Economic and Social Indicators

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Environment Statistics

Year 2023

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Note: Readers are invited to make the distinction between official data which are published in the Economic and Social indicators and the analysis presented for the benefit of general readers. Differences of opinion may arise regarding the analytical part but these do not in any way, undermine the quality of the data. The Editors welcome constructive critical comments.

Environment Statistics - 2023

1. Introduction

This issue of Economic and Social Indicators presents statistics on Environment for year 2023 based on data gathered from various institutions.

The main environment indicators for the years 2022 and 2023 are given in Table 1, while technical notes are given at Annex. Figures presented in the tables may not add up to totals due to rounding.

2. Forestry and Agriculture

2.1 Forestry

Preservation of forests is vital for the protection of the ecosystem. The total forest area reported for the year 2023 was 41,997 hectares as compared to 47,002 hectares in the year 2022. This significant decrease of 5,005 hectares has occurred mainly in privately-owned lands and has been accounted for over a span of 10 years. Some 21,997 hectares (52.4%) of the total forest area in 2023 was state-owned and the remaining 20,000 hectares (47.6%) was privately-owned (Table 2).

Out of the 21,997 hectares of state-owned forest area, 11,763 hectares (53.5%) were planted areas, while the Black River Gorges National Park and the nature reserves accounted for 6,574 (29.9%) and 799 (3.6%) hectares respectively. "Pas Geometriques" covered about 591 hectares (2.7%), other nature parks, 908 hectares (4.1%), Ramsar sites, 46 hectares (0.2%) and other forest lands, 1,316 hectares (6.0%).

The 20,000 hectares of privately-owned forest lands consisted of 13,447 (67.2%) hectares of plantation, forest lands, scrub and grazing lands, and 6,553 (32.8%) hectares of mountain, rivers and nature reserves.

2.2 Agriculture

The area harvested of sugar cane decreased from 39,199 hectares in 2022 to 35,863 hectares in 2023. The production of sugar cane went up by 8.7% from 2,256,806 tonnes in 2022 to 2,452,653 tonnes in 2023 (Table 3). The average yield has increased by 18.8% from 57.57 tonnes per hectares in 2022 to 68.39 in 2023.

The production of sugar increased by 2.6% from 232,707 tonnes in 2022 to 238,854 tonnes in 2023. Compared to 10.32% in 2022, the average extraction rate was 9.74% in 2023, representing a decrease of 5.6%.

The area under food crops harvested increased by 17.3% from 7,865 hectares in 2022 to 9,222 hectares in 2023. Production of food crops increased by 32.5% from 117,115 tonnes in 2022 to 155,166 tonnes in 2023.

The area harvested under tea plantation in 2023 was 627 hectares as compared to 659 hectares in 2022. The production of green tea leaves went up from 6,351 tonnes in 2022 to 6,762 tonnes in 2023, representing an increase of 6.5%.

2.3 Import of fertilisers and pesticides

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.

From 2022 to 2023, import of fertilisers decreased by 7.6% from 26,459 tonnes to 24,445 tonnes. Import of pesticides decreased by 26.8% from 3,234 tonnes to 2,368 tonnes (Table 4).

3. Greenhouse Gas (GHG) Emissions

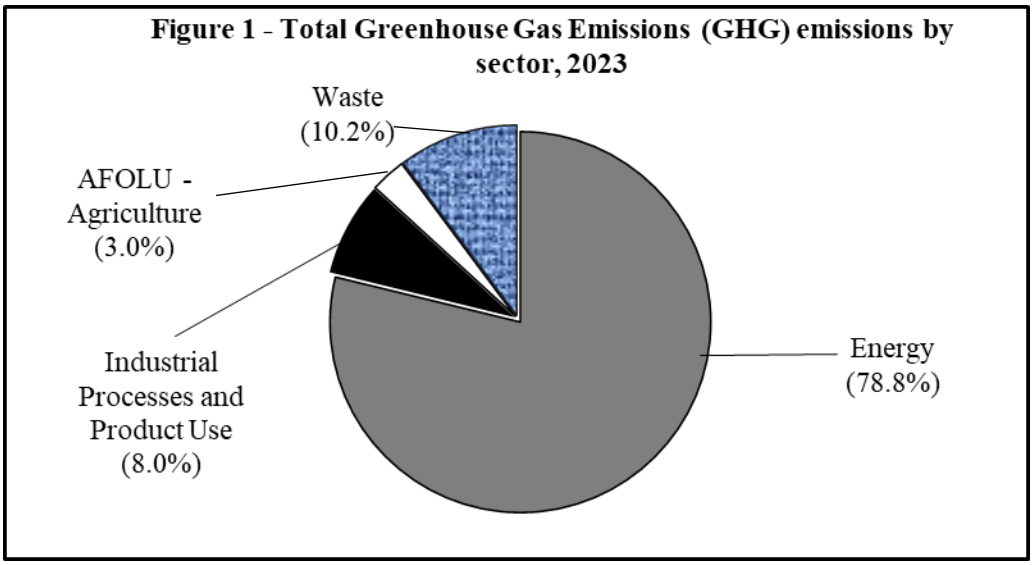
GHG are gases occurring naturally but are also resulting from human-induced activities (anthropogenic emissions from production and consumption). They contribute directly or indirectly to global warming. Some main GHG are Carbon Dioxide (CO_2), Methane (CH_4) and Nitrous Oxide (N_2O).

3.*1 Total GHG emissions by sector*

The total GHG emissions (excluding Forestry and Other Land Use) in 2023 were 5,939.7 Gg carbon dioxide equivalent (CO_2-eq) compared to 5,642.2 Gg CO_2-eq in 2022, representing an increase of 5.3 %. In 2023, there was a general rise in emissions from three sectors, namely; energy, industrial processes and product use, agriculture forestry and other land use (Table 6). On the other hand, the waste sector witnessed a slight decrease. The contribution of GHG to total global GHG emission stood at 0.01% (Source: United Nations Environment Programe (UNEP), Emissions Gap Report 2023).

The energy sector remains the largest contributing sector and accounted for 78.8 % (4,678.6 Gg CO_2-eq) of the total emissions, followed by the waste sector with 10.2 % (606.7 Gg CO_2-eq), the industrial processes and product use sector with 8.0 % (477.0 Gg CO_2-eq) and the agriculture sector, 3.0% (177.4 Gg CO_2-eq) - (Figure 1).

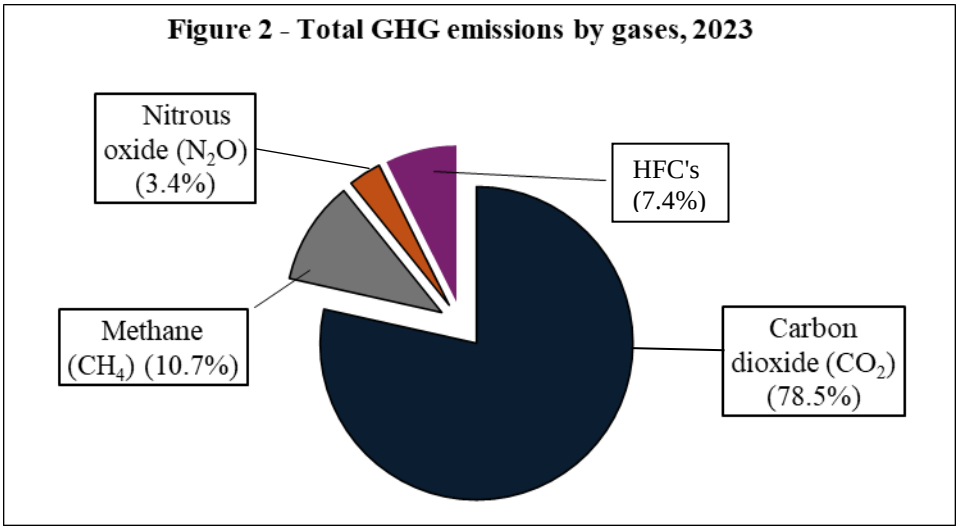
Figure 1 - Total Greenhouse Gas Emissions (GHG) emissions by sector, 2023



3.2 Total GHG emissions by type gases

In 2023, carbon dioxide (CO_2) was the main GHG representing 78.5 % (4,663.0 Gg) of total GHG emissions. Methane (CH_4) contributed 10.7 % (632.4 Gg CO_2-eq), hydrofluorocarbons (HFCs) 7.4% (439.6 Gg CO_2-eq), and nitrous oxide (N_2O) 3.4% (204.7 Gg CO_2-eq) -(Figure 2).

Figure 2 - Total GHG emissions by gases, 2023



3.3 Net GHG emissions

In 2023, GHG emissions have increased mainly due to a higher fuel consumption in electricity generation activities and transport from the Energy sector. Moreover, a significant decrease was observed in GHG removals due to a considerable carbon loss in privately-owned forest lands where 5,005 hectares of forest lands, scrubs and grazing lands were converted to other uses. The overall net GHG emissions, after accounting for the removal of Carbon Dioxide by Forestry and Other Land Use sector, stood at around 5,644.3 Gg CO_2-eq in 2023, up by 6.3% from 5,308.0 Gg CO_2-eq in 2022 (Table 6).

3.4 Energy and Greenhouse gas (GHG)

3.4.1 Energy sector

Though vital for economic development and households, the production and consumption of energy release greenhouse gases. Carbon dioxide is the main component of greenhouse gases.

3.4.2 Primary energy requirement

Total primary energy requirement (total primary energy requirement = local production + imports of primary energy - re-exports of primary energy – international bunkers – stock changes) was 1,537.6 thousand tonnes of oil equivalent (ktoe) in 2023, 3.5% higher than in 2022 (1,485.0 ktoe) - (Table 5).

In 2023, some 9.8% (151 ktoe) was met from locally renewable energy sources (hydro, wind, landfill gas, photovoltaic, bagasse, fuelwood, and charcoal), while 90.2% (1,387 ktoe) were from imported fossil fuels (petroleum products and coal).

In 2023, there was a slight increase of 1.0 % in energy supply from local renewable sources. Energy sources from bagasse increased by 5.1% from 118 ktoe in 2022 to 124 ktoe in 2023, landfill gas decreased by 26.7% from 1.5 ktoe to 1.1 ktoe, hydro decreased by 26.3% from 11.0 ktoe to 8.1 ktoe, photovoltaic decreased by 3.8% from 13.3 ktoe to 12.8 ktoe, wind decreased by 46.2% from 1.3 ktoe to 0.7 ktoe and fuelwood decreased by 4.8% from 4.2 ktoe to 4.0 ktoe in 2023.

From 2022 to 2023, energy supply from imported fossil fuels increased by 3.8% from 1,336 to 1,387 ktoe. Energy supply from petroleum products increased by 0.7% from 976 ktoe in 2022 to 983 ktoe in 2023. Supply from coal increased by 12.5% from 359 ktoe to 404 ktoe (Table 5).

3.4.3 Electricity generation

Total electricity generated increased by 4.7% from 3,119 GWh in 2022 to 3,266 GWh in 2023. In 2023, around 33.5% of electricity was generated from coal, 48.3% from diesel and fuel oil, and 17.6% from renewable sources. Electricity generated from coal increased by 11.3% from 984 GWh in 2022 to 1095 GWh in 2023; that from diesel and fuel oil together increased by 2.7% from 1,535 GWh in 2022 to 1,576 GWh in 2023 (Table 8).

Electricity generated from renewable sources decreased from 599 GWh to 574 GWh, down by 4.2%. Landfill gas decreased by 23.5% from 17 GWh to 13 GWh, hydro decreased by 26.6% from 128 GWh to 94 GWh and photovoltaic decreased by 3.9% from 155 GWh to 149 GWh. Electricity generated from bagasse increased by 9.2% from 283 GWh to 309 GWh whereas that generated by wind stood approximately at 9 GWh with a significant decrease of 44.5% (Table 8).

3.4.4 Fuel input for electricity generation

Fuel input for electricity generation from petroleum products, coal and bagasse as shown in Table 9 indicates that:

- In 2023, coal (47.6%) was the major fuel used to produce electricity followed by petroleum products (38.4%) and bagasse (14.1%);
- Between 2022 and 2023, fuel input increased by 7.8% from 748 ktoe to 806 ktoe;
- Input of fuel oil increased by 2.7%, from 294 ktoe in 2022 to 302 ktoe in 2023 and that of coal increased by 12.0%, from 343 ktoe in 2022 to 384 ktoe in 2023;
- Some 113 ktoe of bagasse was used to produce electricity in 2023 compared to 110 ktoe in 2022, up by 2.7%.

3.4.5 Energy sector emissions

In 2023, GHG emission from the energy sector stood at 4,679 Gg CO_2-eq, up by 5.9% from 4,420 Gg CO_2-eq in 2022. Within the energy sector, the sub-sector that contributed most of the GHG emission was the electricity generating industries which accounted for 53.7 % (2,514 Gg CO_2-eq) of the total emissions. Next came the transport sector which made up 32.5% (1,518 Gg CO_2-eq) of the total emissions, the manufacturing industries and construction making up another 7.9% (368 Gg CO_2-eq) and the other sectors accounting for the remaining 5.9% (278 Gg CO_2-eq) - (Table 7).

3.4.5.1 Energy industries (electricity generation)

GHG emission from the generation of electricity (energy industries) stood at 2,514 Gg CO_2-eq in 2023 compared to 2,311 Gg CO_2-eq in 2022, representing an increase of 8.8% (Table 7). This is mainly attributed to a 12.0% increase (from 343 ktoe to 384 ktoe) in the amount of coal used to produce electricity (Table 9).

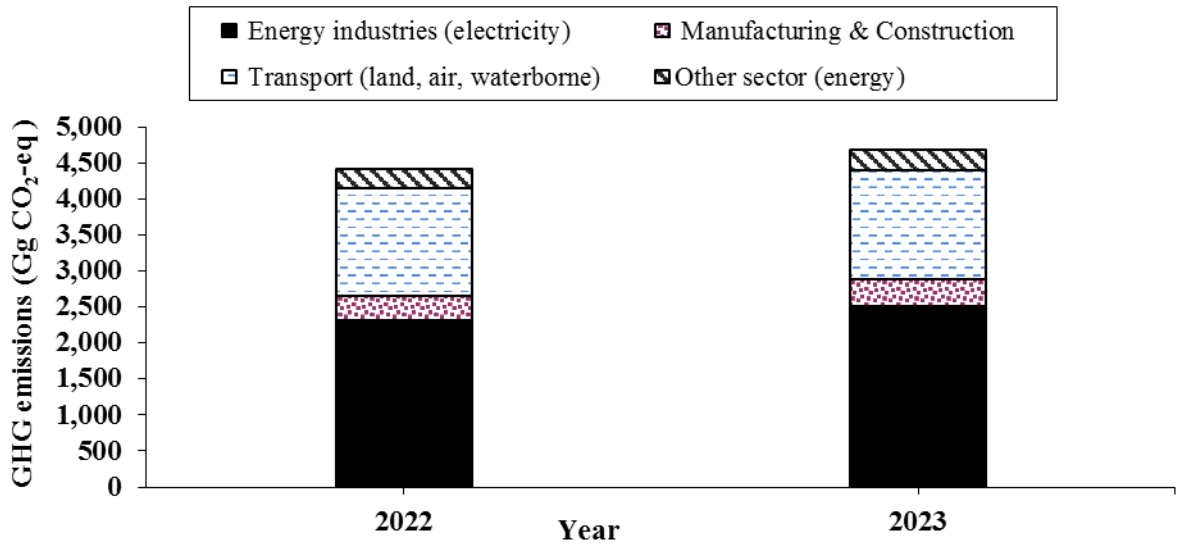
3.4.5.2 Transport industries

In 2023, GHG emission from transport industries was estimated at 1,518 Gg CO_2-eq compared to 1,482 in 2022, up by 2.4% (Table 7). The number of registered motor vehicles went up by 4.4% from 648,176 in 2022 to 676,441 in 2023 (Table 11), the energy consumed by transport sector decreased slightly by 2.0% from 510 ktoe to 500 ktoe - (Table10).

3.4.5.3 Manufacturing industries and construction

Manufacturing industries and construction registered an increase of 6.1% in GHG emissions in 2023, from 347 to 368 Gg CO_2-eq (Table 7). The amount of coal consumed by the sector increased from 16.5 ktoe to 20.3 ktoe, consumption of fuel oil decreased from 35.3 ktoe to 34.0 ktoe, whereas that of diesel and LPG increased from 48.5 ktoe to 51.4 ktoe (Table10).

Figure 3 - GHG emissions from energy sector (fuel combustion activities), Republic of Mauritius, 2022 - 2023



4. Temperature

Table 12 indicates that, in 2023, the monthly mean temperature, the monthly maximum mean temperature and the monthly minimum mean temperature were slightly above their respective long term (1991-2020) means. February was the warmest month of the year with an average maximum of 29.5 ˚C and July and August were the coolest months with an average minimum of 18.0 ˚C.

The highest maximum temperature recorded on 22 February and on 30 March 2023 at Rivière Noire was 35.1 ˚C.

The lowest minimum temperature was 10.5 ˚C, which was recorded on 30 June 2023 at Mon Bois.

5. Water

Water, being a basic support element for human life and ecosystems, is of vital environmental and biological importance.

5.1 Rainfall

During the year 2023, the mean amount of rainfall recorded around the Island of Mauritius was 2,543 millimetres (mm), representing an increase of 15.5% compared to 2,201 mm in 2022.

The wettest month in 2023 was January with a mean of 531 mm, which represented a surplus of 188% relative to the long term (1991-2020) mean of 282 mm. September was the driest month with a mean of 48 mm of rainfall, registering a deficit of 56%, compared to the long term (1991-2020) mean of 85 mm (Table 13).

5.*2 Water Balance*

In 2023, the Island of Mauritius received 4,742 million cubic metres (Mm^3) of water from precipitation (rainfall), 15.5% higher when compared to 4,105 Mm^3 in 2022. Nearly 10 % (474 Mm^3) of the water went as ground water recharge, while evapotranspiration and surface runoff accounted for 30% (1,423 Mm^3) and 60% (2,845 Mm^3) respectively (Table 14).

5.3 Water utilisation

Total water utilisation was estimated at 956 Mm^3 in 2023. Around 84% (800 Mm^3) of the total water utilisation was met from surface water and 16% (155 Mm^3) from ground water.

The agricultural sector accounted for 31% (296 Mm^3) of the water utilised, domestic, industrial and tourism sector 34% (323 Mm^3), and hydropower 35% (337 Mm^3) - (Table 15).

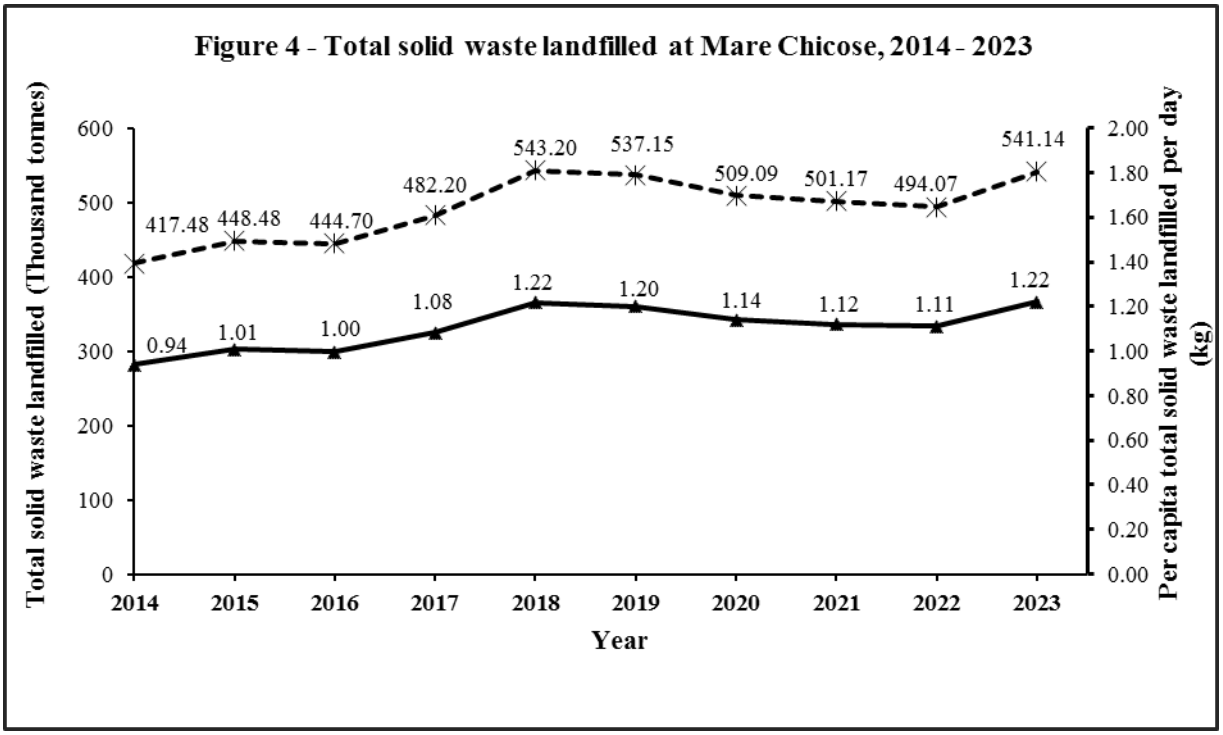
Compared to 2022, water utilisation decreased by 10.2%, from 1,064 to 956 Mm^3 with changes as follows:

- agriculture (-2.3%);
- domestic, industrial and tourism (-2.1%); and
- hydropower (-21.8%).

6. Waste

6.1 Waste disposal at Mare Chicose Landfill

The total amount of solid waste landfilled at Mare Chicose increased by 9.5% from 494,073 tonnes in 2022 to 541,141 tonnes in 2023 (Table 16). The trend of the total amount of solid waste landfilled and the per capita solid waste landfilled are as shown in Figure 4. The per capita total solid waste landfilled increased by 29.8% from 0.94 kg/day in 2014 to 1.22 kg/day in 2023.



7. Complaints

Effective environmental management needs appropriate coordination and monitoring of environmental problems. The Ministry of Environment, Solid Waste Management and Climate Change addresses complaints received from the general public according to a complaints handling protocol.

Complaints attended by the Pollution Prevention and Control Division of the Ministry of Environment, Solid Waste Management and Climate Change (including those received from the Citizen Support Portal) are categorised at Table 17. The number of complaints attended decreased by 42.4% from 757 in 2022 to 436 in 2023. The main categories of complaints were as follows: noise pollution (17.2%), bare land (15.1%), air pollution (9.9%), odour (9.9%) and solid waste (5.7%).

8. Environmental Impact Assessment (EIA) Licences and Preliminary Environmental Report (PER) Approvals

8.1 EIA Licences and PER Approvals

In 2023, some 26 EIA licences were granted, which comprised 9 for "other projects, 4 for land parcelling (morcellement), 4 for coastal hotels and related works, 4 for photovoltaic farms, 3 for "housing/integrated resort scheme/property development scheme/smart city", 1 for construction of road and highway and 1 for industrial development (Table 18).

During the same period, 8 PER approvals were issued, which comprised 3 for industrial development, 2 for poultry rearing, 1 for livestock rearing, 1 for Housing/Integrated Resort Scheme/Property Development Scheme/Smart City and 1 for "other projects". (Table 19).

Statistics Mauritius

Ministry of Finance, Economic Planning and Development

Port Louis

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Table 1 - Main environment indicators, 2022 and 2023

Indicator	Unit	2022	2023 [1]
Republic of Mauritius			
1. Terrestrial protected areas	hectares	14,915	14,915
2. Marine protected areas	hectares	13,953	13,953
3. Total Greenhouse gas (GHG) emission	Gg CO_2-eq	5,642.2	5,939.7
4. Total carbon dioxide emission	000 tons	4,406.4	4,663.0
5. Per capita carbon dioxide emission	tons	3.49	3.70
6. Total electricity generated	GWh	3,119.2	3,265.5
7. Electricity generated from renewable sources	%	19.2	17.6
8. Total primary energy requirement	ktoe	1,484.9	1,537.6
9. Primary energy requirement from renewable sources	%	10.1	9.8
10. Per capita primary energy requirement	toe	1.18	1.22
11. Per capita final energy consumption	toe	0.76	0.77
12. Energy intensity	toe per Rs.100,000 GDP at 2018 prices	0.30	0.30
Island of Mauritius			
13. Forest area	ha	47,002	41,997
14. Total forest area as a % of total land area	%	25.2	22.5
15. Total fish production (fresh-weight equivalent)	tons	33,254	36,279
16. Irrigated land	ha	14,295	13,458
17. Mean annual rainfall	millimetres	2,201	2,543
18. Mean of maximum annual temperature	degrees Celcius	27.4	27.6
19. Mean of minimum annual temperature	degrees Celcius	19.5	20.4
20. Mean annual temperature	degrees Celcius	23.5	23.9
21. Annual fresh water abstraction	Mm^3	632	618
22. Daily per capita domestic water consumption	litres	190.0	192.3
23. Daily per capita total solid waste disposed at landfill	Kg	1.1	1.2

[1]Provisional

Table 2 - Forest area by category, Island of Mauritius, 2022 - 2023

Category of Forest	2022		2023	
	Hectares	%	Hectares	%
State - owned lands	**22,002**	**46.8**	**21,997**	**52.4**
Plantations	11,771	25.0	11,763	28.0
Nature reserves	799	1.7	799	1.9
Mainland	*200*	*0.4*	*200*	*0.5*
Islets	*599*	*1.3*	*599*	*1.4*
Black River Gorges National Park	6,574	14.0	6,574	15.7
Bras D'Eau National Park [1]	497	1.1	497	1.2
Special Reserves [2]	136	0.3	136	0.3
Vallee d'Osterlog Endemic Garden	275	0.6	275	0.7
Ramsar sites	46	0.1	46	0.1
Rivulet Terre Rouge Estuary Bird Sanctuary	*26*	*0.1*	*26*	*0.1*
Pointe D'Esny Wetland	*20*	*0.0*	*20*	*0.0*
Other Forest Lands	1,316	2.8	1,316	3.1
Pas Geometriques	588	1.3	591	1.4
Plantations	*196*	*0.4*	*199*	*0.5*
Leased for grazing and tree planting	*230*	*0.5*	*230*	*0.6*
Others (mostly rocky)	*162*	*0.3*	*162*	*0.4*
Private - owned lands [3]	**25,000**	**53.2**	**20,000**	**47.6**
Reserves	6,553	13.9	6,553	15.6
Mountain reserves	*3,800*	*8.1*	*3,800*	*9.1*
River reserves	*2,740*	*5.8*	*2,740*	*6.5*
Private Reserves	*13*	*0.0*	*13*	*0.0*
Other [4]	18,447	39.2	*13,477*	32.0
Total	**47,002**	**100.0**	**41,997**	**100.0**

[1] Bras D'Eau National Park was proclaimed in 2011. From 2002 to 2010, it was known as Bras D'Eau & Poste La Fayette Reserves

[2] "Islet National Parks" renamed as "Special Reserves" as per Native Terrestrial Biodiversity & National Parks Act of 2015

[3] As per remote sensing survey effected by the Global Forest Resources Assessment (FRA) and the United Nations Commission to Combat Desertification (UNCCD), using Sentinel and Landsat satelllite imagery. The total area of privately-owned forest lands is now estimated at 20,000 ha as at 2023. It is worthy to note that this decline from 25,000 ha to 20,000 ha occurred gradually over the last 15 years.

[4] Includes plantations, forest lands, scrub and grazing lands

Source : Forestry Service, Ministry of Agro-Industry and Food Security

Table 3 - Agricultural crops - Area harvested and production, Island of Mauritius, 2022 - 2023

Crops	2022		2023 [2]	
	Area harvested (hectares)	Production (tonnes)	Area harvested (hectares)	Production (tonnes)
Sugar cane	39,199	2,256,806	35,863	2,452,653
Tea (green leaves)	659 [3]	6,351	627 [3]	6,762
Food crops [1]	7,865	117,115	9,222	155,166
Sugar	Napp	232,707	Napp	238,854

[1] Revised [2] Provisional [3] Area under cultivation

Table 4 - Imports and value (c.i.f)[1] of fertilisers and pesticides, 2022 - 2023

Year	Fertilisers		Pesticides	
	Quantity (tonnes)	Value c.i.f (Rs mn)	Quantity (tonnes)	Value c.i.f (Rs mn)
2022	26,459	1,000.3	3,234	888.2
2023	24,445	726.3	2,368	619.6

[1] Cost, Insurance, Freight

Table 5 - Total primary energy requirement, Republic of Mauritius, 2022- 2023

ktoe (000 Tonne of oil equivalent)

Energy source	2022		2023	
	ktoe	%	ktoe	%
Imported (Fossil Fuels)	**1,335.5**	**89.9**	**1,386.7**	**90.2**
Coal	***359.3***	***24.2***	***403.8***	***26.3***
Petroleum products	***976.2***	***65.7***	***983.0***	***63.9***
Gasolene	206.5	13.9	217.8	14.2
Diesel Oil	214.3	14.4	225.3	14.7
Dual Purpose Kerosene	126.4	8.5	102.1	6.6
Kerosene	*0.8*	*0.1*	*6.4*	*0.4*
Aviation Fuel	*125.6*	*8.5*	*95.7*	*6.2*
Fuel Oil	332.6	22.4	338.9	22.0
LPG	96.4	6.5	98.9	6.4
Imported (Renewables)				
Fuel wood and charcoal	0.2	0.0	0.2	0.0
Local (Renewables)	**149.2**	**10.0**	**150.7**	**9.8**
Hydro	11.0	0.7	8.1	0.5
Wind	1.3	0.1	0.7	0.1
Landfill Gas	1.5	0.1	1.1	0.1
Photovoltaic	13.3	0.9	12.8	0.8
Bagasse [1]	117.9	7.9	123.9	8.1
Fuelwood [1]	4.2	0.3	4.0	0.3
Charcoal	0.0	0.0	0.0	0.0
Total	**1,485.0**	**100.0**	**1,537.6**	**100.0**

[1] Estimates

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Table 6 - National inventory of greenhouse gas emissions [1] by sector, Republic of Mauritius, 2022[2] - 2023[2]

Sector	Gg or Thousand Tonnes						Gg CO_2 - eq		Greenhouse gas emissions (GHG) [2] (Gg CO_2 - eq) excluding Forestry and Other Land Use		% of total GHG emissions	
	Carbon dioxide (CO_2)		Methane (CH_4)		Nitrous oxide (N_2O)		Hydrofluorocarbons (HFCs)					
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
1. Energy	4,368.22	4,624.80	0.64	0.67	0.12	0.13	…	…	4,419.74	4,678.56	78.33	78.77
2. Industrial Processes and Product Use (IPPU)	37.44	37.44	…	…	…	…	405.27	439.58	442.71	477.01	7.90	8.03
3. Agriculture Forestry and Other Land Use (AFOLU) - Agriculture	…	…	1.63	1.74	0.44	0.45	…	…	170.55	177.38	3.02	2.99
4. Waste	0.74	0.74	27.82	27.71	0.08	0.08	…	…	609.18	606.69	10.80	10.21
Total	**4,406.39**	**4,662.98**	**30.10**	**30.12**	**0.64**	**0.66**	**405.27**	**439.58**	**5,642.18**	**5,939.65**	**100.0**	**100.0**

Emissions	Gg CO_2-eq	
	2022	2023
1.Total GHG emissions excluding removals by Forestry and Other Land Use (FOLU)	5,642.18	5,939.65
2. GHG removals [3] - (FOLU)	334.14	295.38
3. GHG emissions including FOLU (= 1 - 2)	5,308.04	5,644.27

[1] Based on 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines of the United Nations Framework Convention on Climate Change (UNFCCC)

[2] Refers to carbon dioxide, methane, nitrous oxide and hydrofluorocarbons

[3] Excludes the amount of CO_2 sequestrated by trees and vegetations found along rivers, canal reserves and trees along roads

... : Not occuring, not applicable, not estimated

Table 7 - Greenhouse gas emissions from energy sector (fuel combustion activities), Republic of Mauritius, 2022 - 2023

Gg CO_2- eq

Energy Sector	2022		2023	
	Quantity	%	Quantity	%
Energy industries (electricity generation)	2,310.90	52.3	2,513.94	53.7
Manufacturing industries and construction	346.61	7.8	368.34	7.9
Transport	1,482.45	33.6	1,518.28	32.5
Other Sectors [1]	279.79	6.3	278.01	5.9
Total	**4,419.74**	**100.0**	**4,678.56**	**100.0**

[1] Includes Residential, Commercial, Institutional and Agriculture

Table 8 - Electricity generation by source of energy, Republic of Mauritius, 2022- 2023

Source of energy	2022		2023	
	GWh	%	GWh	%
Primary energy	**315.5**	**10.1**	**265.2**	**8.1**
Hydro (renewable energy)	128.3	4.1	94.4	2.9
Wind (renewable energy)	15.5	0.5	8.6	0.3
Landfill gas (renewable energy)	17.2	0.6	13.3	0.4
Photovoltaic (renewable energy)	154.5	5.0	148.8	4.6
Secondary energy	**2,803.7**	**89.9**	**3,000.3**	**91.9**
Gas turbine (kerosene)	2.2	0.1	19.5	0.6
Diesel and Fuel oil	1,534.7	49.2	1,576.2	48.3
Coal	983.9	31.5	1,095.4	33.5
Bagasse (renewable energy)	283.0	9.1	309.2	9.5
Total	**3,119.2**	**100.0**	**3,265.5**	**100.0**
of which **:** renewable energy	**598.4**	**19.2**	**574.4**	**17.6**

Table 9 - Fuel input for electricity production, Republic of Mauritius, 2022 - 2023

ktoe (000 Tonne of oil equivalent)

Fuel	2022		2023	
	Quantity (ktoe)	%	Quantity (ktoe)	%
Petroleum products	**295.2**	**39.5**	**309.0**	**38.4**
Fuel oil	293.6	39.3	301.7	37.4
Diesel oil	*0.8*	*0.1*	*1.0*	*0.1*
Kerosene	*0.8*	*0.1*	*6.4*	*0.8*
Coal	**342.8**	**45.9**	**383.5**	**47.6**
Total petroleum products and coal	**638.0**	**85.4**	**692.5**	**85.9**
Local renewables	**109.5**	**14.6**	**113.3**	**14.1**
Bagasse	*109.5*	*14.6*	*113.3*	*14.1*
Total	**747.5**	**100.0**	**805.8**	**100.0**

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Table 10 - Final energy consumption by sector and type of fuel, 2022 - 2023

Sector	2022			2023		
	Tonne (except Electricity in GWh)	ktoe	%	Tonne (except Electricity in GWh)	ktoe	%
1. Manufacturing		**184.2**	**19.2**		**190.8**	**19.7**
1.1 excluding bagasse		**175.8**	**18.3**		**180.2**	**18.6**
Fuel oil	36,731	35.3	3.7	35,388	34.0	3.5
Diesel oil	40,817	41.2	4.3	42,910	43.3	4.5
LPG	6,743	7.3	0.8	7,462	8.1	0.8
Coal	26,588	16.5	1.7	32,720	20.3	2.1
Fuel wood [1]	1,536	0.6	0.1	1,230	0.5	0.1
Electricity (*GWh*)	872	75.0	7.8	862	74.1	7.7
1.2 bagasse	**52,332**	**8.4**	**0.9**	**66,083**	**10.6**	**1.1**
2. Transport [2]		**510.3**	**53.2**		**499.9**	**51.7**
Land		***373.9***	***39.0***		***393.8***	***40.7***
Gasolene	*186,589*	*201.5*	*21.0*	*196,796*	*212.5*	*22.0*
LPG	*2,899*	*3.1*	*0.3*	*2,649*	*2.9*	*0.3*
Diesel oil	*166,850*	*168.5*	*17.6*	*175,566*	*177.3*	*18.3*
Electricity (GWh)	*8*	*724*	*0.1*	*12*	*1,046*	*0.1*
Air						
Aviation Fuel	***120,727***	***125.6***	***13.1***	***92,017***	***95.7***	***9.9***
Sea		***10.8***	***1.1***		***10.5***	***1.1***
Gasolene	*4,588*	*5.0*	*0.5*	*4,839*	*5.2*	*0.5*
Diesel oil	*2,093*	*2.1*	*0.2*	*2,018*	*2.0*	*0.2*
Fuel oil	*3,903*	*3.7*	*0.4*	*3,342*	*3.2*	*0.3*
3. Commercial and Distributive Trade		**104.6**	**10.9**		**113.9**	**11.8**
LPG	*20,063*	21.7	2.3	21,326	23.0	2.4
Charcoal [1]	*510*	0.4	0.0	425	0.3	0.0
Electricity (*GWh*)	*960*	82.5	8.6	1,053	90.5	9.4
4. Household		**151.7**	**15.8**		**156.1**	**16.1**
Kerosene				21	**0.0**	
LPG	58,768	63.5	6.6	59,672	64.4	6.7
Fuelwood [1]	8,568	3.3	0.3	8,337	3.2	0.3
Charcoal [1]	49	0.0	0.0	38	0.0	0.0
Electricity (*GWh*)	988	84.9	8.9	1,028	88.4	9.1
5. Agriculture		**3.2**	**0.3**		**3.0**	**0.3**
Diesel oil [1]	1,612	1.6	0.2	1,594	1.6	0.2
Electricity (*GWh*)	19	1.6	0.2	16	1.4	0.1
6. Other (n.e.s)		**4.3**	**0.5**		**4.1**	**0.4**
Total		**958.3**	**100.0**		**967.7**	**100.0**

[1] Estimates [2] Includes transport for all sectors

Table 11 - Stock of registered motor vehicles, Island of Mauritius, 2022 - 2023

Type of vehicle	2022	2023
Cars, Dual Purpose Vehicle, Double cab pick up	350,996	371,866
Auto / Motocycles	236,566	242,608
Heavy Motor Car and Bus	4,575	4,650
Van, lorry and truck	48,523	49,697
Other vehicles[1]	7,516	7,620
Total	**648,176**	**676,441**
of which hybrid vehicles	*24,101*	*32,309*
electric vehicles	*960*	*1,985*

[1] Includes tractor and dumper, prime mover, trailer, road roller and other

Table 12 - Mean maximum, mean minimum and mean temperature, Island of Mauritius, 2023

Degree Celcius

Temperature	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Annual mean temperature
Maximum temperature													
Long Term Mean (1991-2020)	30.0	30.0	29.6	28.7	27.1	25.3	24.5	24.6	25.5	26.8	28.3	29.6	**27.5**
Monthly Maximum Mean Temperature	28.3	29.5	29.1	29.2	27.7	25.7	25.1	25.2	26.2	27.8	28.3	29.4	**27.6**
Difference from Long Term Mean	*-1.7*	*-0.5*	*-0.5*	*0.5*	*0.6*	*0.4*	*0.6*	*0.6*	*0.7*	*1.0*	*0.0*	*-0.2*	*0.1*
Minimum temperature													
Long Term Mean (1991-2020)	22.6	22.9	22.4	21.5	19.6	18.1	17.3	17.3	17.5	18.7	19.9	21.6	**20.0**
Monthly Minimum Mean Temperature	21.7	22.3	22.2	21.8	20.1	18.2	18.0	18.0	19.0	19.7	21.0	21.9	**20.4**
Difference from Long Term Mean	-0.9	-0.6	-0.2	0.3	0.5	0.1	0.7	0.7	1.5	1.0	1.1	0.3	*0.4*
Mean temperature													
Long Term Mean (1991-2020)	26.3	26.4	26.0	25.1	23.4	21.7	20.9	20.9	21.5	22.7	24.1	25.6	**23.7**
Monthly Mean temperature	25.0	25.9	25.6	24.8	23.9	22.0	21.5	21.8	22.6	23.8	24.6	25.6	**23.9**
Difference from Long Term Mean	*-1.3*	*-0.5*	*-0.4*	*-0.3*	*0.5*	*0.3*	*0.6*	*0.9*	*1.1*	*1.0*	*0.5*	*0.0*	*0.2*

Source: Mauritius Meteorological Services

Table 13 - Mean rainfall, Island of Mauritius, 2022 - 2023

Millimetres

Month	Long Term Mean (1991-2020)	2022		2023	
		Monthly Mean	% of Long Term Mean	Monthly Mean	% of Long Term Mean
January	282	293	104	531	188
February	323	401	124	156	48
March	294	411	140	335	114
April	206	442	215	178	86
May	148	136	92	291	197
June	117	137	117	86	74
July	132	123	93	121	92
August	108	61	56	140	130
September	85	72	85	48	56
October	73	33	45	54	74
November	85	33	39	286	336
December	165	59	36	317	192
Total for the year	**2,018**	**2,201**	**109**	**2,543**	**126**

Source: Mauritius Meteorological Services

Table 14 - Water balance, Island of Mauritius, 2022 - 2023

Mm^3

	2022	2023
Rainfall	**4,105**	**4,742**
Surface runoff	*2,463*	*2,845*
Evapotranspiration	*1,232*	*1,423*
Net recharge to groundwater	*411*	*474*

Source: Water Resources Unit, Ministry of Energy and Public Utilities.

Table 15 - Water Utilisation, Island of Mauritius, 2022 - 2023

Mm^3

Utilisation	2022				2023			
	Surface water		Ground water	Total	Surface water		Ground water	Total
	River-run offtakes	Storage (Reservoirs)			River-run offtakes	Storage (Reservoirs)		
Domestic, Industrial and Tourism (CWA network)	62 [1]	113	145	**320**	60 [1]	110	143	**313**
Agricultural	225	72 [2]	5	**303** [4]	232	58 [2]	5	**296** [5]
Hydropower	174	257 [3]	-	**431**	158 [4]	179 [3]	-	**337**
Industrial	2	1	7	**10**	2	1	7	**10**
Overall utilisation	**463**	**443**	**157**	**1,064**	**452**	**348**	**155**	**956**
Total water mobilisation	**441**	**321**	**157**	**894**	**422**	**296**	**155**	**873**

[1] 22 Mm^3 used also for Reduit hydropower station

[2] 56 Mm^3 used for Tamarind Falls and Magenta hydropower stations and 4 Mm3 for La Ferme hydropower station;

[3] 62 Mm^3 used at Midlands and La Nicoliere;

[4] Included 0.7 Mm^3 re-use of treated Waste Water

[1] 14 Mm^3 used also for Reduit hydropower station

[2] 26 Mm^3 used for Tamarind Falls and Magenta hydropower stations and 4 Mm^3 for La Ferme hydropower station;

[3] 20 Mm^3 used at Midlands and La Nicoliere;

[4] 16 Mm^3 Used at Le Val & again at Ferney

[5] Included 0.7 Mm3 re-use of treated Waste Water

Source: Water Resources Unit, Ministry of Energy and Public Utilities.

Table 16 - Disposal of solid waste by type at Mare Chicose landfill site, 2022- 2023

Tonnes

Waste material	2022	2023
Domestic and Commercial	473,983	525,526
Construction	5,248	5,443
Other [1]	14,842	10,172
Total	**494,073**	**541,141**

Source: Ministry of Environment, Solid Waste Management and Climate Change

[1] Includes mainly industrial waste

Table 17 - Number of complaints [1] attended at the Pollution Prevention and Control (PPC) Division by category, Island of Mauritius, 2022 - 2023

Category of complaints	2022	%	2023	%
Noise	139	18.4	75	17.2
Solid waste	39	5.2	25	5.7
Air pollution	85	11.2	43	9.9
Waste water	53	7.0	21	4.8
Odour	60	7.9	43	9.9
Bareland	87	11.5	66	15.1
Flooding/Obstruction of rivers and drains [2]	45	5.9	19	4.4
Rock [3]	-	-	10	2.3
Land Reclamation/Backfilling	-	-	10	2.3
Other [4]	249	32.9	124	28.4
Total	**757**	**100.0**	**436**	**100.0**

[1] Include number of complaints attended at PPC Division through the Citizen Support Portal.

[2] Complaints regarding "Flooding/obstruction of rivers and drains" were recorded in "Other" prior to 2018.

[3] Rock refers to Rock Quarry

[4] Includes illegal construction, objections to projects, law and order, land conversion, land reclamations, landslides etc.

Source: Ministry of Environment, Solid Waste Management and Climate Change

Table 18 - Number of Environmental Impact Assessment (EIA) licences granted by type of project, 2022 - 2023, Island of Mauritius

Project	Number of EIA licences	
	2022	2023
Land parcelling (morcellement)	5	4
Industrial development	1	1
Coastal hotels and related works	5	4
Housing/Integrated Resort Scheme/Property Development Scheme/Smart City	4	3
Photovoltaic Farms	3	4
Stone crushing plants	2	-
Development in port area	2	-
Construction of road and highway	-	1
Other projects	12	9
Total	**34**	**26**

Source: Ministry of Environment, Solid Waste Management and Climate Change

Table 19 - Number of Preliminary Environmental Report (PER) approvals granted by type of project, 2022 - 2023, Island of Mauritius

Project	Number of PER approved	
	2022	2023
Land parcelling (morcellement)	-	-
Poultry rearing	-	2
Industrial development	6	3
Coastal hotels and related works	-	-
Livestock rearing	1	1
Housing/Integrated Resort Scheme/Property Development Scheme/Smart City	1	1
Other projects	2	1
Total	**10**	**8**

Source: Ministry of Environment, Solid Waste Management and Climate Change

ANNEX

Technical notes

Concepts and definitions

Environment

Environment: The totality of all the external conditions affecting the life, development and survival of an organism.

Environment Statistics: Environment statistics are environmental data that have been structured, synthesized and aggregated according to statistical methods, standards and procedures. The scope of environment statistics covers biophysical aspects of the environment and those aspects of the socioeconomic system that directly influence and interact with the environment.

Environmental indicator: Environmental indicators are environment statistics that have been selected for their ability to depict important phenomena or dynamics. Environmental indicators are used to synthesize and present complex environment and other statistics in a simple, direct, clear and relevant way.

Land use, Agriculture and Forestry

Pas Geometriques: Pas Géométriques are a narrow belt, theoretically 81.21 metres (250 French feet) in width, round the coast and are State-owned. There are several cases where the width is less than 81.21 metres or does not exist at all.

Ramsar Sites: The Convention on Wetlands also known as the Ramsar Convention defines wetlands as "Areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Mauritius became a contracting party to the Ramsar Convention on 30 September 2001.

Land use: Land use reflects both the activities undertaken and the institutional arrangements put in place for a given area for the purposes of economic production, or the maintenance and restoration of environmental functions. Consequently, there are areas of land that are "not in use" by human activities.

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.

Energy and Greenhouse gas

Greenhouse gases (GHG): These gases occur naturally and also result from human-induced activities (anthropogenic production and consumption) that contribute directly or indirectly to global warming. Some main GHG are Carbon Dioxide (CO_2), methane (CH_4) and Nitrous Oxide (N_2O). Other gases such as Carbon monoxide (CO), oxides of Nitrogen (NOx), non methane volatile organic compounds (NMVOC) and Sulphur dioxide (SO_2), contribute indirectly to global warming. GHG 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.

Carbon dioxide equivalent (CO_2-eq): It is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). The carbon dioxide equivalent of a gas is derived by multiplying the weight of the gas by its associated Global Warming Potential (GWP).

Global Warming Potential (GWP)

The Global Warming Potential (GWP) was adopted from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (SAR – 100 years‟ time horizon) as in the table below.

GHG	GWP
Carbon Dioxide CO_2	1
Methane CH_4	21
Nitrous Oxide N_2O	310
Hydrofluorocarbon 152a	140
Hydrofluorocarbon 32	650
Hydrofluorocarbon 134a	1300
Hydrofluorocarbon 125	2800
Hydrofluorocarbon 227ea	2900
Hydrofluorocarbon 143a	3800
Hydrofluorocarbon 23	11700

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.

Renewable energy: Renewable energy is captured from sources that replenish themselves. It includes solar (photovoltaic and thermal), hydroelectric, geothermal, tidal action, wave action, marine (non-tidal currents, temperature differences and salinity gradients), wind and biomass energy, all of which are naturally replenished, even though their flow may be limited.

Final energy consumption: Energy consumption by final user, i.e energy which is not being used for transformation into other forms of energy.

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: 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.

Preliminary environmental report

Preliminary environmental report (PER): PER is a short form of EIA and this preliminary analysis is undertaken to identify the impacts associated with the proposed development and the means of mitigation.

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).

Abbreviations

Rs	Rupees
Rs mn	Rupees million
%	Percentage
000	Thousand
Mm^3	Million cubic metres
Gg	Gigagram(thousand tonnes)
toe	Tonne of oil equivalent
ktoe	Thousand tonnes of oil equivalent
GWh	Gigawatt hour
PER	Preliminary environmental report
EIA	Environmental impact assessment
$\mu g/m^3$	Micrograms per cubic metre

Symbols

0	Nil
NA	Not available
Napp	Not applicable

Conversion factor

1 square kilometre = 100 hectares

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