

Water Statistics

2016

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Introduction

This report presents water statistics in the Emirate of Abu Dhabi for the year 2016. It contains desalinated water statistics including production and consumption of desalinated water and water transmission system, in additional to water quality. It also contains wastewater statistics that includes wastewater quality and treatment plants capacity.

The key sources of data used in the report are the Environment Agency - Abu Dhabi, Abu Dhabi Water & Electricity Authority - ADWEA, Abu Dhabi Sewerage Services Company (ADSSC).

The "Explanatory Notes" section at the end of this report provides an explanation of the key terms and technical concepts used in this publication. Readers are encouraged to refer to that section in conjunction with reading the statistics and information outlined in the publication.

Key Points

Water statsics

Water statistics are considered one of the most important branches of environmental statistics. Water statistics include water resources and types as well the amount consumed and sanitation statistics. Abu Dhabi government seeks to optimum utilization of water resources, conservation of natural resources and to meet the growing need for water in various areas. Non- conventional water resources are of great importance in Abu Dhabi. Non- conventional water resources include sea water desalination and waste water treatment and reuse.

Desalinated water statistcs

Economic development and population growth require more water supplies. Development plans aim at forecasting demand and supply of water resources. Water desalination industry enjoys great significance in the Emirate of Abu Dhabi to meet the growing demand. Data shows that the available desalinated water in the Emirate of Abu Dhabi in 2016 totaled 1,228.5 MCM, of which 1,116.0 MCM consumed.

Consumption of desalinated water

Table 1.1 reveals that avaliable desalinated water in Emirate of Abu Dhabi increased in 2016 by 5% compared with 2015. As a decrease result of the population growth taking place in Abu Dhabi, the annual consumption of desalinated water rose by 3.2% compared with 2015. The public consumption of desalinated water accounted for 90.8% of the total available desalinated water in 2016. Table 1.1 also shows the stability of per capita daily consumption of equals 1.2 cubic meter/ day in 2016.

Table 1.1: Consumption of desalinated water

(Million cubic metre)

Item	2012	2013	2014	2015	2016
Total of available desalinated water	1,084.7	1,112.3	1,151.4	1,169.5	1,228.5
Total Consumption of desalinated water	1,059.2	1,082.5	1,127.8	1,153.6	1,116.0
Daily consumption	2.9	2.9	3.0	3.1	3.0
Daily average per capita (cubic meters)	1.2	1.2	1.2	1.2	1.2

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

1,250.00

1,200.00

1,150.00

1,000.00

1,000.00

2014

2015

2016

Figure 1: Total of available desalinated water

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

2013

Consumption of desalinated water by region

Table 1.2 shows that consumption of desalinated water in Abu Dhabi Emirate classified by region. Abu Dhabi city consumed the largest share at 60.5% of the total Emirate consumption, followed by Al Ain region at 26.5% and Al Dhafra region at 12.8%.

Table 1.2: Consumption of desalinated water by region

(Million cubic metre)

2012

Region	2012	2013	2014	2015	2016
Total consumption	1059.3	1,082.5	1,127.8	1,153.6	1,116.0
Abu Dhabi	653.1	656.9	683.3	694.5	675.6
Al Ain	286.4	293.2	294.2	316.4	296.7
Al Dhafra	119.8	132.4	150.3	142.7	143.7

Source: Abu Dhabi Water and Electricity Company (ADWEC)

Water quality

General network water quality

The Emirate of Abu Dhabi conducts sample analysis to ensure that the specifications of water conform to national and international standards as shown in table 1.3. The average values and concentrations are within the permissible limits and conform to international standards. Table 1.3 also shows the number of samples measured and the number of samples within the accepted standards.

Table 1.3: Water quality by type of measurement - 2016

Table 1.3: Water qu	uanty by type or	measurement -	2016		
		Prescribed			
		concentration			
Measurement type	Unit of Measurement	or Value	Samples	Number of	Number of Samples
		(Maximum	Average	Samples	within the
		unless	Average	measured	accepted standards
		otherwise			Stariuarus
		stated)			
Color	mg/l pt/CO scale	15	0.99	7060	6693
Turbidity (including	NTU	4	0.65	7060	6690
suspended solids)					
Odor (including Hydrogen Sulphide	Dilution Number	*	0	7060	6700
Taste	Dilution Number	*	0	7060	6700
Total Dissolved Solids	mg/l	100 (minimum) 1000(Maximum)	127.8	7073	3996
Calcium hardness	mg/l as CaCO₃	200 at 25 °C	47.7	7147	6786
Total hardness	mg/l as CaCO₃	300 at 25 °C	53.76	7140	6780
Residual chlorine	mg/ I CI2	0.20 (minimum) 0.50(Maximum)	0.43	7060	5262
Conductivity	µmhos/cm	160(minimum) 1600(Ma0ximum)	170.9	3384	2640
Hydrogen ion	pH Value	7.0(minimum) 9.2(Maximum)	8.36	7062	6701

Source: Abu Dhabi Water and Electricity Authority

^{*}Unobjectionable

Marine water quality

The territorial waters of the Emirate of Abu Dhabi are fairly nutrient-rich. Nutrient inputs into the sea from sand storms, dust, sewage discharges especially land runoff near-shore areas. Examples of important nutrients in the seawater essential for the life and growth of plants and phytoplankton include nitrites, nitrates, phosphates, and silicates. Generally, nutrients level rises in closed areas where it is difficult for water renewal to occur or in industrial zones, which have intensive human activities.

The salinity in the Arabian Gulf is relatively high because of combined influence of restricted exchange of Gulf waters with the open ocean, the high evaporation rates caused by high temperatures, in addition to the desalination industry.

Tables 1.4 - 1.7 presents readings of Abu Dhabi city marine waters quality in terms of temperature, acidity, salinity, dissolved oxygen, in addition to nutrients, such as phosphate, nitrates, and others. The readings have been taken at monitoring stations at certain depths in ten locations.

Marine water quality monitoring location



The salinity in marine waters in the city of Abu Dhabi in 2015 ranges between 34.1 & 48.0 Practical Salinity Unit (psu). Regarding dissolved oxygen, most of the readings taken are between 4.7 & 9.3 mg/litre and these are ideal levels for supporting the life of marine living species.

Table 1.4: Marine water quality - 2015

Sample No.	Secchi Depth	Acidity	Salinity	Temreature	Dissolved oxygen (DO)	Biological Oxygen Demand (BOD)
	metre	рН	psu	C°	mg/l	mg/l
1	13.8	8.1	46.6	28.5	4.8	3.6
2	6.0	8.1	45.8	28.4	4.9	3.2
3	2.7	8.3	48.0	27.5	6.1	3.4
4	15.3	8.1	45.7	29.8	5.3	3.7
5	8.3	8.1	43.6	29.2	4.9	3.5
6	15.3	8.1	45.7	29.8	5.3	3.7
7	8.6	8.1	44.2	28.5	5.1	3.1
8	8.7	8.1	44.7	28.2	4.9	3.2
9	6.2	8.1	44.4	28.5	5.0	3.3
10	4.2	8.1	46.9	28.8	5.0	3.5
11	8.3	8.1	43.6	29.2	4.9	3.5
12	14.5	8.1	46.6	28.8	4.9	3.2
13	12.5	8.2	46.5	29.2	4.9	3.5
14	3.3	8.3	47.0	28.1	5.3	3.1
15	2.1	8.4	34.1	28.5	9.3	3.2
16	6.6	8.1	44.1	28.5	4.7	3.1
17	13.8	8.1	46.6	28.5	4.8	3.6
18	6.0	8.1	45.8	28.4	4.9	3.2
19	2.7	8.3	48.0	27.5	6.1	3.4
20	8.2	8.1	47.3	29.5	4.7	3.5

Table 1.5: Concentration of Nutriant in Marine water – 2015 (microgram / litre)

Comple No		Phosphate	Silicate	Nitrate	Nitrite
Sample No.	Chlorophyll	PO ₄	SiO ₃	NO ₃	NO ₂
1	0.7	287.5	745.0	145.0	-
2	2.9	183.3	623.3	295.0	5.0
3	10.9	434.2	848.3	249.2	19.2
4	0.9	262.5	380.0	132.5	-
5	0.7	342.5	457.5	222.5	-
6	0.9	262.5	380.0	132.5	-
7	1.4	150.8	459.2	139.2	2.5
8	1.5	190.8	469.2	203.3	5.8
9	2.8	262.5	2,316.7	363.3	18.3
10	3.4	334.2	945.0	320.8	15.8
11	0.7	342.5	457.5	222.5	-
12	0.9	305.0	422.5	187.5	-
13	0.8	295.0	315.0	157.5	7.5
14	5.6	460.8	902.5	291.7	18.3
15	2.9	498.3	5,565.0	2,349.2	36.7
16	2.0	133.3	1,060.8	596.7	10.8
17	0.9	237.5	365.0	187.5	-
18	0.7	287.5	745.0	145.0	-
19	1.0	285.0	592.5	167.5	-
20	1.8	212.5	674.2	220.8	10.8

As for the year 2016 Abu Dhabi in ranges between 41.0 & 46.5 Practical Salinity Unit (psu). Regarding dissolved oxygen, most of the readings taken are between 4.3 & 5.1 mg/litre and these are ideal levels for supporting the life of marine living species.

Table 1.5 and 1.7 contains the chemical measurements along with nutrients concentration of the marine waters of Abu Dhabi city

Table 1.6: Marine water quality - 2016

Sample No.	Secchi Depth metre	Acidity pH	Salinity psu	Temreature C°	Dissolved oxygen (DO) mg/l	Biological Oxygen Demand (BOD) mg/l
1	4.3	8.3	45.0	27.3	4.9	2.9
2	5.8	8.3	45.9	27.8	5.0	2.9
3	7.3	8.1	44.5	28.1	4.7	2.8
4	7.3	8.1	44.7	27.9	4.7	2.9
5	7.3	8.1	44.2	28.1	4.7	3.4
6	17.5	8.1	44.8	26.6	5.1	2.8
7	14.5	8.1	44.7	26.8	5.0	2.8
8	7.8	8.1	43.3	28.5	4.9	2.9
9	5.1	8.1	46.3	28.3	4.8	3.5
10	6.2	8.1	43.6	28.3	4.7	3.0
11	4.8	8.0	46.2	27.8	4.3	3.2
12	10.7	8.1	43.6	26.1	5.0	2.8
13	7.1	8.1	46.2	26.6	5.1	2.8
14	7.0	8.1	43.2	28.6	4.7	3.0
15	12.3	8.1	42.4	28.0	4.8	2.7
16	20.1	8.1	41.0	28.4	5.0	3.1
17	17.2	8.2	45.4	26.5	5.0	2.8
18	11.3	8.1	45.6	26.2	5.0	2.8
19	10.1	8.1	44.6	29.8	5.0	2.7
20	8.8	8.1	46.5	29.0	4.7	3.0

Table 1.7: Concentration of Nutriant in Marine water – 2016 (microgram / litre)

Sample No.	Chlorophyll	Phosphate	Silicate	Nitrate	Nitrite
		PO ₄	SiO ₃	NO ₃	NO ₂
1	2.2	282.5	876.7	588.3	2.5
2	3.5	296.7	1,034.2	1,296.7	20.8
3	1.3	130.8	603.3	294.2	2.5
4	0.9	172.5	501.7	615.8	2.5
5	0.9	106.7	397.5	430.8	2.5
6	0.6	71.7	390.0	116.7	-
7	0.5	91.7	310.0	1,238.3	-
8	0.9	81.7	530.0	246.7	-
9	1.7	215.8	815.0	959.2	20.0
10	1.3	174.2	1,573.3	450.8	10.0
11	1.3	127.5	797.5	360.8	5.8
12	0.7	87.1	465.7	424.3	-
13	0.7	65.7	430.0	340.0	-
14	1.1	94.2	778.3	476.7	2.5
15	0.5	92.5	359.2	257.5	2.5
16	0.6	64.5	240.9	312.7	-
17	0.8	86.7	255.0	273.3	-
18	0.8	82.9	370.0	322.9	2.9
19	0.4	106.7	440.0	220.0	-
20	1.0	169.2	548.3	822.5	5.0

Wastewater statsics

Quantity of wastewater

Wastewater treatment aims at reducing the pollution caused by different sources such as industry, and service and domestic activities. Wastewater treatment is one way of utilizing water and diversifying its sources, especially when water resources are scarce. Figure 3 shows the wastewater inflow, treated wastewater and treated wastewater reuse from 2010 till 2016. In 2016 the quantity of wastewater inflow totaled 335.6 MCM, and decrease of 2.5% than 2015 as shown in table 2.1. Tables 2.2 and 2.3 illustrate that 97% of the total quantity of wastewater inflow was treated. Data shows that 51.0% of the treated wastewater was reused to irrigate green areas as shown in Figure 3.

Table 2.1: Quantity of wastewater inflow by region (million cubic meter)

Region	2010	2011	2012	2013	2014	2015	2016
Total	255.5	259.6	275.5	295.0	322.7	344.4	335.6
Abu Dhabi	188.8	185.9	203.7	219.7	237.2	259.4	254.1
Al Ain	57.3	62.8	58.4	60.5	71.2	71.5	67.7
Al Dhafra	9.4	10.9	13.4	14.8	14.3	13.5	13.8

Abu Dhabi Sewerage Services Company (ADSSC)

Table 2.2: Quantity of treated wastewater by region

(million cubic meter)

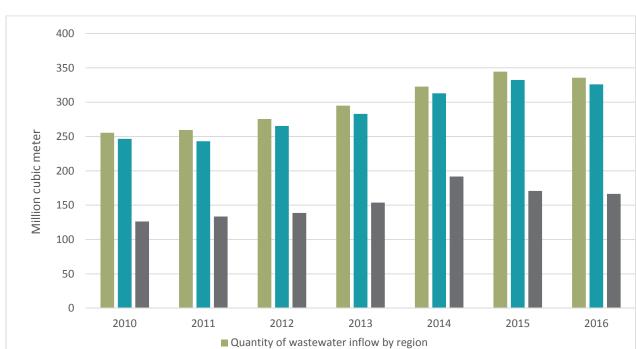
Region	2010	2011	2012	2013	2014	2015	2016
Total	246.6	243.1	265.4	283	312.9	332.3	325.9
Abu Dhabi	183.0	181.0	196.4	209.4	231.3	251.7	247.1
Al Ain	54.8	52.3	55.9	59.1	67.6	67.6	65.3
Al Dhafra	8.8	9.8	13.1	14.5	14.0	13.0	13.5

Abu Dhabi Sewerage Services Company (ADSSC)

Table 2.3 : Quantity of treated wastewater reuse by region (million cubic meter)

Region	2010	2011	2012	2013	2014	2015	2016
Total	126.3	153.8	191.7	170.8	166.5	170.8	166.5
Abu Dhabi	65.5	86.5	115.6	95.7	91.1	73.0	75.4
Al Ain	52.0	58.0	66.0	64.6	63.7	51.5	54.8
Al Dhafra	8.8	9.3	10.1	10.5	11.7	9.0	8.6

Abu Dhabi Sewerage Services Company (ADSSC)

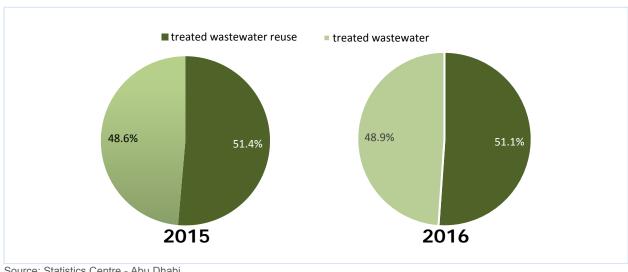


■ Quantity of treated wastewater by region ■ Quantity of treated wastewater reuse by region

Figure 2: Quantity of wastewater

Source: Abu Dhabi Sewerage Services Company

Figure 3: Percentage distribution of re-used and nonreused of the treated wastewater



Source: Statistics Centre - Abu Dhabi

Wastewater treatment plants capacity

The total capacity of wastewater treatment plants amounted to 469.9 MCM in 2016, a Height of 0.9% compared with 2015. The conventional treatment plants accounted for the largest share of wastewater treatment plants at 99%, while non-conventional plants 1% only as shown in tables 2.4 to 2.6.

Table 2.4: Total Wastewater Treatment Plants Capacity by Region

(Million cubic metre)

Region	2011	2012	2013	2014	2015	2016
Total	436.9	405.2	470.5	466.8	470.4	474.7
Abu Dhabi	360.3	328.6	344.4	369.9	369.9	370.6
Al Ain	65.3	65.3	112.7	81.7	81.7	82.4
Al Dhafra	11.3	11.3	13.4	15.2	18.8	21.7

Source: Abu Dhabi Sewerage Services Company

Table 2.5: Total Conventional Wastewater Treatment Plants Capacity by Region

(Million cubic metre)

(/						
Region	2011	2012	2013	2014	2015	2016	
Total	419.9	404.7	469.2	461.6	465.3	469.9	
Abu Dhabi	343.8	328.6	343.8	365.4	365.4	366.4	
Al Ain	64.0	65.0	112.3	81.3	81.3	82.2	
Al Dhafra	11.1	11.1	13.1	14.9	18.6	21.3	

Source: Abu Dhabi Sewerage Services Company

Table 2.6: Total Non-Conventional Wastewater Treatment Plants Capacity by Region

(Million cubic metre)

Region	2011	2012	2013	2014	2015	2016
Total	17.0	0.6	1.3	5.3	5.3	4.8
Abu Dhabi	16.4	0.0	0.6	4.6	4.6	4.2
Al Ain	0.3	0.3	0.4	0.4	0.4	0.2
Al Dhafra	0.3	0.3	0.3	0.3	0.3	0.4

Source: Abu Dhabi Sewerage Services Company

In 2015, the percentage of operated organic load to designed load was 73%, where the hydraulic load of plant operating capicity stood at 344 thousand cubic meters. The percentage of operated hydraulic load to designed load was 39%, where the Organic load stood at 143 thousand kilogram per day, as shown in table 2.7.

Table 2.7: Status of Sewage Treatment Plants by Design and Operating Capacity to Hydraulic and Organic Load – 2015

	Plant Desi	gn Capacity	Plant Oper Capacity	ating	Plant Status		
Region	Hydraulic Load	Organic Load	Hydraulic Load	Organic Load	Operated Organic Load to	Operated Hydraulic Load to	
	(m³)	(Kg BOD / d)	(m³)	(Kg BOD/d)	Designed (%)	Designed (%)	
Total	470.49	366,719	344.40	143,379	73	39	
Abu Dhabi	369.94	259,397	259.38	97,083	70	37	
Al Ain	81.71	91,359	71.53	40,608	88	44	
Al Dhafra	18.84	15,963	13.50	5,687	72	36	

Source: Abu Dhabi Sewerage Services Company

In 2016, the percentage of operated organic load to designed load was 51%, where the hydraulic load of plant operating capicity stood at 335 thousand cubic meters. The percentage of operated hydraulic load to designed load was 71%, where the Organic load stood at 187 thousand kilogram per day, as shown in table 2.8.

Table 2.8: Status of Sewage Treatment Plants by Design and Operating Capacity to Hydraulic and Organic Load – 2016

	Plant Design Capacity		Plant Oper Capacity	ating	Plant Status		
Region	Hydraulic Load	Organic Load	Hydraulic Load	Organic Load	Operated Organic Load to	Operated Hydraulic Load to	
	(m³)	(Kg BOD / d)	(m³)	(Kg BOD/d)	Designed (%)	Designed (%)	
Total	475.03	367,364	335.59	187,793	51	71	
Abu Dhabi	370.95	259,397	254.08	135,431	52	68	
Al Ain	82.39	91,959	67.73	43,685	48	82	
Al Dhafra	21.69	16,008	13.78	8,677	54	64	

Source: Abu Dhabi Sewerage Services Company

Wastwater quality

With the increasing demand on wastewater treatment and reuse in the Emirate of Abu Dhabi, the environmental monitoring level and health standards of wastewater treatment, reuse or disposal also increased. There are several parameters that are examined in the process of wastewater treatment, such as the daily amount of dry sludge, the concentrations of biochemical oxygen demand and suspended solids. Table 2.9 and 10.2 shows that wastewater is basically treated to produce water that conforms to the international standards for irrigation of green spaces or disposal in the sea.

Table 2.9: Mean annual concentration of main pollutants in wastewater before and after treatment mean - 2015

Pollutenat type	Maximum allowed limit of wastewater disposal	Before treatment	After treatment
Biological Oxygen Demand (BOD ₅)	50	193.5	2.9
Chemical oxygen demand (COD)	100	451.6	22.0
Total Dissolved Solids (TDS)	1500	1270.4	1072.1
Total phosphorus (P)	2	4.5	3.1
Total Suspend Solids (TSS)	50	-	-
Ammonia (NH ₃)	2	-	-

Source: Statistics Centre - Abu Dhabi

Table 2.10: Mean annual concentration of main pollutants in wastewater before and after treatment mean - 2016

Pollutenat type	Maximum allowed limit of wastewater disposal	Before treatment	After treatment
Biological Oxygen Demand (BOD ₅)	50	208.2	2.0
Chemical oxygen demand (COD)	100	480.3	18.2
Total Dissolved Solids (TDS)	1500	1078.7	1104.4
Total phosphorus (P)	2	5.1	3.0
Total Suspend Solids (TSS)	50	-	-
Ammonia (NH ₃)	2	-	-

Source: Statistics Centre - Abu Dhabi

The tables below shows the daily average of some pollutants types, where the daily amount of sludge production increased to 113.8 & 114.1 tons per day for 2015 and 2016 respectively where the percentage increased between the two years, approximately 0.27%. In addition, percentage of biochemical oxygen demand (BOD) increaseed between 2015 and 2016 up to 31.9%.

Table 2.11: Average daily amount of dry sludge by region

(Tons/day)

Region	2011	2012	2013	2014	2015	2016
Total	149.63	164.67	119.20	134.37	113.81	114.12
Abu Dhabi	110.05	115.57	92.80	105.45	79.85	80.07
Al Ain	33.56	42.00	21.40	25.02	29.13	29.21
Al Dhafra	6.02	7.10	5.00	3.90	4.82	4.84

Source: Abu Dhabi Sewerage Services Company

Table 2.12: Average daily concentration of BOD by region

(kg/day)

Region	2011	2012	2013	2014	2015	2016
Total	106.0	168.0	128.5	156.3	143.4	190.5
Abu Dhabi	79.0	125.0	99.7	107.3	97.1	142.7
Al Ain	23.0	33.0	17.7	39	40.6	40.3
Al Dhafra	4.0	10.0	11.1	10	5.7	7.5

Source: Abu Dhabi Sewerage Services Company

Table 2.13: Average daily concentration of suspended solids by region

(Tons/day)

Region	2011	2012	2013	2014	2015	2016
Total	103.11	148.40	564.43	-	178.48	196.31
Abu Dhabi	71.828	100.65	234.26	-	128.50	139.71
Al Ain	28.274	38.3	197.45	-	42.26	49.38
Al Dhafra	3.01	9.45	132.72	-	7.72	7.22

Source: Abu Dhabi Sewerage Services Company

Explanatory Notes

Glossary

This report contains certain terms specific to environment and necessary when analyzing the environment statistics of Abu Dhabi Emirate. They include the following terms:

Biochemical oxygen demands (BOD)

Amount of dissolved oxygen required by organisms for the aerobic decomposition of organic matter present in water. This is measured at 20 degrees Celsius for a period of five days. The parameter yields information on the degree of water pollution with organic matter (1).

Biological treatment:

It is a wastewater treatment employing aerobic and anaerobic micro-organisms that results in decanted effluents and separate sludge containing microbial mass together with pollutants. Biological treatment processes are also used in combination or in conjunction with mechanical treatment (1)

Desalinated Water:

Total volume of water obtained from desalination of (i.e., seawater and brackish water ... etc) (1).

Mechanical treatment:

It is the treatment of a physical and mechanical nature that results in decanted effluents and separate sludge. Mechanical processes are also used in combination and/or in conjunction with biological and advanced unit operations. Mechanical treatment includes processes as sedimentation, flotation, etc (1).

Sea water:

Sea water is water from a sea or ocean. On average, sea water in the world's oceans has a salinity of \sim 3.5 per cent. This means that for every 1 litre (1000 ml) of sea water there are 35 grams of salts (mostly, but not entirely, sodium chloride) dissolved in it $^{(3)}$.

Sewage sludge production (dry matter)

The accumulated settled solids, either moist or mixed, with a liquid component as a result of natural or artificial processes, that have been separated from various types of waste water during treatment (3).

Total public water supply:

Water supplied by economic units engaged in collection, purification and distribution of water including desalting of sea water to produce water as the principal product of interest, and excluding system operation for agricultural purposes and treatment of waste water solely in order to prevent pollution.) It corresponds to ISIC division 41. Deliveries of water from one pubic supply undertaking to another are excluded ⁽¹⁾.

Total reuse of freshwater:

Freshwater that has undergone wastewater treatment and is deliverable to a user as reclaimed wastewater. This means the direct supply of treated wastewater to the users. Excluded is wastewater discharged into watercourse and used again downstream ⁽¹⁾.

Total wastewater generated:

Quantity of water in cubic meters, which have no purpose to use , or because of its presence or quantity or quality in the time in which it found

Total wastewater treatment:

Process to render waste water fit to meet applicable environmental standards or other quality norms for recycling or reuse (1).

Treated in other treatment plants:

Treatment of wastewater in any non-public treatment plants, i.e. industrial wastewater plants. Excluded from 'Other wastewater treatment' is treatment in under independent treatment facilities such as septic tanks (1).

Treatment in independent treatment facilities:

Individual private treatment facilities to treat domestic and other wastewater in cases where a public waste water network is not available or not justified either because it would produce no environmental benefits . Examples of such systems are treatment in wastewater tanks ⁽¹⁾.

Wastewater treated in public treatment plants:

All treatment of wastewater in municipal treatment plants by official authorities, or by private companies for local authorities, whose main purpose is wastewater treatment (1).

Water transmission system availability:

Water Transmission System Availability is calculated in percentage in terms of the summation of the availabilities of transmission system components, such as pumps, water transmission lines, storage tanks, and surge vessels.

Data sources

The key sources of data used in the report are the Environment Agency - Abu Dhabi, Abu Dhabi Water and Electricity Company – ADWEC, Abu Dhabi Distribution Company, Al Ain Distribution Company, Abu Dhabi Water & Electricity Authority - ADWEA, Abu Dhabi Sewerage Services Company (ADSSC) and Abu Dhabi Transmission & Despatch Company (TRANSCO).

The data are processed and passed to Statistic Centre – Abu Dhabi for further editing and compilation.

Notes on tables

Unless otherwise indicated, all figures released in this publication pertain to the Emirate of Abu Dhabi. Unless details in tables refer to regions, the figures relate to the total of the Emirate. Wherever "Abu Dhabi" is used in this publication, it refers to Abu Dhabi region and not to the whole Emirate.

Due to rounding, some totals may not equal the sum of components.

More information and next release

For more information about environmental statistics and other official statistics, please visit the statistics link on the SCAD website at http://www.scad.ae

The next release is expected in October 2019 for 2018 data.

References

- "1. United Nations Economic and Social Comission for Western Asia (ESCWA). (2007). Compendium of environment statistics in the ESCWA region. New York"
- 2. United Nation Statistics Division (UNSD). (1997). Glossary of environment statistics (F, No 67). New York
- "3. United Nation Statistics Division (UNSD). (2010). Questionnaire 2010 on environment statistics (section: water). Retrieved from http://unstats.un.org/unsd/environment/questionnaire2010.htm"



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