General Information	
Preliminary title	**A climate neutral, sustainable and productive Blue Economy**
Short description of the partnership	The objective is to sustainably unlock, demonstrate and harvest the potential of Europe's Oceans and Seas, to support the transition to a climate neutral and sustainable Blue Economy by 2050.
directly involved	RTD, MARE, ENV, GROW, JRC, EAC, REGIO, CLIMA, NEAR, EEAS
Context and problem definition	Europe's seas and oceans do not stop at geographical borders[1]; nor do the challenges they face. Many of the issues are even common throughout European seas and the Atlantic, even globally and more knowledge is needed to understand and predict climate change and its impacts, to protect the oceans,, to do maritime spatial planning and to ensure a sustainable strong blue economy.. Under current trends, in 10 years our seas and oceans will no longer be the same: ecosystems, citizens and nations will increasingly suffer from the impact of climate change, loss of biodiversity, ocean acidification, sea-level rise, scarcity of resources (including food), safety issues, etc. *Global trends point to continued deterioration of coastal waters due to ocean pollution and eutrophication. Oceans have absorbed around 93% of the excess heat due to global warming during the period 1971-2010 and 26% of anthropogenic CO2 since the beginning of the Industrial Revolution[2]. Observed and projected impacts of ocean acidification and climate change (ocean warming, and sea-level rise) are being predicted with high confidence [3] These could soon affect fish stocks, oxygen production and CO2 deposition.* At the same time, our seas and oceans will be called to sustainably contribute to more food, biofuel and clean energy. Furthermore, the EU will act on its 'Clean Planet for All' Strategy[4] which will also include activities related to our ocean and seas.. There is an urgency now that all of these issues have to be addressed calling for a major effort on ocean science, research and innovations, both to protect the ocean and increase the resilience of its ecosystems while ensuring a strong Blue Economy[5]. No nation can face this on its own and undertake the investments in research and innovation that are needed. In order to maximise efforts and achieve efficiency gains the best approach with the highest impact will be to join efforts and to align certain research priorities/activities in all seas and oceans around Europe - and beyond - and to pool existing and new funding streams from national public and private sources together with EU funding. To address these issues, the Commission (DG RTD), together with the EU Member States, funders and stakeholders have over the last 10 years developed sea basin specific Strategic Research and Innovation Agendas (SRIAs). Examples of these are part of the SEAS-ERA Net Project funded under FP7; the Atlantic Ocean Research Alliance Initiative; the BLUEMED Initiative, and recently the SRIA for the Black Sea. Implementation for most of these joint EU and Member States Initiatives is underway, also supported with over 200 M€ funding from Horizon 2020. As regards an EU-Member States joint Programme, the BONUS Art 185 Programme for the Baltic Sea has been cofunded with 50 mio euro from the 7th Framework Programme. Furthermore, thanks to the currently ongoing Horizon 2020 funded Support and Coordination Actions for all these initiatives, there is evidence that such jointly implemented SRIAs or programmes exercise a structuring effect on national marine and maritime strategies (BONUS in countries bordering the Baltic Sea, or in Italy thanks to the BLUEMED Initiative), in line with the ERA objectives.. However, the lack of an overall coherent framework, which brings all these initiatives under ONE umbrella, does not yet exist. The still fragmented activities of our Member States

[1] This meas that the national borders are not observed by the oceans and seas!
[2] *IPCC: AR5, 2014*
[3] *UN World Ocean Assessment, 2016; IPCC: AR5, 2014.*
[4] COM (2018), 773 from 28.11.2018 https://ec.europa.eu/clima/sites/clima

[5] See also First Annual Blue Economy Report

	hamper a meaningful implementation of major EU Policies and Regulatory Frameworks, such as the Common Maritime Policy, the Common Fisheries Policy, the Marine Framework or the Marine Spatial Planning Directives, just to name a few. As the challenges to be addressed and the priorities identified are common to several sea basins, it is now time to link all of these different activities, to combine and pool different SRIAs and programmes, and address common issues jointly. This is a prerequisite for driving scientific excellence, and for ensuring the transition to a climate neutral and sustainable blue economy at national, sea basin and European level, in line with the *'Clean Planet for All' Strategy.* Primary beneficiaries are citizens. *Almost half of the EU population lives less than 50 km from the sea; the majority is concentrated in urban areas along the coast.* A loss of the ecosystem services of the seas and oceans would be dramatic. Oxygen production and CO2 sequestration will be affected. Without a healthy and productive ocean, we will not have within 10 years our food supply – particular alternative protein from aquatic sources – will be in danger, and our coastal properties might not anymore be protected from extreme events. In addition to these, many SMEs rely on the oceans and innovations in the Blue Economy. This is illustrated for example by the SMEs in the fishing and aquaculture sectors. Also, the forecasting agencies and the authorities dealing with maritime spatial planning will profit from new knowledge, new tools and better and adapted observations.
Objectives and expected impacts	**The objectives are**: • To support the resilience of marine ecosystems and a transition to a strong, climate neutral and sustainable Blue Economy by 2050; • To sustainably unlock, demonstrate and harvest the full potential of Europe's oceans and seas and to ensure food security and safety for citizens; • To foster the alignment of existing EU and Member State research and innovation priorities, activities and programmes in this domain where the research and innovations needs are largely the same across Europe and across sea basins; • To pool EU and Member State (private and public partners) resources to address the challenges outlined above[6] and to jointly support the development and implementation of a programme of research and innovation activities related to Europe's Seas and Oceans, which would not be possible without joining forces; • To support a Europe wide fit-for-purpose marine observation framework by 2030, to foster data management based on the FAIR Principles, to allow for mutual access to open data and national infrastructures and to create optimal conditions for compatible models and forecasting tools • To support the conception and introduction of new digital and autonomous technologies and concepts that go hand in hand with education and training related to economically, socially and environmentally sustainable development of new technology and jobs; • To increase international cooperation in science, research and innovation as well as science diplomacy with our international partners bordering Europe's Seas and Oceans; • Last but not least '*Climate mainstreaming'* will be addressed: it is estimated that over 50% of the proposed activities will be contributing to knowledge necessary for forecasting climate change and its impact as well as to mitigate the impact of climate change. Furthermore, ocean acidification[7], which is largely caused by excess CO2 being absorbed by the ocean, will be addressed. **Expected impact - By 2030 we will have**: • Built a truly sustainable ocean economy while protecting coastal communities and maritime activities from climate change impacts (notably sea-level rise) and other changes;

[6] See section related to problem definition

[7] Ocean acidification is not due to climate change, but to gases or acids absorbed by the ocean!!

	• Gained advanced knowledge and developed accurate models to support maritime spatial planning and maritime activities, contributing to the clean planet 2050 vision; • Developed a fully integrated oceans, seas and inland waters monitoring system which will provide a holistic systemic view of the environmental impact of human induced activities (e.g. pollution, overfishing, but also related to waterborne operations); • Put in place xxx early warning systems based on precise prediction and forecast capabilities related to climate, weather, changes in ocean physics and chemistry such as sea-level rise, pollutants, ecosystem conditions, etc.; • Ensured sustainable, healthy and safe food from the oceans, seas and inland waters; • Upskilled and trained a new generation of marine/maritime workforce and blue entrepreneurs familiar with digitisation and automation in marine/maritime sectors; • Enhanced cross national cooperation, knowledge sharing and efficiency gains by pooling of resources both within the EU and with our international neighbours; • Contributed to create xxx new start-ups, SMEs, blue jobs etc…; • Supported the successful implementation and further development of several EU policies (e.g. Marine Strategy Framework Directive, Marine Spatial Planning, Common Fisheries Policy, Water Framework Directive, Birds and Habitats Directive, International Ocean Governance Communication), the Bioeconomy Strategy, FOOD 2030, etc,; and, last, but not least , • Contributed to the Communication "A Clean Planet for All", through a shift towards an increase in the consumption of food products from seas, oceans and freshwater resources to substitute GHG- and fresh water intensive food production processes, to reduce GHG emissions in maritime transport or to allow for more GHG free ocean energy.
Necessity test: rationale for a European Partnership	Major investments by the EU and MS are needed to advance and step-up the research and innovations necessary to tackle the Europe-wide challenges mentioned above and to implement jointly and efficiently the SRIAs in the Atlantic and all other European sea basins. This cannot be done properly by regular calls for proposals, as the funding from Member States has to be pooled with the EU funding, the necessary tools and infrastructures must be available,, , and priorities, actions and activities have to be aligned. Even more so, individual Member States' actions cannot suffice either, since they have to be aligned and integrated with those from the EU, other Member States and our international partner countries. A coordinated EU-wide approach is much more effective. Uptake and deployment of results requires strong commitment from Member States beyond the research community and other partners that can only be realised in a formalised partnership. Furthermore, strong cooperation with all the countries bordering the Atlantic and the European seas will be needed. The necessary interventions will build on already existing SRIAs, EU and national projects and initiatives, developed for dedicated EU sea basins under the umbrella of the BLUEMED and WestMED initiatives for the Mediterranean, the Black Sea Initiative, the Baltic through the BONUS Programme, and the Atlantic through the Galway and Belém Statements. Cooperation with other partners who have developed marine/maritime SRIAs such as the Waterborne and Aquaculture sectors in Europe and who commit to the objectives of this Partnership approach will also be strengthened.
	☒ Pillar 1 Pillar II 'Global Challenges and European Industrial Competitiveness' ☒ Cluster Health ☒ Cluster Culture, creativity and inclusive society ☒ Cluster Civil Security for Society ☒ Cluster Digital, Industry and Space ☒ Cluster Climate, Energy and Mobility

	☒ Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment ☒ Cross-cluster ☒ Pillar III 'Innovative Europe'
Currently identified links with other partnership candidates / Union programmes	Currently, complementarities have been identified with EIT/KICs, and the LIFE programme, INTERREG and EMFF, COPERNICUS, ESA, etc., as well as technology platforms such as the Waterborne or Aquaculture Technology Platforms. There will be interactions with Horizon Europe partnerships related to for example to *Food systems, or Biodiversity, or Water for All*; as well as the missions in the area of oceans and climate, since ocean observations and oceanography will be of direct relevance to these. Synergies with other programmes, notably structural and investment funds will be sought.
Does the proposed partnership build on currently active ones?	BONUS art 185 initiative and related BANOS CSA, MARTERA ERA-NET, JPI Oceans (on-going), JPI Climate, JPI Healthy Food, as well as on the following initiatives: BLUEMED, Galway and Belém Statements (Atlantic Ocean Research Alliance), and Black Sea Strategic Research and Innovation Agenda, EATIP and Waterborne platform (cooperation with industry), etc.
Expected type and composition of partners	All relevant marine/maritime Ministries and related funding organisations from EU Member States and international partners; , the private sector, including SMEs, foundations and investment actors. All of these are needed if we want to cover the Atlantic and all European seas, including the Exclusive Economic Zones, ensure access to research infrastructures, share data, etc..
Contributions and commitments expected from partners	Member States and their related funding agencies and research organisations will need to commit on a multiannual basis funding and in-kind contributions for this partnership. Substantial contributions in kind will be made by sharing marine/maritime research infrastructures such as research vessels. We also expect that the private sector will contribute knowledge, expertise and share of funding required (financial or in-kind contributions). Furthermore, contributions from European Maritime and Fisheries Fund (EMFF), the Structural and Investment Funds (particularly Interreg) but also the different Neighbourhood Partner Instruments and the LIFE programme are needed.
Currently envisaged implementation mode(s).	☒ Co-programmed European Partnership ☒ Co-funded European Partnership ☐ Institutionalised European Partnership ☐ Article 185 ☐ Article 187 ☐ EIT-KIC
Justification of the implementation mode	Good cooperation with Member States and funding agencies under the current partnerships need to continue albeit with increased ambition and better coordination and governance. To ensure effective and smooth implementation, 3 dedicated pillars of activities within the partnership are needed: i. Implementation of joint activities in particular calls for proposals with co-funding from the Union (this also includes prior definition and agreement on alignment of actions) ii. Implementation of joint activities without co-funding from the Union iii. A broad set of activities supporting coordination, international cooperation and outreach, uptake of results etc.
Proposed starting year	2023 (call in WP 2022)