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Fiji's Experimental Environmental Account for Solid Waste 2013 to 2016

Solid Waste Account

The Experimental Environmental Account for Waste presented in this release is the first stage of compilation to highlight and measure the inputs, generation and management (use) of waste as it flows to the environment, be taken for treatment, stored or used within the economy. The Account is experimental given that it is based on information that is currently available and coverage will expand once other information of waste flow becomes available.

The Fiji Bureau of Statistics in collaboration with the national stakeholders and international partners has compiled a Waste Account using the System of Environmental-Economic Accounting (SEEA) central framework. The environmental account for waste is a framework that describes in detail the production, reuse, disposal and the various types of residuals generated by the different units in the economy. This release captures the physical flows of residuals from the economy to the environment and within the economy.

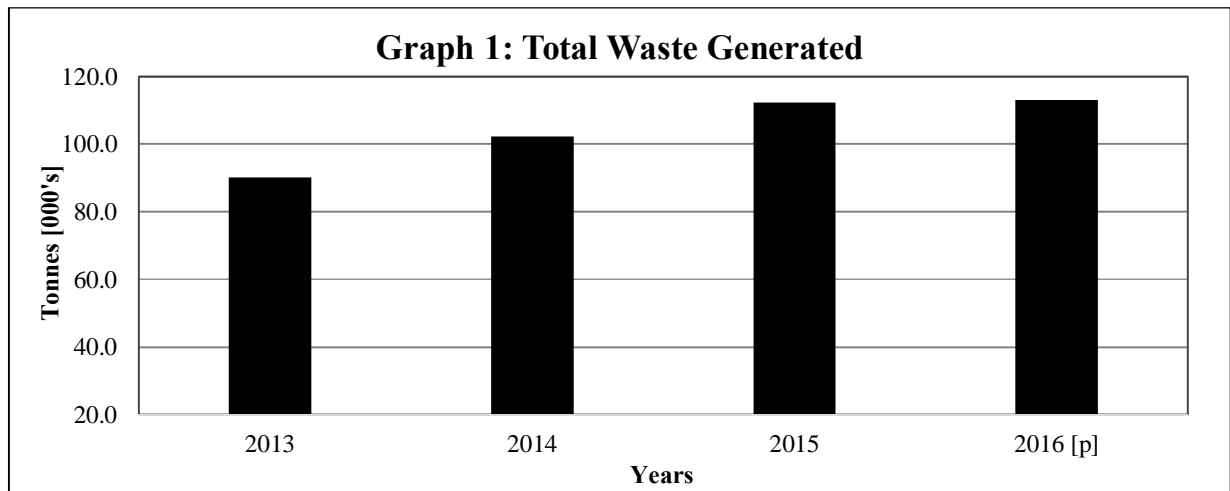
Why a Solid Waste Account

Rapid urbanisation and expansion of economic activity has increased both consumption and imports and as a consequence is placing significant pressure on the management of all forms of waste in Fiji. This experimental waste account attempts to provide solid waste statistics using an international integrated framework to enable better informed policy decisions pertaining to solid waste management in Fiji.

The account only includes the proportion of waste collected and sent to landfills from two dumpsites¹. Data for outer islands and rural areas, with no access to collection and landfill services are not part of the release at present due to data limitations. However, waste generated in these excluded areas, and also through illegal dumping and litter, remain significant and associated data can be included in future accounts.

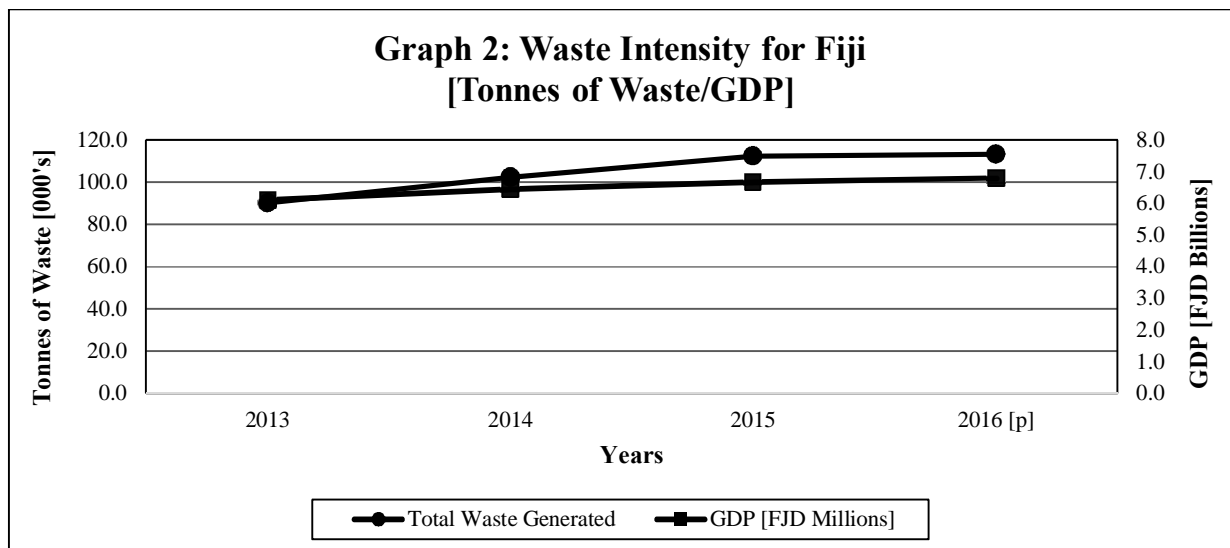
¹ The two dumpsites represent around 40.7% of the total population, covering Korovou to Navua and Nadi to Lautoka.

Waste Generated



An overall increasing trend in waste generation is observed over the years. The graph above clearly depicts the increasing waste concern for the nation. Total waste generated consists of general (80%), green (10%) and special waste (10%). The proportion has remained relatively constant over the years for the three categories.

Waste Intensity Relative to GDP



Between 2013-2016 the quantity of waste increased by 25.4% and nominal GDP increased by 11.5%. If the trend is representative of all of Fiji then this indicates that the economy is becoming more waste intensive.

Waste Management

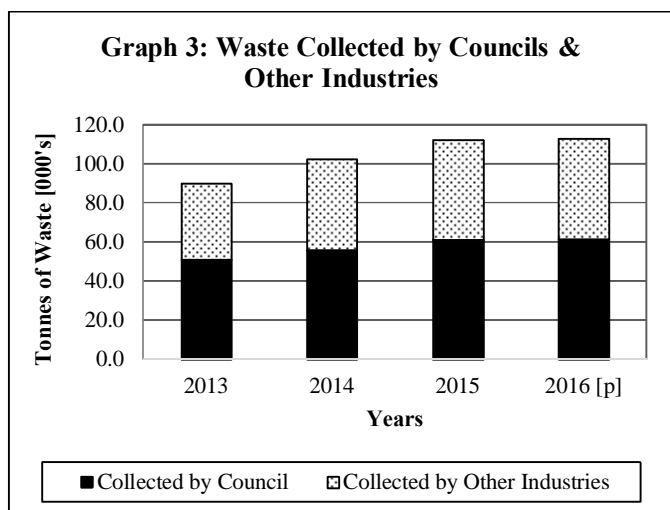


Table 1: Percentage of Waste Collected

Year	% of Total Waste Collected by Town and City Council	% of Total Waste Collected by Other industries
2013	56.3	43.7
2014	54.6	45.4
2015	54.5	45.5
2016 [p]	54.7	45.3

On average 54.4% and 45.6% of waste generated is collected by the town/city councils and private companies respectively. Of the total waste generated in this account 99.7% of the waste ends up in the landfill while 0.3% is recycled.

At present, central and local government allocated funds predominantly influences the capacity to manage waste. On average from 2013 to 2016 the waste management related capital expenditure allocated to the Department of Environment ó Waste Management Unit by central government is around \$2.4 million, representing 0.07 percent of total central government expenditure in 2016.

Please find attached the following Appendices for your reference:

- **Appendix 1** ó Fiji's Solid Waste Account; and
- **Appendix 2** ó Technical Notes.

The following contact persons are available to attend to any further enquiries:

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Appendix 1

Fiji's Solid Waste Account – Major Aggregates

[Tonnes]

Year	Town/City Councils				Other Industries				Total Collection				Landfill				Recycle
	General Waste	Green waste	Special waste	Total	General Waste	Green waste	Special waste	Total	General Waste	Green waste	Special waste	Total	General Waste	Green waste	Special waste	Total	General Waste
2006	27,127	7,758	75	34,960	21,313	72	3,854	25,238	48,440	7,829	3,928	60,198	48,440	7,829	3,928	60,198	0
2007	27,293	7,431	56	34,780	21,443	69	2,901	24,412	48,735	7,500	2,957	59,192	48,735	7,500	2,957	59,192	0
2008	24,716	3,659	63	28,438	19,418	34	3,247	22,699	44,134	3,693	3,310	51,137	44,134	3,693	3,310	51,137	0
2009	25,377	5,493	70	30,940	19,937	51	3,612	23,600	45,314	5,544	3,682	54,540	45,314	5,544	3,682	54,540	0
2010	26,972	6,830	67	33,868	21,191	63	3,443	24,697	48,163	6,893	3,510	58,566	48,163	6,893	3,510	58,566	0
2011	28,319	7,100	75	35,494	22,249	66	3,872	26,186	50,568	7,165	3,947	61,680	50,568	7,165	3,947	61,680	0
2012	29,013	6,298	55	35,366	22,794	58	2,829	25,681	51,807	6,357	2,883	61,047	51,807	6,357	2,883	61,047	0
2013	41,695	8,948	126	50,769	32,758	83	6,500	39,340	74,453	9,030	6,626	90,109	74,202	9,030	6,626	89,858	251
2014	45,590	10,094	205	55,889	35,818	93	10,557	46,468	81,408	10,188	10,761	102,357	81,087	10,188	10,761	102,036	321
2015	50,129	10,755	225	61,109	39,384	99	11,617	51,101	89,513	10,854	11,843	112,210	89,117	10,854	11,843	111,814	396
2016 [p]	50,532	11,029	222	61,783	39,701	102	11,445	51,247	90,233	11,131	11,666	113,030	89,850	11,131	11,666	112,647	383

Appendix 2: Technical Notes

Definition (SEEA 2012 – UNSD)

SEEA 2012 Central Framework – is a multipurpose conceptual framework for understanding the interactions between the economy and the environment, and for describing stocks and changes in stocks of environmental assets.

Solid Waste - Discarded products arising from all human activities and those arising from the plants and animals that are normally solid or semi-solid at room temperature are termed as solid wastes. Municipal solid waste (MSW) is a term used to represent all the garbage created by households, commercial sites (restaurants, grocery and other stores, offices and public places etc.) and institutions (educational establishments, museums etc.). Industrial solid wastes (ISW) are those wastes arising from the human developmental (industrial) activities. (*Environment Management Act 2005 (Act No 1. of 2005). (Legal Notice No. 1)*)

General Waste - also called residual waste, is material from businesses and households that cannot be recycled. It includes materials such as non-recyclable plastics, polythene, some packaging and kitchen scraps, etc. (SUEZ Environment, 2016)

Green Waste - biodegradable waste that can be composed of garden or park waste, such as grass or flower cuttings and hedge trimmings, as well as domestic and commercial food waste. The differentiation green identifies it as high in nitrogen, as opposed to brown waste, which is primarily carbonaceous. (Green Waste Wikipedia, n.d.)

Special Waste – means white goods discarded as waste including waste from chemical metal processing and pharmaceutical or agrochemical wastes. (*Environment Management Act 2005 (Act No 1. of 2005). (Legal Notice No. 1)*)