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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018  
**Blue Growth**

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please refer to the official documents.

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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**DT-BG-04-2018-2019**

Sustainable European aquaculture  
4.0: nutrition and breeding

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## Specific Challenge

- European aquaculture provides 1.25 million tonnes of seafood annually, valued at over 4 billion euro.
- **However**, Europe heavily depends on external markets to ensure consumer demands for seafood (including from fresh water) is met.
- EU aquaculture needs to increase the competitiveness of its food products and to respond to consumer demands for high-quality and safe food, in a challenging context of climate change, greater competition for natural resources, and conflicting interests for space and markets.

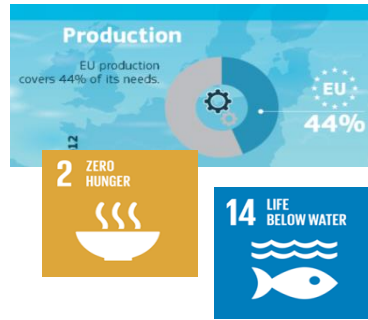


## Specific Challenge

- **To ensure food and nutrition security by 2030:**
  - ✓ European aquaculture has to sustainably expand: in terms of
    - ✓ space,
    - ✓ production and
    - ✓ new value chains,
  - ✓ exploring and enhancing innovation opportunities offered by sustainable and resilient aquaculture production systems,
  - ✓ implementing the circular economy principles and increasing social acceptance of the corresponding activities and products.
  - ✓ European aquaculture has now a unique opportunity to address not only today's challenges of climate change and food and nutrition security, but also to implement the international commitments encompassed in the UN SDGs, while fostering economic growth and social prosperity.

## DT-BG-04-2018-2019: Sustainable European aquaculture 4.0: nutrition and breeding

### Challenges:



### Policy priorities and existing EU initiatives:



## Scope

- **Activities shall develop: smart breeding programmes and/or tailor feeding formulas and technologies for conventional and organic aquaculture – for marine and/or freshwater – targeting:**
  - animal health (contributing to disease resistance) and welfare,
  - different production systems,
  - feeding efficiency,
  - resilience and climate change mitigation
  - zero waste, by-products valorisation following circularity principles and organoleptic and nutritional values of seafood optimisation.
  - Efforts to close the reproduction cycle of economically important species should be considered.



## Scope

- In addition, activities shall explore the potential of the microbiome on health and productivity of farmed species.
- Activities shall consider sound cost-effective production methods and profitability, testing, demonstrating and upscaling of the production processes to pre-commercial product.
- Regulatory authority and consumers should also be consulted, addressing their concerns and demands.
- The use of Internet of Things (IoT) and Artificial Intelligence (AI) should be considered.
- The participation of deep-tech start-ups is encouraged. Activities shall develop a set of indicators to monitor and measure progress towards the expected impacts as listed in the call text and in particular the improvement of the production systems that increases productivity, resilience and sustainability.

## Scope

- Activities shall develop a set of indicators to monitor and measure progress towards the expected impacts as listed in the call text and in particular the improvement of the production systems that increases productivity, resilience and sustainability.
- The interdisciplinary and cross-sectorial nature of the project should also apply to training activities improving the professional skills and competencies and supporting the creation of new jobs in the blue economy





## Requirements to keep in mind



## Expected Impact

- **Contributing to the ongoing implementation of EU policies**
- **In the short term:**
  - Demonstrate that investment in sustainable aquaculture research and innovation leads to the creation of new value chains, markets, growth and jobs in coastal, offshore and landlocked areas.
  - Improve consumers' awareness, perceptions and acceptability of the European aquaculture products and methods.
  - Contribute to the creation of improved sustainable aquaculture systems and implement productive and resilient aquaculture practices that maintain healthy aquatic ecosystems and strengthen capacity for adaptation to climate change, by 2020 (UN SDG 2).

## Expected Impact

- Contribute to ensure the genetic diversity of farmed algae (micro and macro) and farmed aquatic species (fish, molluscs and crustaceans) and their related wild species, and promote access to the utilisation of genetic resources by 2020 (UN SDG 2).
- **In the medium term**
  - Contribute to increasing available, accessible, affordable and nutritious food and feed, while conserving natural resources and contributing to climate change mitigation (UN SDG 2).
  - Improve the professional skills and competences of those working and being trained to work within the blue economy.
  - Contribute to policymaking in research, innovation and technology.

## Expected Impact

**Increase available, accessible, affordable and nutritious food and feed**



**New value chains, markets, growth and jobs**







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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**BG-05-2019**

Multi-use of the marine space,  
offshore and near-shore: pilot  
demonstrators

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# Topic introduction

- **Background for the development of the topic (e.g. challenges, policy priorities, existing EU initiatives, past achievements to be considered, etc)**

Help solve the increasing competition and pressure on Marine Space, divide and reduce the costs of operations and environmental impact at seas and the demand on the space needed for different activities.

Previous EU R&I funding on design and promising business models, identify and address barriers, new technologies for combining activities in terms of economic potential and environmental impact.



# Topic introduction

- **Requirements to keep in mind**

Develop pilots for demonstration in a real environment of multi-use platforms or co-location of activities in a marine space with their logistic support, including service vehicles and port facilities.

Integrating the available knowledge, technologies and facilities, in particular capitalising on the results of EU and national projects, and relevant support offshore vessels and autonomous vehicles.

Real environment testing of the viability (economic, social and environmental) of the multi-uses of a marine space for the output of at least two economic activities (such as renewable energy, aquaculture, marine bio-resources and biotechnologies, maritime activities and related services or tourism).



# Topic introduction

- **Cross-cutting issues (international cooperation, multi-actor approach, RRI, gender, etc)**

Health and safety issues, including for the logistics, ancillary infrastructure and maintenance services.

Involving local communities.

The interdisciplinary and cross-sectorial nature of the project should also apply to training activities improving the professional skills and competencies and supporting the creation of new jobs in the blue economy.

All Blue Growth actions shall also contribute to improving science education and ocean literacy through dissemination, outreach and training activities.



# Useful resources

- **Policy background documents**

EU Integrated Maritime Policy, the EU Blue Growth Strategy, the EU Marine Strategy Framework Directive, the EU Maritime Spatial Planning Directive, the EU International Ocean Governance Communication, the EU Communication for a Sustainable European Future, the EU Bioeconomy Strategy, the Communication on European competitiveness in the blue economy

- **Key definitions**

Multi-use platforms : facilities combining several activities at sea

Co-location of activities: activities for which facilities are next to each other but with their own facilities. They can share logistic and some infrastructures.

- **Links**

[https://ec.europa.eu/maritimeaffairs/policy/blue\\_growth/](https://ec.europa.eu/maritimeaffairs/policy/blue_growth/)



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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**CE-BG-06-2019**

Sustainable solutions for bio-based  
plastics on land and sea

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# CE-BG-06-2019: Sustainable solutions for bio-based plastics on land and sea

## Challenge

Circular plastics economy where bio-plastics reuse and recycling are maximised and the impact in the environment in the case of leakage reduce.

## Scope

Activities shall focus on sustainability strategies and solutions for bio-based products.

- Business models for the reuse and recycling of bio-based plastics
- Biodegradable Plastics Sustainability framework
- International fora and platforms; Stakeholders



## Expected impact

- Efficient feedback into policymaking in research, innovation and technology, in particular in the EU Plastic Strategy.
- Raise awareness and create a better framework for systemic innovation and uptake of results through broad stakeholder engagement.
- Demonstrate solutions and develop strategies for Circular Innovation.
- Contribute to the development of EU harmonized criteria for biodegradability
- Contribute to the assessment of impact on plastic

## Background information/to keep in mind

- Circular Economy actions on Plastic Strategy and Single use Plastics: Marine biodegradability standard





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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**BG-07-2019-2020**

The Future of Seas and Oceans  
Flagship Initiative

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# BG-07-2019-2020: The Future of Seas and Oceans Flagship Initiative

- Contributing to the ongoing implementation of EU Policies such as:
- the Bioeconomy Strategy
- the Circular Economy Strategy
- the European Open Science Cloud Initiative
- the Blue Growth Strategy, the Common Fisheries Policy
- the Maritime Spatial Planning Directive
- the Marine Strategy Framework Directive
- the International Ocean Governance Communication
- the UN SDGs





# What do you imagine the future of Seas and Oceans to look like?

- **The Seas and Oceans are under increasing pressure. While their economic importance is set to increase the ecosystems that provide its foundation are in jeopardy and “an important constraint on the development of the ocean economy is the current deterioration of its health.” (The Ocean Economy in 2030, OECD, 2016)**
- **How can we keep prospering thanks to the Seas and Oceans while ensuring their sustained health? To respond to such a challenge we have only one possibility: exploiting the possibilities arising from digital innovation.**



# Connect the Oceans in its Three Dimensions: turn the lights on...

- A growing network of sensors, manned and unmanned systems, satellites, smart underwater cables, seafloor observatories, vessels and coastal monitoring systems are all connected to give us instantaneous and affordable access to information.



# Unlock Marine data and Observations through the European Open Science Cloud

- To obtain this information the growing amount of data that is going to be generated needs to be effectively stored, analysed and visualised. Considering the high costs associated with collecting data in this challenging and vast environment the principle of 'collecting data once and using it as many times as possible' is particularly relevant in this field.





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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**BG-08-2018-2019**

All Atlantic Ocean Research Alliance  
Flagship

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# BG-08-2018-2019: All Atlantic Ocean Research Alliance Flagship



Move towards a basin-wide cooperation from Antarctica to the Arctic, through enhanced cooperation with countries bordering the South Atlantic, notably Brazil and South Africa (Belém Statement 2017).

Upscale cooperation along and across the Atlantic Ocean and the creation of long-term partnerships building on on-going initiatives such as the All Atlantic Ocean Research Alliance (Galway Statement 2013).

The EU has already invested 140 million Euro in Atlantic research across over 15 projects in the first two work programmes of the Horizon 2020 Blue Growth calls.

<https://www.atlanticresource.org/aora/site-area/atlantic-policy-research/h2020-fp7-funded-projects>



# BG-08-2018-2019: All Atlantic Ocean Research Alliance Flagship

## Actions:

- Coordination and Support Action (CSA)
  - Sub-topic [A] Coordinating R&I in the Atlantic; launching a multistakeholders platform to reinforce cooperation in the Atlantic – **CLOSED**
- Research and Innovation action (RIA)
  - Sub-topic [B] Assessing Atlantic marine Ecosystems – 9 M€ (x 3-4)
  - Sub-topic [C] New aquaculture value chains – 8 M€ (x 3-4)



**Total Budget (2018 & 2019): 64 M€ (37 M€ in 2018 + 27 M€ in 2019)**

## Requirements to keep in mind:

- Eligibility and admissibility conditions: In addition to the minimum number of participants, **proposals shall include participants from South Africa and Brazil.** Under this topic, legal entities established in **Brazil** are **eligible for EU funding**
- Evaluation: **At least one project** (above the threshold) per sub-topic will be funded
- **Include Clustering** task with other projects namely da CSA





# BG-08-2018-2019: All Atlantic Ocean Research Alliance Flagship – Expected IMPACT I

## The Policy context: European Policies & Global Commitments



### Atlantic Strategy & Action Plan



### Blue Growth Strategy



### EU Food 2030



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### Ocean governance communication



### Marine Strategy Framework Directive





## In the short term:



- Contribute to the **implementation of the EU-Brazil-South Africa Belém Statement** on Atlantic Ocean Research and Innovation cooperation.
- Better and accurate **monitoring, modelling, planning, management and prediction capacities** in the whole Atlantic.
- Contribute to the **sustainable management and protection of marine and coastal ecosystems** (UN SDG 14).



## In the medium term:



- Ensure the **long-term sustainable management of marine resources** (UN SDG 14).
- Increase **EU leadership in ocean technology** developments.
- Contribute to **policymaking in research, innovation and technology**.



# Useful resources

## Background documents & Links

- EU-Brazil-South Africa Belém Statement on Atlantic Research and Innovation Cooperation, July 2017

[http://ec.europa.eu/research/iscp/pdf/belem\\_statement\\_2017\\_en.pdf](http://ec.europa.eu/research/iscp/pdf/belem_statement_2017_en.pdf)

- EU-Canada-US Galway Statement on Atlantic Ocean Cooperation, May 2013

[https://ec.europa.eu/research/iscp/pdf/galway\\_statement\\_atlantic\\_ocean\\_cooperation.pdf](https://ec.europa.eu/research/iscp/pdf/galway_statement_atlantic_ocean_cooperation.pdf)

- South-South Framework for Scientific and Technical Cooperation in the South and Tropical Atlantic and Southern Ocean

<https://www.atlanticresource.org/aora/sites/default/files/GalleryFiles/AtlanticFacts/South--South-Framework-for-Scientific-and-Technical-Cooperation-in-the-S....pdf>

- Focus on Atlantic Strategy - FP7 and H2020 Projects

<https://www.atlanticresource.org/aora/site-area/atlantic-policy-research/h2020-fp7-funded-projects>



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**BG-08-2018-2019**

All Atlantic Ocean Research Alliance  
Flagship

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## BG-08-2018-2019: All Atlantic Ocean Research Alliance Flagship. [C] 2018-2019- New value chains for aquaculture production

### Requirements to keep in mind

- **Reinforce capacity building** along and across the Atlantic Ocean, in particular, but not exclusively, with South Africa and Brazil and other Atlantic Ocean coastal states
- Consortia encouraged to include **participants from countries bordering the Atlantic Ocean**
- Include a task to **cluster with other projects**
- Possible **links** with related research and innovation activities supported by the **Belmont Forum on Ocean sustainability** shall also be considered.



## Expected Impact

### In the short term:

- Creation of new value chains, markets, growth and jobs in coastal, offshore and landlocked areas
- Improve consumers' awareness, perceptions and acceptability of the European aquaculture products and methods.

### In the medium term:

- Contribute to increasing available, accessible, affordable and nutritious food and feed, while conserving natural resources and contributing to climate change mitigation (UN SDG 2).







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# Horizon 2020 Work Programme for Research & Innovation 2018-2020

Infoday, 25 June 2018

**LC-BG-09-2019**

Coordination of marine and  
maritime research and innovation in  
the Black Sea

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# LC-BG-09-2019: Coordination of marine and maritime research and innovation in the Black Sea







# LC-BG-09-2019: Coordination of marine and maritime research and innovation in the Black Sea



## Burgas Vision Paper A Blue Growth Initiative for Research and Innovation in the Black Sea

We, experts from the Black Sea coastal countries, namely the Republic of Bulgaria, Georgia, Romania, the Russian Federation, the Republic of Turkey and Ukraine, as well as the Secretary of the European Commission, in cooperation with marine experts from leading European marine institutes and organizations, and with the support of the European Commission, aim to advance a shared vision for a productive, healthy, resilient, sustainable and better valued Black Sea by 2030. We believe that through our work, we will help to create concrete leads for coastal areas through a range of new (maritime) technologies and services. We aim to foster human and infrastructural capacity building in coastal, marine and maritime sectors in view of creating unique opportunities for a sustainable and flourishing (Blue) Economy in the Black Sea.

We take into account – in our common work – the best practice of multilateral cooperation in European and world sea basins and the experience from international organizations such as the Organisation of the Black Sea Economic Cooperation and the Black Sea Commission.

As a first step, we have focused ourselves on a strategic framework and innovation agenda (BIA) that will guide research, innovation, knowledge from international organizations such as the Organisation of the Black Sea Economic Cooperation and the Black Sea Commission.

## TOWARDS A COMMON MARITIME AGENDA FOR THE BLACK SEA MINISTERIAL DECLARATION Burgas Declaration - 31 May 2018

The Ministers responsible for maritime affairs of the participating countries, namely the Black Sea coastal States – Bulgaria, Georgia, Romania, the Russian Federation, the Republic of Turkey and Ukraine – as well as the Republic of Moldova, met during the European Maritime Day in Burgas on 31 May 2018 under the chairmanship of Bulgaria and in the presence of Mr Karmenu Vella, European Commissioner in charge of Environment, Fisheries and Aquaculture and Maritime Policy, and Mr Michael B. Christides, Ambassador of the H.E. Ambassador Michael B. Christides, Secretary General of the Organisation of the Black Sea Economic Cooperation.

- We confirm the Black Sea as a common resource, and economic growth and stability depend, among other things, on the health of the marine and coastal ecosystems, which need to be sustained with joint resources based on the vision set with the support of the Organisation of the Black Sea Economic Cooperation.
- The Black Sea is the largest, deepest, hydrographic, ecological, hydrological, and natural basin in Europe. Any new land, national or transnational policy measures should consider the specific economic characteristics, biodiversity and cultural heritage of the Black Sea.
- Innovation needs to be driven by emerging challenges which are driven by a range of environmental and social drivers, such as population, maritime transport, infrastructure, climate change, and coastal hazards.
- The abundance of grey fisheries is a particular asset of the Black Sea that represents both opportunities and challenges for coastal communities, management and protection.
- For 2030, the Black Sea should be able to tackle the increasingly complex array of multi-stakeholder and multi-sectoral challenges, including their connection with land flowing into the Black Sea.
- Private business (productive) firms will be essential to tackle the increasingly complex array of multi-stakeholder and multi-sectoral challenges, including their connection with land flowing into the Black Sea.
- We see education, science and innovation as the most important tool that can fully utilize the potential of the Black Sea for sustainable development, growth, and management, understanding of innovation, risks and opportunities in the region.
- Science and innovation support the development and implementation of coastal and marine policies and strategies in the Black Sea, including water resources management, fisheries and management, understanding of innovation, risks and opportunities in the region.
- Knowledge supports evidence-based and informed decision-making towards the sustainable growth of the Black Sea and blue growth.

of the Black Sea High-Level Stakeholder Conferences held in Sofia (2015), Odessa (2016) and Batumi (2017) relevant to the agenda in the Black Sea area;

tion" adopted at the conclusion of the High-level conference on Black Sea fisheries and aquaculture held in Burgas (2016);

of the Black Sea Economic Cooperation (BSEC) and the Black Sea Synergy; related to the agenda in the Black Sea area;

20 adopted in New York (26 September 2015), entitled "The 2030 Agenda for Sustainable Development", and in particular its goal 14 "Conserve and sustainably use the oceans, seas and marine resources";

## Useful resources

- **Policy background documents**

1. Burgas Declaration : Towards a Common Maritime Agenda for the Black Sea

[https://ec.europa.eu/maritimeaffairs/maritimeday/sites/mare-emd/files/burgas-ministerial-declaration\\_en.pdf](https://ec.europa.eu/maritimeaffairs/maritimeday/sites/mare-emd/files/burgas-ministerial-declaration_en.pdf)

2. Burgas Vision Paper: A Blue Growth Initiative for Research and Innovation in the Black Sea

[https://ec.europa.eu/maritimeaffairs/maritimeday/sites/mare-emd/files/burgas-vision-paper\\_en.pdf](https://ec.europa.eu/maritimeaffairs/maritimeday/sites/mare-emd/files/burgas-vision-paper_en.pdf)

# Thank you!

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[www.ec.europa.eu/agriculture](http://www.ec.europa.eu/agriculture)

Participant Portal

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

