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Horizon 2020 Work Programme for Research & Innovation 2018–2020

Invests €1,3 billion in
sustainable food, farms, forests,
oceans and bioeconomy

Marine Resources UNIT
European Commission – DG RTD

Horizon
2020



BG-01-2018: Towards a Baltic and North Sea research and innovation programme

Background/Challenge

The Baltic Sea and the North Sea economy is critically dependent on the quality and extent of the ecosystem services they provide. Based on the experience of BONUS Art. 185, in order to foster understanding of these coastal seas and the sustainable use of their goods and services challenges need to be addressed such as:

- fragmentation, gaps in interdisciplinary knowledge, potential synergies and trade-offs between different sectors and the environment, science/policy/industries interfaces, attention to the societal inclusiveness and human well-being.
- well-coordinated research effort between these two regional seas is necessary.



BG-01-2018: Towards a Baltic and North Sea research and innovation programme

Scope/Requirements to keep in mind

- Creating the necessary conditions for coordinated research and innovation efforts bringing together the main national funding agencies in the North Sea and Baltic Sea region **in cooperation with BONUS**.
- Map and engage with relevant stakeholders in the region
- Preparation and delivery of a Joint Baltic-North Sea Strategic Research and Innovation Agenda, the creation of conditions (governance, management, financial, legal aspects and administration) and the development of an effective mechanism for its implementation, showing a strong commitment to achieve a sound level of integration (scientific, management and financial).

Type of action: Coordination and support action

BG-01-2018: Towards a Baltic and North Sea research and innovation programme - Expected Impact I

Expected Impact: In order to contribute to the implementation of the 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 and other EU initiatives such as the Blue Growth Agenda for the Baltic Sea Region, Blue Growth and North Sea related activities, the EU Strategy for the Baltic Sea Region (EUSBSR) and the UN SDGs, activities shall contribute to the following:

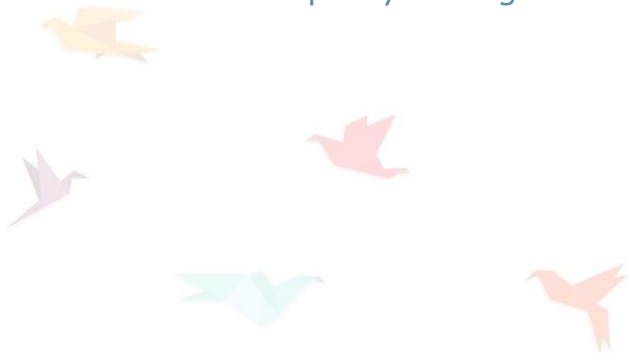
In the short term:

- Overcome fragmentation in research and innovation by developing a joint Baltic-North Sea Marine and Maritime Strategic Research and Innovation Agenda by the Baltic Sea and the North Sea countries.
- Create lasting marine and maritime stakeholder platforms and integration mechanisms in the area, and establishing appropriate stakeholder collaboration mechanisms between the North Sea and Baltic Sea regions.

BG-01-2018: Towards a Baltic and North Sea research and innovation programme – Expected Impact II

In the medium term:

- Create a framework and deliver the necessary mechanisms, based on experience gained by the current BONUS and other equivalent initiatives, for developing a European Baltic-North Sea Research and Innovation Programme.
- Contribute to 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.



Useful resources

Policy background documents/links:

- **Blue Growth Agenda for the Baltic sea Region**
https://ec.europa.eu/maritimeaffairs/content/delivering-sustainable-blue-growth-agenda-baltic-sea-region_en
- **EU Strategy for the Baltic Sea Region (EUSBSR)**
http://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/baltic-sea/
- **BONUS, the joint Baltic Sea research and development programme**
<https://www.bonusportal.org/>



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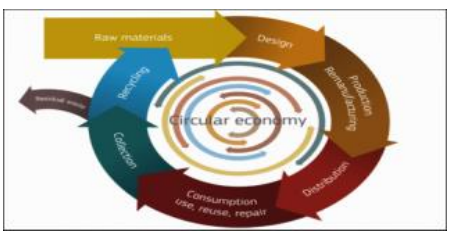
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Nikos Zampoukas
European Commission – DG RTD F4

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BG-02-2018: Blue Bioeconomy Public-Public Partnership

ERA-NET Cofund indicative contribution from the EU in the range of EUR 8 million



Aquatic biomass (e.g. fish, shellfish, microalgae, seaweeds and seagrasses) is currently underutilised due to a lack of synergies between sectors and of adequate investments. EU intervention is needed to create the conditions to mobilise investments by aligning national and regional innovation research agendas across different blue bioeconomy sectors.



- Activities shall pool the necessary financial resources from the participating national and/or regional research programmes with a view to implementing a joint call for proposals with EU co-funding resulting in grants to third parties.
- Proposers are requested to implement other joint activities, including additional joint calls without EU co-funding.

Expected impacts

In the short term:



- Create, test, upscale and bring to the market new knowledge-intensive products and services derived from aquatic biomass, fostering job creation and economic growth in Europe.
- Provide consumers with the knowledge needed to make informed decisions about safe, healthy and sustainable food and policy makers with robust scientific advice

In the medium term:

- Increase the efficient and sustainable use of by-products generated from blue bioeconomy sectors.
- Contribute to the UN SDG 2 target to ensure sustainable food production systems and the UN SDG 14 target to effectively regulate harvesting and end overfishing.
- Contribute to 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.

LC-BG-03-2018: Sustainable harvesting of marine biological resources

- Research and innovation action
- Indicative EU contribution: EUR 6 million



COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Next steps for a sustainable European future

European action for sustainability

- multi-actor approach
- adequate involvement of SMEs

- Provide **data, information** and **knowledge** on the potential **role** of **mesopelagic** micro- and macro-**organisms**
- Address **food safety, fisheries management, fishing techniques, processing** and **consumer acceptance** and **marketing**
- Assess **impacts** of **fishing** and **climate change**
- Assess the **potential** of mesopelagic resources for marine **biotechnological applications**.
- Develop an **ecosystem-based approach to exploitation**.



Expected Impacts:

- Increase the **knowledge** of mesopelagic zone ecosystems and preserve their **ecological functioning**.
- Contribute to the UN SDG targets 2, 12, 13 and 14 and support the implementation of the Paris Agreement.
- Foster innovation for **food and nutrition security** and other bio-based value chains, **biodiversity preservation** and **climate resilience**.
- Improve the professional skills and competences of those working and being trained to work within the blue economy.
- Create jobs and growth in the fishing and processing sector as well as in the marine biotech sector particularly in coastal areas.
- Contribute to policymaking in research, innovation and technology.



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Marta IGLESIAS – Marine Resources Unit
European Commission – DG RTD



AQUACULTURE 4.0



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

€1,3 billion

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

Marco Weydert, DG RTF-F4
European Commission - DG

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Disclaimer

- **The slides are not valid without the spoken words.**
- **The presentation is meant to help reading the work programme.**
- **The only binding text is the work programme/call text.**
 - Difference between must, shall and should.

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

- **2019 - Blue Cloud services**
- **2019 - Observations and forecasting**
- **2020 - Technologies for observations**



SCOPE

- **demonstrate integration, capacity and (scientific, economic etc) potential.**
- **complement and build on existing observation tools and systems**
- **interdisciplinary and cross-sectorial nature of the proposal should also apply to training activities.**
- **mutual feedback processes with the Copernicus Programme and other relevant actions such as those undertaken by IOC/IODE or the Marine Environment Monitoring Service.**

Blue Cloud (6 M€)

- develop cloud services for applications that are specific for oceans, seas and fresh water bodies and are necessary for marine ecosystems research, conservation, forecasting and innovation in the Blue Economy, building and implementing also Blue Cloud demonstrators
- essential Ocean Essential Ocean Variables
- build on ongoing efforts
- unlocking the innovation potential
- build on existing research infrastructures, take advantage of existing data sharing activities
- Proposals **should** include a task to cluster with other projects



Observations and forecasting (12 M€)

- **Contribute to the European component of a future Global Ocean Observing System in line with the G7 Tsukuba Communiqué**
- **EU sea basins and the Atlantic Ocean, including the deep sea (below 2000 m)**
- **Food 2030, Belmont Forum CRA, underpin forecasting**
- **demonstration of methods and technologies and their *integration in existing systems to collect information***
- **underpin sustainable management of the marine environment and its resources**
- **needs deriving from a number of initiatives**

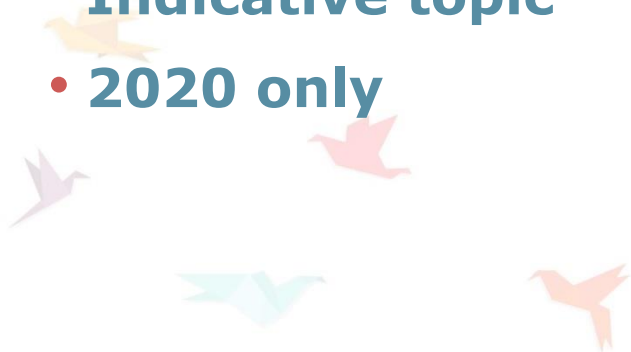
Observations and forecasting (2)

- **Demonstration of smooth storage of data in open access data centres and the improvement of the predictive capability**
- **EOVs, augmented observatories**
- **Data collected shall be in line with agreed standards, be openly available etc**



Technologies for observations

- **Indicative topic**
- **2020 only**



Expected Impacts (1)

- ongoing implementation of EU Policies
- In the short term:
- Future of the Oceans Initiative of the G7 Science Ministers.
- Deliver cloud services achieving TRL between 6 and 7 or higher.
- Achieve at least TRL 6 for ocean observations' systems and tools.
- Regularly measure 50% of biological and biogeochemical EOVs, including in the sea below 2000 m.
- Sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts (UN SDG 14).

Impacts (2)

In the medium term:

- Increase scientific knowledge, develop research capacity and transfer marine technology.
- Improve forecasting of climate change, weather and ocean conditions.
- Improve the professional skills and competences.
- Contribute to policymaking in research, innovation and technology.
- Increase data sharing and increase integration of data.

Type of Action: Innovation action

Overlaps?

- **LC-CLA-08-2018: Addressing knowledge gaps in climate science, in support of IPCC reports**
- **tipping points and impacts**

Hints: Climate-related tipping points (and not limited to marine) while marine tipping points are broader than climate ones.

What is the challenge you want to address?

- **BG-08 is on sustainably managing the Atlantic Ocean as a whole, while BG-07 is on advancing the observations for all SDGs etc.**
- **Research Infrastructures**
- **SC5-15-2018: Strengthening the benefits for Europe of GEOSS - establishing 'EuroGEOSS' (application-oriented initiative)**



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Challenges

- **To fully profit from the seas and oceans also in the future, we have to preserve those valuable resources and ensure that their exploitation is sustainable**
- **To make ocean observations and data management in European seas and the Atlantic Ocean fit for the future, in line with the G7 Future of the Seas and Oceans Initiative**



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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).

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.

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).

<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)
 - Coordinating R&I in the Atlantic; launching a multistakeholders platform to reinforce cooperation in the Atlantic – 4 M€
- Research and Innovation action (RIA)
 - Assessing Atlantic marine Ecosystems – 9 M€ (x 3-4)
 - New aquaculture value chains – 8 M€ (x 3-4)



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

Some 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

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



ean
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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 (sub-topics A, B & C).
- Improve the **coordination and alignment of programmes etc.** between South and North Atlantic regions and with the EU and its Member States (sub-topic A).
- Better and accurate **monitoring, modelling, planning, management and prediction capacities** in the whole Atlantic (sub-topics A & B).
- Create lasting **industrial partnership** on aquaculture between in the South Atlantic (sub-topic C).
- Contribute to **creating sustainable food production systems and implementing resilient aquaculture practices** (UN SDG 2) (sub-topic C).
- Contribute to the **sustainable management and protection of marine and coastal ecosystems** (UN SDG 14) (sub-topics A & B).

BG-08-2018-2019: All Atlantic Ocean Research Alliance Flagship - Expected IMPACT III

In the medium term:



- Ensure the **long-term sustainable management of marine resources** (UN SDG 14) (sub-topic B).
- Ensure that **nutritious and safe food** is available and affordable for all (UN SDG 2 and SDG 13) (sub-topic C).
- Contribute to achieving a **zero waste European aquaculture system**, by 2030 (sub-topic C).
- Increase **EU leadership in ocean technology** developments (sub-topics A, B & C).
- Increase **consumers' trust and confidence** in seafood products (sub-topic C).
- Create a well trained **workforce** able (sub-topics A & C).
- Consolidate **education, training** networks, **ocean-engaged citizens** (sub-topic A).
- Improve the **professional skills and competences** within the blue economy.
- Contribute to **policymaking in research, innovation and technology** (sub-topics A, B & C).

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

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

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. [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.



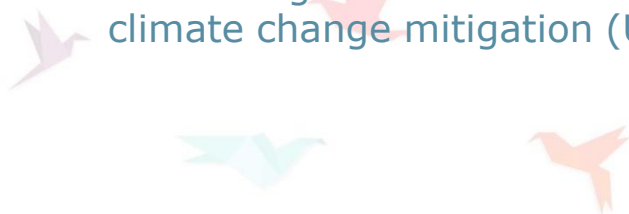
Expected Impact

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).



Thank you!

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www.ec.europa.eu/research

Participant Portal

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