

Papua New Guinea

Status: PNG and its 600 off-shore islands have a land area of approximately 462,840km² with a combined coastline of 5,152 km

Population: Based on PNG's 2000 Census and 2011 Census, its population increased by 2 million over the decade, reaching 7.2 million (GoPNG, 2011). Nearly 40% of the population lives in traditional social groups that are reliant on subsistence farming. A large proportion, approximately 6,254,000, or 87%, live in rural areas (Knoema, 2015)

Accessibility: Regular flights from Australia (Brisbane/Cairns).

Statistics around Waste (including plastic waste data) PNG has the highest coastal population and also the highest rate of plastic waste generation per day in the Pacific islands. It is followed by Fiji, Vanuatu and Solomon Islands.

	Coastal population	Waste generation rate [kg/person/day]	% Plastic in waste stream	% Inadequately managed waste	Waste generation [kg/day]	Plastic waste generation [kg/day]	Inadequately managed plastic waste [kg/day]	Plastic waste littered [kg/day]	Mismanaged plastic waste [kg/person/day]	Mismanaged plastic waste in 2010 [tonnes]	Mismanaged plastic waste in 2025 [tonnes]	
PNG	2,747,514	0.79	13	86	2,170,536	281,084	240,502	5,622	0.090	89,835	242,328	

Source Jambek 2016

PNG has a daily plastic waste generation of approximately 282 tonnes (t). An estimated 246t are mismanaged daily, entering the marine environment through release from uncontained disposal sites or by littering.¹ As a result, an estimated 89,835t of plastic waste became marine debris in the waters around PNG in 2010. If not addressed, the amount is expected to rise to 242,328t by 2025. Of the 282t of plastic generated each day, approximately 31t may be PET or high-density polyethylene (HDPE) plastic, eligible for recycling under a container deposit scheme (CDS).

Based on an average reduction rate of 40% in mismanaged waste with a CDS in place, approximately 10.89t of PET and HDPE plastic would be recycled each day. This could increase to an 80% or above reduction rate, depending on access to recycling collection services and viable markets, among others. Nonetheless, a 40% reduction in mismanaged PET and HDPE would result in approximately 85,859t of plastic becoming marine debris each year

A CDS that recovers 40% of HDPE and PET plastic bottles in PNG may achieve the following reductions in marine debris each year: n 596t in floating plastic n 2,784t in sunken plastic n 596t in beach plastic. Further benefits attributed to a CDS are a potential reduction in annual damage costs for PNG's 605 local fishing vessels (approximately US\$4,700). If beaches were cleaned up, over US\$1 million would be saved, of particular relevance to the amenities of coastal communities and the tourism sector.

An estimated 13% of PNG's waste stream consists of plastic.

A waste composition survey was conducted by the National Capital District Commission (NCDC) of Port Moresby in 2011. Based on the distribution of primary material groups, it was found that the urban household waste generation rate was 0.36kg per day, comprising over 30% organic waste and over 18.5% plastic waste. Source: NCDC 2011

¹ The outcome of mismanaged plastic is split into three primary groups: plastic that remains on the surface of the sea as floating debris, plastic that sinks to the ocean floor and plastic that washes up on beaches.

Legal Policy Framework There is no specific regulatory framework for solid waste management, with solid waste falling under generic pollution / litter umbrella in the *Public Health Act 1973* and the *Environment Act 2000*² which is the principal legislation for environmental protection,. It is implemented through multiple environment regulations under the Department of Environment and Conservation through the Conservation and Environment Protection Authority. The Act empowers provincial and local governments to develop environmental legislation, policies, and by-laws for waste management. The Act also requires the development of national policies and a national SWM strategy with associated regulations.

Environment (Control of Biodegradable Plastic Shopping Bags) Regulation 2010 controls the manufacture and importation of biodegradable plastic bags through the issuance of an environment permit. Bags are required to be labelled and must meet the standards of the Department of Environment and Conservation.

In April 2018, the then PNG Minister for Environment and Conservation, John Pundari, announced a total ban on plastic bags, irrespective of biodegradability. Noting that previous measures to manage plastic bags have been ineffectual and that biodegradable bags still pose a risk to the marine environment that ban would take effect after 18 months . The ban came into effect on 16 March 2020 after being delayed twice.

According to the CEO of the Manufacturers Council of PNG, Chey Scovell, 'They haven't changed the law, they have a policy without a legal basis, they have not defined the parameters; are we just talking only about shopping bags are we talking about the tearaway bags for fresh produce?'

To add to the confusion, the Manufacturers Council is already aware of some businesses that are gearing up for individual exemptions. 'I saw that a Chinese importer was given a letter saying that they can continue to import their bags for a couple of years. So does that mean everyone can apply for an exemption?' Scovell says that the Council acknowledges the need to do more for the environment but believes that it is a far more complex issue than just banning single-use plastic. He says PNG needs to properly manage its waste, to enforce the current regulations and to change the policy of checking bilums (reusable string bags) into the front of shops which is 'not well thought out at all'.³

'The only industry body in PNG that has done anything for the environment in the past 40 years is the Manufacturers Council,' he says. 'The Clean Up Port Moresby and the Clean Up Lae campaigns were both funded by us; nobody else wanted to get on board.'

PNG has identified a need for national policy and strategic planning for waste management, since this area currently is governed under broader environment management legislation. It is anticipated that this will come about as part of a JICA technical cooperation project and that the strategy will incorporate various financial mechanisms.

	Single Use Plastic Policy	Dedicated Single Use Plastic Orders, Acts and Regulations							Economic Instruments to internalise costs					Recycling	National Campaigns targeting SUP	R&D Alternatives
		Plastic bags	Polystyrene plates	Straws	Styrofoam food Containers	Cups plates cutlery	PET	Plastic Ice blocks pouches nappies	Container Deposit Scheme	Levy Plastic Bags	Duty SUP	ARDC	Single Use Diapers	Recycling Of plastics		
PNG																

Enforcement and compliance: Permit holders are not fully reporting manufactured or imported bags, and thus not paying the levy. Additionally, plastic bags are entering the country illegally.

Governance and organisation: PNG has three levels of government - central, provincial, and local. There are 31 urban and 317 rural local governments. PNG has over 21 unregulated disposal sites and two controlled sites located in Lae and Port Moresby.

² <https://devpolicy.org/solid-waste-management-in-papua-new-guinea-20130812/>

³ <https://www.businessadvantagepng.com/industry-in-the-dark-on-papua-new-guineas-single-use-plastic-ban/>

Private Sector Papua New Guinea manufactures plastics products, including plastic bags; however, plastics are not currently recycled in PNG⁴. Since 2004, Papua New Guinea has sought to ban plastic bags. However, opposition by industry and a lack of viable alternative products resulted to delays in implementing the ban.

Public Awareness- tourism: PNG (Port Moresby) is inundated with litter and after heavy rainfalls waterways blocked by plastics etc... Much public awareness needed around reducing single use plastics.

Tourist visits to PNG were at 198,685 in 2015, representing a 3.8% growth on the previous year. PNG is fast becoming the largest short-stay accommodation provider in the South Pacific, with tourism representing 2.5% of its gross domestic product (GDP) (SPHTR, 2014). Not much information on initiatives to minimise single use plastics in literature review in relation to tourism.

Research and Development into Single Use Plastic alternatives/ repurposing: While authorities have been working with industry to encourage the use of billum bags and other alternative products, it is unclear whether in-country manufacturers of plastic bags are continuing to operate.

Development Partner Initiatives The *Reduce, Reuse and Recycle (3R HEART)* community awareness and SWM training programmes were implemented by JICA between 2011 and 2016. UN Environment is implementing a project between 2019 and 2022 to strengthen institutional systems to manage waste, which includes assisting municipalities to develop waste management plans. PacWaste Plus funded a waste audit for PNG.

Summary Overview

- As the largest contributor marine litter, plastic pollution PNG good pilot country in terms of volume of potential single waste avoided and numbers of people benefiting.
- A pilot in PNG would focus on Port Moresby as activities in regional/remote areas of PNG would be too resource intensive in the short timeframes of POLP.
- Scope to increase ban to more SUPs but will face resistance from manufacturers.
- Potential to increase awareness and education about waste management and Single use plastic issues which are a huge problem (clog up waterways in Port Moresby when it rains heavily)
- Recycling virtually an unknown concept as is household segregation of waste
- PNG is a manufacturer of plastics, has a law to ban manufacture and use of single use plastic and has a container deposit scheme
- Activities could include increasing the scope of the plastics ban to more SUPs, increasing awareness and education about waste management and single use plastic issues increasing household segregation of waste.

⁴ <https://www.theprif.org/documents/papua-new-guinea-png/waste-management/papua-new-guinea-png-profile-solid-waste-and>