

Solid Waste Management Country Profile

Vanuatu

BACKGROUND

Vanuatu has a population of 272,459 according to the 2016 census¹, with 50,944 people living in the urban areas, including the capital city of Port Vila, which are the main focus of this document. The country covers an area of 12,200 km² and is made up of 83 islands. The country is divided into six provinces and three designated cities.

The climate is subtropical, with a rainy season and a dry season. Temperatures range from 21°C to 27°C throughout the year, with precipitation averaging 1,500 mm to over 4,000 mm per year depending on the locations². During the rainy season, cyclones pass over the country and its surrounding waters an average of two to three times, and gusts of about 320 km/h can cause damage to large areas of the country during major cyclones. Agriculture and tourism are the main industries, and the GNI per capita is USD 3,130³. The country graduated from the list of Least Developed Countries (LDCs) in December 2020.

INSTITUTIONAL ASPECTS

In Vanuatu, Waste Management Act No. 24 of 2014 provides that a national agency, the Department of Environmental Protection and Conservation (DEPC) of the Ministry of Climate Change, is responsible for overseeing the development, coordination, and implementation of policies related to national waste management and waste reduction. The provision of Solid Waste Management (SWM) services to citizens is the responsibility of municipalities (province and city council governments), which are obliged to develop and implement annual plans for SWM in their jurisdictions. However, not many municipalities have actually developed SWM plans. Therefore, the DEPC is working with the Department of Local Authorities (DLA) of the Ministry of Internal Affairs, the municipalities' regulatory body, to strengthen support for the development and implementation of SWM plans in municipalities.

Upper-level policies and plans related to SWM are as



Plastic prepaid bags awaiting collection (2017)

follows:

- Vanuatu 2030: National Sustainable Development Plan 2016–2030
- Vanuatu National Environment Policy and Implementation Plan 2016–2030
- Vanuatu National Waste Management, Pollution Control Strategy and Implementation Plan 2016–2020

On July 1, 2018, a plastic ban was enacted to prohibit the manufacture and use of disposable plastic bags, polystyrene containers (takeout boxes) and plastic straws, in a progressive effort within the Pacific region. In December 2019, Phase 2 of the plastic ban came into effect, adding seven new items to the list of items covered and a ban on imports. In addition, regulations regarding registration fees for the private sector licensing system and fines for illegal dumping were established in 2018, based on the Waste Management Act.

Port Vila City is a designated city located in Shefa Province; people are flowing into the suburban areas around Port Vila as urbanization progresses. In response, the Greater Port Vila Urban Development Plan has been developed for these suburban areas. In February 2020, the Port Vila City Council (PVCC) and Shefa Provincial Council signed a Memorandum of Understanding (MOU) and are jointly developing an SWM plan for 2021 to 2030. The urban planning department in PVCC was previously in charge of SWM as well as urban planning, but in 2018 a waste management officer was appointed, and the 2020 business plan

provided for the establishment of a dedicated waste management department.

TECHNICAL ASPECTS

Waste Generated and Composition

In Vanuatu, SWM information from each municipality is aggregated by DEPC and made available on its website⁴.

The estimated amount of waste generated across the country was 114 tons per day in 2019, of which approximately 50% was generated by Port Vila City and its surrounding suburbs. There is no segregated collection of waste, and almost all of the collected waste goes to landfill.

The following table shows waste generated by household income in Port Vila City, with a sharp increase since 2011.

Waste generated by household income in Port Vila City

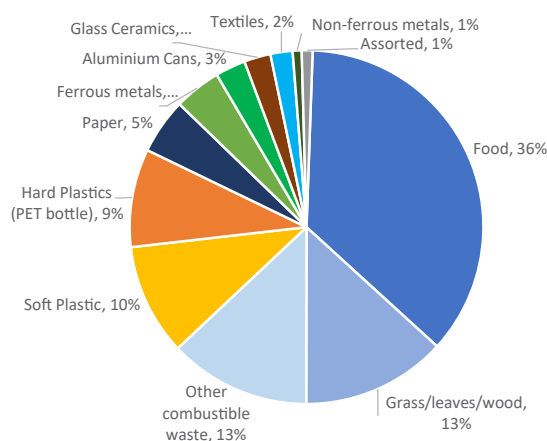
(Unit: g/capita/day)

Year	Low	Middle	High	Average
2011	390	350	620	430
2014	600	680	650	630
2017	960	1200	870	910

Source: J-PRISM II WACS Report (2018)

About 60% of the waste is organic waste, followed by plastic waste, which accounted for about 20% of the total in 2017. A plastic ban was enacted in 2018, but its impact is not reflected in this survey result.

Household Waste Composition in Port Vila City (2017)



Source: J-PRISM II WACS Report (2018)

Waste Collection

The waste collection service in Port Vila City is operated by PVCC. Collection takes place two to three times a week with three compactors and six open trucks, by door-to-door collection using plastic prepaid bags called "Yellow Bags." The prepaid bag system was introduced in 2010, but failed once in the past due to problems such as running out of bags due to insufficient procurement. The system was reintroduced in 2015, with measures taken to remedy these issues, and is now in use by about 90%⁵ of residents.

Approximately 24 tons of household waste is collected per day, and if business and market waste is included, a total of approximately 45 tons per day of waste is taken to the Bouffa Landfill. The waste collection rate was 72% as of 2019⁴. This includes the volume of waste collected by private waste operators (PWOs).⁶



Waste collection vehicles owned by PVCC at the Bouffa Landfill site (2020)

Each of the five wards in the city is staffed with a Ward Secretary, a city employee who serves as a point of contact for residents, holding community meetings and educating residents.

Waste Final Disposal

The Bouffa Landfill is located approximately 10 km from the central city of Port Vila, and all waste collected in Port Vila City is delivered there. The landfill is operated by PVCC. A management building and a leachate pond are installed on the 48-ha site, and leachate collection pipes are buried in the current disposal area (Cell 1). The Bouffa Landfill started operation in 1995 with the support of the World Bank, and was rehabilitated with JICA's support in 2008, becoming a sanitary landfill site (using the Fukuoka Method). After a cyclone in 2015, the landfill was restored thanks to emergency assistance and expanded in 2017.

The remaining capacity of the existing landfill area is limited, so a new landfill area of about 1 ha is due to be

constructed adjacent to it. No weighbridge has been installed because there is no electric power at the landfill site. Vehicles delivering waste pay the waste disposal fee at the landfill site entrance. The amounts of incoming waste are recorded manually by PVCC staff.



Orthoimage generated from an aerial photo of Bouffa Landfill site taken by drone (created by J-PRISM II, 2019)

Recycling

The recycling market in Vanuatu is limited, with only one major private recycling company. The company purchases metals with high market value and collects electronic products free of charge. These recyclable materials are exported and recycled overseas. There is also a local beer manufacturer that collects and reuses more than 80% of its empty bottles using a deposit-based system. Composting in homes and markets is being conducted on a trial basis by NGOs.

In November 2019, the Vanuatu Recyclers and Waste Management Association (VRWMA) was established as the third recycling association in the Pacific region, with the aim of promoting 3R+Return.

Container Deposit Scheme (CDS)

In October 2019, the cabinet approved in principle the introduction of a Container Deposit Scheme (CDS) for beverage container recycling. This is a scheme whereby a deposit is paid at the time of product purchase and a refund is received upon returning the empty container or used product. In December 2020, the CDS technical working group was established, including government agencies, manufacturers, importers, and civil society organizations. Detailed planning and legal arrangements are currently underway, reflecting the opinions of each stakeholder.

FINANCIAL ASPECTS

SWM services in PVCC are mainly funded by Yellow Bags and waste disposal fees at the landfill site. The respective prices/rates are as shown in the table below.

Prices/rates of prepaid bags and waste disposal fees

Items	Type	Cost
Prepaid bag (Yellow Bag)	70 L	VUV 100
	45 L	VUV 70
Waste disposal fee	Small truck	VUV 2,500
	Medium truck	VUV 3,500
	Dump truck	VUV 8,500

In 2017, the total SWM-related revenue at PVCC was approximately VUV 31 million (prepaid bags: about VUV 19 million, waste disposal fees: about VUV 10 million, fines and others: about VUV 2 million). On the other hand, total SWM-related expenditure in 2017 was about VUV 36 million, and the shortfall was covered by the city's general fund. The major expenditures were waste collection costs (salaries for collection workers, vehicle maintenance costs, fuel costs, etc.), and the landfill site management costs. PVCC has a separate financial account for SWM, but it is not currently used and the SWM expenditure is from the city's general fund. PVCC is in the process of formulating the SWM By-law of Port Vila City.

RURAL AREAS

Vanuatu has six provinces, and Luganville in Sanma Province, Port Vila in Shefa Province, and Lenakel in Tafea Province are designated cities.

Shefa Provincial Council

Shefa Province outsources waste collection to seven PWOs, spending about VUV 13 million per year from its general fund (property tax, etc.). The province delivers collected waste to Bouffa Landfill, and is seeking a way to secure new sources of revenue through a new landfill site or prepaid garbage bags of its own.

Luganville Municipal Council

Luganville Municipal Council (LMC) worked with Sanma Province to develop a waste management plan for



Compost (Shefa Province)

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Red Bag
(Luganville Municipal Council)



Source Segregation
(Lenakel Municipal Council)



Explanatory handout of White Bag
(Marampa Province)

2020 to 2024. Residents use plastic prepaid bags called “Red Bags” to dispose of their waste. LMC conducts waste collection about two to three times a week with trucks and compactors, and disposes of the waste at a landfill site about 4 km from the city-center. LMC focuses on environmental education in elementary schools, led by a staff trained in Shibushi City.

Lenakel Town Municipal Council

Lenakel Town Municipal Council (LTMC) conducts waste collection about once a week in collaboration with Tafea Province. The collected waste is stored separately according to its type, but it cannot be exported due to the decline in the market value of resources, so the waste remains in storage.

Marampa Provincial Council

In Lacatro City, Marampa Province, waste collection using prepaid bags called “White Bags” was started in 2019.

CONCLUSIONS AND RECOMMENDATIONS

In general, the waste management in Port Vila City is on its way to sound operation. The following are some of the issues or recommendations nationwide:

✓ Capacity development of municipal SWM through inter-municipality cooperation

DEPC is expected to proactively promote SWM capacity development in municipalities, in collaboration with DLA and relevant ministries and agencies.

✓ Renewal of the NWMPCS 2016–2020

The Vanuatu National Waste Management, Pollution Control Strategy and Implementation Plan 2016–2020 needs to be renewed. In addition, the National Waste Minimization Plan 2021–2025 (Draft) is expected to be endorsed and implemented.

✓ Implementation of a CDS

The practice of 3R+Return by means of a CDS will contribute greatly to solving the SWM problems unique to island countries. The scope of the system is expected to be expanded to include electrical appliances, waste batteries, and automobiles. In addition, a CDS based on participative management by multiple enterprises is an advanced initiative in the Pacific region, and is expected to become a model for south-to-south cooperation.

✓ Funding for Bouffa Landfill improvements

The remaining capacity of the existing cell (disposal area) of the Bouffa Landfill is limited, and the landfill needs to be improved and expanded, including construction of a new access road.

¹ Vanuatu National Statistics Office (VNSO) “2016 Post-TC PAM Mini-Census Report Volume 1”

² Climate Change Knowledge Portal, World Bank Group

³ Ministry of Foreign Affairs of Japan, Vanuatu Basic Data

⁴ DEPC <https://environment.gov.vu/>

⁵ J-PRISM Public Awareness Survey (2017)

⁶ 13 PWOs registered as licensed as of 2019.

August 2022

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