



Solid Waste Management in the Pacific Solomon Islands Country Snapshot

BACKGROUND

Solomon Islands has a population of approximately 552,000. Per capita gross domestic product was estimated at SI\$11,223 (around \$1,582) in 2012.¹ Around 78,000 people live in the capital city, Honiara, with an estimated 35% of residents located in informal settlements in surrounding peri-urban areas.² Honiara is a rapidly growing urban center, with an estimated annual average growth of 4.7% over the period 2010–2015.³

TECHNICAL ASPECTS

Solid Waste Generation

The total solid waste generation rate (household and non-household) for Solomon Islands is estimated to be 0.75–1.0 kilogram (kg) per person per day. With a population of around 80,000 and a waste generation rate of 1.0 kg/person/day, the Honiara urban area is estimated to generate 80 tons per day or 29,000 tons per year. It is estimated that 40%–50% of waste is organic. If the urban population continues growing at its current rate, solid waste generation is expected to double within 18 years.

Waste Collection

The Honiara City Council (HCC) Environmental Health Division is responsible for collecting household waste within Honiara City and transporting it to the Ranadi dump site. HCC is also responsible for collecting waste from the central market. However, less than half of Honiara City's population is provided with waste collection services. The large informal settlements, which fall outside of the HCC municipal boundary, also do not receive waste collection

services. However, some people living in settlements near the boundary with Honiara City transport rubbish to small roll-on-roll-off bins that HCC places in several outlying areas. Many residences, government offices, businesses, vacant lots, and street corners in Honiara have an active garbage pile; and virtually every pile is burned regularly.

Since only a small proportion of solid waste is collected, much of the Honiara urban area's waste is improperly disposed of through open burning and illegal dumping. This has serious public health and environmental consequences. For example, poor solid management practices were linked to a severe outbreak of dengue fever in Honiara in 2013.

There are 10 residential waste collection zones in Honiara. HCC formerly contracted out all household waste collection to private companies, but a recent donation of three small, used compactor trucks induced HCC to take up most of the service again. HCC now uses the donated trucks to collect household waste on six of 10 routes—leaving the other four for tender by private contractors. HCC specifies that household collections be carried out three times per week, on Mondays, Wednesdays, and Fridays. However, collection schedules are somewhat unreliable, leaving solid waste sitting uncollected on the roadside for long period of time.

HCC and three private contractors also collect commercial wastes in and around Honiara, and transport it to the Ranadi dump site. HCC uses the proceeds of its commercial collection service to subsidize the household collection service.

1 ADB. 2013. *Key Indicators for Asia and the Pacific 2013*. Manila.

2 The 2013 population estimate was based on the 2009 population census figures for Honiara and surrounding peri-urban areas of 64,609, adjusted for 4.7% annual growth.

3 UN-HABITAT. 2012. *Solomon Islands: Honiara Urban Profile*. Nairobi.



Burning garbage on a downtown street corner in Honiara

Photo by T. O'Meara

Most household and office wastes are stored in 200 liter oil drums or plastic bags. Since drums are often used by several households, they tend to become overloaded. The drums are also very difficult for collection crews to handle. Drums are also filled up with water when it rains, creating breeding grounds for mosquitoes.

There is no segregation of wastes, such as green waste or recyclables, which are mixed into the general waste stream. Similarly, the waste stream at the Honiara Central Market is 94% compostable organic waste, which is also dumped at the Ranadi site.⁴

Waste Disposal

The HCC Environmental Health Division is also responsible for managing the Ranadi dumpsite, which is located 6 kilometers from the city, on what was once a wetland sited behind the sand berm that formed the nearby beach in a light industrial area.

The active part of the dumpsite covers about 1.5 hectares, but the total area is likely double that since beach erosion to the northwest reveals a thick layer of rubbish, and waste has also spread to adjacent properties. It is estimated that 20 to 30 tons of solid waste is disposed of daily at the dumpsite. Access to the site is unrestricted, and all wastes are accepted. Scavenging at the dumpsite provides a source of income for several dozens of nearby residents.

Until recently, Ranadi site was an unmanaged open dump. Uncontrolled burning was commonly used to reduce

the volume of wastes at the site, with no leachate treatment or control. Records on the number of vehicles and quantity of wastes entering the dump site are not kept.

In 2013, upgrading works on the dumpsite began with assistance provided by the Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management funded by the Japan International Cooperation Agency. As part of the assistance, new cells have been created where waste is now being compacted. Large bulky wastes, such as vehicle bodies and white goods, have been removed to create more space; and a simple drainage system to capture leachate and a small settling and digestion pond have been installed. An office is also being established to improve administrative management of the dumpsite.

Recycling

At least three private recycling companies operate in and around Honiara. They concentrate exclusively on metals. One handles only nonferrous metals, which are by far the most profitable. Local recycling companies buy aluminum cans for SI\$3.00 (\$0.44) per kg. It is estimated that only about half of the aluminum cans imported are exported again for recycling; hence, there is substantial room for the industry to expand (footnote 4). Solomon Islands Brewing, the local brewery, buys empty bottles for recycling at the local factory.

Composting

Despite the high volume of organic waste generated by Honiara's population, there are no commercial composting operations. A local nongovernment organization, Kastom Gaden Association, promotes small-scale composting activities, as part of its efforts to encourage small-scale food gardens using organic farming methods.

INSTITUTIONAL ASPECTS

Under the Environmental Health Act 1980, the Ministry of Health and Medical Services (MHMS), Environmental Health Division has the responsibility for providing expert advice on the development and implementation of environmental health policies covering waste management. The Act also makes provision for securing and maintaining environmental health by (i) prohibiting health nuisances (solid waste is categorized as a nuisance), (ii) reducing breeding spots for mosquitoes arising from refuse, (iii) prohibiting the deposit of refuse in watercourses in urban sanitary districts, (iv) prohibiting the deposit of refuse on

4 M. Matakai. 2011. A Critical Assessment of the Paradigm of Solid Waste Management in Pacific Islands Countries. Doctoral Thesis. Murdoch University. Perth.

beaches and foreshores, and (v) regulating authorities (e.g., HCC) to maintain cleanliness and prevent nuisances.

The Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), under the Environment Act 1998, is responsible for the protection and conservation of the environment. The Act empowers the ministry to assist in the development of legislation and policies for solid waste management (SWM). Section 3 (c) of the Act authorizes the ministry to reduce risks to human health and prevent the degradation of the environment by all practical means including: (i) preventing, monitoring, and controlling pollution; (ii) regulating the discharge of pollutants to the air, water, or land; (iii) regulating the transport, collection, treatment, storage, and disposal of wastes; and (iv) promoting recycling, reusing and recovering materials in an economically viable manner.

Under the Honiara City Act 1999, HCC is assigned the responsibility for refuse collection and street cleaning, refuse disposal, and control of environmental health. The Honiara Refuse Disposal By-Law 1995 directs HCC to plan and conduct the operations of SWM system in Honiara City for the collection and disposal of solid wastes. In addition, the Honiara Litter By-Law 1994 prohibits littering in public places. While the by-law provides for the levying of fines on offenders, in practice, it is not enforced. While Guadalcanal

Provincial Government is responsible for SWM in peri-urban settlements outside of Honiara City, there are no solid waste management services provided to residents.

The Solid Waste Management Strategy, 2009–2014 sets out key objectives for improving SWM in Solomon Islands. The strategy includes an action plan that provides detailed measures to deal with the priority initiatives, proposed time schedules, and implementation process. However, implementation has been constrained by the lack of financial resources and human capacity, as well as political support to promote SWM in Honiara as a priority issues.

A key weakness of the existing legislative framework is the overlapping roles of the Environmental Health Division in MHMS, and Environment and Conservation Division in MECDM, with both agencies assigned the responsibility for pollution control and regulation of illegal dumping of wastes to reduce risks to human health. In addition, implementation of existing solid waste regulations and strategies is limited.

FINANCIAL ASPECTS

HCC's total operating budget (excluding staff salaries) for SWM in 2012 was \$29,000 (SI\$200,000), all of which is earmarked to pay the collection contractors. While HCC



Scavengers working the dump

Photo by T. O'Meara

receives various grants from the national government, which are estimated to account for one-third of total revenue, apparently there is no funding specifically allocated for SWM.⁵

HCC does not receive payments directly from residential users for the solid waste collection or disposal services that it provides. All properties within Honiara City are subject to an annual property tax based on the value of land or property on it, which should then be used in part to support SWM. However, many property owners do not pay the tax, and collection rates are reportedly around 25%.⁶ HCC also derives revenues for the provision of waste collection services to market vendors and commercial businesses. The amounts received are used to offset the costs of providing residential collection services. The cost of providing solid waste collection services is included in the market fee charged to market vendors. HCC charges SI\$25 (\$3.70) for pickup of one drum, and SI\$20 (\$2.96) for each additional drum. For larger loads, HCC charges SI\$600 (\$88.80) to pick up loose waste from the ground, SI\$1,250 (\$185.00) for a 2-cubic meter bin, and SI\$2,000 (\$296.00) for a 3-cubic meter bin.

PUBLIC AWARENESS

Several externally supported public awareness campaigns have been carried out in Honiara, which have promoted the “3Rs” of Reduce, Reuse, and Recycle. Also cleanup campaigns involving the general public, and those specifically targeted at youth have been carried out on an ad hoc basis, such as the “Keep Honiara Clean” campaign implemented by HCC.

There are no awareness campaigns that seek to educate the public, or even the government, about the health consequences of burning trash and of other improper waste management practices.

Also limited information is available to the public to support improved transparency and accountability in the management of solid waste. For example, HCC does not publish the collection routes and schedules and the responsible parties for collection services.

CONCLUSIONS AND RECOMMENDATIONS

There is significant scope for improving SWM in Honiara to address current public health risks and environmental improvements. There is a need to address high rates of illegal dumping and burning of rubbish by expanding service coverage to all of Honiara City’s population, which would result in the collection of volumes up to four times more than at present. Options for expanding coverage to peri-urban areas in Guadalcanal Provinces should also be assessed, given rapidly increasing settlement populations which are currently not provided with service.

Improved collection would put pressure on waste disposal systems at Ranadi dumpsite. While upgrading measures will extend the life of the existing dumpsite, with rising urban population, there is a need to assess longer-term options for waste disposal in Honiara. An alternative to the Ranadi site has not been found—due partly to widespread land ownership issues. Waste minimization, increased composting of organic waste, and better recycling systems, will be essential in reducing the volume of wastes that enter the landfill.

The lack of funding for adequate management of solid wastes in Honiara remains an issue, especially given the high number of informal settlers who do not pay council rates, and low collections among ratepayers.

There is a need to revise and update city, provincial, and national regulations relating to waste management to clarify responsibilities, and strengthen monitoring and enforcement. This activity should be integrated with stakeholder consultations to develop broad support for and awareness of the revised regulations. ■

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5 Commonwealth Local Government Forum. 2013. Solomon Islands Local Government Profile. http://www.clgf.org.uk/userfiles/1/file/Soloman_Islands_Local_Government_Profile_2013_CLGF.pdf (accessed 15 December 2013).

6 D. Larden and M. Sullivan. 2008. Strengthening Land Administration in the Solomon Islands. Case study in “Making Land Work.” Commonwealth of Australia. Canberra.