World Water Day 2017
Wastewater: An Arab Regional Perspective

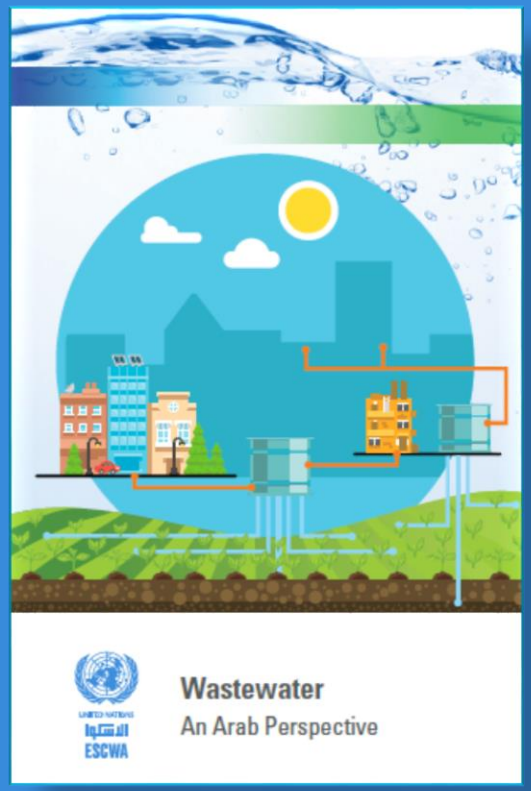
Amman, 22 March 2017

Economic and Social Commission for Western Asia

UNITED NATIONS

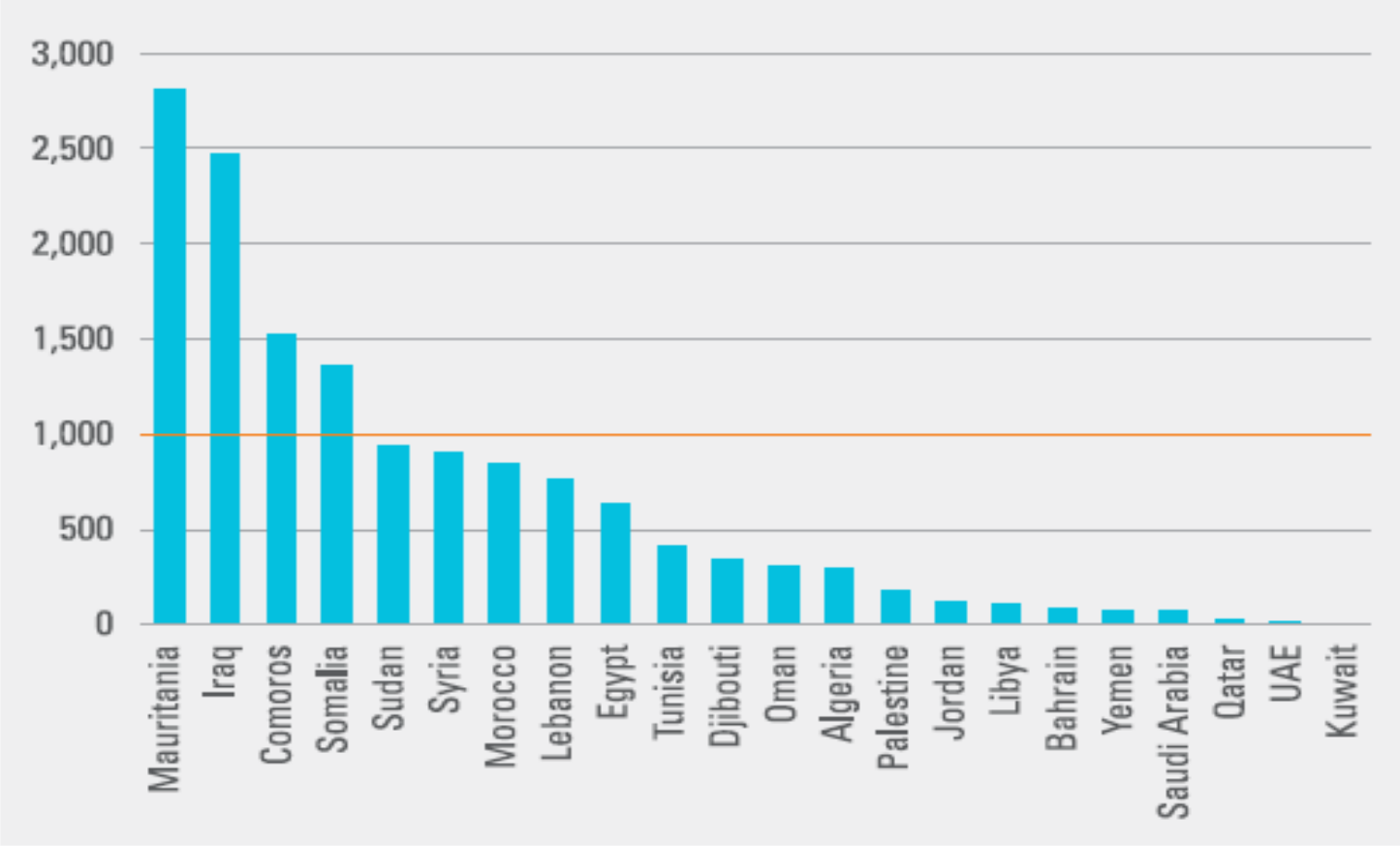
الاسكوا

ESCWA



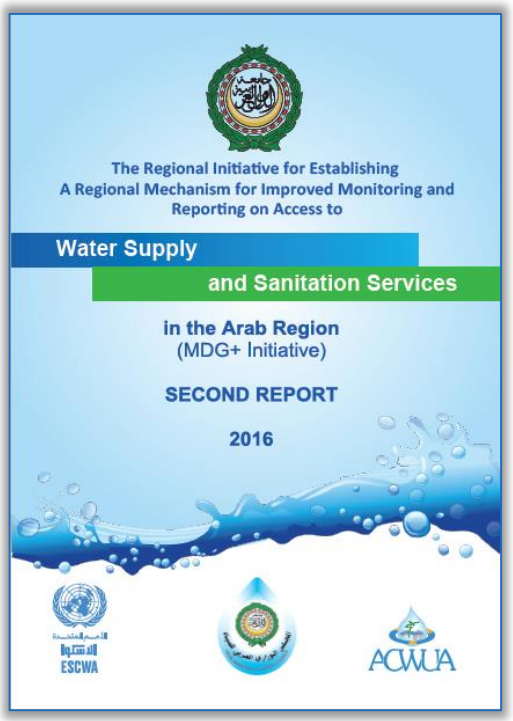
Water Scarcity:
A driver for safely treated wastewater use

Total renewable water resources (m3/capita/year)



Source: FAO, 2016, Aquastat data for 2014.

Arab Indicators on
Water Supply, Sanitation and Wastewater



MDG+ water supply Indicators

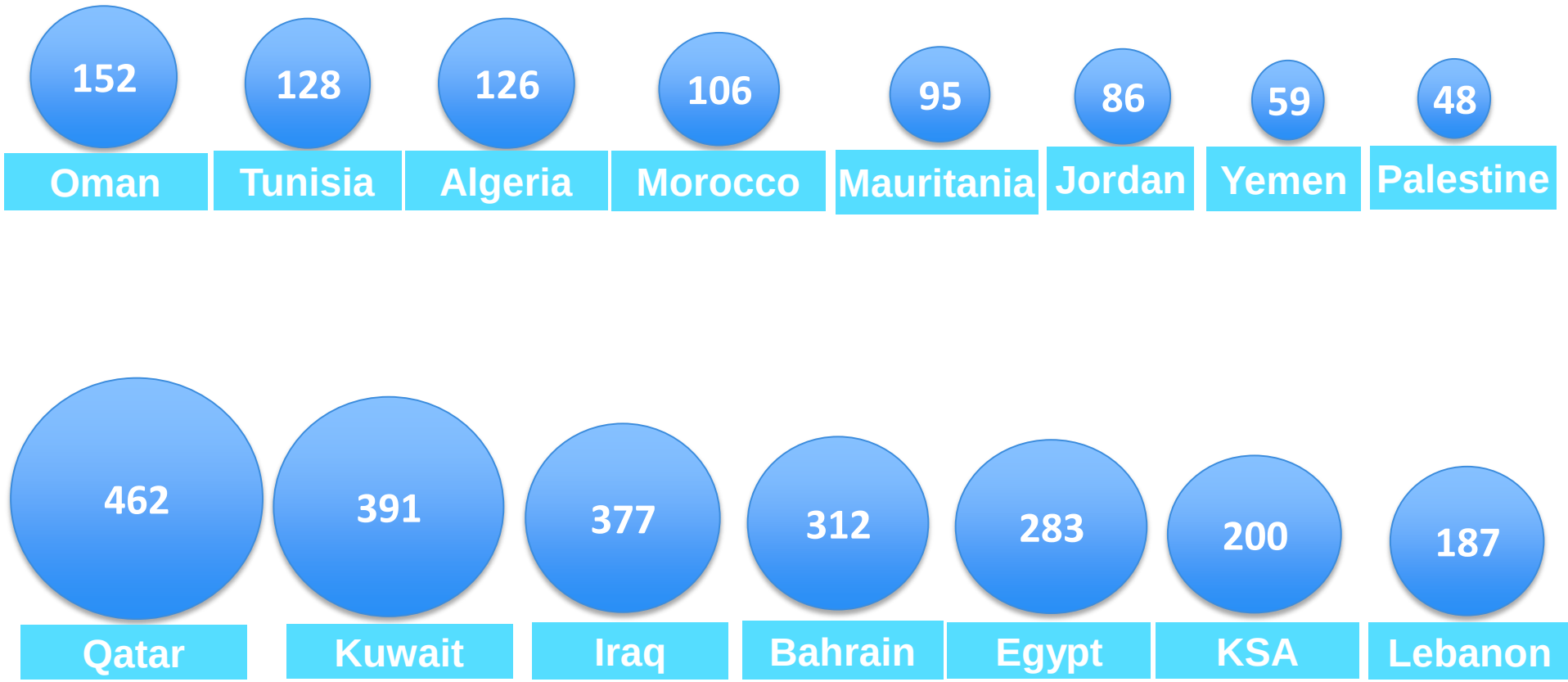
- Water Consumption
- Continuity of Supply
- Water Quality
- Distance to Source
- Tariff Structure
- Cost Affordability

MDG+ sanitation indicators

- Treated Water Quantity
- Treatment Type
- Reuse
- Use after Treatment
- Tariff Structure
- Cost Affordabilty

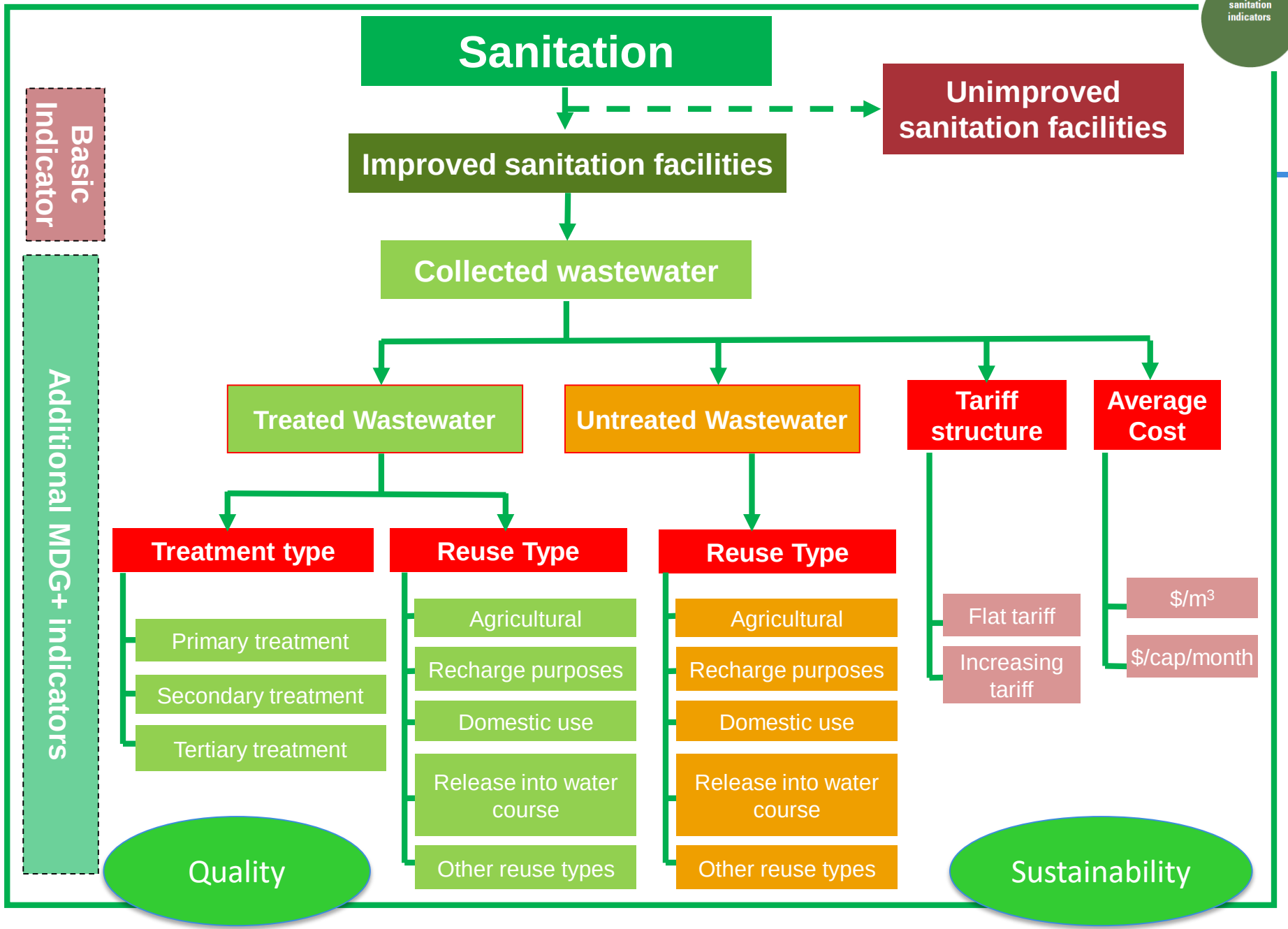
Water Consumption

Average water consumption for urban population connected to piped network (l/cap/day) - 2013



Source: LAS, ESCWA, ACWUA, *2016 Report of the MDG+ Initiative*, 2016.

MDG+ Indicators: Sanitation & Wastewater



Volume of wastewater collected and treated by level of treatment (MCM/year), 2013

Arab State	Volume of collected wastewater	Primary treatment	Secondary treatment	Tertiary treatment
GCC				
Bahrain	122.8	0	0	122.8
Kuwait	NA	NA	58.0	250.3
Oman	26.2	0	0	26.2
Qatar	176.8	0	0	158.7
Saudi Arabia	1,317.2	0	580.2	736.9
UAE	615.7	0.3	11.7	593.6
Mashreq				
Egypt	3,030.4	724.3	2,054.8	57.1
Iraq	620.4	0	415.7	0
Jordan	130.8	0	130.8	0
Palestine	30.8	20.7	0.45	0
Maghreb				
Algeria	1,570.4	0	275.2	0
Libya*	291.1	0	45.8	0
Morocco	144.2	38.2	0.1	6.1
Tunisia	235	0	222	6.6
LDCs				
Mauritania	0.65	0	0.65	0
Sudan	18	18	0	0
Yemen	159.4	58.13	42.24	22.02
TOTAL	8,489.9	858.6	3,837.6	1,980.3

Source: LAS/UNESCWA/ACWUA, 2016. *MDG+ Initiative Report 2016.*
Notes: *Data for Libya are for the year 2012. NA: Not available.

Of Total Volume Collected:
23% tertiary; 45% secondary; 10% primary

GCC

99% of collected wastewater is safely treated

Mashreq

70% of collected wastewater is safely treated

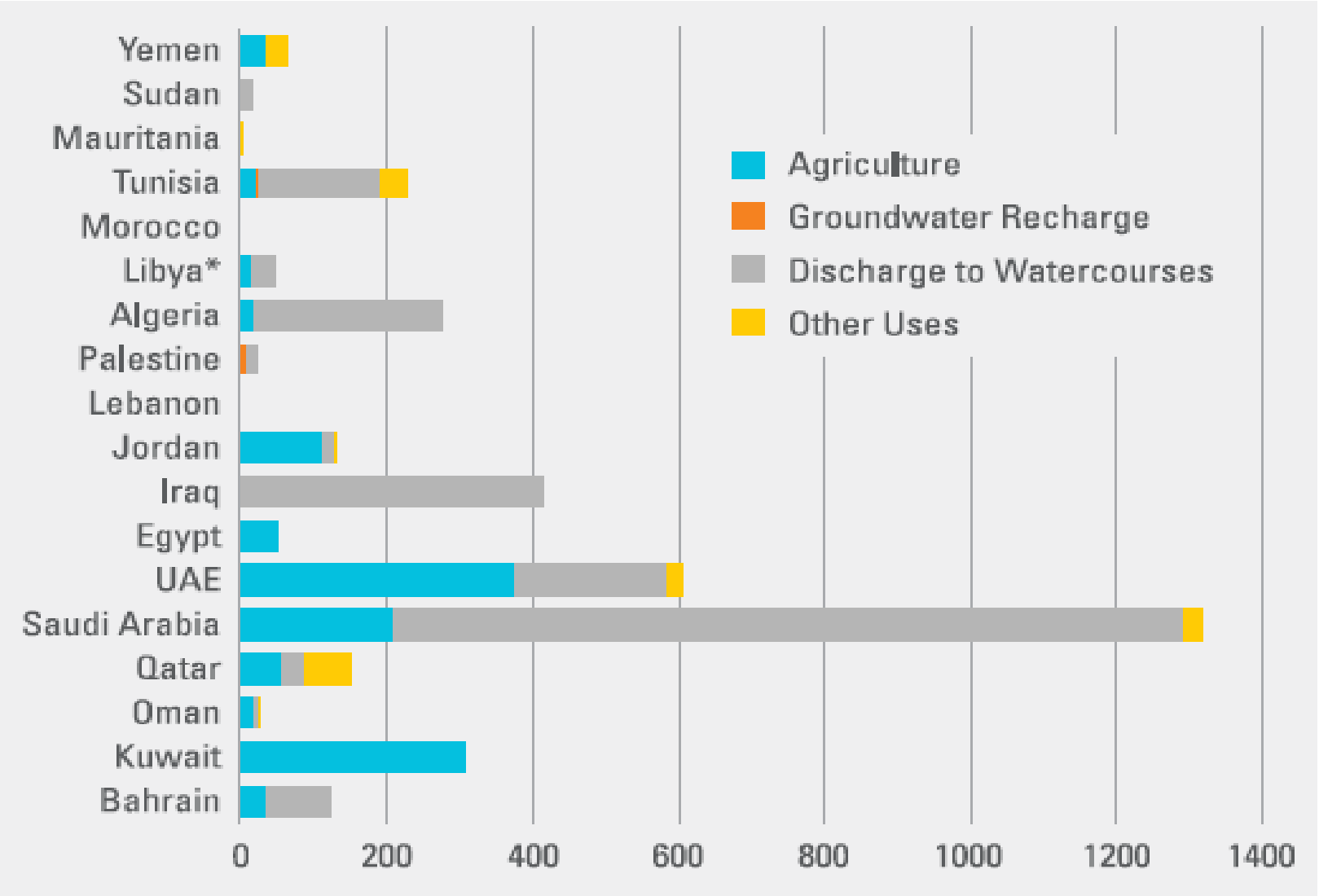
Maghreb

25% of collected wastewater is safely treated

LDCs

36% of collected wastewater is safely treated (but collection low)

Use of safely treated wastewater by type (MCM/year)



Source: FAO, 2016, Aquastat data for 2014.

Source: LAS/UNESCWA/ACWUA (League of Arab State/United Nations Economic and Social Commission of Western Asia/Arab Countries Water Utilities Association). 2016. MDG+ Initiative Report 2016. Amman.

Challenges

- **Insufficient Investment in face of changing regional context**
  - ❖ Lebanon: National Strategy for the Wastewater Sector (2012)
- **Cost recovery and policy coherence**
  - Cost recovery difficult for treated wastewater use when freshwater is under priced
- **Limited institutional capacity and coordination constraints**
  - Overlapping institutional mandates
- **Policy frameworks remain under development**
  - Water safety regulation and enforcement
  - Food safety regulation and enforcement
- **Serving displaced populations**
  - Jordan, Lebanon, Iraq, Syria, Somalia, Libya
- **Managing wastewater & storm water from floods**
- **Industrial effluents**
  - Petrochemical, textiles/tanneries, metals

Responses

✓ Institutional and policy frameworks

- Arab Strategy for Water Security in the Arab Region to Meet the Challenges and Future Needs for Sustainable Development 2010-2030 & MDG+ Initiative

❖ Water reuse in Tunisia

✓ Investment planning and balancing budgets

❖ Jordan Response Plan for the Syrian Crisis

✓ Engaging the private sector

❖ Sulaibiya Wastewater Treatment Plant (PPP and BOT) - Kuwait

❖ New Cairo Wastewater Treatment Plant (2012) -funded by consortium of 4 Egyptian banks

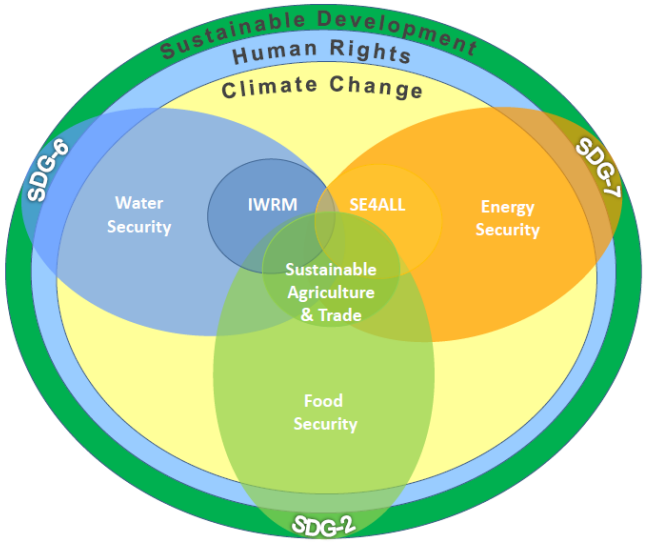
Photo Credit: ACWUA, 2016

✓ Improving connectivity to wastewater networks for reuse

❖ Muscat Wastewater Master Plan, initiated in 2013; plans to connect 80% of residents to sewage network; currently many linked to network via trucks.

Responses *(continued)*

- ✓ **Decentralized wastewater management approaches**
  - ❖ Sustain WaterMED as piloted decentralized approaches in Egypt, Jordan, Morocco
- ✓ **Produced water use by the oil industry**
  - ❖ Oman with Sultan Qabos University
- ✓ **Ecosystem Management**
  - ❖ Lebanon: Litany River Authority
  - ❖ KSA: Constructed wetlands



ESCWA Water Development Report 6 (2015)

- ✓ **Wastewater treatment from a Nexus perspective**
  - ❖ As-Samra Wastewater Treatment Plant (Jordan): 80% energy self-sufficiency; new plant planned in Aqaba at 100% energy self-sufficiency rate.
  - ❖ Egypt & Oman have projects as well, that are also linked to fertilizer production


SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

Thank you!

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