

# STATISTICAL NEWS

FBoS Release No: 99, 2018

20<sup>th</sup> December, 2018

## **Fiji's Experimental Environmental Account for Water 2013 to 2017**

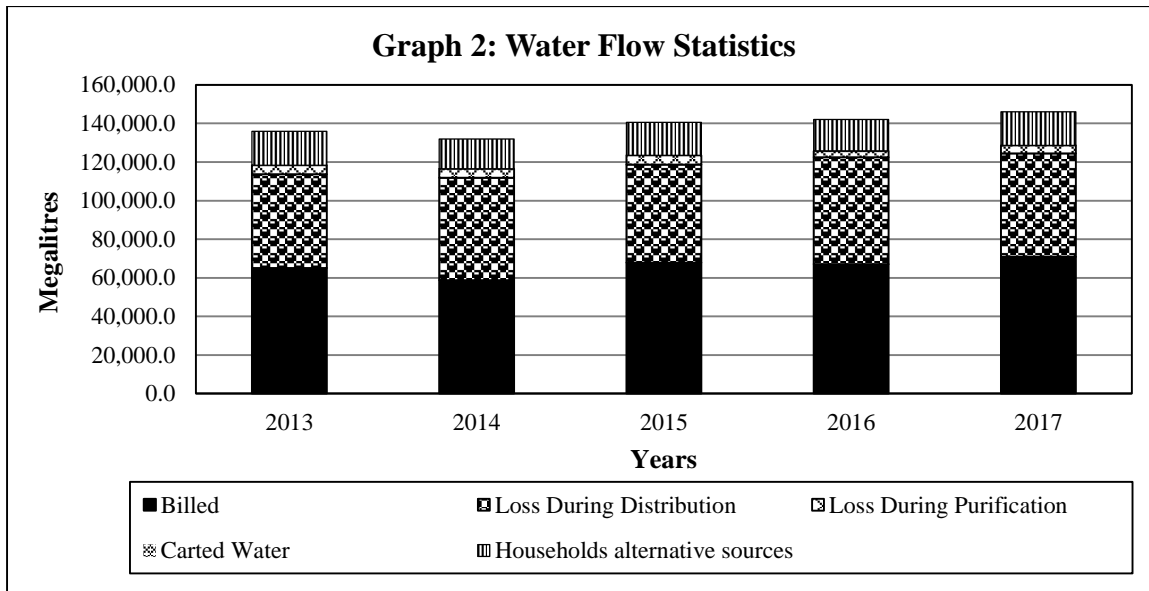
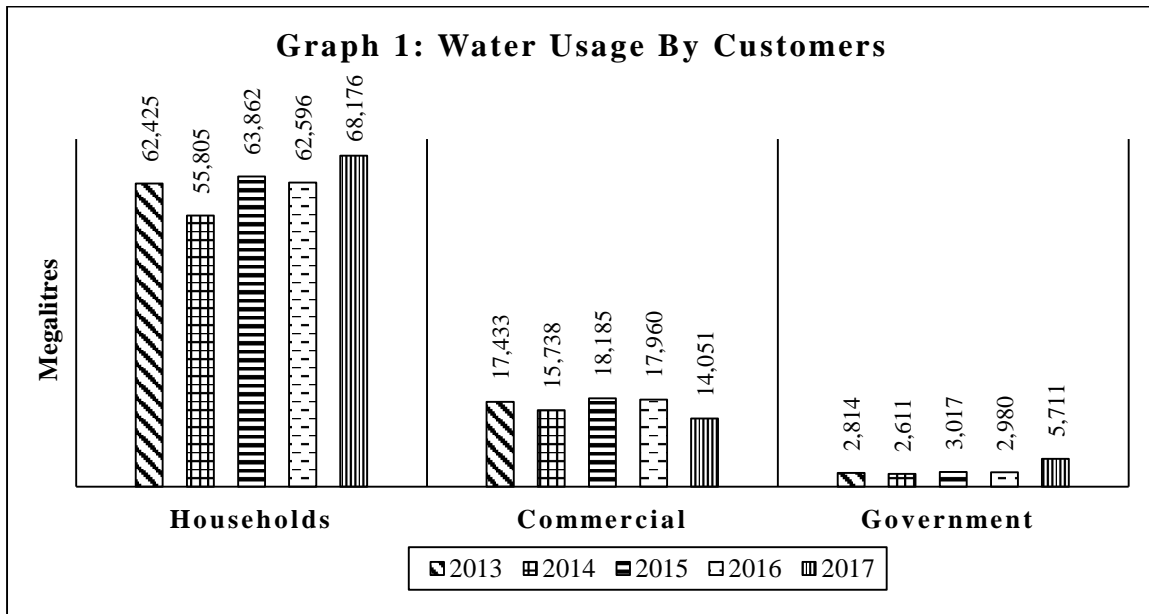
### **Water Account Update**

The environmental accounts for water provides a framework for the assessment of water production and use as well as related issues of resource use. The initial experimental Water Account had only included water extracted, treated and distributed by Water Authority of Fiji.

The Water Account has been updated in this release to include a section for household extracted water, i.e. sourced from wells, rivers or creeks, rain, etc. The numbers used to derive estimates for water extracted by households (not produced by Water Authority of Fiji), were collected from surveys, in particular, the 2017 Census of Population and Households.

### **Main findings**

- In 2017, the total water extraction stood at 145,910 mega litres of which 4,070 megalitres lost during purification, leaving 141,839 megalitres available for distribution. The total extraction increased by 2.7% in 2017 compared to a year earlier.
- 88.1% of water extracted in 2017 was by WAF while the other 11.9% were by households. (see Appendix 1)
- 72.0% of total metered water consumed was by household, 19.9% by the commercial sector and 8.1% by government.
- Of the total surface water extraction by WAF in 2017, 42.0% was lost during distribution and 4.0% was lost in the purification process leaving only 54.0% as water consumed.



**Further Work**

Moving forward in expanding the accounts the Fiji Bureau of Statistics will:

- Incorporate data from the business surveys on alternative water sources

Further steps would include:

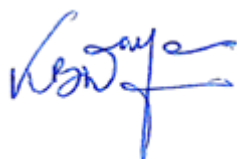
- Conducting a sample survey on water consumption by households and businesses.
- Data Assessment for Water Asset Account

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

- Appendix 1: Fiji's Water Account 2013 – 2017; and
- Appendix 2: Technical Notes.

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

1. Mr. Bimlesh Krishna – Chief Statistician [ESD] on email [bkrishna@statsfiji.gov.fj](mailto:bkrishna@statsfiji.gov.fj) or telephone 331 5822 (ext: 386 233).
2. Ms. Litia Kurisaqila – Assistant Statistician [Sector Satellite Accounts] on email [lkurisaqila@statsfiji.gov.fj](mailto:lkurisaqila@statsfiji.gov.fj) or telephone 331 5822 (ext: 386 237).



Kemueli Naiqama [Mr]  
**Deputy Government Statistician**

---

### **Reproduction of Material**

Any table or material published in this release may be reproduced and published without the Fiji Bureau of Statistics' prior approval. However, the source of information should always be identified and acknowledged in all modes of presentation.

**Appendix 1:**

**Water Flow Account  
2013 – 2017  
[Megalitres]**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Sources of Water</b>					
Surface water extracted (WAF)	118,390	116,536	123,496	125,726	128,620
Surface Water extracted Households (river or creek)	1,169	1,077	1,269	1,277	1,431
Ground water extracted by Households (wells, boreholes, FSC/EGM)	4,167	3,522	3,801	3,497	3,575
Rain Water extracted by Households (communal stand pipes and roof tanks)	11,649	10,176	11,378	10,871	11,579
Other Water Sources	598	545	636	635	705
<i>Total water extracted</i>	135,973	131,857	140,581	142,006	145,910
<b><i>less</i></b> loss during purification	4,631	4,558	4,831	3,036	4,070
Water available for distribution	131,342	127,298	135,751	138,969	141,839
Billed:					
<i>Household</i>	44,800	40,442	46,733	46,152	50,812
<i>Government</i>	2,892	2,611	3,017	2,980	5,711
<i>Commercial</i>	17,433	15,738	18,185	17,960	14,051
Non-billed water distribution (WAF)	42	42	44	164	74
Loss during distribution	48,591	53,144	50,687	55,435	53,901
Non-billed water use (Household)	17,583	15,321	17,085	16,280	17,290
<i>Returns to the environment</i>	135,973	131,857	140,581	142,006	145,910
<i>% of water loss during purification</i>	4.0%	4.0%	4.0%	3.0%	4.0%
<i>% of water loss during distribution</i>	41.0%	46.5%	41.0%	44.0%	42.0%

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 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.

**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.

**Ground water extracted (Households)** – refers to the water sources such as borehole and wells that are employed by Households for their daily supply.

**Rain Water extracted (Households)** – refers to the households that rely on rainfall for their water supply.

**Other Water Sources (Households)** – refers to other sources of water for households i.e. wells and other reticulated systems by industrial companies like Fiji Sugar Corporation and Vatukoula Gold Mines

**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 (WAF)** – 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.

**Non-billed water distributed (Households)** – it is assumed that because households extract and use water directly from environment, there is no charge or bill.

**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 (WAF & Households), and loss during distribution.