



Horizon 2020

Boosting research and innovations in the water sector

Water JPI Conference, Rome, 19 May 2016



Panagiotis Balabanis
European Commission
DG Research & Innovation
Deputy Head of "Eco-Innovation" Unit

The World in 2030

- *Large-scale exploitation of natural resources will remain concentrated in a small number of dominant countries and regions;*
- *Food and water supply will be about managing scarcity — a problem made worse by climate change;*
- *By 2030, 93 % of the rise in energy consumption will be in non-OECD countries.*

Source: ESPAS 2015 report "Global Trends to 2030: Can the EU meet the challenges ahead?"

Need and benefits for innovation in the water sector

- ✓ *Water has been listed as the number one global risk that can cause significant negative impact for several countries or industries within the next 10 years (World Economic Forum – Global Risks 2015 report)*
- ✓ *Citizens, societies, agriculture and industries will increasingly need innovative solutions to meet the need of using water in a more efficient and effective way*
- ✓ *The 2011 Global Water Market survey from Global Water Intelligence, estimates that the global water market is USD 480 billion in 2010, including USD 175 billion for municipal and industrial water and wastewater capital expenditure*
- ✓ *By seizing new and significant market opportunities, Europe can increasingly position itself as a global market leader in water related innovation and technology*



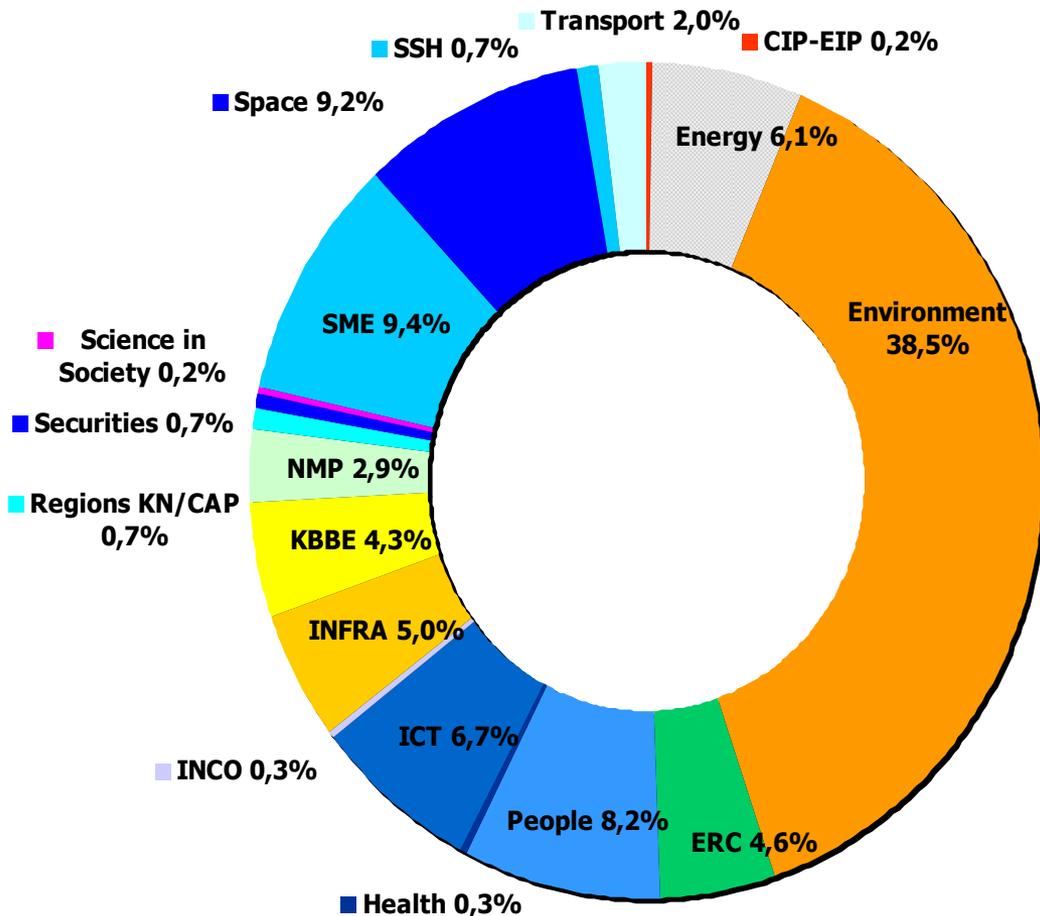
European
Commission

Water

Major component of successive EU RTD programmes

- ✓ *Major societal challenge*
- ✓ *Key element of several EU policies
(environmental, agriculture, climate change,
international and development cooperation
policies)*
- ✓ *Sector of key economic importance and
ready for innovation*

FP7 – The importance of water related research



**€130million per year in FP7
900 projects on Water**

from

*a multidisciplinary
sectorial approach in FP7*

to

*a transdisciplinary and
cross-sectorial approach in
HORIZON 2020*

EU major policy drivers for research and innovation in the water sector in the context of Horizon 2020

- ✓ *Innovation Union Flagship Initiative - European Innovation Partnership on Water*
- ✓ *Resource Efficiency Flagship Initiative*
- ✓ *Eco-Innovation Action Plan*
- ✓ *EU water related policies (Blueprint to safeguard Europe's waters)*
- ✓ *Joint Programming Initiative "Water challenges in a Changing World"*
- ✓ *Water related ETPs (WssTP, SusChem) and PPPs (SPIRE)*

Horizon 2020 and Water JPI Strengthening synergies

✓ **H2020**

- 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**

- 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



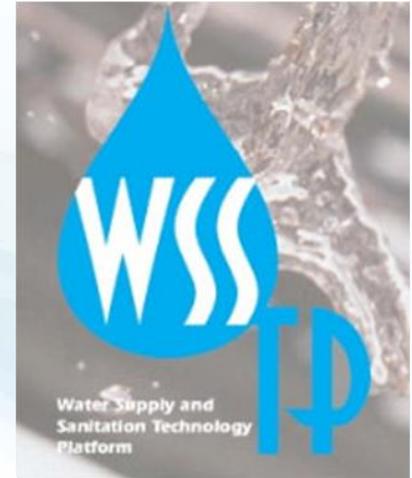
European Commission support to Water JPI

- ✓ Strong support from the launch of Water JPI
- ✓ WatEUr (2013-2016): a dedicated coordination and support action to sustain the overall coordination and capacity-building process for the Water JPI (EC contribution: approx. 2 M€)
- ✓ 2 dedicated ERANET Cofund actions in both 2014 and 2015 calls of Horizon 2020 SC5 (indicative EC contribution of 10 M€ and 15 M€ respectively)
- ✓ Following the evaluation of 2014 call, proposal (WaterWorks2014) has been selected for funding (MS contribution: 18,7 M€, EC contribution: 6,2 M€)
- ✓ Following the evaluation of 2015 call, proposal (WaterWorks2015) has been selected for funding (MS contribution approx: 17 M€, EC contribution: up to 9,5 M€)
- ✓ A CSA to enhance the opening of Water JPI to international cooperation in WP 2016
- ✓ A new ERANET cofund topic proposed in WP 2017

Towards a more competitive **WATER** industry in Europe

The Water Supply and Sanitation Technological Platform (WssTP)

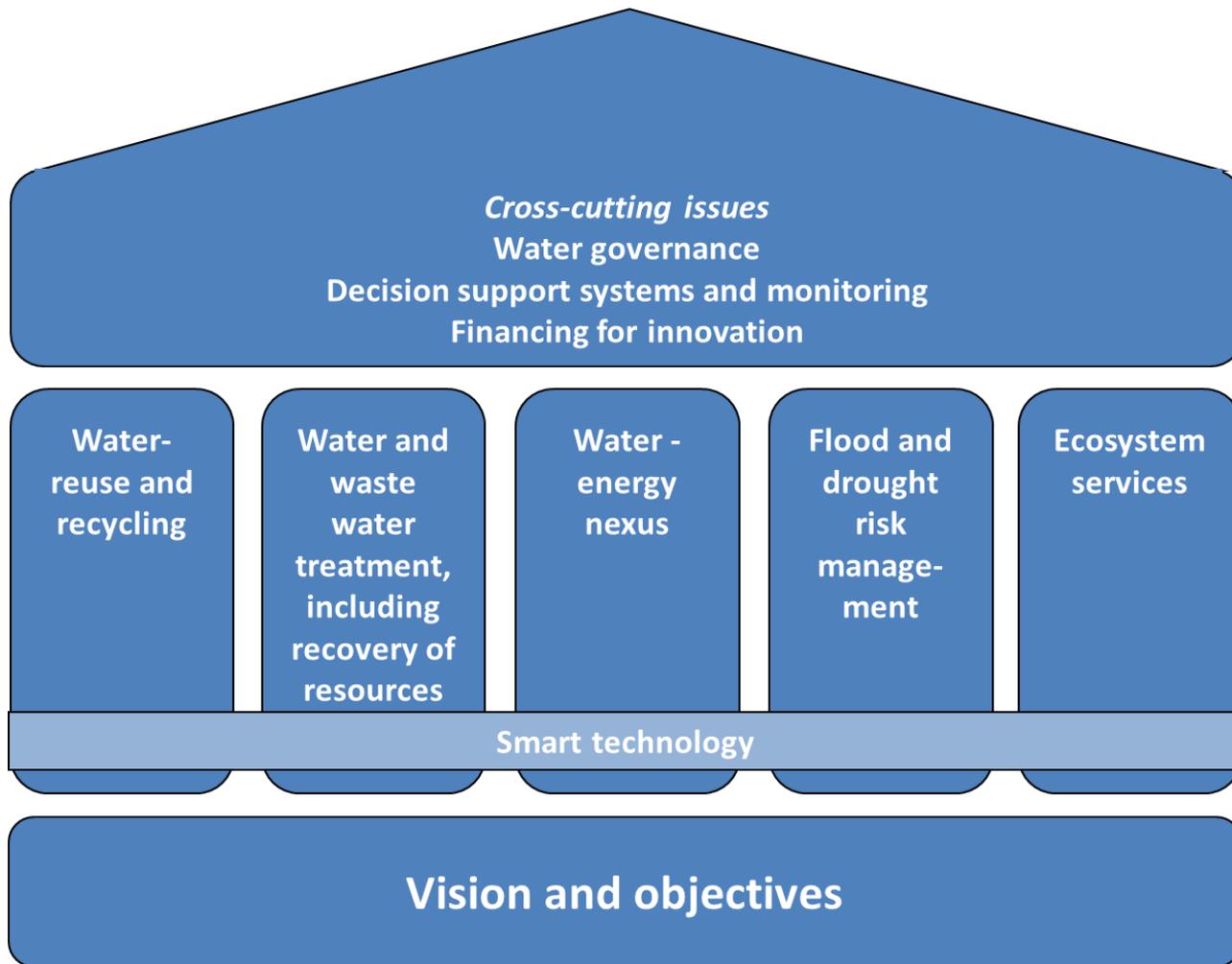
- European Technological Platform driven by a water industry perspective
- Launched in the context of ETAP (2004)
- To strengthen the potential for technological innovation and competitiveness of the European water industry, of water professionals and research institutions
 - **Common vision** and **strategic research and innovation agendas**
- To fasten step changes in the technological capacity of the European water industry and consolidate its position in the world market
- To ensure safe and secure water supply for different uses and sanitation services



What is the EIP Water? What are its objectives?

1. EIP Water is an initiative within the so-called “**EU 2020 Innovation Union**” - *the European Union strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs*
2. EIP Water aims to identify, test, scale up, disseminate and stimulate the uptake of innovative solutions by the market and society for **ten major water related challenges** by 2020.
3. EIP Water supports the **creation of market opportunities** for these innovations, both inside and outside of Europe. It also **identifies and addresses barriers and bottlenecks** to water innovation.

Thematic EIP Water Priorities



Organization and structure

Steering Group - Task Force experts



29 Action Groups, FP7 + H2020 Projects:

- **Development of innovative solutions** involving the entire innovation value chain
- **Application, implementation, commercialization** and dissemination of innovative solutions
- **Identification of barriers** to innovation (practise based) translated into policy recommendations
- Support **implementation of water policy**
- **Connect with relevant/adjacent initiatives**

Priority barriers & bottlenecks to water innovation

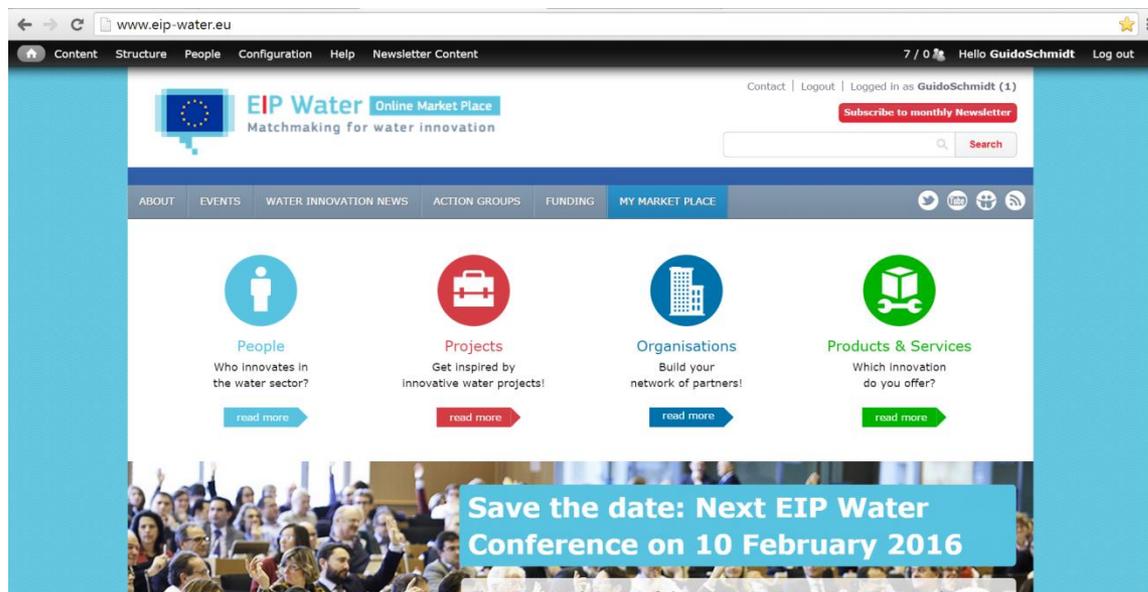
- **Financing**
- **Procurement**
- **Partnerships**
- **Regulation**
- **Information, showcases, demonstration sites**

Online Marketplace – what does it offer?

Matchmaking, searches, personalised news

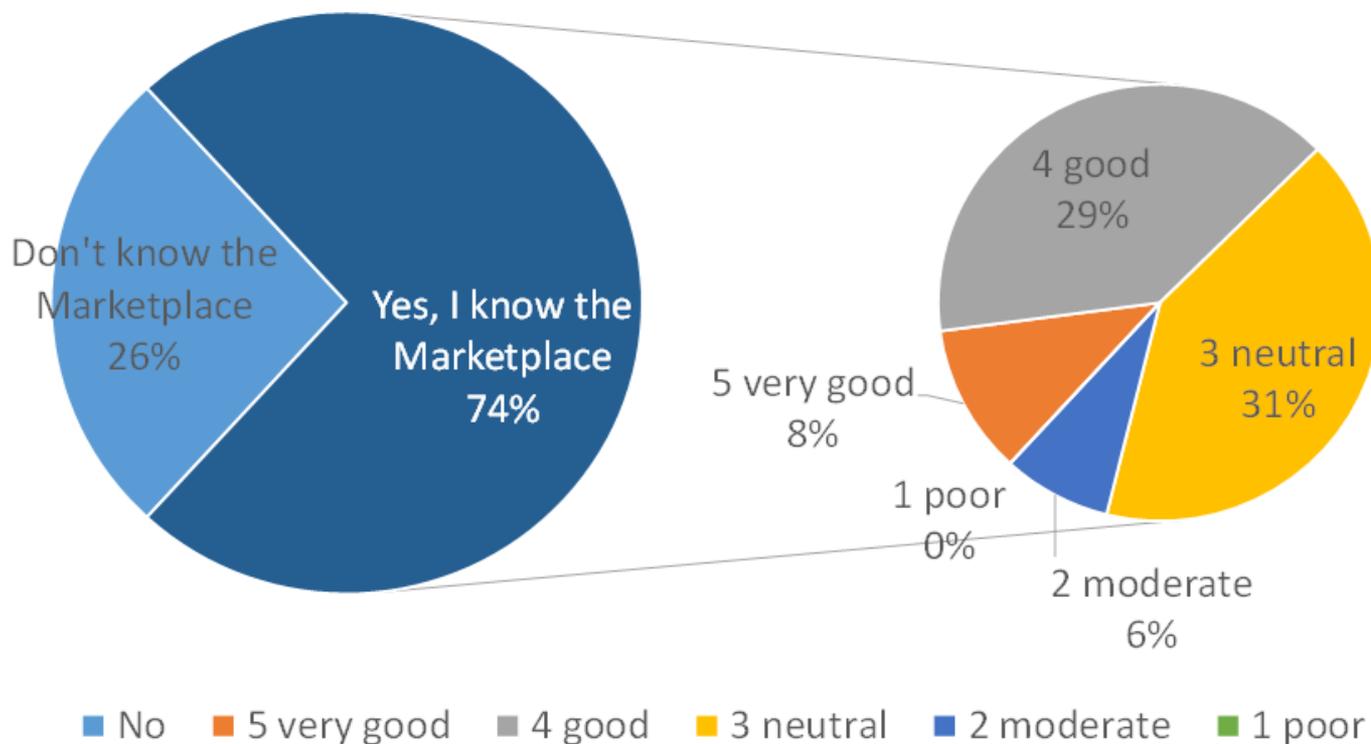
2300 people; 1400 projects

600 organisations; 200 products & services



Stakeholder **feedback** on Marketplace

Publicity/visibility of the Marketplace and Evaluation by Users (among the participants of the 2016 conference)



Communication and dissemination impact

- **500,000 page views** since publication (**600 daily visits**)
- **14,000** downloads of **documents**
- **35,000** views of **presentations** from slideshare.net/eip-water
- **Monthly newsletter** sent to over **4 300 recipients**, with continuously increasing subscriber figures



EIP Water conferences

- **Three conferences** (Brussels, Barcelona, Leeuwarden) **with 1,300 participants so far**
- Participation in **50 other events**
- **Promotion of further events** (China-Europe Water Partnership, India-EU Water Partnership, FP7 and Horizon 2020 projects)

EIP Water Conference 2014
Connecting Innovation Supply and Demand

EIP Water Conference 2013
Networking & interacting – Innovating water

EIP Water Conference 2016
How is water innovation succeeding in Europe?
Leeuwarden, The Netherlands - 10 February 2016

For more information



www.eip-water.eu

env-eip-water@ec.europa.eu

contact@eip-water.eu

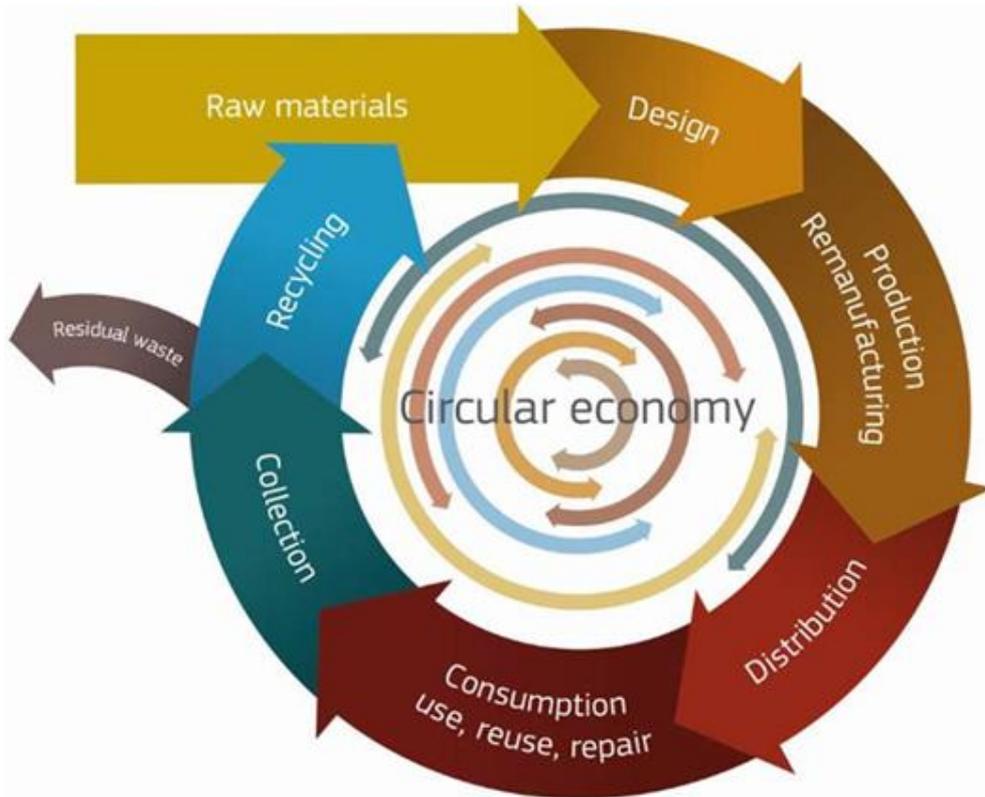
Water has the potential to contribute to the Juncker Commission's policy agenda



- ✓ A new boost for **jobs, growth and investment**
- ✓ A deeper and fairer internal market with a **strengthened industrial base**
- ✓ A resilient Energy Union with a **forward looking climate change policy**
- ✓ **A stronger global actor**

✓ **Open Innovation** ✓ **Open Science** ✓ **Open to the world**

Contributing to the circular economy



- ✓ demonstrating the economic and environmental feasibility of the circular economy
- ✓ supporting systemic innovation to obtain a systems-wide transformation
- ✓ reorganising production and consumption to maintain/enhance value of products, components, materials and resources throughout the value chain and product life
- ✓ decoupling creation of wealth and jobs from resource consumption

Sustainable Development Goals - The research and innovation perspective

- ✓ Investments in science, technology and innovation (STI) are vital to achieving poverty eradication and sustainable development as well as to identifying and addressing pressing global societal challenges.
- ✓ Solutions generated by science, technology and innovation are important drivers for the implementation of the vision for the world beyond 2015.
- ✓ Science, technology and innovation, including digitisation, can generate profound changes
- ✓ The EU is committed to fostering science, technology and innovation, both within the Union and in cooperation with international partner countries and regions.
- ✓ Horizon 2020 has to earmark 60% of its budget to support sustainable development and is open to participation from across the world.

Water in Horizon 2020

- ✓ *A key component of Societal Challenge 5 "Climate action, environment, resource efficiency and raw materials", but also other societal challenges (eg. SC2, SC3) and pillars (e.g. LEIT)*
- ✓ *Focus Area "Water innovation: Boosting its value for Europe" (WP 2014-2015)*
- ✓ *Mainstreamed through WP 2016-2017, as part of the systemic approach*



EC international cooperation water related activities

- Implementation of FP7 joint collaborative call with India and a dedicated project on water reuse and recycling in L.America
- Cooperation with South Africa, Taiwan, USA, Canada, Tunisia, Egypt and Moldova in the context of the Water JPI ERANET Cofund 2014 and 2015 calls
- Towards a strategic cooperation partnership for water research and innovation between Europe and China
 - ***The PIANO project (<http://project-piano.net/>)***
- Cooperation with Africa and non-EU Mediterranean countries, at project level, helping them to address water and climate change vulnerabilities and manage risk associated with water supply and sanitation, while creating more market opportunities for European water innovation
 - ***The AfriAlliance project (<http://afrialliance.org/>)***
 - ***6 more projects have been selected for funding following the 2015 call – currently under grant agreement preparation***

The PRIMA proposal

General objectives

A Joint Research Programme within H2020

- to develop **innovative solutions** and promote their adoption for improving the efficiency and sustainability of **food production** and processing and **water** provision in the **Mediterranean Area**
- to support an inclusive **well-being, stability and socio-economic development** in the Mediterranean Area, within the framework of a reinforced Euro-Mediterranean cooperation
- to facilitate the **creation of knowledge-based competences and jobs** in the Mediterranean Area

Budget

- a 200M€ cash contribution has been committed by participating PRIMA countries for the initiative, over a 10-year period as from 2018

...as PRIMA has been proposed as a public-public partnership under Art. 26 of the Horizon 2020 Framework Regulation, the EC has to examine the potential impact of the initiative



European
Commission

Belmont Forum

- An informal forum of funding agencies from developed and emerging economies in global environmental change research promoting solution-oriented actions
- Collaborative Research Actions (CRAs): centralised objectives – agreed upon consensually by all members – but the participating agencies decide what their financial involvement will serve for and how it will be mobilised
- 3 new CRAs at the 2015 annual meeting in Oslo
 - 'Managing the food, water and energy nexus in cities'. Led by NSF (USA) with a strong participation of Urban Joint Programming Initiative, which will leverage a 5 M EUR co-fund from H2020. The total budget for the joint call in 2016 - 2017 is around 25 M EUR.
 - 'Open access to data and e-Infrastructures'. Led by the NSF (USA), with strong involvement of EC, ANR (France) and NERC (UK). Coordination with the RDA (Research Data Alliance) and GEO (Global Earth Observation).
 - 'Societal Transformations to sustainability'. Led by NWO (NL), leveraging a H2020 SC5 co-fund of 3 M EUR through the NORFACE ERA-Net. The total budget for this joint call in 2016 - 2017 in the order of 15 M EUR.

Workshop on supporting joint actions towards a sustainable green economy in Europe and beyond

Date: 6 June 2016

- *Exchange of information on activities and priorities of JPIs, ERA-NETs and Belmont Forum, in the context of the Societal Challenge 5 strategic programming exercise 2018-2020*
- *Identification of possible future cross-cutting actions between different JPIs/ERA-NETs and/or with the Belmont Forum, as input for the Work Programme 2018-2020, particularly regarding ERA-NET Cofund actions.*

For further information

- **Research Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Horizon 2020 Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

<http://ec.europa.eu/horizon2020>

- **Join our social media network on 'Yammer'**

<http://www.yammer.com/euresearchinnovationshapingagreenerfuture>