### KEY FINDINGS OF THE 2016 REPORT OF THE MDG+ INITIATIVE: SANITATION AND WASTEWATER

النتائج الرئيسية لتقرير مبادرة +MDG الثاني (2016): الصرف الصحي والمياه العادمة

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Economic And Social Commission For Western Asia



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# Introduction

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## Introduction











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#### MDG+·Initiative·indictors·calculated·in·No.·of·population

Sanitation Network <sup>#</sup>													
Population¤		2012 Data	*	Ħ	2013 Data¤								
	Urban¤	Rural∙¤	Total¤		Urban¤	Rural⋅¤	Total¤						
Conneted People¤	30665.53¤	9826.697¤	40492.23¤		32462.99¤	10523.30¤	42986.29¤						
α													
Treated Waste Water¤	29008.01¤	8470.878¤	37206.32¤	ä	31069.24¤	8915.352¤	39984.592¤						
Treatment:¤													
Primary ¤	¤6542.327	¤705.048	¤7247.375	ä	¤7431.469	¤946.856	¤8378.325						
Secondary-¤	¤21721.199	¤7711.103	¤29432.3	ü	¤22737.758	¤7895.986	¤30633.74						
Tertiary·¤	¤744.485	¤54.727	¤799.212	ä	¤900.011	¤72.510	¤972.521						
Types of Reuse after Treatment <sup>#</sup>													
Irrigation¤	¤719.6	¤247.563	¤967.16	α	¤673.53	¤260.255	¤933.78						
Groundwater·recharge¤	¤0	¤0	α0	¤	α0	¤0	¤0						
Domestic·uses¤	¤0	¤0	α0	ä	¤0	¤0	¤0						
Direct discharge to watercource or to the sea¤	¤28293.495	¤8222.421	¤36515.92	α	¤30395.705	¤8652.930	¤39048.64						
Otheruses¤	¤0	¤0	¤0	ä	¤0	¤0	¤0						
<b>¤</b>	¤	a	¤	¤	a	ä	¤						
Untreated wastewater #	1652.516¤	1628.39 <b>¤</b>	3280.906¤	ä	1393.754 <b>¤</b>	1607.953 <b>¤</b>	3001.7 <b>¤</b>						
Untreated wastewater reuses	¤	a	Ħ	¤	¤	Ħ	Ħ						
Irrigation¤	¤0	¤0	α0	α	¤0	¤0	¤0						
Injection for groundwater recharge <sup>x</sup>	¤0	¤0	α0	α	¤0	¤0	2Ω						
Domestic-uses¤	¤0	¤0	¤0	α	¤0	¤0	¤0						
Direct discharge to watercource or to the sea¤	¤1652.516	¤1628.39	¤3280.906	α	¤1393.754	¤1607.953	¤3001.707						
Other uses a	¤0	¤0	¤0	α	¤0	¤0	¤0						
Tariff¤	a	a	¤	ä	Ħ	Ħ	¤						
Monthly Flat¤	Ω_	α-	Ω_	Ħ	α_	α_	-10						
Volumetric¤	¤27799.78	¤6545.57	¤34345.35	Ħ	¤28018.15	¤6545.57	34563.72¤						
Average tariff for one cubic meter:#													
US·\$ <b>¤</b>	0.04¤	0.03¤	-101	α	0.04¤	0.03¤	-101						

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#### MDG+·Initiative·indicators·calculated·ir·Million·Cubic·Meter·)er·Year¶

	1												
<sup>#</sup> Sanitation·Network <sup>#</sup>													
¤	MCM·per·year¤		2012·Data	¤	₫	2013 Data¤							
¤		Urban¤	Rural∙¤	Total¤		Urban¤	Rural∙¤	Total¤					
¤	Wastewater·collected·by·sewer·networks¤	2547.93¤	428.82¤	2976.75¤		2590.03¤	440.35¤	3030.38¤					
¤		α											
¤	Treated·Waste·Water¤	2430.62¤	352.31¤	2782.94¤	α	2472.71¤	363.51¤	2836.23¤					
¤	Treatment:¤												
¤	Primary⋅¤	¤665.41	¤31.04	¤696.45	₫	¤682.41	¤41.94	¤724.35					
¤	Secondary-¤	¤1712.347	¤319.382	¤2031.729	₫	¤1735.438	¤319.383	¤2054.820					
¤	Tertiary-¤	¤52.868	¤1.894	¤54.762	₫	¤54.868	¤2.194	¤57.062					
¤	Types⋅of⋅Reuse⋅after⋅Treatment¤												
¤	Irrigation¤	24.5¤	9.75¤	34.24¤	Ħ	40.4¤	9.75¤	50.2¤					
¤	Groundwater recharge¤	¤0.000	¤0.000	¤0.000	Ħ	¤0.000	¤0.000	¤0.000					
¤	Domestic ·uses¤	¤0.000	¤0.000	¤0.000	Ħ	¤0.000	¤0.000	¤0.000					
¤	Direct·discharge·to·watercource·or·to·the·sea <sup>a</sup>	¤2388.043	¤352.314	¤2740.357	₫	¤2432.247	¤353.755	¤2786.002					
¤	Other • uses ¤	¤0	¤0	¤0	Ħ	¤0	¤00	¤0					
¤	¤	Ħ	Ħ	Ħ	Ħ	¤	Ħ	Ħ					
¤	Untreated-wastewater¤	138.08¤	77.84¤	215.92¤	Ħ	101.74 <b>¤</b>	76.84 <b>¤</b>	178.58 <b>¤</b>					
¤	Untreated·wastewater·reuses¤	α	α	α	¤	¤	Ħ	Ħ					
¤	Irrigation¤	¤0	¤0	¤0	Ħ	¤0	¤0	¤0					
¤	Injection for groundwater recharge¤	¤0	¤0	¤0	₫	¤0	¤0	¤0					
¤	Domestic ·uses¤	¤0	¤0	¤0	Ħ	¤0	¤0	¤0					
¤	Direct·discharge·to·watercource·or·to·the·sea¤	¤138.08	¤77.84	¤215.92	α	¤101.74	¤76.84	¤178.58					
¤	Other · uses ¤	¤0	¤0	¤0	₫	¤0	¤0	¤0					
¤	Tariff¤	Ħ	Ħ	Ħ	₫	¤	Ħ	Ħ					
¤	Monthly Flat∞	_α	_α	_α	Ħ	-12	-02	-102					
¤	Volumetric¤	_α	_α	_α	₫	-12	-02	-12					
¤	Average tariff for one cubic meter:¤												
¤	US·\$¤	0.04¤	0.03¤	0.04¤	8	0.04¤	0.03¤	-12					
-													

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MDG+ Initiative indicators – Sanitation (calculated in No. of population) -2013																						
				Рор	ulat	ion o	conne	cted	to pi	ped s	sewe	r net	work	- Ur	ban							
		Urba	Populat piped	Treate	Tre	atmen (x10 <sup>6</sup>	t type	Reuse type (x10 <sup>6</sup> )					U waste		Reus	e type	Ta struc (x1	riff cture 10 <sup>6</sup> )	Tari			
Country		n population (x10°)	on connected to sewer network (x10 <sup>6</sup> )	(x10°) ion connected to sewer network (x10 <sup>6</sup> )	d wastewater (x10⁵)	Primary treatment	Secondary treatment	Tertiary treatment	Irrigation	Groundwater recharge	Domestic use	Discharge to watercourse or to the sea	Other uses	ntreated water (x10 <sup>6</sup> )	Irrigation	Groundwater recharge	Domestic use	Discharge to watercourse or to the sea	Other uses	Flat tariff	Volumetric tariff	ff (US \$/m³)
Algeria	No.	38.70	32.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-	0.02	
Bahrain	No.	1.25	1.09	1.09	0.00	0.00	1.09	0.34	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Egypt	No.	37.37	32.46	31.07	7.43	22.74	0.90	0.67	0.00	0.00	30.40	0.00	1.39	0.00	0.00	0.00	1.39	0.00	0.00	2.80	0.18	
Iraq	No.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Jordan	No.	6.53	3.85	3.85	0.00	3.85	0.00	3.23	0.00	0.00	0.60	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.85	0.02	
Kuwait	No.	-	3.88	-	0.00	-	-	3.84	0.00	0.00	0.00	0.00	-	-	-	-	-	-	0.00	3.84	0.70	
Lebanon	No.	4.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Libya	No.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mauritania	No.	1.71	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	
Morocco	No.	19.51	17.20	16.11	8.78	4.22	3.11	0.06	-	0.00	14.52	0.85	-	-	-	-	-	-	-	-	0.26	
Oman	No.	3.87	0.77	0.77	0.00	0.00	0.77	0.48	0.09	0.00	0.18	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.64	
Palestine	No.	3.68	0.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	
Qatar	No.	2.00	-	-	0.00	-	-	-	-	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Saudi Arabia	No.	30.14	16.20	16.20	0.00	7.14	9.06	2.59	0.00	0.00	13.28	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sudan	No.	-	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	-	
Tunisia	No.	7.29	6.47	5.76	0.00	5.55	0.21	0.48	0.43	0.00	4.25	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47	0.30	
UAE	No.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Yemen	No.	7.08	2.59	2.55	0.40	1.30	0.86	1.32	0.00	0.00	1.21	0.00	-	-	-	-	-	-	0.00	-	-	

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	MDG+ Initiative indicators – Sanitation (calculated in MCM/year) 2013																			
Piped sewer network Urban																				
	Waste by se (	Treato (M	Trea (M	atment ty [CM/year	pe ·)	R	euse typ	oe (MC	M/year)		Untrea (N	H	Reuse ty	pe (MC	CM/year)	)	Tariff structure (MCM/year)		Tari	
Country		vater collected wer networks MCM/yr)	d wastewater CM/year)	Primary treatment	Secondary treatment	Tertiary treatment	Irrigation	Groundwater recharge	Domestic use	Discharge to watercourse or to the sea	Other uses	ted wastewater ICM/year)	Irrigation	Groundwater recharge	Domestic use	Discharge to watercourse or to the sea	Other uses	Flat tariff	Volumetric tariff	ff (US \$/m³)
Algeria	Volume	1570.36	275.24	0.00	275.24	0.00	19.32	0.00	0.00	255.92	0.00	1295.12	0.00	0.00	0.00	1295.12	0.00	0.00	1570.36	0.02
Bahrain	Volume	122.80	122.80	0.00	0.00	122.80	38.07	0.00	0.00	84.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Egypt	Volume	2590.03	2472.71	682.41	1735.44	54.87	40.40	0.00	0.00	2432.25	0.00	101.74	0.00	0.00	0.00	101.74	0.00	-	-	0.18
Iraq	Volume	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Jordan	Volume	116.92	116.92	0.00	116.92	0.00	100.92	0.00	0.00	15.67	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.92	0.02
Kuwait	Volume	-	308.28	0.00	57.97	250.31	308.28	0.00	0.00	0.00	0.00	-	-	-	-	-	-	0.00	-	0.70
Lebanon	Volume	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Libya	Volume	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mauritania	Volume	0.65	0.65	0.00	0.65	0.00	0.06	0.00	0.00	0.52	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.05
Morocco	Volume	143.57	44.36	38.18	0.14	6.04	-	-	-	-	-	99.22	-	-	-	-	-	0.00	143.57	0.26
Oman	Volume	26.20	26.20	0.00	0.00	26.20	18.50	1.50	0.00	5.80	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.20	0.64
Palestine	Volume	29.96	20.65	20.65	0.00	0.00	0.10	8.78	0.00	11.77	0.00	9.31	0.00	0.00	0.00	9.31	0.00	4.45	25.51	0.27
Qatar	Volume	176.83	158.79	0.00	0.00	158.79	55.58	0.00	0.00	35.27	60.34	18.04	0.00	0.00	0.00	18.04	0.00	0.00	0.00	0.00
Saudi Arabia	Volume	1317.17	1317.17	0.00	580.22	736.95	210.75	0.00	0.00	1080.08	26.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sudan	Volume	18.04	18.04	18.04	0.00	0.00	0.00	0.00	0.00	18.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.04	0.00	-
Tunisia	Volume	235.00	228.65	0.00	222.03	6.62	24.00	1.11	0.00	168.65	34.89	0.00	0.00	0.00	0.00	6.35	0.00	0.00	235.00	0.30
UAE	Volume	605.60	605.60	0.27	11.70	593.60	284.43	0.00	0.00	280.24	35.33	-	0.00	0.00	0.00	0.00	0.00	-	-	-
Yemen	Volume	65.75	65.75	4.95	38.78	22.02	35.96	0.00	0.00	29.57	-	-	-	-	-	-	-	0.00	-	-



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# **Key Findings**

% of Population connected to piped water



## % Population connected to piped water network

**National level** 



## **Treated Wastewater and Treatment Type**

%



## **Treated Wastewater and Treatment Type**



3

The collected wastewater volume by piped sewer networks (million cubic meter/year)



Proportion of the annual collected wastewater volume by piped sewer networks
receiving treatment prior to discharge (%)



## **Treated Wastewater and Treatment Type**

3

Proportion of the annually collected wastewater volume by piped sewer networks that are receiving primary, secondary and tertiary treatment (%)



## **Reuse of treated wastewater**





## **Reuse of treated wastewater**



Proportion of the annually treated wastewater volume that is being reused (%)



3

Proportion of the annually treated wastewater volume that is being used in irrigation (%)





## **THANK YOU**

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