

EPI Water & ENHANCE projects



C. Dionisio Pérez-Blanco
FEEM/CMCC

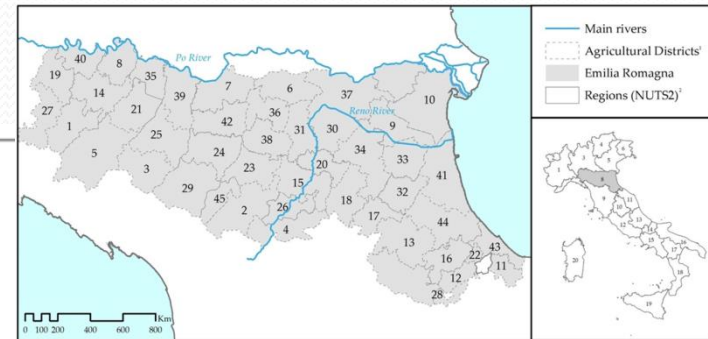
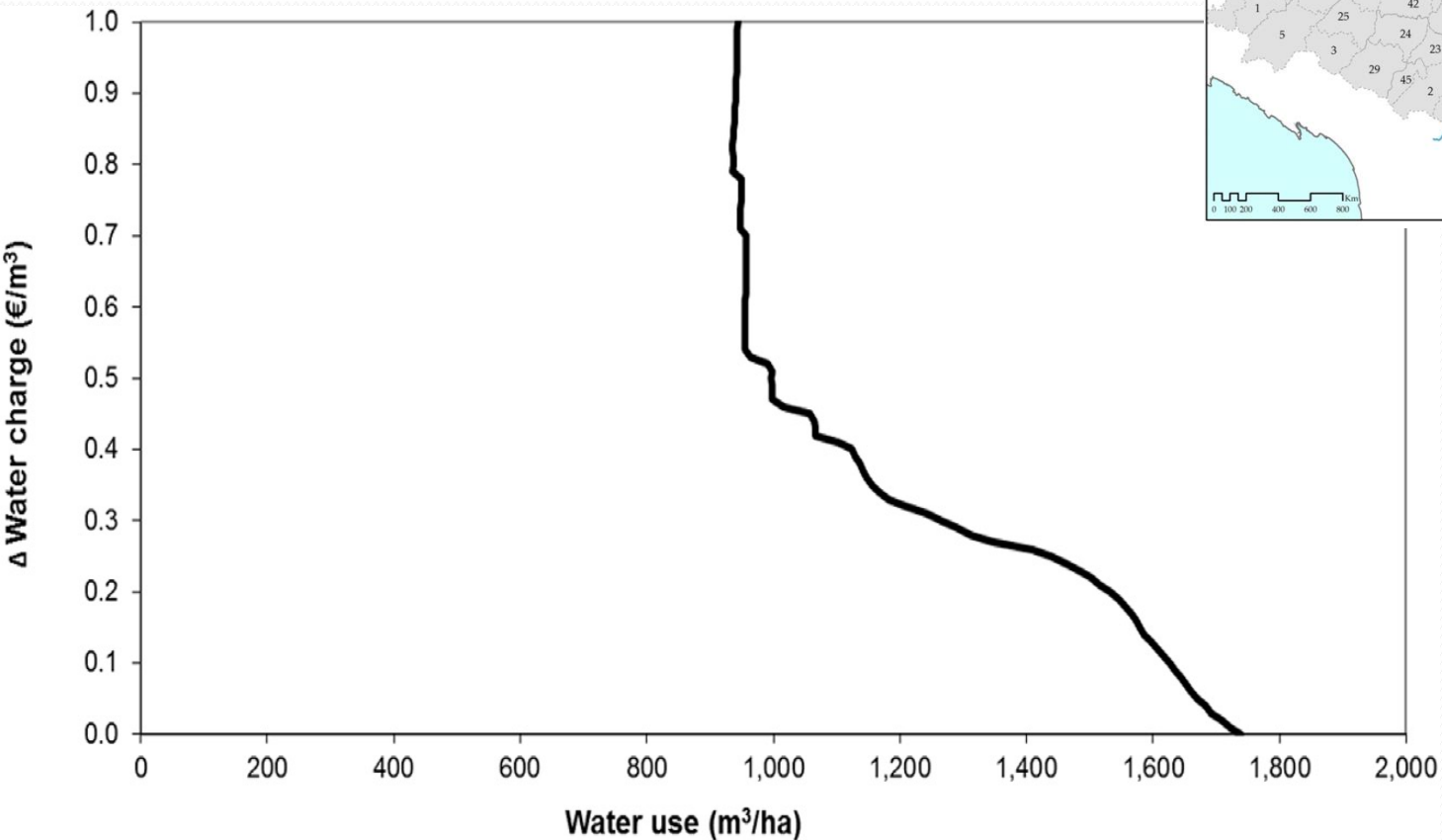
**2016 Water JPI Exploratory Workshop,
Dublin – 14th November 2016**

Project - Objectives

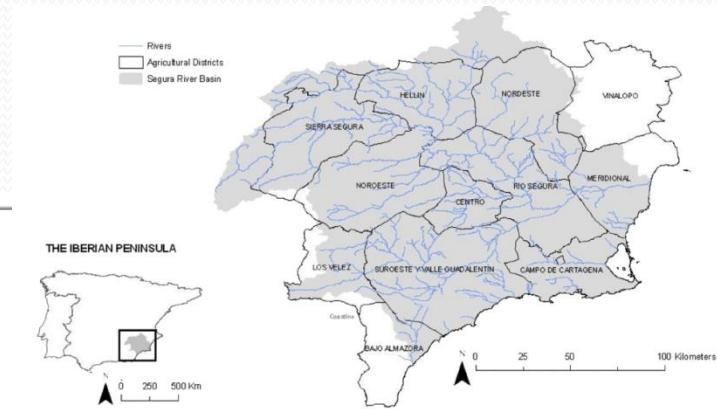
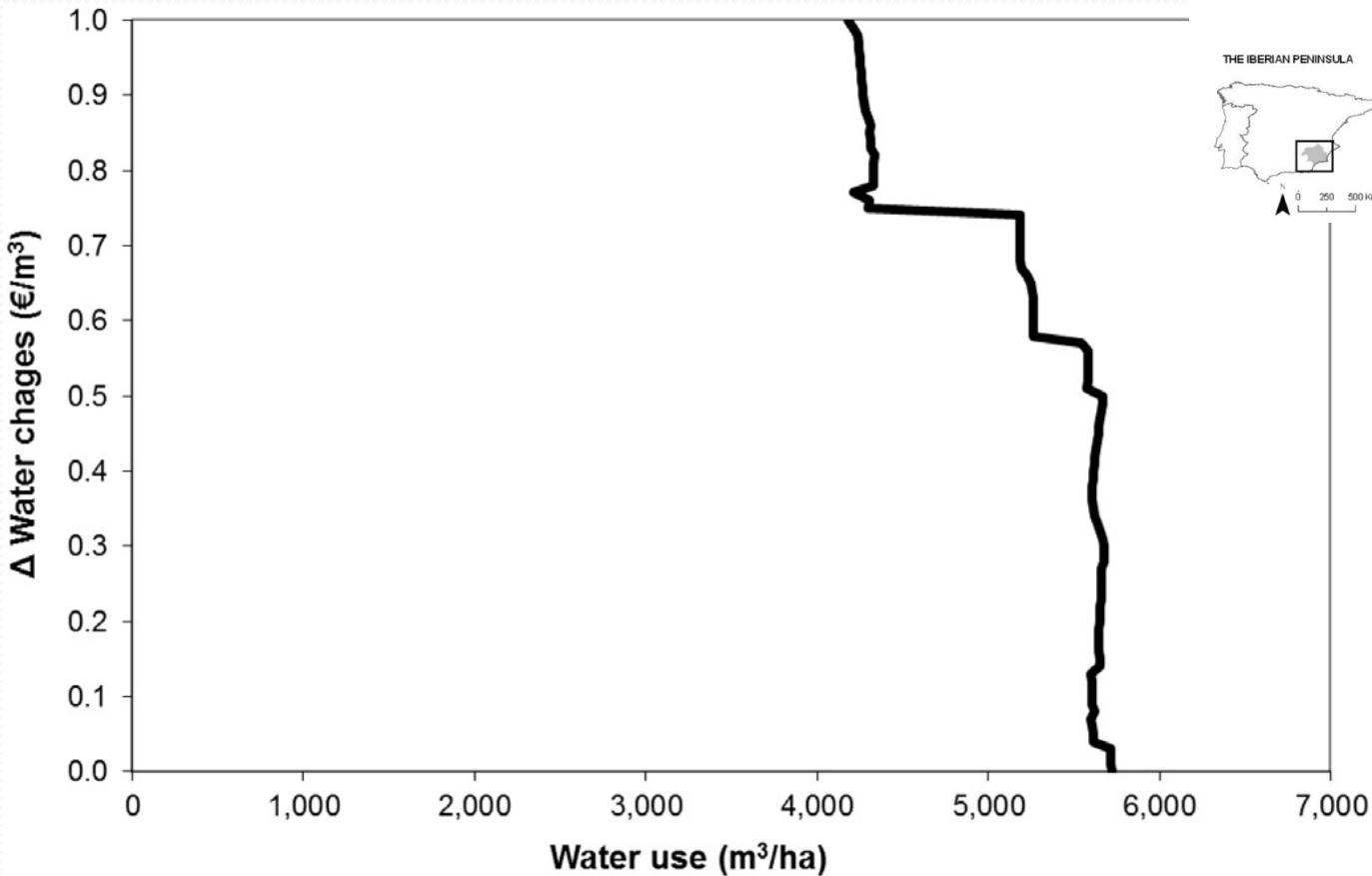
- EPI-Water sets out to assess the effectiveness and the efficiency of **Economic Policy Instruments** in achieving water policy goals
- ENHANCE aims to describe and test through case studies which concepts of **economic instruments**, including insurance and risk management policies, work for MSPs

Project insights

#1: No silver bullets



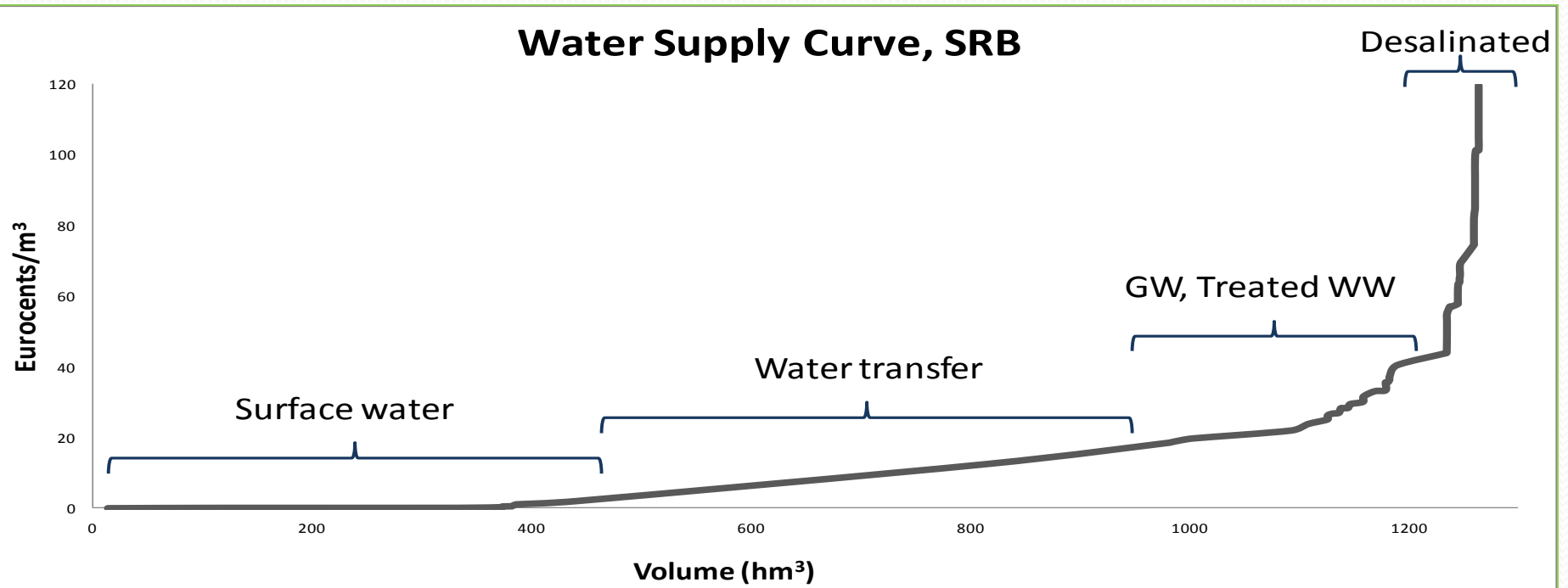
#1: No silver bullets



#2: Transaction costs are key

- Subsidies overcome resistance by users
- Caveats
 - Costly
 - Effective?
- May lead to institutional lock-in

#2: Transaction costs are key



#3: Beware of Jevons

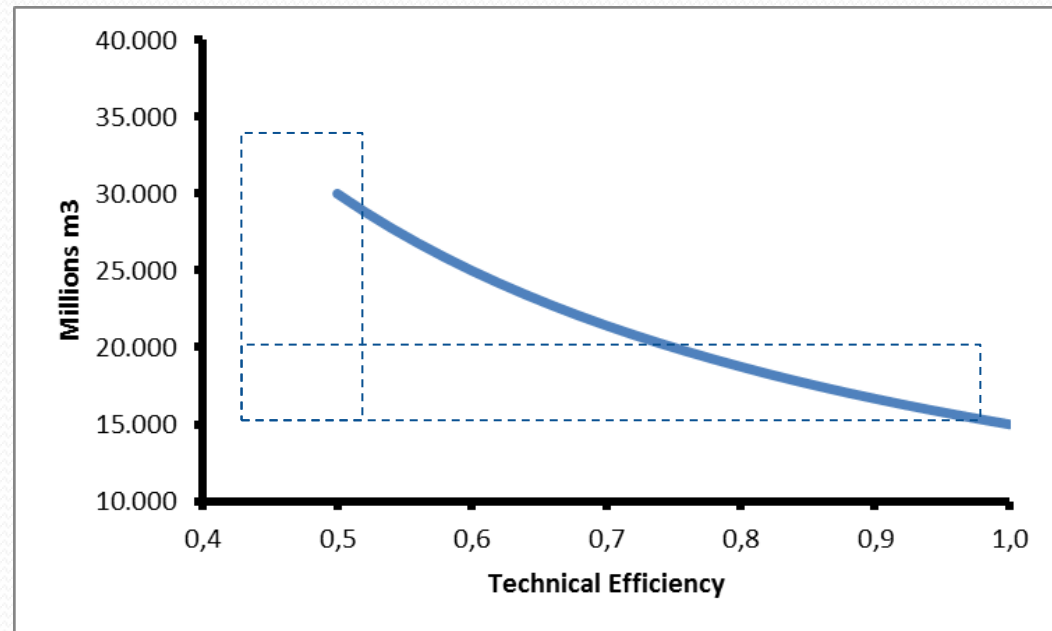
The naïve argument almost any politician is willing to buy:

If you are able to reduce the current efficiency gap by 20% you will save 3.000 million cubic meters of water per year.

The promise: Doing so is easy: increasing technical efficiency from the current 50% to 56% will do it.

The standard CEA: Assume this costs 3.000 million euros. You will receive 1 m³ from now to the eternity for each euro invested.

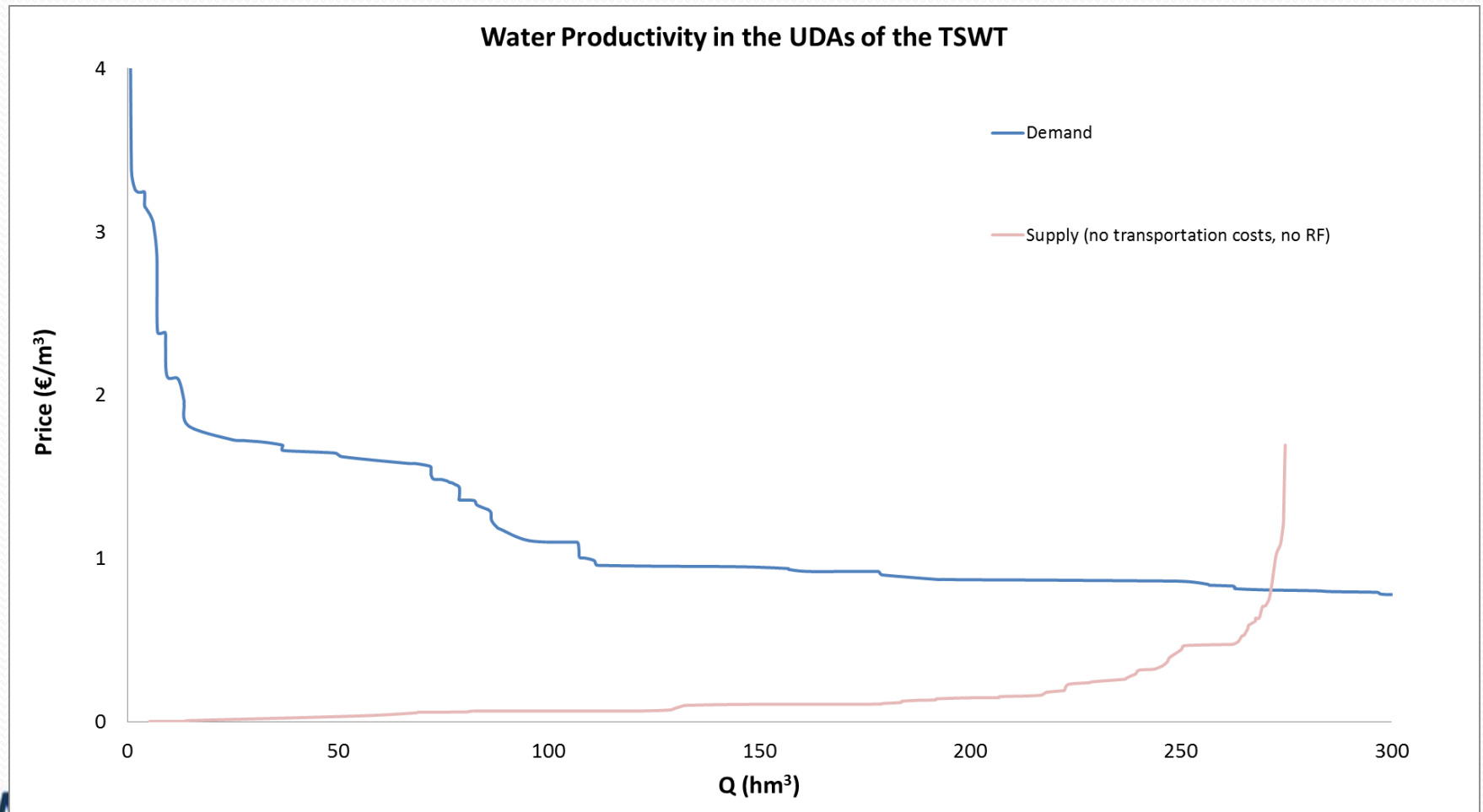
In a 40 year time horizon with a discount rate of 2% the yearly equivalent cost is only 3,7€cents/m³ (at a 0% discount rate it is only 2.5 €cents/m³). Better than any other alternative available.



#3: Beware of Jevons

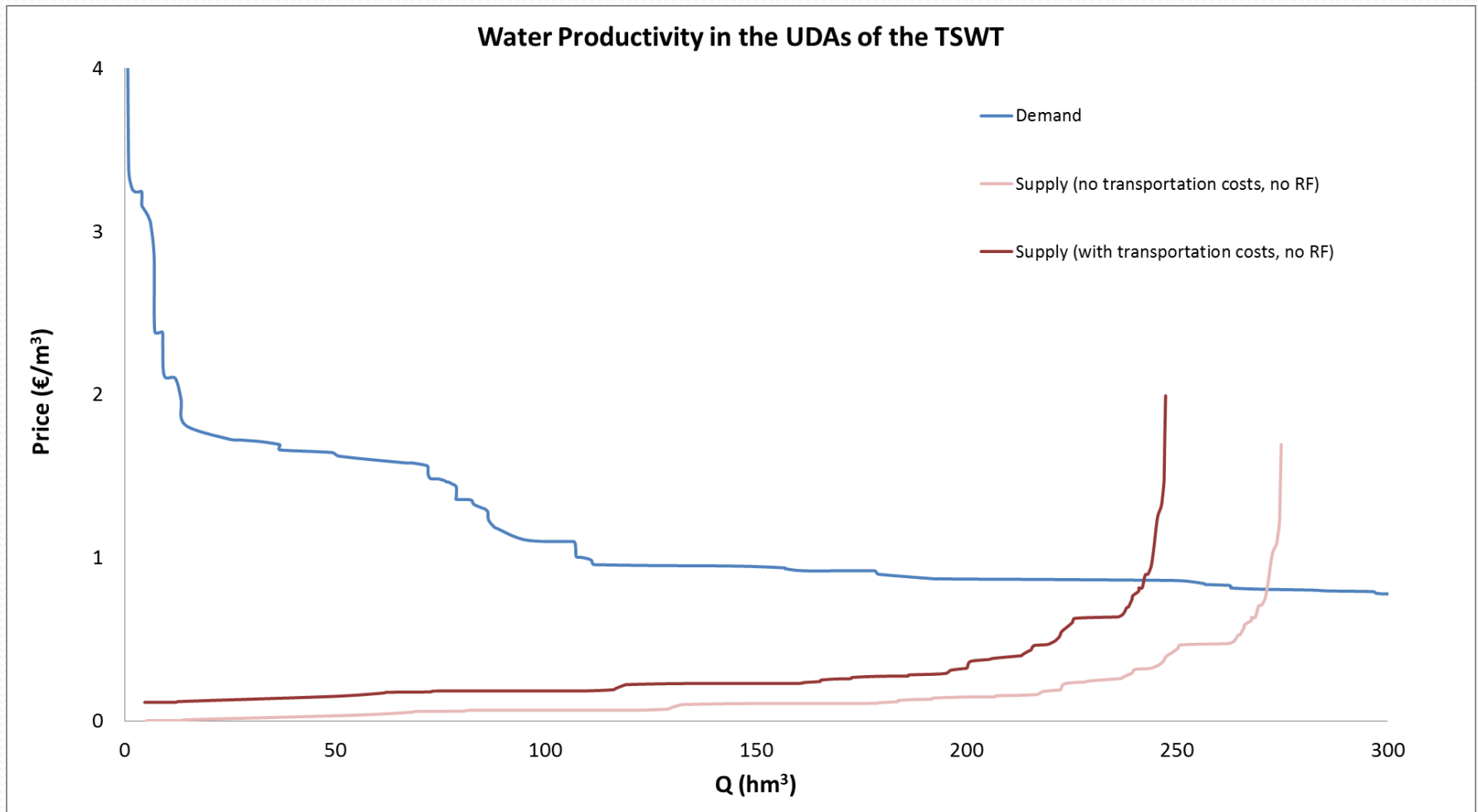
- **The many things you may get in exchange of good intentions**
- *Hydrological paradox:*
 - Efficiency improvements may reduce water use
 - However, increased consumptive use, reduced return flows and lost aquifer seepage may result in equal or higher consumption
- *Jevons' Paradox:*
 - An efficiency improvement makes water a more productive input this may result in an increase, rather than a reduction, in water use
- *Sustainability Paradox:*
 - As more efficient the use of water more energy consumption
- *The incentive/policy Paradox:*
 - If all this is true why farmers don't do it by themselves

#4: Participation and incentive compatibility

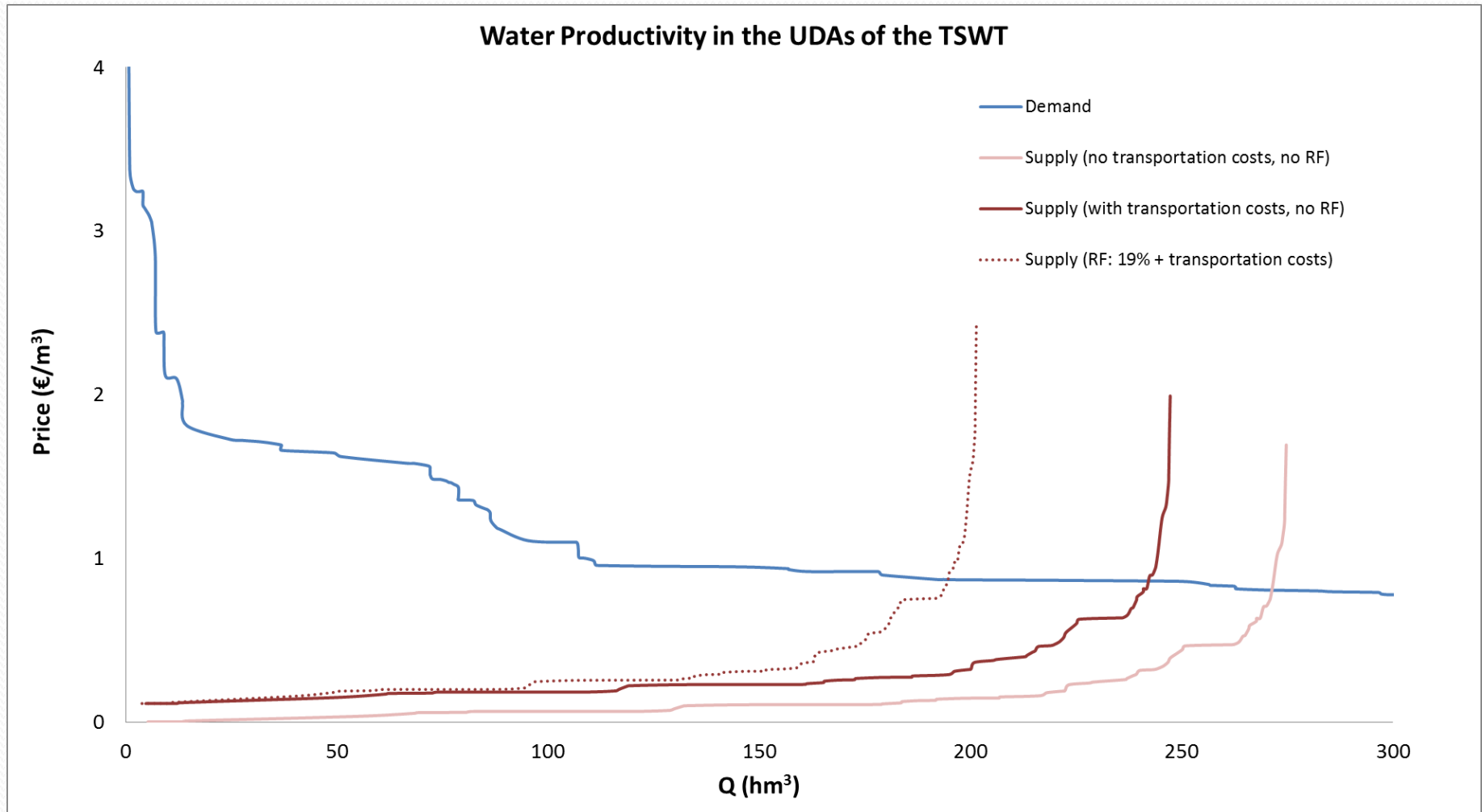


#4: Participation and incentive compatibility

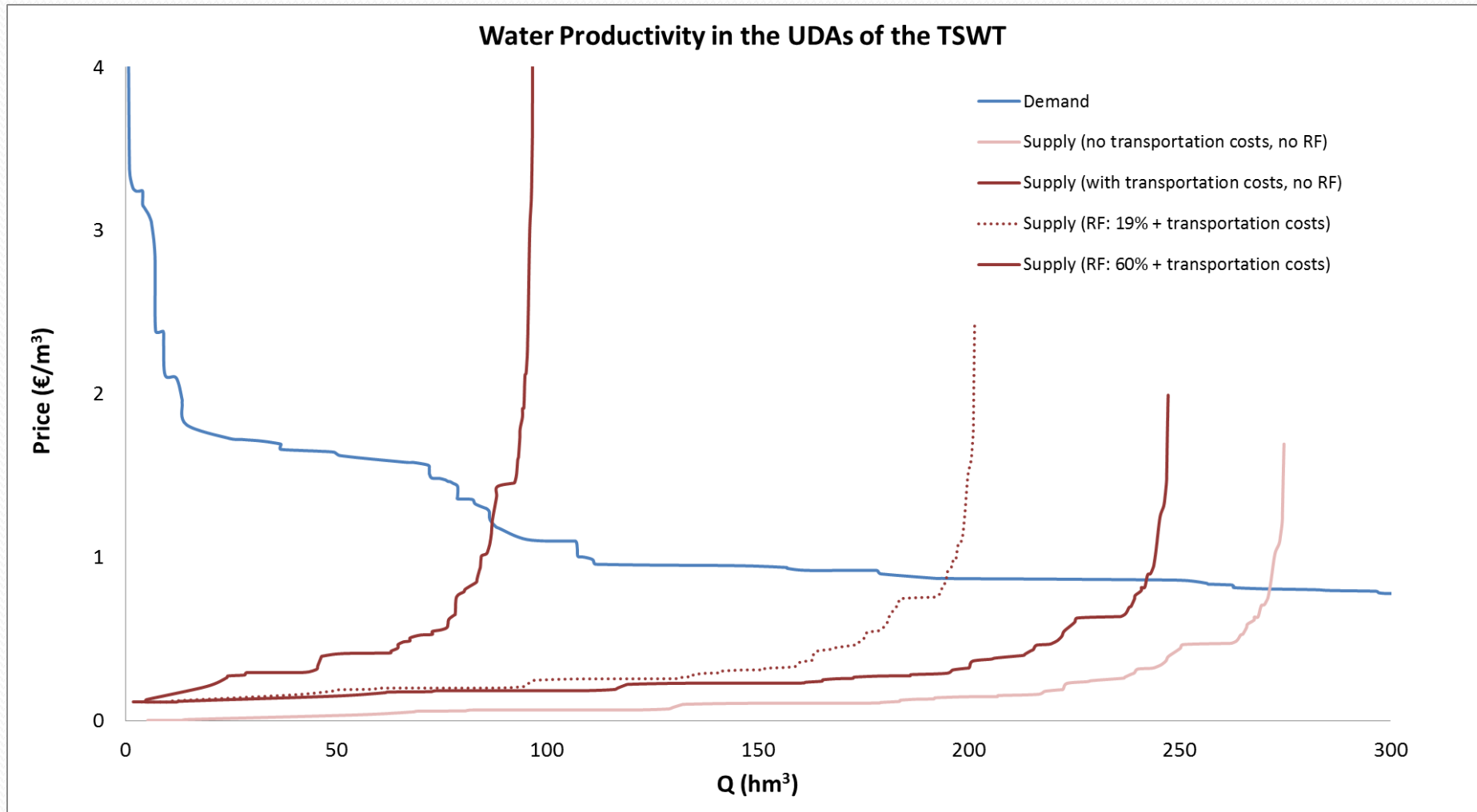
Water Productivity in the UDAs of the TSWT



#4: Participation and incentive compatibility



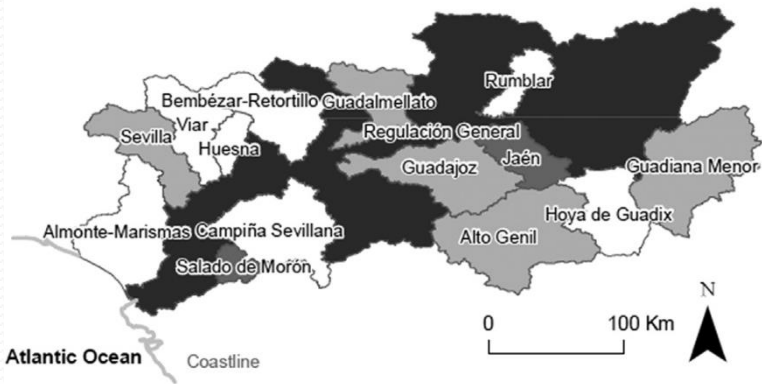
#4: Participation and incentive compatibility



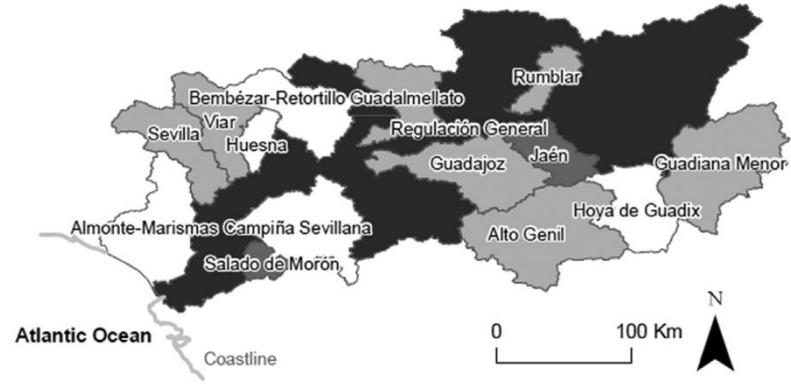
#5: Adaptability and flexibility



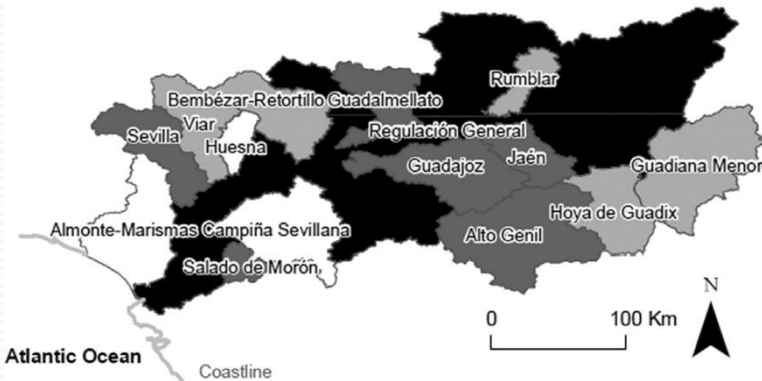
Climate projection for 2012-2040



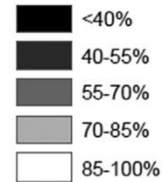
Climate projection for 2041-2070



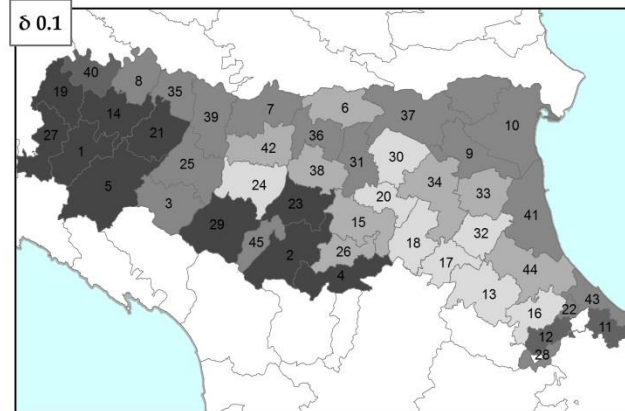
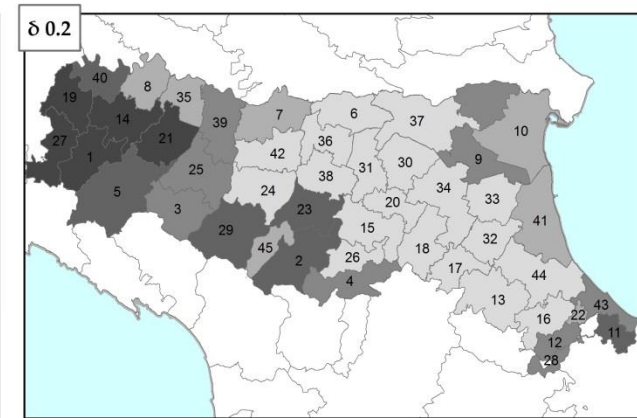
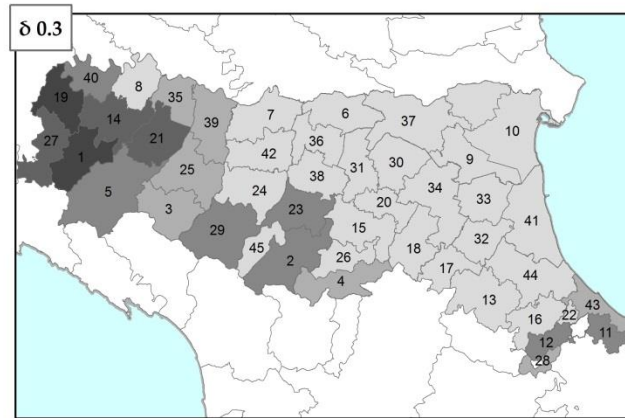
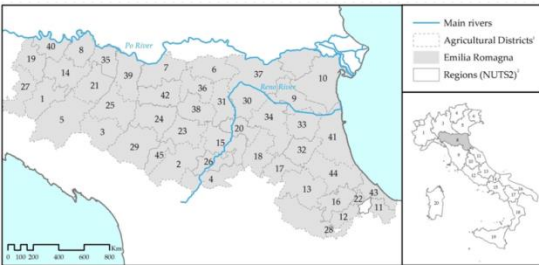
Climate projection for 2071-2100



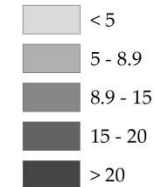
Expected Water Availability



#6: The critical role of PPPs



Willingness To Pay (%)



Synergies with the Water JPI Theme 5

- 5.1.2. Promoting adaptive water management for global change
- 5.1.6. Securing freshwater in the Mediterranean and Baltic basins &
- Whole subtheme 5.2. Strengthening socio-economic approaches to water management

Key Knowledge Gaps

- Economic instruments complement supply and regulatory policies, and other economic instruments as well
- Putting all together is challenging:
 - Institutional setup – the peril of **transaction costs**
 - **Policy mix**
 - **Sequencing** and spillovers
- Remember: there are **no silver bullets**
 - Learn from other experiences...
 - ...but it is the context what ultimately determines the solution

Project – Contact Details

- Email: jaroslav.mysiak@feem.it;
dionisio.perez@cmcc.it
- phone +39.041.27 00 445/472
- Websites: <http://www.feem-project.net/epiwater/index.html>
<http://www.enhanceproject.eu/>