

مركز الإحصاء
STATISTICS CENTRE

Environment

in Figures 2014

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Environment In Figures



Introduction

This report presents statistics on key environmental figures in the Emirate of Abu Dhabi for the year 2014, comprising statistics of climate, air quality, carbon dioxide emissions, desalinated water consumption, sewerage water and non-hazardous solid waste. The main sources for these statistics are the National Centre for Meteorology and Seismology, Environment Agency – Abu Dhabi, Abu Dhabi National Oil Company, Abu Dhabi Water and Electricity Authority, Abu Dhabi Water and Electricity Company, Abu Dhabi Sewerage Services Company and the Centre of Waste Management – Abu Dhabi.

Climate



Abu Dhabi Emirate constitutes about 87% of the total area of the UAE, excluding the islands. The Tropic of Cancer runs through its southern part giving it a tropical desert climate with hot summers, moderate winters, and scant rainfall. In 2014 average temperatures ranged between 17.8°C in January to 36°C in July. Average annual rainfall reached 38.5 mm, while average relative humidity was 55.6%. Average atmospheric pressure was 1,010 Hectopascal.

Table 1: Monthly climate data, 2014

	January	February	March	April	May	June	July	August	September	October	November	December
Average temperature (Degrees Celsius)	17.8	19.1	23.1	28.7	32.1	34.3	36.0	36.0	34.0	30.8	24.6	20.5
Average relative humidity (%)	73.1	65.6	59.1	49.5	44.2	46.1	48.7	51.2	53.8	53.7	56.1	66.2
Average rainfall (Millimetres)	4.9	1.9	20.2	4.4	0.1	0.0	0.0	2.2	2.5	1.2	0.4	0.6
Average atmospheric pressure (Hectopascal)	1,020	1,016	1,014	1,011	1,007	1,001	998	1,000	1,005	1,011	1,016	1,019

Air Quality



Air pollution affects human's health and other living organisms; therefore laws are enacted and standards are set to maintain air quality. In 2014, the annual average concentration of PM10 ranged between 67.8 and 122.6 mcg/m³ in the urban areas of the Emirate, while the annual average concentration of Sulphur Dioxide ranged between 4.1 and 15.2 mcg/m³, which is below the national maximum allowable limit (60 mcg/m³).

Table 2: Average concentrations of air pollutants annual in ambient air by region and location of monitoring station, 2014

(Microgram/m³)

Indicator (maximum allowable limit)	Abu Dhabi				Al Ain				Al Gharbia
	Khalifa School	Bani Yas School	Khalifa City	AlMaqtaa	Al Ain School	Suwaihan	Zakher	Al Tawia	Bida Zayed
Sulphur dioxide (60 mcg/m ³)	5.6	5.4	9.2	4.2	7.7	4.1	4.3	6.4	15.2
Nitrogen dioxide	27.8	32.5	34.7	42.0	36.3	15.1	28.4	20.5	17.0
Ground level ozone	94.3	103.9	102.6	78.5	74.6	101.5	-	102.5	99.7
Particulate matter – PM10	82.5	67.8	83.5	112.6	105.4	92.8	94.2	100.6	98.7

Source: Environment Agency - Abu Dhabi

Carbon dioxide emissions



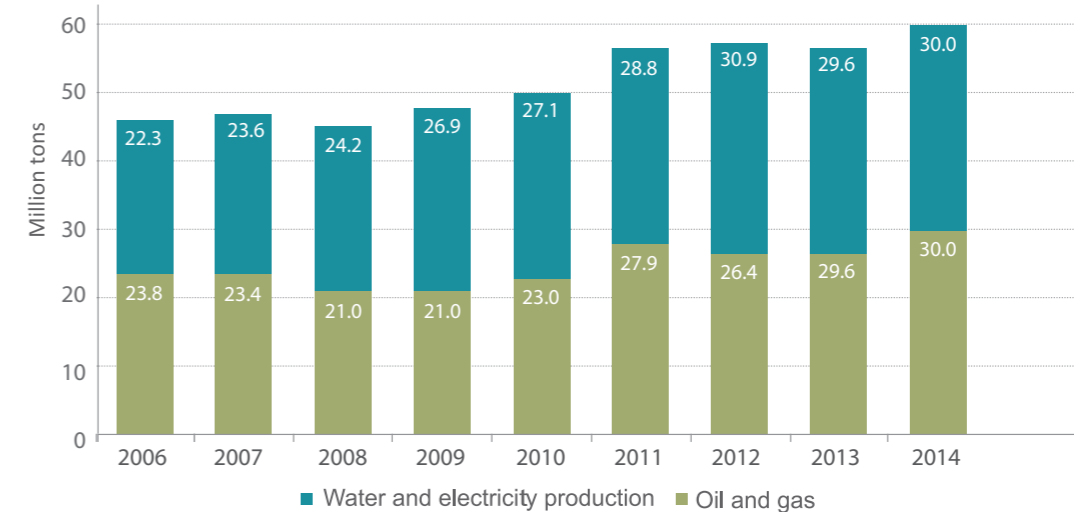
Studies have confirmed the impact of carbon dioxide emissions on global warming, and despite the increasing demand on energy and fossil fuels, there are attempts to find alternative renewable energy to cut down greenhouse gases emissions. In 2014, Carbon Dioxide emissions from the two key energy sectors – oil and gas and water and electricity production – reached 60 million tons.

Table 3: Carbon dioxide emissions from energy sectors
(Million tons)

Sector	2005	2010	2011	2012	2013	2014
Oil and gas	-	23.0	27.9	26.4	26.6	30.0
Water and electricity production	19.8	27.1	28.8	30.9	29.6	30.0
Total	19.8	50.1	56.7	57.3	56.2	60.0

Source: Abu Dhabi National Oil Company, Abu Dhabi Water and Electricity Authority

Figure 1: Carbon dioxide emissions from energy sectors



Source: Statistic Centre - Abu Dhabi

Desalinated water

Consumption



The Emirate of Abu Dhabi consumed about 1,126 MCM in 2014, with a daily average of 3.08 MCM and per capita average daily consumption of 1.16 cubic meters. Consumption of desalinated water increased by 69% from 2005 and this rise is the result of increasing demand on water from various sectors.

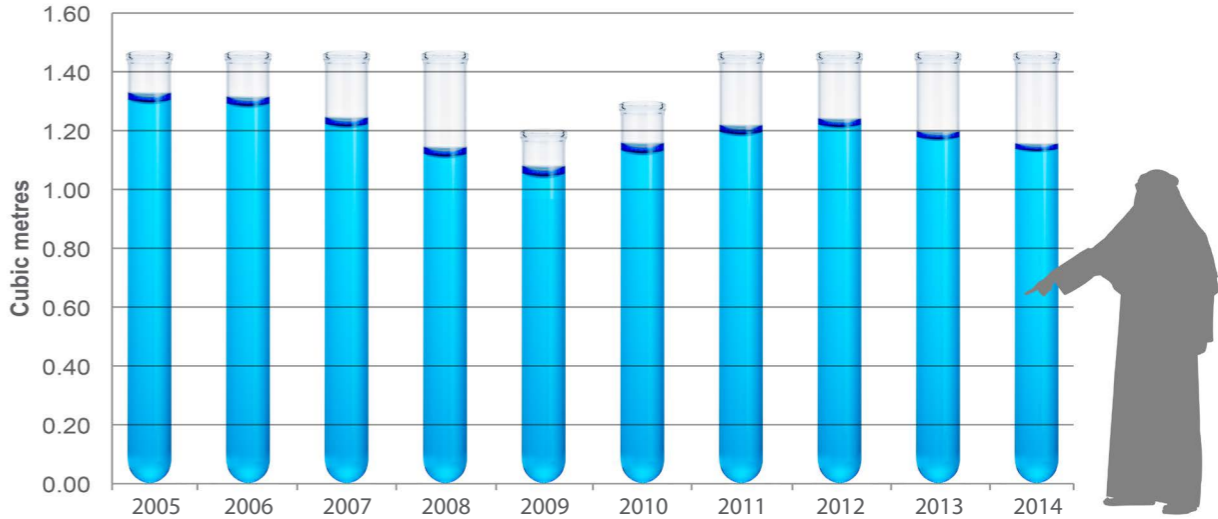
Table 4: Desalinated water consumption

(Million cubic metres)

Year	Annual consumption	Average daily water consumption	Per capita average daily consumption (Cubic metres)
2010	873	2.4	1.1
2011	962	2.6	1.2
2012	1,059	2.9	1.3
2013	1,083	3.0	1.2
2014	1,126	3.1	1.2

Source: Abu Dhabi Water and Electricity Company (ADWEC) - Statistic Centre - Abu Dhabi

Figure 2: Per capita average daily consumption of desalinated water



Source: Statistic Centre - Abu Dhabi

Sewerage Wastewater



In 2014, total amount of produced treated wastewater in Abu Dhabi Emirate reached 312.9 million cubic meter with an increase 11% compared to 2013, and more than 190 million cubic meter of the treated wastewater were reused which is 61.3% of the total treated wastewater.

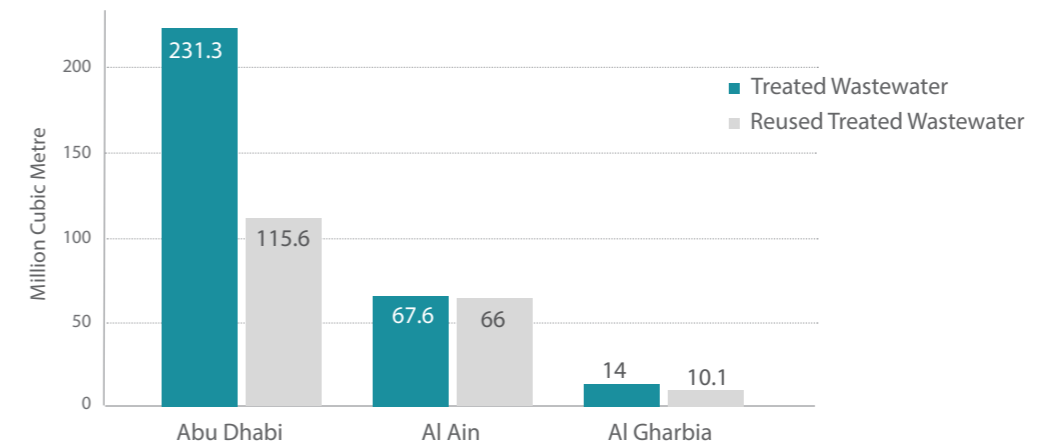
Table 5: Quantity of Treated wastewater and Reused treated wastewater

(Million cubic meters)

Year	2010	2011	2012	2013	2014
Treated Wastewater	246.5	243.1	265.4	283.0	312.9
Reused Treated Wastewater	126.3	133.5	138.8	153.8	191.7

Source: Abu Dhabi Sewerage Services Company.

Figure 3: Quantity of Treated wastewater and Reused treated wastewater, 2014



Source: Abu Dhabi Sewerage Services Company.

Solid waste



The total amount of non-hazardous solid waste disposed in 2014 reached 9.9 million tons, where construction and demolition waste constituted the largest share with 46%. Commercial and industrial waste totaled to about 3.3 million tons, whereas municipal waste reached about 1.3 million during the same year.

Table 6: Non-hazardous solid waste generation by region and source activity, 2014

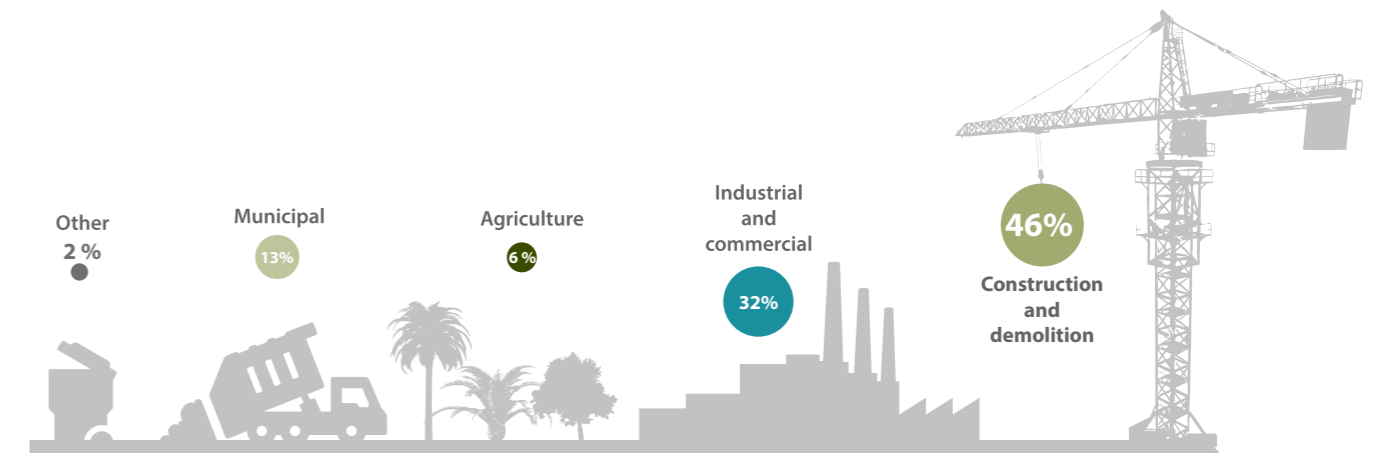
(Tons)

Source	Total	Abu Dhabi	Al Ain	Al Gharbia
Total	9,918,237	6,729,706	1,429,901	1,758,630
Daily average	27,174	18,438	3,918	4,818
Construction and demolition	4,587,301	2,436,958	780,623	1,369,720
Industrial and commercial waste	3,297,147	3,290,399	2,124	4,624
Agricultural waste	564,991	52,785	295,022	214,184
Municipal waste	1,298,955	787,279	342,999	168,677
Other*	172,843	162,285	9,133	1,425

Source: The Centre of Waste Management - Abu Dhabi

*Includes sludge and oil and gas sector waste

Figure 4: Percentage distribution of non-hazardous solid waste generation by source activity, 2014



Source: Statistic Centre - Abu Dhabi



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