

# MEDITERRANEAN Development of Innovative Technologies for integrated water management

**MEDITATE project – INCO-MPC-2001, PL 509112**

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**9 contractors:** Cranfield UK, PRIDESA Spain, HSM + LIRMM Montpellier, France, Hacettepe University Turkey, AECS Syria, ESIB GREEN + WEERC NDU Lebanon, WERSC Jordan University, **BRGM – coordinator (France): Water division, Montpellier**

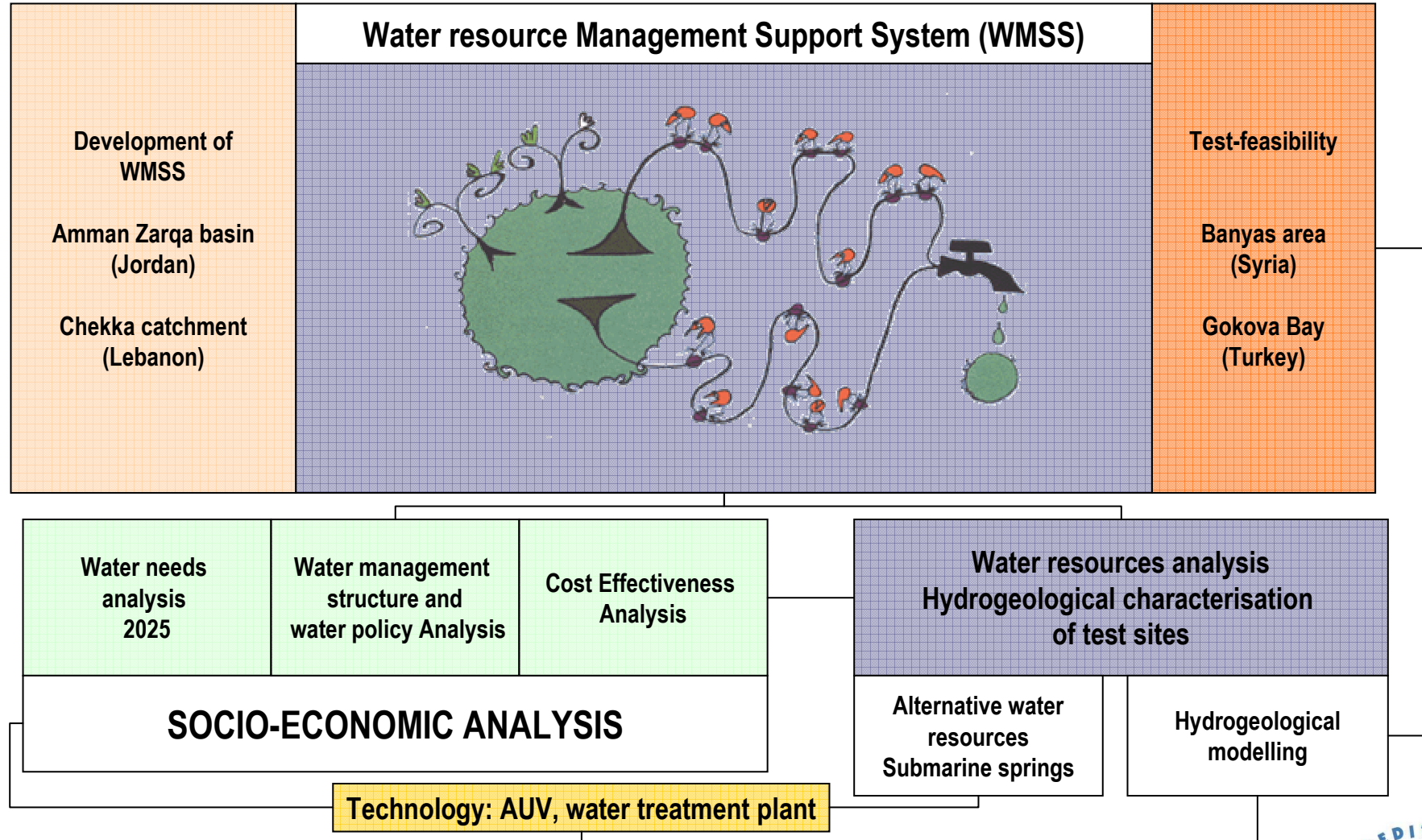


# Water management in Mediterranean basin

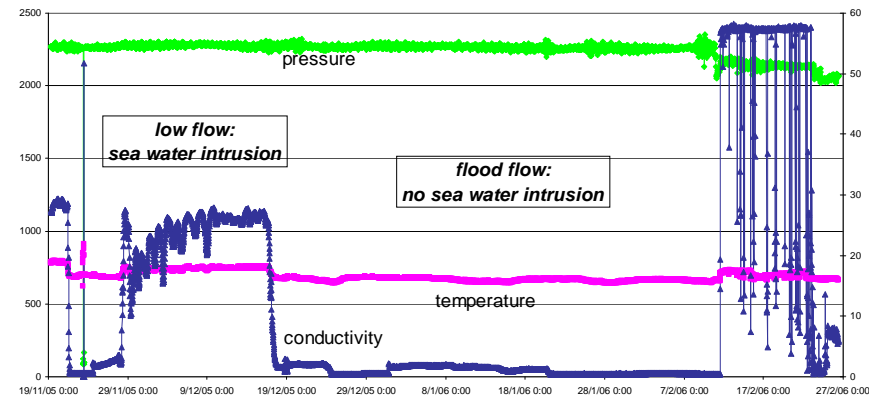
- **Water scarcity**, an important **challenge** facing many countries, including Mediterranean states
- **Population growth** is a particular **driver of increasing water stress** and in Mediterranean countries. Water demand will consequently increase across all sectors.
- In **Mediterranean countries, karst aquifers** are one of the most interesting potential resources, under exploited so far in some countries. Due to the fact the seawater level varied during Quaternary and Tertiary periods part of these aquifers may **discharge directly into the sea at depth**; submarine springs are known off shore of karst areas.
- **Temporary or permanent springs with fresh and/or brackish water** may represent alternative resource, but monitoring of discharges is necessary.



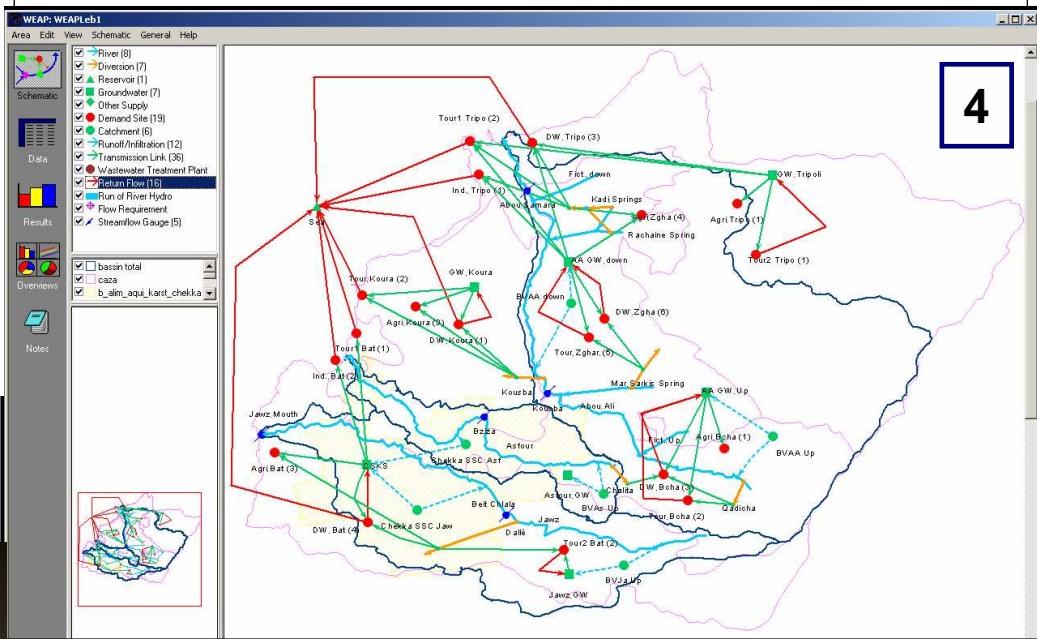
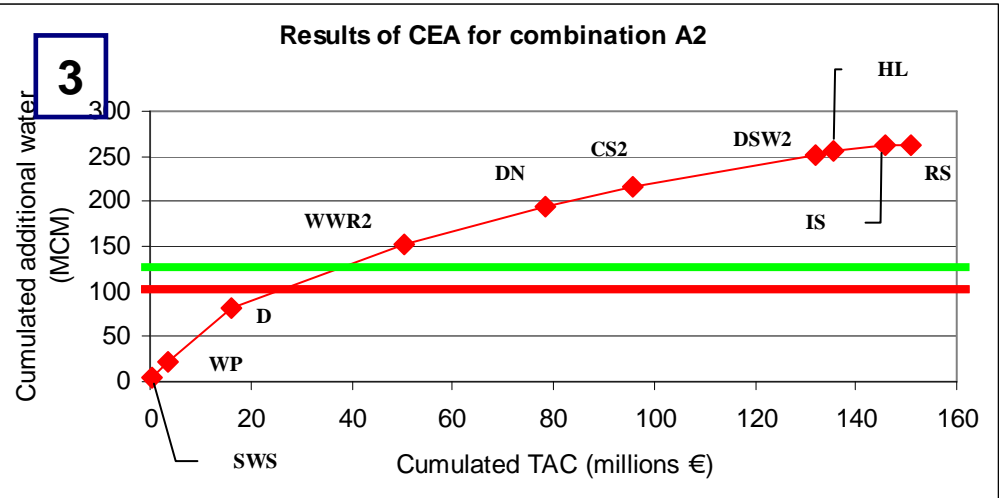
# Objectives of MEDITATE



# Submarine Karst spring: monitoring and survey with AUV



# Participatory workshop and social survey => water scenarios for 2025



# Water management system including Water scenarios and CEA





## **Exchanges between projects, clusters, coordinated actions**

- **Within the consortium:**
  - **Networking through common work on various WP, involvement of most of contractors, through WP meetings, Project meetings**
  - **Training on specific tools for data analysis, on methodology to run participative workshop: good involvement of contractors**
  - **Difficulties of sharing data understood as “sensitive” in some countries**
- **With projects, clusters, coordinated actions:**
  - **Contact with coordinators of other EU projects in IWR in Mediterranean basin at the beginning of the project**
  - **Time problems to run “our” project and exchange with other projects to take benefit during the life project**
  - **Informal exchange through available deliverables to take benefit of results of other projects**



# “Results dissemination”

😊	😐 😞
<p><b>Dissemination workshops:</b> part of the methodology to build water scenarios (BAU, Optimistic and pessimistic) for 2025</p>	<p><b>Difficulties due to “cultural heritage” to get involved in a sharing process, to get the right participants invited and for contractor to get to the philosophy</b></p>
<p><b>Dissemination workshops (3 times during life project) : First opportunity for some to express their opinion, their personal perceptions of future livelihoods</b></p>	<p><b>Diversity of participants, targeted group not wide enough</b></p>
<p><b>Increase awareness of people, authorities on water management, the business of everybody and not only of specialists or water managers</b></p>	<p><b>Difficulties to get translated in the country language newsletters of the project, to maintain the website update</b></p>



# “Exploitation of project results”



- Common methodology for coastal karst aquifer characterization based on review and experience of contractors
- New development of monitoring and survey of submarine karst spring
- Integrated water management => multidisciplinary approach, increase of new scientific and technological fields for “groundwater” scientists
- Common methodology to set up water scenarios, to carry out CEA, to build WSS
- Guidelines to implement such integrated water management process at catchment scale



- Problems of reliability of available data at catchment scale => WMSS developed needs to be updated before exploitation by end-users
- Further scientific development necessary to get an operational tool for discharge measurement of submarine spring with an AUV and modeling
- Awareness of stakeholders of the methodology used, further steps to make... to build new projects based on common guidelines
- Difficulties for stakeholders to select among various approaches, WMSS set up on the same water catchment, i.e. Amman Zarqa basin in Jordan, on various EU projects





## Proposals based on this experience

- **Increase capacity building in country to set up data monitoring with new technology through EU projects, on long term basis**
- **Involve as partners more NGO's, SEMIDE, EUWI, ... to make a stronger link with stakeholders, to ensure a better exploitations of results**
- **Involve in project consortium scientists dealing with dissemination, in order to “Translate” scientific and technical results to targeted groups**
- **Transfer technology to engineer associations, professional forum, demonstration of technology to professionals, contact through Local Chamber of Commerce, ...**

