



R&I in support to Blue Growth

Opportunities in Horizon 2020



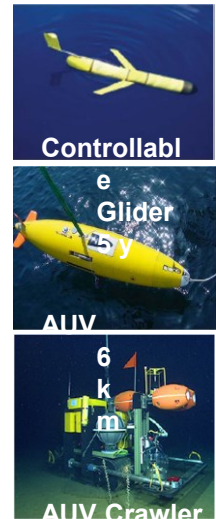
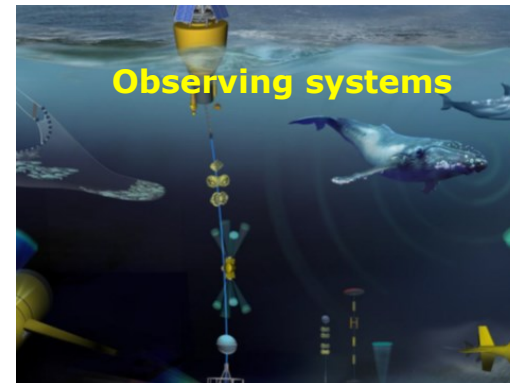
***Atlantic Stakeholder Conference
Research and innovation
Workshop 2 B
Jacques Fuchs – RTD/F4***

Research & Innovation



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An Ocean of opportunities





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The EU 'Blue' Policy context:

2008: *the EU Integrated Maritime Policy*

2012-2014: *the EU Blue Growth Agenda with its Sea-basin Strategies e.g. **the Atlantic Strategy and its Action Plan***

*(**aquaculture, biotech**, energy, deep sea, tourism)*

2014: *Revised EU Common Fisheries Policy*

2014: *Several Communications, such as:*

- the Blue Energy Communication
- the Blue Tourism Communication
- the Blue Innovation Communication (*Joint MARE&RTD*)
EP discussion

***Directives:** the Marine Strategy Framework Directive (2008) , Maritime Spatial Planning Legislation (2014), etc.*



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Political opportunities

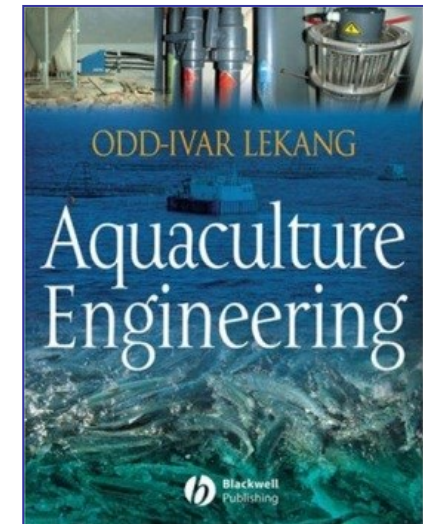
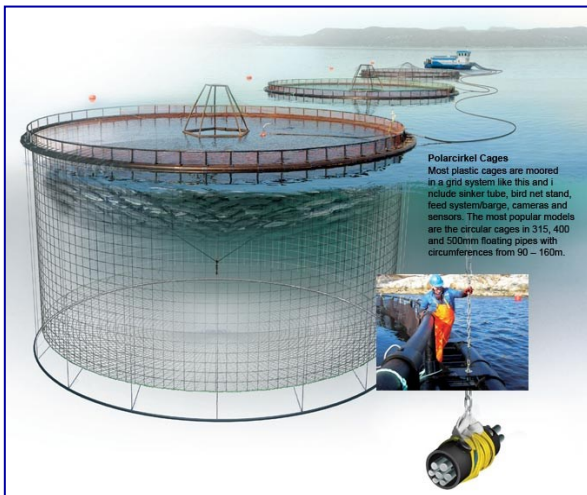
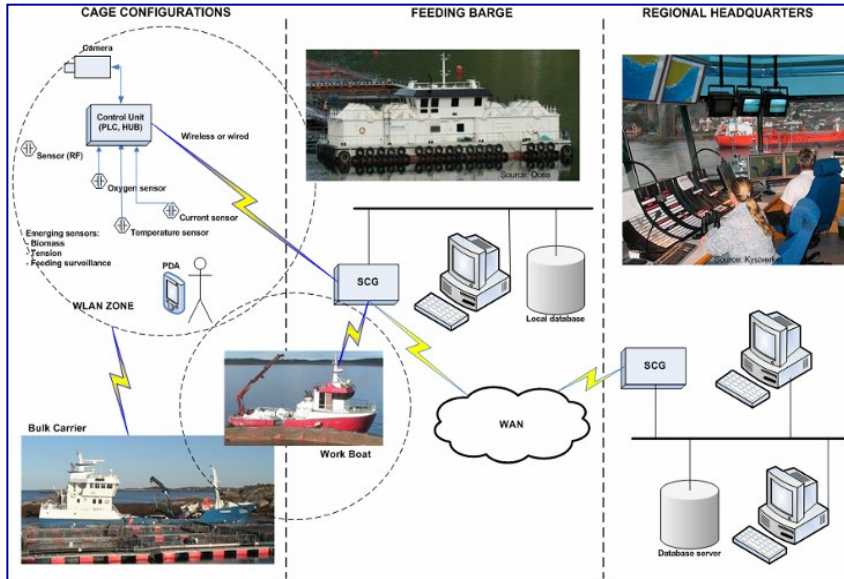
- A. *Demonstrating the innovation potential of seas and oceans*
- B. *Seizing the opportunities of integrated sea basin strategies for science diplomacy*
 -  *Atlantic Strategy/Galway Statement*
- C. *Engaging with citizens*

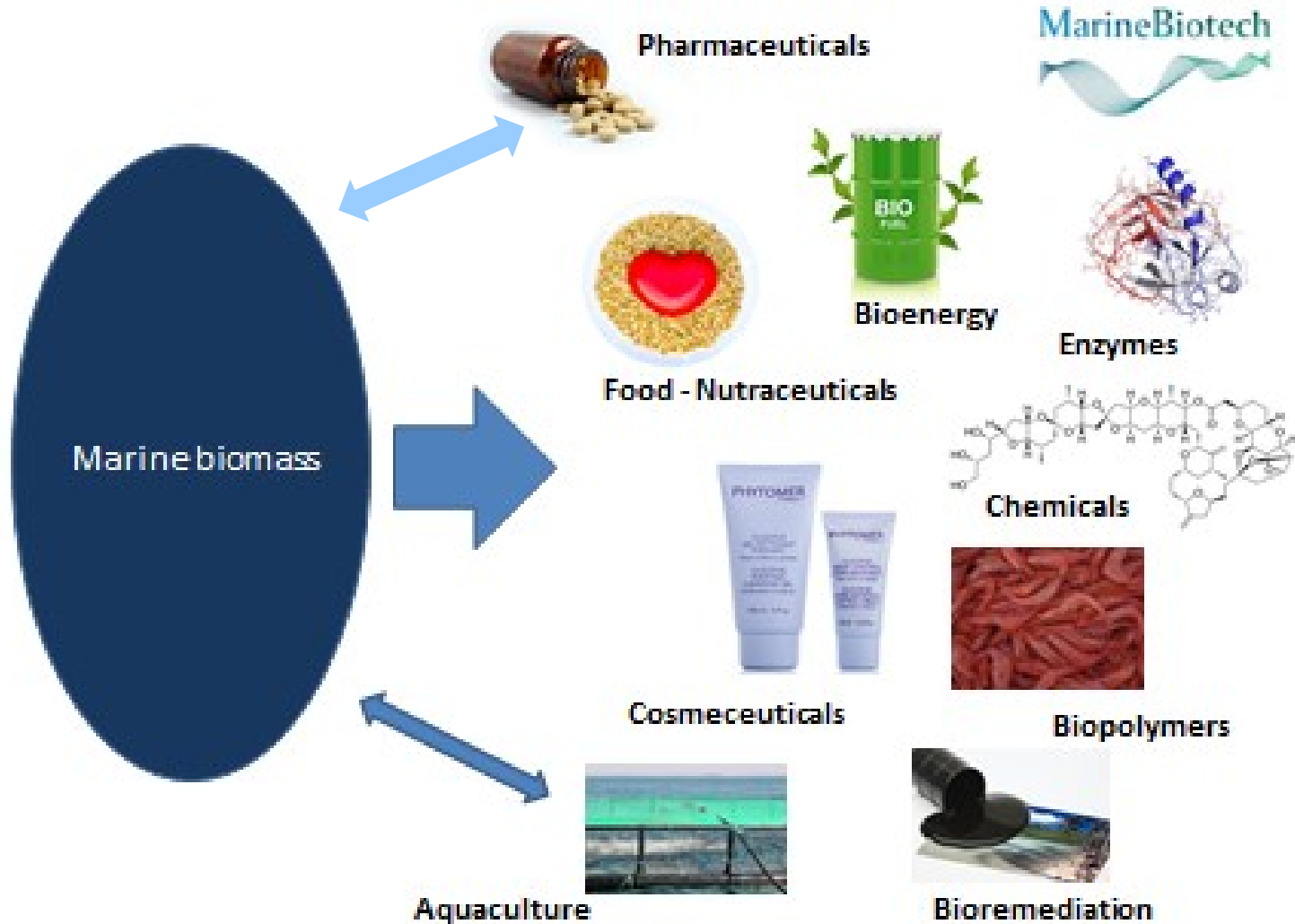
A - Demonstrating the innovation potential of seas and oceans



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Aquaculture – high potential for innovation





Blue biotech research in FP7



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Key domains covered:

Bioactive compounds from marine and fresh water

organisms

- Biodiscovery and bioprospecting
- Exploration of marine biochemical diversity
- Industrial exploitation of marine biodiversity
- Education/communication/outreach/coordination

Micro and macro-algae for bioproducts

Biosensors for remediation/monitoring

EU contribution 130 M€





Galway Statement on Atlantic Ocean Cooperation Marine

**Aquaculture Working Group meeting
Rotterdam, The Netherlands, October 20, 2015**

**THE ATLANTIC
A SHARED RESOURCE**



Priority Areas of Cooperation – “The What”

- ‘*Ocean research and observation efforts*’ subsequently defined under ‘*statements of purpose*’ in which we have agreed to work together in the following priority areas of cooperation:
 - Ocean Health and Stressors
 - Ocean Observation and Prediction
 - Characterization of the Seafloor and the Sub-surface
 - **Aquaculture**
 - **Marine Microbial Ecology (EU-US)**
 - Information Management and Dissemination
 - Data access and interoperability
 - Ocean literacy



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HORIZON 2020

The New EU
Framework Programme for
Research and Innovation

2014-2020



HORIZON 2020



1. Health, demographic change and wellbeing

2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy

3. Secure, clean and efficient energy

4. Smart, green and integrated transport

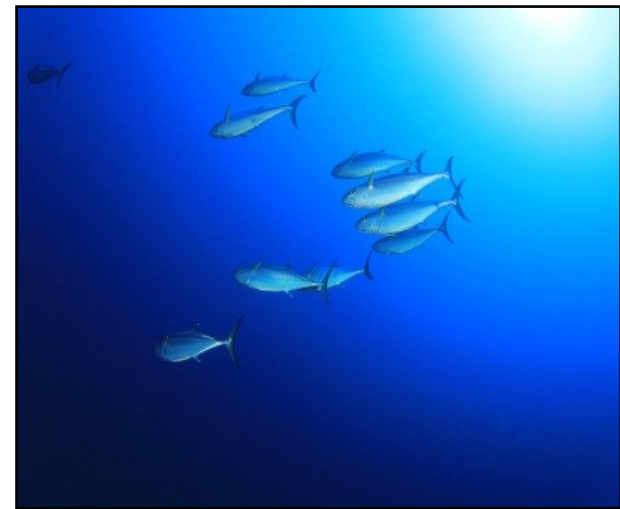
5. Climate action, resource efficiency and raw materials

6. Inclusive, innovative and reflective societies

7. Secure societies

Activity 2.3. Unlocking the potential of aquatic living resources

- 2.3.2. Developing competitive and environmentally-friendly **European aquaculture**
- 2.3.3. Boosting **marine and maritime innovation** through biotechnology
 1. Explore & exploit marine **biodiversity**
 2. **Aquatic biomass**, new innovative and sustainable processes, products and services.
 3. **Markets**; applications chemical&material industries, pharmaceutical, fisheries&Aquaculture, energy supply, cosmetic.





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Sustainable Food Security

- **Sustainable food production systems**
- Safe food and healthy diets and sustainable consumption
- Global drivers of food security

Blue Growth

- **Sustainably exploiting the diversity of marine life**
- **New offshore challenges**
- **Ocean observation technologies/systems**
- **Socio-economic dimension - engagement with society**

Innovative, Sustainable and Inclusive Bioeconomy

- Sustainable agriculture and forestry
- Sustainable and competitive bio-based industries
- Cross-cutting actions covering all the activities



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0 5 10 15 20 25 30 35 40 45 50

2.3. UNLOCKING THE POTENTIAL OF AQUATIC LIVING RESOURCES

2.3.1 Sustainable and environmental friendly FISHERIES

2.3.2 Sustainable and environmental friendly EU AQUACULTURE

2.3.3 Boosting marine and maritime innovation through BIOTECHNOLOGIES

2.5. CROSS-CUTTING MARINE AND MARITIME RESEARCH

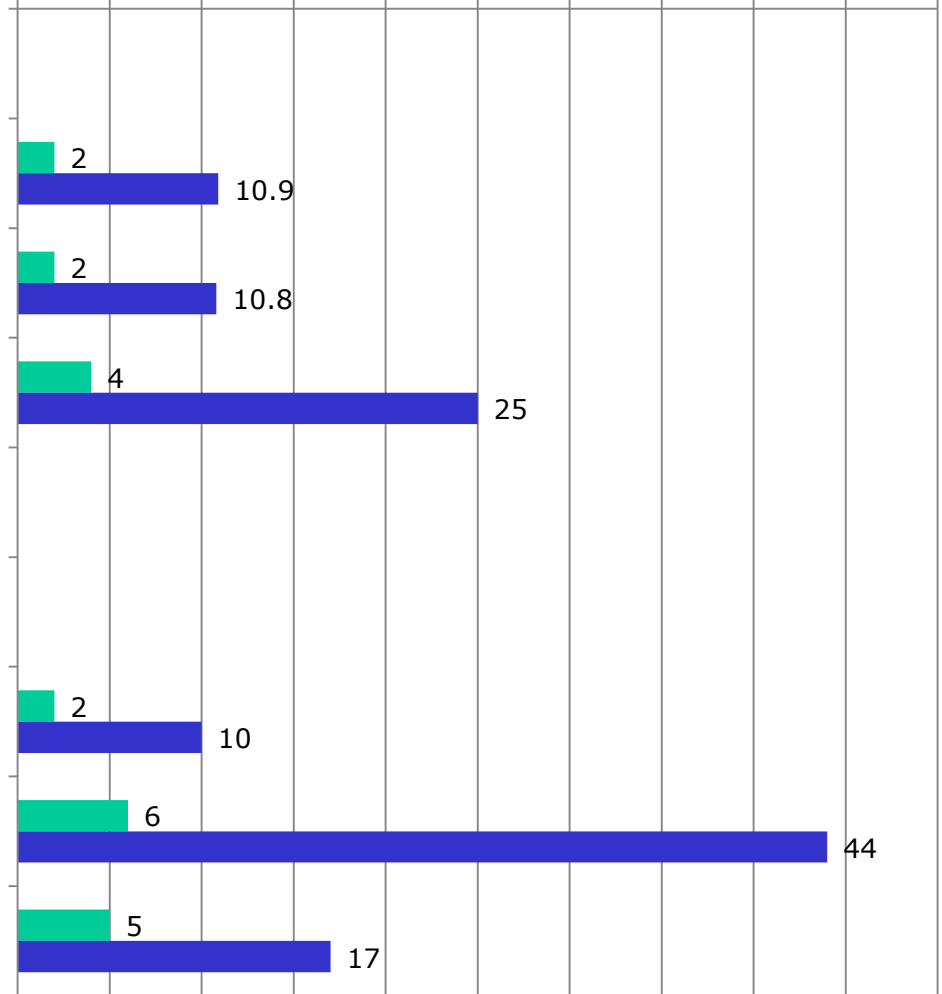
2.5.1 CLIMATE CHANGE impact on marine ecosystems and maritime economy

2.5.2 Developing the POTENTIAL of MARINE RESOURCES through an integrated approach

2.5.3 Cross-cutting concepts and TECHNOLOGIES enabling maritime growth

Horizontal aspects/Socio-economy/International/Policy support

■ number of projects ■ amount of EC contribution (M€)





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Societal Challenge 2

Four Calls 2016-17

**Sustainable
food security**

**Blue
Growth**

**Rural
Renaissance**

**Bio-based
innovation
for
sustainable
goods and
services**





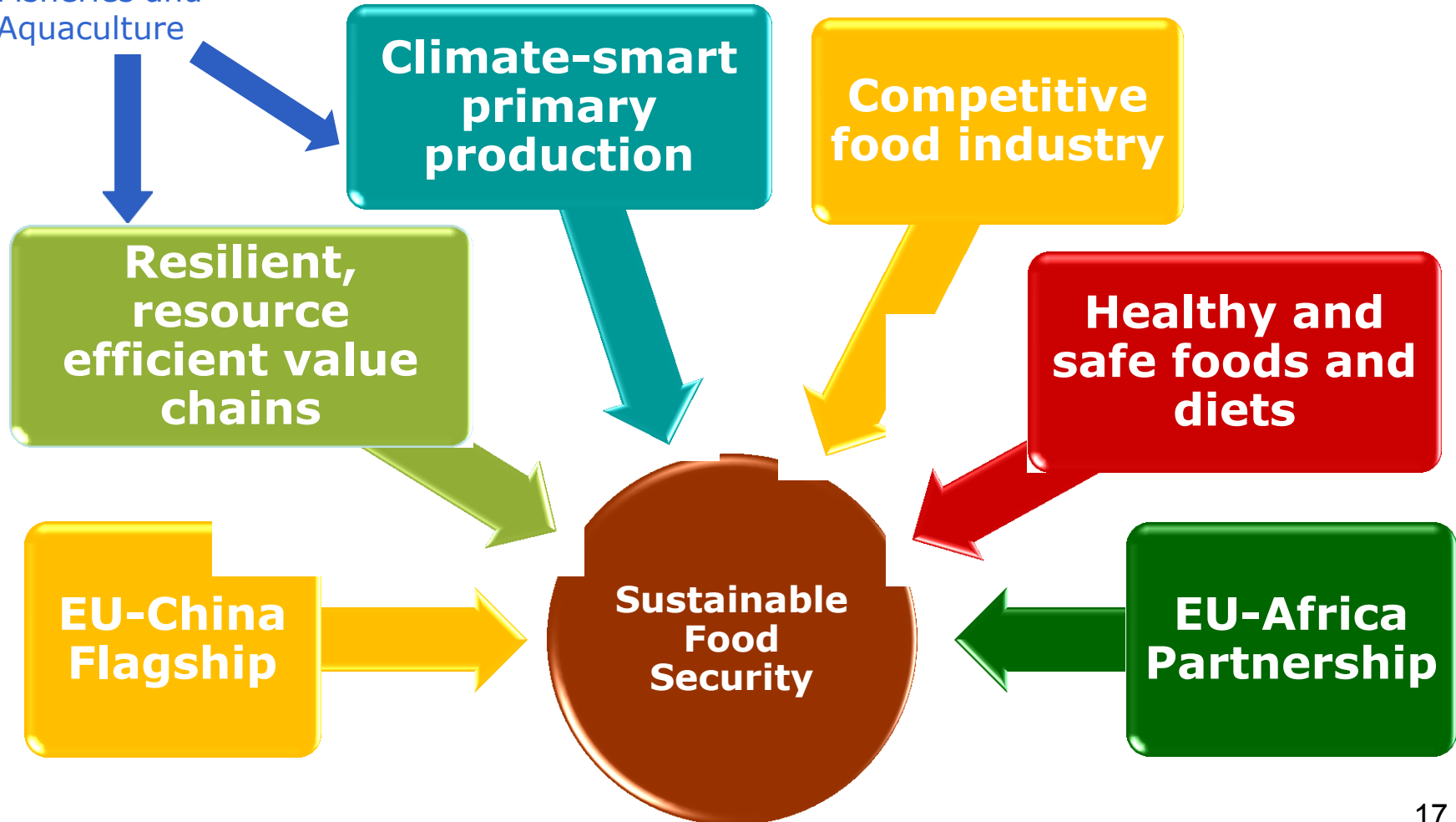
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CALL

**Sustainable Food Security
(SFS)**



Topics on Fisheries and Aquaculture





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CALL

Blue Growth (BG)



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Blue Growth CALL

€ 129 million from different parts of Horizon 2020 to:

-  Demonstrate the innovative potential of the oceans by bringing technologies to the market
-  Ensure a healthy ocean for healthy people
-  Seize the opportunities of integrated sea basin strategies (the Mediterranean and the Arctic)







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Blue Growth - AREAS





 BG-1 (2016)	Large-scale algae biomass integrated biorefineries (IA)	22 M€ SC2
BG-2 (2016-2017)	High value-added specialised vessel concepts enabling more efficient servicing of emerging coastal and offshore activities (IA)	15 M€ SC4 <i>(Transport)</i>
BG-3 (2016)	Multi-use of the oceans marine space, offshore and near-shore: compatibility, regulations, environmental and legal issues (CSA)	2 M€ SC3 <i>(Energy)</i>
BG-4 (2017)	Multi-use of the oceans' marine space, offshore and near-shore: enabling technologies (IA)	8 M€ SC2
 BG-5 (2016)	ERANET Cofund on marine technologies	10 SC2+SC4+LEIT



Linking healthy oceans and seas for healthy people



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3 TOPICS – 21 M€

BG-6 (2017)	Interaction between people, oceans and seas: a strategic approach towards healthcare and wellbeing (CSA)	2 M€ SC2
BG-7 (2017)	Blue green innovation for clean coasts and seas (IA)	12 M€ SC2
BG-8 (2017)	Innovative sustainable solutions for improving the safety and dietary properties of seafood (IA)	7 M€ SC2





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CALL

**Bio-based innovation
for sustainable goods
and services
(BB)**



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Bio-based innovation - AREAS

**Securing
sustainable
bio-mass
supply**

**Building the
bio-based
markets of
the future**

**Bio-based
innovation
for
sustainable
goods and
services**



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Bio-based Industries Joint Undertaking (BBI – JU)

Public Private Partnership supporting R&I for bio-based industries:

- Partners: European Commission and Biobased Industries Consortium (BIC)
- Budget: € 3.705 billion (about 75% from industry)
- Implementation:
 - Principles of **openness, transparency and excellence**
 - Horizon 2020 rules for participation
- Objectives: At least **5 new bio-based value chains** for Europe based on **2nd generation/advanced biorefineries**

The screenshot shows the homepage of the BBI Europe website. At the top left is the logo for 'BIO-BASED INDUSTRIES' with a green leaf icon and the text 'Public-Private Partnership'. To the right is a 'Contact' button. Below the logo is a navigation menu with links for 'Home', 'About BBI', 'Participate', 'News', 'Events', and 'Multimedia'. The main content area features a large image of a field with hay bales under a blue sky. To the right of this image is a blue box with the text 'Welcome to the BIO-BASED INDUSTRIES Joint Undertaking' and '€3.7 billion to convert biological residues and wastes into greener everyday products'. Below this are three smaller images: 'About BBI' (green grass), 'Participate' (chemical elements), and 'Partnering Platform' (industrial building). At the bottom, there are sections for 'News' (dated 09 July 2014), a 'Twitter' feed from Resource Media Ltd, and 'Events' (dated 02 September 2014).

www.bbi-europe.eu



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SC2 Calls 2016 - DATES

Publication	Submission		<u>Deadlines</u>	Information to applicants	Grant Agreements
14 OCT 2016	two-stage submission (RIA with some exceptions)	1st stage	17 Feb 2016	May 2016	-
		2nd stage	13 Sept 2016	Nov 2016	May 2017
	single stage submission (IA, CSA, ERA Net)	Single stage	17 Feb 2016	May 2016	October 2016



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INFORMATION DAYS WP 2016-2017

25 November 2015 Societal Challenge 2
Information Day.

All SFS (fisheries and aquaculture) and Blue Growth topics with 2016 calls will be presented.



Horizon 2020 offers opportunities:

- 1/ To ensure continuity of supply of marine biomass within the Atlantic area (R&I fisheries/aquaculture topics)
- 2/ To strengthen the position of the Atlantic area on marine biotechnology
- 3/ To encourage European SMEs/industry to participate in EU projects (Innovation actions)

What are the prime competitive advantages of the Atlantic area regarding the use marine biotechnology to create value and employment?

A strong network between R&I and Industry (maritime clusters ..)

Implementing Com - Innovation in Blue Growth



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1 - Creation of an information platform on marine research across the whole Horizon 2020 programme as well as information on nationally-funded marine research projects



End of the
year 2015

2 - Creation of a Blue Economy Business and Science Forum



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Maritime days –
Athens 28-29
May 2015



HORIZON 2020

Thank you for your attention

Useful links:

Horizon 2020: www.ec.europa.eu/research/horizon2020

Participant Portal:

<https://ec.europa.eu/research/participants/portal>

Bioeconomy : <http://ec.europa.eu/research/bioeconomy>