The FAO Regional Initiative on Water Scarcity

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The Regional Initiative on Water Scarcity

The context

Per capita fresh water availability = 1/6 of world average

- has decreased by 2/3 over the last 40 years
- it is expected to decrease of further 50% by 2050

Major drivers

- population growth (+consumption pattern)
- climate change
Climate change is expected to accentuate the already severe shortage of water availability

- rainfall reduction (and unpredictability)
- increasing the crop water requirements

(Milly et al., 2005) ≈ year 2050
Over 60% of water resources in the Region flows from outside national and regional boundaries. Groundwater has been the basis for the rapid growth in the Arabian Peninsula, but now Countries are facing excessive depletion. Competition for water between all sectors is accelerating. Degradation of water quality is mounting.
The Near East and North Africa, already one of the most water scarce Regions in the world, may be facing over the coming years the most severe intensification of water scarcity in history.

Agriculture, using already > 85% of available fresh water resources in the region, will be the sector suffering most from water scarcity, with major consequences for food security and the rural economy.

NENA countries have made relevant progress in the management of their water resources but these improvements are still not commensurate with the real dimension of the problem.
The Regional Initiative on Water Scarcity in Near East and North Africa (WSI) has been established by FAO to support countries in identifying, adopting and implementing evidence-based policy-decisions, sound governance and institutions, cost-effective water investments and best management practices that can significantly improve agriculture productivity and food security in the region.

...innovation is key
Elements of innovation

- A **Regional Collaborative Strategy** among the NENA Countries
- A **Strategic Partnership**, actions-oriented and results-based, to generate a critical mass of ‘capacities’ for ‘impact-at-scale’
- Forward-looking ways of visioning **future trajectories of development** for strategic planning of water allocation
- **Evidence**-based approaches
- **Farmers** as full partners (commercial operator and ultimate manager of soil and water)
- Involvement of **private sector** (food value chain, **technology**)
- Effective synergies in **innovation and learning** (from farmer-to-farmer exchange of solutions, practitioners as main actors)
- An **inclusive** approach to change
Focus Areas of Work

• **Strategic planning** & policies of water resources for water and food security (adopting a water-food-energy nexus approach)

• Strengthening/reforming **governance** at all levels

• Improving water management, **performances** and **productivity** in major agricultural systems (rainfed and irrigated) and in the food chain

• Managing the water supply through **reuse** and **recycling**

• **Climate change**, resilience, DRR and droughts management

• Building **sustainability**, with focus on ground water, pollution and soil salinity

• **Benchmarking, monitoring** and **reporting** on water use efficiency and productivity
The Partnership

ACSAD - Arab Center for the Studies of Arid Zones and Dry Lands
AOAD - Arab Organization for Agricultural Development
AWC - Arab Water Council
CEDARE - Center for Environ. and Develop. for the Arab Region and Europe
CIHEAM - International Center for Advanced Mediterranean Agric. Studies
DRC - Desert Research Center
DWFI - Daugherty Water for Food Institute
GIZ - German Cooperation Agency
ICARDA - International Center for Agricultural Research in the Dry Area
ICBA - International Center for Biosaline Agriculture
IWMI - International Water Management Institute
LAS - League of Arab States
NWRC-Egypt - National Water Research Center
UNESCO - UN Educational, Scientific and Cultural Organization
UNESCWA - UN Economic and Social Commission for Western Asia
WB - World Bank
WFP - World Food Program
Morocco as Pilot Country

Staring in the fall 2013, Six countries (Egypt, Jordan, Morocco, Oman, Tunisia and Yemen) applying the initial analytical framework of the WSI:

✓ ‘water accounting’ (availability, use and projections)

✓ ‘food supply cost curve’ (identification and ranking options for future food supply and related economic and water costs)

✓ ‘gap analysis’ (investigating policies, governance and performance of agriculture water management)
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Food supply

Financial cost

- Area expansion under irrigation
- Increased intensification
- Improv. Prod. of rain Agric.
- Reduction of losses along the food chain

Target

gap
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- **Food supply**
  - Area expansion under irrigation
  - Intensification
  - Improv. Prod. of rain Agric.
  - Reduction of losses along the food chain

- Target

- Water requirement

*gap*
Concluding Remarks

Accelerating the implementation of measures reducing ‘water productivity gaps’

Developing analytical frameworks identifying pathways to increase physical and economical water productivity (water delivery; on-farm; market & value-chain)

Lead, inspire and influence other countries of the Region in the water reform agenda (scenario analysis; visioning development trajectories; strategic planning, policy change and governance restructuring)
Thank You

http://neareast.fao.org

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