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W₂A Water2Adapt

Resilience enhancement
and water demand management
for climate change adaptation

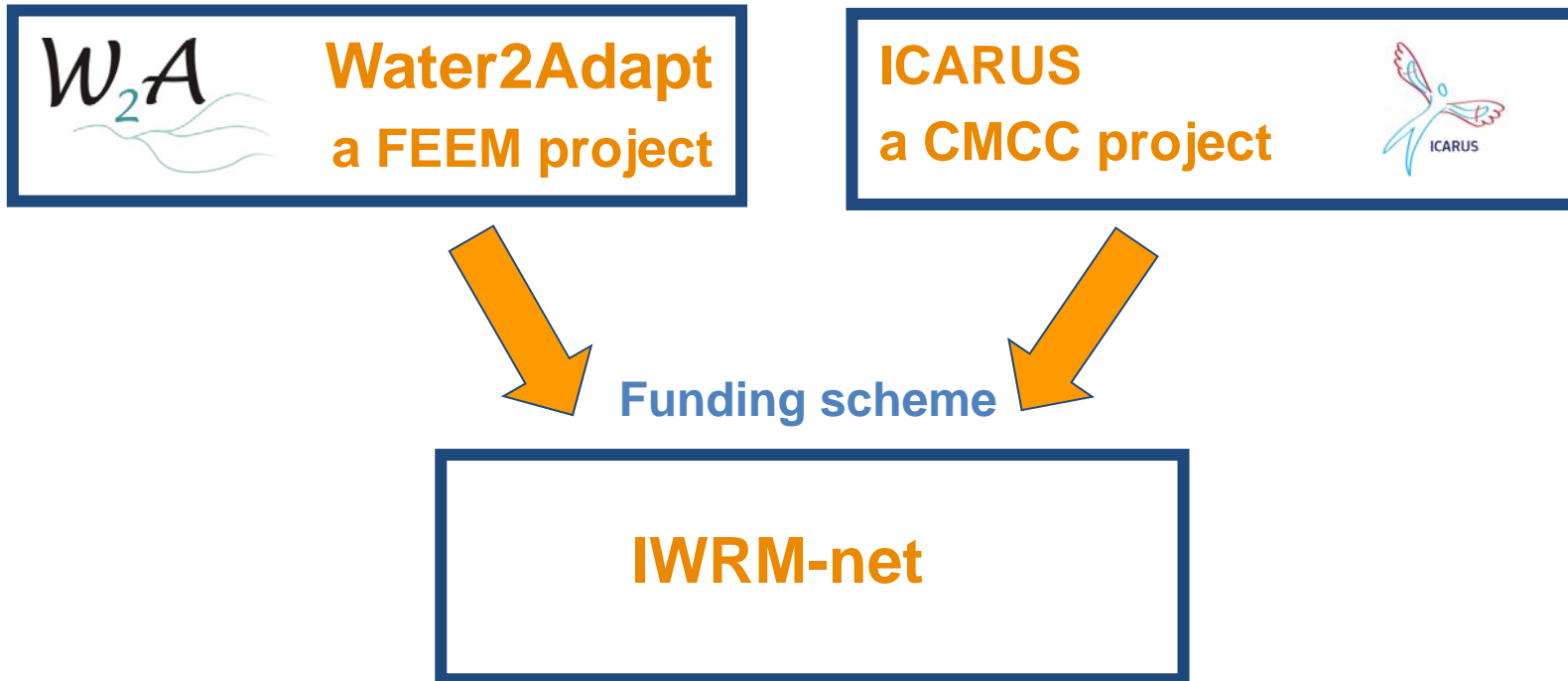**Gaia Sinnona**

Fondazione Eni Enrico Mattei

Venice, 13th October 2011

Two projects

Water2Adapt
a FEEM project

ICARUS
a CMCC project

Funding scheme

IWRM-net

Water2Adapt

Resilience enhancement and water demand management for climate change adaptation

Coordinator: Jaroslav Mysiak, Fondazione Eni Enrico Mattei (FEEM)

Duration: September 2010 – August 2012

Partners: Fondazione Eni Enrico Mattei (FEEM);

Seeconsult GmbH;

Basque Centre for Climate Change (BC3);

Chamber of Agriculture of Lower Saxony (CALS);

Fundação da Faculdade de Ciências e Tecnologia,Universidade Nova de Lisboa

What is about

Examine **recent drought events** in four selected river basins
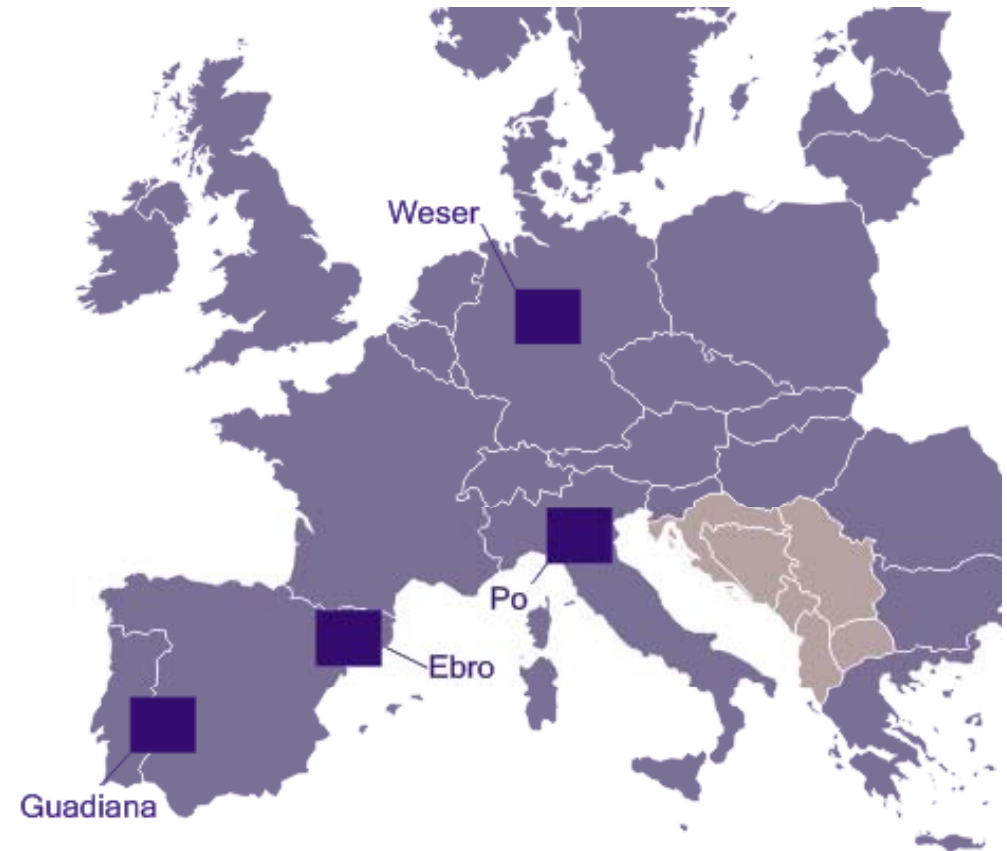
Italy

- River basin (RB): Po

Germany

- RB: Weser

Spain

- RB: Ebro

Portugal

- RB: Guadiana

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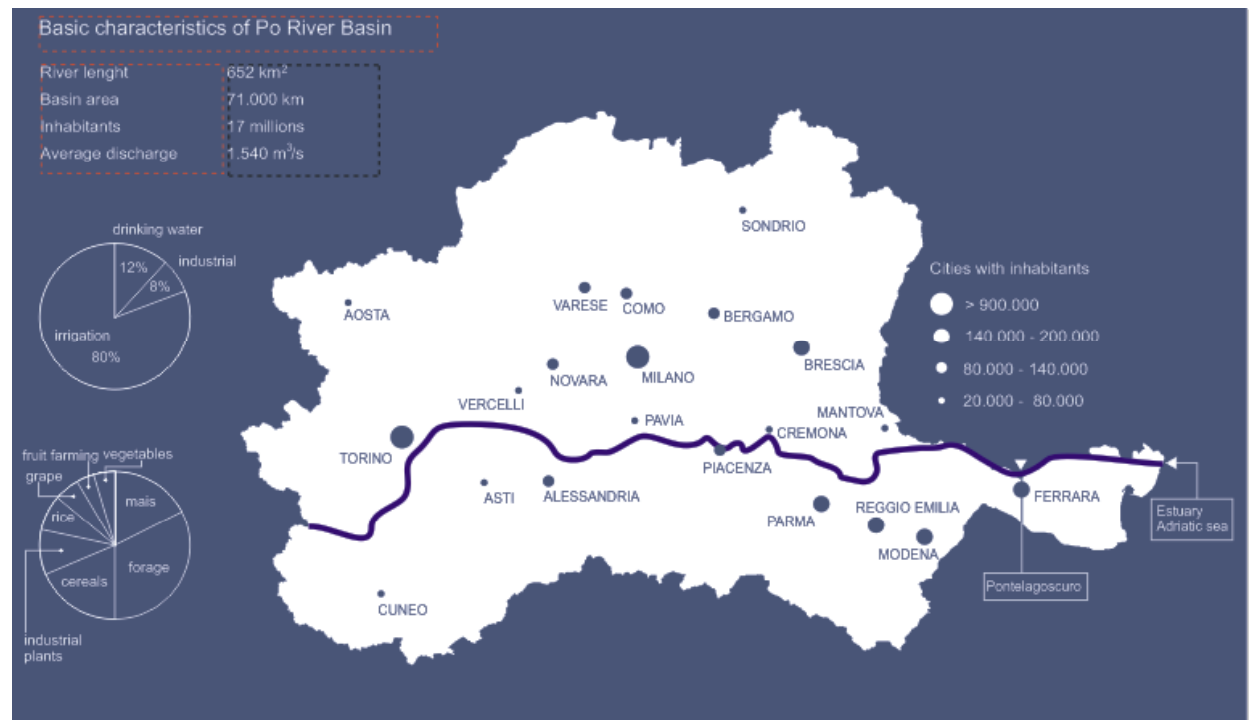ENRICO MATTEI

Objectives of the project

- Identify practices, which lead to **unsustainable** consumption and **inefficient** allocation of water;

- Assess the **social** and **economic** impacts of droughts;

and

- Analyze the performance and wider impacts of **water demand management policies**

Our research – case studies

Rural case studies: **La Muzza canal**

Trebbia river

Urban case studies: **Parma**

Ferrara

Droughts: **2003**

2006/7

Basic characteristics of Po River Basin

River lenght	652 km²
Basin area	71.000 km
Inhabitants	17 millions
Average discharge	1.540 m³/s

drinking water
industrial
12%
8%
irrigation
80%

Cities with inhabitants
> 900.000
140.000 - 200.000
80.000 - 140.000
20.000 - 80.000

SONDRIO
AOSTA
VARESE COMO BERGAMO
BRESCIA
NOVARA MILANO
VERCELLI MANTOVA
PAVIA CREMONA
TORINO PIACENZA
ASTI ALESSANDRIA FERRARA
REGGIO EMILIA Estuary Adriatic sea
PARMA
MODENA
CUNEO
Pontelagoscuro

fruit farming vegetables
grape
mais
rice
cereals
forage
industrial plants

Outputs

- Estimates of economic costs of droughts and social drivers of water scarcity,

- Policy recommendations on how to transform vulnerability to droughts into adaptation management tools

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Cities: derive indicators to compare main cities of the Italian regions

Regions:

Analysis of the Water Conservation Plans
(Piani di Tutela delle Acque)

Estimate the Italian water saving potetial
and
Adaptation measures

http://www.feem-project.net/water2adapt/index.html

Thank you for your attention

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Resilience

Resilience refers to the capacity of a system to absorb disturbances and reorganize, while undergoing changes to retain essentially the same function and identity