

# **INTERNATIONAL INITIATIVES ON WATER PROMOTED BY EU**

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# INTERNATIONAL INITIATIVES ON WATER

**Water Joint Programme Initiative: Water  
challenges for a changing world**



**PIANO Policies, Innovation and Network  
for enhancing Opportunities for China –  
Europe Water Cooperation**



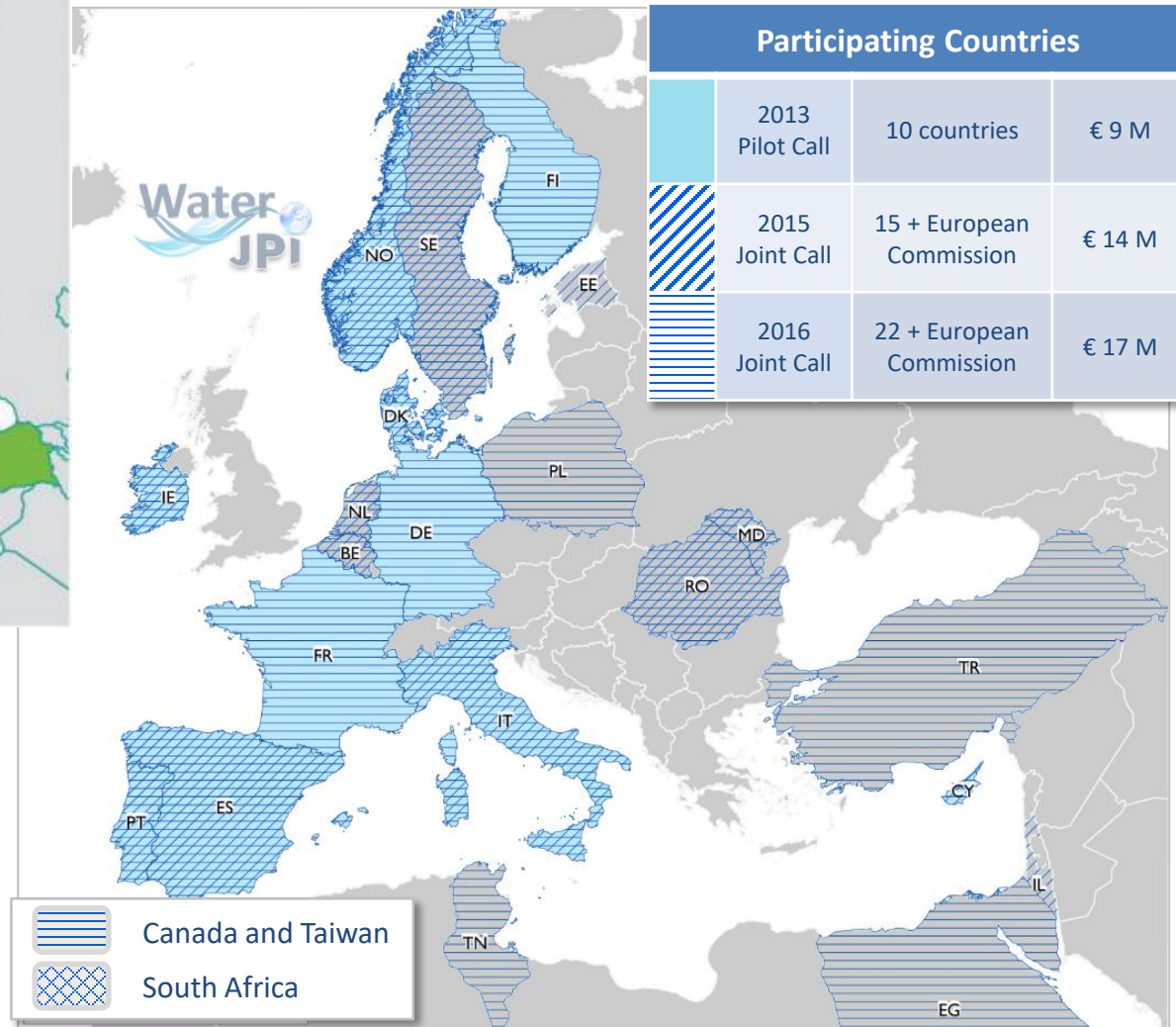
**PRIMA Partnership for Research and Innovation  
in the Mediterranean Area**





# **Water Joint Programme Initiative: Water challenges for a changing world**





## First Implementation Actions

- **2017 Joint Call (IC4Water)**
- **2018 Joint Call (WaterWorks2017)**



Participating Countries		
2013 Pilot Call	10 countries	€ 9 M
2015 Joint Call	15 + European Commission	€ 14 M
2016 Joint Call	22 + European Commission	€ 21 M



## Discussion with

Chile

China

India

USA

Mediterranean countries  
(PRIMA)

Israel

Moldova

Norway

Turkey

Canada

Taiwan

Egypt

Tunisia

Brazil

Argentina

Thailand

Vietnam

South Africa

Non EU Water JPI Members

H2020 Associated Countries

Third countries

201  
4

201  
8



# 5 themes

Maintaining ecosystem  
sustainability



Developing safe water  
systems for the citizens



Promoting competitiveness  
in the water industry



Implementing a water-wise  
bioeconomy



Closing the water cycle  
gap



*For each theme, analysis of socioeconomic, environmental  
and policy impact*



# HORIZON 2020 AND WATER JPI STRENGTHENING SYNERGIES

## ✓ **H2020** - the EU Framework Programme for Research and Innovation (2014-2020)

- funding fundamental type of research in the field of water (Excellent science pillar)
- focus on innovation-oriented investment - proof of concepts, large scale demos aiming to mobilise resources for various EU and national funding instruments, market replication, inducement prizes, innovative public procurement (Societal Challenges and Industrial leadership pillars)



## ✓ **Water JPI** - Joint Programming Initiative “Water Challenges for a Changing World”

- platform for aligning and funding research to underpin the knowledge and evidence for providing solutions to water challenges
- privileged partners for international water R&I cooperation, including by cooperating globally within Belmont Forum actions



# MAIN OBJECTIVES OF WATER JOINT PROGRAMMING INITIATIVE AND ACTIVITIES TO REALIZE

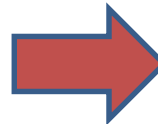
## OBJECTIVES

Involving water end-users for effective RDI results uptake.

Reaching effective, sustainable coordination of European water RDI.

Harmonising National water RDI agendas in Partner Countries.

Supporting European leadership in science and technology.



## TOOLS

Joint Call Management

Mapping RDI activities (Questionnaire, Interview, Desk Research )

Alignment of Research Agendas (SRIA Document and Implementation Plan)

International Cooperation (MoUs, Call Partnerships...)

# OUR WISHES, LONG-TERM COOPERATION PARTNERSHIP AGREEMENTS

## On Joint Actions such as

- Shared strategic research agenda
- Joint calls: IC4Water call is now open  
([http://www.waterjpi.eu/index.php?option=com\\_content&view=article&id=583&Itemid=1097](http://www.waterjpi.eu/index.php?option=com_content&view=article&id=583&Itemid=1097))
- Demonstration programmes or launch of demonstration platforms
- Access to key infrastructures, observatories
- Knowledge hub (Including development of policy briefs, innovation factsheets)
- Joint events / conferences / workshops / webinars
- Brokerage events / roadshows
- Training and capacity building
- Mobility schemes (for researchers, for research programmes managers)
- Connections with leading research networks (e.g. COST Actions)



# PIANO Policies, Innovation and Network for enhancing Opportunities for China – Europe Water Cooperation



# PIANO OBJECTIVES



- Strengthening and expanding the existing network of the China-Europe Water Platform (CEWP) to cover all actors relevant for cooperation between China and Europe in the water research and innovation domain
- Identification of European technological water innovations and areas for joint development of innovative technological solutions that have a potential for their implementation in China
- Identification of drivers and barriers concerning this cooperation and elaboration of strategies to overcome such barriers and take advantage of drivers for the implementation and replication of technological water innovations in China
- Consolidation of a shared strategic research and innovation agenda (SRIA) between Europe and China in the water sector

# EU PARTNERS



- University of Natural Resources and Life Sciences (BOKU)
- Technical University of Denmark (DTU)
- International Office de l'Eau (OIEAU)
- Italian National Institute for Environmental Protection and Research (ISPRA)
- National Laboratory for Civil Engineering (LNEC)
- Stockholm International Water Institute (SIWI)
- W.S. Atkins International Limited (ATKINS)
- European Water Association (EWA)
- European Union Chamber of Commerce in China (EUCCC)





# CHINESE STAKEHOLDERS



- Chinese Secretariat of the China Europe Water Platform hosted by the Ministry of Water Resources (CEWP-MWR)
- Foreign Economic Cooperation Office of the Ministry of Environmental Protection (FECO\_MEP)
- Development research Centre of the Ministry of Water Resources (DRC-MWR)
- Chinese Academy of Environmental Planning (CAEP)
- Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RCEES-CAS)
- China Institute of Water Resources and Hydropower engineering (IWHR-MWR)
- Peking University, Center for Water research (PKU-CWR)
- Tongji University, College of Environmental Engineering and Science (TU-CEES)
- Wuhan University, School of Water Resources and Hydropower Engineering (WHU-MOST)
- Institute of Hydroecology, Ministry of Water Resources & Chinese Academy of Sciences (IHE-CAS)
- Institute of Soil and Water Conservation, Chinese Academy of Science (ISWC-CAS)
- Center for Chinese Agricultural Policy, Chinese Academy of sciences (CCAP-CAS)
- University of the Chinese Academy of Sciences, Sino-Danish Center for Education and Research (UCAS-SDC)

# COMPARATIVE ANALYSIS OF SRIA



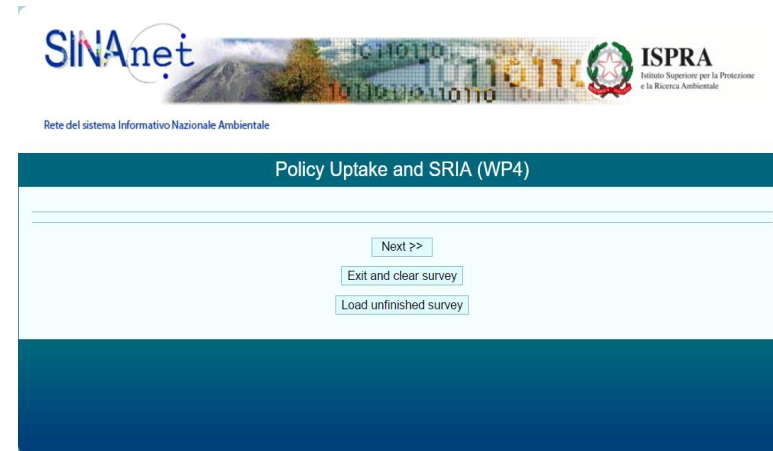
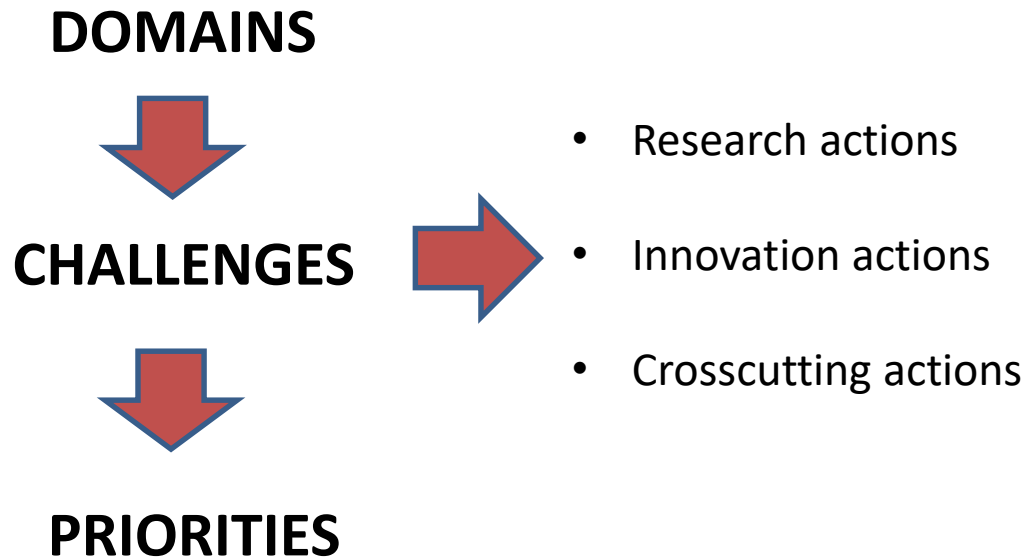
## International Agendas:

1. **WssTp** European Technological Platform on Water
2. **Water JPI** Strategic Research and Innovation Agenda 2.0 Section V - EIP Partnership on Water
3. **Acqueau** Strategic Research Agenda
4. European Commission: **Blueprint** to Safeguard Europe's Water Resources
5. **ASEM** documents on water
6. China's water resources management challenge: **The three red lines**

## National Agendas:

1. **Connect-EU Water Group** 'Strategic Research Agenda 2012' (Spain)
2. **International Strategy for Finland's Water Sector** (Finland)
3. **Italian strategic research agenda**: National strategy on adaptation to the climate change

# PIANO ONLINE QUESTIONNAIRE



# PIANO PROJECT: TECHNOLOGICAL WATER INNOVATION



For each domain, the principal available EU technological innovations have been reported in the SRIA, recommended to reach the priorities above identified and discussed. The table below shows the case of the domain “Water for Energy”.

Technological Water Innovations (TWI)	TWI Category	TWI Subcategory
TWIEU, E19. Geothermal energy pump to harvest geothermal energy.	energy production technologies	Other sources
TWIEU, C29. Micro-hydro generators: systems that do not require a dam or storage facility to be constructed. Instead, they divert water from the stream or river, channel it in to a valley and drop it in to a turbine via a pipeline called a penstock. The turbine drives a generator that provides the electricity to the local community.	energy production technologies: small-scale hydropower	other
TWIEU, E12. Behavioural fish barrier (using a strobe light, sound and a bubble curtain as stimuli) to e.g. divert fish from turbine blades of hydroelectric structures.	water management technologies	Mitigation technologies

# STRATEGIC RESEARCH AND INNOVATION AGENDA - SRIA



## Domains

- Agricultural water challenges
- Municipal water management
- Industrial water
- River basin management
- Water for energy



## Challenges

- Water scarcity
- Water pollution
- Extreme events
- Ecosystem degradation
- Water infrastructures



# PRIMA Partnership for Research and Innovation in the Mediterranean Area







## VISION

**Inclusive, healthy and prosperous Mediterranean societies** through innovative solutions in water systems and agro-food contributing, by the end of the programme, to a **sustainable use of natural resources, economic growth and stability.**

## MISSION

To achieve, support and promote integration, alignment and joint implementation of research and innovation initiatives under a common research and innovation strategy to address the diverse challenges in water scarcity, agriculture, food security.

**A Joint Research  
Programme within H2020  
(art.185 TFEU)**

## 11 European countries:

Cipro, Croazia, Francia,  
Germania, Grecia, Italia,  
Lussemburgo, Malta,  
Portogallo, Slovenia,  
Spagna

## 8 non-European

**countries:** Algeria,  
Egitto, Giordania, Israele,  
Libano, Marocco, Tunisia,  
Turchia





### MANAGEMENT OF WATER

Integrated and sustainable management of water for arid and semi-arid Mediterranean areas



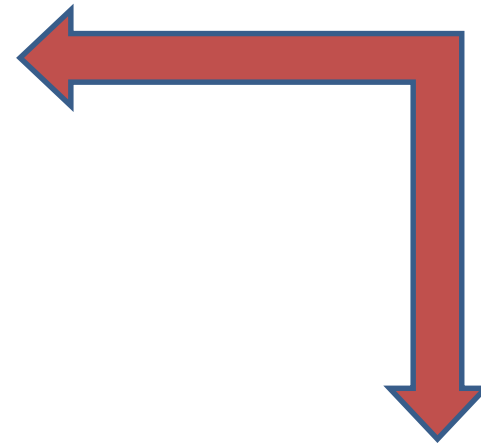
### FARMING SYSTEMS

Sustainable farming systems under Mediterranean environmental constraints



### AGRO-FOOD VALUE CHAIN

Sustainable Mediterranean agro-food value chain for regional and local development



RESEARCH AND INNOVATION PRIORITY	LINK TO OPERATIONAL OBJECTIVE	MAIN ACTIONS	TRL
<b>1</b> Water resources availability and quality within catchments and aquifers	 2/LAND AND WATER SUSTAINABILITY	RIA	2 to 5
<b>2</b> Sustainable, integrated water management	 2/LAND AND WATER SUSTAINABILITY 3/WATER GOVERNANCE SYSTEMS	RIA and CSA	3 to 6
<b>3</b> Irrigation technologies and practices	 1/WATER SAVING SOLUTIONS	RIA and IA	4 to 8
<b>4</b> Use of alternative water resources, technologies and governance models	 1/WATER SAVING SOLUTIONS 3/WATER GOVERNANCE SYSTEMS	RIA and IA	5 to 8

# SINERGIES WITH WATER JPI



In particular, the topic of the call related to the ERA-NET Cofund WaterWorks2014 focused on Research and Innovation for Developing Technological Solutions and Services:

1. **for Water Treatment, Reuse, Recycling and Desalination;**
2. for Water Resources Management;
3. to Mitigate Impacts of Extreme Events (Floods and Droughts) at Catchment Scale.

Maintaining ecosystem sustainability



Developing safe water systems for the citizens



Promoting competitiveness in the water industry



Implementing a water-wise bioeconomy



Closing the water cycle gap



*For each theme, analysis of socioeconomic, environmental and policy impact*

## WORK PLAN 2018 – Section 1 (EU funds)

### Topics chosen for call 2018

### Actions



#### MANAGEMENT OF WATER

Integrated and sustainable management of water  
for arid and semi-arid Mediterranean areas

Research and  
Innovation Action (RIA)

Topic 1.4 Water reuse and water desalination for agricultural and food production



#### FARMING SYSTEMS

Sustainable farming systems under Mediterranean  
environmental constraints

Research and  
Innovation Action (RIA)

Topic 2.2 Sustainable productive ecosystems



#### AGRO-FOOD VALUE CHAIN

Sustainable Mediterranean agro-food value chain  
for regional and local development.

Research and  
Innovation Action (RIA)  
-- Innovation Action  
(RIA)

Topic 3.3 Implementation of innovation in the Agri-food chain, promoting higher  
quality, sustainability and competitiveness, with particular reference to smallholders

Possible topics: Promotion and support of partnerships/Youth Entrepreneurship

Coordination and  
Support Action (CSA)



## WORK PLAN 2018 – Section 2 (National funds)

### Topics chosen for the Call 2018



#### MANAGEMENT OF WATER

Integrated and sustainable management of water  
for arid and semi-arid Mediterranean areas

- Topic 1.1 Water resources availability and quality within catchments and aquifers
- Topic 1.2 Sustainable, integrated water management
- Topic 1.3 Irrigation technologies and practices



#### FARMING SYSTEMS

Sustainable farming systems under Mediterranean  
environmental constraints

- Topic 2.1 Adaptation of agriculture to climate change
- Topic 2.3 Preventing emergence of animal and plant diseases
- Topic 2.4 Developing farming systems able to generate income, to create employment and to contribute to a balanced territorial development



#### AGRO-FOOD VALUE CHAIN

Sustainable Mediterranean agro-food value chain  
for regional and local development.

- Topic 3.1 Valorization of local products from traditional Mediterranean
- Topic 3.2 Food Safety in local food chains
- Topic 3.4 Implications of dietary shifts and sustainable diets for the Med populations and food industry

### Actions

Research and  
Innovation Action (RIA)





## SECTION 1

### Call calendar 2018

Submission on-line:  
[www.prima4med.org](http://www.prima4med.org)  
(under construction)

january



Preannouncement

february



Announcement and/  
or opening of the  
submission website  
**1° Stage**

march

april



Indicative deadline  
for applications -  
**1° Stage**

may



Evaluation results  
are planned to be  
available on or before  
these dates  
**1° Stage**

june



Announcement and/  
or opening of the  
submission website  
**2° Stage**

july



Indicative deadline  
for applications -  
**2° Stage**

august

september

october

november



Evaluation results  
are planned to be  
available on or before  
these dates  
**2° Stage**

december



## SECTION 2

### Call calendar 2018

Submission on-line:  
[www.prima4med.org](http://www.prima4med.org)  
(under construction)

january



Preannouncement

february



Announcement and/  
or opening of the  
submission website  
**1° Stage**

march

april



Indicative deadline  
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**2° Stage**

december

***Thank you for your  
attention!***

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