

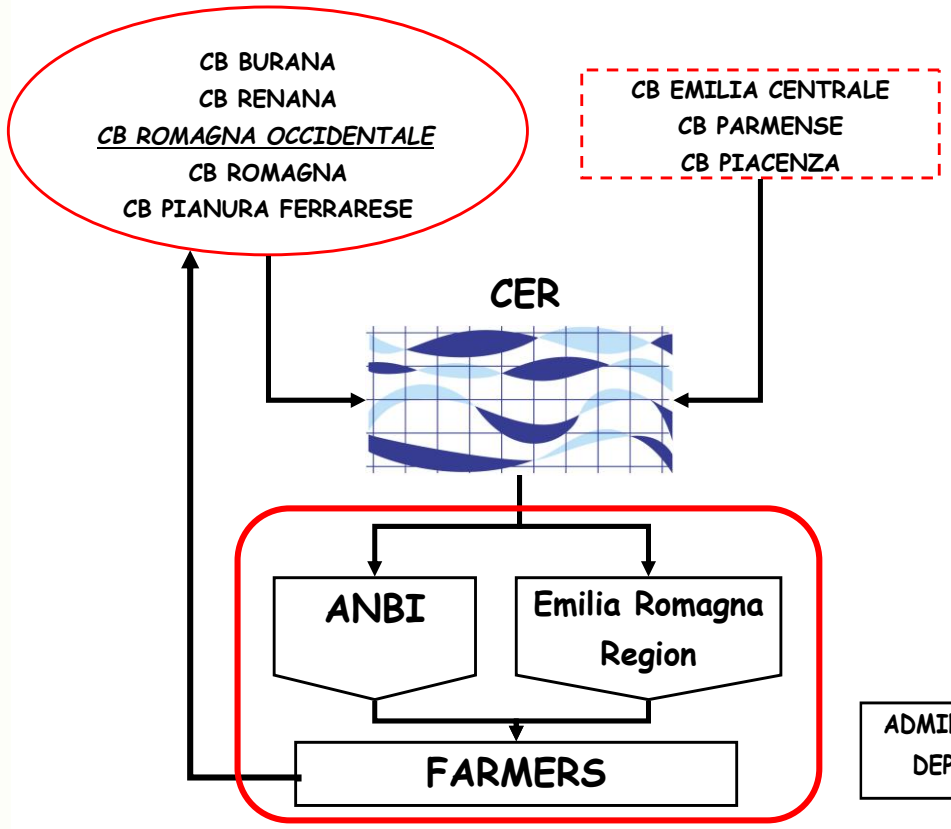
The role and activities of the EIP on water Management in Emilia-Romagna (RDP Measure 16.1.01)

Adriano Battilani
Consorzio Bonifica CER



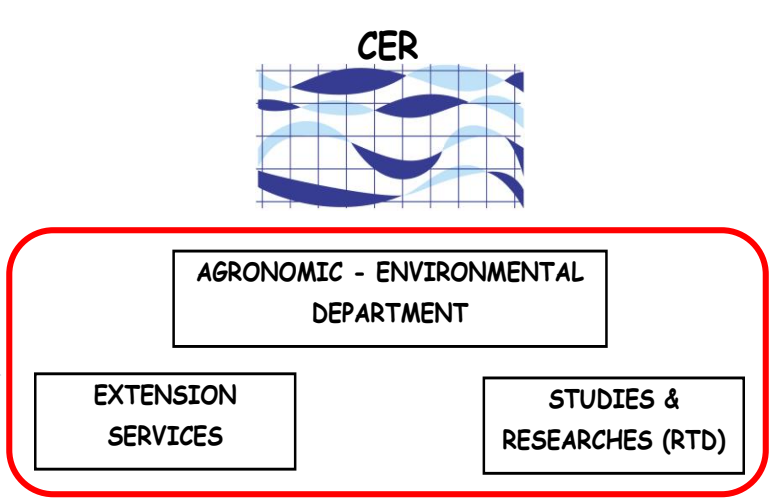
CONSORZIO DI BONIFICA DI SECONDO GRADO
PER IL CANALE EMILIANO ROMAGNOLO

Consorzio di Bonifica di secondo grado per il Canale Emiliano Romagnolo - CER



ADMINISTRATIVE DEPARTMENT

ENGINEERING DEPARTMENT





Sustainable, water and nutrient efficient, cropping systems



INNOVATION IS AN IRREMISSIBLE COMPONENTS OF A SUSTAINABLE WATER AND NUTRIENT EFFICIENT CROPPING SYSTEMS

INTEGRATED USE OF INNOVATION, CO-FERTILIZATION and KNOW-HOW CO-CREATION ARE OF THE UTMOST IMPORTANCE BUT OFTEN NEGLECTED

WE ARE WORKING TO BRING INNOVATION INTO THE EVERYDAY FARMERS' PRACTICE

CER's RTD & EXTENSION SERVICES

Current challenges in management of water for agriculture:
matching science and practice on farm level

THREE STEPS APPROACH



1- Acting on a vision

2- Building upon local assets

3- Preparing new solutions



EU PROJECTS

Acting on
a Vision



EU Project
SIRRIMED

Sustainable use of irrigation water in the Mediterranean Region:

Integrated approach to water use and Management; System harmonisation; Participatory approach to build local capacity and support innovation in irrigated agriculture; Impact assessment/Benchmarking.



SAFIR

Safe and High Quality Food Production using Low Quality Waters and Improved Irrigation Systems and Management



EU Project
SAFIR

Safe and High Quality Food Production using Low Quality Waters and Improved Irrigation Systems and Management: *New technologies for safe water reuse; Fertigation; Novel Irrigation Strategies; Irrigation water quality.*



EU PROJECTS

Acting on
a Vision



EU Project
WATERSTORE2

Reconciling agriculture with environment through A new water governance in coastal and saline areas - Waterstore2: *Automatic decision-making system for the management of rainwater and water governance in coastal irrigation district (Ramsar, Nature 2000) on saline soils; Impact assessment/Benchmarking.*

Water4Crops



EU Project
WATER FOR CROPS

Integrating biotreated wastewater reuse and valorization with enhanced water use efficiency (WEF) to support the Green Economy in EU and India: *Novel management of moderately saline treated waste water; Irrigation strategies; Fertigation; Innovative crop water requirement and soil moisture measurement; PPP and business models.*

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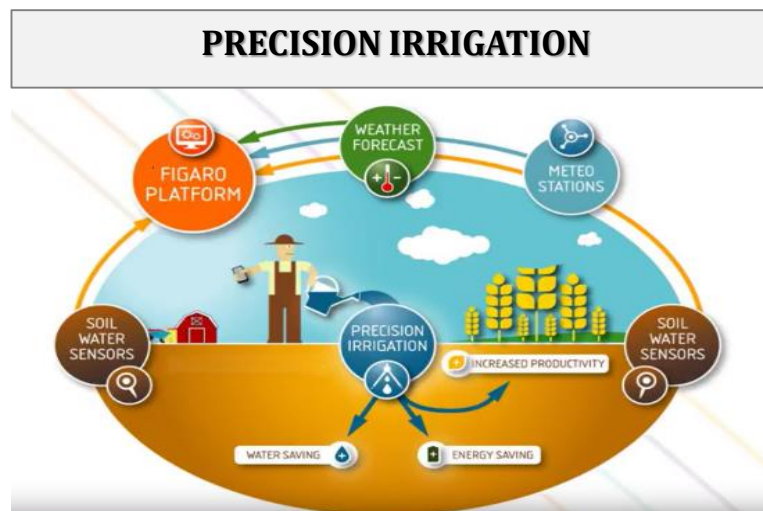
EU PROJECTS

Acting on
a Vision



EU Project
FIGARO

Flexible and precise irrigation platform to improve farm-scale water productivity: *Irrigation strategies; Fertigation; Integration of Satellite or proximity sensors borne data into existing DSSs and Management Models; Optimization; Precise Irrigation Platform*



EU PROJECTS

Acting on
a Vision



EU Project
ALADIN



Variable Rate Sprinkler Irrigation: Reel Machine parameter real time adjustment using soil moisture mapping and sensor borne parameters.

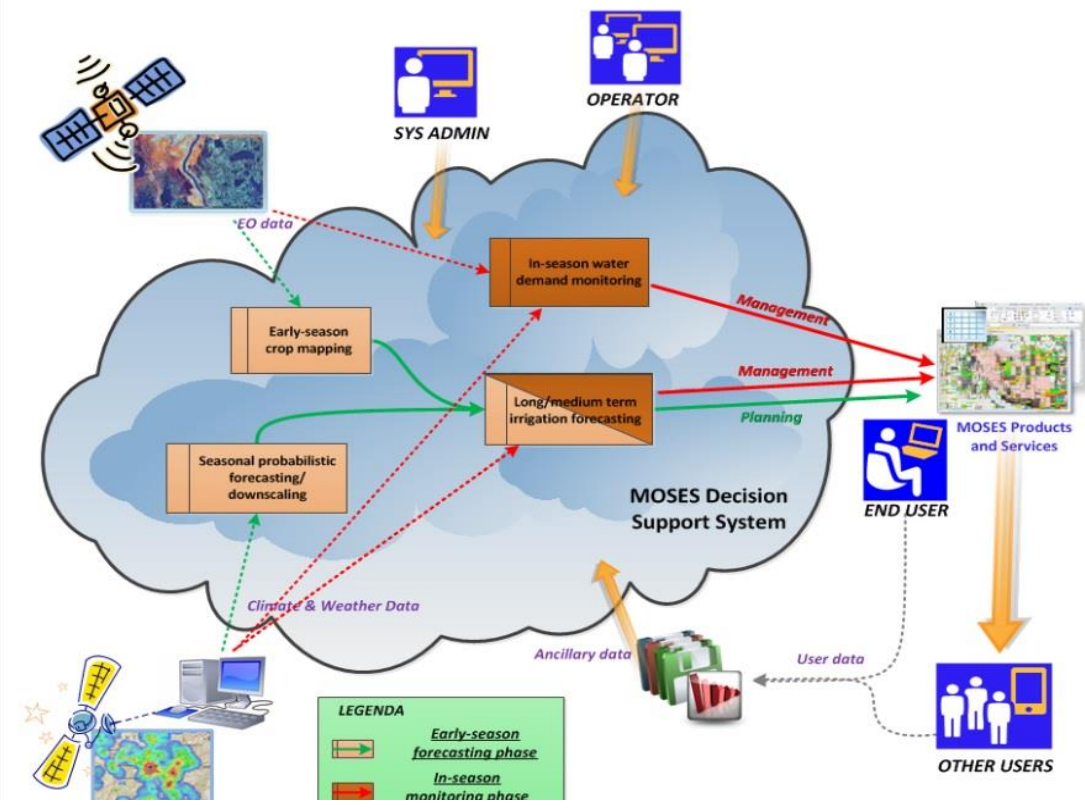


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EU Project
FIGARO

Managing crOp water Saving with Enterprise Services: Long, Medium, Short term Weather Forecast implementation into Agricultural Water Management; Satellite Remote Sensing borne information assimilation into daily crop water management models.

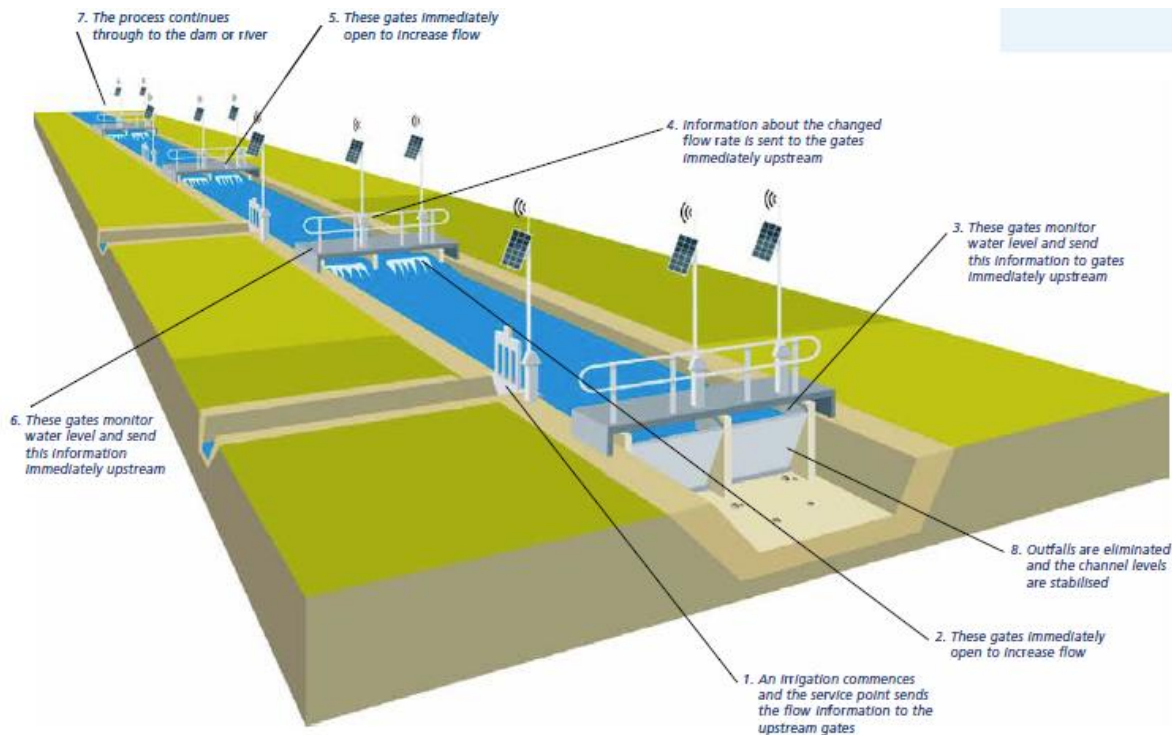


Smart agricultural water network

Automation of the water conveyance according to the crop water requirements as calculated by IRRINET

PARTNERS

CER
UNIBO-
DIPSA
CIO
CRPV



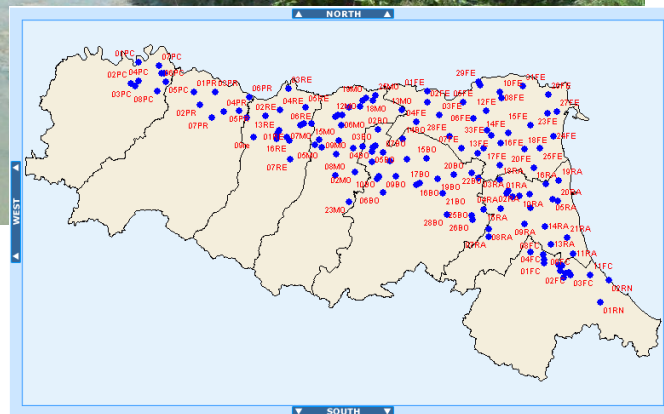
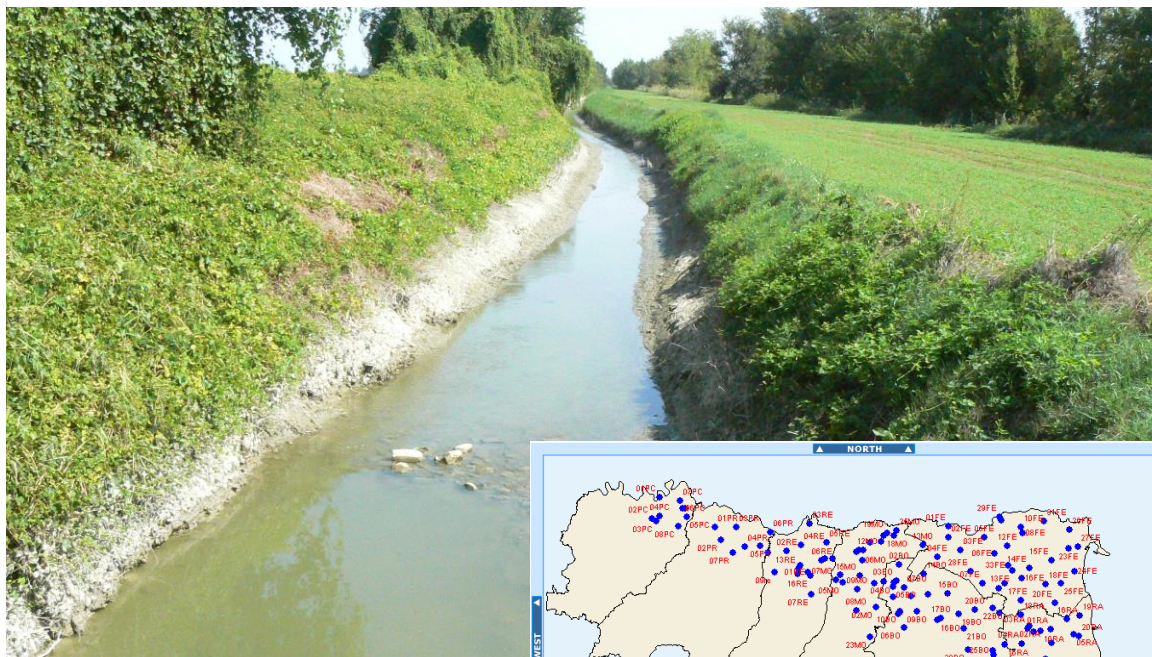
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RDP PROJECTS

Building Upon
Local Assets

Watertable

Management of the Watertable monitoring network aiming to assess the influence of precipitation and agricultural water network management.



PARTNERS

- CER
- Unibo DICAM
- CNR-IBIMET
- Bologna
- CRPV
- Soc. Agr. Visentini
- Az. Agr. Cremonini
- Fruit Modena Group





Sensors networks integration in IRRINET

Integration of sensors and climate stations private networks within the IRRINET model



PARTNER
CER
Unibo DIPSA
CRPV
Apofruit
Soc. Agr. Sandri
(Assopa)
CIO

Sustainable Irrigation in Fruit Crops



PARTNERS

CER

Unibo DIPSA

CNR-IBIMET Bologna

Fondazione F.lli Navarra

Soc. agr. Mazzoni

Fruit Modena Group

Apofruit

CRPV

ACTION 1 Sustainability of Drip and Sprinkler Irrigation Systems on Pear Orchards

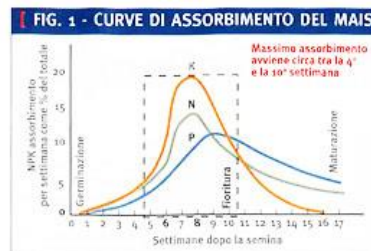
ACTION 2 - Ultra Low Drip Irrigation

ACTION 3 - Water Saving on Kiwi fruit by improvement of daily water uses

ACTION 4 - Fruit crops canopy cooling techniques

FERTIRRINET

Implementation of a fertigation software into IRRINET



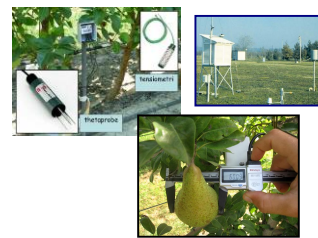
PARTNERS

- CER
- CRPV
- CIO
- Apofruit
- Grandi Colture Italiane
- Soc. Agr. Sandri

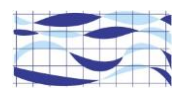
5a - Sistemi irrigui sostenibili in frutticoltura



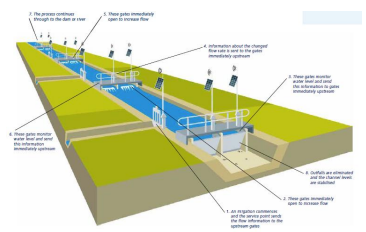
5a - INTEGRAZIONE SENSORI E IRRINET



IRRINET - CER



5a - Reti di consegna intelligenti



5a - FALDA



5a - ACQUA IN MOSTRA



4b - FERTIRRINET



IRRINET & IRRIFRAME

Preparing
New Solutions



mipaaf
ministero delle
politiche agricole
alimentari e forestali

The irrigation model has been developed by CER and has been validated locally over more than 30 years of research in the field of soil/plant/water relation and irrigation technologies and strategies (IRRINET service ER).

In Italy, the Irriframe cloud service is provided by ANBI - the Italian Association of land and water management and protection Consortia.

Irriframe is working at national level since 2012, covering most of the Italian irrigable areas, summing up to more than 7 million hectare managed. The Italian Ministry of Agriculture (MIPAAF) supports the service since 2014.

IRRIFRAME provides a daily-basis irrigation scheduling to thousands of farms through the Web, SMS and a Smartphone APP.



Mapa copertura del servizio



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CER's EXTENSION SERVICE PACKAGE



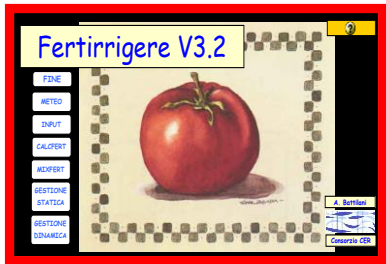
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Preparing
 New Solutions

Irrigation Scheduling DSS



Water and Nutrients joint management (Fertigation)

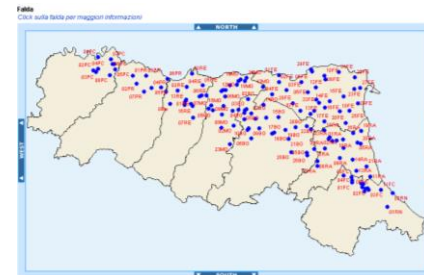


Tools: Filtering station design;
 Micro Irr. Systems design; Pipe sizing;
 Micro Irr. Equipment quality assessment;
 System discharge.

Irrigation water Quality

Water table depth monitoring network

Scientific and vulgarization papers on Irrigation



TRAINING BY DEMONSTRATION

Preparing
New Solutions

ACQUA IN MOSTRA



PARTNER

CER

CRPV

APOFRUIT

Fruit Modena Group

Grandi Colture Italiane

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EIP Water AG WIRE

Preparing
New Solutions

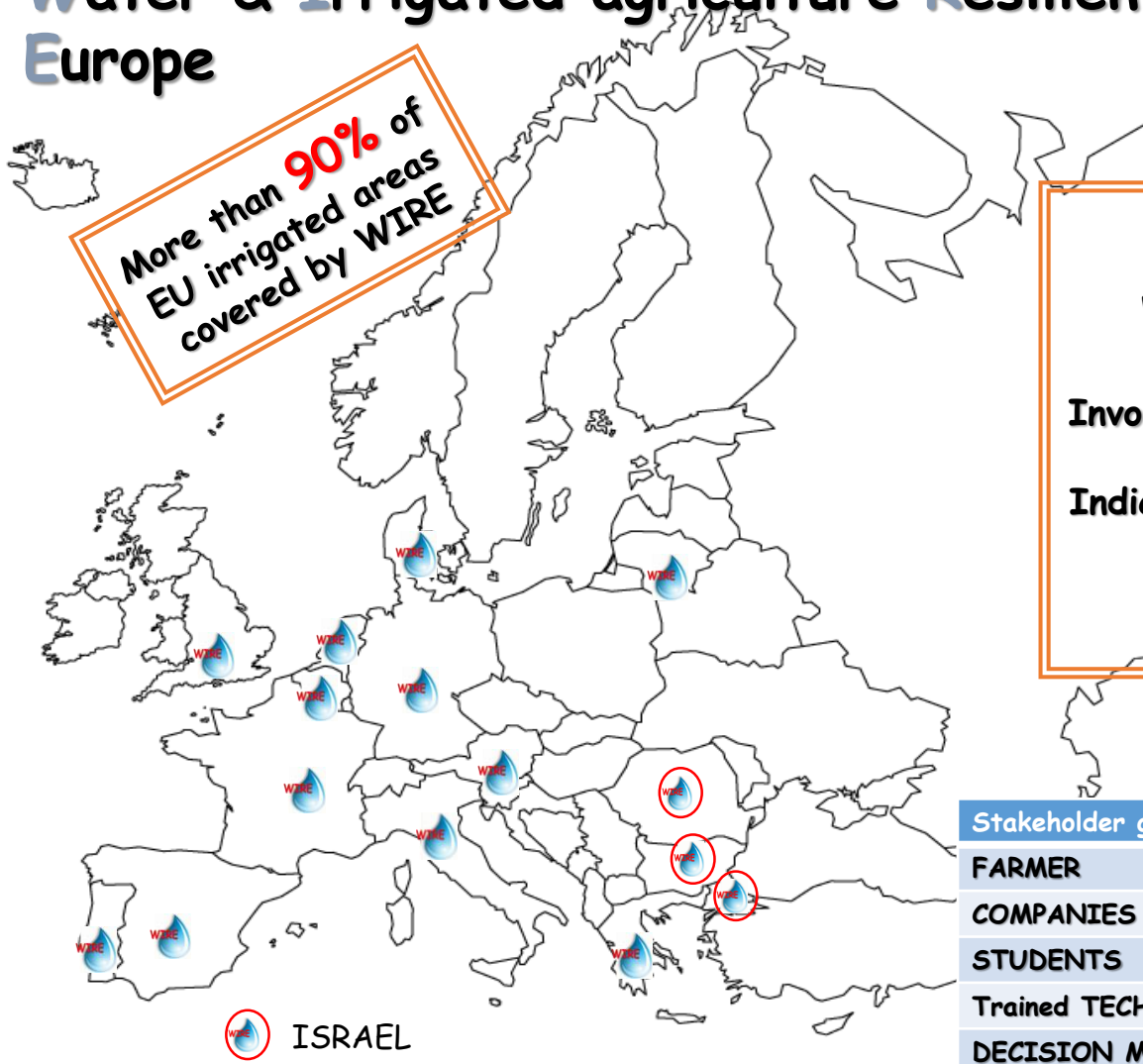
Water & Irrigated agriculture Resilient Europe



More than **90%** of EU irrigated areas covered by WIRE

Presented in **53** workshops/seminars/events
20 events branded WIRE
 Involved as Stakeholder in **31** new EU project proposals
 Indicated as link with EIP water in **25** EU project proposals
 Grouping **54** Demosites

Last updated February 2017

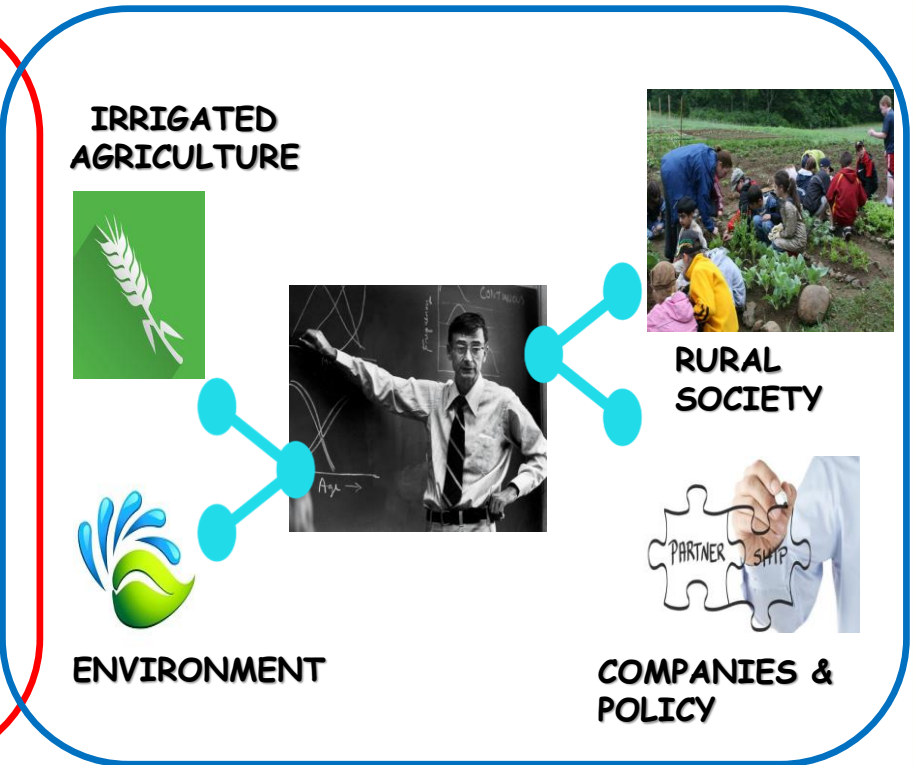
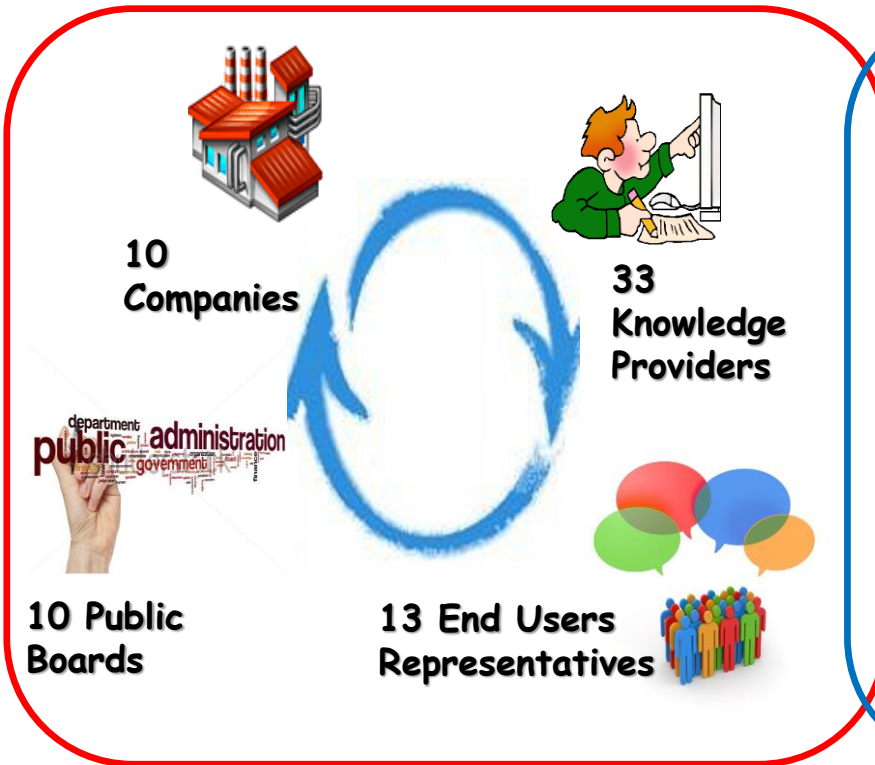


Stakeholder group	Directly connected (n.)
FARMER	> 410000
COMPANIES	> 1500
STUDENTS	> 12000
Trained TECH. + FARMERS	> 30000
DECISION MAKERS	> 900





WIRE: a multiactor partnership connecting science to problem owners



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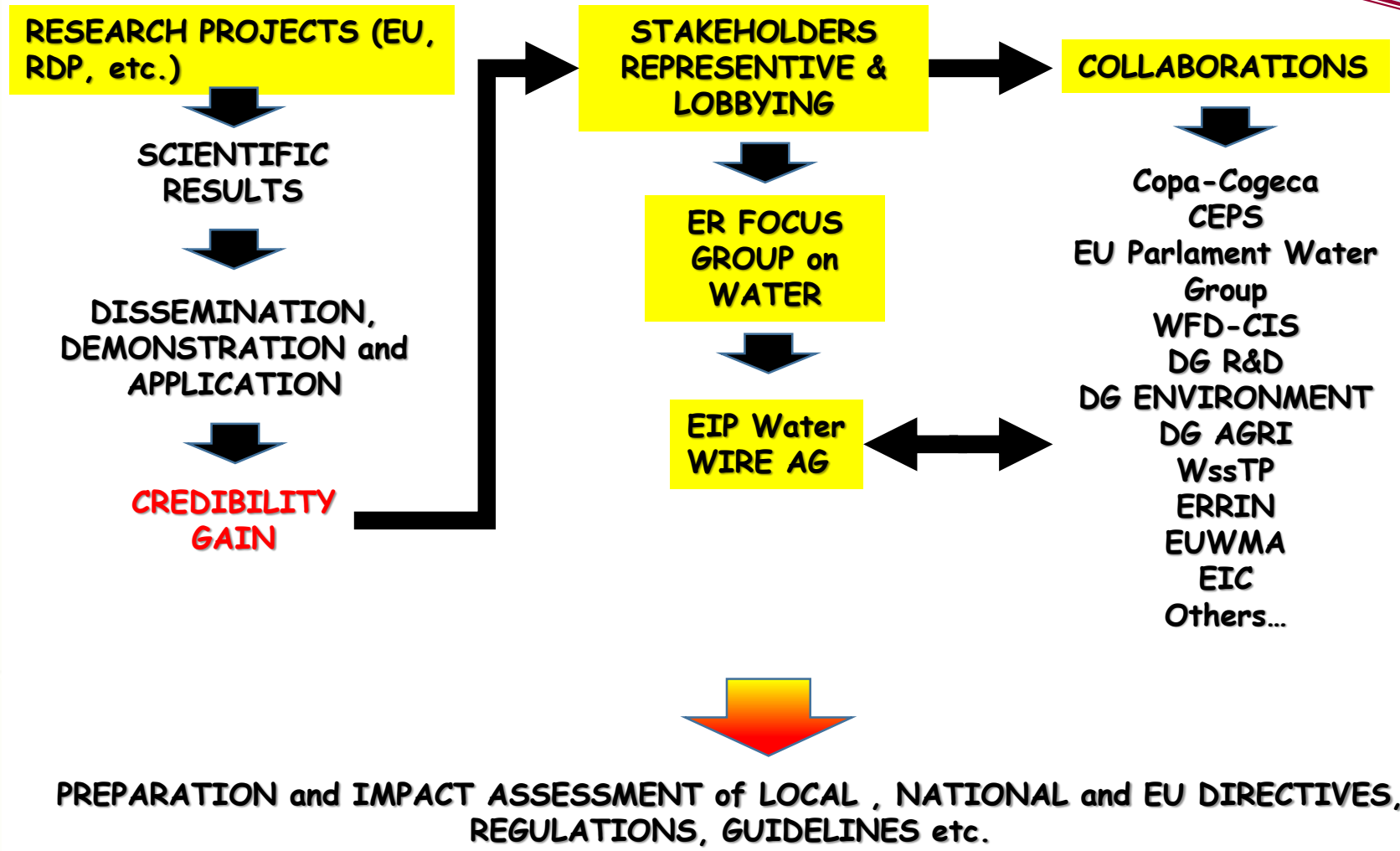
EIP Water AG WIRE

Preparing
New Solutions



CER AS STAKEHOLDER

Preparing
New Solutions



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