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## Fiji's Experimental Account for Water 2013 to 2016

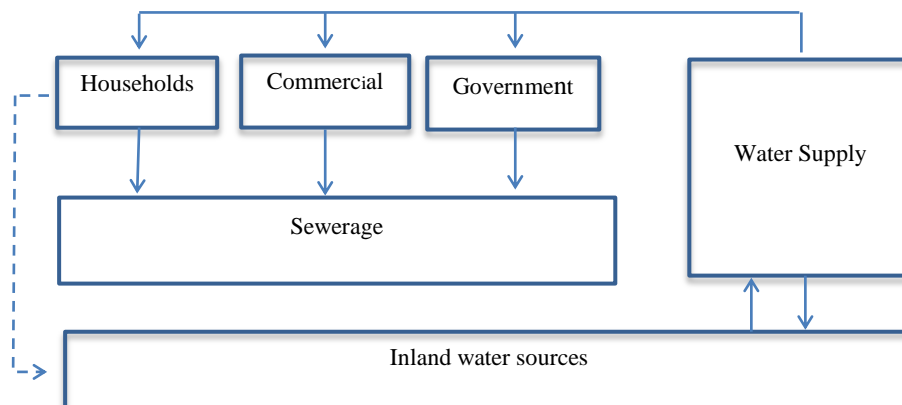
### Water Account

The Experimental Environmental Accounts for Water presented in this release is the first stage of compilation to improve our understanding of the stocks and flows of water in the environment. The Account is experimental given that it is based on available information and coverage will expand once other information on water supply and use becomes available.

The Account was compiled through a collaborative effort with national stakeholders and international partners using the System of Environmental-Economic Accounting (SEEA) central framework. In line with immediate policy concerns on access and availability of metered water for all, the account covers metered water data from the Fiji Water Authority for the years 2013 to 2016. Water from various other sources such as communal standpipes, roof tanks, wells, rivers or creeks, boreholes and privately reticulated supply will be included once the data becomes available.

### Why a Water Account

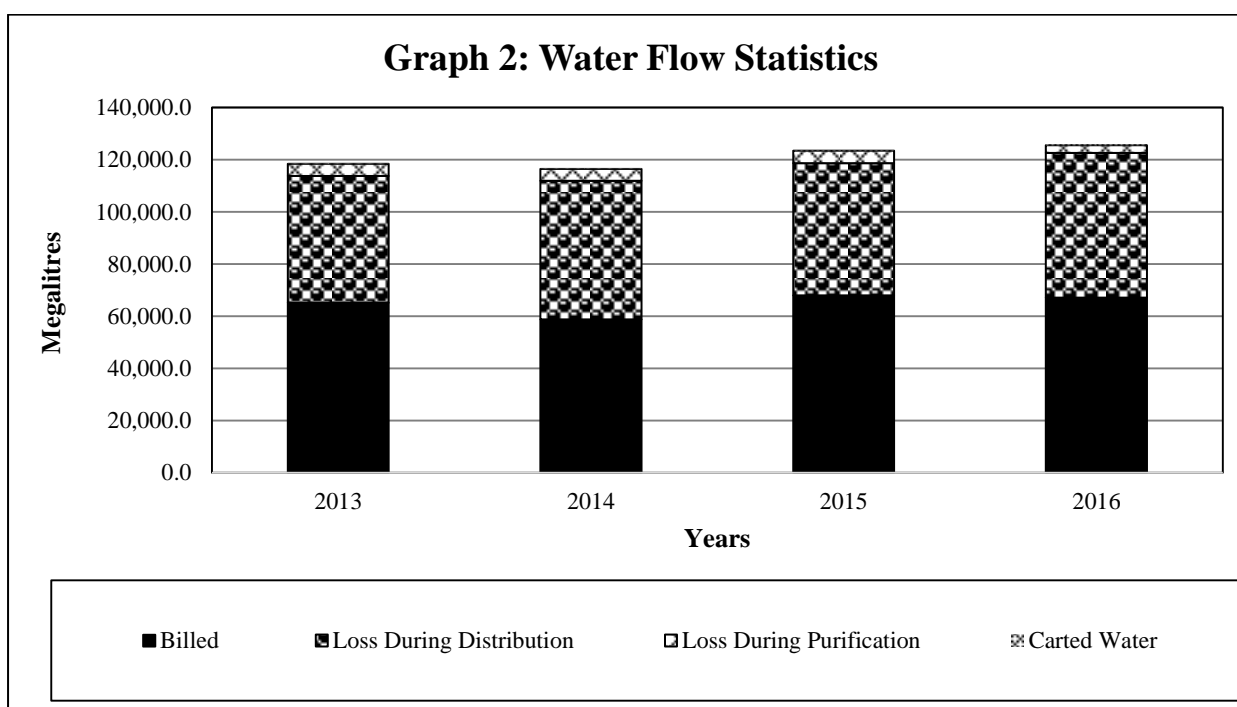
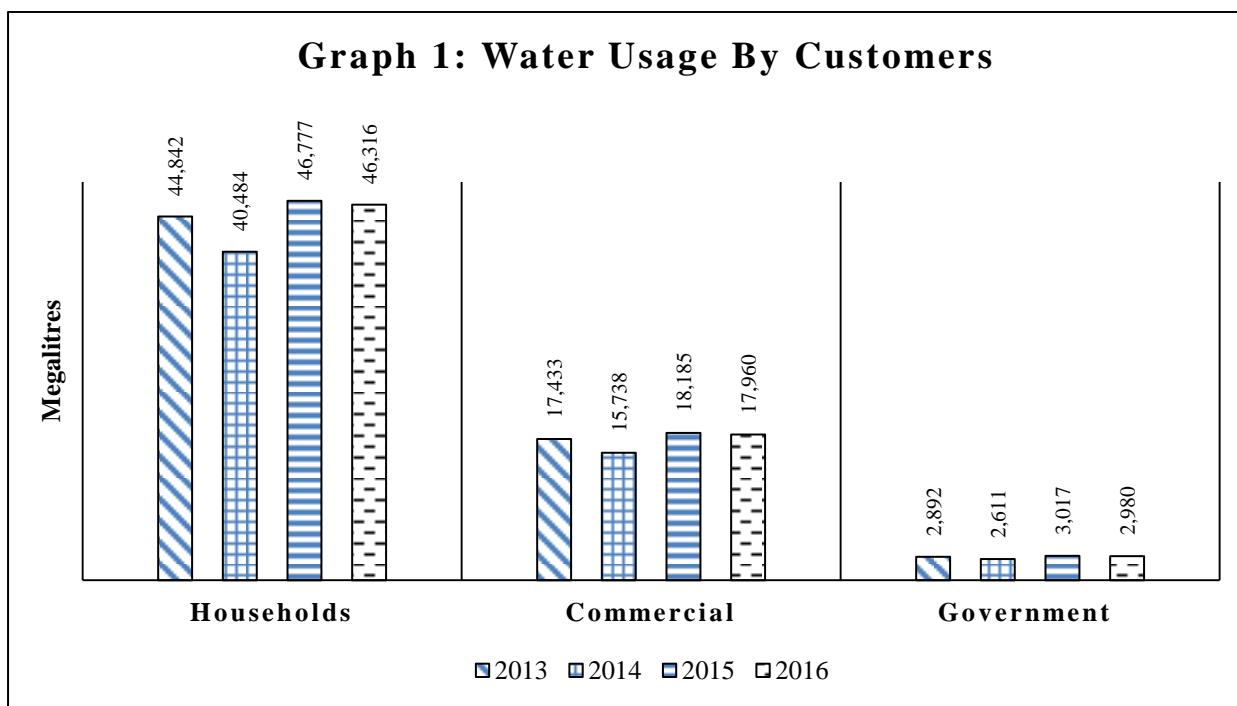
This experimental water account is in response to the need for better data and statistics to inform policies on water resource management and universal access to safe drinking water without increasing pressure on the environment. The compilation process was guided by this metered water flow diagram<sup>1</sup>.



<sup>1</sup> The diagram simplifies the metered water flow by assuming that households, commercial and government sectors are connected to the sewerage system. The flow diagram can be improved with additional information, particularly the number of households that are not connected to the sewerage system (represented by a dashed arrow).

**Main findings**

- 69% of total metered water consumption was consumed by household, around 27% by commercial sector and 4% by government.
- Not all water abstracted for metered water production was used by users. For 2016, 44% was lost during distribution and 2.4% was lost in the purification process, leaving only 53.5% available to users.



### **Further work**

This experimental account is the first attempt towards a more complete accounting of water availability, supply and use in Fiji. While valuable information could be derived from the current compilation, further development of SEEA water accounts will facilitate gathering of water data to address a number of important policy questions such as:

- How much water is available for use? How much of that portion has already been used?
- Which source of water have we been dependent most on? Is it sustainable?
- What is the main use of water?
- Which industry use water more/less efficiently?

In order to provide evidence to support these policy questions, the Fiji Bureau of Statistics will consider the following future work:

- Disaggregating the commercial sector into key water-related industries including Agriculture, Manufacturing and Electricity to capture the amount of metered water use in different industries;
- Breaking down sources of water inputs (rivers, streams, dams, etc.) to metered water production;
- Expanding the scope of the account from metered water to cover information on abstraction and use of water, as well as wastewater and reused water generated by industry; and
- Compiling an asset account for water to monitor the stock and changes in the stock of water for use.

**Please find attached the following Appendices for your reference:**

- **Appendix 1:** Fiji's Water Account 2013 – 2016; and
- **Appendix 2:** Technical Notes.

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

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## Appendix 1: Water Account 2013 - 2016

	2013 (Megalitres)	2014 (Megalitres)	2015 (Megalitres)	2016 (Megalitres)
<b>Sources of Water</b>				
Surface water extracted	118,390	116,536	123,496	125,726
Ground water extracted	-	-	-	-
Soil water extracted	-	-	-	-
<i>Total water extracted</i>	<i>118,390</i>	<i>116,536</i>	<i>123,496</i>	<i>125,726</i>
<b>less</b> loss during purification	4,631	4,558	4,831	3,036
Water available for distribution	113,759	111,978	118,666	122,690
Billed:				
<i>Household</i>	44,800	40,442	46,733	46,152
<i>Government</i>	2,892	2,611	3,017	2,980
<i>Commercial</i>	17,433	15,738	18,185	17,960
Non-billed water distribution	42	42	44	164
Loss during distribution	48,590	53,145	50,686	55,434
<i>Returns to the environment</i>	<i>118,390</i>	<i>116,536</i>	<i>123,496</i>	<i>125,726</i>
<i>% of water loss during purification</i>	<i>3.9%</i>	<i>3.9%</i>	<i>3.9%</i>	<i>2.4%</i>
<i>% of water loss during distribution</i>	<i>41.0%</i>	<i>45.6%</i>	<i>41.0%</i>	<i>44.1%</i>

N.B. This is a simplified version of the water account, the SEEA Conceptual Framework Version of the Water Account i.e. inclusive of Physical Supply and Use Tables is available on the website: [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj)

## **Appendix 1: 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.

**Water flow account** – describe flows of water, in physical units, encompassing the initial abstraction of water resources from the environment to the economy in the form of supply and use by industries and households, and finally flows of water back to the environment.

**Inland water sources** – comprises surface water (rivers, lakes, artificial reservoirs, snow, ice and glaciers), groundwater and soil water within the territory of reference.

**Surface water** – comprises all water that flows over or is store on the ground surface regardless of its salinity levels. Surface water includes water in artificial reservoirs, lake, rivers and streams, snow and ice glaciers.

**Loss during purification** – losses that occur during the purification process mostly through transpiration.

**Loss during distribution** – losses that occur between the point of abstraction, extraction or supply.

**Non-billed water distributed** – refers to water carted to residential areas free of charge during periods of drought, downtime in supply, natural disaster or where supply is affected or lacking.

**Returns to the environment** – comprises of water that is returned to the environment i.e. sum of loss during purification, billed water, non-billed water, and loss during distribution.