

SWIOCOF 5
Seychelles
September 2016

Rajeshwar POKHUN

Principal Hydrological Officer
Water Resources Unit



Water Utilisation in Mauritius

(million cubic metres Mm³)

Purpose	Surface water		Ground water	Total
	River run off-takes	Storage reservoirs		
Municipal (Domestic , Industrial & tourism)	35	87	133 (52%) <i>(153 boreholes)</i>	255 (26%)
Industrial (private boreholes)	5	2	7 <i>(174 boreholes)</i>	14 (2%)
Agricultural	270	68	5 <i>(192 boreholes)</i>	343 (35%)
Hydropower	183	178	-	361 (37%)
Overall Utilisation	493	335	145	973 *
Total water mobilisation	442	274	145	861

** Includes 112 Mm³ used for power generation at Reduit, Magenta, Tamarind Falls, La Ferme and used for irrigation/potable purposes and power generation at Le Val and Ferney, twice.*

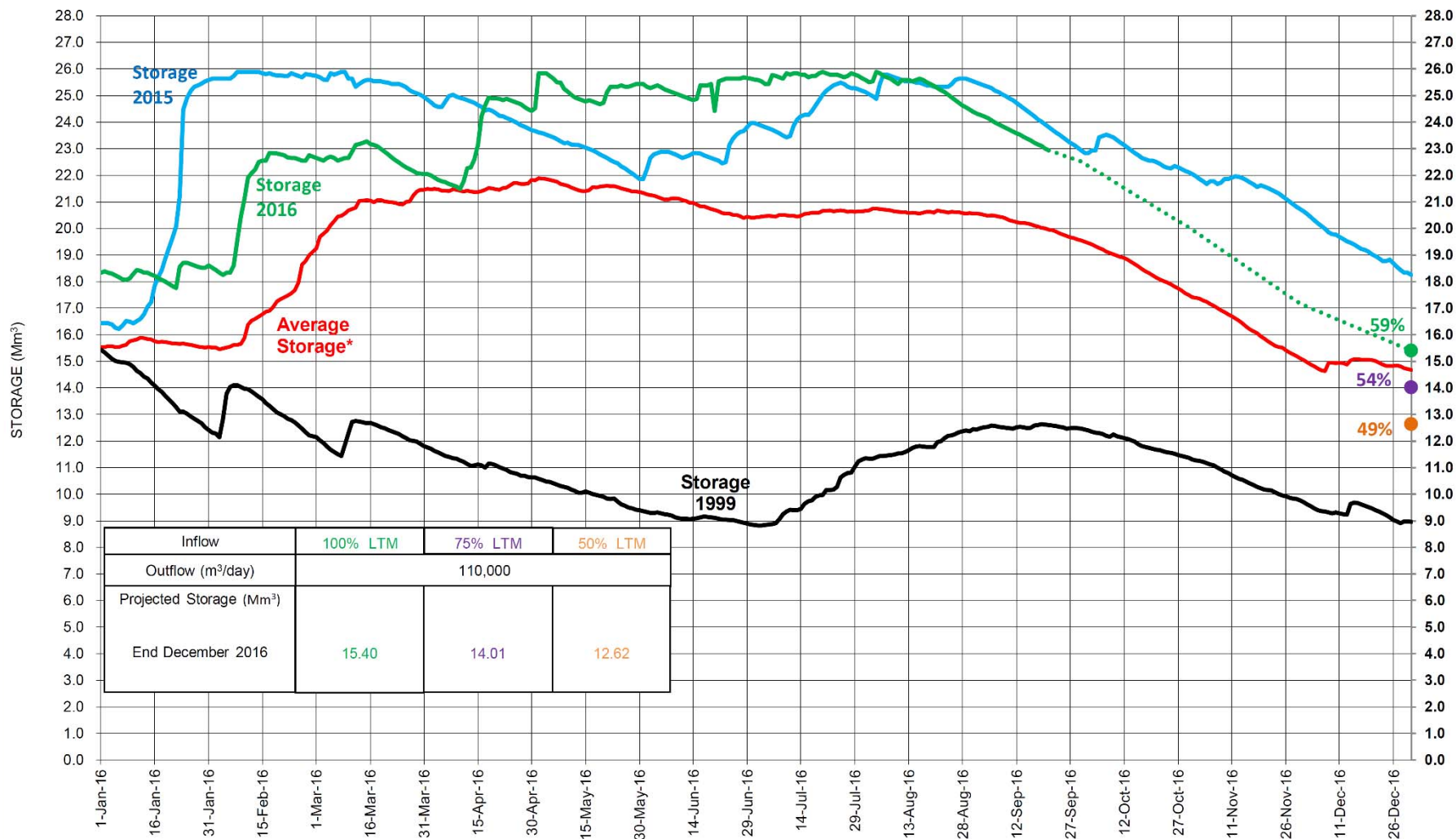
Daily Monitoring of Reservoir Levels

Reservoir	Capacity (Mm ³)	20.09.15				19.09.16				20.09.16			
		Average*		Actual		Average*		Actual		Average*		Actual	
		(Mm ³)	%	(Mm ³)	%	(Mm ³)	%	(Mm ³)	%	(Mm ³)	%	(Mm ³)	%
Mare aux Vacoas	25.89	19.93	77.0	23.92	92.4	19.97	77.1	23.11	89.3	19.93	77.0	23.01	88.9
La Nicoliere	5.26	4.57	86.9	3.48	66.2	4.60	87.5	3.73	70.9	4.57	86.9	3.72	70.7
Piton du Milieu	2.99	2.40	80.3	2.60	87.0	2.41	80.6	2.64	88.3	2.40	80.3	2.64	88.3
La Ferme	11.52	4.09	35.5	8.52	74.0	4.14	35.9	8.99	78.0	4.09	35.5	8.94	77.6
Mare Longue	6.28	3.59	57.2	2.53	40.3	3.62	57.6	6.17	98.2	3.59	57.2	6.19	98.4
Midlands	25.50	23.69	92.9	25.08	98.35	23.77	93.2	24.14	94.7	23.69	92.9	24.14	94.7
TOTAL	77.44	58.27	75.2	66.13	85.4	58.51	75.6	68.78	88.8	58.27	75.2	68.63	88.6



Reservoir Projections for Reservoir Management

STORAGE PROJECTION FOR MARE AUX VACOAS RESERVOIR



The storage level on 31st January 1969 was 4.43 Mm³ (17%)

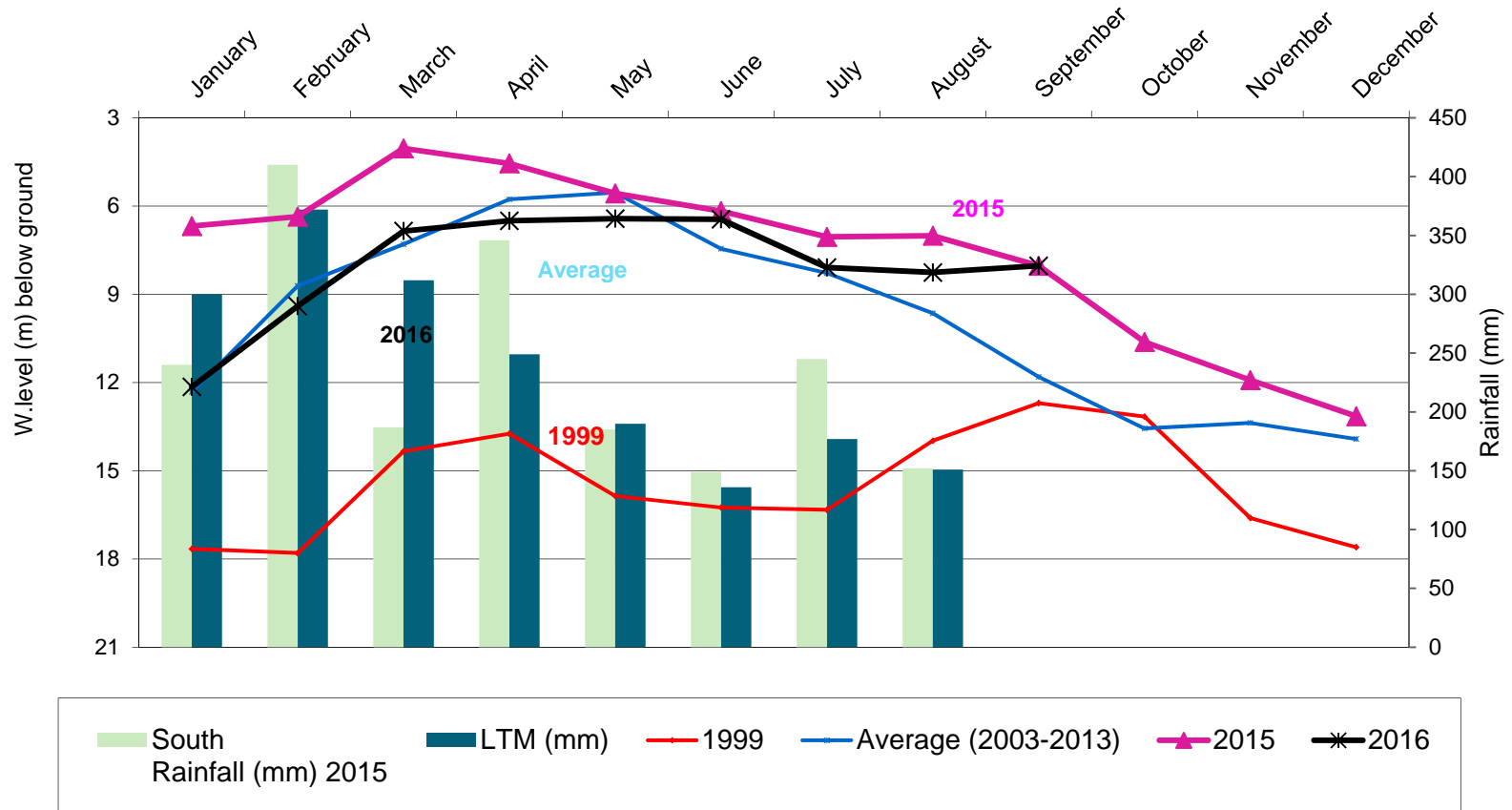
The storage level on 06th February 2012 was 5.91 Mm³ (23%)

Inflow on 20/09/16: 70% of average inflow

* 10 year mean for the period 1990 - 1999

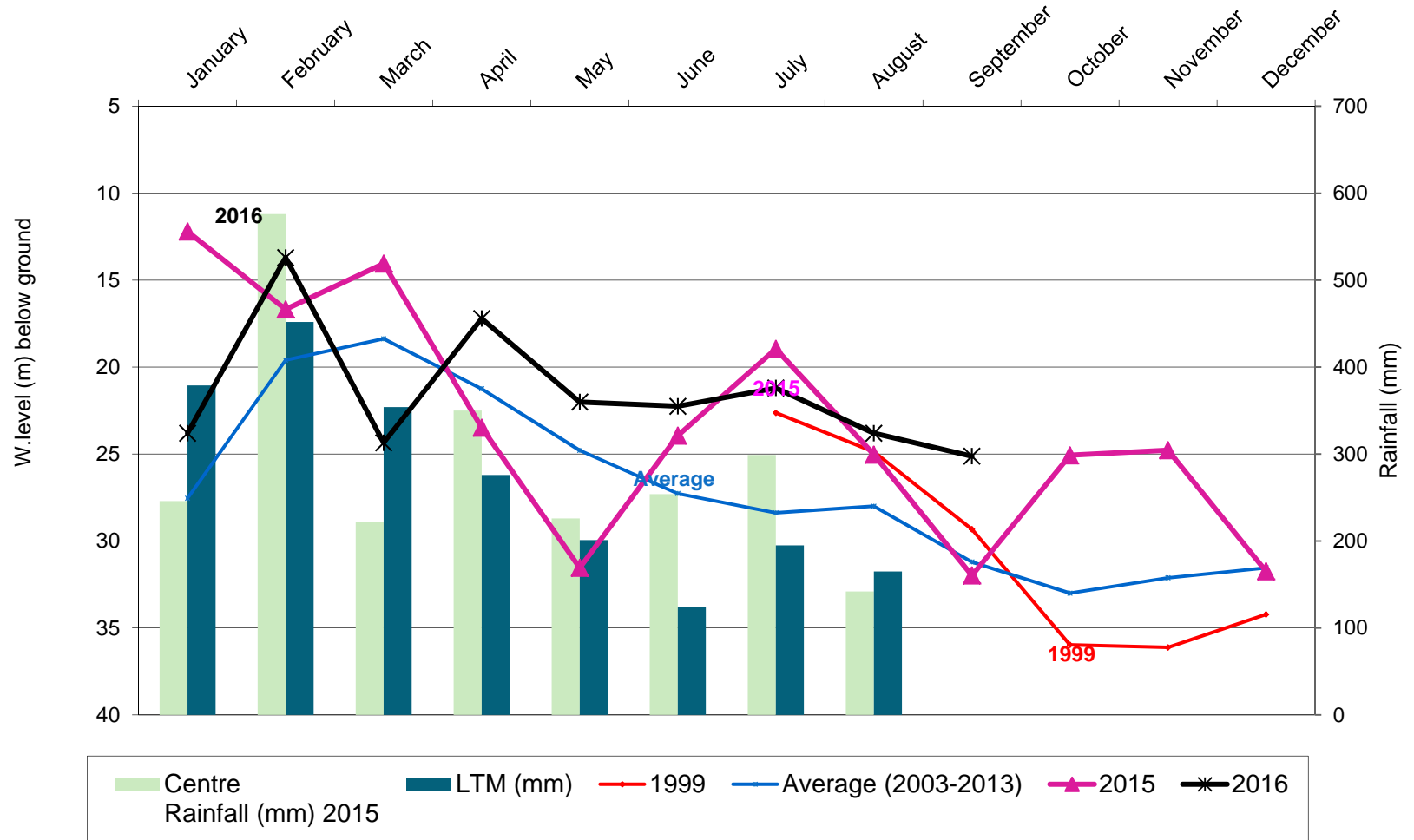
Groundwater Monitoring

Trois Boutiques - Southern Aquifer



Groundwater Monitoring

La Marie Data Logger - Common Recharge Zone



WHAT IS NEEDED

- Forecast by end of September for the next months(OND ,NDJ) as our dry season starts end of September
- Forecast can be updated on monthly basis for efficient water resources management and enable timely decision making such as :
 - ✓ Update reservoirs projections regularly and Review of outflows from reservoirs to maintain a strategic storage in case of expected prolonged dry period season
 - ✓ Review of irrigation strategies and prioritize water allocation to the different sectors of the economy
 - ✓ Close monitoring of major boreholes and decrease production to stabilise water level
 - ✓ Start awareness and water saving campaign early
 - ✓ Start water cut campaign early and gradually



- Likelihood of active period for cyclonic activities as much rainfall could be expected . Same would help for water resources management as described above

- Possibility to extend forecast period to end of rainy season in case of delay for the onset of summer rains

