



Objective ICT-2011.6.3

ICT for Efficient Water Resources Management

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Outline



- Background issues on water



- To support RTD on ICT tools, systems and services for Efficient Water Resources Management



ICT for Efficient Water Resources Management

This is not a Southern Europe problem:

- About 3% of electricity consumption is used by water pumping
- The biggest electricity bill in many municipalities is for sewage treatment.
- 20% of water is wasted during distribution because of leaks
- Re-use of “grey water” for watering gardens and flushing toilets has reduced per capita water consumption in Cyprus by up to 40%.



Water Scarcity: EU policy

- Commission Communication “Addressing the challenge of water scarcity and droughts. July 2007
 - Building and water efficiency
 - Leakage reduction in water distribution networks
 - Water savings in agriculture
 - Labelling of equipment
- Follow-up reports and the 2012 policy review

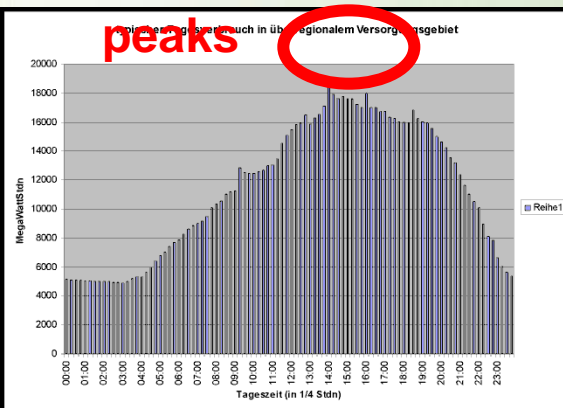
http://ec.europa.eu/environment/water/quantity/scarcity_en.htm



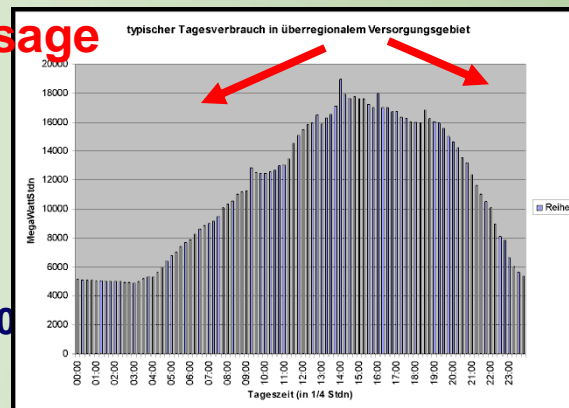
Relation between Energy and Water management

- Stringent to integrate local water sources back to the network
- Always top-down vs. bidirectional flow of energy
- Information collection requires extensive sensor networks
- Can not use the water network as a communication network
 - Need to use existing telecom infrastructure or deploy a new one
- But once the base infrastructure is in place, many principles of energy management can apply (e.g. demand-side management...)

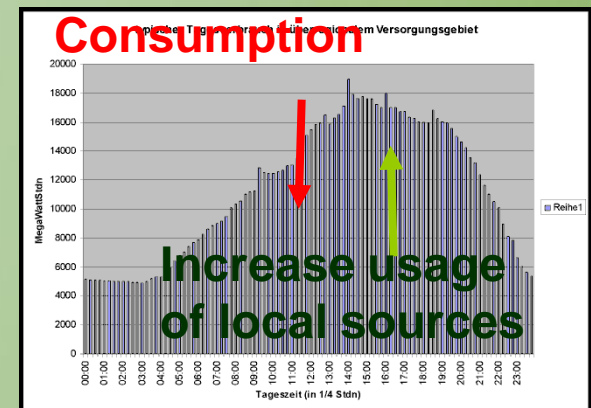
Avoid peaks



Spread Usage



Reduce Consumption



Resources Challenges

- Real-time monitoring and control at wide scale
- Integrated management and decision support based on data collection and aggregation
- Empowering user with real time information to create awareness and stimulate behavioural change
- Water smart meters and ICT tools to support leak detection, automated meter reading through communication networks
- Management of multi-sources data and the organisation of seamless databases



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Objective

Integrate real-time knowledge on demand and supply across water distribution networks and water sources.

Partnerships between ICT equipment providers, software companies and water authorities.

Budget allocation: 15 M €

Target Outcome

ICT-enabled solutions for Integrated Water Resources Management (IWRM), involving as key building blocks:

- *Innovative demand management systems,*
- *Decision support systems,*
- *Data management technologies*

STREPS



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Target Outcome

SHALL

- *Involve robust and proven technologies*
- *Take an holistic approach*

MAY Include

- *Demand forecasting*
- *Advance metering*
- *Real-time consumption*
- *Combined energy-water*

Target Outcome

SHOULD Cover

- *Research and Innovative integration*
- *Validation in at least 2 real-time operational environments*
- *Evaluation of anticipated cost/benefits and market prospects*

Consortia MUST be compact



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Expected Impacts

- New partnerships between European water distributors, water management equipment suppliers, water authorities and the ICT sector
- Enhanced supervision of water networks leading to:
 - Better management of supply and flows
 - Quantifiable water consumption reduction



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- **Funding schemes: STREP & CSA**
- **Indicative budget distribution:**
 - **STREP: EUR 15 million**
- **Call: FP7-ICT-2011-8**
- **Date of publication: 26/7/2011**
- **Call deadline: 17/1/2012**



Thank you for your attention!

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Disclaimer: the opinions in this presentation are those of the author and do not commit in any way the European Commission

