PNG.



Credit: Manufacturing Council of PNG

TARIFF REFORMS
HAVE RESULTED
IN SIGNIFICANT
LOCAL INVESTMENT,
INCLUDING
RE-CAPITALISATION
OF EXISTING
MANUFACTURERS.

Chey Scovell

'There has been a whole number of new entrants. American Cola, the soft drink brand, took up a chunk of the market. They are building two manufacturing plants, one in Port Moresby and another in Lae.'

Lae Biscuits has plans for a noodle manufacturing line. Scovell says food company Goodman Fielder is also increasing its investments, including a new flour mill.

Coca-Cola Amatil (CCA PNG) Limited has been expanding its operations to increase capacity, including a new can processing facility in Lae. Gigy Philip, CCA PNG's General Manager, says the company is improving its power supply, developing a reverse osmosis system for water treatment, adding a warehouse, undertaking capital expenditure and planning a new head office.

He says CCA PNG is seeking to accelerate its investment in staff by improving their capabilities through targeted interventions. This includes the company's Supply Chain Academy, which focuses on technical skills, quality and lean manufacturing; the Sales Academy, which aims to help the sales teams drive sales and have commercial conversations with customers, and a leadership program.



Paradise Foods is PNG's oldest food manufacturer.

Credit: BAI

CATCH UP: NEW FISHERY STANDARDS



The National Fisheries Authority (NFA) in late 2019 launched the *Standards for Fish and Fishery Products* with the aim of offering greater clarification. It came after a two-year period of review and consultations.

The NFA manages, controls and regulates PNG's fisheries ensuring that quality and safety standards are observed in the storing, transporting and processing of fish. It includes providing accredited testing services for the sector.

The move to improve standards was initiated when

RD Tuna Cannery, which operates in Madang Province, showed an interest in entering the European Union market, according to the Managing Director of the NFA, John Kasu. The EU accounts for 80 per cent of all PNG's exports of tuna.

Kasu said that the standards are also applied to resource sustainability, technological advancement, knowledge transfer and greater participation at all levels of industry in the sector. 'This ensures that we are adhering to world's best practices and standards,' he said.

He added that the fisheries industry is a major source of foreign exchange and employment in PNG.



The fisheries sector is also set to undergo a quality transformation that may mean more business and revenue.

Credit: RD Tuna Cannery

‘We are also driving individual development through our development and performance management cycle,’ says Philip.

A long-established manufacturer in

PNG is SP Brewery, which is owned by international brewer Heineken. Managing Director Ed Weggemans says the SP brand is dominant in the country. ‘When people taste this beer

(SP Lager), they stick with it because of its recipe and taste; it is in that sweet spot of having full taste and not being too bitter.’

There are instances of PNG manufacturing companies globalising their production. For example, New Britain Palm Oil, PNG’s biggest palm oil producer and largest private employer, has a refinery in Liverpool, England.

Innovation and diversification

At the other end of the spectrum, a locally focused company is Rubio Plantation Retreat in New Ireland Province. It is predominantly a surf tourism business but diversifies by producing chocolate and cold-pressed virgin coconut oil. ‘It’s difficult and expensive to access larger markets, so we’ve concentrated on supplying the local market, and have been successful through diversification of the business,’ says owner Shane Clark. ‘PNG businesses should concentrate on meeting our domestic needs before looking to export.’ ♦

LESSONS FROM PNG’S OLDEST FOOD MANUFACTURER

A new Group CEO is revitalising Paradise Foods. His goal is to double the business.

The oldest food manufacturer in the country is Paradise Foods Limited and its Group CEO, James Rice, is tasked with ensuring the company is number one across its food categories.

‘It’s a 70-year-old start-up company,’ says Rice. ‘The core of our business is in Port Moresby and Lae. We haven’t hit the Highlands yet, where 80 per cent of the population is, and we are not in the outer islands. My line now is that this 70-year-old company has so many places to go.’

Paradise purchased Laga Industries from Steamships in 2018, which added ice-cream and cooking oil into its portfolio.

‘We now lead in five categories: oil, ice-cream, biscuits, water and snacks, with the rest of the geography and the population in the country to go,’ says Rice. His goal is to double the business for these five categories in the next three years.

‘We need to be more disciplined to be more successful,’ Rice says. ‘We are mapping where every store and market is, so that we can know where they are and check where our product is and where are the black spots. There’s a huge gap to fill and we’re the market leader, so the potential is huge.’



Credit: BAI

Becoming the food basket of Asia



Rice production has increased as local retailers sought to replace imports with local produce.

Credit: Trukai

Agriculture in Papua New Guinea started thousands of years ago in the Kuk Early Agricultural Site in the Western Highlands – and that knowhow may be about to transform the country.

By David James

Mention agriculture to a Papua New Guinean and their eyes light up,' says Ilan Weiss, Chairman of Innovative Agro Industry. There is a high level of expertise and enthusiasm in the area.

That enthusiasm goes to the top. Prime Minister James Marape has announced that he wants PNG to be known as the 'food basket' of Asia.

'We have very rich organic food in PNG and I want to supply the Asian market with that organic food into the future. Investors who are out there, with money to invest, will attract the right government incentive if you come to us and want to partner in this space.'

About a quarter of the country's GDP is derived from agriculture, only behind resources, and more than 80 per cent

of PNG's population is estimated to be engaged in semi-subsistence food production.

According to the World Bank, agriculture is the second largest contributor to PNG's export earnings after minerals. Palm oil, which accounts for 51 per cent of total agriculture exports, is the largest contributor, followed by coffee (27 per cent), cocoa (15 per cent), and copra and copra oil (7 per cent).

In 2019, cocoa and copra export volumes fell, while coffee and palm oil volumes were stable, according to Bank of PNG figures. In 2020, PNG will hopefully be the beneficiary of improved international prices for palm oil, coffee and copra.

PNG's climate and high seasonal rainfall, good-quality soil and low-intensity farming methods, make for a favourable environment for agricultural activities. The PNG Government estimates that about 24 per cent (23,080 square kilometres) of the country is suitable for intensive agricultural production.

It means PNG has a considerable comparative advantage, but investors

have to be skilful. Weiss says one challenge that the agricultural industries face is not having enough 'credible' information. 'If you look at every agriculture sector in PNG, whether for export or domestic consumption, the information is not out there.'

Investors have to acquire their own information, which implies allowing for longer lead times for feasibility studies and higher allocation of resources and capital. 'My best advice is have a good relationship with the retailers around the country to get the information that you require if you are looking at domestic consumption,' explains Weiss.

In recent years, food retailers in PNG have looked to source more local produce, as part of an ongoing process of import substitution.

'We keep growing our local product lines and cutting back on the imports. We're encouraging farmers to grow more and more,' Mahesh Patel, Chief Executive of CPL Group (which owns the Stop N Shop supermarket chain), tells *Business Advantage PNG*.

Connections

Greg Worthington-Eyre, Chief Executive of Trukai Industries, a rice grower, believes it is important to have geographical proximity to markets. 'In this country, anything [has to be transported] on the water.' He suggests producers need to control costs or 'lose significant value' during transportation.

Developing good relationships with landowners is also essential for investors in PNG agriculture, says Worthington-Eyre. 'When you have villages that have been owned under customary title and then all of a sudden something happens with that land, they all come out looking for a slice of the cherry.'

Partnership

Partnering with landowners can be an effective way to develop agricultural

potential. NKW Fresh, a division of the Morobe-based landowner-owned conglomerate NKW Holdings, is providing fresh produce across PNG and aiming to export to the region.

Established in 2014, it was created to complement NKW's catering services, and as part of a diversification strategy for the communities based around the Hidden Valley gold and silver mine.

David Stewart, General Manager at NKW Fresh, says that the company has a 'moral duty' to develop 'something for our communities post-mine life.'

The company sources produce from local smallholder vegetable farming households, which is then supplied to its catering service and other markets, including supermarkets and external catering companies.

NKW Fresh buys 60 metric tonnes of fresh produce each month, dealing directly with smallholders, rather than traders. 'We now have the only effective cold chain [refrigeration] for fresh produce in PNG,' says Stewart. We run two eight tonne refrigerated trucks up and down the Wau road in Hidden



From left: Innovative Agro's Ilan Weiss, Trukai's Greg Worthington-Eyre and NKW's David Stewart.

Credit: BAI

Valley coming back into Lae.'

The General Manager is aiming to improve both the supply chain and farmer knowledge. 'We can't just keep putting on farmers. At some stage, what we need to be doing is developing those farmers' personal capital.

'They need to start putting money aside for mechanising, and asking: "How do I make sure I get that amount

again?" It is that personal capital that creates the disciplines that will produce a sustainable supply arrangement into our markets,' Stewart explains.

Win-win models

Developing the right business model is vital to success in agriculture. The IFC is undertaking a scoping study of the fertile Markham and Ramu valleys to

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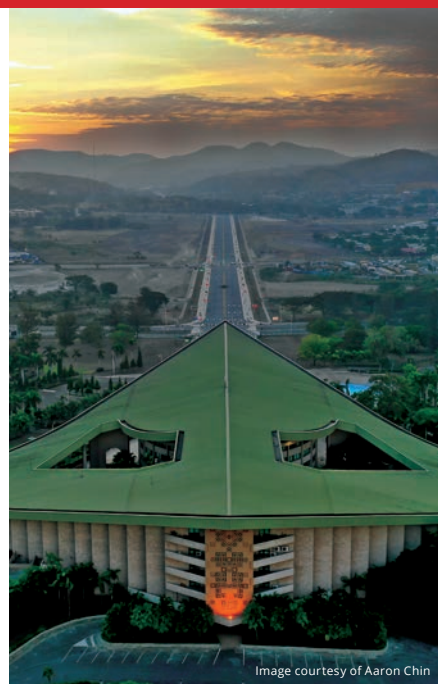


Image courtesy of Aaron Chin



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assess agricultural opportunities in the country. The aim is to develop a win-win business model for investors and customary landowners.

Christian Reichel, the IFC's Operations Officer in Port Moresby, says the first step will be mapping the Markham and Ramu valleys, including land ownership. Another ambition is to create a farm management service company whose purpose would be to offer advice on good agricultural practices, farm management and farm inputs. The intention is eventually to create a model that can be applied to the whole of the country.

Modern farming practices and technology are also coming to the fore, as PNG looks for ways to harness the power of its smallholders. Cocoa exporter Outspan PNG, for example, has pioneered the digital collection of farmgate data from over 5,600 cocoa farmers across the country, with data analytics enabling it to make accurate predictions on productivity and direct its extension services to where they can make the most difference. ♦

DRONES OVER THE OIL PALMS

Leading palm oil exporter New Britain Palm Oil is using drones to ensure there is no fertiliser wastage in its plantations.

New Britain Palm Oil Limited (NBPOL)'s oil palm plantations cover 83,000 hectares across West New Britain, the Ramu Valley, Milne Bay, Poliamba and Higaturu in PNG, and Guadalcanal Province in the Solomon Islands.

In 2016, the company started using drones to ensure the plantation's operations run effectively.

In the years since the program's inception, NBPOL has learned to fly drones in PNG's rugged terrain, found the most suitable type of drone for the project, and has developed ways to process, deliver and utilise data.

The drones have gathered enough data to generate a palm

census. According to NBPOL, it has 11,361,688 palms in PNG and the Solomon Islands.

Each year, those oil palms need about US\$20 million worth of fertiliser. To ensure there is

no excess or shortage, NBPOL uses drone-captured aerial imagery of the plantations to calculate the amount of fertiliser needed.

According to Group TSD Manager Will Unsworth, the data captured by its drones has helped the company calculate the correct amount of fertiliser that needs to be bought each year, helping ensure NBPOL continues to keep its sustainably produced palm oil, which is mostly exported to the European Union.



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Innovation nation

Papua New Guineans' flair for innovation has the potential to create new businesses and empower its next generation of entrepreneurs.

By David James

PNG may be a developing country, but its people are highly innovative – often in ways that are very different to innovators in developed economies.

Innovation is seen as critical by the National Government as a way to diversify the economy. The Prime Minister, James Marape, has stated that the country 'must and will' embrace it.

Finding a way to connect PNG's informal economy to commercial markets is where innovation is needed. Virginia Bruce, CEO and founder of the mentoring consultancy REAL Impact, believes the challenge is to develop an 'ecosystem' that bridges the gap between sophisticated commercial markets and PNG's informal economy.

Artisans

Bruce's company undertook a project to produce hand-woven *bilums* in the Southern Highlands. REAL sold them to a hotel group in Spain for use as chairs called 'hippy chairs'.

'We developed a marketing, PR and social media campaign called the Artisans of Papua New Guinea. We asked [the artisans if they] could make 500 *bilums*. They had never contemplated that before. But they self-organised: 82 women got together and, within three months, delivered the *bilums* to Spain.'

Building capacity in the country requires 'applied learning' and inventiveness. 'If we couldn't get the product from Karani to Hagen for freighting I would find a guy who had a car and offer him an opportunity to join the economy we were creating – and he did. We call it the "drag along economy".'



Top: Prime Minister Marape and POMCCI's CEO Stacey O'Nea during the 2019 Innovation PNG Conference. Above: Immaculate Javia receives the Innovation PNG Award (Small Organisation). Left: Niunet's David Valentine.

Credit: Rocky Roe

Below: Jaive Smare talks about his app for buying and selling power. Bottom: Audience at the 2019 Innovation PNG Conference.

Credit: Rocky Roe



Small-scale mining

Another innovator looking to connect the informal economy to commercial markets is award-winning Sustainable Alluvial Mining Services (SAMS), whose aim is to revolutionise the small-scale alluvial mining industry in PNG.

Founder of SAMS, Immaculate Javia, has developed a pilot program for Esa'ala district in Milne Bay Province aimed at providing support services to a sector that is largely informal and dispersed, but which involves some 100,000 miners.

The goal is to get small-scale miners to export the gold themselves. 'That way they can bring in the money, which can support what they are doing in their villages. It has the potential to drive rural development if adequately reflected in mining policies, monitored and regulated well, and supported financially by governments.'

Javia is encouraging small-scale miners to form an association. She is also aiming to get the government's attention.

After winning the inaugural Innovation PNG Award (Small Organisation), she is working to secure funding to take the project to the next stage.

Distance education

Technological innovation in PNG often involves overcoming barriers that do not exist in developed economies.

Education start up Niunet has found a way to deal with a lack of internet access in the country. David Valentine, Chief Technical Officer for Niunet, says the company distributes educational material through its Niunet Box, a

proprietary device. No mobile phone data or phone credit is needed to access the content delivery network.

In this way, the company is solving the problem of 'accessibility, affordability and relevance of digital learning content for schools, universities and business' in the country.

Old crop, new product

An innovation in the manufacturing sector is SP Brewery's cassava project, which uses the locally grown crop in the production of an alcoholic beverage.

There are 600 varieties of cassava in

BUILDING CAPACITY IN THE COUNTRY REQUIRES "APPLIED LEARNING" AND INVENTIVENESS.

Virginia Bruce

PNG. 'After some trial and error, we found that cassava crop was the best raw material we could use in place of imported barley,' says John Nilkare, Corporate Affairs Manager for SP Brewery.

'This innovation plays into the government's 2050 vision; the government is keen on diversifying its agricultural base. We are empowering a lot of smallholder farmers and families,' Nilkare said about 450 farmers were supplying SP Brewery with the crop; this 'will be scaled up to 2000 over the course of the next three years.' ♦

INNOVATION AWARDS: WINNERS BIG AND SMALL



The inaugural Innovation PNG Awards were announced in Port Moresby at the end of 2019. The entries covered industries as diverse as agribusiness, manufacturing, telecommunications, tourism, education, technology, mining, infrastructure, engineering and financial services.

The judging panel selected SP Brewery's Cassava Project as the winner of the Large Organisation

category (over 10 employees). 'This project started six years ago and has been a true labour of love for all of us who have been involved,' John Nilkare, Corporate Affairs Manager for SP Brewery, told the conference.

Sustainable Alluvial Mining Services (SAMS) was the winner in the Small Organisation category (less than 10 employees). Founder of SAMS, Immaculate Javia, said the pilot project is expected to benefit 3000 local miners and, if replicated across the country, could affect 100,000 miners.



PNG Biomass is planting 16,000 hectares of eucalypts in the Markham Valley.
Credit: PNG Biomass

Rethinking an industry

The government has announced its plans to move into downstream processing of logs. The sector is embracing the change and looking at other ways to innovate and continue to grow.

By David James

Chief Executive of Papua New Guinea's Forest Industries Association, Bob Tate, advises *Business Advantage PNG* that round log exports fell in 2019 by about 12 per cent – to 3.5 million cubic metres. He attributes this fall to lower demand from China, which has been adversely affected by the US–China trade war (the Asian giant takes 90 per cent of PNG's round log exports).

New Guinea has the third-largest expanse of tropical rainforest on the planet. Approximately 30 million hectares (over 60 per cent) of the country's total land area is covered by forests, owned overwhelmingly by customary landowners. About 10 million hectares produce high-quality tropical hardwoods considered suitable for forestry development.

There is a growing push for more downstream processing of logs, especially with the National Government announcing a phasing out of all exports of round logs.

Prime Minister James Marape has indicated that every current operator in the forestry sector will be required to submit their plans to go into downstream processing to the National Forestry Authority. 'By the end of 2020, we will have an inventory and systematically work with them to ensure we fully

mature our forestry downstream by 2025 and beyond,' he said.

Bob Tate says the future in PNG's forestry sector is to 'go back to the future' by expanding PNG's forest plantation resource and building processing around those plantations.

One next-generation business already pioneering sustainable plantations is PNG Biomass, owned by PNG's largest company, Oil Search. PNG Biomass is planting 16,000 hectares of eucalypts – some 20 million trees – on under-utilised grasslands in the Markham Valley in Morobe Province.

The project, which aims to use Forest Stewardship Council (FSC)-certified trees as feedstock for a carbon-neutral 30MW biomass power station, involves fully automated seedling production – a first for the Melanesian nation. In another innovation, its plantations have been designed to allow local landowners to grow cash-crops between the rows of trees for additional income.

Innovation in forestry

One company that has already gone into downstream processing is PNG Forest Products (PNGFP). Managing Director Tony Honey says the company is expanding its manufacturing, increasing exports and handling growth.

'We are producing and exporting some innovative and interesting products that represent value adding to an otherwise basic piece of plywood. Products such as modular bridges and decking into Australia and New Zealand; specialised railway bridge re-decking in Sydney [Australia]; sound barriers along Australian highways, and scarf-jointed bus floors for Australia, New Zealand, Malaysia and Hong Kong.'

PNGFP's diverse operations underline the requirement for investors to achieve a high level of self-sufficiency in the country. It operates three hydropower stations and is well-advanced with the development of two more.

'These engineered wood products require us to be innovative, efficient and competitive,' observes Honey. ♦



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New Britain Palm Oil

+675 985 2177
www.nbpol.com.pg

NKW Holdings Limited

+675 472 6830
www.nkwgroup.com

Paradise Foods Limited

+675 325 0000
www.paradisefoods.com.pg

PNG Forest Products

www.pngfp.com

RD Tuna Canners

+ 675 423 3144
www.rdmanufacturing.rdphilippines.com

SP Brewery

+675 302 8200
www.sp.com.pg

Trukai Industries Ltd

+675 472 2466
www.trukai.com.pg

Banking, finance & insurance

ANZ

+675 321 1079
www.anz.com/png

Bank of Papua New Guinea

+675 322 7200
www.bankpng.gov.pg

Bank South Pacific (BSP)

www.bsp.com.pg

Capital Insurance Group

+675 323 1144
www.cig.com.pg

Credit Corp

www.creditcorporation.com.pg

FinCorp

+675 7200 2100
www.fincorp.com.pg

Kina Bank

+675 308 3800
www.kina.com.pg

MoniPlus

+675 313 2900
www.moniplus.com

Nambawan Super

www.nambawansuper.com.pg

National Development Bank

+675 324 7500
www.ndb.com.pg

National Superannuation Fund Limited (NASFUND)

www.nasfund.com.pg

PNG Exchange Market Limited (PNGX)

+675 320 1982 or 320 1983
www.pngx.com.pg

Westpac Bank PNG

www.westpac.com.pg

Services

Black Swan International

www.blackswanss.com

BNBM

+675 323 3379
www.bnbpmpng.com

Datec

+675 303 1222
www.datec.com.pg

Deloitte PNG

+675 308 7000
www.deloitte.com/pg

Guard Dog Security Services

www.guarddogsecuritypng.com

Hausples

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www.hausples.com.pg

iPi Group

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www.ipigroup.com.pg

KPMG PNG

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kpmg.com.pg

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www.pihpng.com

Pacific Palms Property

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www.pacificpalmsproperty.com.pg

Paladin Group

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www.paladin.com.pg

PVM Advertising

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pvm.com.pg

Remington Technology

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TE PNG

+675 325 6322
www.tepng.com

Total Waste Management

+675 320 3242
www.twm.com.pg

Construction & engineering

Avenell Engineering Services (AES)

+675 320 3288
www.aespng.com

Bishops

www.bishopbros.com.pg

Dulux

+675 325 4555
www.duluxgroup.com.au

Hebou Constructions (PNG)

+675 325 3077

Hornibrook NGI

+675 472 3599
www.hornibrook.com.pg

Lamana Development

+675 323 4791
www.lamdev.com.pg

Monier

www.monier.com.pg





Credit: BAI

Useful online resources for PNG

Business Advantage Papua New Guinea

Business Advantage International's online business magazine and newsletter for PNG and the region.

www.businessadvantagepng.com

Investment Promotion Authority

Includes online business registry.

www.ipa.gov.pg

Austrade Market Profile of PNG

www.austrade.gov.au/Australian/Export/Export-markets/Countries/Papua-New-Guinea/Market-profile

The National (daily newspaper)

www.thenational.com.pg

Post-Courier (daily newspaper)

www.postcourier.com.pg

EMTV (largest TV broadcaster)

www.emtv.com.pg

LOOP PNG (local online news)

www.looppng.com



Mining & petroleum

Barrick Gold

+675 322 4800

www.barrick.com

Bougainville Copper

www.bcl.com.pg

ExxonMobil PNG

www.pnglng.com

Harmony Gold

www.harmony.co.za

Kumul Minerals Holdings

www.kumulminerals.com.pg

Kumul Petroleum Holdings

www.kumulpetroleum.com

Mineral Resources Authority

+675 321 3511

www.mra.gov.pg

Newcrest Mining

+675 321 7711

www.newcrest.com.au

Oil Search Limited

www.oilsearch.com

Ok Tedi Mining Ltd

www.oktedi.com

Puma Energy

+675 309 9 400

www.pumaenergy.com

Total E&P (PNG)

www.total.com

Tourism & transport

Air Niugini

+675 327 3444

www.airniugini.com.pg

Airways Hotel

+675 324 5200

www.airways.com.pg

Airways Residences

+675 325 4366

www.airwaysresidences.com.pg

Bismark Maritime

+675 472 1990

www.bismark.com.pg

Ela Motors

+675 7998 7300

www.elamotors.com.pg

Hilton Hotel

+675 750 18000

www3.hilton.com

National Airports Corporation (NAC)

www.nac.com.pg

PNG Air

www.pngair.com.pg

Tourism Promotion Authority

+675 320 0211

Infrastructure & telecommunications

bmobile

+675 7600 3555

www.bmobile.com.pg



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DataCo PNG

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www.pngdataco.com

Digicel PNG

www.digicelpng.com

International Container Terminal Services Inc (ICTSI)

www.ictsi.com

PNG Ports Ltd

+675 308 4200
www.pngports.com.pg

PNG Power

+675 324 3200
www.pngpower.com.pg

Telikom PNG

+675 300 4000
www.telikompng.com.pg

Diversified Industrial Groups

Anitua Group

+675 986 4633
www.anitua.com.au

Brian Bell Group

+675 325 5411
www.brianbellonline.com

City Pharmacy Ltd (CPL)

www.cpl.com.pg

Rimbunan Hijau (RH) Group

+675 325 7677
www.rhpng.com.pg

SP Brewery

www.sp.com.pg

Steamships Trading Company Limited

www.steamships.com.pg

Business-related & government organisations

Asian Development Bank

+675 321 0400
www.adb.org

Australian Trade Commission (Austrade)

+675 325 9150
www.austrade.gov.au

Australia-Papua New Guinea Business Council

www.apngbc.org.au

Business Council of PNG

+675 320 0700
www.bcpng.org.pg

Business and Professional Women's Club of Port Moresby

www.bpwpng.org

Institute of National Affairs (INA)

+675 321 1045
www.inapng.com

International Finance Corporation (IFC)

+675 321 7111
www.ifc.org

Investment Promotion Authority

+675 308 4444
www.ipa.gov.pg

Lae Chamber of Commerce & Industry

+675 472 2340
www.lcci.org.pg

Manufacturers Council of PNG

+675 321 7143

New Zealand Pacific Business Council

www.nzpbc.co.nz

Pacific Islands Trade and Invest

+612 9290 2133
www.pacifictradeinvest.com

Papua New Guinea Chamber of Commerce and Industry

+675 321 3057
www.pngcci.org.pg

Port Moresby Chamber of Commerce & Industry

+675 321 3077
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World Bank

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