ICARDA

Science for resilient livelihoods in dry areas

Status of SDG 6 achievement in MENA: Challenges and Opportunities

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Outline of the presentation

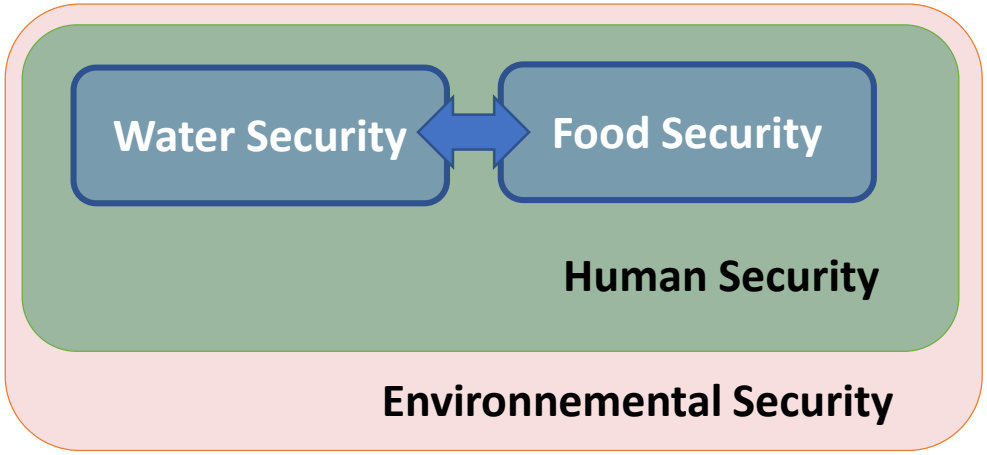
1. Theoretical concepts and components of SDG6.
2. Mapping SDG6 targets to different Integrated Water Management aspects.
3. Some SDG6 achievements in MENA: overall indicators.
4. Opportunities and challenges.
5. Perspectives.

SDG 6 – Ensure availability and sustainable management of water and sanitation to All

Theoretical concepts and components of SD6

SDG 6 – Theoretical concepts and components – Rationale

- Necessity to preserve scarce water resources
- Water security is highly related in food security
- And both are deeply rooted in human and environmental security



The inter-linkage of food, water, human, and environmental security

SDG 6 – Theoretical concepts and components –The supply side -

SDG 6: « Ensure availability »:

- It mostly refers to the SUPPLY side of the water problem. It involves water availability in terms of:
  - *Appropriate volumes: mobilizing alternative supply: with all implications it has on what is appropriate and sustainable supply alternatives (water transfer, new reservoirs, using renewable resources, role of groundwater, etc!). This also lead to the question of prioritizing investments based on funds availability, engineering, and institutional capacities,*
  - *Supply reliability (very important for the MENA countries where we start to see more and more water cuts in the pick demand periods) which depends on regular and systematic maintenance of existing infrastructure + appropriate planning of new infrastructures and supply alternatives.*
  - *Appropriate quality: protecting the existing water reservoirs and ensure their minimum contamination.*

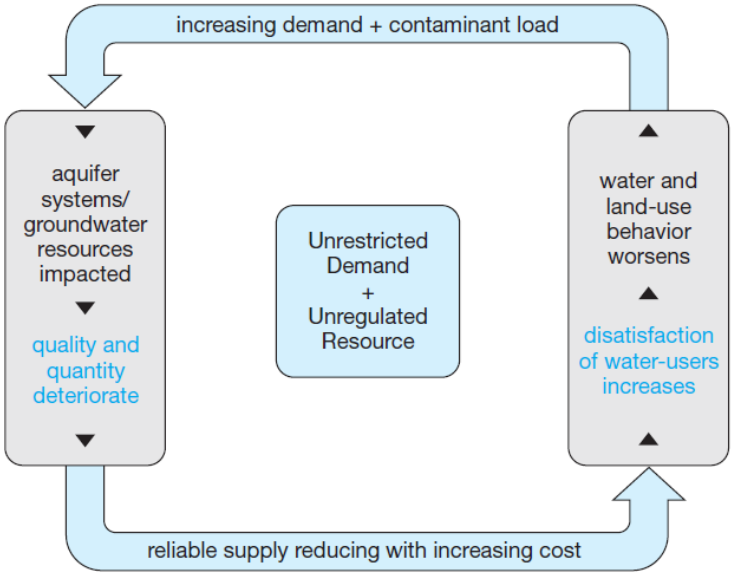
SDG 6 – Theoretical concepts and components – The demand side -

SDG 6: « Sustainable management » (IWRM approach)

It mostly refers to the demand management and all the approaches and instruments it requires to ensure sustainable water management:

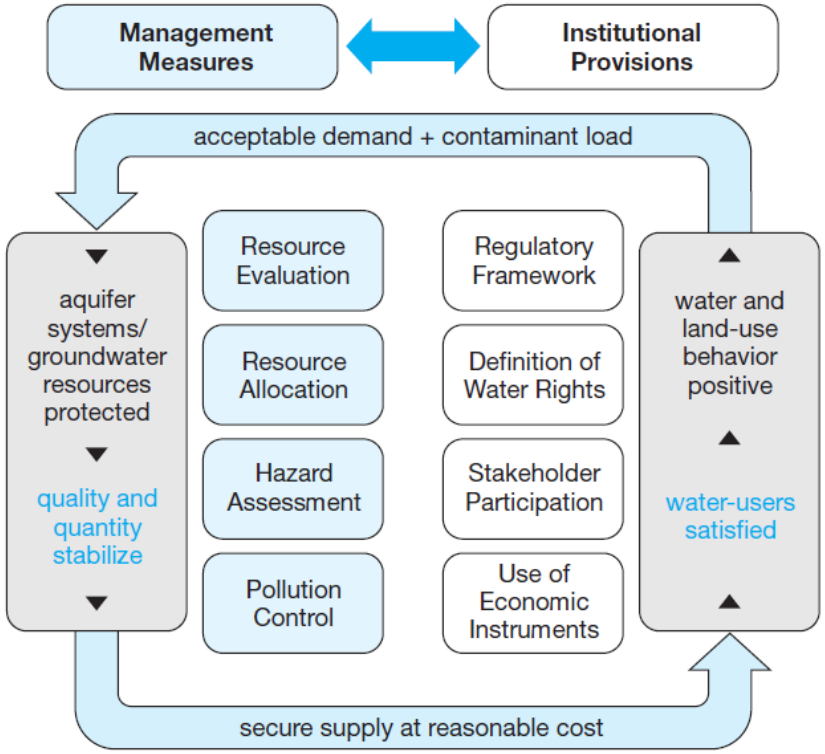
- Managing the water demand involves:
  - Equitable water allocations and water access to all.
  - Efficiency of water use,
  - Managing the quality of water through enhanced control of pollution of water resources.
  - Cost recovery.
- This requires advanced tools and instruments, which are well framed in the IWRM approach,

SDG 6 – Theoretical concepts and components – Approaches



"Classic" Supply-driven development of water sector

VS

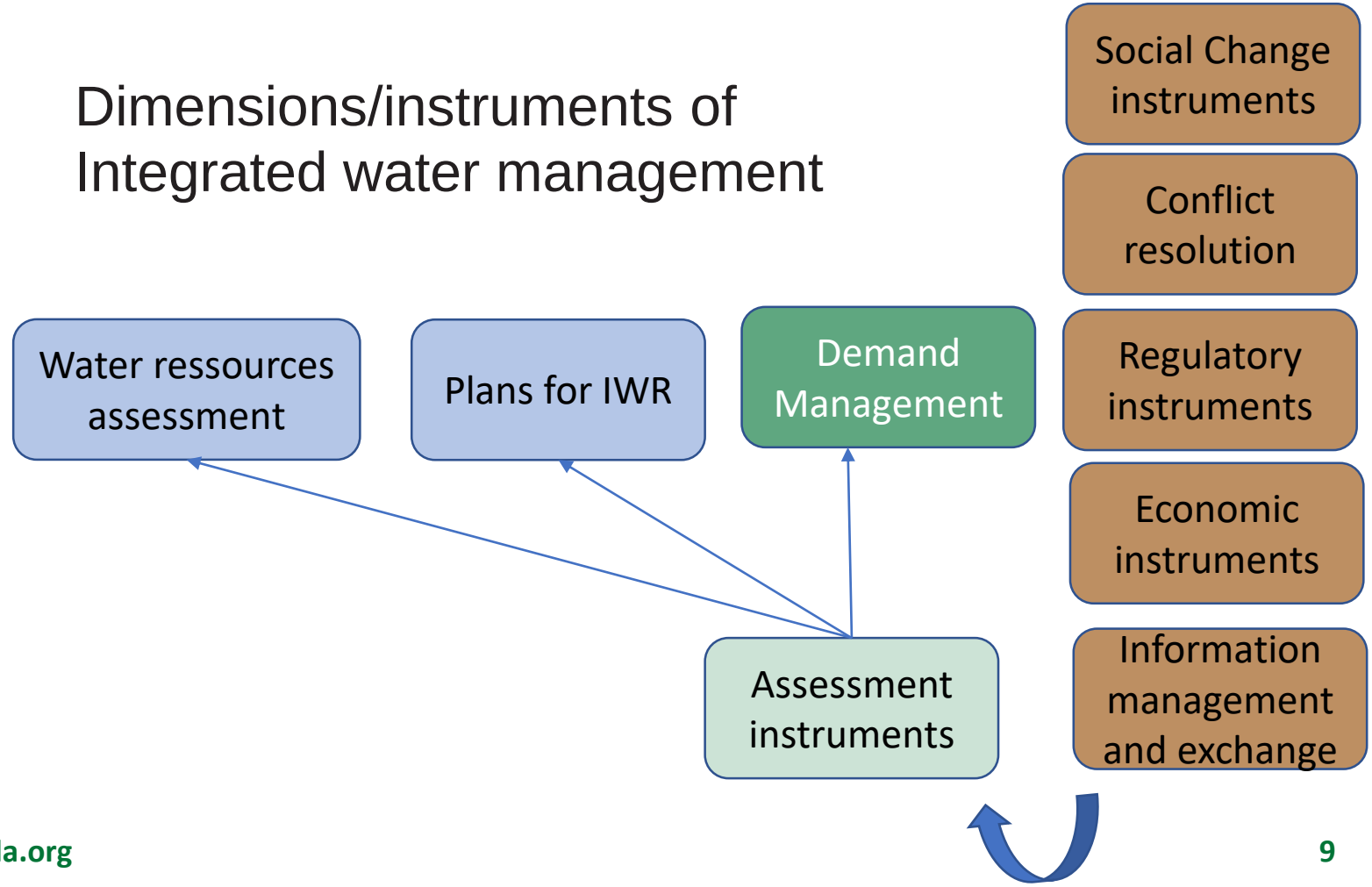


Integrated water management approach (water supply is an integrated part of the approach)

Source: (OCDE, 2012)

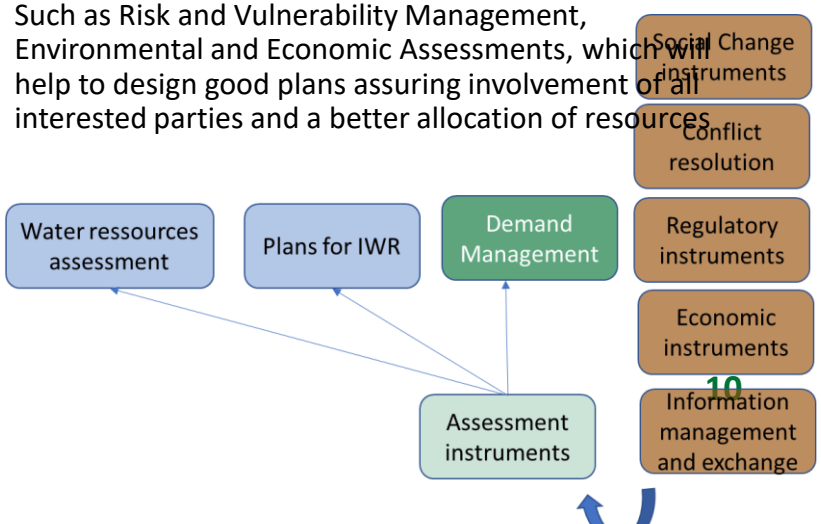
SDG 6 – Theoretical concepts and components – Approaches

Dimensions/instruments of Integrated water management



SDG 6 – Theoretical concepts and components – Approaches

- Considers the collection, analysis, and modeling of the information from the physical (specifically hydrological), biological and human medium related to the management of water.
- Includes tools for the planning process, integrating environmental, social and economic aspects of the management of hydrological resources.
- Considers the instruments that seek to improve water management through a change in the behavior of the different parties that are involved in its management.
- Refers to actions that are oriented to improving the efficiency in use, conservation, recycling and reuse of water.
- Includes those tools that seek to foresee, prevent and manage the conflicts, avoiding ending up in an impasse and favoring the construction of win-win solutions.
- Considers the regulatory standards that require or allow for certain actions, or prescribe a number of results in relation to water management, services associated to water, or usage of the land.
- Economic instruments and incentives
- Includes the instruments that seek to place the information in the power of the different stakeholders, specialists and general public, in order to improve the participation and the decision making process.
- Such as Risk and Vulnerability Management, Environmental and Economic Assessments, which will help to design good plans assuring involvement of all interested parties and a better allocation of resources



SDG 6 – Theoretical concepts and components – Governance for Supply and Demand -

Investments in both availability and sustainable demand will not be successful if we don't have appropriate governance systems. Why?

- Because some water problems are at the interface of few sectors (ex. Water contamination and human health, etc.) … which needs effective regulations and coordination mechanisms across different agencies/stakeholders.
- Effective institutions and stakeholders organizations are necessary to make physical investments in water sector profitable and sustainable.
- Because we need to empower and handhold (capacity development) the real water users and managers at local level … since they will be responsible for most of the outcomes of water policies and investments.

Mapping SDG6 targets to different Integrated Water Management aspects

Mapping SDG6 targets to different Integrated Water Management aspects

TARGETS		Management aspect	Sectors interfaces
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Supply oriented target	Water agencies, urban and rural planning, finance.
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	Supply oriented target	Health & water agencies
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Quality insurance and control	Health, water, environment
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Demand & Supply	Water agencies
6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	Organizational and institutional	Water - foreign affairs
6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Quality insurance and control	Water, environment, health

Mapping SDG6 targets to different Integrated Water Management aspects

6.A	By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
6.B	Support and strengthen the participation of local communities in improving water and sanitation management

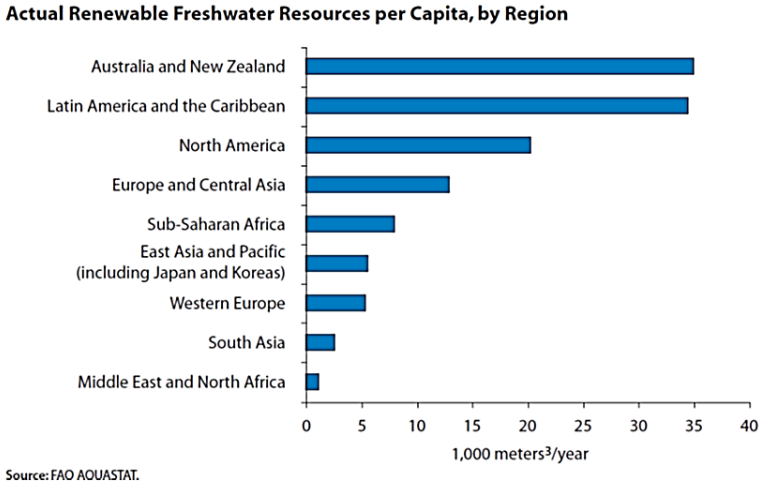
Management aspect

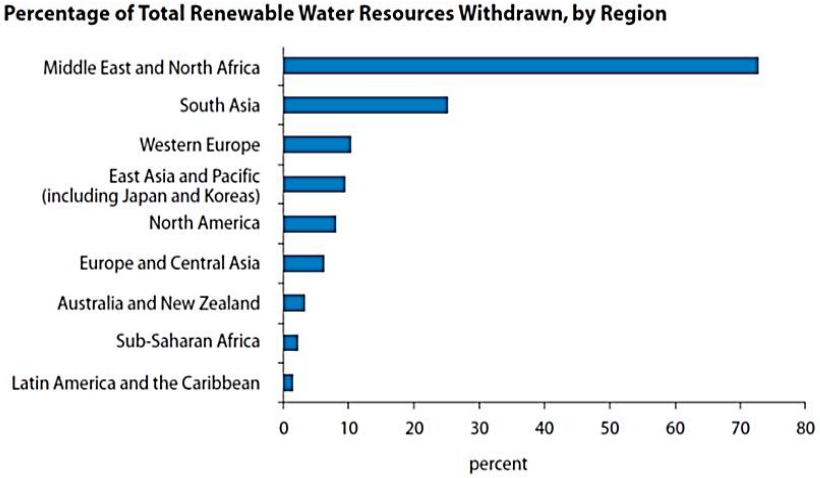
International cooperation / Spillover

Organizational and institutional

Some SDG6 achievements in MENA

SDG 6 – Some achievements in MENA

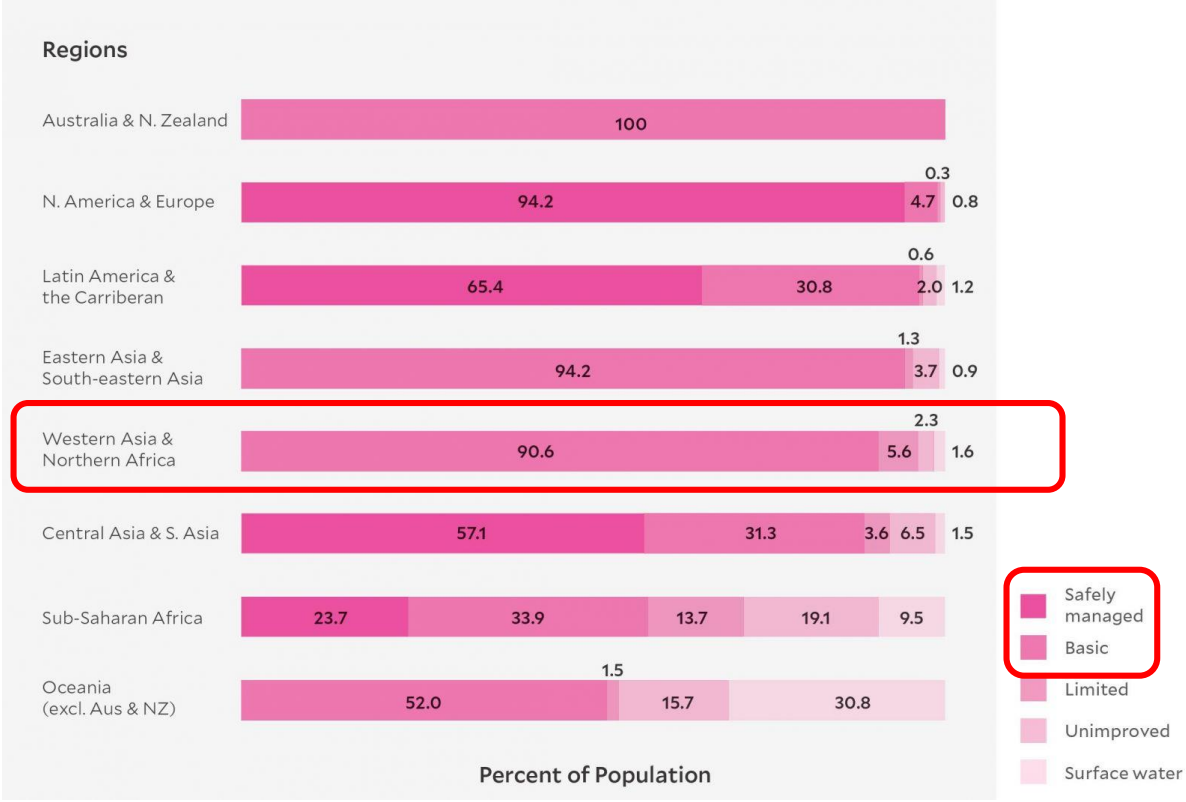




- The Middle East and North Africa is a global hotspot of unsustainable water use, especially of groundwater.
- In some of these countries, more than half of current water withdrawals exceed what is naturally available (The World Bank, 2017)

SDG 6 – Some achievements in MENA

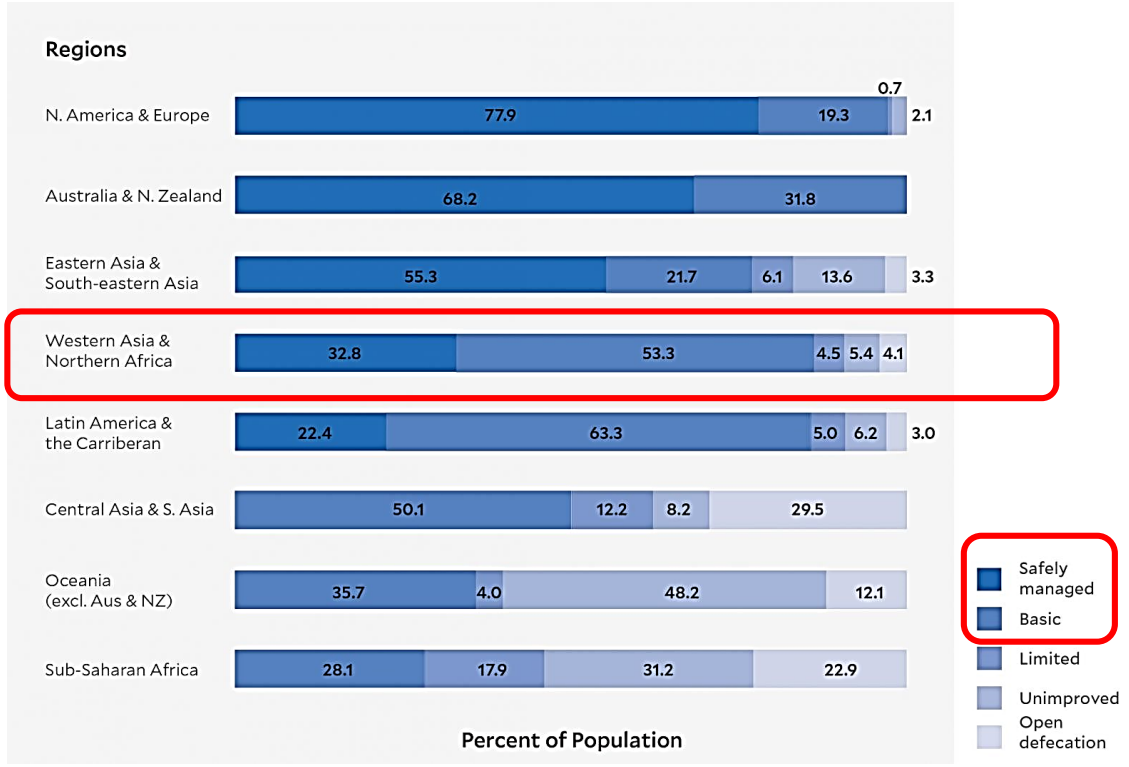
- 884 million people lack access to improved drinking water sources, most of them located in sub-Saharan Africa and Oceania (World Health Organization & United Nations Children's Fund, 2017



Percent of the population with access to drinking water services (WashDdta.org).

SDG 6 – Some achievements in MENA

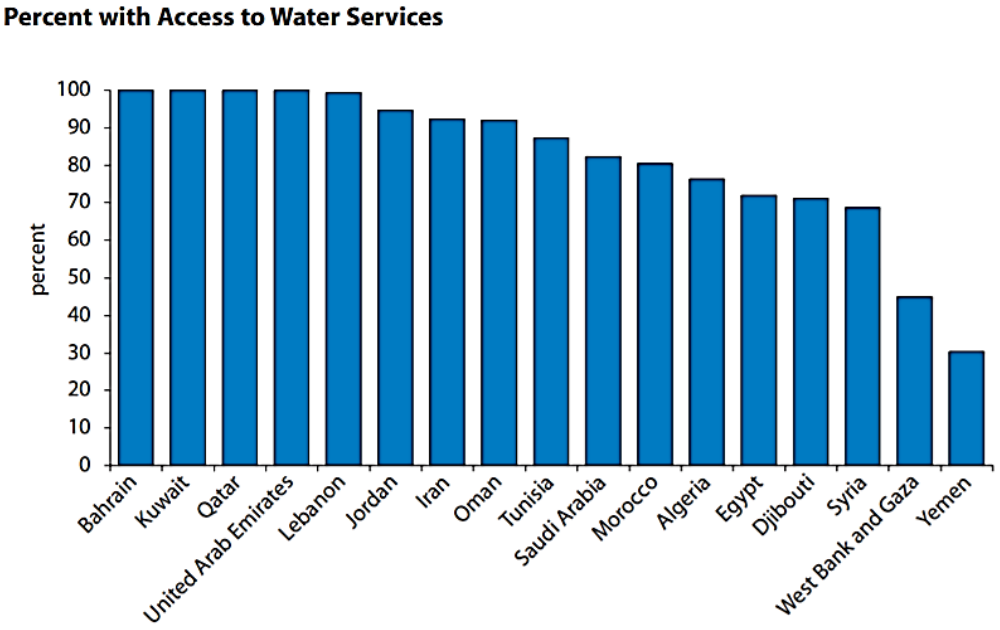
- Individuals in least developed countries still lack access to basic sanitary facilities (World Health Organization & United Nations Children's Fund, 2017, p. 4).



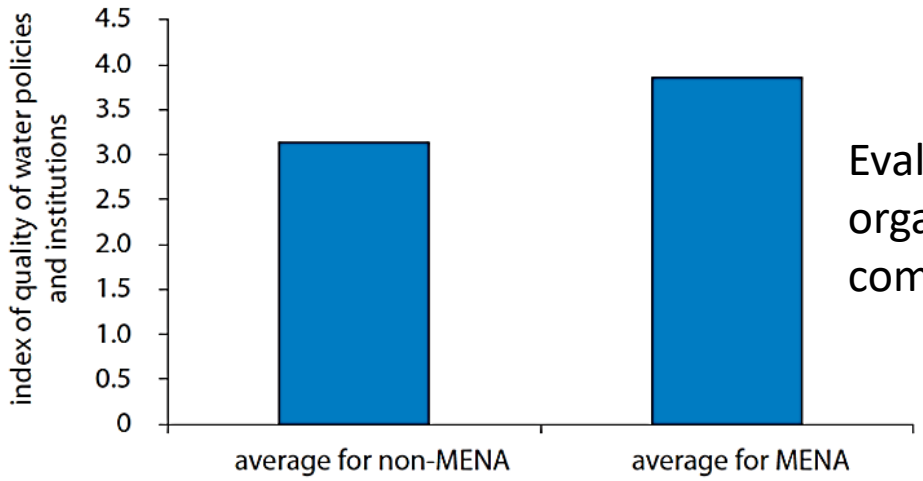
Percent of the population with access to sanitation services (WashDdta.org).

SDG 6 – Some achievements in MENA

- Access to water services remains a problem for some non-oil MENA countries.
- Countries under conflicts.
- Effect of macro-economic conditions and public finance on these investments.



SDG 6 – Some achievements in MENA



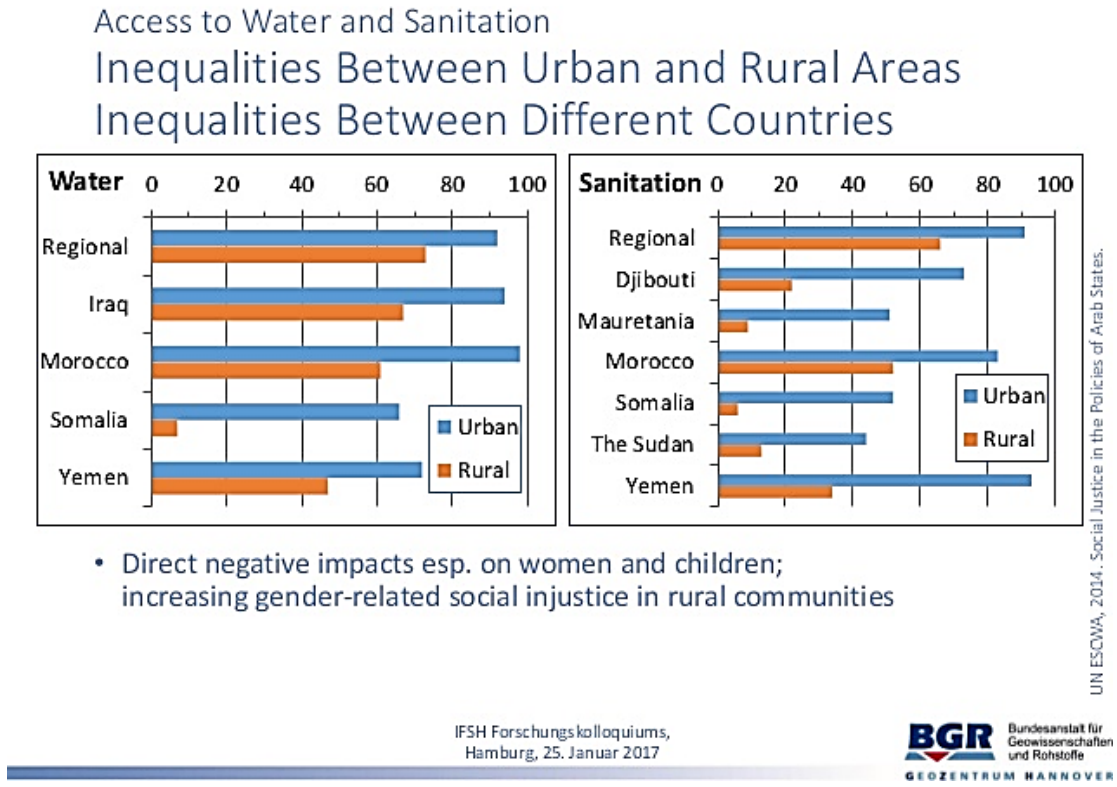
Evaluation of water policies and organizations: MENA and comparator countries.

Source: World Bank 2004a.

- Despite its scarcity, the region has the world's lowest water tariffs and the highest proportion of GDP (2 percent) spent on public water subsidies; (The World Bank 2017).
- Total water productivity in the Middle East and North Africa is only about half the world's average;

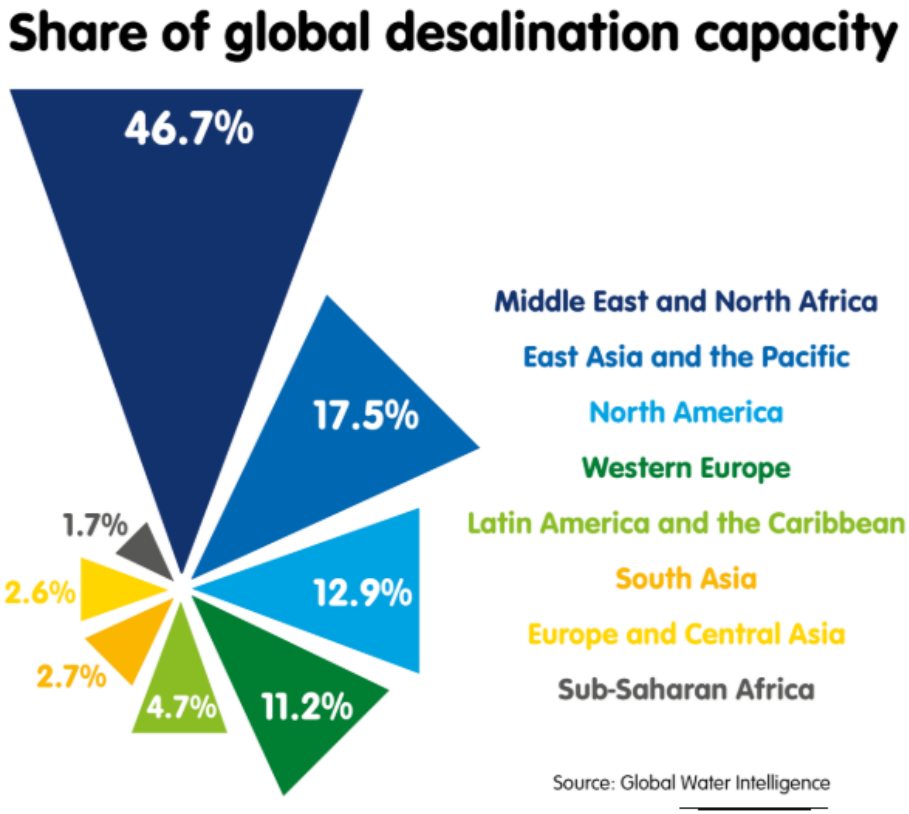
SDG 6 – Some achievements in MENA

- Inequality between urban and rural areas is mostly pronounced for sanitation.
- Flood and drought risks are increasing and are likely to harm the poor disproportionately. (The WB, 2017)



SDG 6 – Some achievements in MENA

- MENA countries are leading the way in terms of investments in water desalinization
- 82% of wastewater is not recycled, presenting a massive opportunity to meet water demands (WB, 2017)



Opportunities and challenges

Challenges (1)

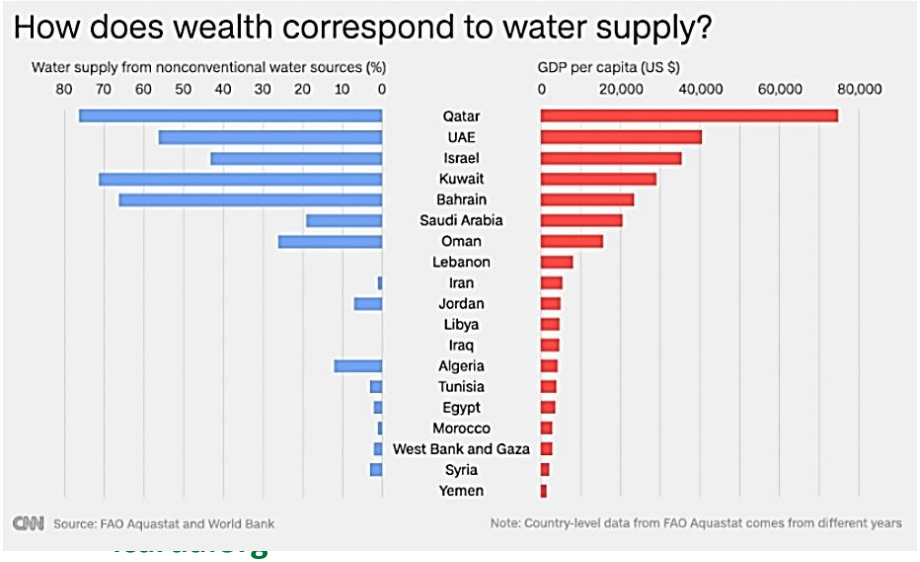
- Investments in demand management can be more profitable (generate higher water savings and enhance economic water value) compared to additional investments in non-conventional water supply… need for Ex-post impact assessment (tradeoffs: short vs long terms – administration capacity).
- Many countries in the region are now diverting their investments towards water desalinization in addition to other non-conventional sources. (MENA is now capitalizing around 46% of desalination capacity),
- … Managing the demand requires more complex institutional and organizational processes and settings which are currently ineffective in MENA (except for some countries).
- "Trap of non-conventional water mobilization": Higher investments, are preferred to less costly but more complex institutional, organizational and regulatory options.

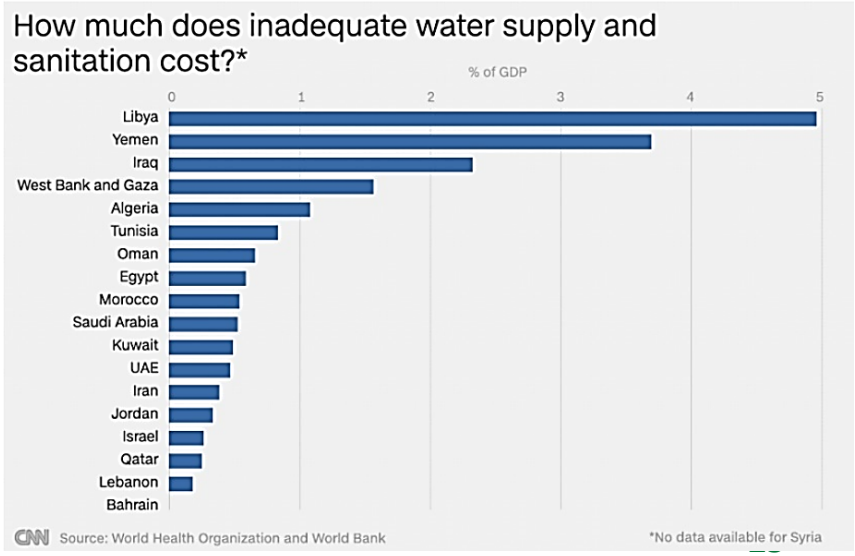
Challenges (2)

Policy makers in MENA region should rather stand for new revolutionary paradigms of water demand management by dealing with some of the below major governance failures.

National level failures:

- Macroeconomic situations (especially in *non-oil countries*) which involve lower investments in infrastructure maintenance and development, and quality control for water and delivery systems.





Challenges (2)

Policy makers in MENA region should rather stand for new revolutionary paradigms of water demand management by dealing with some of the major governance failures listed below.

National level failures:

- Macroeconomic situations (especially in non-oil countries) which involves lower investments in infrastructure maintenance and development, and quality control for water and delivery systems.
- lack of effective coordination tools at the central level for aligning water policies with other sectoral policies
- In some countries like Egypt, this coordination is difficult per-se due to the high number of public agencies dealing with water and irrigation at the central level.

Challenges (3)

At the strategic level:

- "Widely used but weakly-enforced regulatory instruments"…
- "Very limited impact of economic instruments" due to their poor design and implementation" (e.g. Water pricing: shortage in effective pricing mechanisms for groundwater);
- "lack of effective voluntary & advisory policy instruments", which are also linked to community participation instruments and collective action provision.
- The challenge also appears in providing a coherent and compatible set of these instruments that can effectively change stakeholders' behavior regarding use and allocation of water.

Challenges (4)

At the strategic level:

- … In MENA, most of the governance functions are supposed to be fulfilled by Water Users Associations (WUA) who implement and monitor the different water management instruments (ex. Tunisia and Morocco).
- Nevertheless, WUA are not receiving sufficient technical and financial support and their regulatory framework is often inappropriate, where the state role is not clearly defined in the WUA areas.
- Therefore, this “over-reliance” of central water authorities on WUA should be revised, especially with the absence of clear indictors and operational metrics for appropriate monitoring of WUA role…
- Need for clear handholding/empowerment strategy for WAU.

Challenges (5)

At local stakeholder level:

- Individual water users, WUA, local and regional public agencies are the main stakeholders who need effective handholding for helping with SDGs in our countries.
- A mosaic of institutional problems exists at this level due to the low horizontal interactions and integration among local stakeholders, and to the dominance of some stakeholders over others.
- Another major problem at this level is related to the lack of "vertical interplay" which can also be expressed as being the dynamic feedback between the local and other governance levels.
- Policy makers, drafters, and manager at the central level should be aware of local capacities and work on developing them

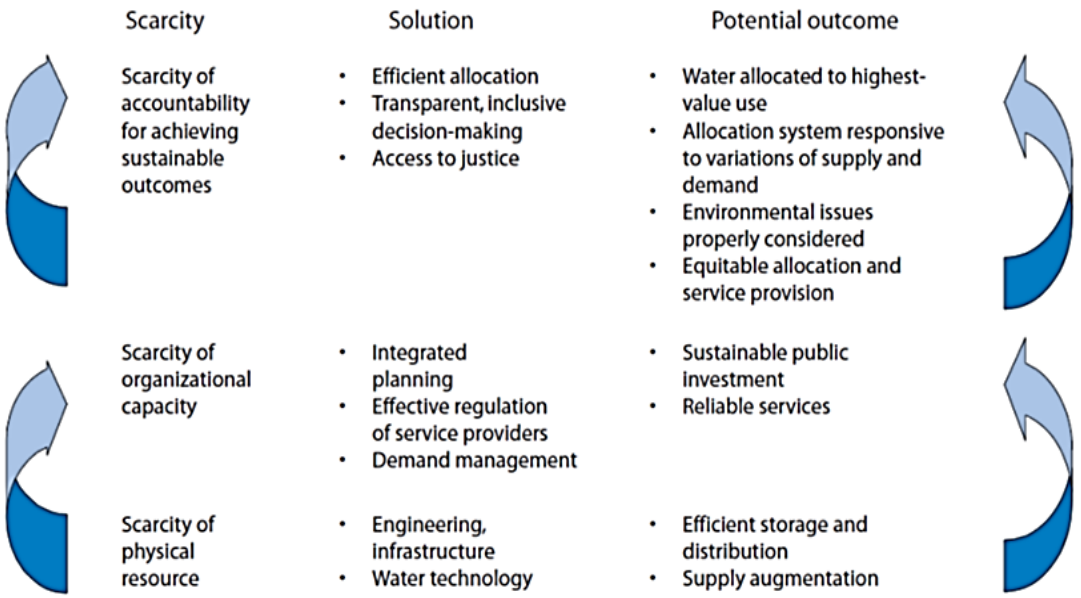
Challenges (6)

At local stakeholder level:

- …They also need to introduce a mechanism to capture feedbacks and adapt water sector management and guidelines based on:
  - *behavioral signals (from local stakeholders)*
  - *external climate (and other) shocks (adaptability mechanisms).*
- Higher, better and more effective local coordination mechanisms for better planning and for capturing feedback signals …
- Monitoring, evaluation and accountability of water resources at local levels.
- … Effective water governance requires the existence of appropriate stakeholders and agencies that can play this dynamic feedback role and ensure a minimum of coordination among and between local and national levels such as regional federations of WUA (in Egypt)

SDG 6 – Theoretical concepts and components – Scarcity in MENA!

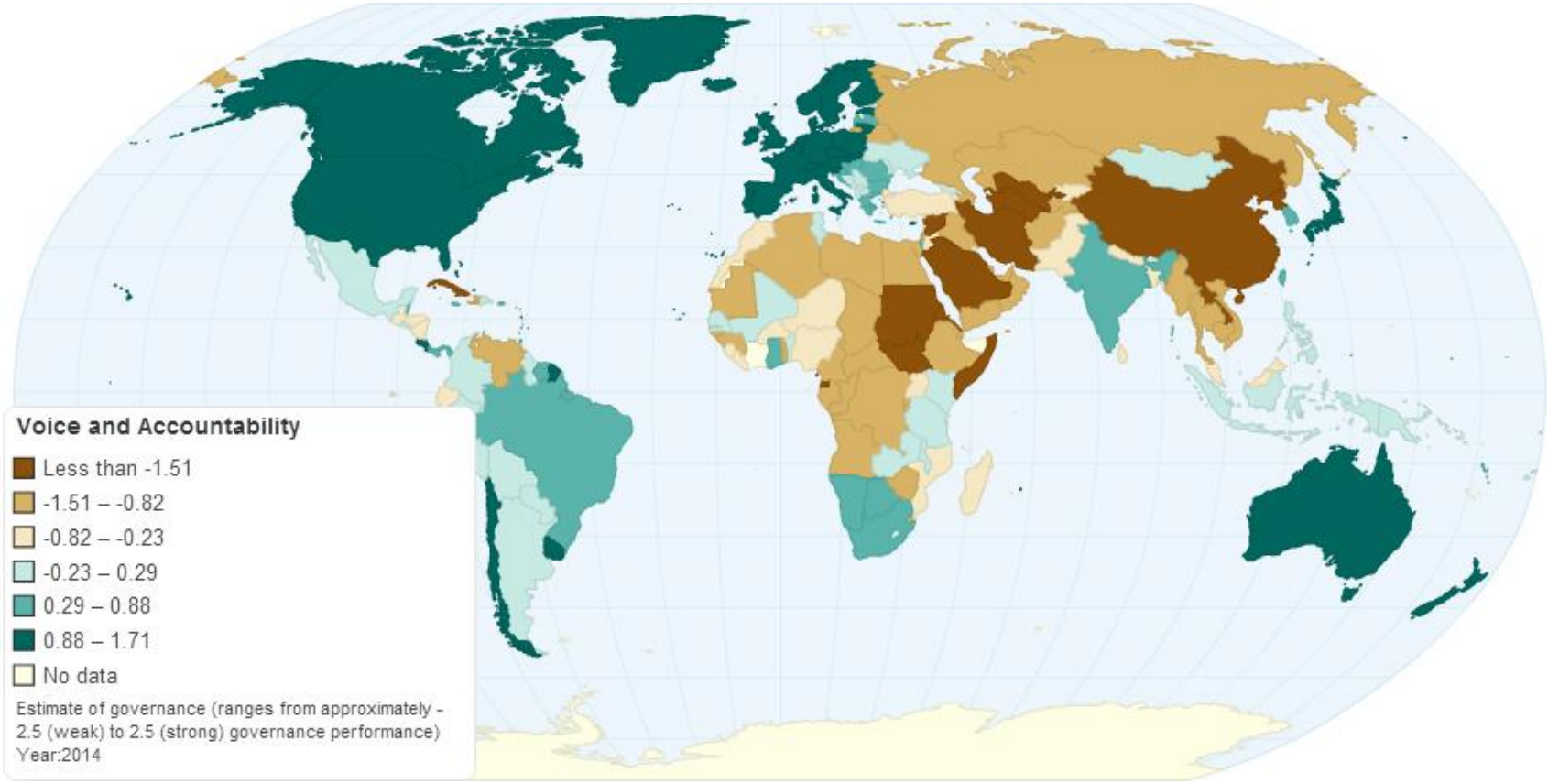
- SCARCITY remains the ultimate incentive for enhancing water and food policies.
- Scarcity is the fundamental economic problem of having seemingly unlimited human needs in a world of limited resources.
- In MENA, we are very familiar with physical water scarcity (already constraining water use in this region),
- Scarcity of organizational capacities is generally a less severe constraint in the region, as services reach most of population (but need for better efficiency).
- Scarcity of accountability is much pronounced and is emerging as principal constraint to better water sector performance.



Dimensions of water scarcity and solutions to deal with them. (source: The World Bank; Making the Most of Scarcity)

Challenges (7)

Voice (collective action and participation) and accountability (Water accountability and resource monitoring)



Opportunities (1)

- Already high budgets allocated for water quality and quantity supply and management … (but the investment approach is very classic)
- At national levels: Ongoing processes for enhanced administrative design for coordination, but also a deep and careful revision of water laws and policies to make them harmonic and compatible across relevant sectors.
- At national level: This horizontal coordination among different public agencies can benefit from the available knowledge and expertise in terms of information systems design.
- This would also enable a flexibility in decision making for adaptive management of water resource under external shocks.

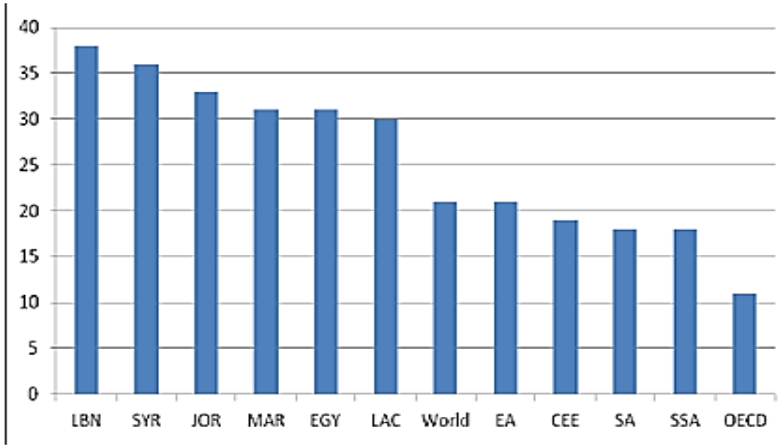
Opportunities (2)

- At strategic level: existence of a network of WUA already established trained and experienced,
- These can handle more complicated tasks if appropriate indictors and operational metrics for appropriate monitoring can be introduced… Think also about incentives for effective WUA!!?
- Identify other key strategic actors (Changing actors), what we want from them, and help developing their capacities to achieve our water and sanitation objectives. Incentives (both in terms of punishment and benefit) is a key word in this … also refers to involvement of private sector,

…Turning water scarcity into opportunities

Water for employment

- …. Develop national/regional industrial cluster of water technologies which can help valorizing and supplying water technologies and enhance the role of private sector in this perspective
- Development of “clusters for water industry” … focus on technologies adapted to small and medium users .. Because these are affordable for SME investments …



SDG 6 – Perspectives for MENA

Some **positive evolutions/trends** related to the following aspects:

- Significant efforts on groundwater management (Jordan, Morocco)
- Some efforts to harness private sector innovation for financing recycled waste water, desalinization, etc. (Jordan)
- Efforts for enhancing the role of private operation in support of public interest outcomes (= less water subsidies) (KSA, Jordan, and others).
- focus on strengthening local accountability for water supply and sanitation services (particularly in Egypt).

THANK YOU!