

Iniciativas Europeas de Programación Conjunta: La JPI del Agua



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MINECO, Coordinador,
JPI del Agua
Leioa, 28 de mayo, 2013

Contenidos

- El proceso de Programación Conjunta
- La JPI del Agua
- La JPI de Agricultura (FACCE)
- Los vecinos de las JPIs:
 - Horizonte 2020
 - Las “European Innovation Partnerships”
 - El Plan Estatal de Investigación Científica y Técnica y de Innovación



Joint Programming Initiatives: situation and perspectives



History of Joint Programming

- In 2008 the EC challenged Member States to develop initiatives on Joint Programming
- Increasing the efficiency and impact of national public funding in strategic areas.
- Joint Programming targets public Research, Development and Innovation (RDI) programmes first and foremost: public-public cooperation.

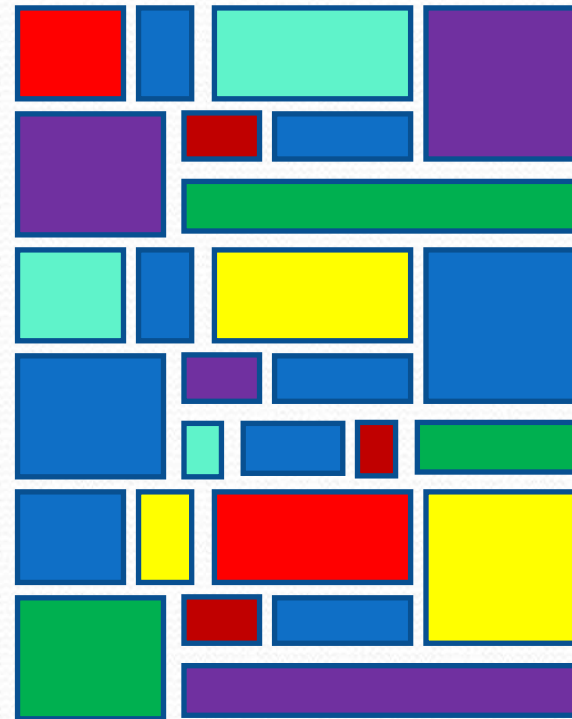
An old FP instrument: ERA-NET

- Objective: cooperation and coordination of research activities carried out at national or regional level in the Member States and Associated States through:
 - The networking of research activities conducted at national or regional level, and
 - the mutual opening of national and regional research programmes.
- Making a reality of the European Research Area
- Enable national systems to take on tasks collectively that they would not have been able to tackle independently.
- Participants: National funding organizations, such as Plan Nacional or INIA
- KBBE (ERA CAPS), IWRMNet, Biodiversa, CIRCLE, FORESTERRA... MANUNET...

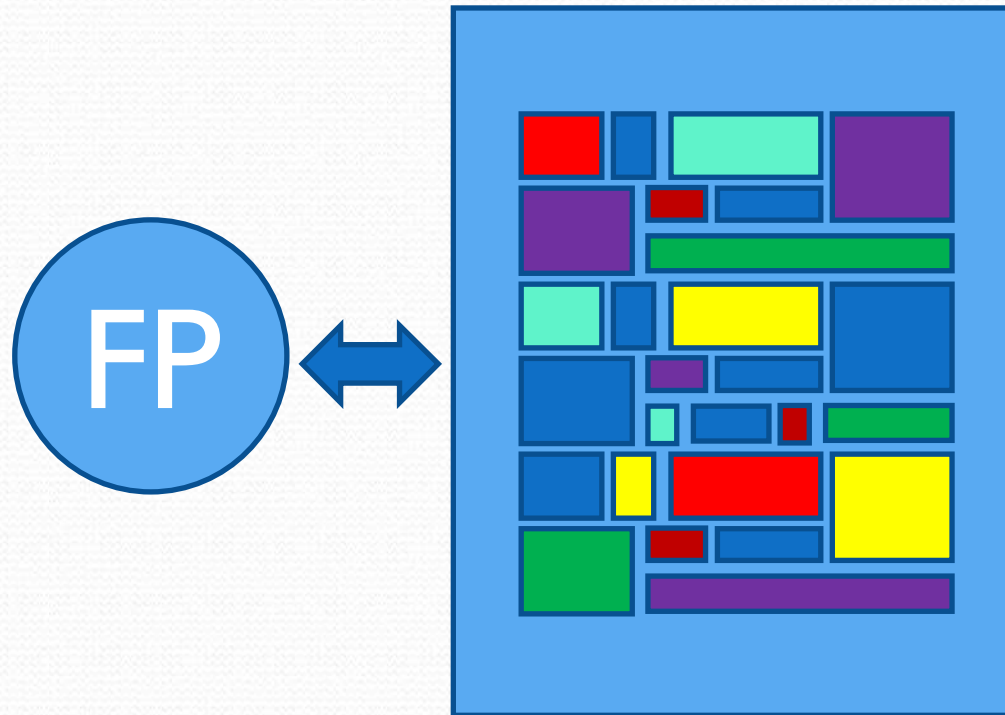
Joint Programming and the EU Framework Programme

- The Framework Programme represents 10-20% of the funding for RDI in Europe
- The rest of the funding is in the hands of National and Regional Programmes in Europe
- The Framework Programme will not have it easy to grow out of these bounds
- Joint Programming aims at attaining European added value out of the funds controlled by National programmes

The FP and national/regional Research, Development and Innovation Programmes



The FP and national/regional Research, Development and Innovation Programmes



Joint Programming can:

- Avoid duplications
- Exploit synergies
- Reinforce European capacity to **transform research results into societal** and economic benefits:
 - Innovative capacity of European industry
 - Fostering demand for the resulting innovations.

Joint Programming

- Coordination of the national / regional, public, research, development and innovation programmes in Europe
- A new way to address RDI problems with European dimension
- A process based on variable geometry

What do JPIs do?

- Harmonize / Align National and Regional RDI Funding Agencies
- Perform Funding activities
 - Projects, Networking, Sharing research results, mobility, infrastructure...
 - Taking advantage of opportunities in the Framework Programme
 - Frequent funding arrangement: “Virtual Common Pot”: Every country pays his own partners directly

So, what is there for me?

- A new “agency” for projects
 - European dimension
 - Similar to the Framework Programme
- A Facilitator for Infrastructure, Mobility, Networking
- An attractive alternative, particularly if:
 - The Framework Programme Changes orientation
 - National / Regional programmes weaken

Ten ongoing JPIs today

- Neurodegenerative Diseases/Alzheimer's → Pilot
 - **Food Security, Agriculture & Climate Change**
 - Cultural Heritage & Global Change
 - More Years, Better Lives
 - A Healthy Diet for a Healthy Life
 - Urban Europe
 - Connecting Climate Knowledge for Europe
 - Antimicrobial Resistance
 - **Water Challenges for a Changing World**
 - Healthy & Productive Seas and Oceans
- First Wave
- Second Wave

JPI Activities



- Neurodegenerative Diseases/Alzheimer's
 - Concluded a transnational call, 16 M€
 - Publishes two 2012 calls for 19 + 10 M €
 - USA has announced a 500 M€ programme
- Agriculture, food security and climate change
 - Developed the “knowledge hub”
 - MACSUR: Modelling European Agriculture with Climate Change for Food Security: 73 partners from 17 countries, 15 M€, 8 are new money
 - 2012 call on mitigation for 12 M€



Urban Europe

- 2012 Pilot call for 7.5 M€
- Plans for a second call in 2013

JPIs starting activities in 2013-4



- Healthy diet for a healthy life
- Cultural Heritage and Climate Change
- JPI Climate
- More years, better lives
- Microbial Challenge
- Healthy and Productive Seas and Oceans
- Water JPI



The Water JPI: Origin and Current Status

Starting up the Water JPI

- Preparatory work: from 2008 to 2010
 - Identifying partners in Europe
 - Building preliminary consensus on topics and scope
- The water JPI coordinated by Spain (MINECO), co-coordinated by the Netherlands
- Kick-off meeting, September 29th, 2010



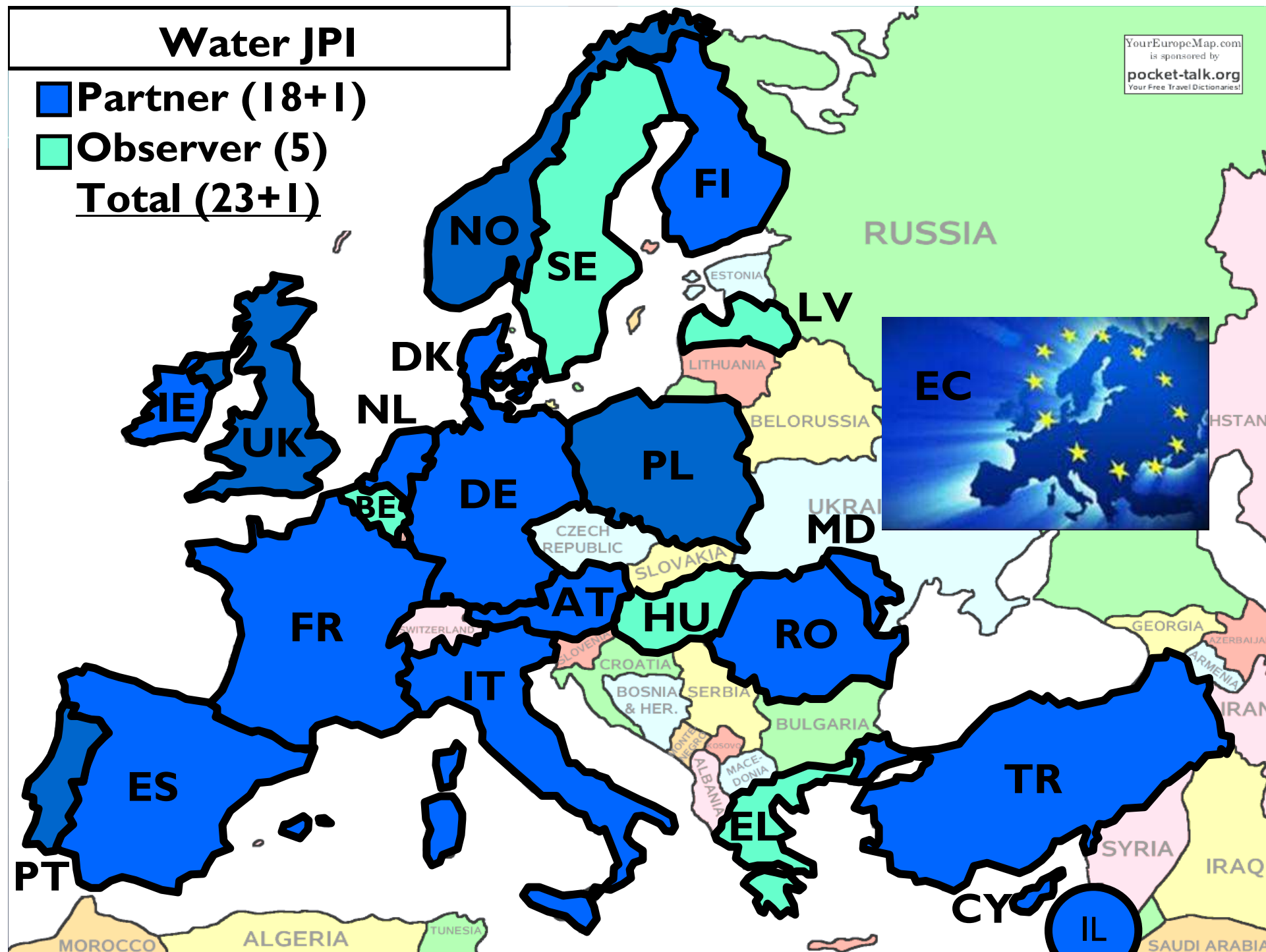
Water JPI

■ Partner (18+1)

■ Observer (5)

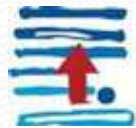
Total (23+1)

YourEuropeMap.com
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pocket-talk.org
Your Free Travel Dictionary!



JPI Partners: the Programme Logo Gallery

Cyprus



Research
Promotion
Foundation

MINISTRY OF AGRICULTURE
NATURAL RESOURCES AND ENVIRONMENT



PLANNING BUREAU

Denmark



Danish Agency for Science
Technology and Innovation
Ministry of Science
Technology and Innovation



Danish Ministry
of the Environment

Finland

AKVA GROUP

ACADEMY OF FINLAND



TEKES



Water

METLA



mmm.fi

MINISTRY OF AGRICULTURE AND FORESTRY

Ministry of Education and Culture

Opetus- ja kulttuuriministeriö

Undervisnings- och kulturministeriet



S Y K E

Germany



Bundesministerium
für Bildung
und Forschung



FONA
Research for Sustainable
Development
BMBF



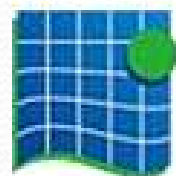
JÜLICH
FORSCHUNGSZENTRUM

JPI Partners: the Programme Logo Gallery

France



Ireland



Israel



JPI Partners: the Programme Logo Gallery

Italy



The Netherlands



Norway



NORWEGIAN DIRECTORATE
FOR NATURE MANAGEMENT



JPI Partners: the Programme Logo Gallery

Poland



Ministry
of Science
and Higher
Education

Republic of Poland

European Regional Centre for Ecohydrology
under the auspices of UNESCO
International Institute of the Polish Academy of Sciences

Portugal



Fundação para a Ciência e a Tecnologia
Instituto de Investigação Científica

MCTES MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR
Ministry of Science, Technology and Higher Education

Romania



AUTORITATEA NAȚIONALĂ PENTRU CERCETARE ȘTIINȚIFICĂ

UE fiscodi

Spain



GOBIERNO
DE ESPAÑA

MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD

Turkey



TÜBİTAK

The Scientific and Technological Research Council of Turkey

United Kingdom

NATURAL
ENVIRONMENT
RESEARCH COUNCIL



Centre for
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL



Department for Environment
Food and Rural Affairs

Water JPI Governance

- Governing Board
- Executive Board
- Advisory Boards
 - Scientific and Technological Board
 - Stakeholders Advisory Group
- Secretariat

The vision document

- The grand challenge:
“Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad”



An interrelated set of challenges

- Economic
 - The world market water: \$ 463 billion/year
 - Investments in water technology around the world increase every year
 - High risk of ineffective investments if the water system is not properly understood
- Ecological
 - Overexploitation and degradation decrease ecosystem ability to provide resources
 - Extreme events have a clear impact on European ecosystems

An interrelated set of challenges

- Societal
 - Right to clean drinking water and proper sanitation
 - Protection from new and emerging water pollutants
- Technological
 - Major breakthroughs in drinking water technology and sanitation
 - Reducing energy input in desalination and water treatment processes.
 - Co-generating energy in processes such as sewage treatment

JPI Objectives

- Involving water end-users for effective RDI results uptake.
- Attaining critical mass of research programmes.
 - Involve at least two-thirds of the public National water RDI investment in Europe.
- Reaching effective, sustainable coordination of European water RDI.
- Harmonising National water RDI agendas in Partner Countries.
- Harmonising National water RDI activities in Partner Countries.
 - Develop a catalogue of jointly programmed activities whose global budget amounts to at least 20 % of the total water RDI budget of partner Programmes.
- Supporting European leadership in science and technology.

Mapping Water RDI funding

- Country summary reports were produced for all countries (30 = JPI + rest of MS + some AC)
- Surveyed / Estimated mobilization of resources through the JPI:

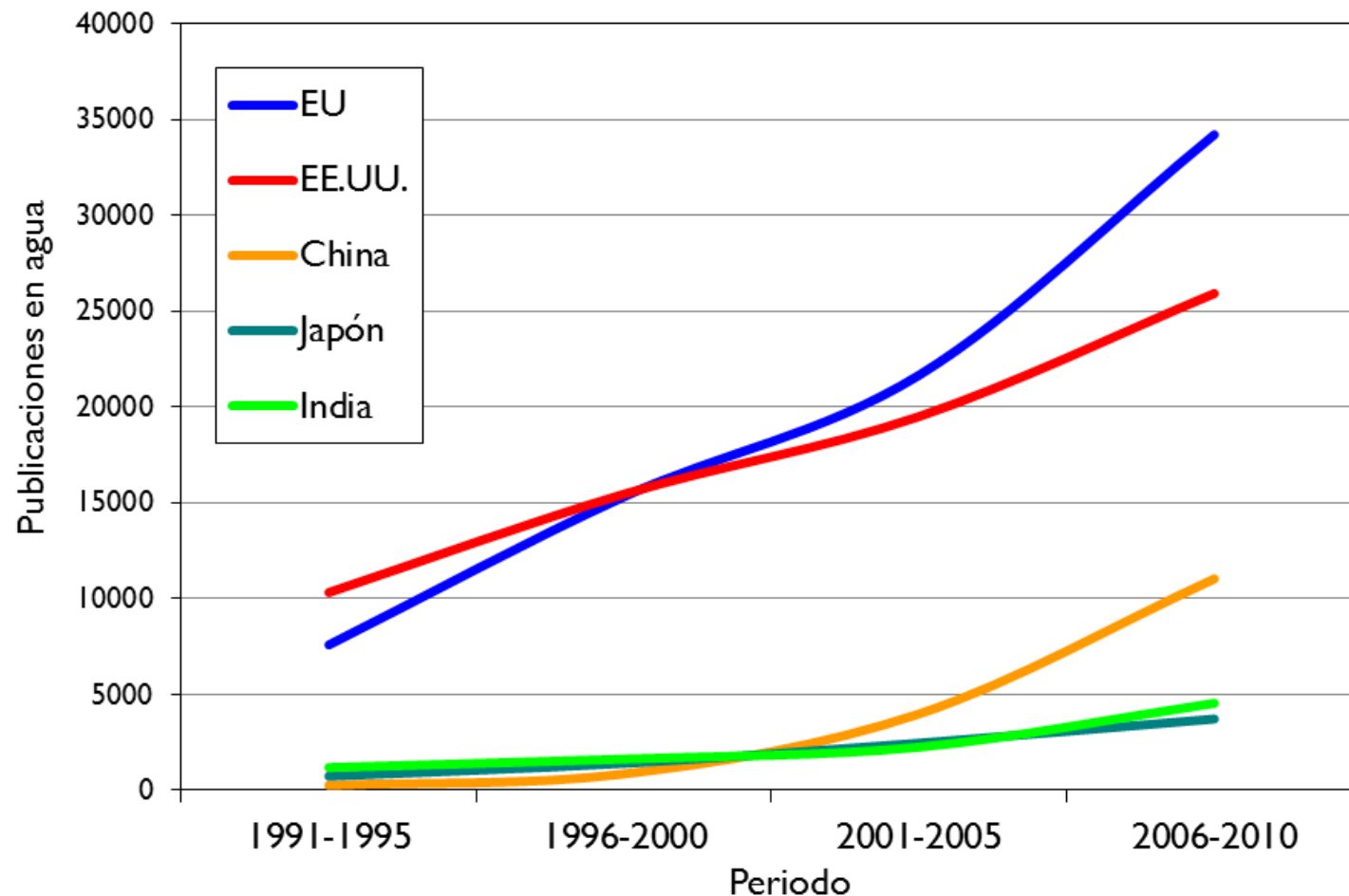
Study Target	Countries	National Public RDI Funding (M€)	Funding respect to MS+AC (%)
Europe	MS	351	94
	AC	22	6
	MS + AC	372	100
Water JPI	Partners	328	88
	Observers	30	8
	Part. + Obs.	358	96

- The EC invests 130 M€/yr through the FP (average of FP6 and FP7 so far)
- Total investment in public RDI: about 500 M€/yr in MS+AC+EC

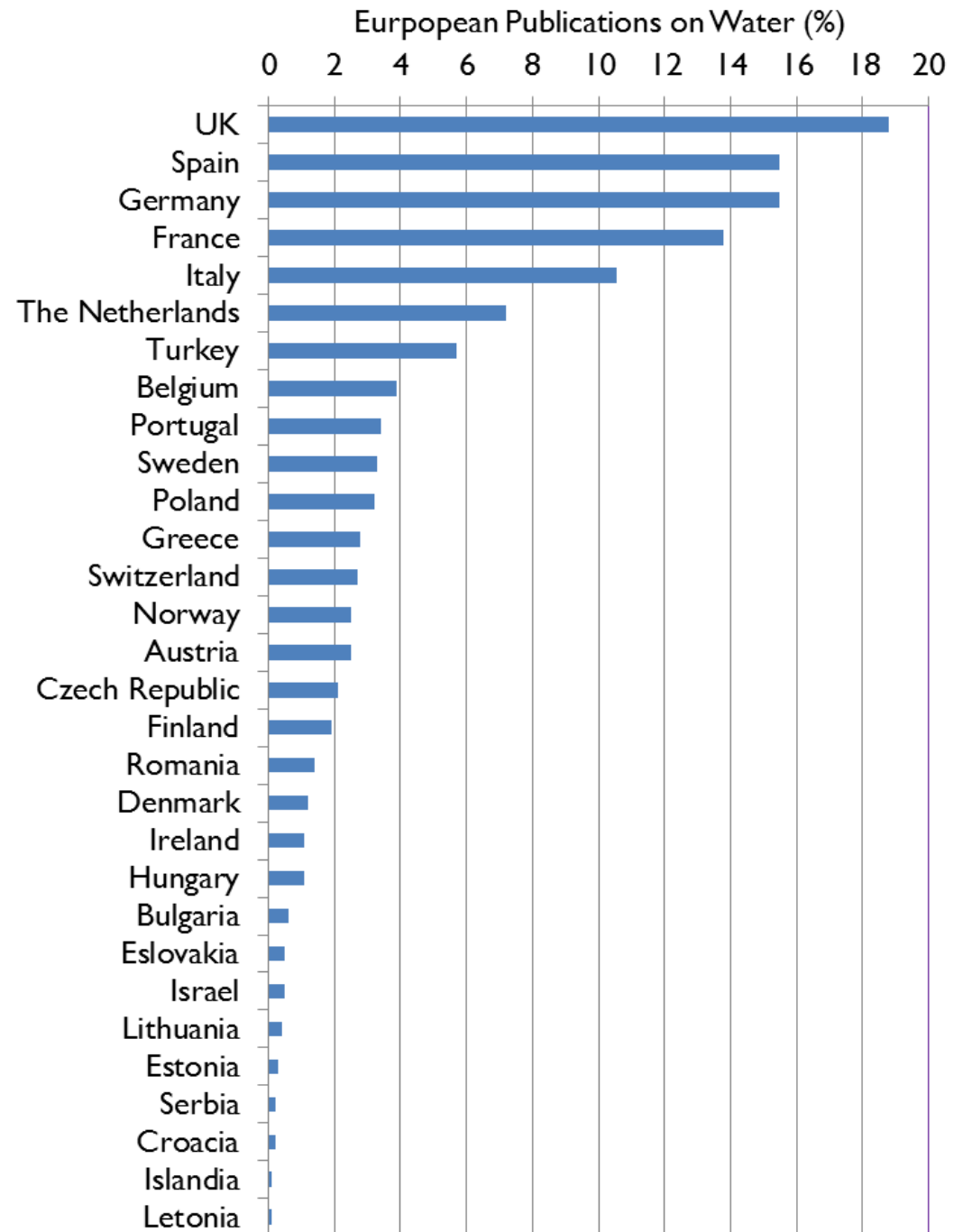
A bibliometric study

- Performed in July 2012
- ISI Web of Science
- Covering period: 1991-2012
- Using specific descriptors for water research and its sections

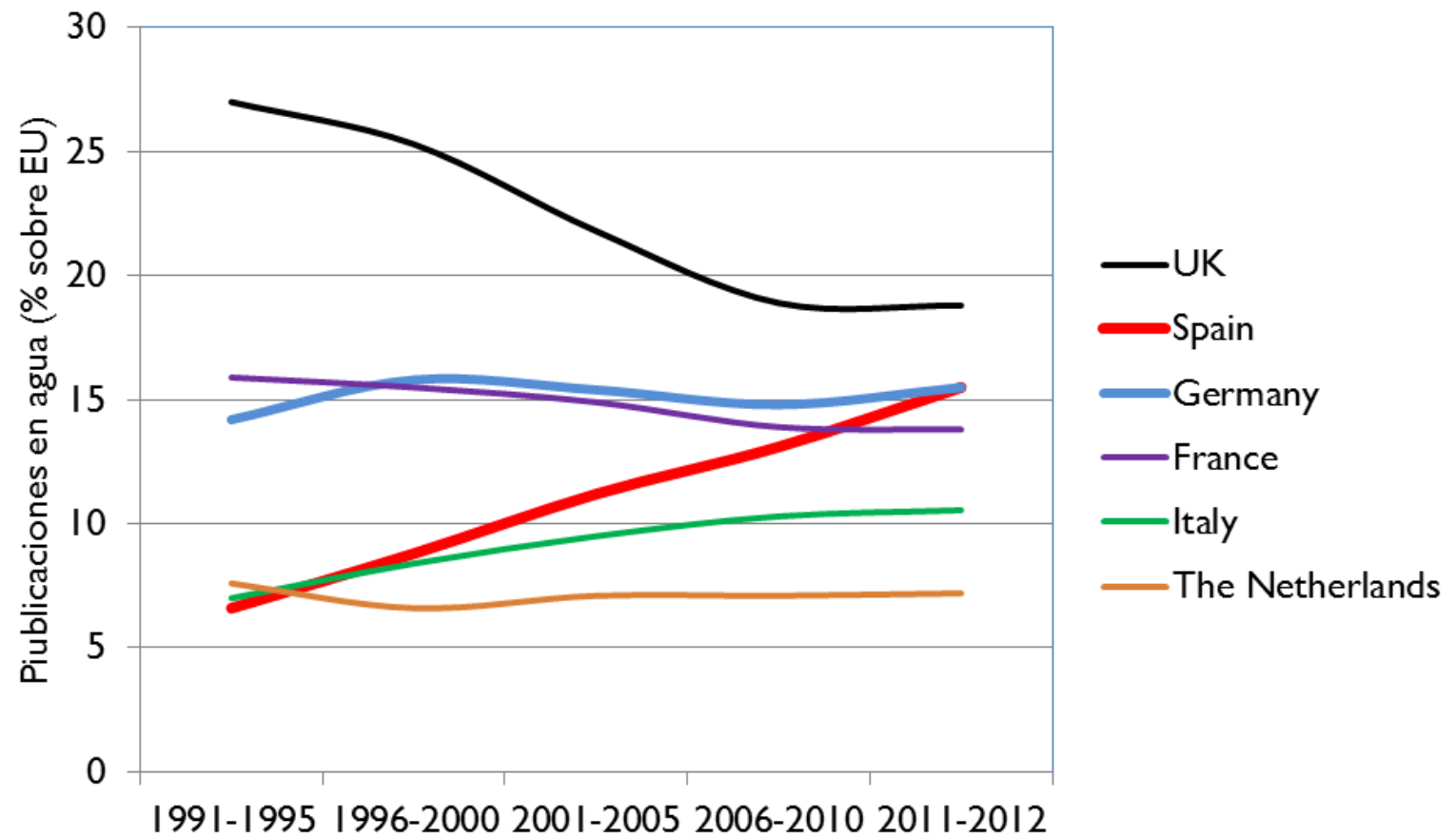
Europe leads in publications



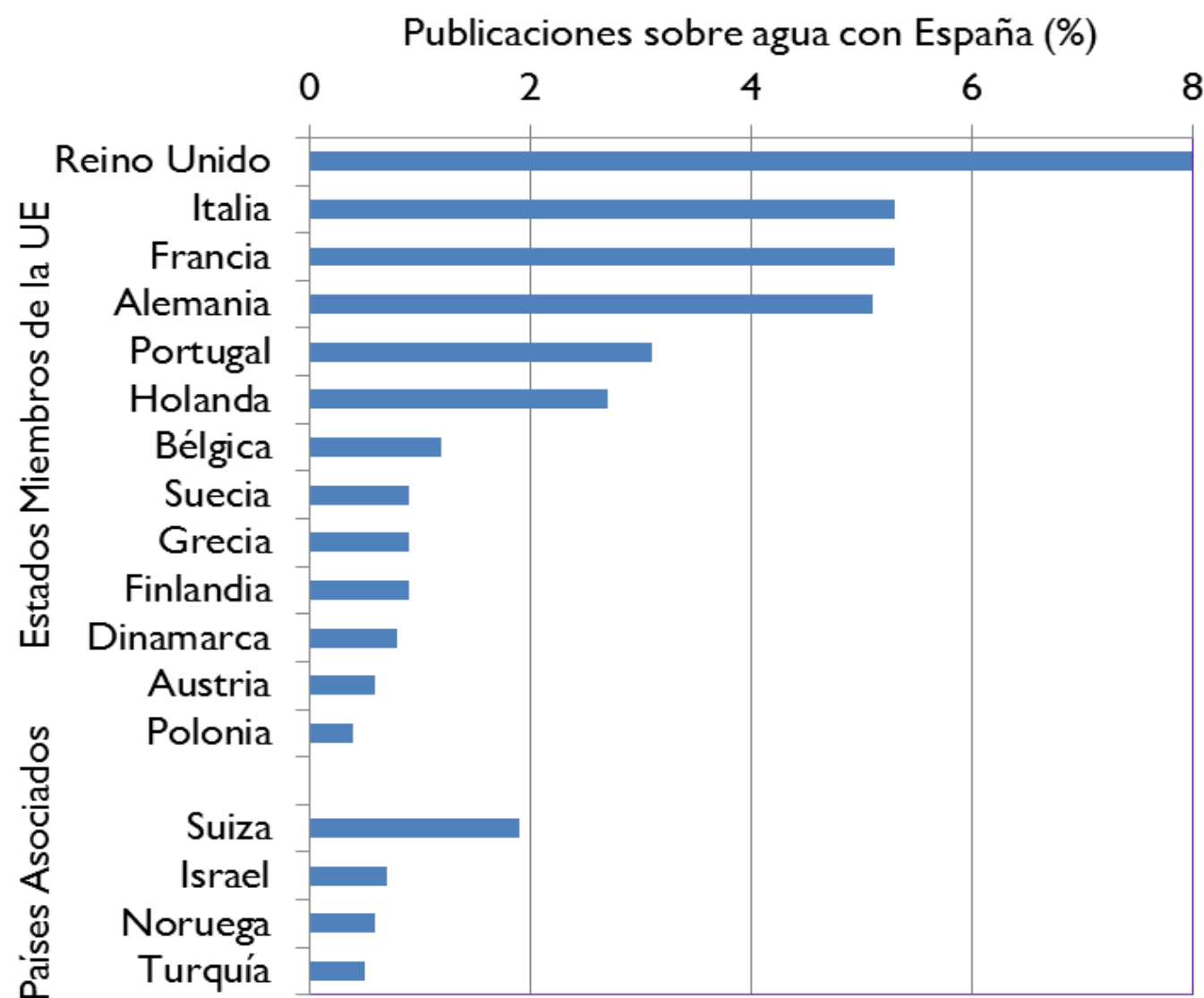
Who publishes in Europe on water? (2011-2012)



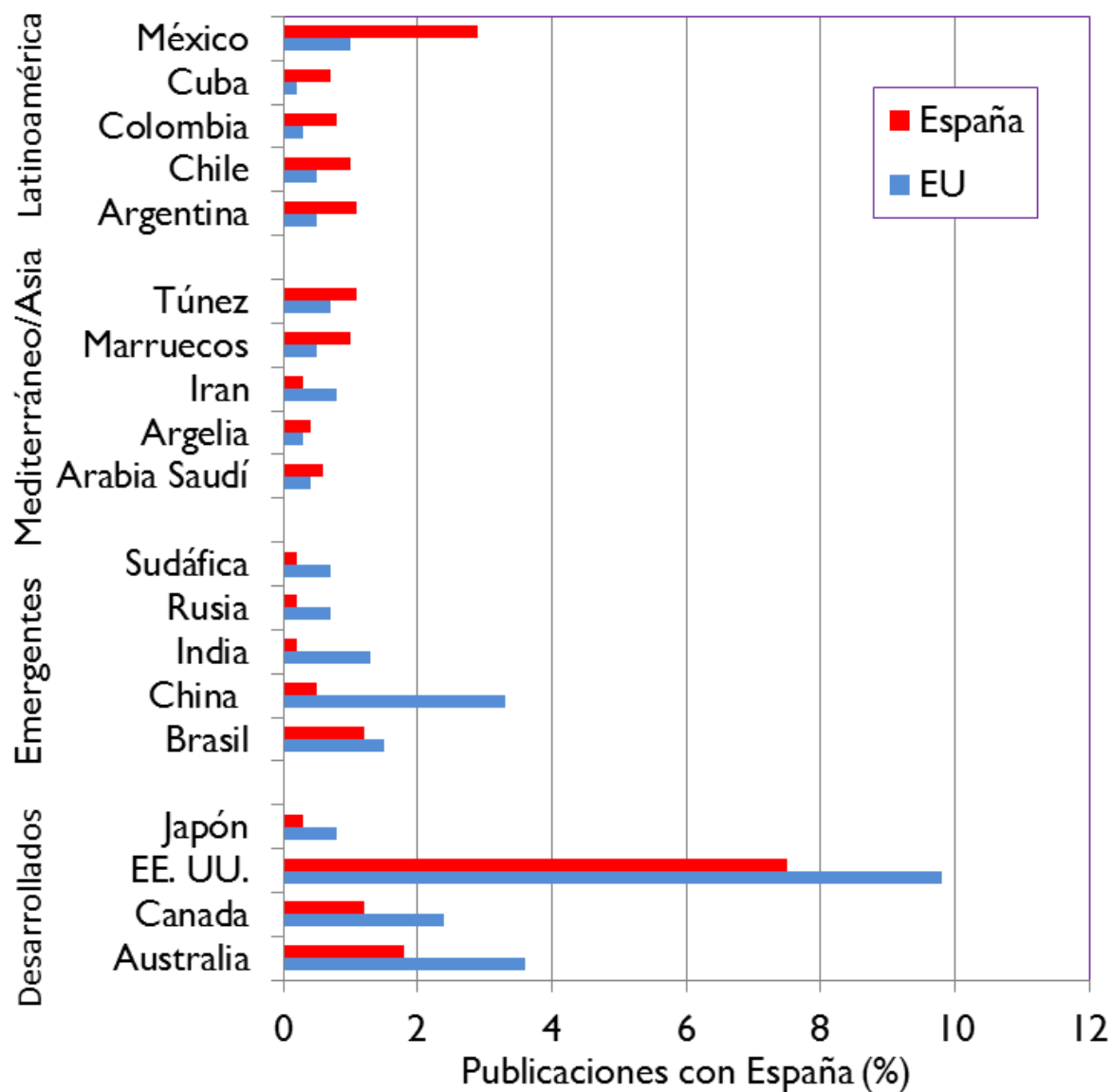
Who publishes in Europe on water?



Who publishes with Spain? (2011-2012)



Who publishes with Europe and Spain? (2011-2012)



Spanish Leadership on Water Research

Tema	% España en EU	Países que lideran: 1° al 6°					
Desalación	20.7	ES	DE	UK	FR	IT	EL
Regadíos	19.6	ES	UK	DE	TR	IT	FR
Contaminación Agraria	11.6	UK	TR	ES	DE	FR	IT
Disruptores endocrinos	21.3	ES	DE	IT	FR	UK	CZ
Sequía	18.6	ES	DE	UK	FR	IT	NL
Tratamiento de aguas	16.5	ES	UK	DE	PO	IT	TR
Tecnología de membranas	10.4	DE	FR	UK	IT	ES	NL
Inundaciones	7.5	UK	DE	FR	IT	NL	ES
Cambio climático	10.8	UK	DE	FR	ES	NL	IT
Servicios ecosistémicos	8.1	UK	DE	IT	NL	SE	FR
Soporte a políticas	10.7	UK	NL	DE	IT	ES	FR

Research and Innovation Agenda

- Maintaining Ecosystem Sustainability
- Developing safe water systems for the citizens
- Promoting competitiveness in the water industry
- Implementing a water-wise bio-based economy
- Closing the water cycle gap

Ecosystem Sustainability

- Ecological Engineering
- Development of early-warning systems, including for the monitoring of weather extreme events
- Ecosystem services

Safe water for citizens

- Emerging pollutants, including behaviour, treatment and human effects
- Best practices for minimizing risks associated with water distribution and storage facilities, or natural hazards

Competitiveness in Water industry

- Development of market-oriented technological solutions for water storage, distribution, measurement, purification, treatment, desalination and irrigation
- Innovative regulatory, governance and management frameworks to enhance the competitiveness of the European water industry

Water-wise bio-economy

- Resource efficiency
- Reduction of soil and water pollution

Closing the Water Cycle Gap

- Technology/ non technology-based innovative concepts and solutions to apply in drought sensitive areas
- Socio-economic approaches: Participatory approaches, water users' behaviour, water economics and governance

Implementation: Activities

- JPI Activities include:
 - Sharing of good practice
 - Early Sharing of research results
 - Coordination of ongoing projects
 - Joint calls for research proposals
 - Capacity building, training and mobility schemes
 - Research infrastructure
 - Working in partnership with industry
 - International cooperation beyond Europe

Implementation: Activities

- JPI Activities include:
 - Sharing of good practice
 - Early Sharing of research results
 - Coordination of ongoing projects
 - **Joint calls for research proposals**
 - Capacity building, training and mobility schemes
 - Research infrastructure
 - Working in partnership with industry
 - International cooperation beyond Europe
- Calls will be a relevant Water JPI activity, receiving most of the funds

Implementation: Activities / Joint calls

- The Water JPI has committed to develop joint activities for 20% of the partner countries funding by 2020
- With the current mapping results, this amounts to about 70 M€/yr... a very sizable amount
 - The Mapping of MINECO activities: 20 M€/yr
 - DGI Research projects: 13 M€/yr
 - INNFACTO and Technology Platforms: 2.6 M€/yr
 - CDTI: 5.4 M€/yr
 - By 2020, Spain should set in Water Joint Programming about 4 M€/yr (20% of its yearly investment)

Implementation: Activities / Joint calls

- Water JPI has planned two calls:
 - 2013: the pilot call, to be published by mid 2013
 - 2014: the Joint Activities call: to be published in 2014
 - ERA-NET scheme?
- Call funding is expected to grow in time, showing:
 - Increased refinement of the procedures
 - Attention to different topics
 - Increased commitment to the process
- Involvement of countries outside Europe

FACCE - JPI

Paloma Melgarejo
INIA

Madrid, 4 de marzo de 2013



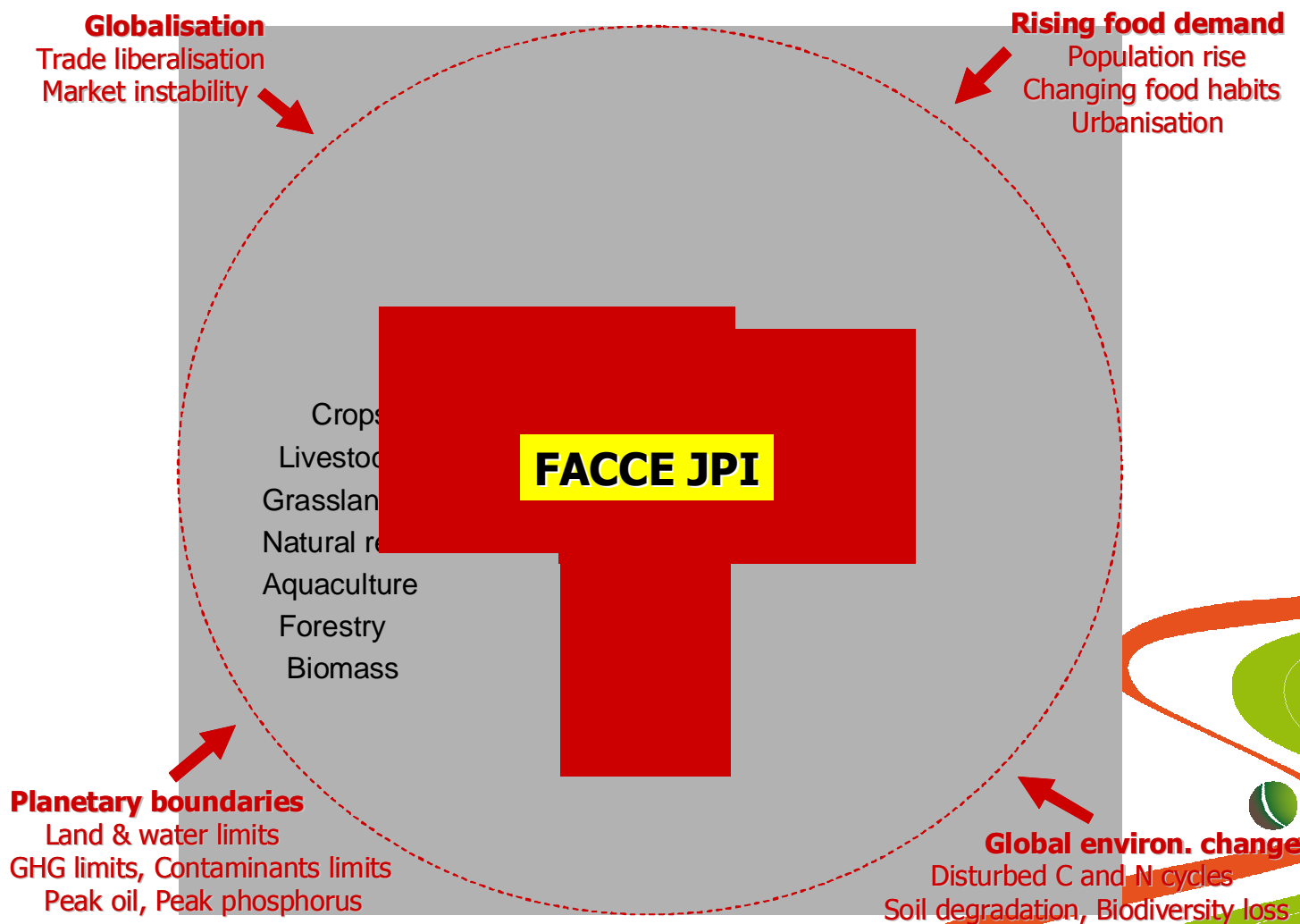
FACCEJPI

www.faccejpi.com



Agriculture Food Security and Climate Change

1. Ámbito de acción



2. Países participantes

21 countries participating

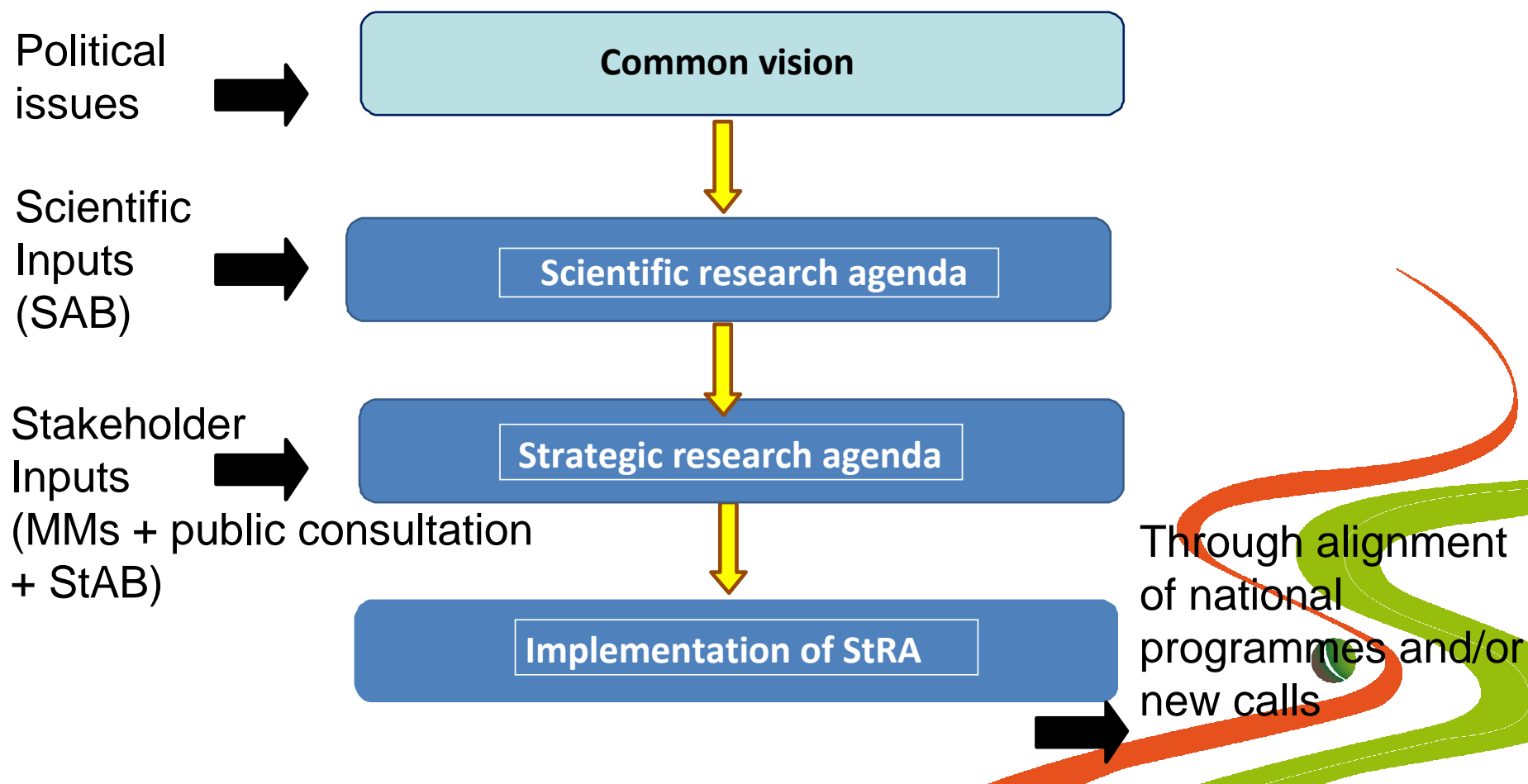


3. Agenda Científica de Investigación

5 core themes defined with short-term, medium-term, longer-term actions:

1. Integrated **food security under climate change**, based on an integrated food systems perspective: modelling, benchmarking and policy research perspective.
2. Sustainable **intensification of agricultural systems** under current and future climate and resource availability.
3. Optimising **trade-offs** between food production and the preservation and utilisation of biodiversity, ecosystem goods and services.
4. **Adaptation** to climate change throughout the whole food chain, including market repercussions.
5. **Mitigation** of N₂O and CH₄ emissions by the agriculture and forestry sector, carbon sequestration and reducing GHG emissions associated with indirect land use change.

4. Esquema de desarrollo



7.1 Implementación de la Strategic Research Agenda

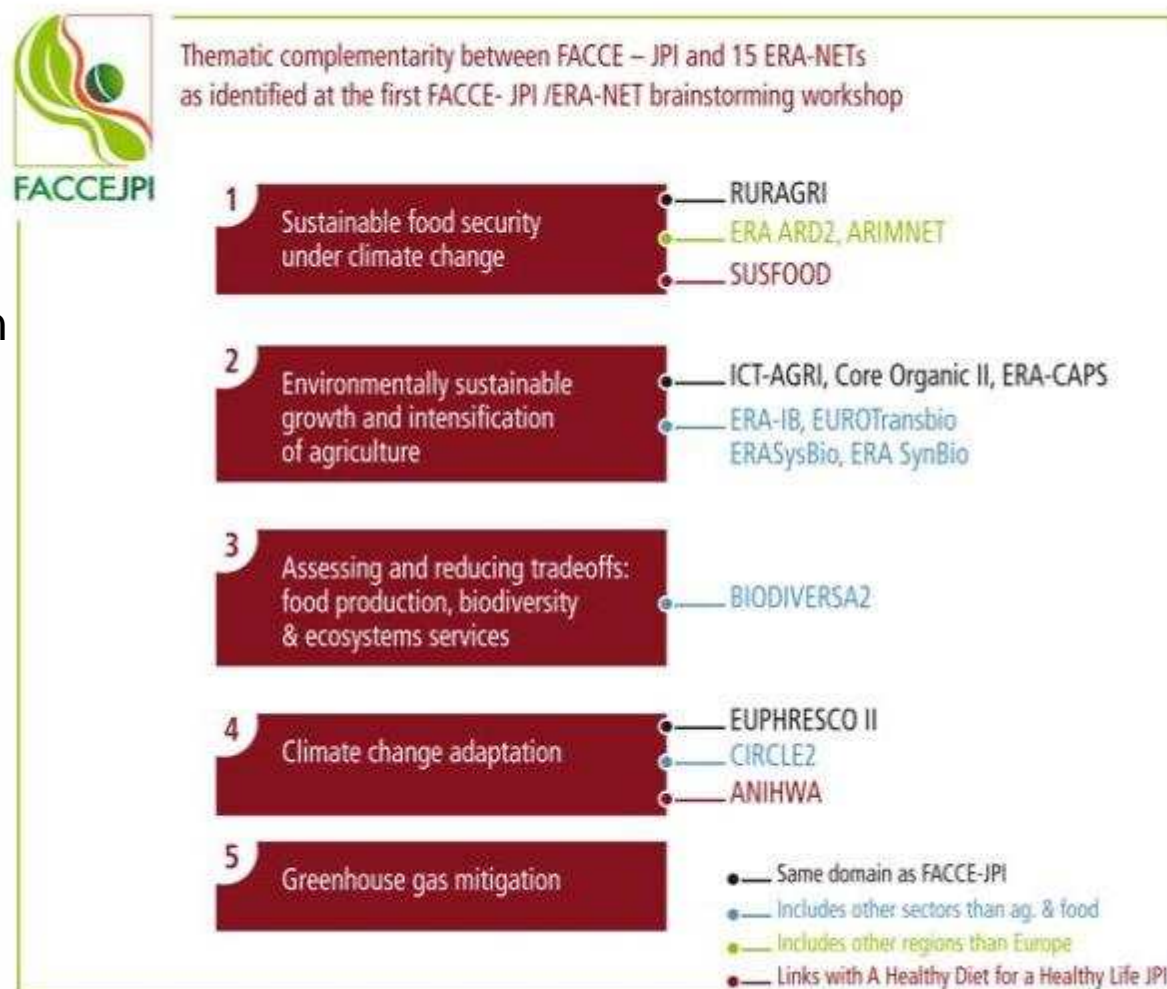
Alineamiento de programas nacionales de investigación

- The core mission of “Joint Programming “
 - Round table at each GB on national programmes which could be connected to the JPI towards the goal of alignment.
 - Set up of a **Working Group on Alignment** at the GB level (June 12th, 2012).
1st meeting in Copenhagen on September 6th, 2012.
 - Exploitation of mapping meeting outcomes towards alignment.

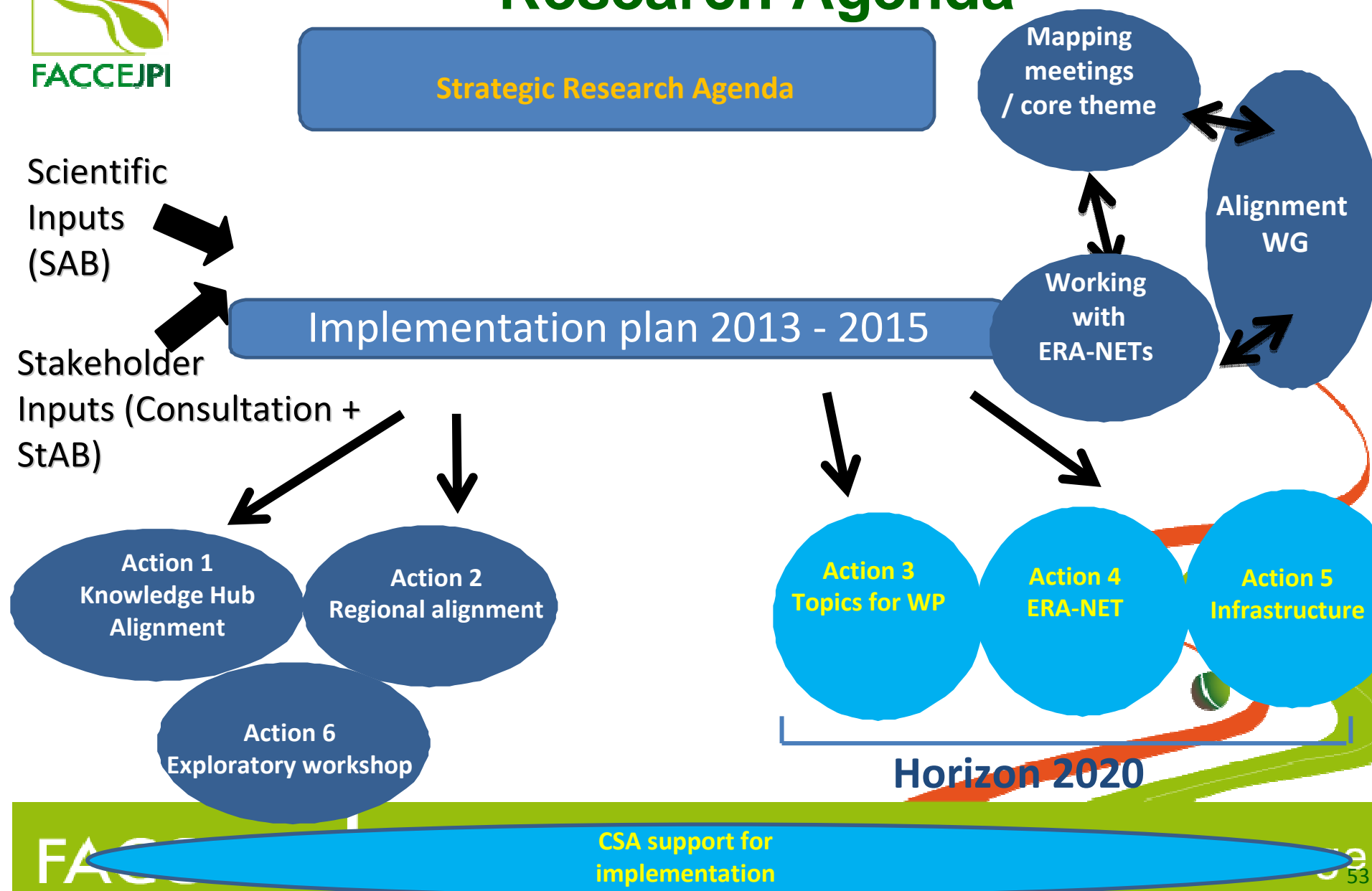
7.2 Implementación de la Strategic Research Agenda

Colaboración con las ERA-NET

- 16 ERA-NETs in the FACCE-JPI scope + PLATFORM project
- Find ways for coordination and joint working to implement the SRA
 - Participation in mapping meetings
 - Annual meetings with ERA-NETs



7.3 Implementación de la Strategic Research Agenda



THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

Relation with Horizon 2020; the new ERANET scheme



Enrique Playán

15 min

Horizon 2020: an outlook



Horizon 2020

Horizon 2020: an outlook

Horizon 2020

Frontier research, ERC
Future and Emerging Technologies
Marie Skłodowska-Curie
Infrastructures

Excellent Science
Industrial Leadership
Societal Challenges
JRC



(Indicative % Water RDI funding in FP7 is provided where available)

Horizon 2020: an outlook

Horizon 2020

ICT

Nanotechnologies

Advanced materials;

Biotechnology;

Advanced manufact. and proc.

Space

+

Risk Finance

SME

Excellent Science

Industrial Leadership

Societal Challenges

JRC



(Indicative % Water RDI funding in FP7 is provided where available)

Horizon 2020: an outlook

Horizon 2020

1. Health and wellbeing
2. Food, bio-based products
3. Energy system
4. Transport system
5. Climate change, resource efficiency, raw materials
6. Inclusive, innovative...society
7. Security, freedom, justice

Excellent Science
Industrial Leadership
Societal Challenges
JRC



(Indicative % Water RDI funding in FP7 is provided where available)

Horizon 2020: an outlook

Horizon 2020

Excellent Science
Industrial Leadership
Societal Challenges
JRC

Customer-driven scientific
and technical support
to Union policies



(Indicative % Water RDI funding in FP7 is provided where available)

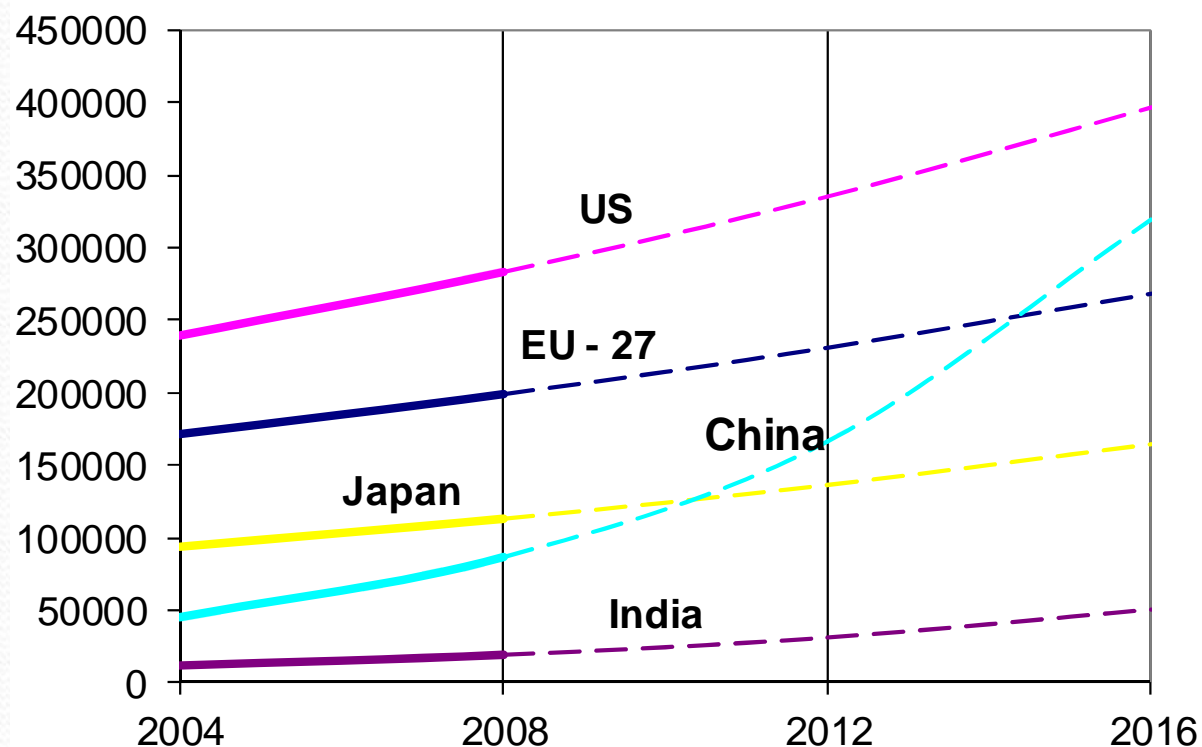


European Innovation Partnerships (Water + Agriculture)



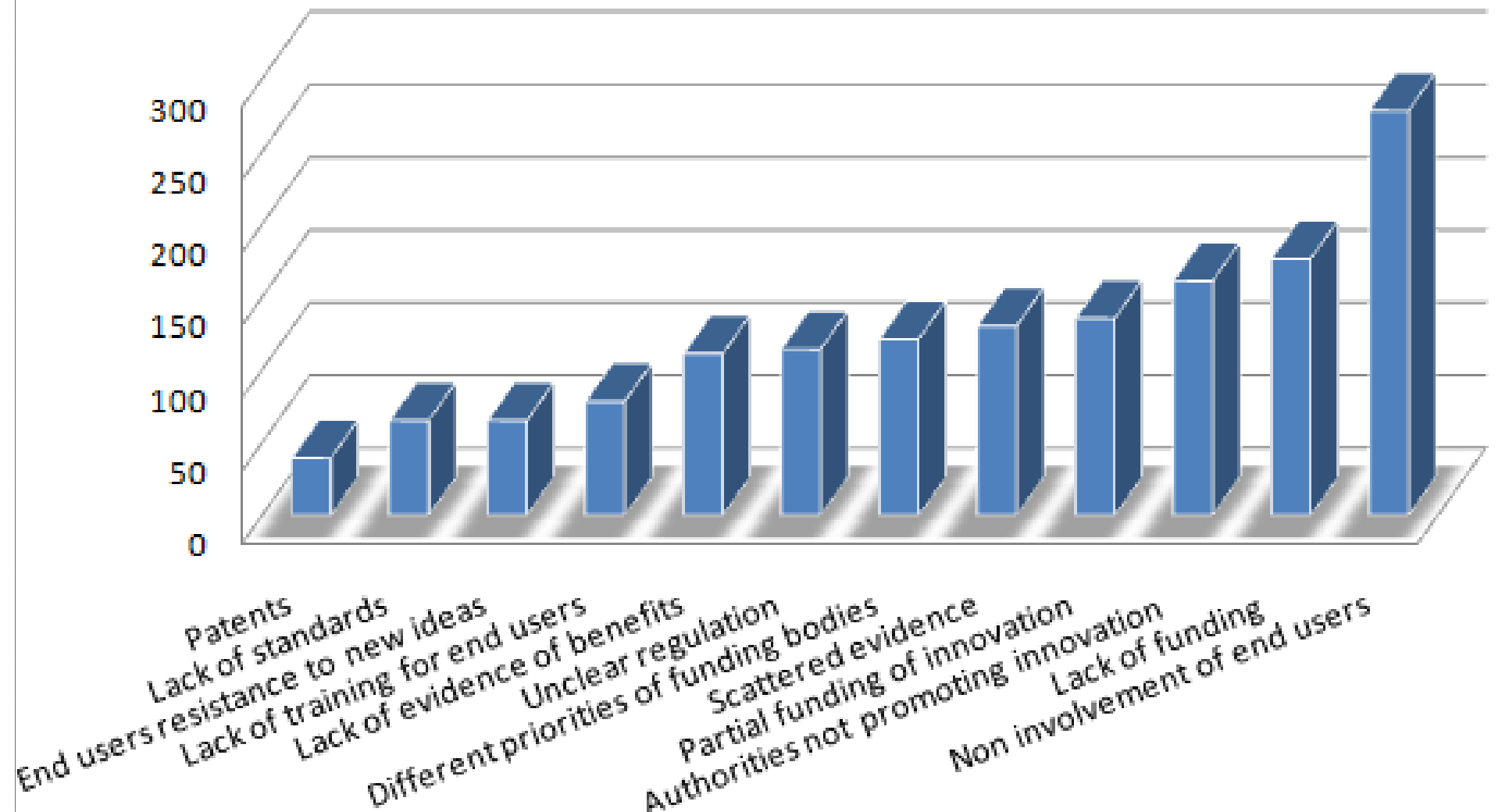
World trends as expected in 2008

Evolution of World
R&D expenditure in
real terms, PPS M€
at 2000 prices and
exchange rates,
1995-2008
(China excluding
Hong-Kong)



Barriers to innovation

(DG Environment, EC, July 2011)



Innovation Partnerships

- EIPs are:
 - Challenge-driven;
 - Acting across the whole research and innovation chain; and
 - Designed to streamline, simplify and better coordinate existing instruments and initiatives.
- The water Industry in Europe:
 - Annual turnover of about 100 G€, one third of the world market ;
 - 9,000 active European SMEs;
 - 600,000 jobs, just in water utilities; and
 - World leaders in water services; less competitive in water technology.

A provisional map of EIPs and JPIs

Joint Programming
Initiatives



European Innovation
Partnerships

→ Active and Healthy ageing

→ Water

→ Productive and Sustainable Agriculture
Raw Materials

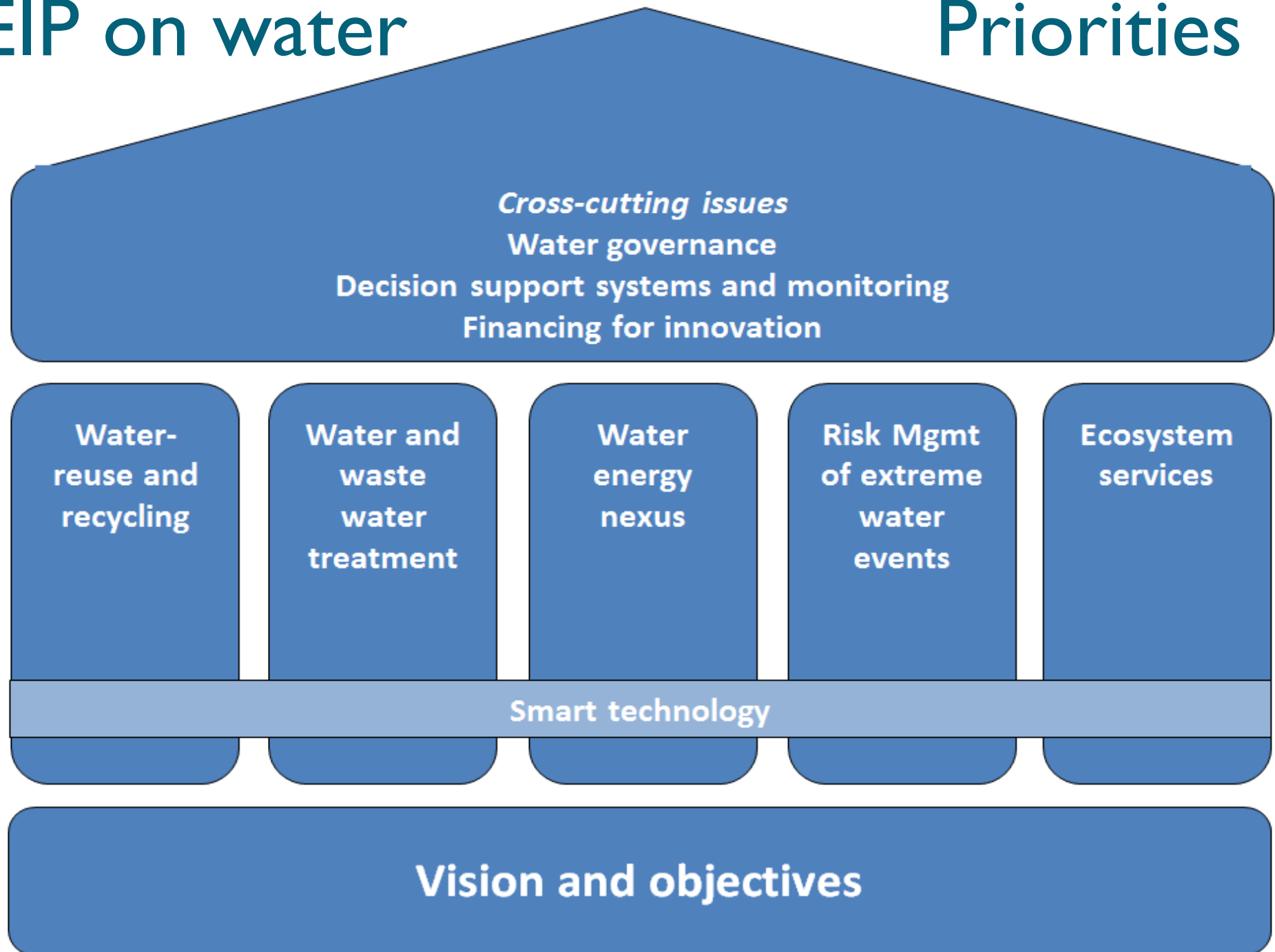
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EIP on Water: Governance



EIP on water

Priorities



Action Groups

- A call for Water Action Groups received 64 proposals
- They are thematic
- Will execute actions based on priorities

Funding

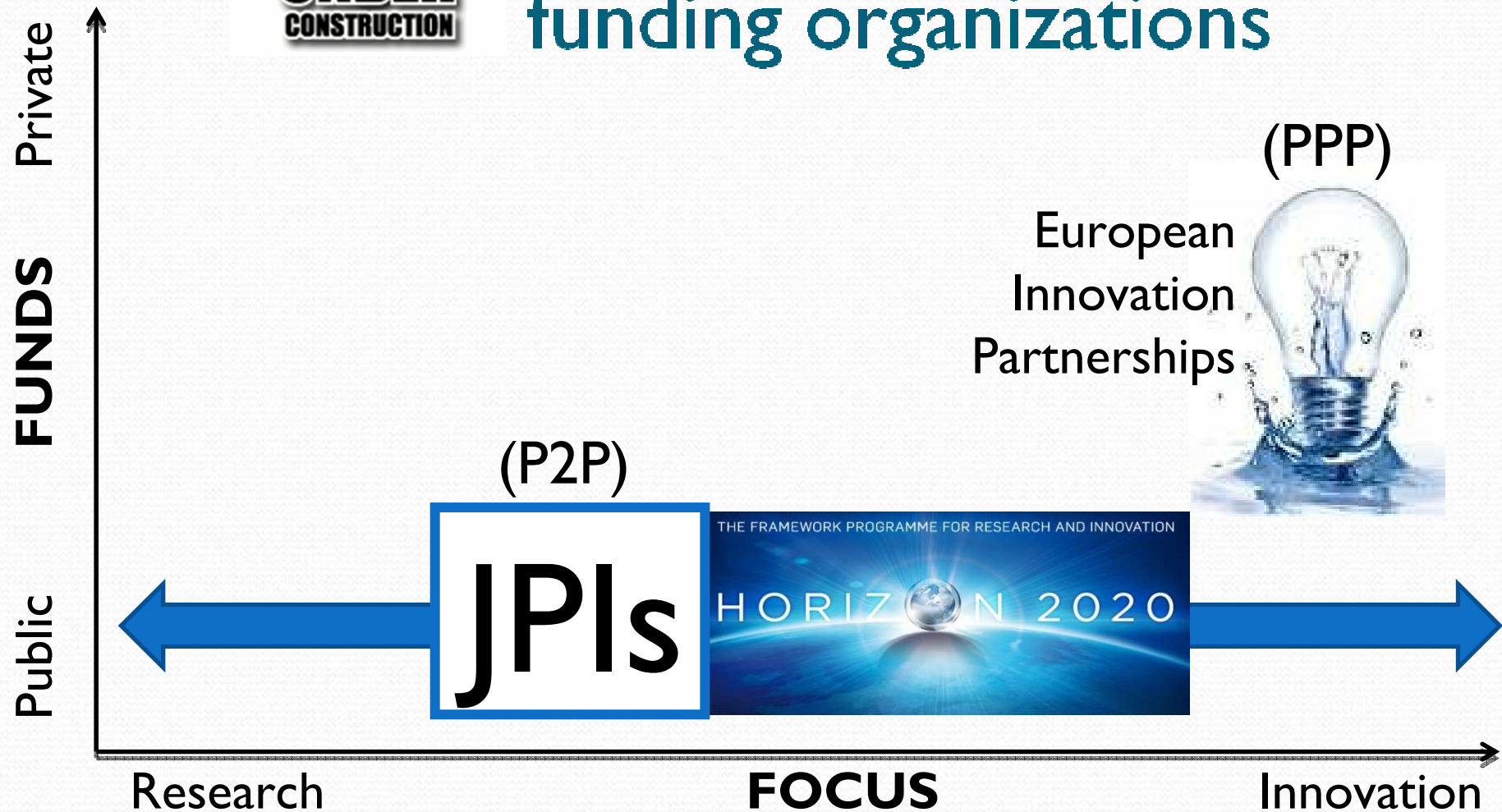
- EIP is not a funding instrument
- Funds from different sources can be labeled EIP
 - EC:
 - Structural Funds
 - Regional Development funds
 - LIFE+
 - FP7 Horizon 2020
 - Private funds
- FP7 INNO DEMO call for proposals, about 50 M€, water innovation. Closed, large number of proposals!

Mapas de la financiación Europea de la Investigación e Innovación a partir de 2014



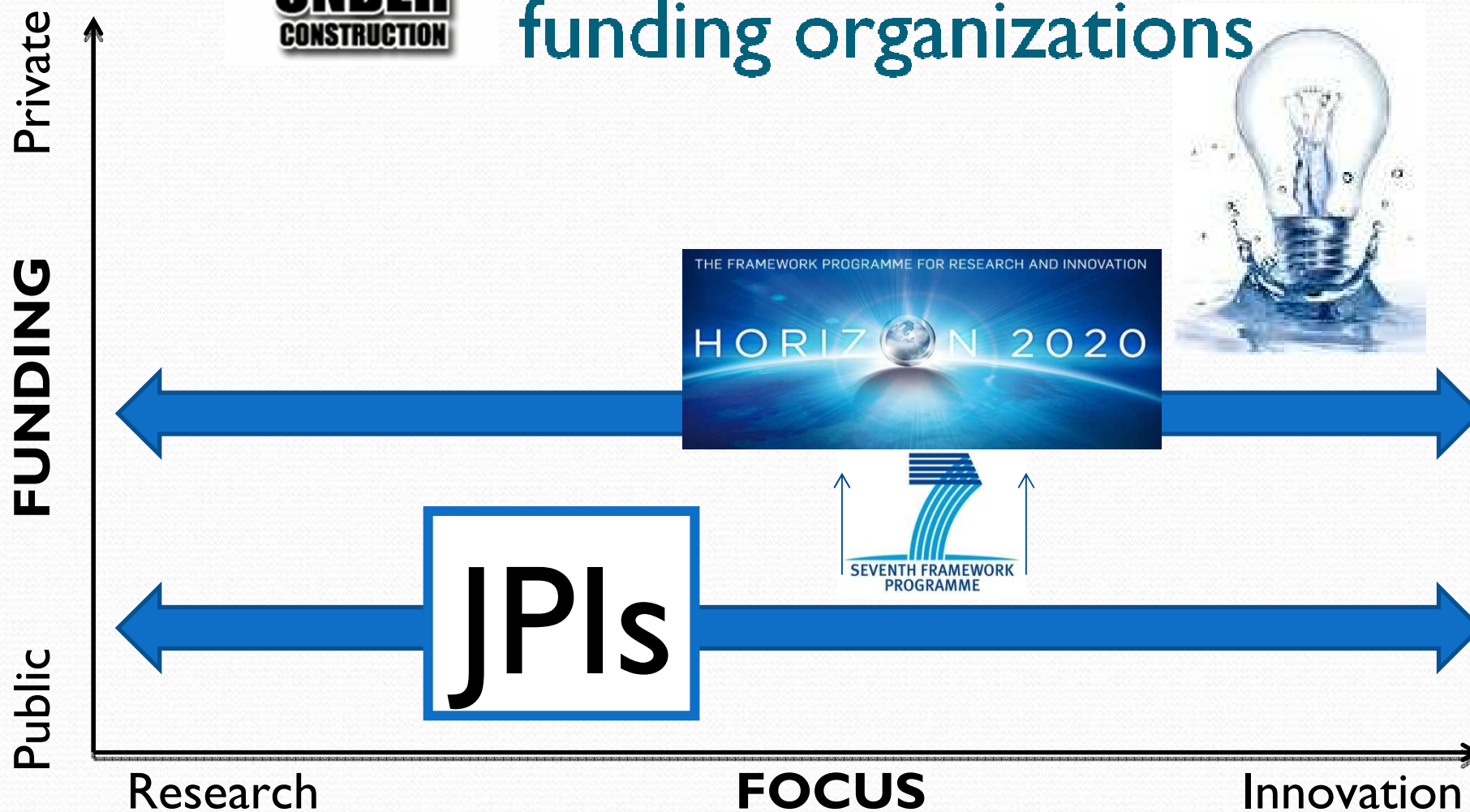


A map of European research and innovation funding organizations





A map of European research and innovation funding organizations



¿Y el Plan Estatal?

- La Estrategia Española de Ciencia, Tecnología y de Innovación, y el Plan Estatal de Investigación Científica y Técnica y de Innovación
 - Reproducen la estructura de Horizonte 2020
 - Muestran compromiso con la Programación Conjunta
 - Financian la participación española en las JPIs
- Los investigadores pueden acceder a fondos nacionales
 - Por la vía de los proyectos habituales del Plan Nacional
 - Por la vía de las JPIs, dónde pueden encontrar un apoyo adicional de financiación Europea



Eskerrik Asko!