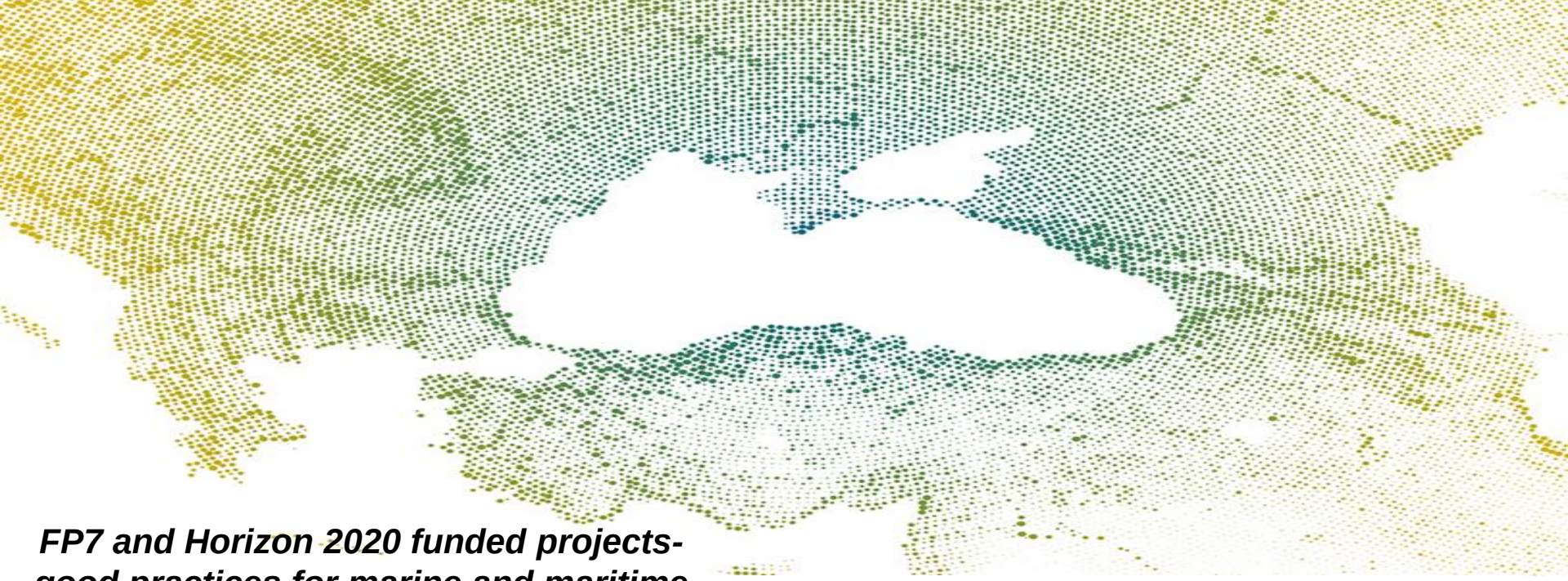


FP7 and Horizon 2020 funded projects- good practices for marine and maritime sectors

Domnica Cotet

BLACK SEA HORIZON

Bi-regional STI Dialogue

May 8, 2017, Athens

The project BLACK SEA HORIZON has received funding from Horizon 2020, the EU Framework Programme for Research and Innovation, under the Grant Agreement 645785 (H2020-INT-INCO-2014).

Summary

- 1. Introduction
- 2. Black Sea ERA. Net- lessons learned and challenges for STI cooperation in the Black Sea region
- 3. EU funded projects - good practices for marine and maritime sectors: COFASP, COLUMBUS
- 4. Conclusions

Black Sea-ERA.NET-Introduction

- The "**Networking on Science and Technology in the Black Sea Region**" (BS-ERA.NET), funded by the EU Commission within the FP7, was the only very significant regional joint funding initiative
- Partners: 17 governmental institutions from 13 countries:
- Duration: 48 months (January 2009 - December 2012).
- **JTC had 2 priorities:**
- 1. Climate & Environment
- 2. Energy
- 11 transnational projects were funded from of 66 submitted project proposals, corresponding to a total cost of 3.1 M€ (national & INTAS contribution)

Black Sea-ERA.NET-JTC funded projects

No.	Acronym
1	**MARCY** - Molecular approaches for rapid and quantitative detections of cyanobacteria and their toxins from coastal Black Sea
2	**RACE** - Radiation background of Black Sea coastal environment
3	**IMAWATCO** - Innovative materials for waste water purification systems to be installed in tourist and other small polluting objectives on the Black Sea coast
4	**HYSULFCEL** – Hydrogen production from Black Sea water by sulfide –driven cell
5	**H2S-PROTON** - Hydrogen production from H2S decomposition in micro-structured proton-conducting solid oxide membrane reactors
6	**CLEARWATER** – Geophysical based hydrogeological modeling to prevent pollution from sea WATER intrusion at coastal areas
7	**WAPCOAST** - Water pollution prevention options for coastal zones and tourist areas: Application to Danube Delta front area
8	**CO2TRACCS - CO2** Transportation Risk Assessment for Carbon Capture and Storage
9	SGD Black - Investigation of Submarine Groundwater Discharge (SGD) for preventing pollution and eutrophication of the coastal Black Sea
10	RDMMOGT - Reliability and durability of Machines and Mechanisms used for Oil and Gas transportation in Black Sea Region
11	**CAUCAS-CCS** - Natural analogue investigation for CCS in the Southern Caucasus

Black Sea-ERA.NET-JTC results and impact analysis

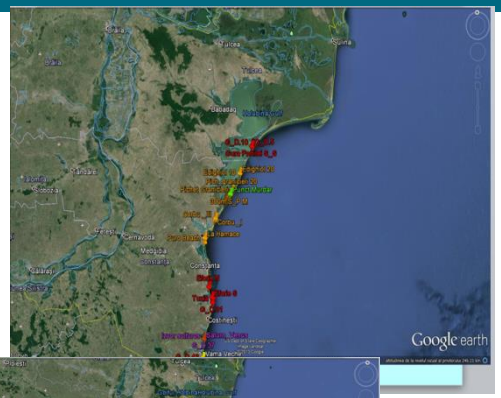


Fig.1 Ambiental radiation dose-rates at Romanian Black Black Sea shore, *R. Margineanu IFIN-HH*

Fig.2 Ambiental radiation dose-rates at Bulgarian Black Black Sea shore, *R. Margineanu IFIN-HH*

Fig.3 CO2 Transportation Risk Assessment for Carbon Capture and Storage (CO2TRACCS)

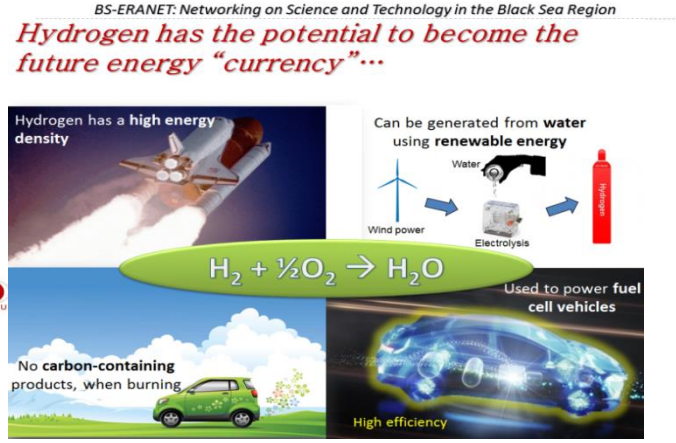


Fig.4 Hydrogen product from H2S decomposition in micro-structured proton-conducting (H+) solid oxide membrane reactors

Black Sea-ERA.NET-JTC results and impact analysis

- Available sources for information :
- Monitoring and Assessment Report of the BS-ERA.Net Pilot Joint Call, produced by an external expert Sidiropoulos, in 2012; provides 18 concrete recommendations;
- External evaluation of the funding parties and the coordinators of 11 funded projects;
- Collection of additional information with an electronic questionnaire (after the workshop in Bucharest, March, 2015), using the template created by SEE-ERA.NET Plus

Black Sea-ERA.NET-JTC results and impact analysis

Impact analysis focused on how the Funding Programme influenced:

- cooperation: jointly published articles/books, participation in conferences, registered patents, joint workshops, further joint projects other joint activities (staff exchange, PhD's).
- close to market at local or regional level: e.g. projects that would develop a product/technology with a commercialization potential).

Data was grouped into three (3) pillars: researcher development, publication/dissemination (scientific results), close to market results.

Black Sea-ERA.NET-JTC results and impact analysis

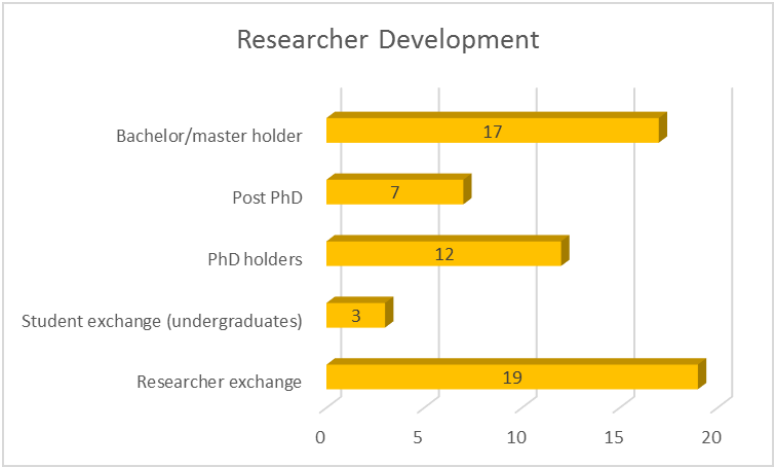


FIGURE 1– RESEARCHER DEVELOPMENT

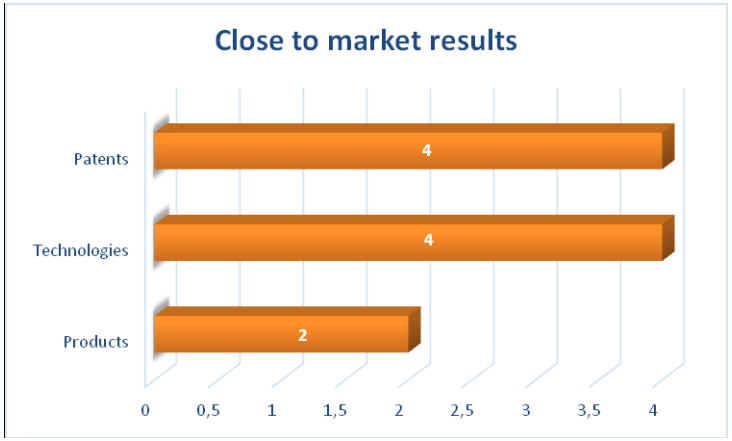


FIGURE 3– CLOSE TO MARKET RESULTS

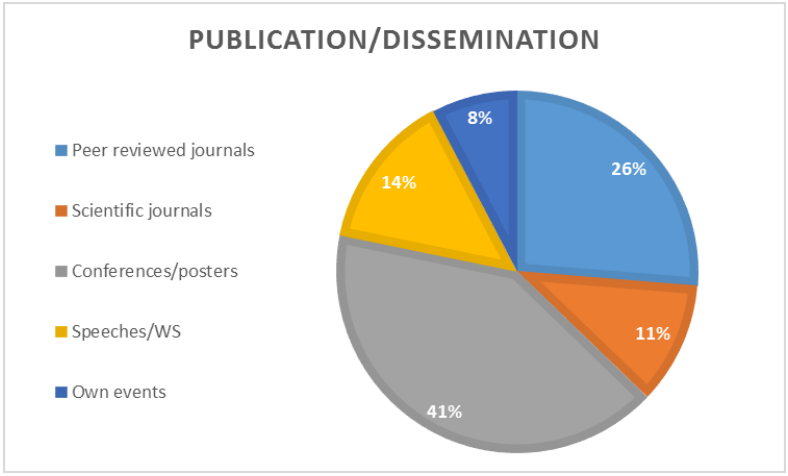


FIGURE 2– PUBLICATION/DISSEMINATION

Black Sea-ERA.NET-JTC results and impact analysis

In addition, other relevant results were identified:

- 12 new joint applications for funding after the completion of the projects. These include submissions to H2020 and to other funding schemes.
- The creation of two new research infrastructures:
  - Centre of Competence "Creation, Development and Application of Technologies for Hydrogen Production and Application as Alternative Energy Sources"
  - Small lab for corrosion testing.

Black Sea-ERA.NET-JTC –identified challenges

- **Synchronization of funding.** The main obstacle for some partners was that they were not able to perform their activities according to the proposed working plan at an early stage in the project. This has caused a delay of other activities.
- **IPR issues.** It was expressed that the lack of IPR agreements between partners can be a limiting factor for cooperation. It was suggested to have a special emphasis on this point in the **Consortium Agreement** between partners.
- The responsibility of the project coordinator to collect information on the project level, was not defined clearly in the **Implementation agreement** of the funding partners.

Black Sea-ERA.NET-JTC –identified challenges

- **Lack of centralized monitoring.** This challenge was considered to be a weak point for the coordinators well as for the funding parties. Even though each funding party had its own national rules regarding the monitoring of projects , there was also a **need to monitor the overall development** of the project with regard to scientific progress, financial spending progress and the delivery of expected results.

EU funded projects - good practices for marine and maritime sectors: COFASP, COLUMBUS

COFASP ERA-NET **Co**operation in **Fi**sheries, **A**quaculture and **S**eafood **P**rocessing: FP7 funded project
The objectives of COFASP was to strengthen cooperation and synergies between major European funding agencies that support research on sustainable exploitation of marine renewable resources.

Fisheries

Aquaculture

Sea food processing

COFASP

COFASP: 28 partners;17 countries: Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Romania, Spain, United Kingdom, Turkey, Estonia

- **For COFASP Cofund (next application) there is a room for participation of other countries.**
- Coordinator: Niels Gøtke , DASTI, Denmark;
- email: nigoe@ufm.dk

Activities

- Launching 3 joint call for proposals
- Implementing joint activities related to dissemination and up-take of research results
- Mapping of national research priorities
- Developing a strategic research (and innovation) agenda
- Joint foresight activities
- Capacity building
- Focus on mobility and training activities
- Creating a database of funded national projects
- Mapping of existing infrastructures

COFASP

Foresight - with external stakeholders

Themes

- Optimal use of the seas
- Value of use of the seas
- Low impact products
- Sustainable use strategies

Fisheries

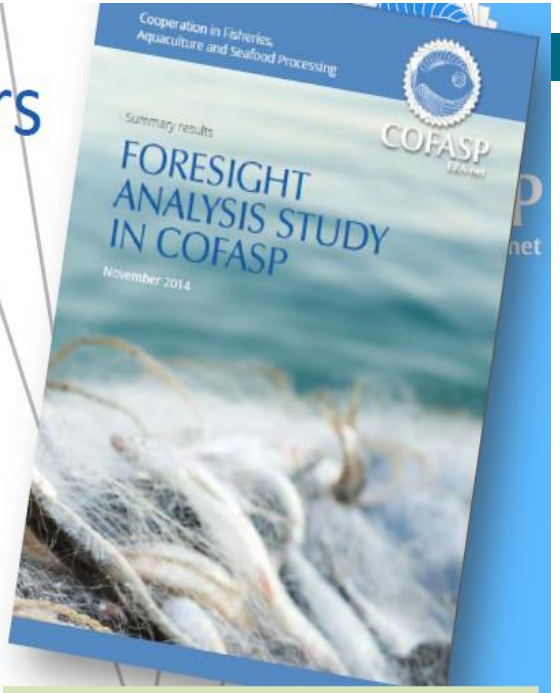
- Monitoring and Management
- Adaptation strategies
- Data use
- Recreational Fisheries

Aquaculture

- Market demand
- Organic aquaculture
- Technology development
- Species enhancement

Seafood Processing

- Towards more flexible production units
- Maximise processing efficiency
- New products and new production technologies



+ The Challenges 2050 Foresight Revisited

Lead partner: EFARO

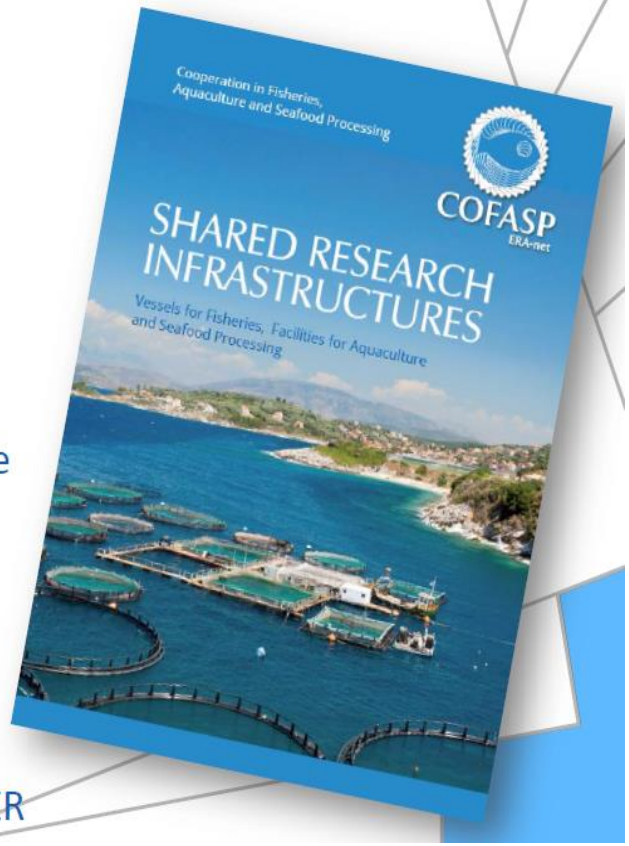
COFASP

Shared Research Infrastructures

Mapping of:

- fisheries research vessels
- Aquaculture research facilities
- Seafood processing research and innovation facilities

- Operators of these facilities in Europe were interviewed on different forms of collaboration such as:
  Shared use, new needs, optimisation of new investments, pooling skills for operation & maintenance



Lead partner: IFREMER

COFASP

- Three Joint Calls in: 2014, 2015 and 2016
- Commitments of €17.3 mio
- Total of 16 funded projects
- 13 countries including Canada
- Last call was in collaboration with ERA-MBT

MarineBiotech and coordinated by UEFISCDI\

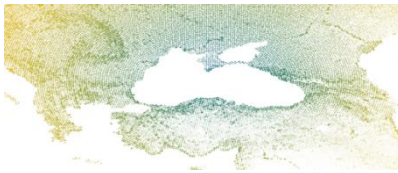
More information: http://www.cofasp.eu/

COLUMBUS (www.columbusproject.eu) , funded by EU Horizon 2020 programme;

- 36-months EU project (March 2015 - February 2018); 26 partners; budget of €4 million.

The goal of COLUMBUS project is to develop a strategy to **monitor, identify and select** successful marine and maritime research projects

Success is defined in terms of **outputs** and **impacts** for the **'Blue Growth'** agenda as well as support to the EU Marine Strategy Framework Directive(MSFD).



Objectives

Main objective: to produce qualitative case studies that illustrate how the project activities have successfully transferred knowledge to policy, industry, science and society resulting in impacts that measurably contribute to "Blue Growth".

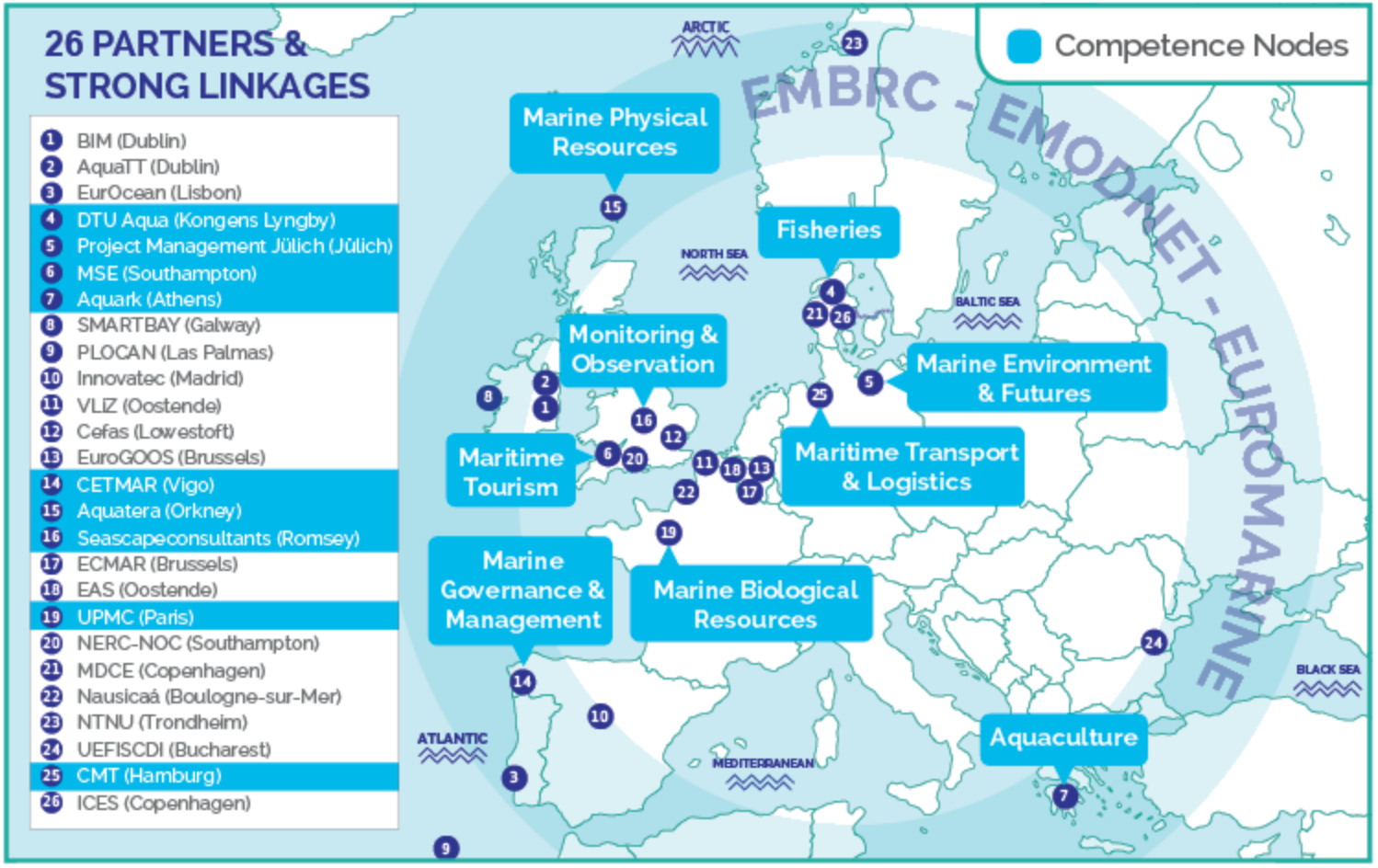
Specific objectives (selected from project application):

- To carry out targeted and customised Knowledge Transfer activities that result in knowledge being taken up and applied by various users (industry, policy, scientific community and wider society).
- Operate a network of Competence Nodes across Europe covering a wide scope of marine and maritime areas/sectors.

Competence Nodes

The partners cover a broad range of expertise and work is divided into **9 thematic Competence Nodes:**

1. **Fishery**
2. **Aquaculture**
3. **Monitoring and observation**
4. **Marine Biological resources**
5. **Maritime transport& Logisctics**
6. **Marine Phisical resources**
7. **Maritime Tourism**
8. **Maritime Governance & Mangement**
9. **Marine Environment &Future**


26 PARTNERS & STRONG LINKAGES
1 BIM (Dublin)
2 AquaTT (Dublin)
3 EurOcean (Lisbon)
4 DTU Aqua (Kongens Lyngby)
5 Project Management Jülich (Jülich)
6 MSE (Southampton)
7 Aquark (Athens)
8 SMARTBAY (Galway)
9 PLOCAN (Las Palmas)
10 Innovatec (Madrid)
11 VLIZ (Oostende)
12 Cefas (Lowestoft)
13 EuroGOOS (Brussels)
14 CETMAR (Vigo)
15 Aquatera (Orkney)
16 Seascapeconsultants (Romsey)
17 ECMAR (Brussels)
18 EAS (Oostende)
19 UPMC (Paris)
20 NERC-NOC (Southampton)
21 MDCE (Copenhagen)
22 Nausicaá (Boulogne-sur-Mer)
23 NTNU (Trondheim)
24 UEFISCDI (Bucharest)
25 CMT (Hamburg)
26 ICES (Copenhagen)
Competence Nodes
EMBRC - EMODNET - EUROMARINE
Marine Physical Resources
Fisheries
Monitoring & Observation
Marine Environment & Futures
Maritime Tourism
Maritime Transport & Logistics
Marine Governance & Management
Marine Biological Resources
Aquaculture
ARCTIC
NORTH SEA
BALTIC SEA
ATLANTIC
MEDITERRANEAN
BLACK SEA

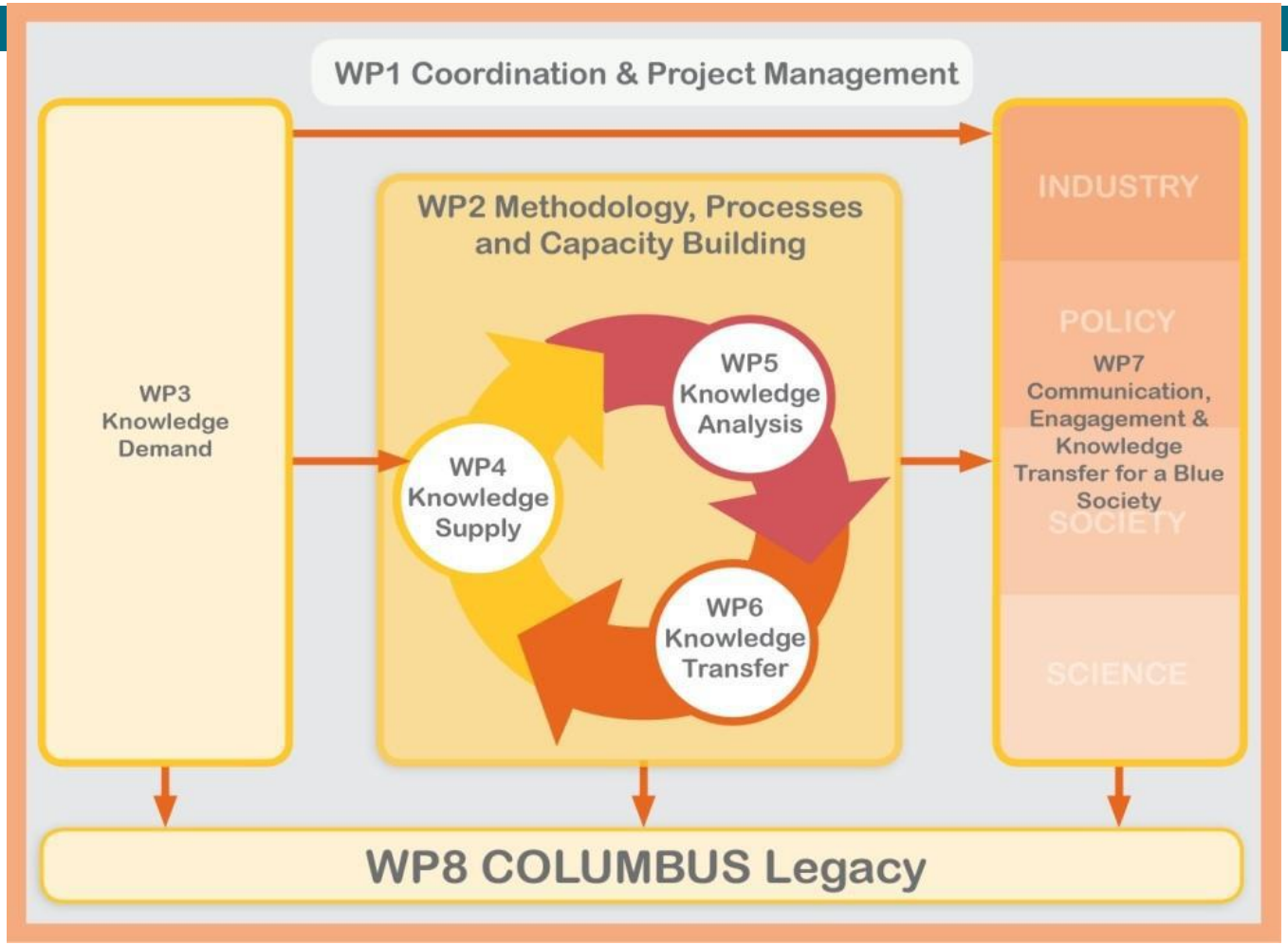
- **COLUMBUS** will build upon prior knowledge and experiences from past projects which are relevant to the specific BG11 challenge. Below is a **summary of the key outputs** of past projects which have informed the COLUMBUS project design and key principles:
- **MarineTT**: Development of a robust Knowledge Transfer methodology, including an identification, collection and analysis system. The development of the concept of a Knowledge Output (P2).
- **STAGES**: Collection of relevant national and EC projects related to Marine Strategy Framework Directive (MSFD). Analysis and Synthesis of knowledge by Sea basin and MSFD descriptors. Research prioritization workshops, Drafting of a Proposal and Recommendations for a Science-Policy Interface to support MSFD implementation (P27).
- **AQUAINNOVA**: Supporting the European Aquaculture Technology and Innovation Platform (EATiP), Aquainnova adopted the MarineTT methodology and successfully mapped Aquaculture research projects to inform the development of a Strategic Research and Innovation Agenda (P27).

- **EUROSHELL**: Bridging the gap between Science and Shellfish producers to support the European Marine Mollusc production sector, knowledge was collected, tools developed and research priorities developed (P18).
- **SEA FOR SOCIETY**: new insights into public attitudes, perceptions and values to the Oceans which will help inform the design of future Communication campaigns to bring about behavior change. The development of the concept of a "Blue Society"(P1,P2,P22).
- **KnowSea**: European citizens' views on the ecosystem approach to management of the oceans (P11).
- **COFASP**: Research prioritisation, development of industry scenarios for fisheries and aquaculture (P1, P25,P27).
- **SCHEMA**: Established a Knowledge Platform with studies that addressed key challenges for the European Maritime and Logistics industry (P21).

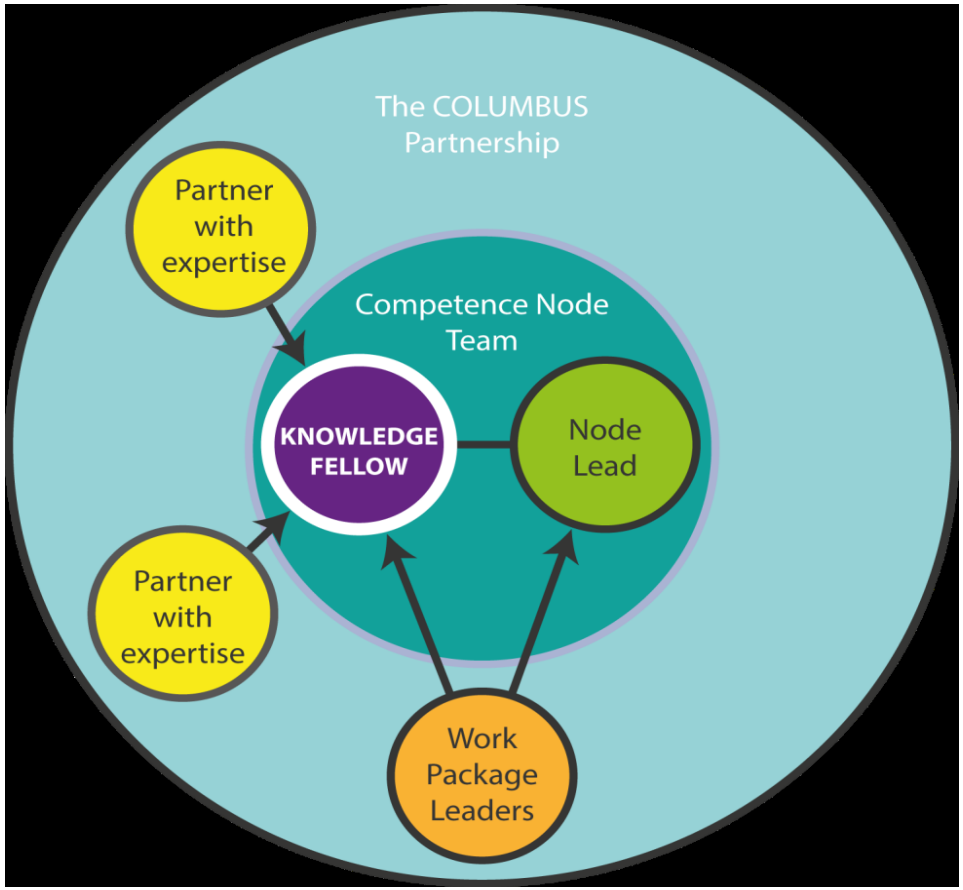
- **EMAR2RES**: Support action to initiate cooperation between the communities of European marine and maritime research hand science (P16, P26)
- **PERSEUS** (Policy-oriented marine Environmental Research in the Southern European Seas) development of necessary scientific understanding essential for assessing Good Environmental Status (GES) (P17)
- **BSC-MSFD**: Providing support for the Black Sea Commission for the implementation of the Marine Strategy (P17)
- **MARPOS:** Providing Maritime Policy support to the EC. (P16, P26)
- **REMCAP:** a Regions of Knowledge project which aims to capitalise on the opportunities that arise from increasing commercial demand across marine industries and is focused on expanding the capacity for innovation and growth across the key markets (P5 coordinator)
- **EUROMARINE:** Develop and implement an agreed framework for cooperation between research institutions ensuring sustainable integration of marine research. (P19)

- **EMBRC**: Building on existing marine biological stations and research centres complemented with innovative components and embedded into European scientific frameworks. (P19)
- **GMES-Pure**: Supporting the EC in setting up a requirement framework for the future Copernicus services with a process for the involvement of users in the definitions of requirements (P12)
- **JPI OCEANS**: the Joint Programming Initiative Healthy and Productive Seas and Oceans, is a coordinating and integrating long-term platform, open to all EU Member States and Associated Countries who invest in marine and maritime research. (P4, P10, P11, P25)
- **EDSnet**: Development of an environmental decision support network between universities, research establishments, regulatory bodies and businesses to exploit research opportunities and encourage collaboration. (P12, P15)
- **SEAS-ERA**: The FP7 SEAS-ERA Project (2010-2014) is a network of marine research funding organisations (an ERA-NET) which aimed to improve co-ordination between nationally funded competitive marine research programmes. (P2, P4, P25)

- **BONUS:** BONUS combines research related to the Baltic Sea system into a joint and durable interdisciplinary and focused multinational programme that supports the Baltic Sea region's sustainable development. It supports European, regional and national coastal and marine environmental policies and plans, in particular HELCOM's Baltic Sea Action Plan. (P4)
- **MARCOM+:** In the MARCOM+ process major European Marine and Maritime research networks and international organisations decided to develop the abilities to jointly respond to emerging policy needs when needed (P16)
- **MARTEC II:** A network of 30 ministries and funding organisations from 25 countries, responsible for the development and funding of national/regional research programmes on maritime technologies. (P4)
- **CASMARE**: Coordination action to maintain and further develop a sustainable maritime research in Europe, disseminating and promoting a research strategy (P16).
- **EMODNET**, the European Marine Observation and Data Network, was set up by DG Mare to constitute a **network of existing and developing European observation systems,** linked by a data management structure covering all European coastal waters, shelf seas and surrounding ocean basins. (P15)
- **Marine Knowledge Gate**: an **innovative online repository** of marine research projects and results (Knowledge Outputs)



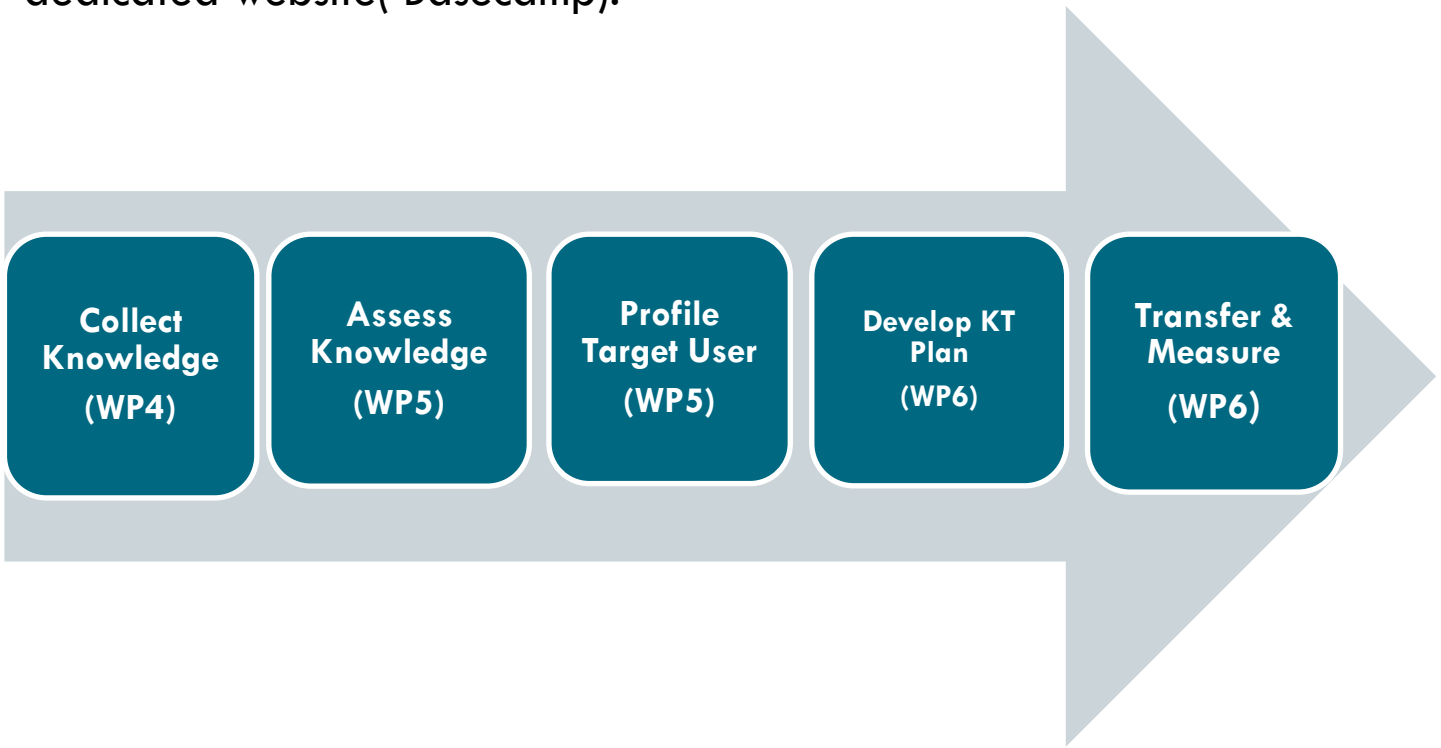
Structure of the COLUMBUS project



Support network surrounding the knowledge Fellows

The COLUMBUS Knowledge Transfer Methodology

The Methodology has 5 steps. Each step require a template, or a number of template to be completed which can be downloaded by the COLUMBUS partners from the dedicated website(Basecamp).



Collect Knowledge → **Knowledge output (*a unit of knowledge*)**
Knowledge output table for marine and maritime projects

- **3 steps:**

1. **Gather knowledge and develop a Knowledge Output Table (KOT)**
2. **Interview the Project Coordinators of selected projects**
3. **Prioritize the collected Knowledge Outputs**

Assess Knowledge → **How a knowledge output is beneficial for a different stakeholders For example for a pre-commercial technology assessing the technology readiness level**

Profile Target User → **The individual (s) identified to whom you'll transfer the Knowledge output**

Develop Knowledge Transfer Plan	**Maximize the chance of successful transfer for uptake the results(message, communication channel used)**
Transfer and Measure	**Start the process; Indicators to measure the success are needed (quantitative and qualitative).**

If knowledge has been transferred, it does not mean that it has been applied. Even if a Target User said they would use the knowledge, does not mean that they actually did. It is important, therefore, to try and assess if the activity had the intended result. This impact measurement should be based on whether the Eventual Impact was achieved, e.g. were changes observed in a Target User's knowledge, attitude or behavior.

- COLUMBUS project: Knowledge transfer methodology (3 minute)
- https://vimeo.com/203088726

Project coordinator: David Murphy: david@aquatt.ie

Project manager: Cliona Ni Cheallachain: cliona@aquatt.ie

WP2 Leader: Georgia Bayliss –Brown: georgia@aquatt.ie

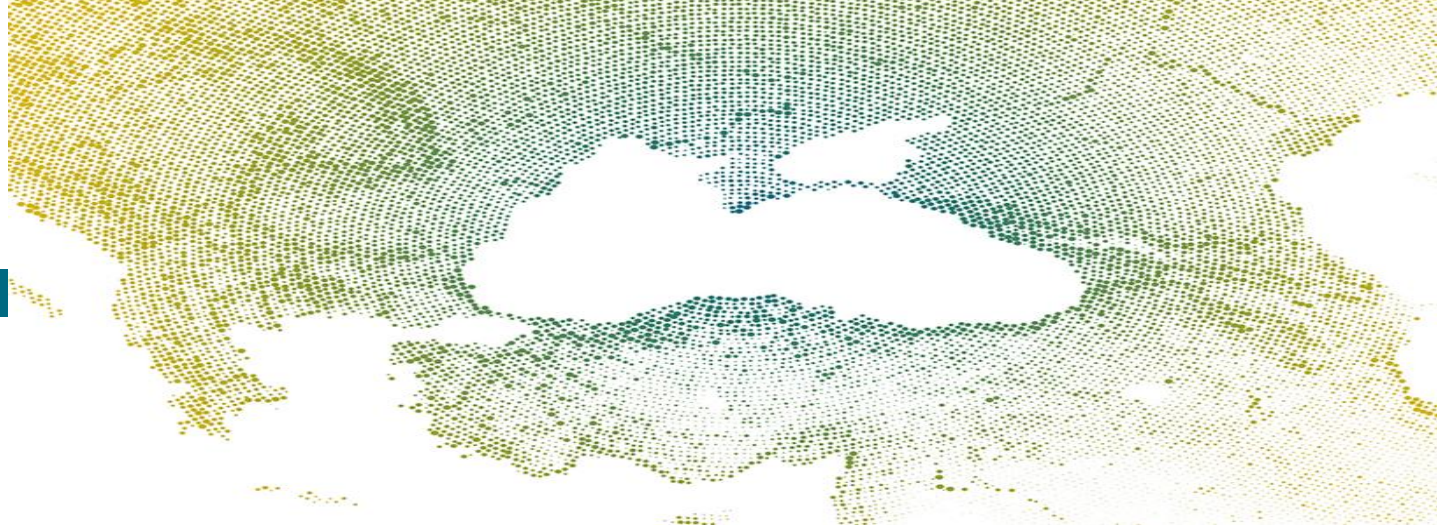
4. Conclusions (1)

- Based on the experience gained in the previous or ongoing initiatives, (Black Sea ERA-NET, ERA-NET Rus Plus (I and II), RI-Link2Ukraine and BSH, the partners of projects, I can say that the policy-makers and the stakeholders involved in different steps of implementation, have succeeded to draw the frame for bi-regional and regional policy dialogs, to stimulate STI cooperation in the BS region and to increase the EU's economic competitiveness.

- It's very important to have an overview of similar initiatives and to approach the EU member states who already carried out cooperation programmes for example the joint Baltic Sea research and development programme-BONUS.

4. Conclusions (2)

- The cooperation programme should have a common vision of the main players in the research aria from the BS member state, and to develop a strategic research agenda such was developed for fishery, aquaculture and sea food processing (in COFASP project) or Strategic Research and Innovation Agenda (SRIA) developed by the European Aquaculture Technology and Innovation Platform (EATIP).
- Is important to approach the European stakeholder organizations, which worked on visons, needs and strategies, for example: EFARO (European Fisheries and Aquaculture Research Organization), COFASP (a European ERA.NET)



Thank you very much for your attention!

Domnica Cotet
Project expert

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