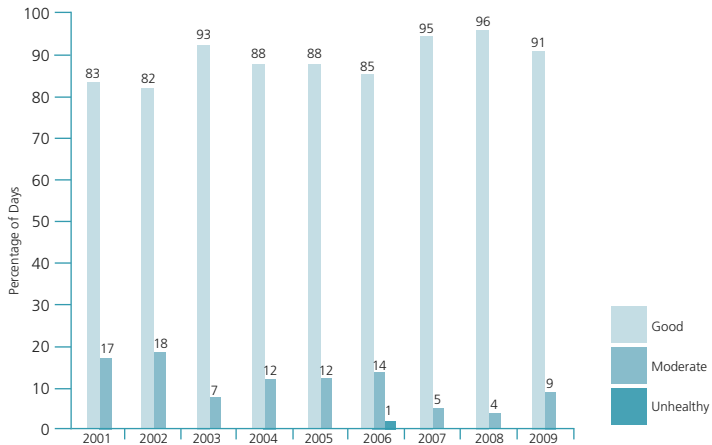


Key Environmental Statistics 2010



Clean Air

Pollutant	Averaging Time	Unit	2007	2008	2009
Sulphur Dioxide (SO ₂)	24-hour Annual	µg/m ³	80	76	83
		µg/m ³	12	11	9
Nitrogen Dioxide (NO ₂)	Annual	µg/m ³	22	22	22
Carbon Monoxide (CO)	1-hour	mg/m ³	2.3	2.3	2.4
	8-hour	mg/m ³	1.7	1.5	1.7
Ozone	8-hour	µg/m ³	140	103	100
Particulate Matter PM10	24-hour	µg/m ³	69	57	77
Particulate Matter PM2.5	24-hour Annual	µg/m ³	35	30	39
		µg/m ³	19	16	19
Lead	Quarterly average	µg/m ³	0.02	0.02	0.01



Air quality was affected by transboundary smoke haze in 2006.

Solid Waste Management

Solid Waste Management	Unit	2007	2008	2009
% of population with access to waste collection services	%	100	100	100
Total waste generated ¹	mil tons/yr	5.60	5.97	6.11
Total waste recycled	mil tons/yr (%)	3.03 (54%)	3.34 (56%)	3.48 (57%)
Total waste incinerated	mil tons/yr (%)	2.38 (43%)	2.45 (41%)	2.48 (41%)
Total waste landfilled ²	mil tons/yr (%)	0.19 (3%)	0.18 (3%)	0.15 (2%)
Total domestic waste disposed	mil tons/yr	1.50	1.48	1.52
Total domestic waste disposed per capita	kg/day/person	0.88	0.84	0.84
Total non-domestic waste disposed	mil tons/yr	1.07	1.14	1.11
Total energy produced from incineration	MWh	974,945	1,048,072	1,064,956
Lifespan of landfill ³	years	35-40	35-40	35-45

¹ Total waste generated = Total waste recycled + Total waste incinerated + Total waste landfilled.

² Total waste landfilled includes non-incinerable waste such as construction and demolition waste, used slag and treated sludge and excludes incineration ash generated from waste disposed through incineration.

³ Measured from the start of the lifespan of Semakau landfill, i.e 1999.

Waste Stream	Amt of Waste Generated (mil tons/yr)	Amt of Waste Recycled (mil tons/yr)	Recycling Rate (%)
Used Slag	0.42	0.41	99
Construction Debris	1.18	1.15	98
Ferrous Metals	0.87	0.81	92
Scrap Tyres	0.02	0.01	83
Non-ferrous Metals	0.06	0.05	82
Wood/Timber	0.29	0.21	72
Paper/Cardboard	1.20	0.57	48
Horticultural Waste	0.24	0.09	39
Glass	0.07	0.02	21
Food	0.61	0.08	13
Textile/Leather	0.11	0.01	12
Plastics	0.69	0.06	9
Others (e.g. e-waste, ceramics, silt, etc.)	0.27	0.01	1
Sludge	0.09	0.00	0
Total	6.11	3.49	57

Environmental Health

Vector Control	2007	2008	2009
No. of local dengue (DF and DHF) cases per 100,000 population	180.6	137.0	83.9
Cleanliness and Food Hygiene	2007	2008	2009
No. of food outlet-related food poisoning outbreaks per 1,000 food outlets	2.6	3.5	5.4
No. of licensed food outlets	30,494	31,033	32,597
Grading issued to Food Shops ^{1,3}			
- Grade A (% of total)	3,293 (47%)	3,843 (50%)	5,183 (52%)
- Grade B (% of total)	3,279 (46%)	3,391 (44%)	4,395 (44%)
- Grade C (% of total)	485 (7%)	465 (6%)	442 (4%)
- Grade D (%of total)	5 (0.07%)	11 (0.14%)	1 (0.01%)
Grading issued to Food Stalls ^{2,3}			
- Grade A (% of total)	4,319 (24%)	4,356 (24%)	5,455 (25%)
- Grade B (% of total)	8,873 (50%)	9,977 (56%)	13,948 (63%)
- Grade C (% of total)	4,625 (26%)	3,438 (19%)	2,734 (12%)
- Grade D (%of total)	2 (0.01%)	9 (0.05%)	4 (0.02%)

¹ Food shops include food courts, restaurants, etc.

² Food stalls include those in government hawker centres and private eating establishments.

³ The percentages for the figures may not add up to 100 percent due to rounding off.

Water Resource Management

"Water For All"					
Water Resource Management		Unit	2007	2008	2009
Access	Improved drinking water sources ¹	% access	100	100	100
	Improved sanitation ²	% access	100	100	100
System Efficiency	Test meeting WHO drinking water quality guidelines	%	100	100	100
	Unaccounted for water	%	4.4	4.4	4.6
	No. of leaks per 100km of potable water pipelines	-	7	7	7
	No. of sewerage disruptions per 1,000km of sewers	-	21	19	17
	Flood prone areas ³	Hectares	98	79	67

¹ Includes piped water into premises, public tap/standpipe, borehole/tube well, protected dug well, etc.

² Includes flush/pour flush toilets or latrines connected to a sewer, septic tank, etc.

³ Based on data over a financial year (period from 1st Apr of the year to 31st Mar of the following year). 2009 figure is estimated based on data available as of December 2009.

Water Resource Management		Unit	2007	2008	2009
Supply	No. of reservoirs in Singapore	-	14	15	15
	Sales of potable water in Singapore				
	- Domestic	Mil m ³	264.2	271.4	277.8
	- Non-domestic	Mil m ³	191.3	191.2	190.1
	Sales of NEWater	Mil m ³	49.2	66.0	72.0
	Sales of Industrial Water	Mil m ³	29.3	23.7	21.9
	Volume of used water treated	Mil m ³	536.2	516.0	515.5

"Conserve, Value, Enjoy"

Water Demand and Management	Unit	2007	2008	2009
Domestic water consumption per capita	Litres/day	157	156	155
Public Outreach	Unit	2007	2008	2009
No. of lifestyle events held at reservoirs and waterways (Cumulative)	-	74	95	139
No. of ABC Waters Projects completed (Cumulative)	-	1	2	3

Climate Change and Energy Efficiency

Climate Change / Energy Statistics	Unit	2007	2008	2009
CO ₂ emissions from combustion of fossil fuels ¹	Kt	39,905	35,945	NA ²
Energy consumption per dollar GDP (% improvement from 2005 levels)	%	10.7	19.4	NA ²
Carbon intensity of electricity generation	kgCO ₂ /kWh	0.5233	0.5016	NA ²
Household electricity use per capita	MWh	1.36	1.27	1.33
Green Vehicles				
- Natural Gas Vehicles	-	485	3,443	4,578
- Hybrid Vehicles	-	1,057	1,999	2,641
- Electric Vehicles	-	1	1	5

¹ The figures do not include non-CO₂ greenhouse gases and CO₂ emissions from other sources such as waste incineration. Bunker fuels are excluded from the figures as per international practice, as such fuels are used for transportation across national borders and are not part of national totals. Consumption of bunker fuels are accounted for separately from national totals.

² Data for 2009 is currently being collated and will be available in the latter half of 2010.

Regional and International Collaboration

Environmental agreements that Singapore has ratified / acceded to	Date of ratification / accession
1999 Beijing Amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer	10 Jan 07
Kyoto Protocol of the United Nations Framework Convention on Climate Change	12 Apr 06
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	24 May 05
Stockholm Convention on Persistent Organic Pollutants	24 May 05
ASEAN Agreement on Transboundary Haze Pollution	13 Jan 03
1997 Montreal Amendment to Montreal Protocol	22 Sep 00
1992 Copenhagen Amendment to Montreal Protocol	22 Sep 00
United Nations Framework Convention on Climate Change	29 May 97
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	2 Jan 96
1990 London Amendment to Montreal Protocol	2 Mar 93
Montreal Protocol on Substances that Deplete the Ozone Layer	5 Jan 89
Vienna Convention for the Protection of the Ozone Layer	5 Jan 89

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