

Solid Waste Management Country Profile

Fiji

BACKGROUND

Fiji has a population of 884,887¹ according to the 2017 census, of which 494,252 people live in urban areas. Fiji has a total land area of 18,270 square kilometers², most of which is occupied by the islands of Viti Levu and Vanua Levu. Ethnic groups are Fijian (57%), Indian (38%), and others (5%)³. The per capita GNI is US\$5,860. The three main industries are tourism, sugar, and clothing⁴. There are a total of 13 municipalities, including Suva, the capital city, which is the main focus of this report.

INSTITUTIONAL ASPECTS

Fiji does not have a waste management law, and the Environmental Management Act of 2005 is the basic act on waste. The Environmental Management Act stipulates the following items: 1) the establishment of a Waste Pollution Control Unit within the Department of Environment (DOE) of the Ministry of Waterways and Environment, 2) the appointment of a Waste Pollution Control Officer within the above Unit, who has the authority to issue Waste Disposal Permits, and 3) the functions of the Unit and other requirements. The operation of DOE is based on the Environmental Management (Waste Disposal and Recycling) Order of 2007, the Litter Act of 2008, and other related legislation.

On the other hand, the provision of waste management services to citizens is carried out by each municipality and is governed by the Department of Local Government (DLG) of the Ministry of Local Government, based on the Local Government Act. The DLG does not have any department or person in charge of waste, and there are certain challenges with regard to its monitoring of municipal waste management services. In the past, local sanitation services were regulated by the Public Health Act, but a major legislative change in 2018 resulted in local governments being required to provide local waste management services outside of their administrative boundaries, which are overseen by DLG.

A National Waste Management and Pollution Control Strategy and 5R⁵ Guidelines have been drafted by DOE, but none of them have yet been formally approved.

In Suva, the Department of Health Services is the main entity responsible for waste management services, although the Department of Technical Services and others also handle waste to a certain extent. There are about seven officers in charge of waste management, cleaning, and the 3Rs⁶ in the Department of Health Services.

TECHNICAL ASPECTS

Waste Categorization

Waste handled by the city's waste collection service is roughly divided into household waste, green waste, bulky waste, and commercial waste. Bulky waste includes household appliances. Only general waste is collected as a frequent service. Green waste is collected once a month, while bulky waste is collected once a quarter at the initiative of the government.

Waste Collection

Suva City is divided into five wards, and waste collection service is provided both inside of the city and in additional jurisdictions outside of the city.

The city has 11 operational packer trucks and four open trucks. Waste collection service is provided three times a week within the city, and once a week for jurisdictions outside of the city. Suva City has a population of 74,481, and according to municipal records, the amount of general waste collected and transported from the city was about 1,400 tons per month in 2019.

There are differences between wards and areas, but for the most part, general waste is put in plastic bags by residents and commercial establishments and placed along the streets. The trucks drive along the road and collect the waste as they go.



Waste Disposal

In the Suva metropolitan area, the Naboro Landfill is the destination for waste transport. Not only the city of Suva, but also the three neighboring municipalities bring their waste to the Naboro Landfill site. The distance from central Suva to the site is about 20 km.

The Naboro Landfill was built with the support of the European Union following the closure of the Lami dump, which is relatively close to Suva. The landfill started operation in 2005 and since then its operation has been outsourced to a private company. The Naboro Landfill site charges a tipping fee of about FJD 30/ton for waste disposal, depending on the type of waste and other factors. The amount paid by the city of Suva to the Naboro Landfill in a year is about FJD 610,000.

The Naboro Landfill site is considered to be a sanitary landfill site and is covered daily. Although there is no leachate treatment facility, leachate collection pipes are buried and aeration is carried out in the leachate storage area. This type of highly controlled sanitary landfill is rarely found in Fiji, let alone in the neighboring island countries.

Although the Naboro Landfill had been built for long-term use until around 2050, the actual development of the landfill cells takes place by stages. A total of four stages are planned, with Stage 1 currently close to its capacity limit and budgetary measures being taken to construct Stage 2.

The total volume of waste received by the Naboro Landfill in 2018 was 96,000 tons, which converts to approximately 8,000 tons per month.

Recycling

In Suva City, organic material is being composted at a composting facility supported by the Japanese government. It takes around three to four months to compost mainly vegetables and other processed waste from municipal markets. This is a simple method of composting, using a roofed area divided by concrete blocks. The compost is turned over manually.

One private company is doing business collecting waste paper and manufacturing recycled toilet paper. The company started operating in 2012 and owns a plant capable of processing 12 tons of wastepaper in 24 hours. In other cities and countries there are a certain number of exporters of metals and other resources, but apart from this company, there are few companies in the neighboring countries engaged in this kind of continuous recycling and

production.

Mission Pacific Fiji is a recycling program initiated by Coca Cola-Amatil (Fiji). The program incentivizes local authorities and citizens to collect plastic bottles and aluminum cans by paying FJD 0.75 per kilogram.

Meanwhile, beer bottles are voluntarily collected by Paradise Beverages (Fiji), the country's largest manufacturer of alcoholic beverages. The bottles are then cleaned and reused. The recovery rate is said to be close to 80%.

A feasibility study for a deposit-based container recycling system (Container Deposit Scheme) was conducted by the United Nations Development Programme (UNDP) in 2009 and this is still recognized as a priority activity by DOE. The UNDP feasibility study mainly targeted aluminum cans and plastic bottles, and recommended charging a deposit of 10 Fiji cents per container imported or produced, and setting an amount to be refunded.

A Waste Management and Recycling Association has been established with a project officer associated with the University of the South Pacific (USP) as the initiator. Although the association is not yet registered as a legal entity, it meets regularly to exchange information.

FINANCIAL ASPECTS

The main source of funding for all municipalities in Fiji is a citizens' tax called "rates," which is similar to the property tax in Japan.

Each municipality has adopted a slightly different system, so it is difficult to generalize, but in Suva City the budget for waste management is obtained from the general fund of the city, in much the same way as in Japan. In addition to this, the city collects an annual waste management fee of FJD 27.25 per 60-liter designated waste container.

Total revenue from the waste management fee in 2015 was about FJD 340,000, and the budget from the general fund was about FJD 2.9 million. Together, they amounted to FJD 3.24 million, which was the total annual expenditure for waste management projects in Suva City in 2015.

As a breakdown of the expenditure, the cost of waste collection (including salaries of collection workers, etc.) accounts for about 60% of the total expenditure, and tipping fees paid to the Naboro Landfill site account for about 20%. The remaining costs relate to 3R activities such as composting, resident awareness, and miscellaneous expenses.

In summary, Suva City's total annual budget is around

FJD 20 million, so the costs associated with waste management operations are expected to hover at around 15-20% of the total.

Refuse fees in Suva City are collected in accordance with the Suva (Garbage Disposal) By-Law of 2009. Ordinances pertaining to these waste management fees are established by each municipality based on the authority of the local government as set out in the Local Government Act. For example, the other three municipalities in the Suva metropolitan area all impose waste management fees of about FJD 80 per household per year. The reason why these municipalities have higher waste management charges than Suva City may be due to their significantly lower municipal tax revenues compared to Suva City. On the other hand, citizens living in these municipalities have lower incomes compared to those living in Suva City, and a low rate of waste management fee collection has been reported as a problem.

In addition, Lautoka City, Fiji's second-largest city, which is in the western part of the country, has a policy of not collecting a waste management fee. Basically, the city provides waste management services to its citizens from the general fund.

LOCAL AREAS

Fiji has 13 municipalities spread across the country. The main island of Viti Levu, which encompasses the central and western part of Fiji, has 10 municipalities. Vanua Levu is in the northern part and has two municipalities. The eastern area consists of a small archipelago that has one municipality.

It is difficult to generalize about these municipalities as they have different systems and vary in population and budget size, but essentially all of them provide certain waste management services to their citizens. Most municipalities have adopted a twice-weekly collection of general waste. In addition, initiatives such as clean school programs, home composting, market waste composting, and eco-bags are being implemented or planned in many municipalities under national policy. The only sanitary landfill site is the aforementioned Naboro Landfill site, but there are two managed landfill sites and four sites that are similar to open dumps⁷ across the country. Of these, there are three disposal sites that are used across a wide area, including the Naboro Landfill site.



The population residing in the 13 municipalities' administrative areas is estimated to be approximately 300,000, so two-thirds of Fiji's total population lives outside of these municipalities. Under the 2018 legislative changes, the 13 municipalities were required to provide services including waste management to residents outside of their administrative boundaries. Each municipality was assigned areas for which they would be responsible. The town of Nausori, for example, is now responsible for two former rural local authority districts, and must provide services to about 80,000 residents in those districts in addition to its own 25,000 residents.

Providing waste management services to areas outside of municipal boundaries is not easy. The first factor to consider is the distance from the landfill site. In addition, residents traditionally disposed of their own waste as they went about their daily lives (by burning it in the fields or dumping it into the rivers, etc.), so they have little awareness of correct disposal methods. These residents do not pay municipal taxes (property taxes) or waste management fees to the local government, of course, so securing financial resources is also a major issue. Currently, each municipality is providing services outside its area of jurisdiction using a special budget from the Ministry of Local Government.



Landfill site in Ba (2019)



Vunato Landfill site in Lautoka City (2019)

CONCLUSIONS

In general, it can be said that the city of Suva has sound waste management operations. Below are some of the issues or recommendations for waste management not only in Suva, but nationwide.

✓ **Transfer stations in the Suva metropolitan area**

In the Suva metropolitan area, four municipalities use one landfill site. The distance from Suva City is about 20 km, but several municipalities haul their waste from further away, some over 30 km. This has a significant impact on relatively small municipalities that do not have the resources to do so, and the establishment of transfer stations is desired.

✓ **Regional final disposal site in the northern region**

The two municipalities in Vanua Levu are both running out of capacity in their final disposal sites, and it is not easy to acquire land for new sites. Therefore, discussions and stakeholder meetings have started to consider the development of a regional final disposal site to

be used jointly by these two municipalities. On the other hand, because of the long distance between them, the candidate site should be carefully considered.

✓ **Waste management law and the development of regulatory authorities and jurisdictions**

Since no waste management law has been enacted, no centralized supervisory authority for waste management has been established. It was formerly the Department of Health, and is now DLG and DOE that operate waste management in accordance with the Local Government Act and the Environmental Management Act, respectively. There is a partial overlap in the roles and responsibilities of these agencies, so their roles need to be radically reorganized by waste management legislation and other laws.

✓ **Formulation of a national waste management strategy**

A national waste management strategy has been on hold in draft form for the past few years. The Environmental Management Act clearly states that it is the role of the DOE to formulate a national strategy, so finalization of the national strategy in the near future is recommended.

✓ **Introduction of a Container Deposit Scheme for recycling**

A Container Deposit Scheme could be a meaningful way to promote recycling and to stop littering in Fiji. It has already been introduced in Australia, Palau, the Federated States of Micronesia, etc., and is in the process of being introduced in Vanuatu and New Zealand. In Fiji, a UNDP feasibility study in 2009 determined that the system could be introduced in the country, but there was opposition from some private-sector companies. Today, however, social conditions are changing, and the need for such a system is recognized by the whole country. It is therefore recommended that introduction of the system be considered.

✓ **Providing services and securing financial resources for citizens who live outside the municipalities**

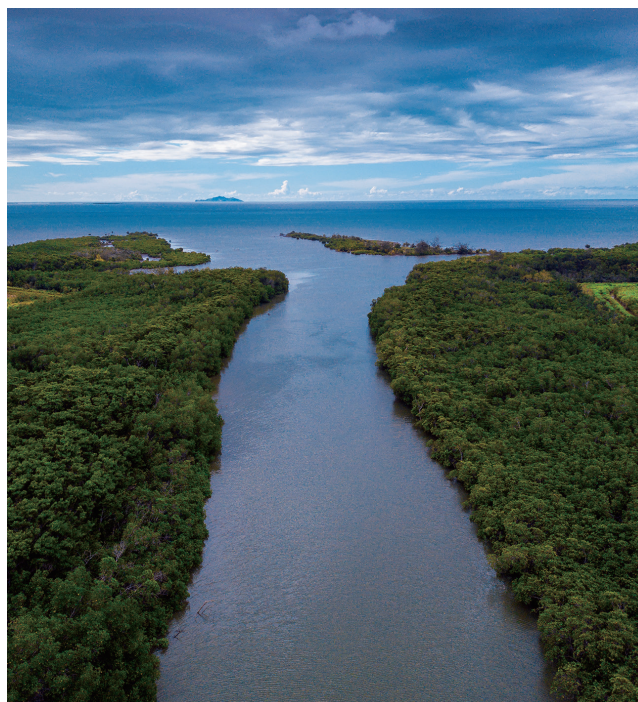
The national policy targets the provision of waste management/sanitation services to all citizens. In accordance with this, a transitional period is currently underway, during which local governments are receiving national funding to provide services to suburban and rural areas, but there are challenges in terms of sustainability. A proposal is being considered to establish a kind of Fiji Waste Management Corporation at the



expense of municipalities to provide services efficiently, but the challenge is how to secure the financial resources to do so.

- ¹ Census 2017 of Population & Housing
- ² Ministry of Foreign Affairs of Japan, Basic Data of Fiji
- ³ Census 2007 of Population & Housing
- ⁴ World Bank, 2018
- ⁵ Before the 3Rs, there were 5Rs, including Rethink and Refuse.
- ⁶ The 3Rs are key words for realizing a sound recycling-based society that suppresses the use of limited resources and reduces the environmental burden. There are three initiatives starting with R, in descending order of priority: "Reduce" (reduction of resource consumption), "Reuse" (repeated use of waste), "Recycle" (use of waste as a resource).
- ⁷ Waste brought to these disposal sites is simply discarded through dumping in the open, causing piles of waste.

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