



Will Papua New Guinea meet its climate action targets?

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Leaders of low-lying and island nations have long called for urgent action on climate change, including Papua New Guinea's Prime Minister, James Marape.

At the UN General Assembly in September 2021, he said: "I make a call for all of us, especially to the big carbon-emitting nations who are now enjoying their national economic transformations through industrialisation, to pause, think and take responsibility to save our planet."

In response, the Evangelical Lutheran Church of PNG Yabem District President, Rev Yasam Aiwara, said PNG needs to "do our part locally for a global cause" and "adhere to the many international agreements" on climate action that the country has consented to.¹

So what are these agreements, and is PNG on track to meet them?

The Paris Agreement

The Paris Agreement is a pact between countries to stop the world's average temperature rising by more than 2 degrees celsius above pre-industrial levels – that is, before human-made machines began pumping large amounts of greenhouse gas into the atmosphere.

Ideally, the aim is to keep temperatures from rising by more than 1.5 degrees. Although it might not sound like much, half a degree is the difference between survival and not for many, especially when it comes to islands facing sea level rise² and the loss of entire ecosystems on which they depend.

At 1.5 degrees of warming, 70-90 per cent of the world's coral reefs will die. At 2 degrees, they will all be lost.³

PNG's Nationally Determined Contribution

In 2016, PNG took the lead and became the first country to officially adopt a climate action plan under the Paris Agreement, called a Nationally Determined Contribution (NDC).

¹ Loop 2021, 4 October, 'Miner urged to reconsider coal plans', <https://www.looppng.com/business/miner-urged-reconsider-coal-plans-105198>

² The Guardian 2021, 10 August, 'The world could hit 1.5C warming in a decade. That's terrible news for the Pacific', <https://www.theguardian.com/commentisfree/2021/aug/09/the-world-could-hit-15c-warming-in-a-decade-thats-terrible-news-for-the-pacific>

³ IPCC Special Report on Global Warming of 1.5°C approved by governments 2018, 8 October, <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

At the end of last year, PNG lodged a second, enhanced NDC – one of only 13 nations to do so⁴ – detailing its climate action plan for the next decade.

Under the plan, PNG has set an overall target of achieving 50 per cent carbon neutrality by 2030 and full carbon neutrality by 2050. It aims to do this by moving to reach the following goals:

- Achieve carbon neutrality within the energy industries by 2030
- Reduce annual emissions from deforestation and forest degradation by 10,000Gg of carbon dioxide equivalent emissions compared to 2015 levels

The Boe Declaration on Regional Security

In 2018, Pacific nations, including PNG, expanded the concept of security under the Boe Declaration on Regional Security to recognise climate change as “the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific”.⁵

The declaration reaffirmed the countries’ commitments to implementing the Paris Agreement.

Why did PNG lead on targets?

Like other island nations, PNG is highly susceptible to the effects of climate change. It’s prone to natural disasters which are forecast to become more frequent and deadly as time goes on.

More than two million people in the highlands are already having to contend with frequent flash flooding, droughts and landslides. On the country’s coasts and atolls, half a million residents are exposed to flooding and sea level rise,⁶ threatening their fresh water sources. People living on the Carteret Islands are widely recognised as the world’s first climate refugees, forced to relocate due to rising seas.⁷

Extreme weather events also pose a severe risk to the country’s agriculture sector, which employs 85 per cent of Papua New Guineans – most of whom are informal workers – and accounts for almost a third of the country’s gross domestic product.⁸

⁴ NDC Registry <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>

⁵ Boe Declaration on Regional Security <https://www.forumsec.org/2018/09/05/boe-declaration-on-regional-security/>

⁶ Final Revised NDC Implementation Plan 2021, p.47

⁷ ABC 2018, 4 August, ‘Lost at sea: the race against time to save the Carteret Islands from climate change’, <https://www.abc.net.au/news/2018-08-04/the-race-against-time-to-save-the-carteret-islanders/10066958?nw=0&r=HtmlFragment>; United Nations University 2009, 16 June, How-to Guide for Environmental Refugees, <https://ourworld.unu.edu/en/how-to-guide-for-environmental-refugees>

⁸ Final Revised NDC Implementation Plan 2021, p.10

PNG has been quick in setting official targets for climate action because it recognises that climate change will continue to have a negative impact on its people and the planet.

Without urgent action, rising temperatures and acidification will also eventually destroy PNG's coral reefs, threatening the food sources and livelihoods of all Papua New Guineans.⁹

But is PNG on track with its goals?

Agriculture, forestry and other land use targets

According to PNG's NDC Implementation Plan, the forest and land use sectors are the biggest emitters of greenhouse gas – but also have the highest potential to remove emissions.¹⁰

The overall goal is to shift the current upward trend of greenhouse gas emissions in these sectors to a downward trend by 2030, reducing them from 2500Gg of carbon dioxide equivalent emissions in 2015 to -7500Gg in order to mitigate emissions from other sectors.

Part of PNG's plans to lower its emissions involves reducing annual deforestation and forest degradation by 25 per cent against 2015 levels by 2030, as well as planting and restoring more forest on its land.

As the world's largest exporter of tropical logs, PNG will need to make drastic changes in order to meet these goals.

While almost all logging in PNG is licenced, the granting of licences and the operation of logging concessions commonly involve breaches of the law.¹¹ The logging industry, which is dominated by multinational companies, has been a major contributor to deforestation and forest degradation.¹²

Progress on land use goals

The NDC Implementation Plan includes a long list of activities that would contribute towards achieving PNG's forestry goals, such as strengthening the monitoring of Forest Clearance Authorities, promoting the downstream processing of logs, better enforcement of timber legality standards and encouraging agro-forestry initiatives.

Enforcement of PNG's forestry laws is notoriously challenging. First of all, the PNG Forest Authority (PNGFA) and the Conservation, Environment and Protection

⁹ “ p.47

¹⁰ “ p.20

¹¹ Jubilee Australia Research Centre, 'Background paper: Illegality and Human Rights Abuses in PNG's Logging Industry'

¹² Jubilee Australia Research Centre, Oakland Institute, ActNow! PNG 2020, 'From Extraction To Inclusion', <https://jubileeaustralia.org/resources/publications/extraction-inclusion-2020>

Authority (CEPA) do not have publicly available permit approval registers,¹³ despite the requirement for PNGFA to have one under the Forestry Act 1991.¹⁴ This makes it difficult to hold the authorities and permit-holding companies accountable to the law and climate action targets.

A Bank of PNG national money laundering assessment found that there has never been any investigation into breaches of forestry laws that has resulted in a successful prosecution. It also criticised weak supervision capacity for logging concessions, extraction and export activities, payments, and the operation of ports.¹⁵

Monitoring of Forest Clearance Authorities (FCAs) is a good example of this challenge. While FCAs are intended to allow operators to clear cut forests only for agricultural projects, there is ample evidence that these have been used, as a conduit, to access valuable timber.¹⁶

The PNGFA has acknowledged it is under-resourced to combat illegal logging,¹⁷ and without further funding it is unclear how monitoring will be improved in line with the NDC Implementation Plan.

Promoting the downstream processing of logs in PNG will also be difficult unless the round log export ban, promised for 2025, is actually enforced. So far, progress towards the ban has been stymied by a lack of political will.

Given that PNG has thus far failed to curb illegal logging pushed primarily by multinational companies, significant changes would be needed in order to meet the targets.

Energy targets

In order to make its energy industries carbon neutral, PNG plans to:

- Increase the proportion of on-grid electricity generation powered by renewables to 78 per cent by 2030
- Reduce the demand for energy by adopting new Minimum Energy Performance Standards and Labelling rules
- Establish a framework for offsetting fossil fuel emissions
- Enhance the country's capacity for data collection

¹³ Conservation, Environment and Promotion Authority, <https://www.pngcepa.com/>; PNG Forest Authority, <https://pngfa.gov.pg/>

¹⁴ Forestry Act 1991, http://www.paclii.org/pg/legis/consol_act/fa1991139/

¹⁵ Bank of PNG (2017) *Money Laundering and Financing of Terrorism National Risk Assessment*, available at: <https://www.bankpng.gov.pg/financial-analysis-and-supervision/> at p. 91.

¹⁶ See final reports of Commissioner Nicholas Mirou and Commissioner John Numapo, SABL Commission of Inquiry, 2013, available for download at: <https://actnowpng.org/issue/campaign-issue-commission-inquiry>; Global Witness (2018) *A Major Liability: Illegal logging in Papua New Guinea Threatens China's Timber Sector and Global Reputation*

¹⁷ Bank of PNG (2017) *Money Laundering and Financing of Terrorism National Risk Assessment*, available at: <https://www.bankpng.gov.pg/financial-analysis-and-supervision/> at p. 91.

PNG is currently on track to grow its on-grid share of renewables to 65 per cent by 2030.¹⁸ Most of the activities listed in its NDC Implementation Plan to help achieve the target of 78 per cent renewables, however, are not funded. It is therefore unclear whether the nation's energy goals will be matched with resources and action.

Barriers to reaching energy goals

A 2019 analysis by the United Nations Development Programme, the Global Environment Facility and the Global Green Growth Institute highlights several major and persistent policy gaps that have hindered PNG's shift to renewable energy.¹⁹

These organisations identify that a lack of policies relating to renewables – and a lack of energy data that would inform the creation of such policies – are responsible for delaying the transition, along with an absence of financing options and financial incentives.

They write that the limited space for private sector activity also slows the country's move towards renewables, with state owned PNG Power having a monopoly on the electricity market. A uniform electricity tariff prevents the introduction of competition and serves as a disincentive for PNG Power and private companies to invest in renewable energy for rural areas.

Off-grid renewable power sources such as micro-hydro, small-scale solar and biomass would be the best ways to connect rural areas to electricity. However, the government remains focused on extending the existing grids.

Major energy projects

One plan to bolster the national power grid comes in the form of the Ramu 2 Hydropower proposal, a massive project funded by Chinese companies.

Another is the 2018 PNG Electrification Partnership between PNG, Australia, Japan, the US and New Zealand, formed to help realise the country's goal of connecting 70 per cent of its population to electricity by 2030. The country has one of the world's lowest rates of energy access, at 13 per cent.²⁰

Among other projects, the partnership has pledged to fund:

- A new solar power plant in Morobe's Markham Valley, which would plug into the Ramu grid and power the city of Lae
- An upgrade to the Ramu grid around Lae

¹⁸ Final Revised NDC Implementation Plan 2021, p.37

¹⁹ United Nations Development Programme, Global Environment Facility and Global Green Growth Institute 2019, 'Policy Gap Analysis: Supporting improved policy settings for renewable energy and energy efficient technology uptake in Papua New Guinea'

²⁰ Energy Research & Social Science 2021, September, 'The Papua New Guinea Electrification Partnership: Power and diplomacy in the Pacific'

- Small-scale and microgrid projects beyond the network reach of the state-owned electricity company PNG Power²¹

Risk of stranded assets

PNG also has several plans for fossil fuel projects including Papua LNG, PNG LNG, P'nyang, Pasca A and a coal-fired power station in Lae, which would cause major setbacks to achieving the nation's clean energy targets if they proceed.

All of these proposals coincide with a global market trend away from the risk of stranded fossil fuel assets. Stranded assets are investments that are unlikely to yield an economic return for investors due to unexpected reductions in value and can be caused by changing market conditions, including the current international push towards decarbonisation.

Institutions such as the International Energy Agency²² and the Intergovernmental Panel on Climate Change²³ have warned against creating any new fossil fuel developments if the world is to avoid climate catastrophe.

Many countries have vowed to slash their emissions and are moving to renewable energy sources at an unprecedented rate, reducing the demand for fossil fuels. Companies are also operating in a world of rapidly rising carbon tariffs and climate litigation, and a shrinking pool of investors.

PNG already sources much of its energy from hydropower and is developing more hydropower plants. It is also developing its first biomass and solar plants. All of these will improve electricity access for the people of PNG in a cleaner and cheaper way than coal or gas.

Recommendations

Speeches from the Prime Minister and official plans from the government make it clear that PNG recognises the urgent need to act in order to mitigate the devastating effects that climate change will have on its citizens.

What is still unclear is whether the government will take appropriate action. To overcome the hurdles outlined in this paper, the government will have to take concrete steps beyond setting targets and calling for climate action.

The Nogat Coal alliance makes the following recommendations:

²¹ Lowy Institute 2020, 6 October, 'PNG electrification: Spend on solar to help meet targets', <https://www.loyyinstitute.org/the-interpretor/png-electrification-spend-solar-help-meet-targets>

²² IEA 2021, May, 'Net Zero by 2050: A Roadmap for the Global Energy Sector', <https://www.iea.org/reports/net-zero-by-2050>

²³ IPCC 2021, 'Sixth Assessment Report', <https://www.ipcc.ch/report/ar6/wg1/#FullReport>

Energy use

- The PNG government should conduct an analysis on how much it would cost to meet NDC targets on energy and make a public statement on how it plans to fund those costs.
- The PNG government should immediately implement a ban on coal mining and coal-fired power for the grid and any other power generation.
- The PNG government should publicly reaffirm the government's commitment to increase the proportion of on-grid electricity generation powered by renewable energy to 78 per cent by 2030.
- The PNG government should publish an overarching plan to build off-grid renewable energy sources to power rural communities.

Land use

- The PNG government should conduct an analysis on how much it would cost to meet NDC targets on land use and make a public statement on how it plans to fund those costs.
- The PNGFA should actively implement the measures needed to give effect to the ban on round log exports by 2025, including through ceasing renewals of all types of logging concession leases, licences and permits.
- The PNG government should ensure that the PNGFA has the resources to adequately enforce breaches of forestry laws and regulations.
- The PNG Forest Authority and the Conservations and Environment Protection Authority permit approval registers should be made publicly available.

This is a publication of the [Nogat Coal](#) alliance, which consists of:

[Nogat Coal](#)—an advocacy group trying to keep coal out of Papua New Guinea. It has access to NGOs, the business community, think tanks, academia and key public figures in PNG.

[Center for Environmental Law and Community Rights \(CELCOR\)](#)—a not-for-profit PNG public interest environmental law firm, which gives legal help to landowners and community-based organisations. It also conducts policy research and advocates for environmental justice.

[Jubilee Australia Research Centre](#)—an Australian not-for-profit organisation engaging in research and advocacy to promote economic justice for communities in the Asia-Pacific region and accountability for Australian corporations and government agencies operating there.