

# **CHAPTER 4**

## **WATER**

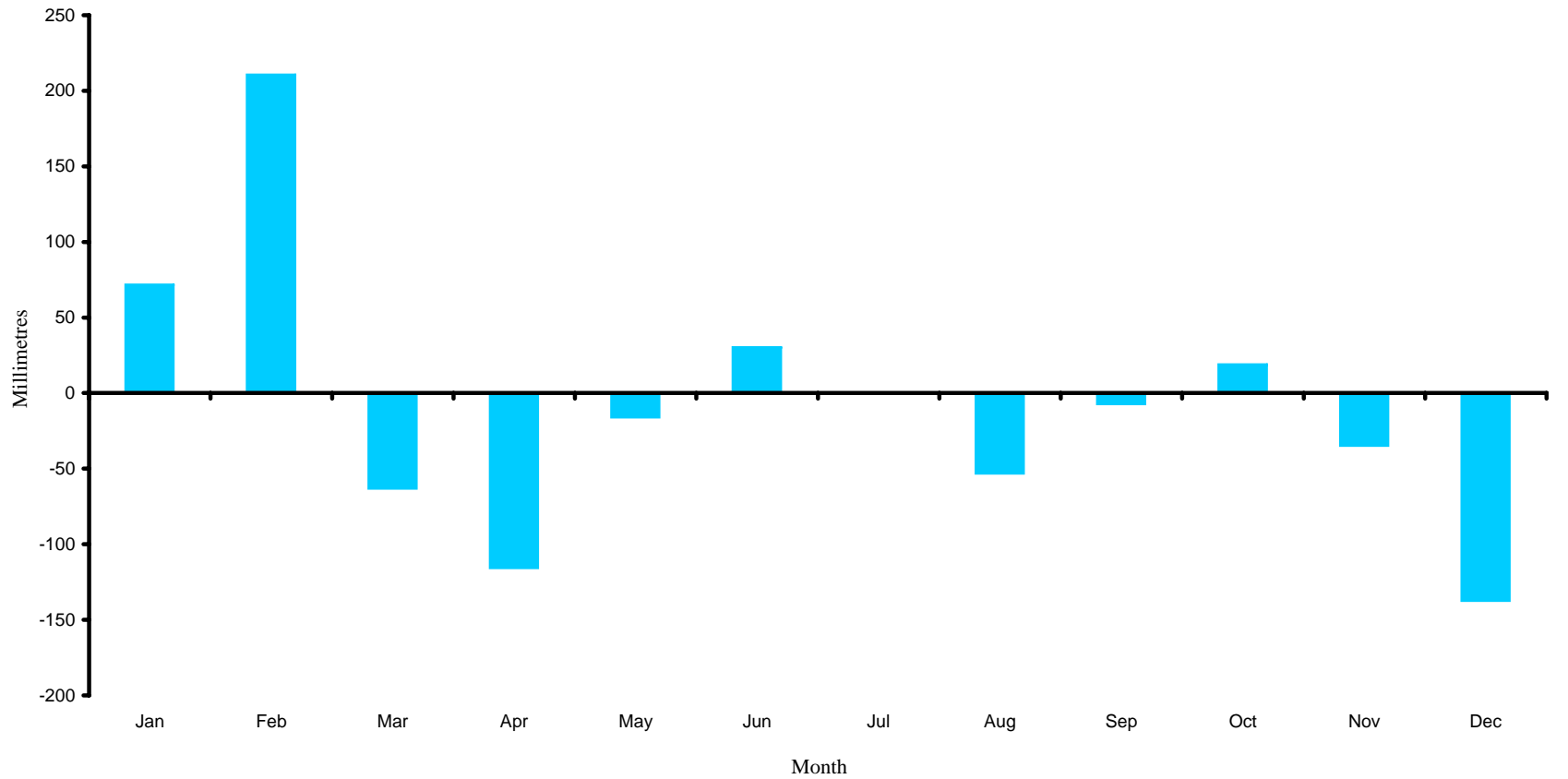
**Table 4.1 - Monthly rainfall, averaged over all sugar zones, 1998 - 2007**

Millimetres

YEAR		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MONTH											
<b>January</b>	Mean	144.4	53.9	393.5	278.6	573.1	118.4	416.2	139.0	352.9	325.7
	<i>Difference from Normal</i>	- 132.9	- 223.3	+ 115.3	+ 0.3	+ 295.0	- 159.7	+ 162.4	-114.9	+99.0	+71.8
<b>February</b>	Mean	592.2	168.7	313.4	205.1	99.0	331.3	305.1	401.3	331.5	535.3
	<i>Difference from Normal</i>	+ 295.4	- 128.1	+ 15.7	-92.7	-198.7	+ 33.5	-19.5	+ 76.8	+6.9	+210.7
<b>March</b>	Mean	162.8	125.5	166.2	155.8	224.0	207.3	211.7	688.7	434.4	162.2
	<i>Difference from Normal</i>	- 79.4	- 116.5	- 76.9	-87.3	-19.1	- 36.0	-15.3	+ 463.3	+209.0	-63.2
<b>April</b>	Mean	115.0	79.0	186.1	329.9	135.4	444.8	282.6	115.5	85.4	105.2
	<i>Difference from Normal</i>	- 111.7	- 147.7	- 41.7	102.0	-92.5	+ 216.8	+61.6	-105.4	-135.6	-115.8
<b>May</b>	Mean	162.6	70.0	95.8	95.3	141.1	191.0	161.1	109.1	52.8	137.6
	<i>Difference from Normal</i>	+ 10.3	- 80.2	- 56.5	-55.9	-10.1	+ 39.8	+7.3	-44.6	-101.0	-16.1
<b>June</b>	Mean	62.7	83.5	105.1	79.1	127.6	117.4	111.2	134.3	95.4	136.4
	<i>Difference from Normal</i>	- 54.4	- 33.7	- 12.7	-38.7	+ 9.9	- 1.4	+3.2	+26.3	-12.6	+30.3
<b>July</b>	Mean	141.0	152.5	117.1	93.3	139.9	175.2	85.6	158.0	156.4	108.7
	<i>Difference from Normal</i>	+ 20.7	+ 33.2	- 3.1	-26.9	+19.7	+55.0	- 24.2	+48.2	+46.6	+0.4
<b>August</b>	Mean	85.7	96.5	149.2	74.1	111.9	92.4	39.8	91.7	81.2	53.8
	<i>Difference from Normal</i>	- 22.7	- 9.6	+ 40.2	-35.1	+ 2.8	- 16.7	- 69.0	-17.1	-27.5	-53.2
<b>September</b>	Mean	78.9	82.9	43.7	71.9	37.1	130.4	118.2	207.6	63.1	62.7
	<i>Difference from Normal</i>	+ 4.1	+ 8.1	- 31.6	-3.4	-38.2	+55.0	+47.1	+136.6	-8.0	-7.3
<b>October</b>	Mean	62.5	40.7	71.3	83.8	60.4	29.7	29.5	55.8	51.1	90.3
	<i>Difference from Normal</i>	- 10.2	- 32.0	- 1.9	10.7	-12.8	- 43.5	- 42.9	-16.7	-21.4	+19.0
<b>November</b>	Mean	31.3	29.1	81.5	33.2	34.4	81.1	124.8	38.3	76.7	43.6
	<i>Difference from Normal</i>	- 62.4	- 59.8	- 12.9	-61.1	-60.0	+ 1.8	+ 45.5	-41.1	-2.7	-34.8
<b>December</b>	Mean	37.7	120.1	75.2	153.3	222.4	54.0	168.8	69.5	42.2	53.7
	<i>Difference from Normal</i>	- 179.4	- 95.5	- 140.4	-62.3	+ 6.8	- 139.1	- 24.3	- 123.6	-151.0	-137.4
<b>Total Year</b>	Mean	1,676.8	1,102.4	1,798.1	1,653.4	1,906.3	1,973.0	2,054.6	2,208.8	1,823.1	1,815.2
	<i>Difference from Normal</i>	-322.6	-885.1	-206.5	-350.4	-97.2	+ 5.5	+ 5.5	+ 287.8	-98.3	-95.6

Source : Meteorological Services

**Fig 11 - Rainfall difference from normal, 2007**



**Table 4.2 - Yearly rainfall by region, 1998 - 2007**

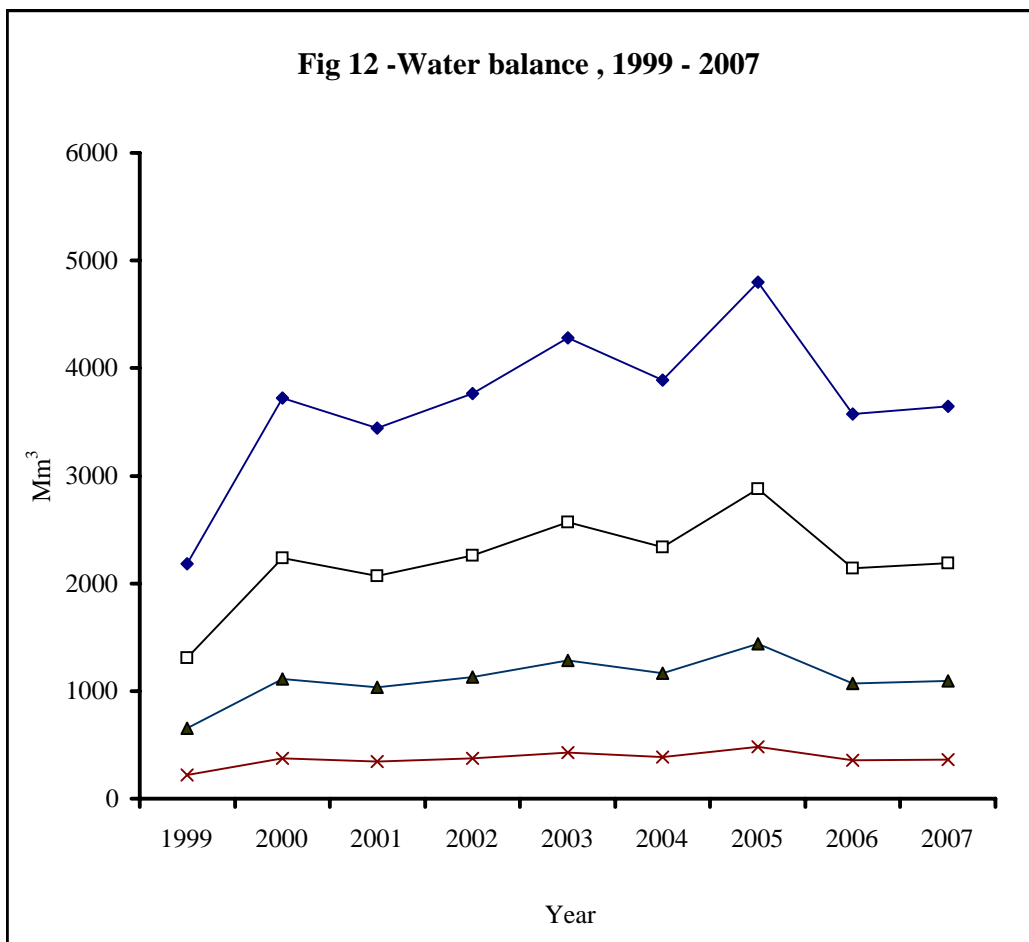
Millimetres

REGION \ YEAR		YEAR									
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
North	Mean	1,097.7	601.3	1,043.6	1,019.6	1,040.0	1,201.3	1,350.8	1,404.1	1,348.9	1,072.0
	<i>Difference from Normal</i>	- 330.7	- 808.6	- 366.7	-390.6	-370.2	-178.8	+ 45.8	+ 89.8	+50.6	-226.3
South	Mean	2,142.3	1,336.7	2,055.2	2,124.0	2,314.0	2,285.4	2,288.3	2,670.7	2,076.2	2,215.5
	<i>Difference from Normal</i>	- 231.8	- 1030.3	- 318.8	-250.4	-60.4	-56.3	-31.2	+ 279.1	-243.5	-71.5
East	Mean	2,045.3	1,534.6	2,386.8	1,993.8	2,303.9	2,622.4	2,692.9	2,774.9	2,226.2	2,125.1
	<i>Difference from Normal</i>	- 366.3	- 87.3	- 20.6	-423.9	-113.8	+ 259.5	+ 379.5	+ 292.7	-87.2	-188.3
West	Mean	628.6	404.7	908.4	799.3	1,357.7	978.3	949.3	1,097.8	750.8	966.4
	<i>Difference from Normal</i>	- 259.9	- 484.1	+ 202.2	-89.5	+ 468.9	+ 119.5	+ 120.7	+ 269.3	-77.7	+ 137.8
Centre	Mean	1,605.3	1,145.4	2,006.5	1,536.1	2,105.6	1,995.7	2,262.6	2,134.8	1,987.9	2,179.5
	<i>Difference from Normal</i>	- 507.8	- 966.6	- 115.9	-576.2	+ 6.7	-61.4	+ 238.5	+ 99.5	-36.3	+ 155.2
Island	Mean	1,676.8	1,102.4	1,798.1	1,653.4	1,906.3	1,973.2	2,054.6	2,207.8	1,823.1	1,814.7
	<i>Difference from Normal</i>	- 322.6	- 885.1	- 206.5	-350.4	+97.5	+ 5.8	+ 131.9	+ 286.8	-98.3	-95.9

Source : Meteorological Services

**Table 4.3 - Water balance , 1999 - 2007**

	Mm <sup>3</sup>									
	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Rainfall	2,184	3,721	3,445	3,764	4,284	3,890	4,801	3,571	3,644	
<i>Surface runoff</i>	1,311	2,233	2,067	2,259	2,571	2,334	2,881	2,143	2,186	
<i>Evapotranspiration</i>	655	1,116	1,034	1,129	1,285	1,167	1,440	1,071	1,093	
<i>Net recharge to groundwater</i>	218	372	345	376	428	389	480	357	364	

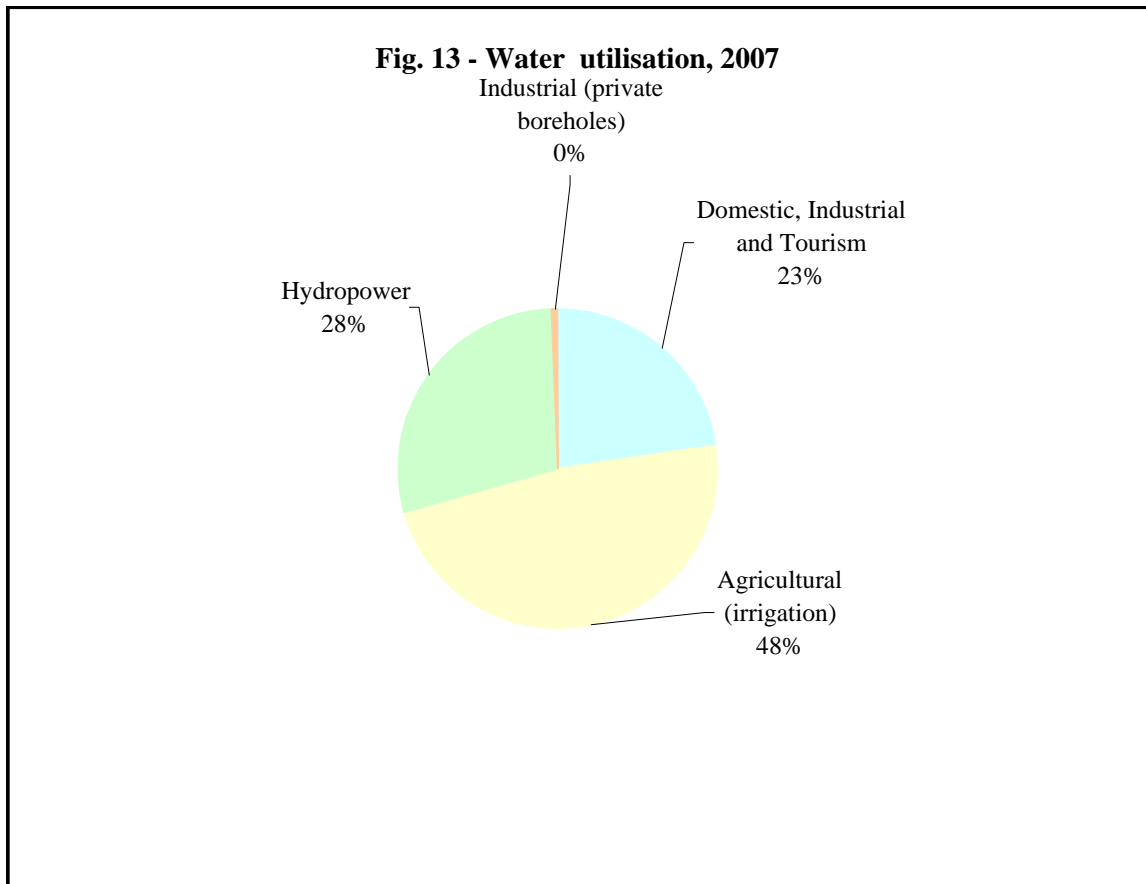


**Table 4.4 - Water utilisation,2007**

Million cubic metres

Use	Surface water		Ground water	Total
	River-run offtakes	Storage		
Domestic, Industrial and Tourism	35 <sup>1</sup>	67	99	201
Industrial (private boreholes )	-	-	6	6
Agricultural (irrigation)	338	78 <sup>2</sup>	7	423
Hydropower	137	117 <sup>3</sup>	-	254
<b>Total</b>	<b>510</b>	<b>262</b>	<b>112</b>	<b>884</b>

Source: Water Resources Unit, Ministry of Public Utilities

<sup>1</sup> includes 19 Mm<sup>3</sup> for Reduit Hydro Power Station<sup>2</sup> includes 28 Mm<sup>3</sup> for Tamarind Falls and Magenta Hydropower Stations<sup>3</sup> includes 13 Mm<sup>3</sup> used twice for Le Val and Ferney Hydropower Stations and 16 Mm<sup>3</sup> for Tamarind Falls and Magenta

**Table 4.5 - Fresh water abstractions<sup>1</sup> by source, 1998 - 2007 <sup>2</sup>**

Million cubic metres

Source	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Surface water	508	405	532	532	578	577	575	541	528	518
<i>Reservoirs</i>	<i>119</i>	<i>61</i>	<i>124</i>	<i>124</i>	<i>128</i>	<i>169</i>	<i>167</i>	<i>154</i>	<i>146</i>	<i>145</i>
<i>Rivers and streams</i>	<i>389</i>	<i>344</i>	<i>408</i>	<i>408</i>	<i>450</i>	<i>408</i>	<i>408</i>	<i>387</i>	<i>382</i>	<i>373</i>
Ground water	131	111	145	145	148	148	150	150	154	112
Total	639	516	677	677	726	725	725	691	682	630

Source: Water Resources Unit, Ministry of Public Utilities

<sup>1</sup> for agricultural, domestic and industrial purposes.

<sup>2</sup> Hydrologic year ( i.e. From November n-1 to October n ,where n = year)

**Table 4.5 Con't - Fresh water abstractions<sup>1</sup> by water supply industry, 2001 - 2007<sup>2</sup>**

Million cubic metres

<b>Source</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Gross surface water abstraction</b>	<b>532</b>	<b>578</b>	<b>577</b>	<b>575</b>	<b>541</b>	<b>528</b>	<b>518</b>
<i>Surface water abstraction</i>	<i>86</i>	<i>88</i>	<i>110</i>	<i>110</i>	<i>99</i>	<i>99</i>	<i>102</i>
<i>Agriculture, forestry and fishing</i>	<i>446</i>	<i>490</i>	<i>467</i>	<i>465</i>	<i>442</i>	<i>429</i>	<i>416</i>
<b>Gross ground water abstraction</b>	<b>145</b>	<b>148</b>	<b>148</b>	<b>150</b>	<b>150</b>	<b>154</b>	<b>112</b>
<i>Ground water abstraction</i>	<i>113</i>	<i>114</i>	<i>114</i>	<i>114</i>	<i>115</i>	<i>119</i>	<i>99</i>
<i>Agriculture, forestry and fishing</i>	<i>22</i>	<i>24</i>	<i>24</i>	<i>25</i>	<i>24</i>	<i>24</i>	<i>7</i>
<i>Manufacturing</i>	<i>10</i>	<i>10</i>	<i>10</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>6</i>
<b>Total</b>	<b>677</b>	<b>726</b>	<b>725</b>	<b>725</b>	<b>691</b>	<b>682</b>	<b>630</b>

Source: Water Resources Unit, Ministry of Public Utilities

<sup>1</sup> for agricultural, domestic and industrial purposes.

<sup>2</sup> Hydrologic year ( i.e. From November n-1 to October n ,where n = year)

**Table 4.6 - Characteristics of major reservoirs**

<div style="text-align: center;">Name of reservoir</div> <div style="text-align: left;">Characteristics</div>	Mare aux Vacoas	Nicoliere	Piton du Milieu	Mare Longue	La Ferme	Tamarind Falls	Eau Bleue	Diamamove	Midlands Dam
Purpose	Domestic	Domestic, Irrigation and Industrial	Domestic	Hydro - power and irrigation	Irrigation	Hydro - power and irrigation	Hydro - power	Hydro - power	Domestic, Irrigation and Industrial
Total capacity (Mm <sup>3</sup> )	25.89	5.26	2.99	6.28	11.52	2.30	4.10	4.30	25.50
Full reservoir level , m (a.m.s.l) <sup>1</sup>	566.35	249.02	438.00	576.91	146.00	492.36	355.00	241.00	395.00
Maximum water spread area ( km <sup>2</sup> )	5.60	1.02	0.76	1.05	2.28	1.68	0.75	0.43	2.98

Source: Water Resources Unit, Ministry of Public Utilities

<sup>1</sup> a.m.s.l : above mean sea level

**Table 4.7 - Gross storage capacity of reservoirs**

Million cubic metres

Reservoir	Gross capacity
Mare aux Vacoas <sup>1</sup>	25.9
Mare Longue	6.3
La Ferme <sup>1</sup>	11.5
Piton du Milieu <sup>1</sup>	3.0
La Nicoliere <sup>1</sup>	5.3
Tamarind Falls	2.3
Eau Bleue	4.1
Diamamove	4.3
Dagotiere	0.6
Valetta	2.0
Midlands Dam	25.5
Total Storage Capacity	90.7

Source: Water Resources Unit, Ministry of Public Utilities

<sup>1</sup> Based on hydrographic survey of 1997

**Table 4.8 - Percentage water level by month and reservoir - 2007**

Month	Mare aux Vacoas			La Nicoliere			Piton du Milieu			La Ferme			Mare Longue			Midlands Dam			All reservoirs (excl Midlands Dam)				
	Capacity																						
	25.89 Mm <sup>3</sup>			5.26 Mm <sup>3</sup>			2.99 Mm <sup>3</sup>			11.52 Mm <sup>3</sup>			6.28 Mm <sup>3</sup>			25.5 Mm <sup>3</sup>			51.94 Mm <sup>3</sup>				
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min
<b>Jan</b>	44	42	54	63	47	87	69	63	97	15	13	22	35	32	51	47	43	63	40	37	52		
<b>Feb</b>	64	55	98	99	90	100	100	99	100	41	24	82	68	52	100	75	64	100	63	16	95		
<b>Mar</b>	99	98	100	100	100	100	99	98	100	99	85	100	100	99	100	100	99	100	99	95	100		
<b>Apr</b>	95	93	98	84	75	100	97	95	99	100	98	100	95	91	99	100	99	100	95	93	99		
<b>May</b>	92	90	95	74	57	88	98	95	99	92	88	97	85	81	91	100	99	100	90	86	94		
<b>Jun</b>	91	88	93	85	62	98	98	95	100	89	86	92	82	78	85	100	99	100	89	86	91		
<b>Jul</b>	87	86	88	71	61	84	91	89	95	85	83	88	89	85	93	94	91	99	85	84	87		
<b>Aug</b>	82	77	86	69	59	73	87	82	91	79	75	83	85	83	90	90	85	94	81	77	83		
<b>Sep</b>	72	67	77	67	63	72	75	71	82	69	64	75	84	83	85	79	73	85	72	68	77		
<b>Oct</b>	64	61	67	71	63	82	69	68	71	58	53	63	76	66	83	67	64	73	65	62	68		
<b>Nov</b>	55	50	61	58	46	73	66	62	69	46	39	53	59	52	66	63	56	66	55	48	61		
<b>Dec</b>	45	40	49	45	42	54	54	48	62	32	25	39	44	41	51	46	36	56	42	39	48		

**Table 4.9 - Average monthly potable water production from treatment plants and boreholes to distribution systems, 2007**

Mm<sup>3</sup>

Month	Mare Aux Vacoas (Upper)			Mare Aux Vacoas (Lower)			Port -Louis			District water supply - North			District water supply - South			District water supply - East			Total production				
	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface (%)	Borehole (%)
Jan	2.9	0.4	3.3	-	2.1	2.1	1.6	0.7	2.3	2.1	1.8	3.9	0.7	1.6	2.3	0.8	1.3	2.1	8.1	7.9	16.0	50.6%	49.4%
Feb	2.8	0.5	3.3	-	2.0	2.0	1.5	0.7	2.2	2.0	1.7	3.7	0.7	1.1	1.8	0.6	1.6	2.2	7.6	7.6	15.2	49.9%	50.1%
Mar	3.3	0.5	3.7	-	2.2	2.2	1.6	1.3	2.9	2.2	1.9	4.1	0.8	1.4	2.2	0.8	1.7	2.5	8.6	9.0	17.6	48.8%	51.2%
Apr	3.2	0.5	3.7	-	2.5	2.5	1.7	0.9	2.5	2.1	1.9	4.0	0.7	1.4	2.1	0.8	1.6	2.4	8.4	8.7	17.1	49.3%	50.7%
May	3.3	0.5	3.9	-	2.6	2.6	1.8	0.8	2.6	2.1	2.1	4.1	0.8	1.4	2.2	0.7	1.7	2.4	8.7	9.0	17.7	49.0%	51.0%
Jun	3.2	0.5	3.7	-	2.3	2.3	1.7	0.7	2.5	2.0	1.9	3.9	0.7	1.3	2.1	0.7	1.6	2.3	8.4	8.4	16.8	49.8%	50.2%
Jul	3.4	0.6	3.9	-	3.1	3.1	1.8	1.2	3.0	1.7	2.1	3.7	0.8	1.3	2.1	0.8	1.4	2.2	8.4	9.6	18.0	46.7%	53.3%
Aug	3.5	0.5	4.0	-	3.1	3.1	1.9	1.0	2.9	1.8	2.0	3.8	0.8	1.4	2.1	0.8	1.4	2.2	8.7	9.3	18.0	48.4%	51.6%
Sep	3.2	0.5	4.0	-	2.8	2.8	1.8	1.0	2.8	1.7	2.0	3.7	0.8	1.4	2.1	0.7	1.4	2.1	8.2	9.0	17.2	47.7%	52.3%
Oct	3.3	0.6	3.8	-	3.1	3.1	1.8	1.0	2.8	2.1	1.6	3.6	0.8	1.4	2.2	0.6	1.5	2.1	8.6	9.0	17.6	48.8%	51.2%
Nov	3.5	0.5	4.0	-	3.1	3.1	1.7	1.0	2.7	2.1	1.6	3.7	0.9	1.5	2.3	0.7	1.5	2.2	8.8	9.1	17.9	49.2%	50.8%
Dec	3.2	0.5	3.7	-	2.8	2.8	1.5	0.9	2.4	2.0	1.6	3.5	0.8	1.3	2.1	0.7	1.5	2.2	8.2	8.5	16.7	49.1%	50.9%
Total year	38.6	6.1	44.7	-	31.6	31.6	20.3	11.0	31.3	23.7	22.1	45.8	9.2	16.3	25.5	8.6	18.0	26.6	100.5	105.0	205.5	48.9%	51.1%

**Table 4.10 - Water sales by type of tariff of subscribers , 2003 - 2007**

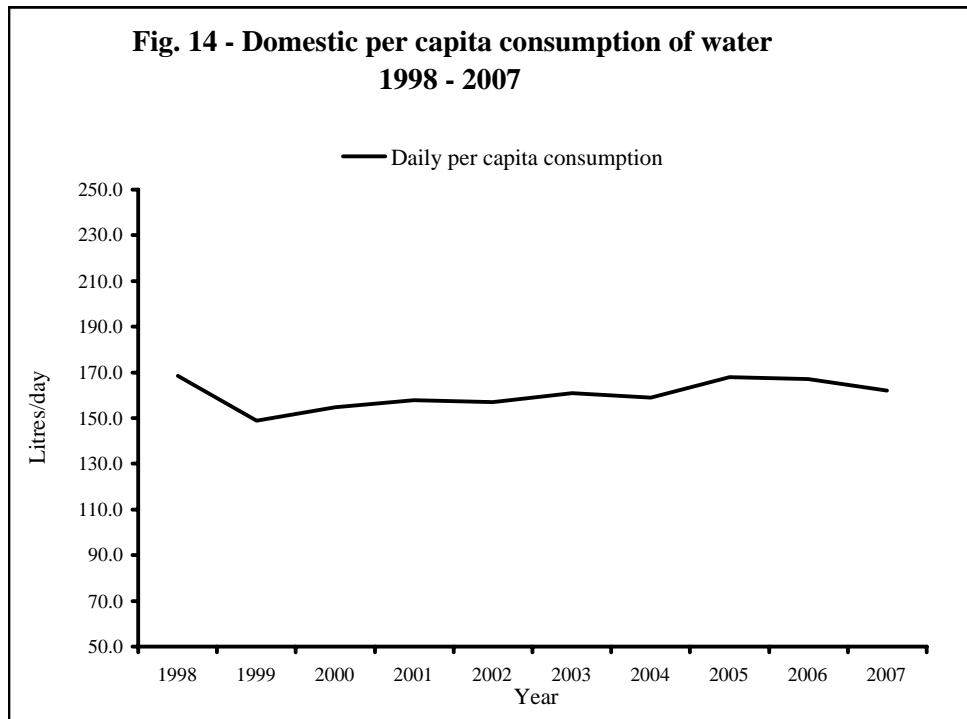
Type of tariff	2003		2004		2005		2006		2007	
	No. of subscribers	Volume ('000 m <sup>3</sup> )	No. of subscribers	Volume ('000 m <sup>3</sup> )	No. of subscribers	Volume ('000 m <sup>3</sup> )	No. of subscribers	Volume ('000 m <sup>3</sup> )	No. of subscribers	Volume ('000 m <sup>3</sup> )
Domestic	250,752	70,253	258,381	70,562	265,763	73,055	272,269	73,158	278,625	73,007
Commercial	9,455	5,573	9,638	5,653	9,823	5,790	10,102	5,987	11,260	6,743
Government	3,614	4,228	3,585	4,285	3,708	4,632	3,763	4,631	3,879	4,686
Agriculture and Livestock Producers	2,174	1,103	2,377	1,131	2,632	1,322	2,871	1,433	3,129	1,421
Industrial	762	4,988	746	4,775	741	4,770	736	4,712	744	4,827
Hotels , Guest houses	192	3,644	188	3,694	197	4,080	206	4,267	224	4,429
Acquired/concessionary prizes	48	23	47	20	45	19	45	17	43	16
Total Potable water	266,997	89,812	274,962	90,120	282,909	93,668	289,992	94,205	297,904	95,129
Total non - treated water	253	13,993	254	12,265	267	14,161	276	14,412	278	15,490
TOTAL	267,250	103,805	275,216	102,385	283,176	107,829	290,268	108,617	298,182	110,619

**Table 4.11 - Domestic per capita consumption of water<sup>1</sup>, 1998 - 2007**

Litres / day	
Year	Daily per capita consumption
1998	168.4
1999	149.0
2000	154.9
2001	157.8
2002	157.0
2003	161.0
2004	159.0
2005	168.0
2006	167.0
2007	162.0

Source: Central Water Authority

<sup>1</sup> Potable water



Note : The fall in consumption in 1999 is due to an unusually severe drought .

**Table 4.12 - Volume of water used by the CEB for hydropower generation, 1998 - 2007**

Million cubic metres

<b>Power station</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Champagne	70	23	69	56	71	108	117	105	62	61
Ferney	111	39	102	80	81	119	117	116	79	95
Tamarind Falls	40	9	34	25	31	34	37	37	26	27
Le Val	15	1	16	4	9	15	17	14	10	13
Reduit	18	1	17	11	19	30	30	26	21	20
Cascade Cecile	22	8	19	16	19	21	14	8	7	17
Magenta	27	6	23	14	17	17	13	25	17	16
La Ferme	7	-	5	1	4	-	-	-	5	5
<b>Total</b>	<b>310</b>	<b>87</b>	<b>285</b>	<b>207</b>	<b>251</b>	<b>344</b>	<b>345</b>	<b>331</b>	<b>227</b>	<b>254</b>

Source: Central Electricity Board



**Table 4.14 - River water quality by selected physico-chemical parameters for Riviere Citron, River Tombeau, Rivulet Terre Rouge, January - July 2007 and Grand River North West (GRNW), Black River and Riviere du Rempart West, January - September 2007**

Parameters	Unit	GRNW01	GRNW02	GRNW03	River Citron 01	River Citron 02	River Citron 03	River Tombeau 01	River Tombeau 02	River Tombeau 03	Rivulet Terre Rouge 01	Rivulet Terre Rouge 02	Black River 01	Black River 02	Black River 03	Riv du Rempart West 01	Riv du Rempart West 02	Riv du Rempart West 03
		Petit Camp	Belle Rose	GRNW Old Bridge	Mont Gout	Solitude	Balaclava	Baillache	Terre Rouge	Arsenal	Terre Rouge	Baie du Tombeau	Black River National Park	4 km downstream BR01	1 km downstream BR02	Henrietta	Bassin Estate	Beau Songe
Temperature	°C	18.0-25.0	18.0 - 26.0	20.0 - 28.0	19.0 - 25.0	20.0 - 24.0	20.0 - 26.0	19.0-27.0	20.0 - 28.0	20.0 - 26.0	20.0 - 28.0	21.0 - 29.0	20.0 - 26.0	20.0 - 27.0	20.0 - 28.0	17.0-23.0	20.0-24.0	20.0-26.0
pH		7.9 - 8.2	7.7 - 7.9	7.9 - 8.2	6.9 - 7.4	7.1 - 7.7	7.5 -7.7	7.6 - 7.8	7.4 - 7.8	7.6 - 7.7	7.5 - 7.6	7.7	7.1-8.1	7.3-8.0	7.2-8.1	7.1-8.4	7.0-7.7	7.2-7.7
Dissolved Oxygen	mg/l	7.1 - 8.8	6.0 - 8.2	6.7 - 8.8	7.2 - 8.3	4.9 - 6.8	4.4 - 6.2	6.2 - 8.2	2.7 - 8.5	7.1 - 7.8	1.8 - 7.5	3.7 - 5.9	6.6-8.1	6.1-7.9	2.2-7.8	6.5-7.9	7.0-7.8	7.2-8.3
Total Suspended Solids	mg/l	ND	2.0 - 3.0	2.0 - 5.0	1.0 - 12.0	1.0 - 8.0	3.0 - 6.0	1.0 - 3.0	1.0 - 3.0	1.0 - 2.0	5.0 - 9.0	7.0 - 9.0	ND-12.0	ND-2.0	ND-26	ND-17.0	ND-1	ND
Phosphate as P	mg/l	0.02 - 0.03	0.01 - 0.02	0.01 - 0.02	0.02	0.02 - 0.06	0.05 - 0.06	0.02	0.02 - 0.11	0.03 - 0.09	0.3 - 0.4	0.35 - 0.63	0.01-0.02	0.01-0.02	0.02-0.06	0.01-0.06	ND-0.01	0.01
Chemical Oxygen Demand	mg/l	1.0 - 6.0	3.0 - 25.0	4.0 - 21.0	7.0 - 11.0	3.0 - 8.0	12.0 - 18.0	ND	2.0 - 54.0	2.0 - 93.0	14.0 - 26.0	5.0 - 34.0	ND-5.0	ND-3.0	ND-54	ND-51.0	ND-14.0	ND-54.0
Nitrate as N	mg/l	2.3 - 3.0	2.4 - 6.2	1.8 - 3.2	0.9 - 1.2	2.3 - 2.9	1.2 - 2.4	1.0 - 3.3	1.5 - 4.5	3.2 - 4.5	0.7 - 2.4	4.1 - 5.8	0.03-0.1	ND-0.1	ND-0.1	1.3-2.7	2.3 - 3.4	3.2-6.0
Sulphate	mg/l	13.7 - 16.9	11.9 - 17.9	8.7 - 10.2	6.4 - 7.0	10.6 - 12.5	17.9 - 57.0	7.3 - 10.5	12.8 - 20.0	9.5 - 20.0	112.0 - 116.2	91.2 - 107.9	2.2-3.5	2.3-5.4	2.7-4.4	4.3-8.4	5.2-7.1	7.7-9.5
Chloride	mg/l	18.7 - 22.7	18.9 - 51.5	22.8 - 29.1	16.6 - 19.2	27.3 - 36.6	18.7 - 44.0	20.2 - 32.6	35.0 - 44.5	26.2 - 45.0	305.3 - 327.0	182.5 - 267.1	16.3-20.7	17.0-26.4	18.4-29.6	13.9-19.2	13.7-18.0	19.3-23.6

Source : National Environmental Laboratory, Ministry of Environment and National Development Unit.

**Table 4.15 - Range of levels of Nitrate-Nitrogen, Phosphate and COD for selected regions, 2007.**

Milligram per litre

Region	Chemical water quality parameter		
	Nitrate-Nitrogen (NO <sub>3</sub> <sup>-</sup> - N)	Phosphate (PO <sub>4</sub> <sup>3-</sup> )	Chemical Oxygen Demand (COD)
Ile aux Benitiers	< 0.1	0.01 - 0.03	< 0.1 - 1.4
Bel Ombre	< 0.1	< 0.01 - 0.06	0.2 - 0.7
Bambous Virieux	< 0.1	<0.01 - 0.01	0.1 - 1.0
Trou D'Eau Douce	< 0.1	0.01 - 0.02	0.3 - 0.6
Anse la Raie	< 0.1	0.01 - 0.04	0.4 - 0.8
Trou aux Biches	< 0.1	<0.01 - 0.04	0.1 - 1.2
Pointe aux Sables	< 0.1	0.01 - 0.06	0.1 - 0.5
Tombeau Bay	< 0.1	<0.01 - 0.08	<0.1 - 1.5
Port Louis Harbour	< 0.1	0.03 - 0.09	<0.1 - 1.3

Source: Albion Fisheries Research Centre, Ministry of Agro Industry and Fisheries.

**Table 4.16 - Volume of wastewater treated by public treatment stations, 1998 - 2007**

Million cubic metres

Station	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Fort Victoria	5.10	5.20	5.20	5.30	5.30	8.10	5.06	5.20	7.84	-
Baie du Tombeau	4.70	4.75	4.80	4.85	4.85	8.26	8.27	8.27	8.40	8.20
Pailles TP <sup>1</sup>	0.08	0.08	0.08	0.08	0.08	0.11	0.12	0.18	0.07	0.07
B. Marchand <sup>1</sup>	0.18	0.18	0.18	0.18	0.18	0.26	0.27	0.19	0.17	0.17
Riviere du Rempart <sup>1</sup>	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
Borstal <sup>1</sup>	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	-
Pte aux Sables	1.33	1.33	1.34	1.34	1.34	1.34	1.34	1.34	4.07	-
St. Martin	8.14	8.16	8.18	8.20	8.20	10.89	13.10	13.88	14.93	15.50
Kennedy <sup>2</sup>	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36	-	-
Robinson	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
Vuillemin <sup>1</sup>	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.10	0.10
Flacq <sup>1</sup>	0.03	0.03	0.03	0.03	0.03	0.03	0.18	0.23	0.10	0.10
Dubreuil <sup>3</sup>	0.13	0.13	0.13	0.13	0.13	1.22	0.68	0.68	0.10	0.10
<b>Total</b>	<b>20.22</b>	<b>20.39</b>	<b>20.47</b>	<b>20.64</b>	<b>20.65</b>	<b>30.74</b>	<b>29.56</b>	<b>30.51</b>	<b>35.90</b>	<b>24.33</b>

Source : Wastewater Management Authority

<sup>1</sup> Serves CHA houses<sup>2</sup> Serves CHA houses and V. Hospital<sup>3</sup> Serves CHA + NHDC houses

**Table 4.17 - Water quality in coastal area - (Terre Rouge Rivulet Bird Sanctuary), 1998 - 2007**

Variable	Unit	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Chemical Oxygen Demand (COD)	mg O <sub>2</sub> /l	1.4	1.5	1.3	1.0	0.4	2.1	0.4	0.4	0.6	2.0
Total Phosphorus <sup>1</sup>	mg P/l	0.16	0.19	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Nitrogen <sup>2</sup>	mg N/l	0.1	0.2	0.1	0.1	0	0	0	0	0	0

Source : Albion Fisheries Research Centre, Ministry of Agro Industry and Fisheries

<sup>1</sup> Data given are for the variable Phosphate

<sup>2</sup> Data given are for the variable Nitrate-nitrogen

Note: All values below detection limit are taken as zero.

**Table 4.18 - Certain notifiable waterborne diseases reported to sanitary authorities, 1998 - 2007**

Year \ Disease	Amoebiasis	Food Poisoning	Infective Hepatitis	Leptospirosis	Malaria		Schistosomiasis	Typhoid Fever	Total
					Indigenous	Imported			
1998	-	28	16	7	-	52	-	6	109
1999	1	73	24	1	-	73	-	2	174
2000	1	62	12	3	-	62	-	10	150
2001	8	23	41	3	-	62	-	1	138
2002	-	33	11	1	-	38	-	1	84
2003	-	60	20	3	-	40	-	2	125
2004	-	160	19	3	-	45	-	1	228
2005	-	29	12	6	-	35	-	5	87
2006	1	78	5	6	-	38	-	4	132
2007	-	766	5	9	-	42	-	15	837

Source : Statistics Unit, Ministry of Health and Quality of Life

**Table 4.19 - Enteritis and other diarrhoeal diseases, 1998 - 2007**

YEAR	Cases treated as in-patients in government hospitals					Deaths in whole island				
	Under one Year	1 - 4 Years	5 - 14 Years	15 Years and over	Total	Under one Year	1 - 4 Years	5 - 14 Years	15 Years and over	Total
1998	751	1,366	557	2,061	4,735	5	-	-	8	13
1999	1,012	2,007	751	2,584	6,354	3	1	-	7	11
2000	961	1,872	666	3,167	6,666	3	2	-	13	18
2001	616	880	483	2,517	4,496	3	2	-	9	14
2002	862	1,652	603	2,777	5,894	3	2	-	6	11
2003	487	1,029	528	2,515	4,559	3	2	1	7	13
2004	566	2,044	1,024	2,218	5,852	6	5	-	6	17
2005	538	1,380	648	2,588	5,154	1	1	-	8	10
2006	742	2,373	975	3,853	7,943	2	2	-	24	28
2007	636	1,483	945	3,260	6,324	2	-	-	11	13

Source : Statistics Unit, Ministry of Health and Quality of Life

**Table 4.20 - Sea transport<sup>1</sup>, 1998 - 2007**

Period	Vessels entering		Vessels leaving		Goods	
	Number	Net registered tonnage (000t)	Number	Net registered tonnage (000t)	Unloaded (000t)	Loaded <sup>2</sup> (000t)
1998	1,782	5,925	1,810	5,924	3,129	1,033
1999	1,665	6,725	1,676	6,129	3,355	1,198
2000	1,658	6,387	1,633	6,087	3,677	1,514
2001	1,643	7,026	1,782	6,482	4,362	1,365
2002	1,664	8,595	1,612	7,871	3,961	947
2003	1,588	8,399	1,578	8,843	4,076	1,165
2004	1,330	7,800	1,481	8,662	4,696	1,773
2005	1,407	6,786	1,318	6,713	4,709	1,197
2006	1,365	7,400	1,321	7,265	4,619	1,226
2007	2,317	-	-	-	5,080	1,179

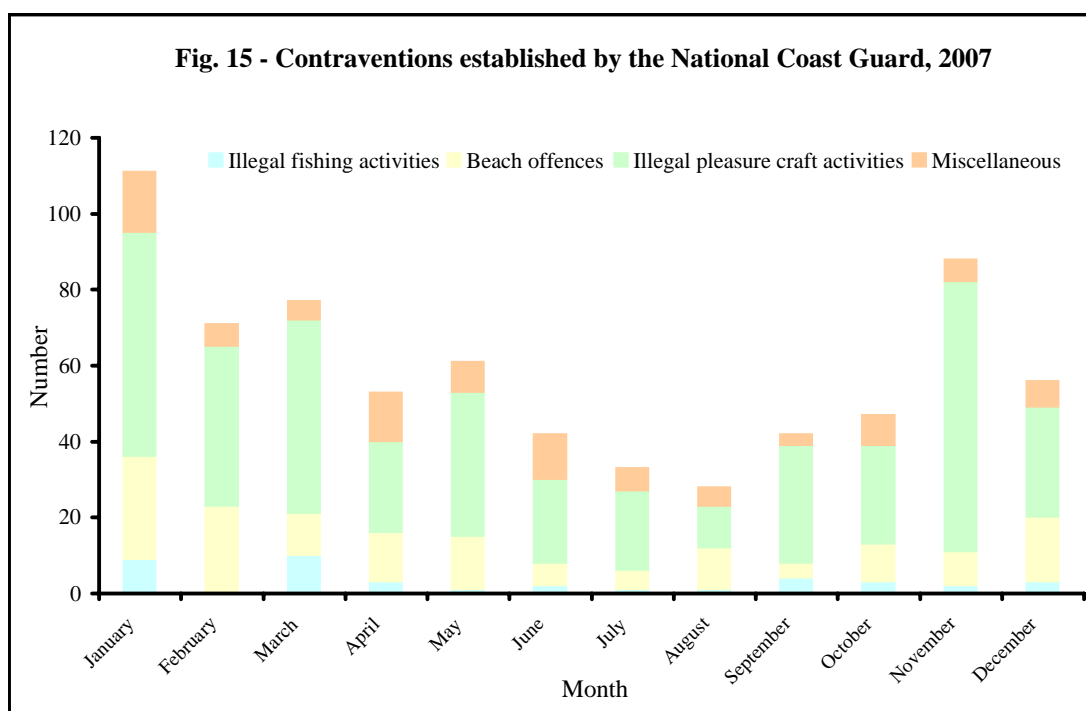
<sup>1</sup> exclude fishing vessels berthed in Port Louis only.

<sup>2</sup> exclude bunkers.

**Table 4.21 - Contraventions established by the National Coast Guard, 2007**

Month	Illegal fishing activities	Beach offences	Illegal pleasure craft activities	Miscellaneous	Total
January	9	27	59	16	111
February	-	23	42	6	71
March	10	11	51	5	77
April	3	13	24	13	53
May	1	14	38	8	61
June	2	6	22	12	42
July	1	5	21	6	33
August	1	11	11	5	28
September	4	4	31	3	42
October	3	10	26	8	47
November	2	9	71	6	88
December	3	17	29	7	56
Total	39	150	425	95	709

Source: Police Department



**Table 4.22 - Mean sea surface temperature around the Island of Mauritius, 1998 - 2007**

Degrees celcius

	January	February	March	April	May	June	July	August	September	October	November	December	Average for the year
1998 Mean	26.7	27.6	26.1	26.1	25.4	23.6	23.1	22.4	22.4	23.5	23.8	26.1	24.7
<i>Difference from Normal</i>	0.7	0.1	1.7	1.0	0.7	1.4	0.9	1.1	1.1	0.6	1.4	0.5	
1999 Mean	25.4	26.6	26.5	25.5	25.0	24.3	23.0	22.8	22.3	23.0	24.5	25.4	24.5
<i>Difference from Normal</i>	2.0	1.1	1.3	1.6	1.1	0.7	1.0	0.7	1.2	1.1	0.7	1.2	
2000 Mean	26.3	26.6	26.7	26.0	24.8	24.2	22.9	22.4	22.6	23.2	23.9	24.8	24.5
<i>Difference from Normal</i>	1.1	1.1	1.1	1.1	1.3	0.8	1.1	1.1	0.9	0.9	1.3	1.8	
2001 Mean	25.5	27.3	26.6	26.6	25.3	23.7	23.5	22.7	22.5	23.2	24.2	25.9	24.8
<i>Difference from Normal</i>	1.9	0.4	1.2	0.5	0.8	1.3	0.5	0.8	1.0	0.9	1.0	0.7	
2002 Mean	26.3	27.6	28.1	26.3	26.2	24.2	23.9	22.6	24.0	24.7	25.1	27.2	25.5
<i>Difference from Normal</i>	1.1	0.1	-0.3	0.8	-0.1	0.8	0.1	0.9	-0.5	-0.6	0.1	-0.6	
2003 Mean	27.7	28.1	27.9	27.2	26.5	25.4	23.9	23.1	23.4	23.9	25.5	26.7	25.8
<i>Difference from Normal</i>	-0.3	-0.4	-0.1	-0.1	-0.4	-0.4	0.1	0.4	0.1	0.2	-0.3	-0.1	
2004 Mean	26.9	28.6	27.7	27.7	27.3	24.6	23.9	23.6	23.4	24.0	25.3	26.5	25.8
<i>Difference from Normal</i>	0.5	-0.9	0.1	-0.6	-1.2	0.4	0.1	-0.1	0.1	0.1	-0.1	0.1	
2005 Mean	27.8	28.6	28.0	27.4	26.5	25.0	24.1	24.0	23.5	24.9	24.9	26.3	25.9
<i>Difference from Normal</i>	-0.4	-0.9	-0.2	-0.3	-0.4	0.0	-0.1	-0.5	0.0	-0.8	0.3	0.3	
2006 Mean	27.7	27.1	27.5	27.5	27.3	24.5	24.1	23.5	23.8	24.1	25.1	26.7	25.7
<i>Difference from Normal</i>	-0.3	0.6	0.3	-0.4	-1.2	0.5	-0.1	0.0	-0.3	0.0	0.1	-0.1	
2007 Mean	27.7	28.6	27.2	26.8	26.2	25.3	24.3	23.8	23.6	24.0	25.5	26.1	25.8
<i>Difference from Normal</i>	0.3	0.9	-0.6	-0.3	0.1	0.3	0.3	0.3	0.1	-0.1	0.3	-0.5	
Mean 1971 -2000	27.4	27.7	27.8	27.1	26.1	25.0	24.0	23.5	23.5	24.1	25.2	26.6	25.7

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Source : Meteorological Services

**Table 4.23 - Percentage distribution of households by type of water supply and other amenities available, Republic of Mauritius, 1990 and 2000 Housing Censuses.**

Amenity available	Housing Censuses	
	1990 (%)	2000 (%)
1. Water supply		
(i) Piped water inside house	56.0	83.7
(ii) Piped water outside on premises	33.5	14.5
(iii) Public fountain, well, rivers, etc.	10.5	1.8
2. Availability of water tank / Reservoir	...	36.4
3. Bathroom		
(i) With running water	63.6	89.0
(ii) Without running water	30.9	10.0
(iii) None	5.5	1.0
4. Toilet		
(i) Flush toilet	62.8	88.8
(ii) Pit latrine	36.5	11.0
(iii) Other	0.7	0.2