Environment Statistics - 2001

Introduction

This issue of the "Economic and Social Indicators" presents a series of environment statistics that have been compiled by the Central Statistics Office (CSO) jointly with the Department of Environment of the Ministry of Environment. Information has been gathered from various institutions and thus some of the data may already be available in other publications. In most of the tables, comparative data are provided for 1995, 2000 and 2001, and unless otherwise stated, relate to the Republic of Mauritius.

1. The economy

Some key socio-economic indicators are given in Table 1.1 to show the structural changes that have occurred in the economy during the past ten years.

From 1991 to 2001, Gross Domestic Product (GDP), which measures the total value of production, has increased in nominal terms by about threefold, from Rs 44,665 million to Rs 131,835 million. The share of agriculture in GDP decreased from 11.7 % in 1991 to 7.2 % in 2001, that of manufacturing, from 24.0 % to 23.0 % while that of the financial and business services increased from 14.6 % to 18.5 %.

During the same period, the population increased by 12.1 % from 1,070,300 to 1,199,900 and the population density from 528 per km² to 591.

2. Agriculture

2.1 Land use

Urbanisation and the development of industries and infrastructure have led to a loss of agricultural land. Detailed data on land use for the island of Mauritius are available only for 1986 and 1995.

Between 1986 and 1995, the proportion of land under agriculture dropped from 48.2% to 46.4%, and that of forestry from 35.1% to 30.6% whilst built-up areas increased from 13.4% to 19.5% (Table 2.1 and figure 1).

Preservation of forests is vital for the protection of the ecosystem. Table 2.2 shows the forest area by category for the Island of Mauritius. In 2001, the total forest area was 56,629 hectares, of which 22,089 hectares were state-owned and the remaining 34,540 hectares, privately-owned.

As shown in Table 2.3, around 92% of our effective agricultural land is under sugarcane plantation with the remaining being planted with tea, tobacco and foodcrops.

2.2 Fertiliser and other inputs

Intensive use of chemical based fertilisers and other agro-chemicals may contribute to the pollution of the environment through the leaching of nitrate to ground water. The total amount of fertilisers consumed and its breakdown by main nutrient components are shown in Table 2.4. The consumption of fertilisers for the year 2001 amounted to 65,527 tonnes, showing a decrease of 1,517 tonnes (-2.3%) over 2000. The nutrient contents consisted of nitrogen, phosphate and potash with respective proportions of 17.4 %, 6.2 % and 19.7 % of the product weight.

3. Energy

While being an essential ingredient for the economic development and for the well being of the population, energy-related activities are also a source of major concern for the environment. They are by far the most important contributors of air pollutants, through the emission of carbon dioxide and other greenhouse gases.

3.1 Primary energy requirements

Between 1995 and 2001, the total primary energy requirement of the country increased by 34.0 %, from 889.5 ktoe (thousand tonnes of oil equivalent) to 1,191.5 ktoe. This is equivalent to an annual growth rate of 5.0 %. Details on the primary energy requirements by energy source are shown in Table 3.1. In 2001, around 76 % of the total primary energy requirement was met by imported fuels (oil, LPG and coal) and the remaining 24%, from local sources (bagasse and hydro).

3.2 Inputs for electricity production

The different types of fuel used for electricity production expressed in energy units are shown in Table 3.2. Fuel oil, which represented 52 % of total energy used in 1995, dropped to 33 % in 2001. On the other hand the shares of coal and bagasse in the production of electricity rose from 7 % and 26 % to 32 % and 34 % respectively.

3.3 Final energy consumption

In 2001, final energy consumption amounted to some 784 ktoe. The largest consumers were the transport and manufacturing sectors, which accounted for 47 % and 33 % of the total consumption respectively. Between 1995 and 2001, final energy consumption increased on average by 2.3 % per annum (Table 3.3 and figure 2).

4. Transport

Industrialisation, continuous economic growth and higher standard of living have led to a rapid increase in transport services over the recent years. A number of environmental problems are associated with transport, especially emission of carbon dioxide and other pollutants such as nitrogen oxide, volatile organic compounds, sulphur dioxide and particulates.

4.1 Stock of registered motor vehicles

In 2001, the fleet of motor vehicles was numbered at 255,149 and this represented an increase of 34 % over the year 1995 (Table 4.1).

In 2001, about 372 ktoe of energy were used for transportation; of which gasolene 95 ktoe, diesel oil, 147 ktoe and aviation fuel, 129 ktoe. Between 1995 and 2001 consumption of gasolene and diesel oil rose by 4 % and 43 % respectively (Table 4.2).

5. Greenhouse gas (GHG) emissions

Mauritius as a party to the United Nations Framework Convention on Climate Change (UNFCCC) is required to update and report periodically on the inventory of anthropogenic emissions and removal of greenhouse gases using IPCC (Intergovernmental Panel on Climate Change) guidelines. GHG are gases occurring naturally and resulting from human activities which act much like a glass greenhouse, trapping heat in the lower levels of the atmosphere and reflecting the heat back to the earth's surface, causing it to heat up. Data on GHG emissions and removals have been compiled as from the year 1990.

Table 5.1 shows the total emissions and removals of greenhouse gases for the years 1995, 2000 and 2001. The data indicate a rise of nearly 56 % in net $\rm CO_2$ emissions between 1995 and 2001. Net emissions take into account the removal of $\rm CO_2$ by forests. However, the contribution of Mauritius to the greenhouse effect remains negligible.

5.1 Carbon dioxide emissions from fossil fuel by sector

Between 1995 and 2001, total carbon dioxide emissions from fossil fuel increased by nearly 50 % from 1,737 Gg to 2,595 Gg. Carbon dioxide from energy industries alone contributed to 1,302 Gg (50 %) of the total emissions in 2001, followed by transport with 735 Gg (28 %) (Table 5.2).

5.2 Greenhouse gas inventory

The national inventory of greenhouse gas emissions by source categories for the year 2001 is given in

Table 5.4. Carbon dioxide (CO_2) , with an emission of 2,598 Gigagram (Gg), was the major greenhouse gas injected in the atmosphere. Most of this gas was produced as a result of fuel combustion activities such as electricity production, transport and manufacturing processes. Other GHG injected were carbon monoxide (65.9 Gg), sulphur dioxide (31.5 Gg), non-methane volatile organic compounds (17.1 Gg), oxides of nitrogen (14.2 Gg), methane (5.8 Gg) and nitrous oxide (1.4 Gg).

6. Water

6.1 Water balance

The estimated water balance for Mauritius is shown in Table 6.1. The water balance is based on long term records of annual average rainfall and indicates how fresh water resources are distributed. On average, the island of Mauritius receives 3,900 million cubic metres (Mm³) of precipitation (rainfall) every year. Some 30% of this water is lost through evapotranspiration, while surface runoff and ground water recharge account for 60% and 10% respectively.

6.2 Water utilisation

Estimates of water utilisation for the year 2001 are shown in Table 6.2. The water demand was estimated at 982 Mm³, of which, 468 Mm³ (48%) were used for irrigation, 305 Mm³ (31%) for hydropower and 209 Mm³ (21%) for domestic and industrial purposes.

Around 85 % of the total water demand was met by surface water and the remaining 15 %, by ground water.

7. Waste

The rapid economic development of Mauritius has led to changes in the production and consumption pattern resulting in an increased volume of waste being generated. For the efficient management of waste, data are required on the different types of waste being generated. Unfortunately, there is a paucity of time series data on waste and the only data available relate to Mare Chicose landfill site, the major recipient of solid wastes.

7.1 Waste disposal

Increasing waste generation and consequently its disposal pose a major environmental problem. Waste collected are either sent directly to the Mare Chicose Sanitary Landfill, which started operating by the end of 1997, or go through the process of compaction at the four transfer stations (St Martin, Roche Bois, Poudre D'Or and La Brasserie) before their transportation to the landfill site.

The total amount of solid waste landfilled at Mare Chicose went up from 265,817 tonnes in 2000 to 306,691 tonnes in 2001, representing an increase of 40,874 tonnes (15 %) (Table 7.1 and figure 3).

Environmental Impacts Assessment (EIA) Licences, complaints and contraventions.

The Department of Environment grants EIA licences as from the end of 1993, for undertakings (projects) which have an impact on the environment or on human health. These undertakings are listed in the First Schedule of the Environment Protection Act, 1991.

8.1 EIA licences

The number of EIA licences issued during the period 1997 to 2001 is shown in Table 8.1. In 2001, 110 licences were granted, of which land parcelling and poultry rearing accounted for 67 % and 12 % respectively.

8.2 Complaints

Table 8.2 lists the number of complaints by category received at the Department of Environment from 1997 to 2001. The number of complaints rose from 1,906 in 2000 to 3,051 in 2001, showing an

increase of 60 %. In 2001, the largest cause of complaint was noise, accounting for 27 % of all complaints.

8.3 Contraventions

During the year 2001, some 1,890 contraventions were issued by the Police de L'Environnement. Of these, illegal littering (1,368) was the principal type, and represented about 72 % of the contraventions (Table 8.3).

During the same period, 1,592 notices were issued to drivers of vehicles emitting black smoke.

9. Air Quality

In 2001, in order to address the air quality problem in Mauritius, the Ministry of Environment purchased fixed and mobile air quality stations. The fixed station is installed at Medco, Cassis since May 2001.

The main parameters under investigation are Dust (PM 10), Ozone, Sulphur Dioxide, Nitrogen Dioxide, Carbon Monoxide, Total Suspended Particles and Lead.

For the period May to December 2001, the average results for all the parameters under study showed that the levels of ambient pollutants near Medco, Cassis are well below the norms (Table 9.1).

Concepts and definitions

Economy

Gross Domestic Product (GDP): GDP is the aggregate money value of all goods and services produced within a country out of economic activity during a specified period, usually a year, before provision for the consumption of fixed capital.

Energy intensity: Energy intensity provides a measure of the efficiency with which energy is being used in production or energy used (tonnes of oil equivalent) per Rs 100,000 GDP (at constant prices)

Land use, Agriculture and Forestry

Land use: Land use refers to the main activity taking place on an area of land, for example, farming, forestry or housing.

Built-up areas: Built-up areas consist of land under houses, industrial zones, quarries or any other facilities, including their auxiliary spaces, deliberately installed so that human activities may be pursued.

Nutrient: A nutrient is a substance, element or compound necessary for the growth and development of plants.

Energy

Primary energy requirement: It is the sum of imported fuels and locally available fuels less re-exports of bunkers and aviation fuel to foreign aircraft after adjusting for stock changes.

Greenhouse gas emissions

Greenhouse gases (GHG): GHG are gases occurring naturally and resulting from human activities (production and consumption); that contribute directly or indirectly to global warming. Some main naturally existing GHG are Carbon Dioxide (CO₂), methane (CH₄) and Nitrous Oxide (N₂O). Other gases such as Carbon monoxide (CO), oxides of Nitrogen (NOx), non methane volatile organic compounds (NMVOC) and Sulphur dioxide contribute indirectly to global warming. GHG's act much like a glass greenhouse, trapping heat in the lower levels of the atmosphere and reflecting the heat back to the earth's surface, causing it to heat up.

Water

Water balance: The water balance is based on long term records of annual average rainfall and indicates how freshwater resources are distributed.

Precipitation: Rain falling from the atmosphere and deposited on land or water surfaces.

Evapotranspiration: Combined loss of water by evaporation from the soil or surface water and transpiration from plants and animals.

Surface runoff: The flow of surface water from rainfall, which flows directly to streams, rivers and lakes. Runoff may cause soil erosion.

Groundwater recharge: Process by which water is added from outside to fresh water found beneath the earth surface.

Waste

Solid waste includes domestic garbage, industrial and commercial waste, sewage sludge, wastes resulting from agricultural and animal husbandry operations and other connected activities, demolition wastes and mining residues.

Landfill: Final placement of waste in or on the land in a controlled or uncontrolled way according to different sanitary, environmental protection and other safety requirements.

Environmental impact assessment

Environmental impact assessment (EIA): Analytical process that systematically examines the possible environmental consequences of the implementation of projects, programmes and policies.

Air Quality

Ambient air quality is the quality of the air that surrounds us and which we breathe.

Air quality standards: Levels of air pollutants prescribed by regulations that may not be exceeded during a specified time in a defined area.

ABBREVIATIONS AND SYMBOLS

Abbreviations

Rs mn

NS IIII	Napees millen
Rs	Rupees
US\$	US dollar
%	Percentage
f.o.b	free on board
c.i.f	Cost, insurance, freight
000	Thousand
n.e.s	Not elsewhere specified
Mm^3	Million cubic metres
Gg	Gigagram (thousand tonne)

Rupees million

ktoe Thousand tonne of oil equivalent

Toe Tonne of oil equivalent

µg/m³ Microgramme per cubic metres

ppb Part per billion

ppm Part per million

TSP Total suspended particles

- Nil or negligible

... Not available

Conversion factor

1 square kilometre = 100 hectares

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March 2003

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1.The Economy

Table 1.1 - Main socio-economic indicators, 1991 and 2001

Indicator	Units	1991	2001 ¹
1. Gross Domestic Product (GDP) at market prices	Rs mn	44,665	131,835
2. Sectoral contribution to GDP			
Agriculture	%	11.7	7.2
Mining and quarrying	%	0.2	0.1
Manufacturing	%	24.0	23.0
Construction	%	6.9	5.6
Electricity, gas and water	%	2.0	2.2
Wholesale and retail trade	%	13.0	11.8
Hotels and restaurants	%	3.9	6.4
Transport and communications	%	11.0	13.0
Financial intermediation and business services	%	14.6	18.5
Other ²	%	12.7	12.2
3. GDP annual growth rate (basic prices)	%	+4.5	+5.8
4. Per capita GDP at market prices	Rs	41,738	109,847
5. Per capita GDP in US dollars	US\$	2,657	3,779
6. Investment (GDFCF)	Rs mn	12,722	29,378
7. Exports (f.o.b) (include re-exports)	Rs mn	19,300	47,138
8. Imports (c.i.f)	Rs mn	24,383	58,115
9. Population (mid year)	000	1,070.3	1,199.9
10. Population annual growth rate	%	1.1	1.0
11. Population density (per km²)	Number	528	591
12. Total labour force	000	441.4	538.5
13. Total employment	000	429.4	490.3
Agriculture (as a % of total)	%	14.6	11.1
Manufacturing (as a % of total)	%	31.0	29.3
14. Unemployment rate	%	2.7	9.2
15. Inflation rate	%	7.0	5.4
16. Tourist arrivals	000	300.7	660.3
17. Primary energy requirement	ktoe	752.1	1,191.5
18. Energy intensity	toe per Rs 100,000 GDP	2.14	1.96

¹ Provisional

 $^{^2}$ Includes public administration, education, health and financial intermediation services indirectly measured (FISIM)

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2. Land use, Agriculture and Forestry

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Table 2.1 - Land use, Island of Mauritius, 1986 and 1995

	1986 ¹		1995 ²		Change
	Hectares	%	Hectares	%	%
Agriculture	90,000	48.2	86,500	46.4	-1.8
Sugarcane	83,625	44.8	76,840	41.2	-3.6
Other agricultural activities	6,375	3.4	9,660	5.2	+1.8
Forests, scrubs & grazing lands	65,400	35.1	57,000	30.6	-4.5
Reservoirs, ponds, swamps & rocks	2,610	1.4	2,600	1.4	0.0
Road and footpaths	3,465	1.9	4,000	2.1	+0.2
Built-up areas	25,000	13.4	36,400	19.5	+6.1
Total	186,475	100.0	186,500	100.0	

¹ Source : Digest of Agricultural Statistics

Note: The difference in total area between 1986 and 1995 is due to rounding

Table 2.2 - Forest area by category, Island of Mauritius, 1995, 2000 and 2001

Hectares

	1995	2000 ¹	2001 ²
State - owned	22,519	22,089	22,089
Plantations	12,557	12,359	12,362
Nature reserves	4,585	799	799
On mainland	4,018	200	200
Islets	567	599	599
National Park ³	-	6,574	6,574
Unplanted, protective or to be planted	4,725	1,705	1,702
Pas Geometriques	652	652	652
Plantations	209	224	230

² Source : Initial National Communication under the United Nations Framework Convention on Climate Change, April 1999

Leased for grazing and tree planting	230	230	230
Unplanted, protective or to be planted	213	198	192
Privately - owned lands	34,540	34,540	34,540
Reserves	6,540	6,553	6,553
Mountain reserves	3,800	3,800	3,800
River reserves	2,740	2,740	2,740
Nature Reserves	-	13	13
Forest lands, incl.scrub,grazing lands ⁴	28,000	27,987	27,987
Total	57,059	56,629	56,629

Source : Forestry Service of the Ministry of Agriculture, Food Technology and Natural Resources.

Table 2.3 - Effective agricultural land area, Island of Mauritius, 1995, 2000 and 2001

Hectares

Detail	1995	2000 ¹	2001 ²
Sugarcane	76,840	77,000	76,478
Tea	2,077	670	660
Tobacco	673	397	383
Foodcrops ³	5,000	4,860	5,140
Total	84,590	82,927	82,661

¹ Revised

¹ Revised

² Provisional

³ Black River Gorges National Park was proclaimed in 1994 and data on the area enclosed by the boundaries of the park were not available until 1997

⁴ Figures not available but estimated

Table 2.4 - Consumption of fertilizers, 1995, 2000 and 2001

Tonnes

Detail	1995	2000	2001
Fertilizers	70,900	67,044	65,527
Nutrients content			
Nitrogen	11,800	11,550	11,428
Phosphate	4,625	3,940	4,059
Potash	14,208	13,464	12,911

3. Energy

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Table 3.1 - Primary energy requirements by energy source, 1995, 2000 and 2001

ktoe (000 Tonne of oil equivalent)

Energy Source	1995 ²	2000 ²	2001
Imported	584.2	849.1	901.2
Oil ¹	508.1	642.2	664.9
Liquefied petroleum gas (LPG)	37.0	50.0	50.8
Coal	39.1	156.9	185.5
Local	305.3	276.8	290.3
Electricity - hydro	29.7	21.0	15.6
Bagasse	262.4	248.5	267.4
Fuel wood	13.2	7.3	7.3
Total	889.5	1,125.9	1,191.5

¹ Includes gasolene, diesel oil, dual purpose kerosene and fuel oil

Table 3.2 - Energy used for electricity production,1995, 2000 and 2001

ktoe (000 Tonne of oil equivalent)

	1995 ¹		2000 ¹		2001	
Fuel	Quantity (Ktoe)	%	Quantity (Ktoe)	%	Quantity (Ktoe)	%
Fuel oil	137.2	52.2	168.5	34.3	177.9	33.1
Diesel oil	5.3	2.0	3.4	0.7	3.2	0.6
Kerosene	33.6	12.8	13.6	2.8	3.9	0.7
Coal	18.8	7.2	141.7	28.9	169.5	31.5

² Revised

Bagasse	67.7	25.8	163.4	33.3	182.8	34.0
Total	262.6	100.0	490.6	100.0	537.3	100.0

¹ Revised

Table 3.3 - Final energy consumption by end-user, 1995, 2000 and 2001

ktoe (000 Tonne of oil equivalent)

	1995 ¹		2000 ¹		2001	
Fuel user	Quantity (Ktoe)	%	Quantity (Ktoe)	%	Quantity (Ktoe)	%
Manufacturing	305.3	44.6	249.9	33.4	262.4	33.4
Transport	268.8	39.3	355.9	47.5	372.3	47.5
Household	81.3	11.9	99.2	13.3	101.8	13.0
Commercial	24.0	3.5	36.9	4.9	40.8	5.2
Agriculture	3.4	0.5	4.8	0.6	4.8	0.6
Other (n.e.s & losses)	1.3	0.2	2.3	0.3	2.3	0.3
Total	684.1	100.0	749.0	100.0	784.4	100.0

¹ Revised

4. Transport

on this page: tables 4.1 to 4.2

Table 4.1 - Stock of registered motor vehicles, Island of Mauritius, 1995, 2000 and 2001

Number

Type of vehicle	1995	2000	2001
Cars and Dual Purpose Vehicle (DPV)	65,374	89,823	95,066
Auto / Motocycles	97,809	116,478	119,953
Heavy Motor Car and Bus	3,260	3,310	3,331
Van and Lorry	19,666	29,292	31,582
Other vehicles ¹	4,758	5,115	5,217
Total	190,867	244,018	255,149
No of cars & DPVs per 1000 population	60	78	82

¹ Includes tractor and dumper, prime mover, trailer and road roller

Table 4.2 - Fuel used for transport, 1995, 2000 and 2001

ktoe (000 Tonne of oil equivalent)

Fuel	1995 ¹	2000 ¹	2001
Gasolene	91	99	95
Liquefied Petroleum Gas (LPG)	-	1	1
Diesel oil	103	144	147
Aviation fuel	75	112	129
Total	269	356	372

¹ Revised

5. Greenhouse gases (GHG) emissions

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Table 5.1 - Total emissions and removals of greenhouse gases, 1995, 2000 and 2001

Gg or thousand tonne

Greenhouse gas	1995	2000 ¹	2001 ²
Emissions		•	•
Carbon Dioxide	1,738.4	2,456.8	2,597.7
Methane	4.6	5.7	5.8
Oxides of Nitrogen	10.2	13.8	14.2
Nitrous Oxide	0.7	1.4	1.4
Carbon Monoxide	67.0	66.3	65.9
NMVOC ³	15.5	17.2	17.1
Sulphur Dioxide	13.4	28.9	31.5
Removals			
Carbon Dioxide	221.4	229.2	234.5
Net emissions			
Carbon Dioxide	1,517.0	2,227.6	2,363.2

¹ Revised

Table 5.2 - Sectoral carbon dioxide emissions from fossil fuel, 1995, 2000 and 2001

Gg or thousand tonne

Sector	1995		2000 ¹		2001 ²	
	Quantity	%	Quantity	%	Quantity	%
Energy industries (electricity)	655.6	38	1,185.4	48	1,302.0	50
Manufacturing industries	277.7	16	357.4	15	383.6	15
Transport	645.0	37	735.8	30	734.6	28
Residential	138.5	8	141.7	6	141.7	6
Other ³	20.1	1	33.7	1	33.1	1
Total	1,736.9	100	2,454.0	100	2,595.0	100

¹ Revised

² Provisional

³ Non-methane volatile organic compound

² Provisional

³ includes Agriculture and Commerce

Table 5.3 - National inventory of greenhouse gases by source categories, 2000¹

Gg or thousand tonne

Category	Carbon dioxide(CO2)		Methane (CH4)	Nitrous oxide(N2O)	Oxides of nitrogen(NOx)	Carbon monoxide(CO)	NMVOC ²	Sulphur dioxide(SO2)
	Emissions	Removals	(0114)	Oxide(N2O)	Titt ogen (NOX)	monoxide(co)		dioxide(302)
1. Energy	2,454.0	-	0.6	0.1	13.3	66.3	8.3	28.9
Fuel Combustion Activities								
(a) Energy industries (electricity)	1,185.4	1	0.3	0.1	4.3	8.4	0.5	20.1
(b) Manufacturing industries	357.4	ı	0.1	0.0	1.4	17.3	0.2	6.9
(c) Transport	735.8	-	0.1	0.0	7.4	39.1	7.4	1.8
(d) Other sectors	175.4	-	0.1	-	0.2	1.5	0.2	0.1
2.Industrial Processes	2.8	-	-	0.3	0.5	-	8.9	-
3.Solvent and Other Product Use								
4.Agriculture	-	-	1.0	1.0	-	-	-	-
5.Land use Change and Forestry	-	229.2	-	-	-	-	-	-
6.Waste	-		4.1	-	-	-	-	-
Total	2,456.8	229.2	5.7	1.4	13.8	66.3	17.2	28.9

¹ Revised

Table 5.4 National inventory of greenhouse gases by source categories, 2001¹

Gg or thousand tonne

Category	Carbon dioxide(CO2)			Nitrous oxide(N2O)	Oxides of nitrogen(NOx)	Carbon	NMVOC ²	Sulphur
	Emissions	Removals	(СП4)	Oxide(N2O)	Tilti ogen (NOX)	monoxide(co)		dioxide(SO2)
1. Energy	2,595.0	-	0.6	0.1	13.9	65.9	8.2	31.5
Fuel Combustion Activities								
(a) Energy industries (electricity)	1,302.0	ı	0.3	0.1	4.8	9.4	0.5	22.0
(b) Manufacturing industries	383.6	-	0.1	0.0	1.5	17.2	0.3	7.6

 $^{^{2}}$ Non-methane volatile organic compound

(c) Transport	734.6	-	0.1	0.0	7.4	37.8	7.2	1.8
(d) Other sectors	174.8	-	0.1	-	0.2	1.5	0.2	0.1
2.Industrial Processes	2.7	-	-	0.3	0.3	-	8.9	-
3.Solvent and Other Product Use					:			
4.Agriculture	-	-	1.0	1.0	-	-	-	-
5.Land use Change and Forestry	-	234.5	-	-	-	-	-	-
6.Waste	-	-	4.2	-	-	-	-	-
Total	2,597.7	234.5	5.8	1.4	14.2	65.9	17.1	31.5

 $^{^{1}}$ Provisional 2 Non-methane volatile organic compound

6. Water

on this page: tables 6.1 to 6.2

Table 6.1 - Water Balance¹, Island of Mauritius

Detail	Volume (Mm3/ yr)	Percentage %
Precipitation	3,930	100
of which Evapotranspiration	1,179	30
Surface runoff	2,358	60
Groundwater recharge	393	10

Source: Water Resources Unit of the Ministry of Public Utilities.

Table 6.2 - Water Utilisation, Island of Mauritius, 2001

Mm3

	Surface	e water		Total	
Use	River-run offtakes	Storage	Ground water		
Domestic, Industrial, and Tourism	38	48	123	209	
of which					
private boreholes	1	1	10	10	
Agricultural (irrigation)	370	76	22	468	
Hydropower	131	174	-	305	
Total	539 (55%)	298 (30%)	145 (15%)	982 (100%)	

Source: Water Resources Unit of the Ministry of Public Utilities.

¹ Based on long term records of annual average rainfall

7. Waste

on this page: table 7.1

Table 7.1 - Solid waste landfilled at Mare Chicose by source of waste material, 2000 - 2001

Tonnes

Waste material	2000	2001 ¹
Domestic	251,249	292,880
Construction	6,839	3,709
Other ²	7,729	10,102
Total	265,817	306,691

Source: Ministry of Local Government, Rodrigues and Rural & Urban Development.

¹ Provisional

² Includes mainly industrial waste.

8. Environmental Impact Assessment licences, Complaints, and Contraventions

on this page: tables 8.1 to 8.3

Table 8.1 - Number of EIA licences granted by type of project, Island of Mauritius, 1997 - 2001

Project	1997	1998	1999	2000	2001 ¹
Land parcelling (morcellement)	21	13	17	31	74
Poultry rearing	20	17	35	26	13
Industrial development	11	17	6	7	1
Coastal hotels & related works	7	13	13	11	9
Livestock rearing	7	3	11	4	-
Housing	6	6	7	4	4
Stone crushing plants	3	1	3	3	-
Development in port area	3	3	2	2	2
Service station ("filling" station)	1	2	2	2	-
Other	3	3	2	2	7
Total	82	78	98	92	110

Source: Department of Environment of the Ministry of Environment.

Table 8.2 - Number of complaints received at the Department of Environment by category, Island of Mauritius, 1997 - 2001

Category	1997	1998	1999	2000	2001 ¹
Noise	86	150	121	555	821
Solid waste	35	85	57	586	758
Air pollution	18	47	32	71	188
Waste water	35	60	32	150	210
Animal husbandry	12	11	12	-	-
Odour	24	64	56	251	417
Other	85	86	93	293	657
Total	295	503	403	1,906	3,051

Source: Department of Environment of the Ministry of Environment.

Table 8.3 - Contraventions established by Police De L' Environnement, 2001

Туре	Number
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¹ Provisional

¹ Provisional

[
Illegal Littering	1,368
Illegal Dumping	27
Noise	85
Others	406
Total	1,886

No of notices issued to drivers of vehicles emitting black smoke	1,592
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9. Air - Quality

on this page: table 9.1

Table 9.1 - Ambient air quality monitoring at Medco Cassis, May - December 2001

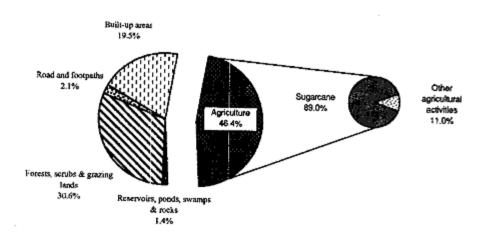
Pollutant	Unit	Minimum	Maximum	Average	Ambient air quality standard ¹
Dust (PM ₁₀)	μg/m3	12.0	64.0	26.4	100.0
Ozone (O ₃)	ppb	1.0	25.0	14.6	46.7
Sulphur dioxide (SO ₂)	ppb	0.0	17.0	2.0	70.0
Nitrogen dioxide (NO ₂)	ppb	0.0	27.0	9.0	97.5
Carbon monoxide (CO)	ppm	0.0	1.0	0.0	13.8
Total suspended particles (TSP)	μg/m3	32.4	110.9	57.3	150.0
Lead	μg/m3	0.0	0.2	0.1	1.5

Source: Department of Environment.

Note: Conversion coefficients (at 250 C and 1013 bar) have been used to convert the ambient air quality standards.

 $^{^{1}}$: 24-hour averaging time is used except for Ozone, Carbon monoxide and lead which are based on 1 hour , 8 hour .and 3 month average respectively

Fig.1 - Land use by category, Island of Mauritius, 1995



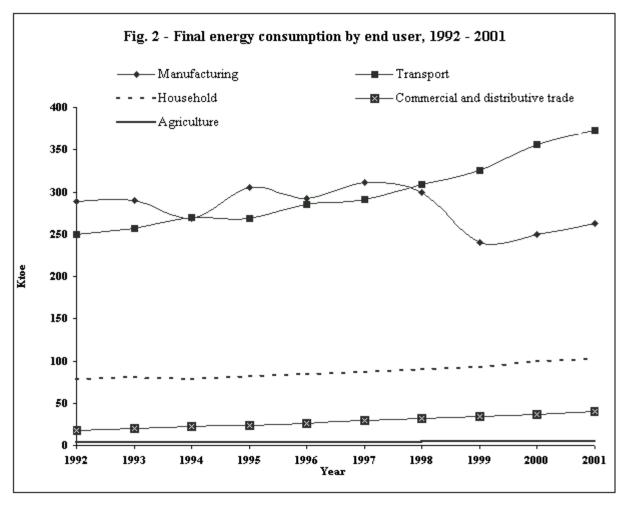
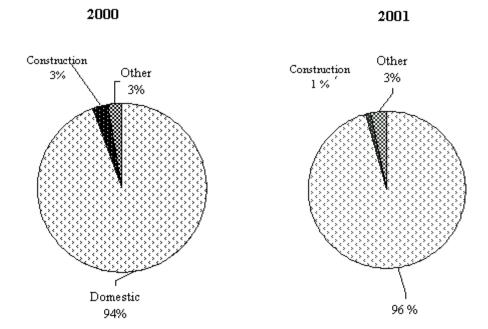


Fig. 3 - Percentage composition of solid waste landfilled at Mare Chicose, 2000 and 2001



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