Introducing *WATERSUM/WATER POrT* activities

**Capacity building for IWRM**

**WATER DEMAND MANAGEMENT**

World Water Week in Stockholm, 28 August – 2 September, 2016
The team

- REKK, Hungary (economics):
  - András Kis
  - Gábor Ungvári
  - additional policy experts as needed

- Tunisia (law):
  - Dr. Moez Allaoui

- JUST, Jordan (engineering):
  - Dr. Fayez Abdulla
  - Dr. Hani Abu Qdais
Objective:

- promote the integration of the WDM approach into the water resources planning process
- improve knowledge of the economic nature and technical aspects of water demand
**Workplan**

**Inception phase**

- Assessment of hydrologic, institutional, economic, technical conditions
- National workshops

**Selection of WDM measure(s) to focus on**
- Development of an assessment framework (methodology) for best practice cases
- Best practice handbook: 30 cases in total (Jordan, Tunisia, other countries)

**Demonstration site: research and analysis of WDM measure(s), DS specific case studies**
- Demonstration site training workshops

**Regional conference and training**
Deliverables:

• Needs assessment
• Economic analyses of DSs
• Regional and national workshops
• On-site trainings
• Good practices handbook
Traditional response to water scarcity: supply side solutions

- New ground water resources
- Transfer of water from other regions
- Desalination
- Recycled wastewater
- Water storage (across seasons)
- Artificial recharge of ground water
- Other technological solutions (e.g., reduced evaporation from surface water)

Often expensive or simply not available
Demand management increasingly utilised

- Introduction of metering
- Price setting
- Investigation and penalisation of illegal consumption and non-payment
- Education, awareness raising, water saving tips
- Building codes, technical standards
- Leakage reduction
- Audits of large water consumers
- Modified agricultural practices, advanced irrigation, change in crop mix
- Outright ban (seasonal or permanent)
- Tradable water rights
Allocating water to the most beneficial use

A genuine source of misunderstanding related to WDM

- Demand management – economic perspective on resource allocation
- Recent allocation – on communities’ principles or tradition
- This is different from financially feasible because revenues bigger than costs

Rationale for WDM

Impossible to achieve satisfactory allocation via a central master plan, since we do not have information on the value of water for given users.

Application of economic instruments is based on the aggregation of individual water value judgements.
Financial- and Economic value based demand management instruments from the WDM set

- Introduction of metering – Financial value
- Price setting – Economic value
- Investigation and penalisation of illegal consumption and non-payment – Financial value
- Education, awareness raising, water saving tips
- Building codes, technical standards
- Leakage reduction – Financial value
- Audits of large water consumers
- Modified agricultural practices, advanced irrigation, change in crop mix – Financial value
- Outright ban (seasonal or permanent)
- Tradable water rights by purpose designed markets or auctions
Typically supply and demand side solutions work together, with increasing focus on demand management

Smart mix must include:

- cost minimization
- diversity of sources and solutions
- attention to vulnerable water users
- consideration of externalities (future generations, ecology – the base of current ecosystem-service provisions)
Potential demonstration cases

- **Tunisia**
  - Pricing of urban drinking water services

- **Jordan**
  - Economic incentives to reduce water use from illegal wells in the Highland
  - Cost benefit analysis of further use of treated wastewater for irrigation
  - The economics of water saving devices and the price of water