



# **Department of Economic and Social Affairs (DESA) and Economic and Social Commission for Western Asia (ESCWA)**

**Joint Presentation to the  
Capacity Development Workshop  
in Advancing Water and  
Sustainable Development**

**New York, 24-25 Feb 2015**

**Session 3: Regional Contexts**  
**Water and Sustainable Development**  
**Challenges and Opportunities in ESCAWA**  
**region**

**Joint ESCWA-DESA presentation (Carol Chouchani  
Cherfane-ESCWA and Sami Areikat – DSD)**

# **Presentation Outline**

**1. Water Scarcity and Drought Management in West Asia and North Africa**

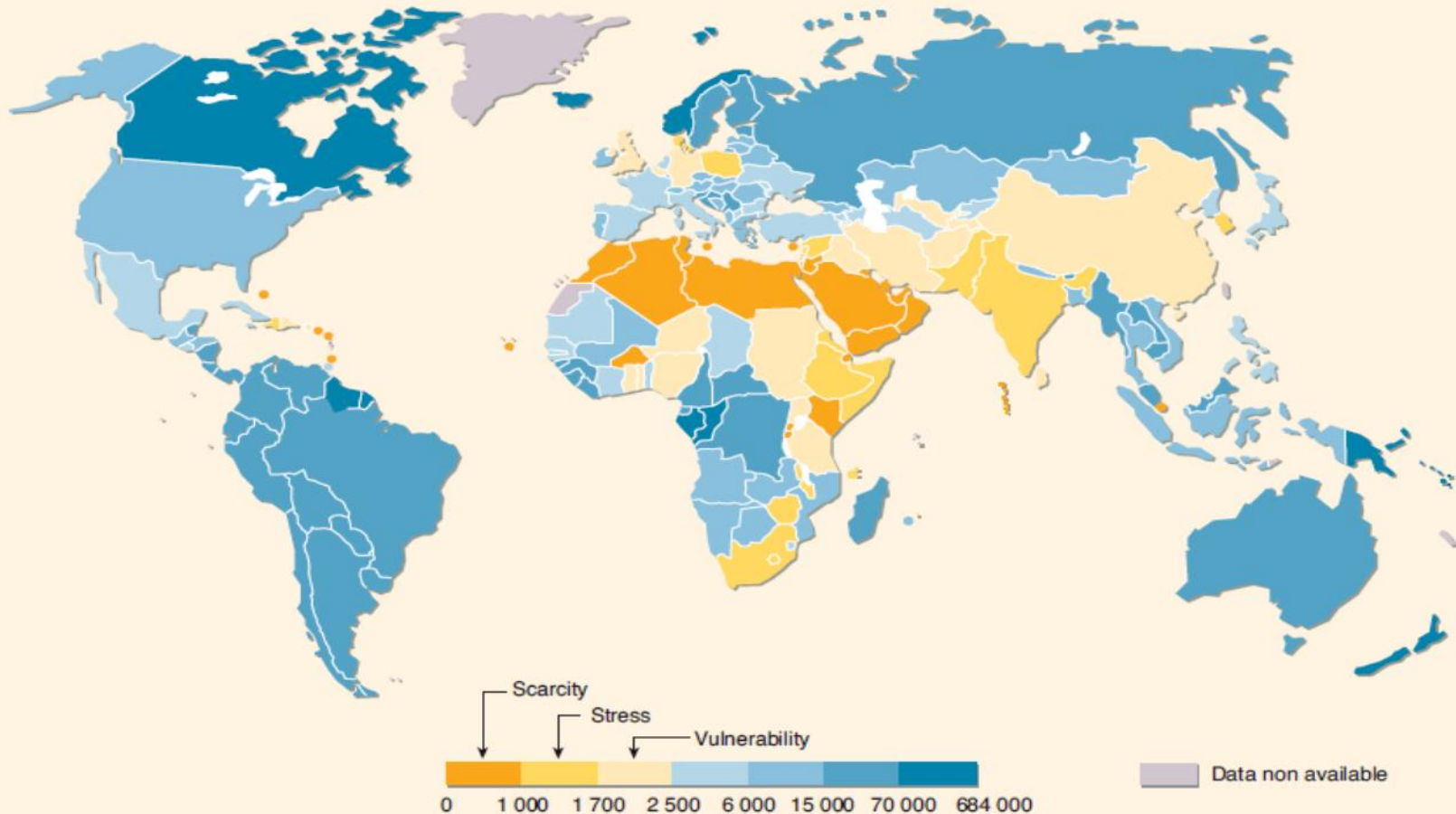
**2. Water and Sustainable Development in the ESCWA Region: Moving from the MDGs to the SDGs**

**3. Case Study: UN-DESA Capacity Building project on Water Scarcity and Drought Management in West Asia/North Africa**

# **1. Water Scarcity and Drought Management in West Asia and North Africa**

# Global Freshwater Availability, 2007

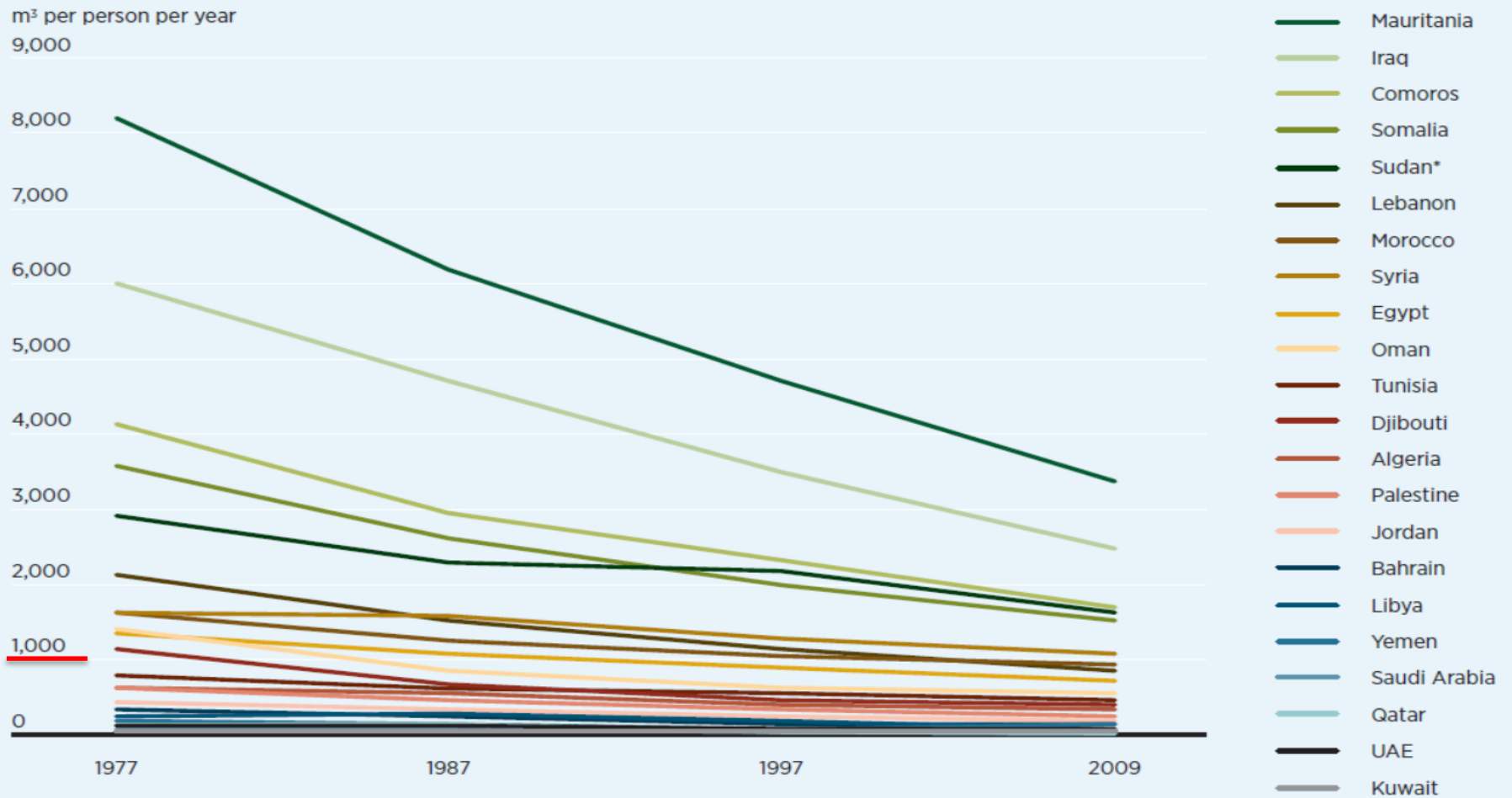
Freshwater availability (m<sup>3</sup> per person per year, 2007)



Source: UNEP/GRID-Arendal (2008) (<http://maps.grida.no/go/graphic/global-waterstress-and-scarcity>), P. Rekacewicz [cartographer] (*Le Monde diplomatique*), with sources FAO and WRI).

# Per Capita Renewable Water Resources in the Arab Region

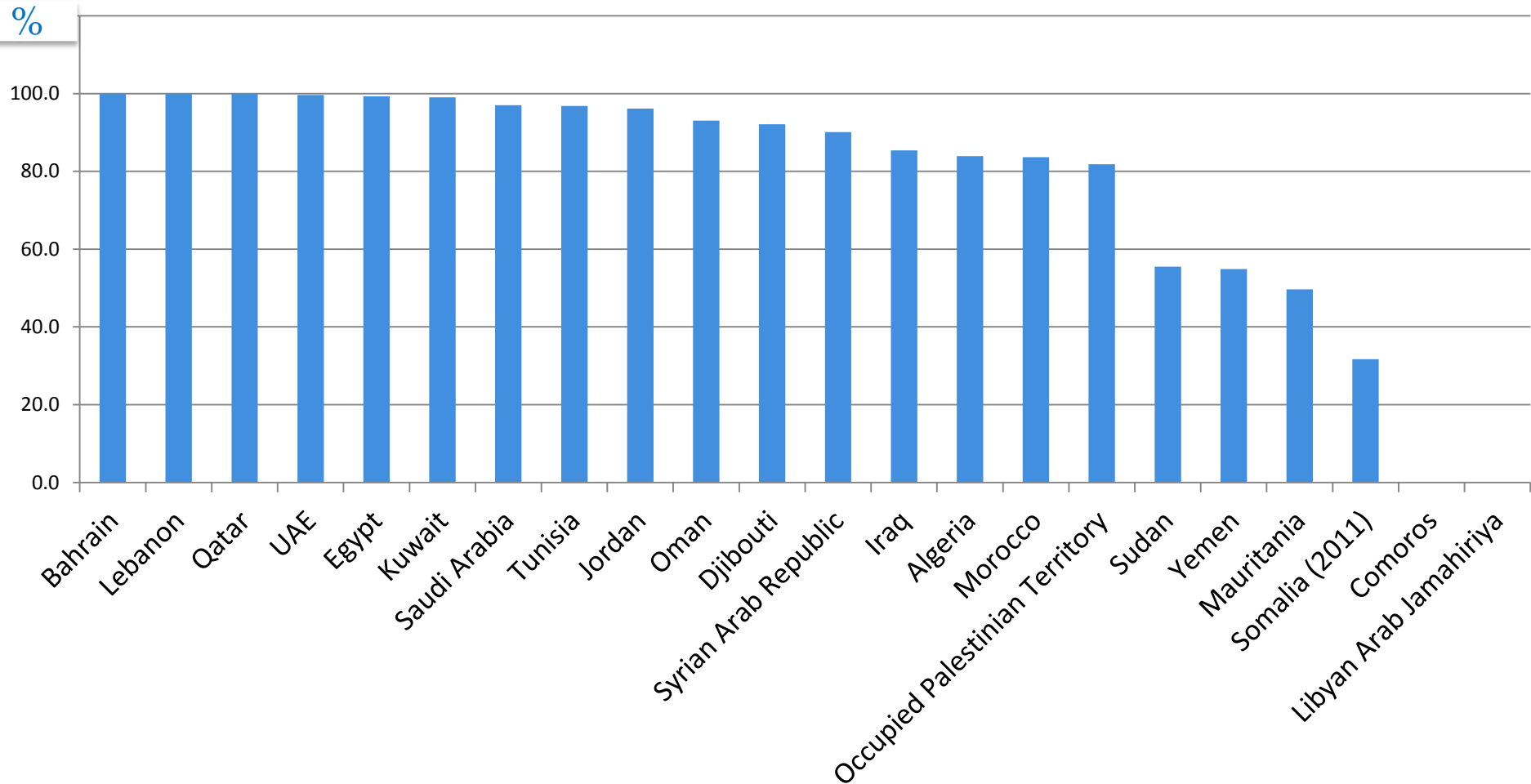
Renewable water resources in the Arab region per capita



Note: \*Area covering South Sudan and Sudan.  
 Source: Based on FAO AQUASTAT data (2011).

## **2. Water and Sustainable Development in the ESCWA Region: Moving from the MDGs to the SDGs**

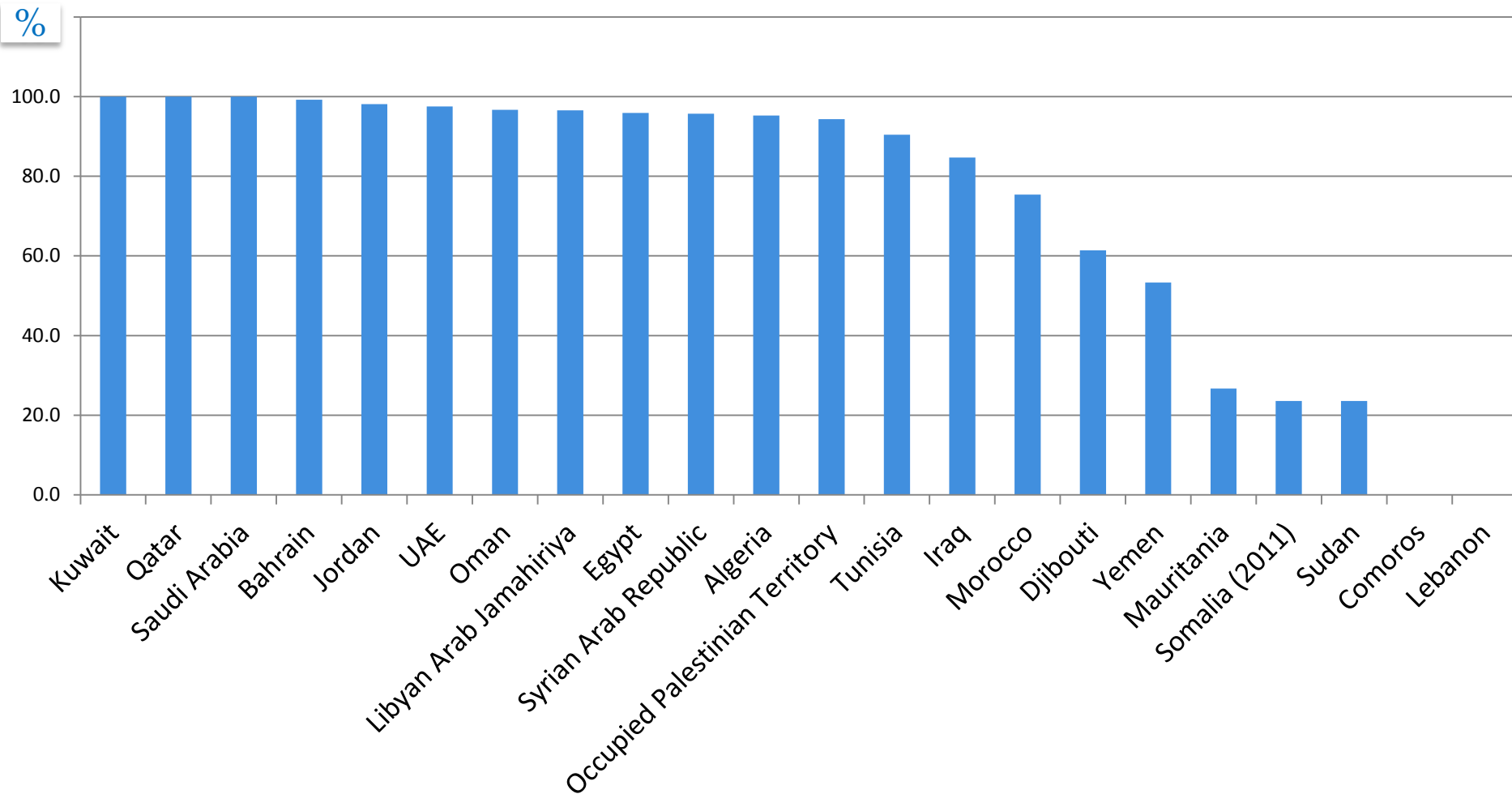
# Access to Improved Water Supply (2012) Arab Region



Source: Calculations by ESCWA, based on WHO/UNICEF Joint Monitoring Programme (JMP) on-line database, updated data for 2012 ; accessed 10 November 2014



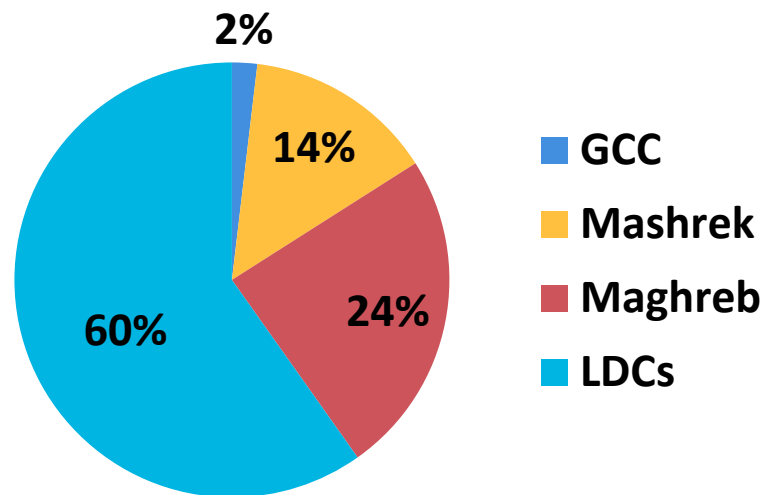
# Access to Improved Sanitation (2012) Arab Region



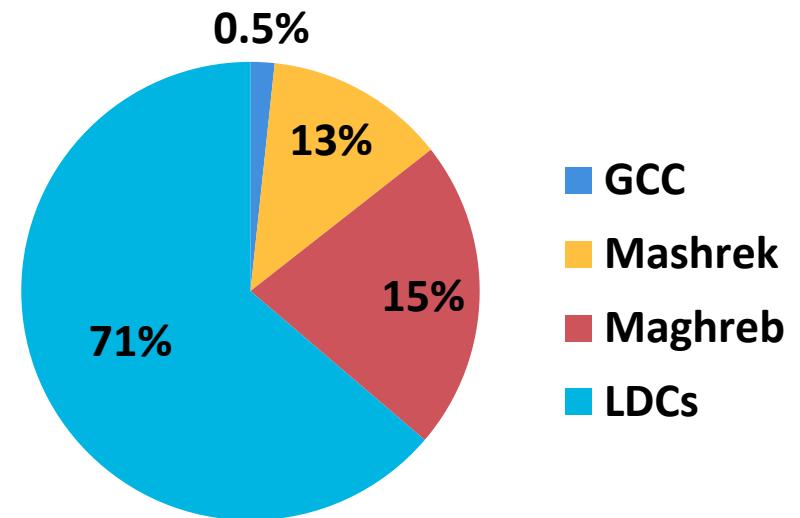
Source: Calculations by ESCWA, based on WHO/UNICEF Joint Monitoring Programme (JMP) on-line database, updated data for 2012 ; accessed 10 November 2014

# Sub-regional distribution of Arab people without access to improved water and sanitation at the national level (2012)

## Lack of Access to Improved Water



## Lack of Access to Improved Sanitation



**Out of a total Arab population estimated at 363 million people (2012):**

- 17% (60.5 million people) do not have access to improved drinking water sources
- 20% (72.6 million people) do not have access to improved sanitation facilities

*Source: Calculations by ESCWA, based on WHO/UNICEF Joint Monitoring Programme (JMP) on-line database, updated data for 2012 ; accessed 10 November 2014*

*Based on ESCWA, Water Issues Brief for the "Arab Sustainable Development Report" (forthcoming 2015)*



### **3. Overview of Capacity Building Project on Water Scarcity and Drought Management in West Africa (Equipping regional countries to achieve the SDG on Water)**



**RIO+20**

United Nations Conference  
on Sustainable Development

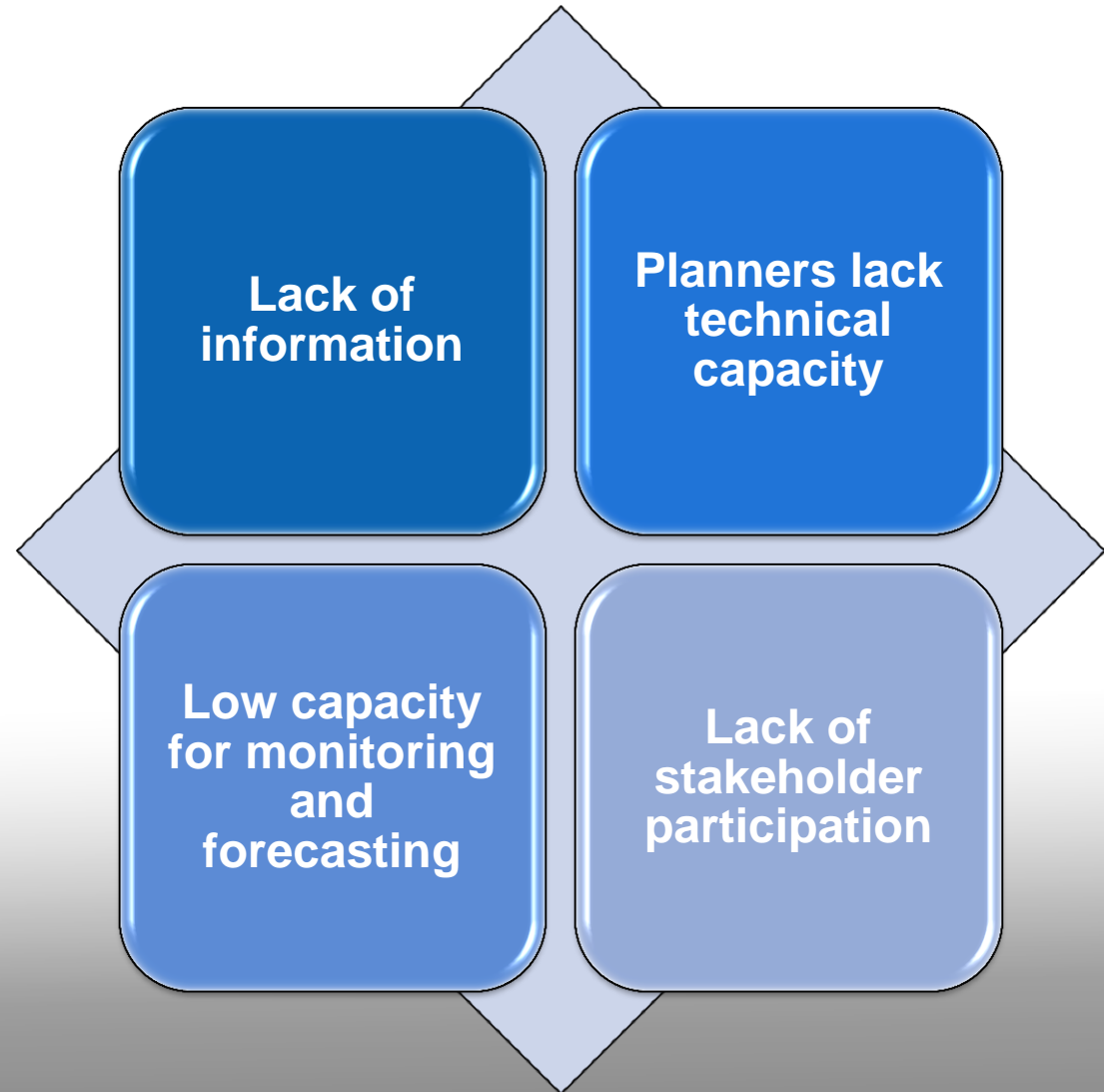
**This project is a response to Rio + 20' s:**

- Call for urgent action to address water scarcity, desertification, land degradation, drought
- Call for disaster risk reduction and the building of community resilience to disasters



# Gaps in Current national drought management Plans in West Asia/North Africa

- Ex-post (reactive)
- Emergency relief that take effect after or during a drought event.

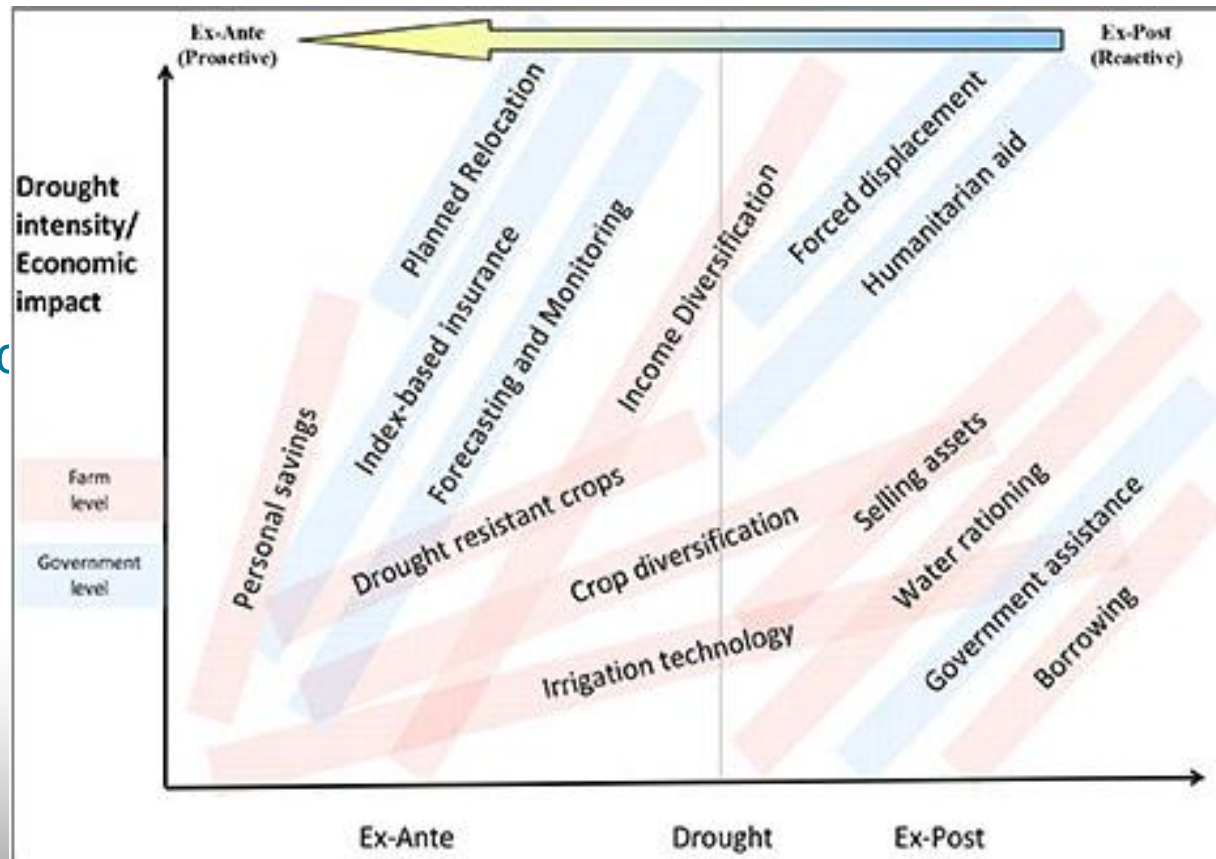




# Strengthening National Capacities to Manage Water Scarcity and Drought in West Asia and North Africa

## Main objective:

Capacity building in the formulation, implementation and monitoring of proactive and preparedness drought management strategies.





# Pilot Countries

## Current Pilot Countries:

### West Asia

- Yemen
- Jordan
- State of Palestine

### North Africa

- Tunisia
- Morocco



# Pilot Countries

## Countries with Interest in Water Scarcity and Drought management:

- Egypt
- Sudan
- Mauritania





# Fundamental Steps in developing and implementing National Water Scarcity and Drought Plan:

Creating Political Momentum and Authority

Strategic Planning and Coordination

Fostering Involvement and Developing Common Understandings

Investigating Drought Monitoring, Risk, and Management Options

Writing a Drought Plan

Implementing a Drought Plan



# Best Practices/Essential Elements for National Drought Management Policy

a

**Standard approaches to vulnerability and impact assessment**

b

**Effective drought monitoring and early warning systems**

c

**Enhancing preparedness and mitigation actions**

d

**Including water scarcity and drought conflict prevention measures**



Enhancing preparedness and mitigation actions

# Supply Side Measures

- **Increase Storage Capacities**
- **Use of marginal resources (groundwater)**
- **Aquifer Artificial recharge**
- **Improved efficiency of water distribution networks**
- **Rainwater Harvesting**
- **Brackish and Sea Water Desalination**
- **Reuse of treated wastewater**
- **Import of water**
- **Other measures**



Enhancing preparedness and mitigation actions

# Demand Side Measures

- **Adoption of techniques oriented to water saving**
- **Enhance economic incentives for water savings**
- **Improving distribution system**
- **Using techniques to control point-source and non-point source pollution**
- **Adoption of resilient agricultural practice/ Drought-resistant crops**
- **Adoption of water recycling in industries**
- **Promoting of renewable energy projects**



Enhancing preparedness and mitigation actions:

# Impact Minimization

- **Development of early warning systems**
- **Stakeholders participation in the implementation of drought management plan**
- **Education and training activities for reducing negative impacts of draught**
- **Reallocation of water resources based on water quality requirements**
- **Adoption of insurance programmes**



# Regional/National Stakeholders, Counterparts and Institutions

Government  
Ministries

National and local  
water authorities &  
water suppliers

Farmer  
communities

Water consumers  
and users

Meteorological  
Departments and  
Research  
Institutions

National and  
International NGOs

Development  
Agencies and  
International  
Organizations

# Establishing a Regional Mechanism for Improved Monitoring and Reporting on Access to Water Supply and Sanitation Services in the Arab Region (MDG+ Initiative)

*Implemented under the auspices of the Arab Ministerial Water Council since 2009 by ESCWA and ACWUA with funding provided by Sida*

MDG+ Indicators	
Water Supply	Sanitation
<ul style="list-style-type: none"><li>• Water consumption</li><li>• Continuity of supply</li><li>• Water quality</li><li>• Distance to source</li><li>• Tariff structure</li><li>• Affordability</li></ul>	<ul style="list-style-type: none"><li>• Treated quantity</li><li>• Treatment type</li><li>• Reuse utilization</li><li>• Reuse type</li><li>• Tariff structure</li><li>• Affordability</li></ul>

**The MDG+ Initiative builds upon the MDG-7 indicators on WSS so as to measure the *availability, accessibility, affordability and reliability (intermittency) and quality of water supply and sanitation services in the Arab region.***

## MDG indicator

## MDG+ indicators

## SDG 'indicators'

Access to improved drinking water source (Urban and Rural)

Water Consumption (Water Supply)

Distance to Source

Continuity of Supply

Water Quality (Quality of Water Supplied)

Tariff Structure

Affordability

Universal and Equitable Access Drinking Water for All

Increased Water-Use Efficiency

Reduce Number of Persons suffering from freshwater scarcity

Access to Safe Drinking Water

Increase participation of local communities for improving water management

Access to Affordable Drinking Water



# MDG indicator

# MDG+ indicators

# SDG 'indicators'

Access to improved sanitation  
(Urban and Rural)

Access to Sanitation Network

Quantity of Treated Wastewater

Reuse Utilization

Tariff Structure

Affordability

Type of Treatment

Reuse Type

Access to **Adequate and Equitable** Sanitation and Hygiene For All

Improve water quality by halving number of **untreated wastewater**

Increasing **wastewater recycling & safe reuse**

Increase participation of local communities in improved sanitation management

# Additional SDG 'indicators' proposed SDG 6 (Water Goal)

Sustainable Water  
Management for All

Reduce Number of  
Persons suffering from  
**freshwater scarcity**

Increase Water-Use  
Efficiency

Integrated Water  
Resources management

Transboundary  
cooperation

Enhance capacity  
building support to  
developing countries

Water harvesting,  
desalination, water  
efficiency, **wastewater  
treatment, recycling and  
reuse technologies**

Protect and Restore  
water-related  
Ecosystems (wetlands,  
rivers, aquifers & lakes)



# Project Activities in Pilot Countries

1

Support the planning and coordination process.

2

Provide technical advisory and supervisory services (national experts)

3

Assist with fostering involvement and developing common understandings through field visits to drought affected areas.



# Activities in Pilot Countries

4

Conduct training seminars and training of trainers workshops to the national stakeholders and national experts.

5

Assist with developing country-specific preparedness and mitigation water scarcity national drought management plan.



# Access address

## <http://sustainabledevelopment.un.org>

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- Topics A-Z -

**Desertification, land degradation and drought**

Decisions

Documents

Publications

National Reports

Statements

Meetings & Events

Voluntary initiatives

**DA Project - Strengthening National Capacities to Manage Water Scarcity and Drought in West Asia and North Africa**


## Strengthening National Capacities to Manage Water Scarcity and Drought in West Asia and North Africa

### Project 121C "ROA-207"

About Project UN Partners Regional Countries Pilot Countries EGM EWS Analysis Research DESA Contact

#### Introduction

Droughts are complex events generally associated with greatly reduced precipitation, dry soil that impairs agricultural production, and reduced water levels in reservoirs and other bodies of water that can compromise drinking supplies and natural resources. Drought is a contributing factor to conflict, and conflict also makes drought situations worse, in turn causing famine and economic hardship. Many areas affected by drought are arid to semi-arid which tend to be under substantial ecological pressure and low in resources. When drought occurs in such arid areas, the living conditions of the local people become very difficult; the land yields no crops and the quantity of water is insufficient. People often compete for the availability of scarce water resources which can lead to tension and violent conflict.





# Thank you

## contacts:

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