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CONTENTS

EXECUTIVE SUMMARY

In the framework of the BLUEMED project, the coordination action supporting the development of the BLUEMED Research and Innovation Initiative for blue jobs and growth in the Mediterranean area (www.bluemed-initiative.eu/), an overview and analysis of funding schemes available at different levels, from national to European and international, has been carried out.

This task is part of the activities devoted to strengthening cooperation to consolidate and implement the BLUEMED Strategic Research and Innovation Agenda (SRIA). It complements the BLUEMED interconnecting Platforms developed by the four BLUEMED operational working groups on knowledge, economy, technology and policy, to update the SRIA and serves as reference tool in the process of developing an operational network of research funders and key players to favour synergies and coordinate the realization of the BLUEMED actions.

This report can be considered a background document to initiate and facilitate dialogue and interaction between research funding agencies of different countries and European Institutions. Once the strategic alignment of agendas on areas of mutual interest has been identified, the aim is to lay the groundwork for operational alignment towards the launch of transnational actions.

As a first step, a catalogue (Annex I and II) has been compiled for reviewing marine and maritime RTDI strategies. The collected information has been analysed to address opportunities of alignment for joint implementation of the BLUEMED SRIA (section 2) and finally provide a set of preliminary recommendations to develop the BLUEMED Implementation plan (section 3), one of the key deliverables of the project.

Scope

Screening of recent international, European, regional and national R&I strategies and programmes of interest for the BLUEMED initiative and provide an auxiliary tool to design the BLUEMED Implementation Plan.

1. MARINE AND MARITIME R&I PROGRAMMES AND STRATEGIES

The review of active marine and maritime R&I programmes, generally defined by a particular scope, implementation time-frame and a budget allocation, is the preliminary step when addressing an operational framework of collaboration and concretely exploring funding opportunities for the realization of priority actions based on the feasibility of program alignment.

While relevant strategies enacted at high political levels, as well as vision documents and policy briefings addressing specific needs, may not provide exhaustive solutions for developing R&I actions, they are often crucial starting points of possible future commitments and programming. Among these, the strategic research and innovation agendas of initiatives and networks already in place targeting marine and maritime R&I are useful as technical frameworks of reference for alignment and the identification of possible gaps. Their impact on the development of policies and endorsement of measures by the European Union and by countries is undisputed and collaborative efforts in regards to the seas and oceans science have been increasingly providing new insights in terms of future programming, as in the case of the EurOCEAN Rome Declaration on "Delivering impact, global leadership and sustainable blue growth for Europe". The main output of the Conference, promoted by the European Marine Board held in Rome in 2014, addressed the regional seas specificities calling for the "recognition of regional seas diversity […] the sensitivity of the Mediterranean Sea calls for particular attention which is acknowledged by the proposed Blue Growth Research and Innovation Initiative for the Mediterranean". This Declaration, endorsed during the Italian Presidency of the Council of the European Union, led to important outcomes propelling marine and maritime research and innovation programmes in the area. Following the work of a group of representatives and experts from European Member States, with the support of the European Commission, the Venice Declaration on "Mediterranean Sea Cooperation Launching a Strategic Marine and Maritime Research and Innovation Agenda for Blue Growth" was signed by 10 European Member States in October of 2015. The event was a turning point that oriented R&I programmes towards Mediterranean blue jobs and growth.

Such strategies are also examined in the present review.

The Catalogue described in section 1.1 is based on the information provided by each BLUEMED CSA partner in reference to their own country and on desk analysis of available literature produced by relevant initiatives and projects. The catalogue provides not only reviews and results such as in the case of analogous surveys performed by the ERANETs COFASP on fishery, aquaculture and seafood processing, and MarTERA on maritime technology, but also useful methodology input, as in the case of the toolkit developed by the Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI-Oceans, www.jpi-oceans.eu/toolkit). The agendas of the European Aquaculture Technology Innovation Platform (EATiP), the Shipyards' & Maritime Equipment Association (SeaEurope) and the Ocean Energy Europe network of professionals (OEE), addressing innovation strategies in key sectors of the blue economy, have also been consulted, as well as the mapping of state of the art instruments and networks available on the ERALEARN2020 platform supporting the

Public-Public-Partnerships (P2P) community at www.era-learn.eu/public-to-public-partnerships.

1.1 Catalogue of main R&I Programmes and Strategies

BLUEMED topics are generally addressed in broader R&I programmes and strategies promoted at national level. In many cases, these respond to European sectoral directives and policies. Considering the strategic alignment process implemented at the European and Mediterranean level by entities shaping the policies that affect blue growth R&I activities, an overview is provided of frameworks that can be of interest for the BLUEMED operative phase. Finally, strategies at global level are considered for their importance in driving the agendas.

Following a common template, relevant information has been collected in order to feed a repository on existing R&I strategies and policies at different levels of governance and state of implementation, thus relying on different funding instruments. These include:

- National >> R&I strategies developed by relevant public and private bodies as well as possible explicit indications on R&I interventions within national plans;
- Regional >> Smart Specialization Strategies;
- European >> R&I Framework Programme and other relevant EC funding frameworks, the Food2030 Strategy, the Bioeconomy Strategy, JPI Oceans Strategic Research Agenda, Copernicus Marine, Integrated Maritime Policy, Technology Platforms positions;
- Mediterranean >> WESTMED, EUSAIR, GFCM, CPMR-IMC, MSSD;
- International >> UN-Sustainable Development Goals, International Ocean Governance, Strategic Plan for Biodiversity, IODE, GO-SHIP, UNDP, IODP

In Annex I, for each country detailed information on marine and maritime R&I programmes and strategies at national and regional level is presented based on a common layout describing contents and main objectives, the entity(ies) responsible for the implementation, the duration, and the budget (if allocated).

The same format is followed to address the policies and instruments in place at the European, Med, and international level, as listed in Annex II.

Only strategies and programmes that either specifically or partially, within a wider scope, target R&I in the marine and maritime domain are reported.

1.2 Preliminary analysis of information

As a first step, in order to correlate the gathered information with the scopes of the BLUEMED SRIA, common points and differences among countries and between general and sectoral R&I frameworks are identified as are the different scopes of programmes and strategies (1.2.1). A focus on Regional Innovation and Smart Specialization Strategies is also presented (1.2.2). Key points of strategies addressing R&I at the European, Mediterranean and global level are finally listed (1.2.3).

1.2.1 National programmes/strategies

Sixty strategies/programmes of interest for the BLUEMED project have been **listed for** nine European countries: Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia, and Spain. While general frameworks for the development of research and innovation activities all along the education and professional chain are set by the research Ministries/agencies, research and innovation on marine and maritime topics fall under the jurisdiction of many different ministries.

Besides Portugal, where the Ministry of the Sea has the responsibility of overarching planning (i.e. the National Ocean Strategy 2013-2020), the other eight countries set-up inter-ministerial working groups to coordinate marine and maritime activities. For example, in France the Inter-ministerial Committee of the Sea set the strategy for the development of the French blue economy and maritime employment; in Italy the Bioeconomy Strategy is promoted at the level of the Presidency of the Council of Ministers; and in Slovenia the Maritime Strategy resolution dating back to 1991 is implemented by all ministries.

A homogeneous trend of programmes available in many countries is clearly related to those sectors addressed by EU Directives, the implementation of which is deemed mandatory, such as the Marine Strategy Framework Directive and the Common Fishery Policy leading to multiannual strategic plans for the management of fisheries and development of aquaculture, as reported by Croatia, Greece, Italy, Malta and Spain.

That being said, the strategies in the following **economy driving sectors also embed research and innovation** in marine and maritime disciplines:

- **Transports**, with particular focus on **ports**, with dedicated national strategies in place in Greece (National Port Strategy), Italy (Plan for Ports and Logistics), and Portugal (Enhancing the Competitiveness of the Continent's Commercial Port Network - Horizon 2026). In France the strategy by the Inter-ministerial Committee of the Sea for the development of the blue economy has a specific focus on port security; in Slovenia modern cargo and cruise ports are addressed within the Maritime Strategy;
- **Tourism**, clearly part of the Italian Strategic Plan for Tourism implemented by the Ministry of Cultural Heritage and of the Slovenian Action plan of Strategic-development and innovative partnership 2017-2022 on sustainable tourism. In Greece it is part of the Port Strategy in relation to island viability and attractiveness of coastal areas;
- **Energy** tackled by the French National Energy Research Strategy of the Ministries of Energy and of Research, the Italian annual National Energy Strategy by the Ministry of Economic Development, and the Portuguese Industrial Strategy for Ocean Renewable Energy by the Ministries of the Sea and of the Economy.

In regards to **time frame and level of implementation**, in line with the seven year long European frameworks, 27 strategies out of the 60 collected are in the final phase of their implementation and will come to an end by the 2020, posing on one side operational constraints for alignment purposes and, on the other, valuable **opportunities to impact the next programming cycle by proposing new alignment methods that bring single strategies to effectively work together for optimal results**. Programmes that are implemented on a yearly basis and that target

the year 2030 seem, in principle, more flexible for alignment with the BLUEMED priorities, particularly at the strategic level. The adoption of the Food 2030 Strategy can be an opportunity for tailored R&I activities, being the food sector one of the key economy drivers, in relation also to nutrition and security.
Alignment of **funding mechanisms** is crucial for the operational phase. National Programmes for Research, that dedicate resources to implement transnational activities, address many different disciplines. While strategies implemented at the national level through the European Structural and Investment Funds (ESFIs), e.g. the European Maritime and Fishery Fund (EMFF), though definitely characterized by conspicuous allocation of resources and clear distribution, often pose management issues when seeking for complementarities and synergies through combined funding.

It should be noted that specific information on funds allocated to each programme was available, and thus is reported, for only nine of the listed programmes; for the remaining three an indication of the financing scheme is provided. In most cases there are no dedicated funds and the implementation of the measures is in principle secured through European funds and/or investments from the private sector.

1.2.2 Innovation and Smart Specialization, the regional dimension

Regional-level authorities are increasingly involved in designing their own strategies to support and enhance innovative local dynamics and improve the performance of their regional innovation systems for the benefit of the national innovation system.

The role of regions is relevant for fostering blue growth. Regional development policies focus on a limited number of key priorities, concentrating knowledge resources and linking them to instruments characterized by complementarities between public support mechanisms for RDI, industrial promotion and human capital and training. The latter two objectives are generally targeted as horizontal priorities.

In most cases the underlying principles of regional (smart specialization) strategies are: the exploitation of the potential of scientific and technological knowledge; cooperation between public and private R&D institutions and companies; strengthening the clustering policy and promoting the transfer of knowledge in order to improve the level of technological and knowledge intensity of the produced goods and services; the bet on tradable and value-added goods and services, as well as the internationalization of companies and the diversification of markets; the promotion of entrepreneurship; the creation of employment and the qualification of human resources.

The following inputs have been collected from six countries on specific themes relevant to the BLUEMED project, with specific reference to the regional dimension.

CROATIA	Strategic areas for innovative interventions and technology development are energy, transport, security, food and the bioeconomy.
CYPRUS	Key sectors are energy, tourism, transport/marine, food industry.
FRANCE	Strategic priorities of Regional Innovation Strategies (RIS) - Energy Transition / Energy Efficiency for the Regional Council of Provence Alpes Côte d'Azur;

	- Coastal and sea economy for the Regional Council of Occitanie including Plan Littoral 21 and floating offshore wind strategy - Valorisation of natural and cultural resources for CTC Corse.
ITALY	Designed to promote a competitiveness and innovation chain at national level with a positive return on the economic system, relevant themes addressed by the smart specialization strategy are bioeconomy, tourism, and energy. Some regions are more sensible to the blue growth than others..
PORTUGAL	The Research and Innovation Strategy for Smart Specialization defines five thematic axes, one of them being the Sea Economy, which targets in turn five priorities: 1. Marine food resources (fishing and aquaculture); 2. Natural systems and renewable energy resources; 3. Deep-sea resources; 4. Ports, logistic, transport, shipbuilding and maritime works; 5. Culture, tourism, sports and leisure.
SLOVENIA	SRIPT, the action plan of strategic development and innovative partnership 2017-2022 on sustainable tourism complies with the Smart Specialization Strategy, presenting the priorities for the sector as well as potential networking and international activities.

It is worth noting that the mentioned strategies are subject to updates and amendments, a process that allows for new strategic alignment opportunities and thus, a better coordinated operational phase for the joint implementation of envisioned actions.

1.2.2 The European, Mediterranean and Global level

A second Catalogue (Annex II) of relevant international programmes has been drafted. It complements the assessment on regional and sub-regional cooperation reported in the BLUEMED CSA deliverable D5.2 "Non-EU stakeholders: analysis of R&D strategy/policy/programme and priorities" available at http://www.bluemed-initiative.eu/wp-content/uploads/2017/10/D5.2_final.pdf. In particular, for the Western Mediterranean blue economy initiative, WESTMED, and the European Strategy for the Adriatic-Ionian Region targeting blue growth in one of its pillars, the outputs of the matching exercise with the BLUEMED challenges are reported in Annex III and IV, revealing the extent of overlapping as well as some of the focus areas of common intervention.

The coordination of high-level stakeholders representing institutions from different countries at the international level can favour the strategic alignment of priorities and integration of knowledge of interest for the BLUEMED initiative.

Intergovernmental bodies such as the Union for Mediterranean (UfM), the UN Environment Programme/Mediterranean Action Plan (UNEP-Map) responsible for the Barcelona Convention and the UNESCO – International Oceanographic Commission (IOC), strongly influence international governance also via science diplomacy. They are endorsed by national authorities and provide them with the fundamental guidelines. For instance, the need to better stimulate effective alignment of local and global

strategies marks a valuable opportunity for the BLUEMED project in view of the preparatory activities of the upcoming UN Decade of Ocean Science targeting 2030.

Regional networks such as the Intermediterranean Commission of the Conference of Peripheral Maritime Regions (CPRM – IMC), are better connected with the needs of local communities. Sectoral bodies can provide insightful knowledge for a more operative alignment of specific strategies: the General Fisheries Commission for the Mediterranean (GFCM) for the sustainable exploitation of biological resources or the networks of universities UniMED and EMUNI in terms of the fundamental transversal topic of education and skills.

Technology Platforms position statements can be a useful steering tool for the alignment from the perspective of the private sector, thus intersecting for the most part the BLUEMED SRIA's economy and technology pillars. In its updated strategic agenda, the European Aquaculture Technology and Innovation Platform forecasts the Mediterranean growth in the sector targeting 2030, emphasizing some of the challenges requiring research and innovation solutions, e.g. to control and prevent disease and overcome severe weather conditions. The challenges addressed by the Ocean Energy Technology Platform are related to the need of more operational data from real sea deployment of demonstrators, and of new opportunities for the materials' industry as well as the demand for tailored training of new professional figures. SeaEurope, the shipyards' and maritime equipment association representing the shipbuilding industry, includes research, development and innovation as a policy priority. R&D&I of products and production methods are a key driver to enhance the competitiveness of European shipyards and maritime equipment manufacturers. On the global market, the consolidation of the European leadership is also achieved through coordination of research and innovation activities.

2. ADDRESSING OPPORTUNITIES OF ALIGNMENT FOR THE JOINT IMPLEMENTATION OF THE BLUEMED SRIA

Based on the Catalogue, a more detailed analysis and an attempt at matching clear economical drivers, common points, connections, overlaps, gaps, policies directly linked and/or affected, is presented.

The Catalogue with basic information and attributes of R&I strategies and programmes can eventually become a user-friendly toolkit accessible through the BLUEMED Portal, including examples of suitable instruments to be associated with a typology of action for implementation. The interactive Catalogue can then be periodically updated according to the evolution of the BLUEMED CSA process.

All Tables referred in the following sub-sections are reported at the end of the chapter 2 for readability purposes.

2.1 Matching the SRIA

In this section a matching exercise between the national strategies and the SRIA goals they relate to is performed. Tables 1(a) to 1(i), display for each country, relevant R&I marine & maritime strategies which are compared with the challenges of the BLUEMED

SRIA (version dated April 2017 available at http://www.bluemed-initiative.eu/wp-content/uploads/2017/09/BLUEMED-SRIA_Update_final.pdf.

The matching exercise allow to infer some key points for consideration in the operational phase in regards to common points/connections/overlaps, and gaps as summarized in the following list.

Common points, connections, overlaps	National research strategies/programmes are thematically broad and overlap with the whole content of the SRIA with particular reference to the challenges included in the knowledge and technology pillars, while **regional strategies** (and the national coordination counterparts) **clearly target the challenges included in the economy and technology pillars**. Indeed, , the **smart, greener maritime transport and facilities** are addressed in six cases out of the ten collected strategies at regional level or national level with regional application (see Table 2, technology pillar).
	Almost all countries are **equipped with strategies on aquaculture and fisheries**, embracing R&I, often driven by the implementation of binding EU directives.
	Attention is posed vertically to (hazards and protection of) **coastal areas** (one of the knowledge challenges of the SRIA)**:** the challenge "Reasonable management of resources and climate adaptation" of the Research National Strategy France Europe 2020 includes a priority on coastal areas, in relation to tourism, energy, transport, cultural and natural heritage. In Italy, the Ministry of Environment and Protection of Territory and Sea together with Regions established the dedicated National Board on Coastal Erosion.
Gaps	The challenge on **Maritime Spatial Planning** belonging to the economy pillar does **not** seem to be **explicitly detected by national plans**. This is due to the weak presence of tailored strategies at national and regional levels complying with the EU MSP Directive. For instance, the regional declination of the National Strategy for the Sea and the Coast (SNML) implemented in the French region Provence-Alpes-Côte d'Azur, deals with the management of sea use conflicts that typically arise along the coasts. In other countries such as Greece and Spain, the need to strengthen synergies among science, industry, policy makers and society and to effectively manage the maritime space is included in plans related to key economy drivers such as tourism and aquaculture. This temporary gap marks an opportunity for BLUEMED to make an impact and promote an operational alignment on this topic.
	According to the European strategy Forum on Research Infrastructures (ESFRIs), such strategies are also a means for supporting local innovation. **Regional strategies can be better linked to national plans on RIs** – the relevance of which, for BLUEMED, is reported for instance by France and Italy that consider them as **enablers for tackling the challenges of the knowledge and technology pillars**.

2.2 Linking the BLUEMED SRIA[1] with the policy frameworks

Each challenge of the strategic R&I agenda and the related goals is connected with one or more EU policies tackling macro topics. These can address frameworks and/or geographical scope for implementation, specific sectors, environmental features and cross-cutting themes. In this paragraph, for each one of the three pillars grouping the BLUEMED SRIA challenges, i.e. knowledge, economy, and technology, existing connection with policies, directives and/or plans is explored, in order to determine to what extent some of the BLUEMED goals and related actions can contribute to their implementation.

KNOWLEDGE - POLICY RELEVANCE AND IMPACTS OF CHALLENGES, GOALS AND ACTIONS

CHALLENGE A. Mediterranean Sea Ecosystems: characterize present dynamics, services, resources, vulnerability and resilience to natural and anthropogenic pressures:

- GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem;
- GOAL A2. Understanding Pollution Impacts, Mitigation, and Remediation in the Mediterranean Sea.

Challenge A's goals address mainly environmental policies, and more specifically the implementation of Marine Strategy Framework Dir(2008/56/EC), understanding the status of ecosystems through most of the descriptors, the effects of natural and anthropogenic pressures and therefore recommending effective measures and practices to reach environmental objectives and targets. Actions on land-sea interaction are also very relevant for the Water Framework Dir(2000/60/EC), the evaluation of effectiveness of the River Basin Management Plan measures, addressing therefore their adaptation in the next 6-year cycle.
Moreover, a number of actions will be useful to address decisions on values and areas to be protected, as well as conservation measures, according to EU Biodiversity Strategy (COM(2011)244) and Habitat & Birds Directive (92/43/EEC; 2009/147/EC).
The challenge is supporting the main existing Regional Cooperation Frameworks, i.e. the Barcelona Convention (1976, 1995) and several of its Protocols, EUSAIR (COM(2012)713; COM(2014)357), with regard in particular to Pillar 3 - Topic 1 (The marine environment), and WESTMED (COM(2017)183), with reference to Goal 3 — Better governance of the sea – and its priorities.
Finally, some actions under goal A1 address some very important cross-cutting policy issues, such as reducing fragmentation among research institutions, readily opening and making available research results ("open science" policies) and data on the marine environment coming from the public and the private sectors ("open data" policies).

[1] The the challenges and goals reported in this sub-section refer to the last version of the SRIA updated at the EU level by the BLUEMED partner countries, as resulted from the consultation with national communities and the work of the BLUEMED platforms, www.bluemed-initiative.eu/bluemed-platforms/. In June 2018, the BLUEMED CSA released the deliverable D2.2 "Updated SRIA1". Its final version will be made public once the input of non-EU countries are included. Although some challenges and goals are slightly different from those reported in the other paragraphs, the consistency of the exercise of linking the SRIA with the policy frameworks within the report is not affected.

CHALLENGE B. Mediterranean Sea: forecast changes of the basin under climate and anthropogenic pressures and develop services in the field of sustainable adaptation to climate change and plans for mitigation:

- GOAL B1. Forecasting the Mediterranean Sea dynamics and climate;
- GOAL B2. Preparing to climate change and define adaptation/mitigation measures.

Challenge B targets in particular climate change adaptation and mitigation policies (e.g. COP21 Climate Change (2015), EU Strategy on adaptation to climate change (COM (2013)216). Actions of goal B1 on observing systems and of goal B2 on risks assessment and management can be particularly relevant for the implementation of Floods Directive (2007/60/CE) in coastal areas. The objective of making a comprehensive assessment of climate and anthropogenic related risks in the Mediterranean Sea ecosystem and human environment will also affect MSFD process; both as far as the trends of environmental pressures and the status of marine ecosystems are concerned.

Despite there is not a specifically dedicated pillar to climate change, EUSAIR recognizes the relevance of this issue under Pillar 3 ("The Adriatic and Ionian Region is vulnerable to disasters and to the impact of climate change and comprehensive actions to adapt to those circumstances are needed. Enhancing cooperation in this area, through different actions such as conducting adequate comprehensive risk assessment, implementing a disaster risk management policy, as well as developing a regional strategy on adaptation to climate change, will make the Region more resilient to such changes"), thus establishing a clear connection between Challenge B and EUSAIR. Similarly, the WESTMED Initiative stresses the fact that climate change greatly affects the region and the rise in sea level is a major threat to coastal ecosystems and economies, promoting therefore under Goal 2 actions on adaptation to climate change in coastal cities and coastal areas.

CHALLENGE C. Hazards and protection of coastal areas and open sea in the Mediterranean:

- GOAL C1. Reducing the coastal risk of disasters and their effects;
- GOAL C2. Protecting Maritime Cultural Heritage.

Similar to Challenge B, Challenge C addresses through several actions climate change adaptation and mitigation policies. This regards in particular coastal adaptation and contrast of erosion under goal C1.

The cross-cutting policy issue of reducing fragmentation among research institutions is specifically targeted through an action under goal C1, to establish a coordinated network of marine institutes, universities, stations, observatories and companies to identify and define geological processes potentially generating geo-hazards. Goal C3 will support specifically the Convention on the Protection of the Underwater Cultural Heritage (UN, 2001).

CHALLENGE D. Innovative blue growth trajectories: biotechnologies, food, and the deep-sea resources:

- GOAL D1. Exploring the potential of blue-biotech;
- GOAL D2. Support solutions for sustainable food production;
- GOAL D3 Exploiting the Deep Sea.

Challenge D addresses three main policy fields: Bioeconomy (COM(2012)60), Food and Nutrition (SWD(2016)319; Food 2030 Agenda) and Circular Economy (COM(2015)614), with their specific declination related to the environment and resources. Some actions of goal D2 can also affect and be of interest to the Common Fishery Policy (Reg(EC) 1967/2006; Reg(EU) 1380/2013; COM(2011)804).
The challenge is also supporting Regional Cooperation Frameworks. EUSAIR (COM(2012)713; COM(2014)357) has blue biotechnologies well in evidence under Pillar 1 - Topic 1 and fisheries and aquaculture under Pillar 1 – Topic 2. WESTMED (COM(2017)183) intends to promote Strategic Research and Innovation on bio-based innovative industries and services (producing for instance food ingredients, pharmaceuticals, cosmetics, chemicals, materials and energy) and innovative and sustainable aquaculture under Goal 2 — A smart and resilient blue economy, while Sustainable fisheries have several actions under Goal 3 — Better governance of the sea.
Some sectoral policies are affected by the D challenge, in particular through the actions of goal D2 dealing with sustainable fisheries and aquaculture (Common Fisheries Policy (Reg(EC) 1967/2006; Reg(EU) 1380/2013; COM(2011)804); Medfish4ever Declaration (2017); Straddling Fish Stock Agreement (UN, 1995).
D3 on the deep-sea environment is crucial to support a correct safeguarding and sustainable exploitation of such poorly known environment, addressing its correct governance (e.g. International Seabed Authority decisions), in line with the International Ocean Governance Agenda (Join (2016)49) and UNCLOS (UN, 1982).

ECONOMY - POLICY RELEVANCE AND IMPACTS OF CHALLENGES, GOALS AND ACTIONS

CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean:

- GOAL A1. Developing new technologies and tools;
- GOAL A2. Generating new products and services.

Challenge A addresses through technologies, tools, products and services three main policy fields: Bioeconomy (COM(2012)60), Food and Nutrition (SWD(2016)319; Food 2030 Agenda) and Circular Economy (COM(2015)614), with their specific declination related to the environment and resources.
In many cases, goals and actions regard more than one single policy. The specific action on marine litter under Goal A2 contributes to the objectives of MSFD, Descriptor 10.
As for Challenge D of Pillar Knowledge, the challenge is also supporting Regional Cooperation Frameworks. EUSAIR (COM(2012)713; COM(2014)357) has blue biotechnologies well in evidence under Pillar 1 - Topic 1, while WESTMED (COM(2017)183) intends to promote Strategic Research and Innovation on bio-based innovative industries and services (producing for instance food ingredients, pharmaceuticals, cosmetics, chemicals, materials and energy) under Goal 2 — A smart and resilient blue economy.
Finally, some actions under goal A2 address the important cross-cutting policy issue of promoting the aggregation of companies and investors (e.g. through clusters) to develop new marketing opportunities, such as reducing fragmentation among research institutions, readily opening and making available research results (“open science” policies) and data on the marine environment coming from the public and the private sector (“open data” policies).

CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries:

- GOAL B1. Develop optimal fishing strategies, technologies and practices;
- GOAL B2. Develop optimal aquaculture strategies, technologies and practices.

Through its two Goals, Challenge B directly targets some sectoral policies dealing with fisheries (Common Fisheries Policy (Reg(EC)1967/2006; Reg(EU)1380/2013; COM(2011)804); Medfish4ever Declaration (2017); Straddling Fish Stock Agreement (UN, 1995) and aquaculture (COM(2013)229).
The definition of spatially based measures towards sustainable fisheries and the allocation of sea space for nearshore and offshore aquaculture farms will inform Maritime Spatial Planning Directive (2014/89/EU) objectives. Innovation in several actions is related to circular economy approaches, combination with blue biotechnologies, while the Food 2030 Agenda is a sort of overarching framework and objective.
The challenge is intended to support the main existing Regional Cooperation Frameworks, i.e. EUSAIR (COM(2012)713; COM(2014)357), with regard in particular to Pillar 1 - Topic 1 (Blue technologies) and Topic 2 (Fisheries and aquaculture), and WESTMED (COM(2017)183), with reference to Goal 2 - A smart and resilient blue economy - and Goal 3 — Better governance of the sea – and their respective priorities "2.4 Sustainable consumption and production (maritime transport, ports, maritime and costal tourism, marine aquaculture)" and "3.4 Sustainable fisheries and coastal community development".

CHALLENGE C. Sustainable tourism and cultural heritage in the Mediterranean:

- GOAL C1. Linking tourism, tourists and environment;
- GOAL C2. Increase the economic impact of the Mediterranean natural and cultural heritage.

Challenge C is strictly related to EU policies on the tourism sector (COM(2010)352), more specifically Coastal and Maritime Tourism (COM(2014)86), with their priority actions designed to boost competitiveness (e.g. improvement of business environment and access to finance, promotion of destinations and internationalization of SMEs, uptake of digitalization, training and enhancement of skills) and sustainability (e.g. diversification of tourism offer, deseasonalisation, tourism fluxes management, etc.).
Some actions of the challenge will investigate how to diversify the tourism offer and promote synergies and coexistence among sea uses in the same areas (e.g. tourism, underwater cultural heritage, leisure boating, small scale and recreational fisheries, aquaculture, environmental protection), informing the use and exploitation of sea space and resources and promoting the development of new business models.
The goals and actions of this challenge are highly relevant for EUSAIR (COM(2012)713; COM(2014)357), which has an entire Pillar (Pillar 4) dedicated to this topic, and WESTMED (COM(2017)183), with reference to Goal 2 - A smart and resilient blue economy - and its priority "2.4 Sustainable consumption and production (maritime transport, ports, maritime and costal tourism, marine aquaculture)".
The cross-cutting policy issue of reducing fragmentation among marine and archaeological research institutions, including data sharing, is specifically targeted through an action under goal C1.
Some actions will also support the Convention on the Protection of the Underwater Cultural Heritage (UN, 2001) and the training of marine technician/scientists on the

protection of marine cultural heritage (New Skills Agenda for Europe – Blueprint for sectoral cooperation (2016).

CHALLENGE D. Maritime clusters in the Mediterranean:

- GOAL D1. From traditional maritime economic to blue growth activities;
- GOAL D2. Mediterranean Blue start-ups.

Quite evidently, Challenge D addresses the cross-cutting policy issue of reducing fragmentation among public and private research and economic operators, through the creation and promotion of sectoral and intra-sectoral maritime clusters and other innovative business models.
Macro-Regional Strategies and Initiatives recognize the importance of this approach: EUSAIR promotes the development of clusters under Pillar 1 (blue technologies and fisheries & aquaculture) and Pillar 4 (tourism), while WESTMED has a specific priority "2.2 Maritime clusters development" under Goal 2 - A smart and resilient blue economy.

CHALLENGE E. Governance of maritime space and marine resources in the Mediterranean:

- GOAL E1. Strengthen synergies among science, industry, policy-makers and society;
- GOAL E2. Effective maritime spatial planning in the Mediterranean;
- GOAL E3. Promote the role of Marine Renewable Energies (MRE) in the energy transition phase.

Challenge E addresses complex ocean governance (Ocean Governance (Join(2016)49) issues, which are often at the base of any blue growth perspective. It is by definition cross-sectoral, having the objective to promote the coexistence in space (terrestrial coastal area and marine waters) and the synergies among sea and coastal uses, without compromising ecosystems and the environmental objectives established by the International and EU policies (e.g. Marine Strategy Framework Dir (2008/56/EC), Water Framework Dir (2000/60/EC), EU Biodiversity Strategy 2020 (COM(2011)244), Habitat & Birds Dir (92/43/EEC; 2009/147/EC), Barcelona Convention Protocols, IMO Ballast Water Management Convention (2004), IMO MARPOL Convention, Convention on Biological Diversity (UN, 1993), Sustainable Development Goals Agenda (UN, 2015), ICCAT (1999), ACCOBAMS (1996)).
The two policy tools specifically regulating this issue in the Mediterranean are the ICZM Protocol of the Barcelona Convention (UNEP, 2008) and the EU Maritime Spatial Directive (2014/89/EU).
Being cross-sectoral, most policies regulating and addressing sea economy sectors and sea activities (e.g. Common Fisheries Policy (Reg(EC)1967/2006; Reg(EU)1380/2013; COM(2011)804), Aquaculture (COM(2013)229), Tourism (COM(2010)352; COM(2014)86), Energy (COM(2008)768; COM(2014)15); Reg(EU)347/2013), Renewable Energy Dir (2009/28/EC), Safety Oil & Gas Dir (2013/30/EU), Transport (COM(2009)10; COM(2013)295; Reg(EU)1315/2013), Bioeconomy (COM(2012)60), EU Maritime Security Strategy (11205/14), Search & Rescue Dir (2013/32/EU)) are directly and indirectly influenced by this Challenge.
Policies promoting data sharing, extensive and structured stakeholder engagement, participatory approaches, synergies among science, industry, policymakers and society are strongly required.

The energy sector and related policies are specifically targeted by Goal E3 which favorably positions MREs in energy transition, particularly in the panel of other renewable energies, and contributes to policies on climate change mitigation (e.g. COP21 Climate Change (2015), Climate (COM(2013)216).
The challenge supports the main existing Regional Cooperation Frameworks, i.e. the Barcelona Convention (1976, 1995) and its ICZM Protocol, EUSAIR (COM(2012)713; COM(2014)357), with regard in particular to Pillar 1 - Topic 3 (Maritime and marine governance and services) and Pillar 3 – Topic 1 (The marine environment), and WESTMED (COM(2017)183), with reference to Goal 3 — Better governance of the sea – and its priority "3.1 Spatial planning and coastal management".

TECHNOLOGY - POLICY RELEVANCE AND IMPACTS OF CHALLENGES, GOALS AND ACTIONS

CHALLENGE A. Smart, greener and safer maritime transport and facilities in the Mediterranean:

- GOAL A1. Greening vessels, facilities and services;
- GOAL A2. Safer maritime transport;
- GOAL A3. Connected and automated transport.

Challenge A, on the whole, and from different perspectives, addresses, , the policies on maritime transports (e.g. (COM(2009)10; COM(2013)295; Reg(EU)1315/2013). The planning and management of ships and harbours and the temporal perspectives are aspects that influence Coastal Zone Management and Maritime Spatial Planning.

Some actions under Goal A1 and A2 are aimed at producing environmental benefits, and as such are very relevant for environmental policies (e.g. mitigation of climate change, prevention and response to marine pollution, reduction of pressures such as water pollution and underwater noise).

These goals and actions are fully in line with Barcelona Convention Protocols and the objectives of Pillar 2 (Connecting the Region) of EUSAIR. In several aspects they are also very relevant for WESTMED Goal 1 — A safer and more secure maritime space (Priority 1.2 Maritime safety and response to marine pollution) and Goal 2 — A smart and resilient blue economy (Priority 2.4 Sustainable consumption and production (maritime transport, ports, maritime and costal tourism, marine aquaculture).

CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean

- GOAL B1. Towards an observing system of systems;
- GOAL B2. Tailor-made sensors and platforms;
- GOAL B3. Security and safety services and technologies in the Mediterranean supporting the Blue Growth.

Challenge B targets in particular, climate change and environmental policies through its ocean observing sensors, platforms and networks (Goals B1 and B2).

The cross-cutting issues of integrating networks and consortia and managing / sharing acquired data, also developing Big data analytics, are vital for this Challenge. A specific action also promotes the direct involvement of the civil society, through Citizen Science initiatives.

The need to consolidate marine knowledge in order to integrate and stabilize marine observatories is part of EUSAIR Pillar 3 – Topic 1. The marine environment – priorities.

WESTMED addresses this topic under Goal 3 — Better governance of the sea, Priority 3.2. Maritime and marine knowledge (data gaps, data analysis and sharing).

Goal B3 tackles the important topic of Safety & Security, the policies of which are evident (e.g. EU Maritime Security Strategy (11205/14), Search & Rescue Dir (2013/32/EU)).

The Challenge should promote Maritime Domain Awareness through a strategic framework based on voluntary contributions provided within flexible and inclusive institutionalized structures and promote appropriate investments, homogeneous legislation and capacity building throughout the Mediterranean, together with a sound sense of ownership in order to ensure full participation from all stakeholders.

Policies dedicated to maritime security should be reviewed and reinforced to achieve relevant sustainability goals and socio-economic advantages, up to the definition of a strategic plan and an action priority scheme for maritime security supporting Blue Growth and critical monitoring infrastructures.

CHALLENGE C. Innovative offshore industrial platforms including marine renewable energy and co-use:

- GOAL C1. Changing the rationale: one platform, multiple uses and activities;
- GOAL C2. Increase the fraction of installed marine renewable energy power plants.

Challenge C touches mainly three policy aspects: coexistence of multiple sea uses in a single platform, i.e. an issue of advanced and optimized use of the sea space (Maritime Spatial Planning Directive (2014/89/EU)); energy-related policies, promoting and orienting the transition towards decarbonization (O&G decommissioning and reuse of platforms; marine renewable energies).

Policy actions that favour networks, clusters, new business models mainly related to multi-use platforms and marine renewables are also proposed.

WESTMED tackles the issue of “solutions and new technologies to harness marine renewable energies and mitigate and adapt to climate change” and “new concepts and protocols with private companies and the maritime operators to maximize the use of infrastructure, ships and platforms for scientific and environmental monitoring, safety and security purposes” under Goal 2 — A smart and resilient blue economy, Priority 2.1 Strategic research and innovation.

CHALLENGE D. Marine and coastal natural and cultural heritage in the Mediterranean: discovering, protecting and valuing:

- GOAL D1. Technology solutions for the Mediterranean natural and cultural heritage.

Challenge D contains actions related to technological aspects promoting the discovery, protection and recognition of the value of marine natural and cultural heritage. It is strictly linked to Challenge C and of Pillar Knowledge and Challenge C of Pillar Economy. As such, it is related to EU policies on the tourism sector (COM(2010)352), more specifically Coastal and Maritime Tourism (COM(2014)86), and policies on the protection of the Underwater Cultural Heritage. Actions on the reduction of pollution from terrestrial sources contribute directly to the objectives of Water Framework Directive (2000/60/CE).

2.2 National programmes/strategies meet the European policy frameworks

As a strategic framework, Blue Growth affects numerous sectors, thus interlinks with many different policies, directives and regulations addressing a specific area of application. Moreover, considering the regional nature of the Sea basin strategies developed at the European level, a number of cooperation initiatives intersect with many aspects of the Blue Growth sector in the Mediterranean.

The following boxes provide an organized overview, grouping the strategic EU blue frameworks, the sectoral policies, directives and regulatory acts and regional cooperation initiatives.

STRATEGIC EU BLUE FRAME

EU2020 Strategy (COM(2010)2020 final)
Blue Growth Strategy (COM(2012)494final; COM(2014)242final)
Integrated Maritime Policy (COM(2007)575final)
Convention on Biological Diversity (UN, 1993)
Sustainable Development Goals (SDGs) Agenda (UN, 2015)
Convention on the Law of the Sea (UN, 1982)
Straddling Fish Stock Agreement (UN, 1995)
Ocean Governance (JOIN(2016)49final)
7° Environment Action Programme (Dec.1386/2013/EU)
Circular Economy Package (COM(2015)614final)

SECTORAL POLICIES, DIRECTIVES AND OTHER REGULATORY ACTS

Common Fisheries Policy (Reg(EC)1967/2006; Reg(EU)1380/2013; COM(2011)804final)
Aquaculture (COM(2013)229final)
Tourism (COM(2014)86final)
Climate (COM(2013)216final)
Energy (COM(2008)768final; COM(2014)15final); Reg(EU)347/2013)
Transport (COM(2009)10final; COM(2013)295final; Reg(EU)1315/2013)
Bioeconomy (COM(2012)60final)
EU Maritime Security Strategy (11205/14)
Marine Strategy Framework Dir (2008/56/EC)
Water Framework Dir (2000/60/EC)
Maritime Spatial Planning Dir (2014/89/EU)
Habitat&Biodiversity (92/43/EEC; 2009/147/EC)
FD (2007/60/CE)
Renewable Energy Dir (2009/28/EC)
Safety Oil&Gas Dir (2013/30/EU)
Barcelona Convention Protocols
International Maritime Organization (IMO) Ballast Water Management Convention
IMO MARPOL Convention
INSPIRE Dir (2007/2/EC)
Search & Rescue D (2013/32/EU)
Skills & Education (2016/381/EC)
Open data Rec (2012/417/EU)

REGIONAL COOPERATION

EU Cohesion and Neighborhood Policy (ENP)
Barcelona Convention (1976, 1995)
EUSAIR (COM(2012)713final COM(2014)357final)
WESTMED (COM(2017)183final)
ICCAT (1999)
ACCOBAMS (1996)

The matching exercise reported in Table 3 refers to the above listed groups of policies and the information collected from partners on national strategies, in order to visually represent the extent to which countries respond to different policies. Binding directives are by definition matched and also represent a good opportunity to develop R&I aspects. The coloured squares allow to not only identify sectoral trends that countries have in common, but also the national degree of response to sub regional cooperation, which can be a driver for alignment, according to the principle of variable geometry.

The lack of a clear link of the economic drivers to the overarching thematic and managing frameworks of the circular economy, Ocean Governance and International cooperation must be addressed in order to achieve effective long term coordination of marine and maritime research and innovation activities.

2.3 Overview of non-EU countries programmes and strategies

The BLUEMED CSA deliverable D5.2 on "Non-EU stakeholders: analysis of R&D strategy/policy/programme and priorities" available at www.bluemed-initiative.eu/wp-content/uploads/2017/10/D5.2_final.pdf is an output of the project's activities devoted to the engagement with non-EU Mediterranean countries and mainly based on deskwork. A review of current strategies and priorities, in place at the time of writing, of 14 non-EU Mediterranean States has been carried out as well as of regional and sub-regional cooperation initiatives. The matching exercise of countries' priorities with the SRIA challenges resulted in the synthesis reported in Table 4. While this preliminary overview is a good basis for bringing out commonalities and suggesting alignment opportunities, a more capillary catalogue and comprehensive collection of homogenous information is needed for a more comparable assessment. This analysis is preliminary and based on the information gathered in the first step of the project. The findings should be updated and consolidated according to the inputs of stakeholders from Mediterranean non-EU countries.

Some non-EU countries engaged in the BLUEMED initiative through appointed delegates, the Euro-Med Group of Senior Official BLUEMED Working Group (GSO BLUEMED WG), are contributing to the SRIA through national consultations. This process will provide a basis for the operational phase at the Mediterranean level, once the strategic alignment phase is concluded with a convergence of priorities. In particular, following the organization of the BLUEMED Days in five non-EU countries as part of the BLUEMED extension activities and consultation of national communities, five countries (Algeria, Egypt, Jordan, Tunisia and Turkey) drafted tailored reports addressing specific inputs to the SRIA and country priorities' tendencies. In some cases, e.g. Turkey, the report also included comments on existing strategies and frameworks at national level.. These contributions will be analysed and will supplement the updated version of the BLUEMED SRIA. The discussion that will be carried out in the framework of the second research funders' workshop organized on the 24th of October 2018 within the BLUEMED Week, will provide additional inputs on strategies and tools that will feed the follow-up of this document, produced in response to the CSA Task 2.3.

Tables 1a-1i, between the BLUEMED SRIA and the National and Regional Strategies.

Table 1(a) - CROATIA

R&I marine & maritime strategies/programmes	National Strategic Plan for Development of Fisheries	Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia	Strategy for Education, Science and Technology	Croatian Smart Specialisation Strategy
Level	**National**	**National**	**National**	**National**
KNOWLEDGE Pillar				
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures				
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem				
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources				
GOAL A3. Cleaning the Mediterranean Sea				
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation				
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics				
GOAL B2. Preparing to climate change				
GOAL B3. Climate services for the Mediterranean				
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean				
GOAL C1. Reducing the risk of disasters				
ECONOMY Pillar				
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean				
GOAL A1. Developing new technologies and tools				
GOAL A2. Generating new products and services				

R&I marine & maritime strategies/programmes	National Strategic Plan for Development of Fisheries	Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia	Strategy for Education, Science and Technology	Croatian Smart Specialisation Strategy
Level	**National**	**National**	**National**	**National**
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries				
GOAL B1. Develop optimal fishing strategies, technologies and practices				
GOAL B2. Develop optimal aquaculture strategies, technologies and practices				
CHALLENGE C. Sustainable tourism in the Mediterranean				
GOAL C1. Linking tourism and environment				
GOAL C2. Developing smart technologies and dedicated services				
CHALLENGE D. Maritime clusters in the Mediterranean				
GOAL D1. From traditional maritime economic to blue growth activities				
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean				
GOAL E1. Strengthen synergies among science, industry, policy makers and society				
GOAL E2. Effective maritime spatial planning in the Mediterranean				
TECHNOLOGY Pillar				
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean				
GOAL A1. Greening vessels and facilities				

R&I marine & maritime strategies/programmes	National Strategic Plan for Development of Fisheries	Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia	Strategy for Education, Science and Technology	Croatian Smart Specialisation Strategy
Level	**National**	**National**	**National**	**National**
GOAL A2. Safer maritime transport in the Mediterranean				
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean				
GOAL B1. Towards an observing system of systems				
GOAL B2. Tailor-made sensors and platforms				
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean				
GOAL C1. Changing the rationale: one platform, multiple uses and activities				
GOAL C3. Train for blue offshore professionals				
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing				
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean				
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage				

Table 1(b) – CYPRUS

R&I marine & maritime strategies/programmes	Smart Specialisation Strategy for Cyprus (S3Cy)
Level	**National**
KNOWLEDGE Pillar	
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures	
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem	
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources	
GOAL A3. Cleaning the Mediterranean Sea	
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation	
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics	
GOAL B2. Preparing to climate change	
GOAL B3. Climate services for the Mediterranean	
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean	
GOAL C1. Reducing the risk of disasters	
ECONOMY Pillar	
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean	
GOAL A1. Developing new technologies and tools	
GOAL A2. Generating new products and services	

R&I marine & maritime strategies/programmes	Smart Specialisation Strategy for Cyprus (S3Cy)
Level	**National**
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries	
GOAL B1. Develop optimal fishing strategies, technologies and practices	
GOAL B2. Develop optimal aquaculture strategies, technologies and practices	
CHALLENGE C. Sustainable tourism in the Mediterranean	
GOAL C1. Linking tourism and environment	
GOAL C2. Developing smart technologies and dedicated services	
CHALLENGE D. Maritime clusters in the Mediterranean	
GOAL D1. From traditional maritime economic to blue growth activities	
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean	
GOAL E1. Strengthen synergies among science, industry, policy makers and society	
GOAL E2. Effective maritime spatial planning in the Mediterranean	
TECHNOLOGY Pillar	
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean	
GOAL A1. Greening vessels and facilities	
GOAL A2. Safer maritime transport in the Mediterranean	

R&I marine & maritime strategies/programmes	Smart Specialisation Strategy for Cyprus (S3Cy)
Level	**National**
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean	
GOAL B1. Towards an observing system of systems	
GOAL B2. Tailor-made sensors and platforms	
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean	
GOAL C1. Changing the rationale: one platform, multiple uses and activities	
GOAL C3. Train for blue offshore professionals	
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing	
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean	
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage	

Table 1(c) – FRANCE

R&I marine & maritime strategies/programmes	Research National Strategy France Europe 2020	French national strategy on research infrastructures	ALLENVI (CONTRIB. ESFRI RM ENVIRON. RES. INFRASTR. AND NAT. RM INFRASTR.	France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation	National Energy Research Strategy	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	ANR (National Research Agency) Action Plan 2018	CIMER 2017 (Inter-ministerial Committee of the Sea)	Comité France Maritime (Maritime France Committee	Pôle Mer Méditerranée	Concours Innovation 2018	National Strategy for the Sea and the Coast (SNML)	Regional Innovation Strategy Provence Alpes Côte d'Azur	Plan Littor 21 of Occita Midi Pyrén
Level	**National**	**National**	**National**	**National**	**National**	**Regional and Local**	**National**	**National**	**National**	**National European International**	**National**	**National**	**Regional**	**Regio**
KNOWLEDGE Pillar						■			■	■				
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures		■	■			■			■	■				
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem		■	■	■		■			■	■				
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources				■		■		■	■	■				
GOAL A3. Cleaning the Mediterranean Sea						■			■	■				
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation	■	■	■			■	■		■	■				
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics		■	■	■		■			■	■				

R&I marine & maritime strategies/programmes	Research National Strategy France Europe 2020	French national strategy on research infrastructures	ALLENVI (CONTRIB. ESFRI RM ENVIRON. RES. INFRASTR. AND NAT. RM INFRASTR.	France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation	National Energy Research Strategy	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	ANR (National Research Agency) Action Plan 2018	CIMER 2017 (Inter-ministerial Committee of the Sea)	Comité France Maritime (Maritime France Committee	Pôle Mer Méditerranée	Concours Innovation 2018	National Strategy for the Sea and the Coast (SNML)	Regional Innovation Strategy Provence Alpes Côte d'Azur	Plan Littor 21 of Occita Midi Pyrén
Level	**National**	**National**	**National**	**National**	**National**	**Regional and Local**	**National**	**National**	**National**	**National European International**	**National**	**National**	**Regional**	**Regio**
GOAL B2. Preparing to climate change														
GOAL B3. Climate services for the Mediterranean														
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean														
GOAL C1. Reducing the risk of disasters														
ECONOMY Pillar														
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean														
GOAL A1. Developing new technologies and tools														
GOAL A2. Generating new products and services														
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries														
GOAL B1. Develop optimal fishing strategies, technologies and practices														
GOAL B2. Develop optimal aquaculture strategies,														

R&I marine & maritime strategies/programmes	Research National Strategy France Europe 2020	French national strategy on research infrastructures	ALLENVI (CONTRIB. ESFRI RM ENVIRON. RES. INFRASTR. AND NAT. RM INFRASTR.	France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation	National Energy Research Strategy	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	ANR (National Research Agency) Action Plan 2018	CIMER 2017 (Inter-ministerial Committee of the Sea)	Comité France Maritime (Maritime France Committee	Pôle Mer Méditerranée	Concours Innovation 2018	National Strategy for the Sea and the Coast (SNML)	Regional Innovation Strategy Provence Alpes Côte d'Azur	Plan Littor 21 of Occita Midi Pyrén
Level	**National**	**National**	**National**	**National**	**National**	**Regional and Local**	**National**	**National**	**National**	**National European International**	**National**	**National**	**Regional**	**Regio**
technologies and practices														
CHALLENGE C. Sustainable tourism in the Mediterranean														
GOAL C1. Linking tourism and environment														
GOAL C2. Developing smart technologies and dedicated services														
CHALLENGE D. Maritime clusters in the Mediterranean														
GOAL D1. From traditional maritime economic to blue growth activities														
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean														
GOAL E1. Strengthen synergies among science, industry, policy makers and society														
GOAL E2. Effective maritime spatial planning in the Mediterranean														
TECHNOLOGY Pillar														

R&I marine & maritime strategies/programmes	Research National Strategy France Europe 2020	French national strategy on research infrastructures	ALLENVI (CONTRIB. ESFRI RM ENVIRON. RES. INFRASTR. AND NAT. RM INFRASTR.	France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation	National Energy Research Strategy	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	ANR (National Research Agency) Action Plan 2018	CIMER 2017 (Inter-ministerial Committee of the Sea)	Comité France Maritime (Maritime France Committee	Pôle Mer Méditerranée	Concours Innovation 2018	National Strategy for the Sea and the Coast (SNML)	Regional Innovation Strategy Provence Alpes Côte d'Azur	Plan Littor 21 of Occita Midi Pyrén
Level	**National**	**National**	**National**	**National**	**National**	**Regional and Local**	**National**	**National**	**National**	**National European International**	**National**	**National**	**Regional**	**Regio**
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean														
GOAL A1. Greening vessels and facilities														
GOAL A2. Safer maritime transport in the Mediterranean														
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean														
GOAL B1. Towards an observing system of systems														
GOAL B2. Tailor-made sensors and platforms														
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean														
GOAL C1. Changing the rationale: one platform, multiple uses and activities														
GOAL C3. Train for blue offshore professionals														

R&I marine & maritime strategies/programmes	Research National Strategy France Europe 2020	French national strategy on research infrastructures	ALLENVI (CONTRIB. ESFRI RM ENVIRON. RES. INFRASTR. AND NAT. RM INFRASTR.	France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation	National Energy Research Strategy	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	ANR (National Research Agency) Action Plan 2018	CIMER 2017 (Inter-ministerial Committee of the Sea)	Comité France Maritime (Maritime France Committee	Pôle Mer Méditerranée	Concours Innovation 2018	National Strategy for the Sea and the Coast (SNML)	Regional Innovation Strategy Provence Alpes Côte d'Azur	Plan Littor 21 of Occita Midi Pyrén
Level	**National**	**National**	**National**	**National**	**National**	**Regional and Local**	**National**	**National**	**National**	**National European International**	**National**	**National**	**Regional**	**Regio**
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing														
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean														
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage														

Table 1d – GREECE

R&I marine & maritime strategies/programmes	PA (Partnership Agreement for the Development Framework) 2014-2020	Multi-annual National Strategic Plan for the development of aquaculture in Greece, 2014-2020	National Port Strategy	National Strategic Framework for Research and Innovation of the New Programming Period 2014-2020	National Strategy for Research, Technological Development and Innovation (NSRTDI 2014-2020)
Level					
KNOWLEDGE Pillar					
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures					
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem					
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources					
GOAL A3. Cleaning the Mediterranean Sea					
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation					
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics					
GOAL B2. Preparing to climate change					
GOAL B3. Climate services for the Mediterranean					
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean					
GOAL C1. Reducing the risk of disasters					
ECONOMY Pillar					

R&I marine & maritime strategies/programmes	PA (Partnership Agreement for the Development Framework) 2014-2020	Multi-annual National Strategic Plan for the development of aquaculture in Greece, 2014-2020	National Port Strategy	National Strategic Framework for Research and Innovation of the New Programming Period 2014-2020	National Strategy for Research, Technological Development and Innovation (NSRTDI 2014-2020)
Level					
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean					
GOAL A1. Developing new technologies and tools					
GOAL A2. Generating new products and services					
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries					
GOAL B1. Develop optimal fishing strategies, technologies and practices					
GOAL B2. Develop optimal aquaculture strategies, technologies and practices					
CHALLENGE C. Sustainable tourism in the Mediterranean					
GOAL C1. Linking tourism and environment					
GOAL C2. Developing smart technologies and dedicated services					
CHALLENGE D. Maritime clusters in the Mediterranean					
GOAL D1. From traditional maritime economic to blue growth activities					
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean					
GOAL E1. Strengthen synergies among science, industry, policy makers and society					
GOAL E2. Effective maritime spatial planning in the Mediterranean					
TECHNOLOGY Pillar					

R&I marine & maritime strategies/programmes	PA (Partnership Agreement for the Development Framework) 2014-2020	Multi-annual National Strategic Plan for the development of aquaculture in Greece, 2014-2020	National Port Strategy	National Strategic Framework for Research and Innovation of the New Programming Period 2014-2020	National Strategy for Research, Technological Development and Innovation (NSRTDI 2014-2020)
Level					
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean					
GOAL A1. Greening vessels and facilities					
GOAL A2. Safer maritime transport in the Mediterranean					
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean					
GOAL B1. Towards an observing system of systems					
GOAL B2. Tailor-made sensors and platforms					
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean					
GOAL C1. Changing the rationale: one platform, multiple uses and activities					
GOAL C3. Train for blue offshore professionals					
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing					
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean					
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage					

Table 1(e) – ITALY

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
KNOWLEDGE Pillar														
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures														
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem														
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
GOAL A3. Cleaning the Mediterranean Sea														
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation														
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics														
GOAL B2. Preparing to climate change														
GOAL B3. Climate services for the Mediterranean														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean														
GOAL C1. Reducing the risk of disasters														
ECONOMY Pillar														
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean														
GOAL A1. Developing new technologies and tools														
GOAL A2. Generating new products and services														
CHALLENGE B. Ecosystem-based management of														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
Mediterranean aquaculture and fisheries														
GOAL B1. Develop optimal fishing strategies, technologies and practices														
GOAL B2. Develop optimal aquaculture strategies, technologies and practices														
CHALLENGE C. Sustainable tourism in the Mediterranean														
GOAL C1. Linking tourism and environment														
GOAL C2. Developing smart technologies and dedicated services														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
CHALLENGE D. Maritime clusters in the Mediterranean														
GOAL D1. From traditional maritime economic to blue growth activities														
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean														
GOAL E1. Strengthen synergies among science, industry, policy makers and society														
GOAL E2. Effective maritime spatial planning in the Mediterranean														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
TECHNOLOGY Pillar														
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean														
GOAL A1. Greening vessels and facilities														
GOAL A2. Safer maritime transport in the Mediterranean														
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean														
GOAL B1. Towards an observing system of systems														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
GOAL B2. Tailor-made sensors and platforms														
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean														
GOAL C1. Changing the rationale: one platform, multiple uses and activities														
GOAL C3. Train for blue offshore professionals														
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing														

R&I marine & maritime strategies/programmes	National Programme for Research (PNR)	National Programme for Research Infrastructures (PNIR)	National Technology Cluster - Blue Italian Growth (CTN - BIG)	Italian Bioeconomy Strategy (BIT)	National Strategic Plan for Ports and Logistics	Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	National Board on Coastal Erosion (TNEC)	National Energy Strategy (SEN 2017)	Triennial National Programme on Fisheries and Aquaculture	National Strategic Plan for Aquaculture	Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	National Plan for Military Research	The Strategic Plan for Tourism	National Smart Specialization Strategy (SNSI)
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**	**National**
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean														
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage														

Table 1(f) – MALTA

R&I marine & maritime strategies/programmes	National Research and Innovation Strategy	AQUACULTURE STRATEGY FOR THE MALTESE ISLANDS - Towards sustainability 2014-2025	INTEGRATED MARITIME POLICY
Level	**National**	**National**	**National**
KNOWLEDGE Pillar			
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures			
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem			
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources			
GOAL A3. Cleaning the Mediterranean Sea			
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation			
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics			
GOAL B2. Preparing to climate change			
GOAL B3. Climate services for the Mediterranean			
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean			
GOAL C1. Reducing the risk of disasters			
ECONOMY Pillar			
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean			
GOAL A1. Developing new technologies and tools			
GOAL A2. Generating new products and services			
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries			
GOAL B1. Develop optimal fishing strategies, technologies and practices			
GOAL B2. Develop optimal aquaculture strategies, technologies and practices			
CHALLENGE C. Sustainable tourism in the Mediterranean			

R&I marine & maritime strategies/programmes	National Research and Innovation Strategy	AQUACULTURE STRATEGY FOR THE MALTESE ISLANDS - Towards sustainability 2014-2025	INTEGRATED MARITIME POLICY
Level	**National**	**National**	**National**
GOAL C1. Linking tourism and environment			
GOAL C2. Developing smart technologies and dedicated services			
CHALLENGE D. Maritime clusters in the Mediterranean			
GOAL D1. From traditional maritime economic to blue growth activities			
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean			
GOAL E1. Strengthen synergies among science, industry, policy makers and society			
GOAL E2. Effective maritime spatial planning in the Mediterranean			
TECHNOLOGY Pillar			
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean			
GOAL A1. Greening vessels and facilities			
GOAL A2. Safer maritime transport in the Mediterranean			
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean			
GOAL B1. Towards an observing system of systems			
GOAL B2. Tailor-made sensors and platforms			
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean			
GOAL C1. Changing the rationale: one platform, multiple uses and activities			
GOAL C3. Train for blue offshore professionals			
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing			
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean			
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage			

Table 1(g) – PORTUGAL

R&I marine & maritime strategies/programmes	ENEI - Research and Innovation Strategy for Smart Specialization	Research and Innovation Agenda for the Ocean	Higher Education, Research and Innovation in Portugal – Perspectives for 2030	ENM National Ocean Strategy 2013-2020	EI-ERO - Insdustrial Strategy for Ocean Renewable Energy	Strategy for Enhancing the Competitiveness of the Continent's Commercial Port Network - Horizon 2026	Observatório do Atlântico / Atlantic Observatory
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**
KNOWLEDGE Pillar							
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures							
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem							
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources							
GOAL A3. Cleaning the Mediterranean Sea							
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation							
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics							
GOAL B2. Preparing to climate change							
GOAL B3. Climate services for the Mediterranean							
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean							
GOAL C1. Reducing the risk of disasters							
ECONOMY Pillar							
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean							

R&I marine & maritime strategies/programmes	ENEI - Research and Innovation Strategy for Smart Specialization	Research and Innovation Agenda for the Ocean	Higher Education, Research and Innovation in Portugal – Perspectives for 2030	ENM National Ocean Strategy 2013-2020	EI-ERO - Insdustrial Strategy for Ocean Renewable Energy	Strategy for Enhancing the Competitiveness of the Continent's Commercial Port Network - Horizon 2026	Observatório do Atlântico / Atlantic Observatory
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**
GOAL A1. Developing new technologies and tools							
GOAL A2. Generating new products and services							
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries							
GOAL B1. Develop optimal fishing strategies, technologies and practices							
GOAL B2. Develop optimal aquaculture strategies, technologies and practices							
CHALLENGE C. Sustainable tourism in the Mediterranean							
GOAL C1. Linking tourism and environment							
GOAL C2. Developing smart technologies and dedicated services							
CHALLENGE D. Maritime clusters in the Mediterranean							
GOAL D1. From traditional maritime economic to blue growth activities							
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean							
GOAL E1. Strengthen synergies among science, industry, policy makers and society							

R&I marine & maritime strategies/programmes	ENEI - Research and Innovation Strategy for Smart Specialization	Research and Innovation Agenda for the Ocean	Higher Education, Research and Innovation in Portugal – Perspectives for 2030	ENM National Ocean Strategy 2013-2020	EI-ERO - Insdustrial Strategy for Ocean Renewable Energy	Strategy for Enhancing the Competitiveness of the Continent's Commercial Port Network - Horizon 2026	Observatório do Atlântico / Atlantic Observatory
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**
GOAL E2. Effective maritime spatial planning in the Mediterranean							
TECHNOLOGY Pillar							
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean							
GOAL A1. Greening vessels and facilities							
GOAL A2. Safer maritime transport in the Mediterranean							
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean							
GOAL B1. Towards an observing system of systems							
GOAL B2. Tailor-made sensors and platforms							
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean							
GOAL C1. Changing the rationale: one platform, multiple uses and activities							
GOAL C3. Train for blue offshore professionals							
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing							
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean							
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage							

Table 1(h) – SLOVENIA

R&I marine & maritime strategies/programmes	Resolution on Research and Innovation Strategy of Slovenia 2011-2020	Resolution on Maritime Strategy of the Republic of Slovenia (RMSRS)	Transport Development Strategy of the Republic of Slovenia (adopted by the Government on July 29, 2015)	Action plan of Strategic-development and innovative partnership 2017-2022 Sustainable tourism - SRIPT	Draft of the Slovenian Development Strategy 2030 (SDS)
Level	**National**	**National**	**National**	**National**	**National**
KNOWLEDGE Pillar					
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures					
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem					
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources					
GOAL A3. Cleaning the Mediterranean Sea					
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation					
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics					
GOAL B2. Preparing to climate change					
GOAL B3. Climate services for the Mediterranean					
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean					
GOAL C1. Reducing the risk of disasters					
ECONOMY Pillar					

R&I marine & maritime strategies/programmes	Resolution on Research and Innovation Strategy of Slovenia 2011-2020	Resolution on Maritime Strategy of the Republic of Slovenia (RMSRS)	Transport Development Strategy of the Republic of Slovenia (adopted by the Government on July 29, 2015)	Action plan of Strategic-development and innovative partnership 2017-2022 Sustainable tourism - SRIPT	Draft of the Slovenian Development Strategy 2030 (SDS)
Level	**National**	**National**	**National**	**National**	**National**
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean					
GOAL A1. Developing new technologies and tools					
GOAL A2. Generating new products and services					
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries					
GOAL B1. Develop optimal fishing strategies, technologies and practices					
GOAL B2. Develop optimal aquaculture strategies, technologies and practices					
CHALLENGE C. Sustainable tourism in the Mediterranean					
GOAL C1. Linking tourism and environment					
GOAL C2. Developing smart technologies and dedicated services					
CHALLENGE D. Maritime clusters in the Mediterranean					
GOAL D1. From traditional maritime economic to blue growth activities					
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean					
GOAL E1. Strengthen synergies among science, industry, policy makers and society					

R&I marine & maritime strategies/programmes	Resolution on Research and Innovation Strategy of Slovenia 2011-2020	Resolution on Maritime Strategy of the Republic of Slovenia (RMSRS)	Transport Development Strategy of the Republic of Slovenia (adopted by the Government on July 29, 2015)	Action plan of Strategic-development and innovative partnership 2017-2022 Sustainable tourism - SRIPT	Draft of the Slovenian Development Strategy 2030 (SDS)
Level	**National**	**National**	**National**	**National**	**National**
GOAL E2. Effective maritime spatial planning in the Mediterranean					
TECHNOLOGY Pillar					
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean					
GOAL A1. Greening vessels and facilities					
GOAL A2. Safer maritime transport in the Mediterranean					
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean					
GOAL B1. Towards an observing system of systems					
GOAL B2. Tailor-made sensors and platforms					
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean					
GOAL C1. Changing the rationale: one platform, multiple uses and activities					
GOAL C3. Train for blue offshore professionals					
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing					
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean					
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage					

Table 1(i) – SPAIN

R&I marine & maritime strategies/programmes	National Marine Strategies MAPAMA – Ministry of Agriculture, Fisheries and Environment	Spanish National Plan for Scientific and Technical Research and Innovation 2017-2020	Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture 2014-2020	National Plan of Spanish Aquiculture	Spanish Science and Technology Strategy 2013-2020	Spanish Strategy on Bioeconomy Horizon 2030	Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda
Level	**National**	**National**	**National**	**National**	**National**	**National**	**National**
KNOWLEDGE Pillar							
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures		■			■		
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem	■	■			■		
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources		■	■	■	■		■
GOAL A3. Cleaning the Mediterranean Sea	■	■			■		
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation	■	■			■		
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics	■	■			■		
GOAL B2. Preparing to climate change		■			■		
GOAL B3. Climate services for the Mediterranean		■			■		
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean	■	■			■		
GOAL C1. Reducing the risk of disasters	■	■			■		
ECONOMY Pillar							

R&I marine & maritime strategies/programmes	National Marine Strategies MAPAMA – Ministry of Agriculture, Fisheries and Environment	Spanish National Plan for Scientific and Technical Research and Innovation 2017-2020	Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture 2014-2020	National Plan of Spanish Aquiculture	Spanish Science and Technology Strategy 2013-2020	Spanish Strategy on Bioeconomy Horizon 2030	Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean							
GOAL A1. Developing new technologies and tools							
GOAL A2. Generating new products and services							
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries							
GOAL B1. Develop optimal fishing strategies, technologies and practices							
GOAL B2. Develop optimal aquaculture strategies, technologies and practices							
CHALLENGE C. Sustainable tourism in the Mediterranean							
GOAL C1. Linking tourism and environment							
GOAL C2. Developing smart technologies and dedicated services							
CHALLENGE D. Maritime clusters in the Mediterranean							
GOAL D1. From traditional maritime economic to blue growth activities							
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean							

R&I marine & maritime strategies/programmes	National Marine Strategies MAPAMA – Ministry of Agriculture, Fisheries and Environment	Spanish National Plan for Scientific and Technical Research and Innovation 2017-2020	Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture 2014-2020	National Plan of Spanish Aquiculture	Spanish Science and Technology Strategy 2013-2020	Spanish Strategy on Bioeconomy Horizon 2030	Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda
GOAL E1. Strengthen synergies among science, industry, policy makers and society							
GOAL E2. Effective maritime spatial planning in the Mediterranean							
TECHNOLOGY Pillar							
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean							
GOAL A1. Greening vessels and facilities							
GOAL A2. Safer maritime transport in the Mediterranean							
CHALLENGE B. Observing systems and operational oceanography capacities in the Mediterranean							
GOAL B1. Towards an observing system of systems							
GOAL B2. Tailor-made sensors and platforms							
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean							
GOAL C1. Changing the rationale: one platform, multiple uses and activities							
GOAL C3. Train for blue offshore professionals							
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing							

R&I marine & maritime strategies/programmes	National Marine Strategies MAPAMA – Ministry of Agriculture, Fisheries and Environment	Spanish National Plan for Scientific and Technical Research and Innovation 2017-2020	Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture 2014-2020	National Plan of Spanish Aquiculture	Spanish Science and Technology Strategy 2013-2020	Spanish Strategy on Bioeconomy Horizon 2030	Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean							
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage							

Table 2 – BLUEMED SRIA matching, focus on regional strategies and national ones with regional level of implementation per country.

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
KNOWLEDGE Pillar											
CHALLENGE A. Mediterranean Sea Ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures											
GOAL A1. Understanding the functioning of the Mediterranean Sea ecosystem											
GOAL A2. Promoting sustainable exploitation of biotic and abiotic resources											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
GOAL A3. Cleaning the Mediterranean Sea											
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation											
GOAL B1. Understanding and forecasting the Mediterranean Sea dynamics											
GOAL B2. Preparing to climate change											
GOAL B3. Climate services for the Mediterranean											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	Croatian Smart Specialisation Strategy	Smart Specialisation Strategy for Cyprus (S3Cy)	Mistrals Mediterranean Integrated STudies at Regional And Local Scales	Regional Innovation Strategy Provence Alpes Côte d'Azur	Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur	Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur	Regional Plan for Tourism Economy	Regional Innovation Strategy Occitanie-Midi Pyrénées	Regional Innovation Strategy Corsica	National Smart Specialization Strategy (SNSI)	ENEI - Research and Innovation Strategy for Smart Specialization
Level	National/Regional	National/Regional	Regional and Local	Regional	Regional	Regional	Regional	Regional	Regional	National/Regional	National/Regional
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean											
GOAL C1. Reducing the risk of disasters											
ECONOMY Pillar											
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean											
GOAL A1. Developing new technologies and tools											
GOAL A2. Generating new products and services											
CHALLENGE B. Ecosystem-based											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
management of Mediterranean aquaculture and fisheries											
GOAL B1. Develop optimal fishing strategies, technologies and practices											
GOAL B2. Develop optimal aquaculture strategies, technologies and practices											
CHALLENGE C. Sustainable tourism in the Mediterranean											
GOAL C1. Linking tourism and environment											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
GOAL C2. Developing smart technologies and dedicated services											
CHALLENGE D. Maritime clusters in the Mediterranean											
GOAL D1. From traditional maritime economic to blue growth activities											
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean											
GOAL E1. Strengthen synergies among science, industry,											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
policy makers and society											
GOAL E2. Effective maritime spatial planning in the Mediterranean											
TECHNOLOGY Pillar											
CHALLENGE A. Smart, greener maritime transport and facilities in the Mediterranean											
GOAL A1. Greening vessels and facilities											
GOAL A2. Safer maritime transport in the Mediterranean											
CHALLENGE B. Observing systems and operational											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
oceanography capacities in the Mediterranean											
GOAL B1. Towards an observing system of systems											
GOAL B2. Tailor-made sensors and platforms											
CHALLENGE C. Multi-purpose offshore platforms in the Mediterranean											
GOAL C1. Changing the rationale: one platform, multiple uses and activities											
GOAL C3. Train for blue offshore professionals											

Country	Croatia	Cyprus	France							Italy	Portugal
R&I marine & maritime strategies/programmes	**Croatian Smart Specialisation Strategy**	**Smart Specialisation Strategy for Cyprus (S3Cy)**	**Mistrals Mediterranean Integrated STudies at Regional And Local Scales**	**Regional Innovation Strategy Provence Alpes Côte d'Azur**	**Regional Plan for Economic Development Innovation and Internationalisation of Provence Alpes Côte d'Azur**	**Regional Plan for Higher Education, Research and Innovation (SRESRI) of Provence Alpes Côte d'Azur**	**Regional Plan for Tourism Economy**	**Regional Innovation Strategy Occitanie-Midi Pyrénées**	**Regional Innovation Strategy Corsica**	**National Smart Specialization Strategy (SNSI)**	**ENEI - Research and Innovation Strategy for Smart Specialization**
Level	**National/Regional**	**National/Regional**	**Regional and Local**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**Regional**	**National/Regional**	**National/Regional**
CHALLENGE D. Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing											
GOAL D1. Towards a shared management approach to cultural heritage in the Mediterranean											
GOAL D1 Increase the economic impact of the Mediterranean's cultural heritage											

Table 3 – National strategies/programmes/plans match with strategic blue frame at EU level

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
CROATIA																						
National Strategic Plan for Development of Fisheries	2014-2020			■	■				■			■		■		■	■				■	■
Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia	2014-2020			■			■					■	■	■	■		■				■	■
Strategy for Education, Science and Technology	2014-2020																■	■	■	■	■	
Croatian Smart Specialisation Strategy	2016-2020			■	■		■	■	■				■	■								
CYPRUS																						

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Smart Specialisation Strategy for Cyprus (S3Cy)	2016-2020			■			■	■		■		■		■	■	■	■					
FRANCE																						
Research National Strategy France Europe 2020	2015-2020						■	■	■	■	■		■			■			■		■	
French national strategy on research infrastructures	2016-																■		■	■		

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Allenvi's contribution to the update of the ESFRI roadmap on environmental research infrastructures and the French national roadmap on infrastructures	2018															■	■			■		
France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation (May 2013)	20123-2020						■	■		■			■			■						■
National Energy Research Strategy	2016							■													■	■

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Mistrals Mediterranean Integrated STudies at Regional And Local Scales	2010-2020																					
ANR (National Research Agency) Action Plan 2018	2018																					
CIMER 2017 (Inter-ministerial Committee of the Sea)	2017																					
Comité France Maritime (Maritime France Committee)	2017																					
Pôle Mer Méditerranée	2005-																					

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Concours Innovation 2018	2018-2022						■							■	■	■					■	
National Strategy for the Sea and the Coast (SNML)	2017-2030										■											■
Regional Innovation Strategy Provence Alpes Côte d'Azur	2014-2020							■			■											
Plan Littoral 21 of Occitanie Midi Pyrenees							■	■			■	■			■	■	■					
Regional Innovation Strategy Occitanie-Midi Pyrénées	2014-2020						■	■	■		■	■	■									
Regional Innovation Strategy Corsica	2014-2020								■			■										

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
GREECE																						
PA - Partnership Agreement for the Development Framework	2014-2020				■		■	■						■	■	■	■			■	■	
Multi-annual National Strategic Plan for the development of aquaculture in Greece, 2014-2020	2014-2020				■				■		■											■
National Port Strategy	2013-2018						■					■										
National Strategic Framework for Research and Innovation of the New Programming Period 2014-2020	2014-2020						■	■		■		■										■

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
National Strategy for Research, Technology Development and Innovation (NSRTDI 2014-2020)	2014-2020				■												■	■	■	■	■	■
ITALY																						
National Programme for Research (PNR)	2015-2020		■				■	■		■						■	■				■	■
National Programme for Research Infrastructures (PNIR)	2014-2020		■														■		■	■		
National Technology Cluster - Blue Italian Growth (CTN - BIG	2017	■					■		■		■						■			■	■	■
Italian Bioeconomy Strategy (BIT)	2017										■				■		■				■	■

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
National Strategic Plan for Ports and Logistics	2014																					
Strategia per l'Ambiente Marino - Marine Strategy Framework Directive	2018-2021																					
National Board on Coastal Erosion (TNEC)	2016																					
National Energy Strategy	2017, annual																					
Triennial National Programme on Fisheries and Aquaculture	2017-2019																					
National Strategic Plan for Aquaculture	2014-2020																					

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture	2014-2020						■	■	■									■	■			■
National Plan for Military Research	Annual						■	■					■				■			■		■
The Strategic Plan for Tourism	2017-2022											■										■
National Smart Specialization Strategy (SNSI)	2014-2020						■	■			■	■		■	■	■						

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
MALTA																						
Aquaculture strategy for the Maltese Islands - Towards sustainability 2014-2025	2014-2025																					
National Research and Innovation Strategy	2016-2020																					
PORTUGAL																						
ENEI - Research and Innovation Strategy for Smart Specialization	2014-2020																					
Research and Innovation Agenda for the Ocean	2018-2030 (expected)																					

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Higher Education, Research and Innovation in Portugal, Perspectives for 2030	2018-2030																					
ENM - National Ocean Strategy	2013-2020																					
EI-ERO - Industrial Strategy for Ocean Renewable Energy	2018-2030																					
Strategy for Enhancing the Competitiveness of the Continent's Commercial Port Network - Horizon 2026	2018-2026																					

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Atlantic Observatory	2018-2019										■					■	■				■	
SLOVENIA																						
Resolution on Research and Innovation Strategy of Slovenia 2011-2020	2011-2020																■				■	■
Resolution on Maritime Strategy of the Republic of Slovenia (RMSRS)	Since 1991						■					■					■					
Transport Development Strategy of the Republic of Slovenia	2015-2030						■	■						■								
Action plan of Strategic-development and innovative partnership 2017-2022	2017-2021										■	■					■				■	

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Sustainable tourism - SRIPT											■	■					■				■	
Draft of the Slovenian Development Strategy 2030 (SDS)	2018-2030													■	■	■	■					■
SPAIN																						
National Marine Strategies MAPAMA – Ministry of Agriculture, Fisheries and Environment	2015-2021								■					■	■	■						
Spanish National Plan for Scientific and Technical Research and Innovation	2017-2020							■	■	■	■		■			■	■				■	■

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture	2014-2020																					
Spanish Science and Technology Strategy	2013-2020																					
Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture	2014-2020																					
National Plan of Spanish Aquaculture	2014-2020, annual																					
Spanish Strategy on Bioeconomy Horizon 2030	-2030																					

Programme	Duration	Strategic Blue Frame	Macro-Regional Frameworks				Sectoral Policies							Environmental Policies			Skills & Education	Cross-cutting				
			EU Cohesion and Neighborhood Policy (ENP)	Barcelona Convention	EUSAIR	WESTMED	Transport	Energy	Fisheries & Aquaculture	Food	Bioeconomy	Tourism and cultural heritage	Security and Surveillance	Pollution	Biodiversity	Climate	Skills & Education	Open data	Open science and open innovation	Coordinated network of Marine Institutes / Infrastructures	Innovation through collaboration (clusters, technology platforms)	Interaction between scientists, stakeholders, policy makers, civil society
Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda	2013-																					

Table 4 - Synthesis of the BLUEMED SRIA challenges match with national priorities for non-EU countries from the BLUEMED CSA report D5.2 "Non-EU stakeholders: analysis of R&D strategy/policy/programme and priorities".

	BLUEMED SRIA key challenges											
Country	Mediterranean Sea ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures	Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation	Hazards and the protection of coastal areas in the Mediterranean[2]	Innovative businesses based on marine bio-resources in the Mediterranean	Ecosystem-based management of Mediterranean aquaculture and fisheries	Sustainable tourism in the Mediterranean	Maritime clusters in the Mediterranean[1]	Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean*	Smart, greener maritime transport and facilities in the Mediterranean	Observing systems and operational oceanography capacities in the Mediterranean	Multi-purpose offshore platforms in the Mediterranean	Marine and coastal cultural heritage in the Mediterranean: discovering, protecting and valuing
Albania								*			?	?
Algeria								*			?	
Bosnia & Herzegovina												
Egypt												
Israel							?	*				
Lebanon									?			
Monaco								*				
Montenegro		?						*				
Morocco				?				*			?	
Tunisia								*				
Turkey				?								

* Countries that have signed or ratified the Protocol on Integrated Coastal Zone Management in the Mediterranean (source: PAP/RAC)

[1] cluster(s) existing at the national or regional scale

[2] Additional source: CIESM Monograph- Marine Geohazards in the Mediterranean - Nicosia, February 2011

Priority in the area (or related to) set by the country or major public institutions (even if not fully implemented)

Not identified as a priority but the country is potentialy concerned by the issue

Not a challenge with regard to the characteristics of the country

3. RECOMMENDATIONS FOR THE IMPLEMENTATION PLAN

Based on the previous analysis, this section collects preliminary technical and strategic recommendations, for the development of the BLUEMED Implementation Plan.

From the toolbox to the toolkit. The programmes/strategies Catalogue of this report and related analysis can serve as basis for developing a living matrix highlighting the SRIA-national programmes-policy frameworks correlation. This screening can help identify the main priorities towards which investment for economic, social and territorial development should preferably be directed, maximizing the benefits of a coordinated intervention in the different areas where national systems of research and innovation interconnect.

Discussion on implementation options and potentials to be based on mapped programmes and initiatives of relevance, including research and data infrastructures, target sectors and groups, funding options and agencies responsible for the implementation, recent and ongoing relevant projects (not only for their results but also for the associated established networks).

Timely impact on EU and national programmes and strategies that are regularly released promoting operational alignment.

Overcoming the 'which instrument' issue, and allowing flexibility for the implementation of actions also by reinforcing bilateral cooperation.

Towards a policy brief. Contribute to raise awareness in the Mediterranean Blue Growth community, and particularly in Institutions responsible for R&I programmes, on BLUEMED policy relevance. Provide fact based policy advice to decision-makers on key policy challenges in the Mediterranean Sea.

Promote the blue circular economy in the Mediterranean, anchoring the economic drivers (food, energy, tourism, transport) to the frameworks of Ocean Governance and International cooperation.

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Annex I, Catalogue of national marine and maritime R&I programmes/strategies

For each country, the programme/strategy is identified by its title, duration and by the name of the entity responsible for its implementation. A brief description of the programme/strategy contents is reported together with main objectives and where relevant allocated funding.

1. CROATIA

1.1 Strategic Plan for Development of Fisheries (2014-2020), Ministry for Agriculture of the Republic of Croatia[1]

Prepared in accordance with the provisions on the European Maritime and Fisheries Fund (EMFF) and after consultations with sector stakeholders, the document describes the status of the fisheries and aquaculture sectors in Croatia, defines strategic settings and identifies target goals for 2014-2020, taking into account key elements of the EU Common Fisheries Policy.

Main objectives:

- Adaptation of the fisheries fleet: establishing sustainable balance between fleet capacity and resources;
- Sustainable aquaculture: Increase in aquaculture capacity and in competitiveness;
- Sustainable processing and marketing of fisheries and aquaculture products;
- Elevating administrative capacities and stakeholders' awareness.

1.2 Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia - European maritime and Fisheries Fund (EMFF) (2014-2020), Ministry of Maritime Affairs, Traffic and Infrastructure of the Republic of Croatia[2]

The document presents the strategy in maritime development and integral maritime policy of the Republic of Croatia, following the principles embedded in strategic settings and sectorial strategies and principles of the European Union, with the aim of sustainable economic development, promotion of culture, and safety and protection of the marine environment.

Main objectives:

- Sustainable growth and competitiveness of the maritime industry, as: shipping trades and services in marine traffic, harbour infrastructures and services, education and labour conditions for seamen;
- Safe and ecologically sustainable marine traffic, maritime infrastructure and waters of the Republic of Croatia.

1.3 Strategy for Education, Science and Technology (2014-2020), Ministry of Science and Education[3]

The strategy provides key elements for development of the educational and science system of the Republic of Croatia, with the emphasis of the technology development being a basis for the economic and other growths of the Republic of Croatia.

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[1] https://ribarstvo.mps.hr/UserDocsImages/NSP/NSP_OP_06112013/1511OP_NSP_ENG/National%20strategic%20plan%20for%20development%20of%20fisheries%20of%20the%20Republic%20of%20Croatia.pdf

[2] http://www.csamarenostrum.hr/userfiles/files/Nacion%20zakon%20engl/MDIMPSRC.pdf

[3] https://mzo.hr/sites/default/files/dokumenti/Strategija_OZT/Strategy_eng/strategy_for_education_science_and_technology.pdf

Main objectives:

- Lifelong learning;
- Early childhood and pre-school education, primary education and secondary education;
- Higher education;
- Adult education;
- Science and Technology.

1.4 Croatian Smart Specialisation Strategy (2016-2020), Government of Croatia[4]

The document identifies strategic areas for innovative interventions and technology development, based both on the analysis of the strengths and potential of the Republic of Croatia. Main features include:

- Increase in capacity of the research and development sector and its usability for the economic sector;
- Overlapping of the innovation chain fragmentation and gaps between R&D and business sectors Modernization and diversification of the Croatian economic sector through investment in R&D and innovations;
- Upgrading the global chain value and internationalisation of the Croatian economic sector;
- Partnership is solving societal challenges;
- Development of smart skills – upgrading qualifications of the existing and new labour human resources.

Main objectives:

The Croatian Strategy for Smart Specialization is an integrated, place-based economic transformation agenda with the following features:

- Focused policy support and investments on key priorities, challenges and needs for knowledge-based development;
- Assessment of strengths, competitive advantages and potential for excellence in R&D;
- Instruments aimed to support technological and practice-based innovation with aim to stimulate private sector investment and to promote structural changes of Croatian economy;
- Instruments aimed on fostering synergies and identifying complementarities between public support mechanisms for RDI, industrial promotion and human capital and training;
- Detailed plan how will stakeholders involved in innovation development become co-operative in decision-making mechanism and development of innovation in key priority R&D intensive economic sectors.

The main purpose of Smart Specialization is to transform the Croatian economy and increase its competitiveness by concentrating knowledge resources and linking them to a limited number of priorities. The identification of the Smart Specialization priorities will allow concentration of research capacities and infrastructure. This will provide advantage to both public and private sector and will bring together the critical mass of researchers who will jointly work on strategic R&D topics with goal of research excellence and its commercialization.

[4] http://s3platform.jrc.ec.europa.eu/documents/20182/222782/strategy_EN.pdf/e0e7a3d7-a3b9-4240-a651-a3f6bfaaf10e

2. CYPRUS

2.1 Smart Specialisation Strategy for Cyprus (S3Cy) (2016-2020), RESTART 2016-2020, Research Promotion Foundation of Cyprus[5]

The Council of Ministers approved the Smart Specialisation Strategy for Cyprus on 26.03.2015. The preparation and adoption of Smart Specialisation Strategy is an ex-ante conditionality set by the European Commission to the Member States, during the programming period 2014-2020, for the exploitation of resources from the European Structural and Investment Funds for enhancing Research and Innovation (R & I) in areas where each country has a competitive advantage.

Main Objectives:

The core priority of S3Cy is Sustainable Development, that is, the safeguarding of human and social resources of the island over time. Sustainability involves both the developmental approach essential to all the initiatives within the Strategy, but also four specific issues: Climate Change, Natural Resources (water – ecosystems), Cultural Heritage and Blue Growth.

The priority areas identified through Smart Specialization Strategy are: Energy, Tourism, the Structured Environment/Construction Industry, Transport/Marine, Agriculture/Food Industry and the sector of Health. Furthermore, a number of horizontal priorities have also been identified (such as Information Technology, Environment and Human Resources).

Dominant Priority Sectors are :

- Tourism and Energy.
- Secondary priortiy sectors;
- Agriculture- Food Industry
- Built Environment- Construction Industry;
- Transport- Shipping and Health;
- Horizontal Sectors;
- Information and Communication Technologies;
- Sustainable Growth-Environment;
- Key Enabling Technologies (KET) which, beyond their intrinsic importance, deeplyaffect the qualitative development of Priority Sectors.

[5] http://www.dgepcd.gov.cy/dgepcd/dgepcd.nsf/page44_en/page44_en?OpenDocument

3. FRANCE

3.1 Research Strategy France Europe 2020 (2015-2020) - All ministries, in particular the Ministry of Higher Education, Research and Innovation, the Ministry of Health, the Ministry of Ecological and Solidarity-based Transition, the Ministry of Economy, Finances and Industry[6]

The research strategy is the synthesis of all inputs collected through consultation by researchers, members of universities, social and economic stakeholders, associations, public administrations, local authorities and civil society, on different stakes related to scientific research.
The strategy sets priorities in the research field, aiming to tackle 10 societal challenges, related to the H2020 EU priorities in research and innovation. The research strategy will be assessed and updated every 5 years.

Main Objectives:
To mobilize expertise and skills in sciences, technology and environment from all stakeholders of the research field.
The 10 identified challenges are the following:

- Reasonable management of resources and climate adaptation;
- Clean, safe and efficient energy;
- Industrial renewal;
- Health and well-being;
- Food safety and demographic challenge;
- Transports and sustainable urban systems;
- Information and communication society;
- Innovative, integrative and adaptive societies;
- A European space ambition;
- Freedom and security of Europe, its citizens and residents.

In particular, the challenge on "Reasonable management of resources and climate adaptation" includes a priority on coastal areas, with issues related to tourism, energy, transport, cultural and natural heritage.

3.2 French strategy on research infrastructures (2016), Ministry of Higher Education[7]

The strategy was set up in 2008 and updated in 2012 and 2016. The strategy for research infrastructures is a mapping of all existing research infrastructures (RIs) or RIs that are currently under development.. A data sheet presenting each one of the 105 listed infrastructures is available in this document; the presentations include geographical information, contacts and web sites, type and goal of infrastructure, socio-economic impact, construction costs and date, number of staff, French stakeholders involved, information on storage of collected data. In particular, infrastructures of the French Oceanographic Fleet (FOF), of European drill ships (IODP/ECORD-European Consortium for Ocean Drilling Research / Inter Ocean Discovery

[6] https://www.allenvi.fr/groupes-transversaux/infrastructures-de-recherche/infrastructures-de-recherche-en-environnement
[7] https://cache.media.enseignementsup-recherche.gouv.fr/file/Infrastructures_de_recherche/16/4/infrastructures_UK_web_615164.pdf

Program), of EURO-ARGO (European contribution to Argo programme), of EMBRC-FR (Marine Biological Resource Center), and of EMSO-FRANCE (European Multidisciplinary Seafloor and water column Observatory – France) are presented. Observation of ocean and coastlines will be in the future entirely covered by the observation RIs EMSO (deep ocean), EURO-ARGO (surface ocean) and I-LICO (coastal areas); an infrastructure covering high seas may be also added to this system.

Main Objectives:
This strategy on RI is a steering tool for the French government; it is a roadmap aiming at having a complete overview of all 4 types of research infrastructures: inter organisations, very large research infrastructures, research infrastructures, projects under development.

3.3 Allenvi's contribution to the update of the ESFRI roadmap on environmental research infrastructures and the French roadmap on infrastructures (2018); Allenvi (French Research Alliance for the Environment)[8]

Allenvi (French Research Alliance for the Environment) is a French institution that aims at gathering and coordinating French environmental research to address the major societal challenges of food, water, climate and territories. 27 French scientific research institutions are members of Allenvi (founding or associated).
The document gathers inputs on the update of the ESFRI roadmap and the French roadmap on environmental research infrastructures and includes France's proposal to add more infrastructures to the ESFRI roadmap, the European Strategy Forum on Research Infrastructures that was set up in 2002. The mission of ESFRI is to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and to facilitate multilateral initiatives leading to a better use and development of research infrastructures, at EU and at inter levels.
The infrastructures are presented by categories (earth, ocean, atmosphere…) in order to better assess the added value of the infrastructure for each scientific community. In particular, infrastructures of the French Oceanographic Fleet (FOF) and of European drill ships (IODP/ECORD-European Consortium for Ocean Drilling Research / Inter Ocean Discovery Program) are presented.

Main objectives:
The ESFRI roadmap aims to update research infrastructures, in order to create a coherent Integrated Global Observing System for all fields including atmosphere, ocean and earth, biodiversity and ecosystems. The ESFRI roadmap supports the implementation of research infrastructures and is regularly updated, including new and major upgrades at European level.
In particular, the roadmap includes infrastructures aiming at increasing knowledge on reduction, mitigation and adaptation to climate change, natural hazards and sustainable use of natural resources.
France's proposal includes 2 projects related to the sea, which are EMSO (European Multidisciplinary Seafloor and water column Observatory) and EUROARGO (European part of the Argo Ocean Infrastructure).

[8] https://www.allenvi.fr/groupes-transversaux/infrastructures-de-recherche/infrastructures-de-recherche-en-environnement

A new RI dedicated to coastal areas, ILICO, was included to the French roadmap, whereas the OHIS infrastructure, dedicated to deep-sea environment, will be suggested as new input for the French roadmap

3.4 France-Europe 2020 – A Strategic Agenda for Research, Technology Transfer and Innovation (2013-202) - Public research institutes, universities and ANR (French Research Agency)[9]

With France Europe 2020, the strategic agenda for research, transfer and innovation, the ministry in charge of higher education and research intends to restore research to its role as the main vector of knowledge creation and to assert its place as a lever for France's recovery.
The Agenda is based on the belief that "investing in research is believing in the power of competitiveness, in a world of technological, scientific, economic, societal and environmental change". The agenda lists specific measures to foster transfer and innovation and aims to:

- • Mobilise sectors around major societal challenges;
- • Reforge research coordination and guidance system in France;
- • Promote technological research;
- • Develop digital training and infrastructures;
- • Foster innovation and technology transfer;
- • Ensure uptake of the scientific culture;
- • Develop programmes tailored for major research and innovation priorities;
- • Build consistency between sites;
- • Set up the presence of French research in Europe and abroad.

Nine major societal challenges around which French research must mobilise have been identified:

- 1. Reasoned resource management and adaptation to climate change;
- 2. Clean, secure and efficient energy;
- 3. Stimulating industrial renewal;
- 4. Health and well-being;
- 5. Food safety and the demographic challenge;
- 6. Sustainable mobility and urban systems;
- 7. Information and communication society;
- 8. Innovative, integrating and adaptive societies;
- 9. A spatial aspiration for Europe.

Most of these 9 challenges have a marine or maritime component. Whilst this agenda is set as a general framework for research, technology transfer and innovation, some examples are taken in the marine area, such the use of marine bioresources in order to foster the development of applications in the healthcare and cosmetics sectors, and the improvement of assessment and prediction of renewable resources, such as marine and wind resources.

3.5 Energy Research Strategy (2016), Ministry of Energy and Research [10]

[9] http://www.enseignementsup-recherche.gouv.fr/cid71873/france-europe-2020-l-agenda-strategique-pour-la-recherche-le-transfert-et-l-innovation.html
[10] https://www.ecologique-solidaire.gouv.fr/sites/default/files/SNRE%20vf%20d%C3%A9c%202016.pdf

The Energy Transition for Green Growth Act provides for the development of an energy research strategy, agreed by the Ministers of Energy and Research and taking into account the Strategy for Energy Carbon and Multiannual Energy Programming.
This strategy, which specifies the energy component of the Research Strategy, aims to identify the R&D stakes and the scientific obstacles to be overcome at different time horizons and along the innovation chain in the field of research.
The strategy is organized around four strands and associated structuring actions:

- • Target key themes and dynamics for the energetic transition;
- • Develop R&D and innovation in relation with the territories and industrialists, in particular SMEs, for the success of the energy transition;
- • Develop skills and knowledge for and through R&D&I;
- • Create a light and efficient governance to ensure the dynamic operational management of the Energy Research Strategy.

Main Objectives
The strategy focuses in particular on marine renewable energies (floating or anchored offshore wind turbines, wave energy, thermal energy,) which is an asset for France because of its many maritime facades which have potential deposits both in metropolitan France and overseas; potential for export, especially for island areas.
The main innovation challenges for these sectors consist in particular, in addition to the characterization of the sites (deposit), in the modeling and the measurement of the impacts, the identification and the development of the most promising technologies. Demonstrators and pilot farms aim to confirm, under real conditions, methods of construction, installation, operation, connection, maintenance and dismantling of technologies before considering the development of structured and competitive industrial sectors and the deployment of commercial parks.

3.6 Mistrals Mediterranean Integrated STudies at Regional And Local Scales (2010-2020), - CNRS and other French research institutes[11]

Mistrals is multidisciplinary research program focused on the Mediterranean region. It was launched to federate the French scientific community and to reinforce the inter collaboration between Mediterranean countries in research projects which address the societal, environmental and economic challenges for a sustainable development of Mediterranean countries.

Main Objectives:

- MISTRALS addresses the following scientific questions :
- Links between past climate variability and evolution of Mediterranean civilizations and societies;
- Hydrological cycle in the Mediterranean and extreme rainfall events;
- Evolution of marine biogeochemistry under climate change and anthropogenic pressure ; impacts on marine ecosystems;
- Change in atmospheric composition and air quality under climate change and anthropogenic pressure ; impacts on health;
- Monitoring continental and marine biodiversity and their sensitivity to climate change and anthropogenic pressure;

[11] http://www.mistrals-home.org/spip.php?rubrique32

- Changes in continental surfaces, from urban to country-side regions under climate change and anthropogenic pressure.

3.7 ANR (Research Agency) Action Plan (2018), Ministry of Higher Education, Research and Innovation[12]

ANR is the French agency for public research funding aimed at supporting partnerships between public institutions or between public institutions and private companies.

Main Objectives:
For its action plan 2018, 9 societal challenges are identified, closely related to the H2020 EU priorities in research and innovation.
The 9 challenges are the following:

- Reasonable management of resources and climate adaptation;
- Clean, safe and efficient energy;
- Industrial renewal;
- Life, health and well-being;
- Food safety and demographic challenge;
- Mobility and sustainable urban systems;
- Information and communication society;
- Innovative, integrative and adaptive societies;
- Freedom and security of Europe, its citizens and residents;

The ANR also establishes partnerships to fund projects with the Ministry of Ecological and Solidarity-based Transition.

3.8 CIMER 2017 (Inter-ministerial Committee of the Sea) (2017), All ministries[13]

The 2017 session of this committee chaired by the Prime Minister has set the maritime ambition and subsequent strategy for the development of the French blue economy and maritime employment. The 48 adopted measures are presented in 5 groups:

- The sea, a necessary lever for the ecological transition;
- The blue economy, a new alliance for the future;
- Maritime and port security, ensuring the protection of ships and passengers;
- The essential role of ultramarine spaces;
- The affirmation of France's maritime ambition in Europe and at international level.

Main objectives:

- The ecological protection of marine environments and uses in maritime areas are quickly brought into coherence through spatial planning at façade (regional) scale;
- Implementation of renewable marine energies is simplified and the use of the development of green vessels is encouraged to place the sea and the marine environment at the forefront of energy transition;

[12] http://www.agence-nationale-recherche.fr/en/funding-opportunities/2018-work-programme/
[13] http://www.gouvernement.fr/sites/default/files/document/document/2017/11/dossier_de_presse_-_comite_interministeriel_de_la_mer_2017.pdf

- The protection of the most fragile marine ecosystems, particularly overseas, is strengthened Attention is paid to coastal ecosystems, which act as tools for the resilience of coastal territories to climate change;
- The economic model of ports is being radically rethought and revised through the diversification of port investment, tax reform, the further introduction of digital tools, the evolution of State ownership and taxes, the fluidity of the logistics chain and the widening of port hinterlands;
- Competitiveness and renewal of the commercial fleet are supported and the plan for monitoring of the strategic fleet will be implemented over three years;
- Efforts to modernise French fisheries and aquaculture are being pursued in order to prepare for the future and respond to changes in the economic and European context, particularly the Brexit;
- The Government makes the attractiveness of seafaring professions a priority in its policy maritime, through training and social support policies;
- The enhancement of maritime and port assets and ultramarine maritime jobs is sought in all sectors of the blue economy. It is also accompanied by a sustained attention to the environmental preservation of sensitive environments;
- Innovation is at the forefront of public efforts in all sectors of the French maritime economy, to consolidate French positions and have the best assets for the future, particularly in terms of low-carbon propulsion;
- The government is continuing its efforts to equip and organize itself to carry out its public service missions in mainland France and overseas, as well as to simplify supervision;
- France is firmly involved in the joint efforts of its partners within the European Union and on the inter stage to strengthen its defence of its interests and to bring climate and sustainable development policies to the ocean level.

3.9 Comité France Maritime (Maritime France Committee (2017), SGMER and French Maritime Cluster [14]

Launched in 2017, the Comité France Maritime gathers around the Secretary General of the Sea and the French Maritime Cluster coastal regions and representatives of the main maritime sectors (including maritime transport, shipbuilding, port activities, fishing, aquaculture and seafood, research, marine renewable energies, marine aggregates, pleasure craft and the cruise industry).

The General Secretariat for the Sea (SGMER) is the key-element for the French maritime policy coordination. This body participates in the reflection and conception of French maritime policy. The role of the General Secretariat for the Sea is to:

- Drive and coordinate the works of the government on maritime policy;
- Make sure it is executed;
- •Strengthen the links with inter and European administration, including within the EU maritime policy.

The French Maritime Cluster was established in 2006 by and for professionals to promote the interests of all sectors of the maritime economy from manufacturing to services. The membership of the CMF is composed of enterprises large and small, competitiveness clusters, federations and associations, laboratories and research centres, colleges and training institutions, local authorities and economic stakeholders, even the French Navy.

[14] https://ocean-climate.org/?p=925&lang=en

Main Objectives:
The Committee aims to support industrial sectors so that France also doubles the turnover on the entire sector as well as the number of direct jobs
In addition to the concerns specific to each economic sector, the focus has been on transversal topics, bases of any development, which will be seized as a priority: the need for a long-term strategic vision, research, innovation and access to markets, the enhancement of the attractiveness of the business lines, the re-industrialization of certain businesses, easier access to financing, the renewal and modernization of tools, the adaptation of regulations to the evolutions of the sectors so that they remain competitive, the conflicts of use and the distribution of spaces as well as the problems of safety.

3.10 Inter Pôle Mer Méditerranée – 2005 - Pôle Mer Méditerranée[15]

Created in 2005, Pôle Mer Méditerranée-Toulon Var Technologies (PMM-TVT) is a sea innovation and business cluster located in the south of France. Its ambition is to contribute to the sustainable development of the maritime and coastal economy in the Mediterranean basin, in Europe and across the globe.
In 2018, its network involved 410 members including major companies, SMEs, research institutes and academic actors. PMM-TVT provides a wide range of services to its members related to access to funding, inter activities, business growth, collaborative R&D projects.

Main Objectives:
It stimulates and encourages innovation trough collaboration around 6 Strategic Business Areas:

- Maritime safety and security;
- Ship and nautical industry;
- Marine energy resources;
- Marine biological resources;
- Environment and coastal planning;
- Ports, Infrastructures and shipping.

3.11 Concours Innovation 2018 (2018-2022), Bpifrance and ADEME[16]

The Concours d'Innovation is a contest operated by Bpifrance and Ademe. It replaces the previous Concours d'Innovation Numérique and Concours Mondial d'Innovation. It aims to accelerate the emergence of companies with high potential. It targets start-ups and SMEs to finance research, development and innovation projects from € 600,000 to € 5M

Main Objectives:
8 themes are covered of which, the following concern the marine and maritime domains:

- Transport and sustainable mobility - concerns technologies and services relating to the maritime or fluvial transport of persons and / or goods (boats and vessels with commercial functions of transport, work, surveillance or leisure) such as:

[15] https://www.polemermediterranee.com/
[16] https://appelsaprojets.ademe.fr/aap/CI%20Vague%2012017-89

- Dissemination of innovations that will significantly improve ship operating conditions, including energy consumption or the use of new energy sources with low environmental impacts;
- Dissemination of new information technologies in ships and new uses of ships (Marine Renewable energy installation maintenance, etc.): aids to navigation; real-time ship condition management; autonomous navigation, connected navigation;
- Reduction of all ship discharges at any stage of its life cycle;
- Improved safety and security: safety and robustness in extreme weather conditions; security related to the use of new energies; prevention and protection against unlawful acts; safety of operations at sea.

- Innovate for the quality of terrestrial, aquatic and marine ecosystems
  - The contest supports projects developing methodologies, technologies, processes, services, innovative industrial solutions targeting markets responding to environmental challenges such as the energy and ecological transition, the fight against the massive erosion of biodiversity, the effects of climate change, the city and sustainable territories, the management of water resources and aquatic environments. The projects will respond to quality issues (new sources of pollution, treatment adapted to crisis management, flow simulation), quantity (availability, resilience and anticipation), sustainability of supply in an economically constrained market context. . The mobilization of digital tools to promote the sharing of information will be valued. Projects aimed at strengthening knowledge on the state of ecosystems and the impacts of anthropogenic activities and projects with a systemic vision, either by hydraulic models at the scale of a region or a watershed or by an approach.
- Renewable energies, storage and energy systems

  Projects may focus on different sectors including marine renewable energies. The expected innovations concern both:
  - Production technologies (new generations, technological or systemic innovations, hybridization of renewable sources), including materials used, to obtain improvements in performance and competitiveness, reliability or construction and installation methods or repowering;
  - Optimization tools (for example predictive models related to meteorology or to optimize maintenance operations) and monitoring;
  - Functions enabling greater sustainability (life-cycle analysis) and better environmental integration (reducing impacts and conflicts of use), better integration with networks, etc.

Funds: €10 billion

3.12 National Strategy for the Sea and the Coast (SNML) (2017-2030), The Prefect of the Provence-Alpes-Côte d' Azur region and the Maritime Prefect of the Mediterranean Sea [17]

[17] https://www.ecologique-solidaire.gouv.fr/sites/default/files/17094_Strategie-nationale-pour-la-mer-et-le-littoral_fev2017.pdf

The Strategy for the Sea and the Coast (SNML) and its variation at regional level (DSF: Strategic Document for the Maritime Façade), is the response to the objectives set out in two framework directives. Firstly, the European Framework Directive on Maritime Spatial Planning makes maritime spatial planning which potentially concerns all activities and uses at sea, with the exception of activities whose sole purpose is defence or security. Secondly, the Marine Strategy Framework Directive (DCSMM) aims to achieve and maintain good ecological status of waters by 2020. The scope of the strategy is the marine waters. For the Mediterranean regions, these are the territorial waters and the French exclusive economic zone

Main Objectives:
The Strategy promotes

- The growth of maritime economies, the development of the potential of the blue economy;
- The sustainable development of maritime areas and the sustainable use of maritime resources;
- The protection of the environment, and the anticipation/management of use conflicts.

3.13 *Regional Innovation Strategy Provence Alpes Côte d'Azur (2014-2020), Regional Council of Provence Alpes Côte d'Azur*[18]

Regional innovation strategies are systematic, goal-oriented exercises carried out by regional partnerships with the aim to define or revise regional innovation policies
Regional-level authorities are increasingly involved in designing their own strategies to support and enhance innovative local dynamics and improve the performance of their regional innovation systems. Governments are also seeking to strengthen the innovation system through these regional systems. Regional Innovation Strategies (RIS) refer to the process for conducting these goal-oriented exercises in specific regional environments

Main Objectives:

- Strategic priority: Energy Transition / Energy Efficiency
    - Develop the production of marine renewable energies supporting the creation of an industrial sector on offshore floating wind turbines

The Region wants to increase the share of regional primary energy production from wind power by 1% by creating an industrial sector on floating wind. 120 companies are identified in the offshore floating wind industry. These companies are involved in the engineering of systems and equipment for offshore energy parks, park maintenance, construction of wind turbine rotors and environmental monitoring. The underwater technologies to be implemented in particular for anchoring wind turbines are similar to those of offshore oil, for which many leading companies are present in the region. Several studies indicate that the floating offshore wind potential is much higher than that fixed offshore wind, which is particularly interesting for Provence-Alpes-Côte d'Azur due to the depth of the seabed near the coast. In view of the multiple technical obstacles, namely the maintenance of equipment in harsh environment (saline environment, weather conditions) and the constraints of connection to the electrical network, it is necessary to maintain a regular R&D effort over a long period including the development of demonstrators.

    - Promote the exploitation of micro-algae

[18] http://s3platform.jrc.ec.europa.eu/documents/20182/228916/FR_PACA_RIS3_201403_Final.pdf/bbf980bb-93b9-4c2f-936f-6280271406c9

Faced with global strategic challenges concerning the development of bioenergy, micro-algae appear as a promising solution for the future and major economic developments over a period of about ten years. This sector offers the opportunity to produce third generation biofuels from industrial CO2 and substrates from recycled water. In addition, microalgae can accumulate up to half their weight in lipids, raw materials of biofuels, resulting in a productivity that can reach values much higher than that of terrestrial plants.
By supporting the R&D effort, it is necessary to move from the laboratory stage to the industrial stage and to lift the economic barriers by being able to produce algal biomass dry matter at a competitive price that competes with fossil products. According to the results obtained, an industrial sector bringing together algal producers, suppliers of equipment and design offices could be created. The production of biofuels could rely on the refineries of the Etang de Berre thus facilitating the reconversion of this site.
More generally, beyond the scope of this strategic area, it is necessary to support the industrial recovery of micro-algae because it is a carrier of activity and short-term job creation in food additives and cosmetics, industrial sectors strongly present in the region.

- Strategic priority: Risk- Safety - Security
    - Maritime safety and security

The region benefits from the establishment of global players in the defence industry and civil security on its territory. The Var is the 1st defence department of France thanks to the presence of the first French and Mediterranean military port which drains a vast network of sub-contracting SMEs with a solid technological knowledge. The main competencies are detection tools (physical, chemical or biological sensors), intelligence and data processing (modelling, simulation, 3D technologies, and virtual reality), aerial surveillance vectors (drones), submarines (robotics) and means of intervention (helicopter). Three major system integrators of inter dimension NAVAL GROUP, THALES, SIGNALIS play the role of locomotive.
The technologies concern in-situ instrumentation networks and satellite observation of the sea surface, forecasting models, warning tools. Whatever the vector of surveillance, inhabited or not inhabited, it is often necessary to add specific equipment to accomplish a mission. To date, the majority of surveillance and intervention missions are conducted using vectors and manned nautical means. The trend is towards the development of remote-controlled robotics. Therefore, it is necessary to:

- Support R&D facilitating the integration of information systems for decision-making: networking of systems and sensors, automation of alerts , Strengthening the performance (weight, autonomy, consumption) of the vectors of communication (sensors on land, on ships or integrated into a satellite, surface, submarine or aerial drones) and to test at sea new robotic equipments.
- To develop global security solutions, with an integration in the tools of port management, adapt military products and technologies to civilian applications of products and technologies used in Defence and export this know-how.

- Strategic priority: Smart Mobility
    - Develop new energy-efficient and safe port and airport services and infrastructure
        - New port and airport services represent an emerging market. Port and airport infrastructures are subject to similar challenges in terms of

ecological conversion, optimization of flows of people and goods, security and require in-depth consideration of uses and new business models. One hundred innovative SMEs can provide solutions in embedded systems engineering, complex electrotechnical systems, maintenance optimization, simulation, safety, training, navigation and piloting assistance, engineering of complex ships. Provence-Alpes-Côte d'Azur has historically many assets related to industrial port activities, with the presence of first-class infrastructure: the Grand Port Maritime Marseille The first French port for foreign trade, Toulon first military port of the Mediterranean, world-renowned marinas. The organization of the European and Mediterranean port network, the specialization of the ports, the increase of the size of the merchant ships imply a modernization of the ports and a reorganization of the existing installations. Maritime structures will have to better integrate the uses of tomorrow, the reversible constructions for the environment, new zones dedicated to ships of the future to deconstruction activities. In addition, the ecological conversion of the ports will require the promotion of the electric power supply of the ships at the quayside, the energy supply of the ships to meet the new modes of propulsion, the development of the servitude units with propulsion.

- Strengthen the industrial competitiveness of aeronautics and shipbuilding through the development of new transport vehicles and new activities.
    - Provence-Alpes-Côte d'Azur is one of the three French naval maritime regions with the Pays de Loire and Brittany regions. The region stands out on the engineering, design and construction of specific vessels, coastal passenger vessels and yachts as well as on equipment for these same vessels and on the maintenance, repair and refit of military vessels, yachts and large vessels cruise. A network of 150 SMEs provides repair and maintenance for 15% of the world's fleet of pleasure craft. The other two regions are more strongly positioned on construction. The Provence-Alpes-Côte d'Azur region accounts for 25% of all registered pleasure craft units in France (900,000 of which 600,000 are active) and 40% with Languedoc Roussillon. The Federation of Nautical Industries has estimated the tonnage of pleasure boat out of use at 10 000 t in 2010 and 20 000 t in 2025. It would therefore be necessary to support the naval R&D dedicated to the advanced technologies of composite, metal and hybrid structures production in partnership with the Jules Verne Technological Research Institute of Nantes. It would also be appropriate for the region to have an operational center for the decommissioning and recovery of waste from end-of-life pleasure craft, by supporting R&D and by developing clean dismantling processes

Funds: € 284 million

3.14 Regional Innovation Strategy Occitanie-Midi Pyrénées (2014-2020), Regional Council of Occitanie [19]

[19] https://sri.madeeli.fr/

Regional innovation strategies are systematic, goal-oriented exercises carried out by regional partnerships with the aim to define or revise regional innovation policies
Regional-level authorities are increasingly involved in designing their own strategies to support and enhance innovative local dynamics and improve the performance of their regional innovation systems. Governments are also seeking to strengthen the innovation system through these regional systems. Regional Innovation Strategies (RIS) refer to the process for conducting these goal-oriented exercises in specific regional environments.

Main Objectives:
Strategic priority: Coastal and sea economy

- boating and nautical activities;
- maritime safety and security;
- marine energy;
- marine living resources (sustainable fisheries and aquaculture;blue biotechnologies);
- the environment and sustainable development of the coastline;
- ports, infrastructure and maritime transport.

Thanks to its lagoons and the excellence of its research and training, the region has a strong visibility on aquaculture (fish, invertebrates, microorganisms). The discriminating assets of the region are also around port activities and maritime environmental engineering skills, as well as some nautical activities related to boating (design and practice of kitesurfing, catamarans and long-distance boats). Finally, thanks to its capacity for important tourist reception in a protected natural environment, the territory can play a role on the engineering of the Mediterranean habitat and the mix of materials. The industrial ecosystem consists of companies, often present on niches, but with or even inter recognition.
Examples of themes: improvement of aquaculture techniques includes innovative techniques for remediation and restoration of contaminated habitats, restoration of degraded port environments, design of warning tools or management of coastal areas.
The domain has 4 ambitions, divided into 8 operational objectives.
The 4 ambitions are:

- Being a leader in eco-designed (or sustainable) products and services for coastal activities and developments;
- To be a leader in products, techniques and services for Mediterranean coastal habitat, adapted to climate change;
- Develop innovative solutions for sectors related to boating;
- To be a leader in the production of larvae / juveniles of certain Mediterranean species for aquaculture and products derived from marine biotechnology.

Operational objectives are:

- Being a leader in eco-designed (or sustainable) products and services for coastal activities and developments;
- Create a complete offer of turnkey solutions for monitoring and decision support for the management of coastal marine environments (monitoring, interpretation, prediction);
- -Develop and sell know-how and coastal development projects (eco-designed, integrated and multifunctional) and solutions related to restoration / ecological compensation;
- To be a leader in products, techniques and services for Mediterranean coastal habitat and adapted to climate change;
- Design, manufacture and sell an offer of services and products for the Mediterranean coastal habitat adapted to the risks and comfort of summer;

- Create low cost solutions for the consumption of resources and user comfort, at the building and territory level;
- Develop innovative solutions for sectors related to boating:
- Develop an integrated offer of innovative services and products related to the kitesurf industry;
- Design and produce boats and integrated services for yachting (including catamarans, large voyage boats) targeted ""high-end"" and with a low environmental impact;
- To be a leader in the production of larvae / juveniles of certain Mediterranean species for aquaculture and products derived from marine biotechnology;
- Develop a breeding unit and an industrial hatchery to obtain oyster (and other invertebrate) spat and Mediterranean pre-fattened fish with quality label and very low environmental impact. - Achieve the valorisation and industrial production of ""blue"" biotechnologies;

3.15 Regional Innovation Strategy Corsica (2014-2020), CTC Corse [20]

Regional innovation strategies are systematic, goal-oriented exercises carried out by regional partnerships with the aim to define or revise regional innovation policies
Regional-level authorities are increasingly involved in designing their own strategies to support and enhance innovative local dynamics and improve the performance of their regional innovation systems. Governments are also seeking to strengthen the innovation system through these regional systems. Regional Innovation Strategies (RIS) refer to the process for conducting these goal-oriented exercises in specific regional environments.

Main Objectives:
Strategic priority: Valorisation of natural and cultural resources

- Aquaculture and exploitation of fisheries resources
    - Activity relatively limited, since representing a little more than a dozen companies, it is nonetheless a specificity of Corsica, by the availability of resources it exploits, and the potential that this represents. The aquaculture sector has 11 companies, just under 200 jobs, and a turnover of around ten million euros. In particular, fish and shellfish farming activities are being developed. The first represents an annual production of about 1,115 tons, and 1,022 tons for the second. Corsica is also the second largest French region in terms of marine fish production, with 1 / 6th of the production.

[20] http://s3platform.jrc.ec.europa.eu/documents/20182/228916/FR_Corse_RIS3_Final.pdf/d9385154-49fe-4016-af45-0abb844fcaf9

4. GREECE

4.1 Partnership Agreement (PA) (2014-2020); Ministry of Economy and Development[21]

The Partnership Agreement for the Development Framework (PA) 2014-2020 constitutes the main strategic plan for growth in Greece with the contribution of significant resources originating from the European Structural and Investment Funds (ESIF) of the European Union. The PA, through its implementation, seeks to tackle the structural weaknesses in Greece that contributed to the economic crisis, as well as other economic and social problems caused by it. Moreover, the PA 2014-2020 is called upon to help attain the national targets within the Europe 2020 Strategy.
The PA's vision of growth is to contribute to revitalising the Greek economy through the recovery and upgrading of the productive and social fabric of Greece and the creation and maintenance of the sustainable jobs, spearheaded by outward looking, innovative and competitive entrepreneurship and on the basis of reinforcing social cohesion and the principles of sustainable development.

Main objectives:
The main objectives/financing priorities are:

- Enhancing business competitiveness and extroversion, shifting to qualitative entrepreneurship spearheaded by innovation and higher domestic added value (Transition to high added value activities; Creation of a business friendly environment to attract investments; Capitalising on research and innovation to strengthen the competitiveness of new and existing businesses)
- Development and utilisation of human resource abilities – active social inclusion (Education and life-long learning; Development of human resources and access to employment focusing on the creation of jobs, especially for young people; Promotion of social inclusion and combating poverty
- Protection of the environment – Transition to a more environmentally friendly economy (Protection of the environment; Fostering climate change adaptation and risk prevention; Shift to a low carbon economy)
- Development – modernisation – completion of infrastructures for economic and social growth (Transport networks focusing on the completion of the Trans-European Transport Networks, with vertical axes and multi-modal transport; Energy networks; Broadband networks).
- Improvement of the institutional capacity and the efficiency of public administration and local government

4.2 Multi-annual National Strategic Plan for the development of aquaculture in Greece, 2014-2020 - Directorate of Aquaculture and Inland Waters of the Ministry of Rural Development and Food[22]

[21] https://www.espa.gr/en/pages/staticPartnershipAgreement.aspx
[22] https://ribarstvo.mps.hr/UserDocsImages/akvakultura/NSPA%202014-2020_eng.pdf

Marine aquaculture is a strategic sector for the Greek economy; it ranks first in the EU as regards seabass and seabream productions, while it has achieved lower production costs compared to its competitors.

Article 34 of Regulation (EU) 1380/2013 of the European Parliament and the Council of the EU on the Common Fisheries Policy provides for the establishment of multiannual national strategic plans for the development of aquaculture activities for all Member States. The drawing up of these plans is a prerequisite for the adoption of the new Operational Program for the Sea and Fisheries. For the preparation of these strategic plans, common strategic guidelines (priority areas) have been issued -[COM (2013) 229 final / 29.4.2013]- as a voluntary open method for the coordination of actions between Member States to remove obstacles towards achieving sustainable development of aquaculture.

The Greek multi-annual Strategic Plan for the development of aquaculture is based on the above guidelines accounting for the specific conditions prevailing in the country, the state of the aquaculture Industry as well as the legislative, institutional and administrative framework that governs its operation.

In order for the Industry to meet the requirements set out in the Plan and achieve the strategic targets through the outlined actions, the role of research is considered as critical with priorities stemming from the National Aquaculture Development Program following the opinion of the National Aquaculture Council.

Main Objectives:

The main objective of the Plan is the promotion of the development of sustainable aquaculture activities in accordance to the requirements of the Common Fisheries Policy. Research actions mentioned in the Plan paving the road towards this direction are summarized as follows:

- improving existing farming methods and production processes
- development of new farming methods and breeding technologies in new fields (eg open sea)
- breeding new species
- sustainable fish feed production
- promoting the production of biotechnology products
- environmental protection and reduction of impacts

The provision of advisory services in order to support the Industry are also foreseen and relate to:

- contemporary management needs in productive, scientific, administrative, economic level,
- compliance with national and EU legislation,
- environmental protection and environmental assessment impact,
- the implementation of Maritime Spatial Planning,
- management needs related to health and well-being of aquatic animals but also of public health,
- development of specialized commercial, promotional and business strategies

In the context of innovation and the promotion of new species production, emphasis needs to be placed on systems of production of aquatic biomass (cyanobacteria, algae, etc.) through collaborative research actions to identify and develop methods of production with zero footprint on the environment, as well as to facilitate biotechnological goals (biofuels, medicines, cosmetic dyes, etc.). Research actions of high priority for the sector relate to the the possibility of using these in biologically superior forms of fish feed. Research actions that promote systems of

production of aquatic biomass in closed cultivation systems, aiming at minimizing water use and impacts on biodiversity are of key priority.

4.3 National Port Strategy (2013-2018), Ministry of Shipping and Aegean[23]

The Greek shipping sector is significant sector for the national economy. The value chain of the sector is very wide including ports and the full range of services provided within the port area, such as bunkering, water etc. The Greek Port Strategy is connected to "Internationalization" since the major objective of the strategy is the enforcement of the role of Greek ports to international maritime transport system. In particular, through operational programs and other kind of projects, the aim of this national policy is to ensure the viability, reliability and competitiveness of maritime transport system. In this context, a number of interventions are planned related to the specialization of infrastructures, the concession program, the administrative structures, the safety requirements, the application of e-services etc.
Regarding the Blue Growth objectives, the national port policy is aligned with the "Increase the growth potential of activities" and the "Increase the attractiveness of coastal areas" since the operating program of accessibility focuses on the construction of new infrastructures and the improvement of present ones for enhancing the inter-country connectivity and intermodality as precondition for regional development.
Given the multi-island morphology of the country, maritime transport and port infrastructures are essential for the viability of the islands, while considerable impact has on touristic development.

Main Objectives:
The "National Port Strategy aims at developing and integrating the national port system in order to improve the competitiveness of the national economy and enhance the territorial cohesion and setting a new scene for the port industry in several relevant fields related to the blue growth.
The Greek Law 4150/2013 sets a framework regarding:

- The restructuring and rationalization of the Greek port system;
- The adjustment and improvement of port infrastructures and services;
- The attraction of private investments in the port sector through long-term concessions on infra- and superstructures;
- The establishment of a regulatory authority for ports in order to ensure healthy competition in this field and provide market access to all players;
- The enhancement of port security through the implementation of the ISPS code across all ports.

4.4 National Strategic Framework for Research and Innovation of the New Programming Period (2014-2020), Ministry of Education, Research and Religious Affairs

The National Strategic Framework for Research and Innovation (NSFRI) is based on the national research and innovation framework for smart specialization taking into account the regional perspectives (National/Regional Research and Innovation Strategies for Smart Specialization (RIS3).
The NSFRI 2014-2020 funds major projects, productive partnerships and research organizations under various shapes (research infrastructures, clusters, partnerships, PPP etc)

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which produce innovative products or services with high added value, linking with industry and business, creating sustainable jobs, exports (where possible), training of potential businesses to new technologies, etc. It will generally act as an area of constant interaction and application of new knowledge in production.

Main objectives:
Priority areas at national level have been selected on the basis of criteria like added value in the Greek economy, job vacancies and scientific specialization, and with the wide participations of key actors from these areas, a number of activities have emerged. These activities support innovation among and between the sectors of key importance, while particular emphasis is given to the integration and development of Key Enabling Technologies (KET) which can stimulate all sectors and productive activities, increasing productivity and added value. Emerging activities closely linked to the main objectives of the NSFRI refer to:

- The agro-food sector;
- Tourism and the experience industry in synergy with the creative industry (culture, media, economic activities related to art, etc.);
- Materials and Construction, f.e development and production of coatings (e.g. paints, varnishes) for use in construction and shipbuilding;
- Energy with emphasis to energy R&D for energy efficiency (in buildings, the industrial and agricultural sector), Renewable Energy Resources and emerging sectors and technologies in Energy;
- ICT in sectors with strong 'international' demand, interdisciplinary collaborations with companies in other sectors of the economy and in emerging advanced technologies;
- Technologies and services for environmental protection and sustainable development, including eco-innovation and blue economy;
- Health products & services, pharmaceuticals, diagnostic products;
- Transport and Logistics with emphasis on minimizing air emissions on Secure Transport and on Safe and functional Shipping.

4.5 National Strategy for Research, Technological Development and Innovation (NSRTDI) (2014-2020); Ministry of Education, Research and Religious Affairs[24]

The National Strategy for Research, Technological Development and Innovation (2014-2020) builds on the competitive position of Greece in specific research areas - at the EU and international level - maximizing its potential, through R&D investment on strategic areas of national priority, identified on the basis of the principles of Smart Specialization (RIS3), fostering innovation and entrepreneurship.

Main Objectives:
This policy framework aims at establishing Research Infrastructures of strategic importance in Greece, as accessible hubs for research, synchronized with international standards and responding to public and private research needs.
The key objective of the NSRTDI 2014-2020 is 'to set the knowledge triangle (Education - Research - Innovation) and the production and exploitation of knowledge as a major priority in

[24] http://www.gsrt.gr/Financing/Files/ProPeFiles81/ESPEK%202014-2020%20by%20ESET%282010-2013%29.FIN.v.3.pdf

order to overcome the current economic crisis, address societal challenges and contribute to the restructuring of the Greek economy.
The above challenge is addressed through three main policy pillars:

- Pillar 1: Growth based on Knowledge and Specialization
- Pillar 2: Excellence in research and development of the human research potential
- Pillar 3: Societal Challenges

5. ITALY

5.1 National Programme for Research (PNR) (2015-2020), Ministry of Education, University, and Research[25]

The Research Programme 2015-2020 proposes a taxonomy of applied and translational research divided into twelve specialization areas:

1. Aerospace;
2. Agri-food;
3. Cultural Heritage;
4. Blue Growth;
5. Green Chemistry;
6. Design, Creativity and Made in Italy;
7. Energy;
8. Smart Manufacturing;
9. Sustainable Mobility;
10. Health;
11. Smart, Secure and Inclusive Communities;
12. Technologies for Living Environments

These are the areas where research, especially if carried out jointly by public and private bodies, can produce the best results. The areas, which take into account the industrial weight of their related production sectors, were cross analysed using two types of indicators: those assessing the relevance of Italian research in the various fields in terms of scientific publications, and those assessing the innovative capability associated with patenting activity. The resulting areas combine the strategic choices made at the European level – especially those under the Framework Programme Horizon 2020 –with the policies defined at the national and regional level. Based on the analysis of the strengths and weaknesses of the Italian research system, six intervention programmes have been defined, each with their own specific objectives, actions and dedicated resources. The articulation in programmes and actions and the definition of specialization areas of applied research are intended to provide research policies with consistency, thus avoiding inefficiency due to inaccurate planning; predictability, by providing a time, financial and project frame that is shared by all public stakeholders from the beginning; and selectivity, thus avoiding the dispersion of resources.

Main objectives:

Based on the analysis of the strengths and weaknesses of the Italian research system, six intervention programmes have been defined, each with their own specific objectives, actions and dedicated resources.

The articulation in programmes and actions and the definition of specialization areas of applied research are intended to provide research policies with consistency, thus avoiding inefficiency due to inaccurate planning; predictability, by providing a time, financial and project frame that is shared by all public stakeholders from the beginning; and selectivity, thus avoiding the dispersion of resources:

- the internationalization, coordination and integration of initiatives with European and global ones. The NRP organically integrates programmes and resources with European

[25] http://www.istruzione.it/allegati/2016/PNR_2015-2020.pdf

resources, in particular through the Cohesion Policy and those under the Framework Programme for Research and Innovation 2014-2020 Horizon 2020, and aligns each NRP Programme to criteria and instruments established at European level;

- investment in human capital. The NRP strategy focuses primarily on people working in public and private research, with the aim of increasing the number of educated and trained researchers;
- provide selective support to research infrastructures. The NRP pays great attention to research infrastructures, a pillar of Italian and inter research, especially of fundamental research. The NRP defines and starts for the first time an infrastructure assessment process, aligning it to the criteria and mechanisms of theEuropean Strategy Forum on Research Infrastructures (ESFRI);
- public-private collaboration, considered as the driving force of research and innovation. In this context, the Technology Clusters, set up based on the specialization areas of applied research, are recognized as permanent infrastructures for the dialogue between universities, public research bodies and enterprises and between central and local authorities;
- Southern Italy. Priority actions are defined to support research and innovation in this area, by creating a synergy between the Operational Programme, Regional Operational Programmes and ordinary resources;
- efficiency and quality of expenditure, through the definition and strengthening of evaluation, monitoring, transparency, simplification and administrative reinforcement processes.

Funds: €2.5 billion

5.2 National Programme for Research Infrastructures (PNIR) (2014-2020), Ministry of Education, University, and Research[26]

In line with the strategies defined in the Research Programme and the Smart Specialisation Strategy – the funds are mainly aimed at Central and Southern regions, with a part of the resources (not exceeding 15%) that can also be used in the North.

Main Objectives:
Enhancement of the infrastructures identified by MIUR as priority in the Programme for Research Infrastructures (PNIR) 2014-2020 and eligible for funding under NOP. These infrastructures meet the criteria and scope of ESFRI, the European body responsible for developing a coherent strategy for the development of research infrastructures in Europe.

Funds: €326 million

5.3 Technology Cluster Blue Italian Growth (CTN BIG) (since 2017), Ministry of Education, University, and Research[27]

[26] http://www.ponrec.it/media/388972/pnir.pdf
[27] http://www.diitet.cnr.it/clusterBig/Piano%20Strategico%20esteso%20CTN%20BIG_EN.pdf

The CTN BIG is one of the 12 Technology Custers of the Research Programme implemented by the Ministry of Education, University and Research. Acting at the interface between public and private research, the CTN BIG develops innovation opportunties for marine and maritime industries.

Main objectives:

- Sharing innovation roadmaps;
- Forecasting scenarios for Italian industry;
- Developing knoweldge tools in support to policies, including addressing funds for industrial research;
- Aligning and integrating R&I roadmaps and actions at regional, European and Mediterranean level;
- Cooperating with representatives in relevant inter-committees and boards;
- Sharing infrastructures;
- Implementing development trajectories on the following themes: marine environment and coastal zone; blue biotechnologies; marine renewable energies; marine abiotic resources; marine biotic resources; shipbuilding and marine robotics; skills and jobs; research infrastructures; sustainability and economic uses of the Sea.

Funds: € 200 plus projects

5.4 Italian Bioeconomy Strategy (BIT) (since 2017); Promoted by the Presidency of the Council of Ministers, implemented by the Ministry for the Economic Development (co-chair); the Ministry of Agriculture, Food, and Forestry Policies; the Ministry of Education, University and Research; the Ministry of Environment and Protection of Territory and Sea Protection; the Conference of Italian Regions; the Agency for Territorial Cohesion; the Technological Clusters on green chemistry (SPRING) and agro-food (CLAN).[28]

The strategy represents a significant opportunity for Italy to enhance its competitiveness and role in promoting sustainable growth in Europe and the Mediterranean area. As part of the implementation of the Smart Specialization Strategy, the BIT promotes a common vision of opportunities and environmental challenges as well as economic, social and of inter-cooperation, in view of reconciling environmental sustainability and economic growth

Main Objectives:
The strategy aims to provide a shared vision of the economic, social and environmental opportunities and challenges associated with the creation of an Italian bioeconomy ecosystem based on longer, more sustainable and locally routed value chains. In particular it proposes to:

- Increase the actual Italian bioeconomy income (ca. 250 billion euros/year);
- Increase the number of employees by 20% (about 1.7 million at present) in the sector by 2030;
- Promote an approach to systems rather than sectors and promote the concept of sustainable economy;
- Enhance the added value of local biodiversity and circular economy;
- Foster the Bioeconomy in the Mediterranean Area.

[28] https://scar-europe.org/images/SCAR_EVENTS/Greece_24_05_2018/2-5_Annalisa_Zessa.pdf

5.5 Strategic Plan for Ports and Logistics (since 2014), Ministry of Infrastructures and Transport [29]

The Plan defines a strategy to relaunch the Port and Logistics sector to be pursued through the added value of the maritime system and which means a quantitative increase in maritime traffic, as well as defining national policy actions at sector and horizontal level in the different production, logistics, administrative and infrastructure sectors involved, which will contribute to recover the competitiveness of the Maritime System's economy in terms of productivity and efficiency. The strategy is designed to promote the economic recovery, the growth and cohesion of the South and the environmental sustainability and, to provide a tool for Euro-Mediterranean policy.

Main Objectives:
The adoption of the Strategic Plan for Ports and Logistics was aimed to improve the competitiveness of the Italian port system and logistic, to facilitate the growth of the traffic of goods and people and the promotion of intermodality, to support the rationalization and unification of the existing Port Authorities. The plan proposes to:

- Simplify the procedures for interventions on ports;
- Increase the efficiency of port services;
- Improve the accessibility of ports by sea and by land;
- Integration of the logistics system and of the manufacturing activities of the territory;
- Upgrading of port and ground-based infrastructures;
- Create incentives for research, training and technological innovation;
- Promote measures for energy efficiency and sustainability of ports;
- Provide coordination and planning at level;
- Adapt the governance to the mission of the Italian ports

5.6 Strategia per l'Ambiente Marino - Marine Strategy Framework Directive (2018-2021) - Ministry of Environment and Protection of Territory and Sea[30]

The Framework Directive 2008/56 / EC on the strategy for the marine environment, was implemented in Italy in October 2010 and is based on an integrated approach and aims to become the environmental pillar of the future maritime policy of the European Union. Member States are called upon to achieve the good environmental status (GES) for their own sea waters by 2020. Each state must therefore implement a strategy consisting of a ""preparation phase"" and a ""program of measures"" for each region or marine sub-region. The Framework Directive requires Member States to develop a marine strategy based on an initial assessment, on the definition of good environmental status, on the identification of environmental targets and on the establishment of monitoring programs. Good environmental status of marine waters means the ability to preserve ecological diversity, the vitality of the seas and oceans to be clean, healthy and productive while maintaining the use of the marine environment at a sustainable level and safeguarding the potential for uses and the activities of present and future generations.

Main Objectives:

[29] http://www.mit.gov.it/en/maritime-sector
[30] http://www.strategiamarina.isprambiente.it/

The MSFD main objective is to establish a framework for all Member States to take the necessary measures to achieve and/or maintain Good Environmental Status (GES) in the marine environment by 2020. The Directive applies to all marine waters, seabed and subsoil of areas where Member States have and/or exercise jurisdictional rights, which entail an integral part of different marine regions and subregions. According to MSFD, GES is defined in terms of 11 descriptors and using a number of criteria and indicators associated to each descriptor. The 11 descriptors refer to state, pressures and impacts of marine environment: biodiversity, non-indigenous species, extraction of commercial fishes (fishing), food web, eutrophication, sea-floor integrity, hydrologic processes, contaminants in water, sediments and biota, contaminants in seafood, marine litter and underwater noise

5.7 National Board on Coastal Erosion (TNEC) (since 2016), Ministry of Environment and Protection of Territory and Sea [31]

The Board was established to set up the Guidelines for coastal protection from erosion and climate change as well as to propose targeted initiatives and develop actions at international level for a sustainable management of coastal zones.

Main Objectives:

- Identify and compare coastal erosion's drivers, including due to climate change, in order to start a balanced process of sediment's cycle;
- Advise on: evaluation of erosion phenomena, management of coastal dynamics and sediments; environmental issues related to works for protecting coasts;
- Develop parameters and methodologies to collect physical and environmental data related to residual sediment deposits, in order to manage them;
- Assess maritime state properties;
- Promote cooperation in research and innovation between all Mediterranean countries, supporting knowledge-based policy making, and ensuring the effective and efficient use of resources and infrastructures by Member States cooperation and joint actions.
- Lines of action
- Fill the knowledge gap while develop new knowledge on coastal dynamics and erosion;
- Systematic sharing of knowledge and expertise;
- Promoting and supporting reseach and management of sediment's residual to be used for beach nourishment;
- Creating a Observatory on Coastal erosion, protection and management;
- Promoting Research and Innovation on coastal protection and management;
- Propose additional regulatory requirements;
- Support the continuity of programming and actions for coastal protection and management

5.8 Energy Strategy (SEN) (since 2017), Ministry of Economic Development and Ministry of the Environment and Protection of Territory and Sea[32]

The Energy Strategy is the ten-year plan that the Italian Government drew up to anticipate and manage the change of the energy system: a document looking beyond 2030, and laying the

[31] http://www.erosionecostiera.isprambiente.it/linee-guida-nazionali

[32] http://www.sviluppoeconomico.gov.it/index.php/it/energia/strategia-energetica-nazionale

groundwork for building an advanced and innovative energy model. The document results from a participative process that involved the Italian Parliament, the Regions, and over 250 stakeholders, including associations, companies, public entities, citizens, and representatives of academia. The Strategy has ambitious and complex targets. Achieving them calls for efficient public policies. However, its success also depends on day-to-day actions: guiding citizens towards responsible energy usage patterns will be imperative. The Strategy is a gamble on the future of the energy system. We do not lack the energy to make this gamble pay off.

Main objectives:
The core targets of the Energy Strategy 2017 include reducing final energy consumption by a total of 10 Mtoe by 2030; reaching a 28% share of renewables in total energy consumption by 2030, and a 55% share of renewables in electricity consumption by 2030; strengthening supply security; narrowing the energy price gap; furthering sustainable public mobility and eco-friendly fuels; and phasing out the use of coal in electricity generation by 2025.
Futhermore, the strategy aims to make the energy system:

- More competitive by aligning Italian energy prices with European ones to the benefit of both companies and consumers; opening up new markets to innovative companies; creating new employment opportunities; and fostering research and development.
- More sustainable by contributing to decarbonisation, in line with the long-term targets of the Paris Agreement on Climate Change; improving energy efficiency, and encouraging energy conservation to mitigate environmental and climate impacts; and by promoting environmentally conscious lifestyles, from sustainable mobility to wise energy usage; and confirming Italy's environmental leadership role.
- More secure by improving the security of energy supply, while ensuring its flexibility; and strengthening Italy's energy independence.

5.9 Triennial Programme on Fisheries and Aquaculture (2017-2019), Ministry of Agriculture, Food, and Forestry Policies[33]

The Italian Program for Fisheries and Aquaculture for the period 2017-2019 was adopted through the Ministerial Decree of 28th December 2017, with the aim to ensure the protection of the marine ecosystem and to ensure the competitiveness of the fishing sector. The Program is the only programmatic tool in the sector of aquatic production in the Italian agro-food policy; it assumes a strategic dimension both for the redefinition of the priorities of the fishing-aquaculture system and for the assessment of the social, economic and environmental impacts that the Program will produce

Main Objectives:

- Sustainable development of fisheries with:
    - the full adaptation of the Italian fish sector to European standards;
    - a greater balance between effort and fishing opportunities;
    - the recovery of fish stocks and the achievement of the objectives set by the CFP (MSY, discards elimination, regionalization) and in general the environmental, economic and social sustainability of the sector.
- Sustainable development of aquaculture through:
    - the fight against any form of illegal fishing

[33] https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/11003

- the promotion of social dialogue and the participation of stakeholders in the decision-making process with the centrality of the associations;
- the creation of tools to promote the competitiveness of enterprises;
- the intensification of scientific research activities;
- the promotion of the sector and the awareness of the public opinion on the sustainability of fishing and aquaculture activities and the salubrity of fish products.

Funds: € 9.627.258,00

5.10 National Strategic Plan for Aquaculture (2014-2020), Ministry of Agriculture, Food, and Forestry Policies[34]

The Strategic Plan for Italian Aquaculture is the governance tool for the planning of aquaculture activities in Italy for the period 2014-2020. As an integral element of the new Common Fisheries Policy, it has as its primary objective the development of aquaculture in Italian territories and seas to create economy, employment and social benefits. The Plan meets the programming needs required by the new European policies for aquaculture and pursues the objectives of "smart, sustainable and inclusive" innovation and growth sustained in the Europe 2020 Strategy and in the Blue Growth.

Main Objectives:
In 2017, the Ministry of Agricultural, Food and Forestry Policies established the Aquaculture Italian Platform (ITAQUA) with the aim to give information, technical and advisory support to the Directorate General for Maritime Fisheries and Aquaculture of the Ministry. ITAQUA is organized in 4 thematic Forums, coherent with the 4 macro-objectives of the Strategic Plan for Aquaculture in Italy 2014-2020:

- Forum 1 - Administrative simplification;
- Forum 2 - Environment and Health;
- Forum 3 - Research and Innovation;
- Forum 4 - Market and communication.

The 4 macro-objectives are:

- • Strengthen the institutional capacity and simplify administrative procedures;
- • Ensuring development and sustainable growth of aquaculture through coordinated planning of space and increase in the site potential;
- • Promoting the competitiveness of aquaculture;
- • Promoting equal competition conditions for operators and improvement of market organization of aquaculture products.

5.11 Strategic Plan for Innovation and Research in agriculture, food and forestry sector – Innovation and Research in fisheries and aquaculture (2014-2020), Ministry of Agriculture, Food, and Forestry Policies[35]

The Strategic Plan for Innovation and Research in the Agricultural, Food and Forestry Sector describes the strategy shared by the Italian "Ministry of Agriculture, Food, and Forestry Policies"

[34] http://www.mps.hr/ribarstvo/UserDocsImages/akvakultura/NSPA%202014-2020_eng.pdf
[35] https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/7801

and the Regions for innovation and research actions to be undertaken in response to the first of the six priorities of the European regulation for rural development in the period of 2014-2020 programming: "Promote the transfer of knowledge and innovation in the agricultural and forestry sector in rural areas".
The Plan is divided into 4 sections that describe:

- the scenario of European and policies and the analysis of the context that identifies potential and critical aspects of the food and forestry agricultural system;
- six priority thematic areas of intervention, identified taking into account both transversal themes, which are reminiscent of the needs of innovation emerged in the analysis of needs carried out prior to the preparation of this Plan, as well as that indicated in the European policy documents of innovation policies and search. For each area the innovations available and the actions to be taken to increase the knowledge base (research) according to the area in which they fall (sustainable agriculture, organic agriculture, forest sector) as well as the potential beneficiaries for which they are intended are described;
- innovation and research for the fisheries and aquaculture sector: for this sector, which is also fully included in the general strategy of the Plan aimed at identifying a common reference for all innovation measures, it was considered appropriate carry out a separate treatment given the peculiarities and the different tools that this sector uses;
- the system of governance of the innovation indicating subjects and tools that can be used for its realization, monitoring and updating during its duration.

Main Objectives:

- For Fisheries:

Innovations must be implemented to reduce fuel consumption, appropriate strategies for the optimal exploitation of fisheries resources, more knowledge on population biology and identification of population units (stock boundaries) and stock-recruitment relations, scientific elements for the revision of the borders of some GSAs (Geographical Sub Area on which management is currently based), mapping of the deposition seabed and other habitats essential for species, assessment of the impacts of fishing on communities and ecosystems and on the seabed, investigation on the effects of climate change on stock dynamics, assessment of possible spatial management measures (biological protection zones, marine protected areas), optimization and implementation of bioeconomic models for the inclusion of socio-economic aspects in the evaluation of stocks, studies on application of the new Common Fisheries Policy on the subject of discards ban.

- For Aquaculture:

The current three-year Strategic Plan for Italian Aquaculture indicates some priorities: studies to support the planning of areas allocated to aquaculture, within the Integrated Coastal Zone Management; development of the GIS fishing system towards mariculture; research for new candidate species to expand the production range of Italian marine aquaculture. For fish production: it is necessary to promote responsible and sustainable consumption through clear information policies based on the real knowledge of the quality of the product and its sustainability. Therefore it is necessary to: deepen the relationship between the various phases of the production chains and the safety, quality and preservability of fish products; valorise the food characteristics of ""poor"" species and identify the best marketing methods; deepen the knowledge regarding the relationship between composition and quality of feed raw materials/quality and safety of use of the product; investigate the relationship between the breeding method and the safety and quality of the product; characterize the fishery discards and

their by-products for use as aquaculture feeds; enhancing mollusc farming for its ecological role and high food characteristics; to valorise the fish production of the lagoons for their ecological value, the preservation of typical and traditional products and the tourist-recreational aspects; promote the short supply chain; identify new seafood products for catering.

5.12 Plan for Military Research – Annual - General Secretariat of Defence and Directorate of Armaments of the Ministry of Defence[36]

The scientific and technological research program aims to increase the knowledge of defense in the high technology sectors, necessary to ensure the feasibility of future programs for the development of armament systems both at level and in the frame of inter cooperation.

Main Objectives:

- Integrate proposals coming from the civil society (universities, research centers, industries) and the Defense;
- Develop coordinated programs, exploiting synergies, using for different applications - civil, military and dual - technological bases derived from a common research matrix, eliminating overlaps and duplications and promoting the exploitation, sharing and dissemination of results;
- Facilitate the conservation/enhancement of excellence at European and global level of the industry (with particular regard to PMI) and the academia.

Funds: For the PNRM2017+EDA 48 M€ same for 2018 and 2019

5.13 The Strategic Plan for Tourism (2017-2022), Ministry of Cultural Heritage[37]

The plan aims to equip Italy with a strategic common vision of tourism and culture, recognizing the need of the tourism sector as one of the main development policies of the country.
Coordinating public and private stakeholders and services towards all citizens and tourists, it provides the Country with a single framework within which both institutions and operators can share a long-term vision as well as medium-term objectives and action lines.

Main objectives:
Increasing tourism contribution to social, economic, and sustainable wealth, and relaunching Italy's leadership within the inter tourist market. The Plan pursues four general objectives to be attained by 2022:

- Innovating, specialising and integrating the domestic offer;
- Enhancing Italy's tourist system competitiveness;
- Developing effective and innovative marketing;
- Ensuring efficient and participatory governance for definition of the Strategic Plan and tourism policies.

[36] https://www.difesa.it/SGD-DNA/Staff/Reparti/V/Documents/PNRM_Istruzioni_per_Uso.pdf
[37] http://www.turismo.beniculturali.it/wp-content/uploads/2017/07/PST_2017_ENG_21apr17.pdf

5.14 Smart Specialization Strategy (SNSI) (2014-2022), Ministry of Education, University, and Research; and Ministry of Economic Development[38]

The Strategy was designed to promote a competitiveness and innovation chain at national level with a positive return on the economic system. In general, elements relevant for blue growth are addressed under different themes such as Bioeconomy, Tourism, and Energy. As of May 2018, the time of writing, the Strategies were in the process of being updated and amended

Main objectives:
Priority areas of intervention are regions that clearly include a relevant blue economy sector. Eligible regions and related areas of innovation are as follows:

- Sicily - Blue Economy
- Sardegna - Tourism, Culture, and the Environment
- Friuli-Venezia-Giulia - Maritime Technologies
- Liguria - Maritime Technologies

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https://www.researchitaly.it/uploads/14175/Strategia%20Nazionale%20di%20Specializzazione%20Intelligente_Italia.pdf?v=26a4e6c

6. MALTA

6.1 *Aquaculture Strategy for the Maltese Islands – Towards sustainability (2014-2025), Ministry for sustainable development, environment and climate change*

In seeking to improve environmental monitoring and developing carrying capacities ofAquaculture Zones, this Strategy will contribute to define the limits of sustainability of our marine waters and help Malta in its effort towards meeting the objective of achieving Good Environmental Status under the Marine Strategy Framework Directive.

Main Objectives:
The strategic direction provided by Aquaculture Strategy is expected to illustrate in practice that economic growth and the achievement of environmental objectives can take place in parallel.

6.2 *National Research and Innovation Strategy (2016-2020), Malta Council for Science&Technology*

This is a clear policy framework which identifies Malta's economic, social and environmental goals as well as the role of innovation and research to achieve these. The aim of this document is to set out Malta's research and innovation strategy for the forthcoming seven year period.

Main Objectives:
In reference to the objectives set out in the 2007-2010 R&I Strategic Plan, the ultimate goal of this Strategy remains that of embedding research and innovation at the heart of the Maltese economy to spur knowledge-driven and value added growth and to sustain improvements in the quality of life. The more that our public and private enterprises invest in research and innovation in the delivery of more innovative, eco-efficient products and services, the more the economy can develop and grow in a sustainable manner which protects human health and the environment, whilst becoming more resource-efficient, competitive, and attractive to foreign investors. Strengthening the link between investments in R&I and efforts to address the challenges which our society is facing is thus also critical.

6.3 *National Integrated Maritime Strategy (2016-2020), Malta Marittima; National Integrated Strategic Maritime Committee*

A sustainable strategy for the Government's vision and goals to manage marine and maritime related activities by adopting an integrated approach across maritime related policies, governance structure and maritime related activities. An integrated approach will help instigate the potential of Malta's marine and maritime sector creating maritime quality jobs and economic growth. This policy document is a national focal point for maritime affairs, designed to facilitate sustainable investment and to promote the sector internationally. The main idea is to outline the necessary stimulus so as to truly make Malta A Maritime Centre of Excellence.

Main Objectives:
This document aims to create the platform that will enable the development of the maritime section in Malta.

7. PORTUGAL

7.1 *ENEI - Estratégia Nacional para a investigação e inovação para uma especialização Inteligente / Research and Innovation Strategy for Smart Specialization (2014-2020), Ministry of Economy, Ministry of Science, Technology and Higher Education and the Agriculture, Forestry and Rural development*

The strategy is politically coordinated by the Ministry of Economy, Ministry of Science, Technology and Higher Education and the Agriculture, Forestry and Rural development. There are several agencies and institutes of each Ministry responsible for its implementation supported by a technical executive secretariat at the Innovation Agency.
It identifies the main priorities around which the investment from the European Structural and Investment Funds for economic, social and territorial development in Portugal for the period of 2014-2020 should preferably be directed, maximizing the benefits of a coordinated intervention in the different areas where the System of Research and Innovation interconnects. It is a multi-level strategy that comprises challenges and their alignment with the seven regional strategies. Alignment takes place at both thematic and policy priorities and in the governance model, which involves cross-participation from the regional level to the level and vice versa.
This strategy defines five thematic axis, one of them dedicated to the Natural Resources and Environment (Agro-food, Forest, Sea Economy, Water and Environment) – Axis 4.
In what concerns Sea Economy axis it identifies five smart strategy priorities:
1. Marine Food Resources (Fishing and Aquaculture)
2. Natural Systems and Renewable Energy Resources
3. Deep sea Resources
4. Ports, Logistic, Transport, Shipbuilding and maritime works
5. Culture, Tourism, Sports and Leisure

Main Objectives:
The strategy has 5 structuring objectives:

- The promotion of the potential of the scientific and technological knowledge;
- The increase in the cooperation between public and private R&D institutions and companies, strengthening the clustering policy and promoting the transfer of knowledge in order to improve the level of technological and knowledge intensity of the produced goods and services;
- The bet on tradable and value-added goods and services, as well as the inter ization of companies and the diversification of markets;
- The promotion of entrepreneurship, promoting the creation of employment and the qualification of human resources;
- The transition to a low carbon economy.

Funds: European Structural and Investment Funds for economic, social and territorial development in Portugal – more than 1 billion EUR dedicated to science

7.2 *Agenda de Investigação e Inovação para o Mar / Research and Innovation Agenda for the Ocean (2018-2030) (expected), Portuguese Foundation for Science and Technology (FCT)*

The Research and Innovation Thematic Agendas aim particularly to mobilize experts from research and development institutions and companies to identify challenges and opportunities in the scientific and technological system, particularly in the medium and long term. It is expected that the agendas can also contribute to the development of research and innovation by contributing to find solutions and answers to issues and needs identified by different sectors of society and to identify associated opportunities and challenges.
One of the 14 agendas being developed (expected to be concluded in 2018) is a Research and Innovation Agenda for the Ocean. This agenda, still under development, aims to promote research and development in the areas of Marine Sciences and Technologies, taking into account the skills and competences of the scientific and technological community and the particular conditions and challenges that differentiate the positioning of Portugal in the Atlantic.

Main Objectives:
The thematic agendas have as main objectives the promotion of a collective reflection on the knowledge base that supports the scientific, technological and socioeconomic development of Portugal in the different areas of the agendas. The main objectives of thematic agendas, including the one for the Ocean are:

- the promotion of the dialogue between the scientific and business communities, combining the capacities and needs of researchers, citizens, companies, the public administration and civil society organizations;
- the development of a medium- and long-term vision on the Portuguese research and innovation system, as well as on the more promising research and innovation lines to achieve this vision in each of the thematic areas;
- the contribution to the development of information sources capable of inspiring and sustaining decision-making processes, in particular as regards research and innovation internationalization strategies, as well as the research agendas of the institutions and their researchers.

7.3 *Higher Education, Research and Innovation in Portugal – Perspectives for 2030 (2018-2030), Ministry for Science, Technology and Higher Education*

This strategy identifies a series of actions to be developed until 2030 involving the research and innovation area, the tertiary education area and the digital skill area. In what concerns research and innovation, it identifies one marine and maritime research and innovation related action that Portugal considers as a priority, the Atlantic Interactions initiative with its research and technological agenda. The Atlantic Interactions research and technological inter agenda identifies Ocean Science and Technology as a thematic area

Main objectives:
The objective of this strategy is to fully achieve European convergence by 2030 and to boost knowledge and innovation, together with skilled job creation and wellbeing. The three main targets are:

- Achieve a level of overall R&D investment of 3% by 2030, with a relative share of 1/3 public and 2/3 business expenditure, corresponding to achieve an overall R&D investment of 1.8% of GDP by 2020 (while 1.3% in 2016);
- Achieve a level of 40% of tertiary education graduates in the 30-34 years old age group by 2020 (while only 35% in 2016), and 50% by 2030, with 60% of those aged 20 participating in higher education by 2030;

- Achieve an European leadership level of digital skills by 2030 in association with internet access and usage, as well as market demand, business development and specialized skills development.

7.4 ENM - Estratégia Nacional para o Mar NOS -Ocean Strategy (2013-2020), DGPM, Ministry of the Sea

This strategy follows a strategy for the period of 2006-2016. It presents a new development model of ocean and coastal areas that will allow Portugal to meet the challenges for the promotion, growth and competitiveness of the maritime economy, in particular, the important changes to the political and strategic framework at both European and Worldwide levels. It is a strategy based on knowledge and technological progress.
The NOS 2013-2020 identifies the areas of intervention and presents the action plan, which includes the programs to be run and developed, in order to achieve specific objectives and produce the desired effects, being subject to proper monitoring, evaluation, review and update mechanisms.
The Mar-Portugal Plan (MMP), an action plan mainly aimed at the economic, social and environmental enhancement of the maritime space through the implementation of sectorial and cross-sectorial projects, as well as the existing strategic plans or those in preparation.
The MPP is structured in 3 Action Axes (AA), one dedicated to Research (getting to know the Ocean). In this Action Axe the actions are intrinsically linked to research and knowledge of the Ocean, its interfaces and processes that occur therein, including decodification of the main functions and services. It also comprises technologically based initiatives for monitoring of the marine environment or that lead to an improvement of the conditions of the different productivity sectors within a framework of sustainable economic exploitation.

Main Objectives:
The objectives of the strategy are as follows:

- To reaffirm the maritime identity in a modern, proactive and entrepreneurial framework.
- Realising the economic, geostrategic and geopolitical potential of the maritime territory, turning the Mar-Portugal into an asset with permanent economic, social and environmental benefits.
- To create conditions for attracting investment, both and inter , in all Ocean economy sectors, promoting growth, employment, Ocean sector in the GDP in around 50%.
- To strengthen scientific and technological capacity, stimulating development of new areas of action that promote the knowledge of the Ocean and effectively, efficiently and sustainably enhance its resources, use and activities as well as the ecosystem's services.
- To consecrate Portugal on a worldwide level, as a maritime nation and as an unchangeable part of the IMP and of the EU maritime strategy, in particular for the Atlantic area."
- No dedicated funding. Several funding instruments in place will be used, including budget from the State and at European level (PT2020, EAA grants, Blue Fund, etc).

7.5 EI-ERO - Estratégia Industrial para as Energias Renováveis Oceânicas / Insdustrial Strategy for Ocean Renewable Energy (2018-2030), Ministry of the Sea in articulation with the Ministry of Economy

This strategy presents a governing model focused on the creation of an exporting cluster, through the maximization of natural, scientific and technological factors in the emerging sector

of ocean renewable energies. The ambition is that the development of ocean renewable energies occurs in an integrated way with the Port Tech Clusters strategy and the technological acceleration platforms of the marine industries in the Portuguese port network.
This document also includes an Action Plan structured in two main axes and 3 action lines with several measures. One of the axes includes a sub-axis dedicated to "Attract investment for Ocean Energy based competitive R&D" (Axis 1.2). The action line "Atract R&D – capture new testing and development projects in the ocean renewable energy sector for installation in Portugal" includes the following measures:

- Measure 1.1 - Financing for new R&D projects (research, development, prototyping and testing);
- Measure 1.2 – R&D Infrastructures and Industrial Innovation;
- Measure 1.3 - Marketing and Promotion to attract new R&D projects (research, development, prototyping andand testing.

Main Objectives:
This strategy has the main objective to help capture business opportunities for Portugal in the ocean renewable energy sector through the maximization of existing skills and competencies and quell the weaknesses of the companies. The major strategic objective is the creation of a competitive an innovating industrial exporting cluster of oceanic renewable energies - floating offshore wind energy and wave energy -, based on the creation of new specializations in the Portuguese naval industry and on the consolidation of the port network as the new sea economy engine

Funds:. No dedicated funding Several funding instruments in place will be used, including budget from the State and at European level (PT2020, EAA grants, Blue Fund, etc).

7.6 Estratégia para o Aumento da Competitividade da Rede de Portos Comerciais do Continente Horizonte 2026 / Strategy for Enhancing the Competitiveness of the Continent's Commercial Port Network (2018-2026), Ministry of the Sea

This strategy supports the dynamisation of the activity in the ports and the administrative simplification in this sector. Among several measures dedicated to stimulate the ports activity in today's context, it defines measures to affirm the continent's commercial ports as engines of technological innovation. In this context there is a specific measure in the strategy Action Plan to develop "Port Tech Clusters".
The "Port Tech Clusters" will be developed as technological acceleration platforms for the new maritime industries with the aim to promote the proximity between research and innovation and the business sector. In order to achieve this ambition, measures will take place to install research and innovation centres in the continent's ports near the industry and the operational environment. It is thus expected that the "Port Tech Clusters" accelerate the transfer of knowledge between R&D centres and companies, as well as the development cycle to create new maritime industries, reducing the time and the financial resources needed to develop a marketable product/service. Seven "Port Tech Clusters" are expected:

- Ocean Renewable Energies;
- Specialized Ships;
- Green Shipping;
- Ocean Engineering and Robotics;
- Digital Ports (Industry 4.0);

- Green Port;
- Naval Repair of Nautical Recreation.

Main Objectives:
This strategy has 3 main strategic objectives:

- Adequate the infrastructures and equipment needed to the increase of the vessels size and demand and the increase in the connections to the hinterland;
- Improve the operational conditions of the port units;
- Create technology acceleration platforms and new skills in the ports.

Funds: No dedicated funding. 2.5 billion euro are estimated to be needed to implement all the measures defined, being 83% expected to come from the private sector, 11% from the public sector and 6% from European funds (namely PT2020 and Connecting Europe Facility (CEF).

7.7 Observatório do Atlântico / Atlantic Observatory - 2018-2019 (Definition and implementation framework) - Ministry of the Sea

The Programme of the XXI Constitutional Portuguese Government (2015-2019) is an overarching strategic planning document which includes the formulation on how Portugal seeks to achieve benefit to its population taken out from the potential of its Ocean and coastal zones resources through its economic, social, and environmental valorisation. To be successful in the set objectives the plan is to promote clusters of different ocean economic activities, which generate more value together than separate, maximizing the value chain of the different activities. To associate the traditional fisheries with new foods industry or tourism, or the naval construction and repair industry with offshore aquaculture or renewable energy, is an opportunity to create qualified jobs and new markets. The achievement of this aim must be based on a medium- and long-term strategy of exploration and exploitation of new spaces and resources, based on the scientific and technological development, targeting to give substance to a technological base emerging ocean activities that have as centre of its activity the deep and ultra-deep ocean environments (biotechnologies, mineral resources).

Main Objectives:
The development of the Atlantic Observatory aims namely:

- To stimulate activities of inter reference in the areas of research, monitoring and knowledge transfer on the Atlantic and especially on the deep sea;
- Operate in coordination with the Air Centre to reinforce knowledge on space-climate-ocean interactions through north-south/south-north cooperation;
- To promote projects at the inter level with a view to increasing knowledge of the Atlantic and of the processes of living and non-living resources, while increasing scientific employment in marine sciences and technologies in research and training centres and their integration into business and industry;
- To establish applied research in the new economy of the sea and ensure in its operating model the connection to the productive sector.

Funds: No dedicated funding. Estimated 10 million euros with contributions from EAA grants, Blue Fund and other public funds, and also private sector.

8.SLOVENIA

8.1 Resolution on Research and Innovation Strategy of Slovenia (2011.2020), Ministry of Education, Science and Sport with its Slovenian Research Agency

The Research and Innovation Strategy of Slovenia (RISS) is a document that describes how the Government of Slovenia (public administration) is to implement, with regard to social responsibility a long-term commitment to science and development by establishing their important role in social progress and as a foundation of well-being for its citizens. It is aware that without the joint presence and intertwining of different scientific disciplines progress of societies and technologies cannot be understood. Slovenia supports a comprehensive integration of science and the strengthening of its autonomy and institutions while supporting harmonized interdependence between science, development and innovation, which is unique in providing overall social progress and well-being. RISS covers the following topics: effective governance of the research and innovation system, high-quality research in the public sector, establishment of capacities in support of research and development, innovative economy and promotion of science, creativity and innovativeness

Main objectives:
The main objective of the RISS is to establish a modern research and innovation system that will allow for a higher quality of life for all through critical reflection of society, efficiency in addressing social challenges, increased value added per employee, and assurance of more and higher quality workplaces.
Specifically, the main objectives of specific topics covered in RISS could be summarized as:

- Effective governance of the research and innovation system:
  - •Establishment of an effective common governance system for the research and innovation system, involving all stakeholders
  - • Monitoring the implementation and evaluation of the effects of RISS
  - • Periodic evaluation of the effectiveness of all support and executive institutions
- High-quality research in the public sector
  - • Increased inter visibility and competitiveness of Slovenian science
  - • Differentiation of the mission and the role of the higher education sector and institutes (PRO's, Public research Organizations)
  - • Establishing an evaluation system of PROs' research activities
  - • Autonomy and responsibility of PROs to enable their strategic development in accordance with priorities
- Establishment of capacities in support of research and development
  - • Increase the number of researchers and developers in the economy
  - • Increasing the number of doctors of science
  - • Strengthening the qualifications of the personnel
  - • Ensuring effective inter-institutional and interstate mobility
  - • Improvement of career opportunities for researchers, and inclusion of the gender equality principle
- Innovative economy and promotion of science
  - • Create stimulating environment for the commercialization of knowledge in PROs

    - • Set up complete scheme of financial and other incentives for the start-up and initial running of businesses
    - • Measures to support start-up companies
- Promotion of science, creativity and innovativeness in society and education
    - • Popularization of science
    - • Promotion of creativity, innovativeness and the culture of entrepreneurship
    - • Renovation of study programs at the tertiary level.

8.2 Resolution on Maritime Strategy of the Republic of Slovenia (RMSRS) (Since 1991), All ministries, in particular the Ministry of infrastructure

"Resolution" is a strategic document which, with the definition of the situation, goals and actions, provides conditions for sustainable and integrated maritime development with an emphasis on ensuring the safety of maritime transport. it also means a vision and it defines the conditions for the use of the exit to the open sea (Adriatic Sea) and the development of:

- modern cargo and cruise port
- education of seafarers
- maritime economy

Main objectives:
The program seeks to preserve and improve the safety of navigation, quality of life, environmental protection, port infrastructure, impact on the economy and tourism in the sensitive area of the northern Adriatic, and describes better opportunities for the development of Slovenia in a modern maritime country. The main objective of RMSRS is setting guidelines for the sustainable development of maritime transport and ensuring the safety of maritime transport

8.3 Transport Development Strategy of the Republic of Slovenia (2015-2030), All ministries, in particular the Ministry of infrastructure

When drafting the new transport development strategy, the original intention was to develop a Resolution on the Development Plan for Public Transport Infrastructure, which would:

- define an integrated and comprehensive development of transport and transport infrastructure by 2030;
- define the provision of the regular and stable financing of transport infrastructure;
- provide the basis for the drawing of the EU funds in the 2014-2020 financial perspective (ex-ante conditionality).

In order to provide a suitable basis for the drawing of the EU funds, the Resolution had to be extended in its scope of application, including the management, maintenance and the operation of the transport system, with a particular reference to the public passenger transport, the intelligent transport system (telematics applications), logistics and alternative fuel infrastructure.
Due to the extensive change in the scope it was decided that the adoption of the extended document was to be divided into two phases:

- the adoption of the Transport Development Strategy;
- the plan for its implementation with a priority order regarding the implementation of investments, funding, time periods and responsible bodies, which is still in the process of adoption.

8.4 Action plan of Strategic-development and innovative partnership, Sustainable tourism (SRIPT) (2017-2022), Ministry of Economic Development and Technology, the Chamber of Commerce and Industry of Slovenia, the Chamber of Tourism and Hotel Management

SRIPT is a document of strategic development of tourism in Slovenia, which is in compliance with the Smart Specialization Strategy of EU. It presents the meaning of the SRIPT for Slovenia, global trends in tourism and present state in Slovenia, priorities in the sector of tourism, networking and inter activities, and methodology for the identification of four priorities in which SRIPT will act

- Contributing to sustainable development of Slovenia, including the human health and social welfare;
- Link touristic stakeholders to create joint innovative and globally competent products in the field of tourism;
- Improve knowledge and competences in touristic industry;
- Improve the validation of primary touristic products;
- Include the expectations of all societal groups;
- Act in accordance with legislation and inter standards;
- Integrating in new SRIP partnerships (e.g. SRIP for circular economy in Slovenia, medicine, food, smart towns).

8.5 Draft of the Slovenian Development Strategy 2030 (SDS) (2018-2030), Government Office for Development and European Cohesion Policy, other ministries

This draft of SRS was accepted by the Government of R Slovenia on 7th December 2017 when it decided that it is the cross-sectorial balanced document. It has to be accepted by the parliament. It is meant to be the ground-floor document to which other sectorial strategies should be adapted.

Main objectives:
The primary objective of the Slovenian Development Strategy 2030 is to ensure a high quality of life for all. It will be pursued through balanced economic, social and environmental development that generates the conditions and opportunities for present and future generations.
High quality of life for all Slovenian residents will manifest in:

- better opportunities for work, education and creativity;
- decent, safe and active life in the well - preserved natural environment;
- active inclusion in democratic decision making and co-governing the society;

Country`s strategic orientations to achieve a high quality of life and well-being are:

- inclusive, healthy, safe and responsible society;
- learning for the through life;
- highly productive economy that generates value added for all;
- well-preserved natural environment;
- high level of cooperation, competence and governance efficiency.

9. SPAIN

9.1 *Spanish National Plan for Scientific and Technical Research and Innovation (2017-2020), Ministry of Economy, Industry and Competitiveness (MINECO)*

The Spanish Plan is the main instrument of the public administration for the development and achievement of the objectives of the Spanish Strategy for Scientific and Technical Research and Innovation 2013-2020. The plan has a challenge-based approach which will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake.
Funding will focus on the following challenges:

- Health, demographic change and wellbeing;
- Bioeconomy: Sustainable agriculture and forestry, food safety and quality, marine and maritime and inland water research;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Social science and humanities, science with and for society;
- Economy, society and digital culture;
- Security, protection and defense;

Main objectives:
As the Plan corresponding to the period 2013-2016, the current plan is composed by four national programmes connecting with the objectives of the Spanish Strategy for Scientific and Technical Research and Innovation 2013-2020: the promotion of talent and its employability, knowledge creation and strengthening the science system, leadership of the private sector in R&D&i and R&D&i addressing the aforementioned societal challenges.

Funds: 21.700
M€ for the period 2017-2018

9.2 National Marine Strategies - MAPAMA (2015-2021), Ministry of Agriculture, Fisheries and Environment

The MSFD was incorporated into Spanish legislation by means of Law 41/2010, of 29 December, on the protection of the marine environment. That law establishes the general legal framework for the protection of the Spanish marine environment. ""Marine strategies"" are the planning instruments for the marine environment and they establish the general framework to which the different sectoral policies and administrative actions with an impact on the marine environment must adapt. They are applied to marine waters, the seabed, the subsoil and the natural resources under Spanish sovereignty or jurisdiction. The strategies are not applicable to coastal waters for those aspects covered by the river basin management plans, deriving from the application of Directive 2000/60/EC, which establishes a framework for community action in the field of water policy (Water Framework Directive, henceforth WFD). They are applied to marine waters, the seabed, the subsoil and the natural resources under Spanish sovereignty or jurisdiction. The

strategies are not applicable to coastal waters for those aspects covered by the river basin management plans, deriving from the application of Directive 2000/60/EC, which establishes a framework for community action in the field of water policy (Water Framework Directive, henceforth WFD).

The Spanish marine environment has been divided into 5 marine subdivisions (MD), taking into account the hydrological, oceanographic and bio-geographical characteristics of each area:

- North Atlantic MD
- South Atlantic MD
- Estrecho and Alborán MD
- Levantine-Balearic MD
- Canary MD

Main Objectives:

The application of the Marine Strategies seeks the following objectives:

- To protect and preserve the marine environment, including its biodiversity, avoid its degradation or restore, where practicable, the marine ecosystems in those areas where they have been adversely affected;
- To prevent and reduce inputs into the marine environment, in order to progressively phasing out the pollution of the marine environment;
- To ensure that the activities and uses in the marine environment are compatible with the conservation of its biodiversity, which means that their management must be designed taking into account the ecosystem-based approach.

The implementation of the strategies is structured around the eleven qualitative descriptors of the good status of the marine environment established in the MSFD:

- Biodiversity
- Non-indigenous species
- Commercially exploited species
- Food webs
- Eutrophication
- Sea-floor integrity
- Alterations of hydrographical conditions
- Contaminants and their effects
- Contaminants in fish and other seafood
- Marine litter
- Underwater noise

The system adopted in order to draw up the marine strategies, established by the working groups of the Common Implementation Strategy, was as follows: for each Spanish marine subdivision, a marine strategy must be developed and its implementation follows an iterative process, which is carried out in six-year cycles. The design and implementation of the marine strategies has been structured in a series of consecutive phases:

- Initial assessment of the marine environment
- Determination of good environmental status (GES)
- Establishment of environmental targets and associated indicators
- Preparation of the monitoring programmes
- Preparation of the programmes of measures

9.3 Spanish National Plan for Scientific and Technical Research and Innovation (2017-2020), Ministry of Economy, Industry and Competitiveness (MINECO)

The Spanish Plan is the main instrument of the public administration for the development and achievement of the objectives of the Spanish Strategy for Scientific and Technical Research and Innovation 2013-2020.
The plan has a challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake.
Funding will focus on the following challenges:

- Health, demographic change and wellbeing;
- Bioeconomy: Sustainable agriculture and forestry, food safety and quality, marine and maritime and inland water research;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Social science and humanities, science with and for society;
- Economy, society and digital culture;
- Security, protection and defense.

Main objectives:
The Plan corresponding to the period 2013-2016, is composed by four national programmes connecting with the objectives of the Spanish Strategy for Scientific and Technical Research and Innovation 2013-2020: the promotion of talent and its employability, knowledge creation and strengthening the science system, leadership of the private sector in R&D&i and R&D&i addressing the aforementioned societal challenges.

Funds: €21.700 M for the period 2017-2018

9.4 Spanish Science and Technology Strategy (2013-2020), Ministry of Economy, Industry and Competitiveness (MINECO)

The National Science and Technology Strategy (ENCYT) is a positioning document drawn up with the participation of the Spanish Science and Technology system players. It covers the main principles and general objectives governing both nationwide and regional science and technology policies, for the period 2007-2015.
The initiative for this strategy arose as a result of the experience of the different National Plans developed to date and the results of the INGENIO 2010 initiative which has been a significant impulse for science and technology in Spain.

The basic principles governing this Strategy are:

- To place R&D&i at the service of the general public, of social wellbeing and of sustainable development, fully integrating women into the workplace and guaranteeing equal opportunities;
- To make R&D&i a factor in the improvement of corporate competitiveness;

- To acknowledge and promote R&D as an essential element for the generation of new knowledge;
- The principles aforementioned strive towards accomplishing the following goals;
- Situating Spain in the vanguard of knowledge;
- Promoting a highly competitive business fabric;
- Integrating the regional areas into the Science and Technological System;
- Strengthening the international dimension of the Science and Technology System;
- Availing of an environment that is favourable to R&D&I investment;
- Availing of the right conditions for science and technology dissemination;

9.5 Strategic Plan of Innovation and Technology Development for Fisheries and Aquaculture (2014-2020), Spanish Ministry of Agriculture, Fisheries and Environment (MAPAMA)

The Strategic Plan includes all the prioritisation work for innovation in the sector which have been developed both at national level by Observatories and Technology Platforms (in particular by the National Technology Platform for Fisheries and Aquaculture, PTEPA) and at regional level by the different regional ministries and institutions in charge of fostering the fisheries innovation sector.
The Plan is a reliable report on the innovation needs of the sector, in coordination with the different public administrations involved in the process. It states and defines the roadmap to reach the objectives of competitiveness and sustainability through the innovation in a rather traditional sector at national level as the fisheries are.

Main objectives:
To reach a consensus diagnoses about the current situation of main variables which influence the innovation and the technological development of the sector, and the critical aspects having an impact in its evolution.

- Identify the main innovation roadmaps and priorities for technological development of the fisheries sector;
- To plan and analyse the needs and capacities at technological level and the existing innovation tools for the sector at national level;
- To propose strategic measures necessary to update and improve each of the needs and capacities aforementioned;

9.6 National Plan of Spanish Agriculture (2014-2020), Spanish Ministry of Agriculture, Fisheries and Environment (MAPAMA)

The Strategic Plan of Spanish Aquiculture 2014-2020, adopted at the Fisheries Sectorial Conference on 16 April 2015, includes, among its actions towards fostering the competitiveness of the Spanish aquiculture through research and innovation, the development of the National Plans.
The National Plans of Aquiculture are innovative and collaborative projects to reinforce the competitiveness of the sector through the development of scientific, technical and organizational knowledge, in the aquiculture infrastructures.
Among others, the topics of the projects are:

- Environment (mitigation and reduction of the environmental impact, efficiency and sustainable use of resources, new methods of sustainable production);

- Lifecycle and new species (improvements on the animal feed and animal wellbeing, pathologies, epidemiologic studies, and health control);
- Processes, management and organisation systems (technologies, culture structures and new materials, automatisation of processes, biomass estimation, energetic efficiency and alternative energy solutions);
- Economic aspects of production (viability/cost efficiency of new species, costs and production processes, cost efficiency of new technologies, knowledge management and ICT).

The beneficiaries of the grants for the execution of these projects are those public entities developing innovation and technological development in the aquiculture sector.
The projects must have several entities working together in a collaborative way and foresee, among other activities, the validation of results in companies of the sector, especially when those companies are involved from the initial preparatory phase of the projects.
The management of the grants is responsabilituy of the Ministry of Agriculture, Nutrition and Environment (MAPAMA).

Main objectives:
The Strategic Plan of Spanish Aquiculture is framed within the new Common Fisheries Policy and the European Maritime and Fisheries Fund (EMFF) and supports the Strategic Guidelines for the sustainable development of EU aquiculture (COM(2013) 229 final) related to the priorities and common needs for the sector´s development.
In the Strategic Plan four Strategic Goals are defined:

- To simplify and homogenise the legal and administrative framework to reinforce the sector´s representativeness
- Increase the Spanish aquiculture production, through the improvement of the sectorial planning and the selection of new Interest Zones for Aquiculture.
- Reinforce the competitiveness of the sector through research and innovation, making stronger links between the scientific community and the sector, the health management and wellbeing.
- Reinforce the aspects related with the transformation and commercialization of the products through innovation, promotion and support to producers.

9.7 Spanish Strategy on Bioeconomy Horizon 2030 (2016-2030), Ministry of Economy, Industry and Competitiveness (MINECO) Secretary of State on Research, Development and Innovation (SEIDI)

The Secretary of State of Research, Development and Innovation has elaborated a Spanish Strategy on Bioeconomy Horizon 2030 (EBB) with the collaboration of the diverse productive sectors and technological platforms. The strategy focuses on the activity of the agro-food, marine and forest sectors, in the efficient use of products, sub-products and generated wastes, encouraging the transformation of the later into new bioproducts, including the bioenergy obtained.

Main objectives:
The Spanish Strategy on Bioeconomy Horizon 2030 has the main goal of boosting the economic activity, improving the competitiveness and sustainability of the different sectors involved and promoting the development and implementation of technologies generated through the public-

private partnerships (PPP). In order to reach that goal, making sure that production is sustainable and bioresources are indeed used, it is essential that research and innovation manage to introduce new ideas and technologies in the market.

9.8 Spanish Technological Platform for Fisheries and Aquaculture (PTEPA) Strategic Research Agenda(2014-2020), PTEPA memberships in collaboration with public administration

The Spanish Technological Platform for Fisheries and Aquaculture SRA has the challenge to promote initiatives aimed at achieving sustainable growth, which places the national fishing and aquaculture industry in a competitive position on the European scene, promoting the collaboration of all stakeholders that help meet the challenges of sustainability, food safety and respect for the environment of Europe 2020.

Main objectives:
PTEPA aims to promote research, development and innovation in the fisheries and aquaculture sector by analysing the needs and promoting R&D&I initiatives that achieve a real implementation of new technologies in the different links of the fishing chain and aquaculture. The PTEPA SRA is alienated with the Strategic Plan of Innovation and Technological Development of the fishing and aquaculture sector 2014-2020 of the Spanish General Secretariat of Fisheries and is divided in 5 working groups:

- Marine living resources;
- Fishing Technologies;
- Aquaculture;
- Processing technologies;
- Commercialization.

Each working group has its own challenges and priority R&D&I objectives, but they have some common priority areas:

- Energy saving and energy efficiency measures have been identified as priorities to be developed in all the links of the fisheries and aquaculture value chain;
- Reduction, valorisation or use of discards. In this sense the fishing sector should optimize marine productivity and exploit the fishing resources in a sustainable manner.

R&D&I must play a key role in the reduction of discards through the use of more selective fishing techniques and the correct management of discards that offer added value to the fishing activity, avoiding the waste of resources that can be exploited. Also and ecosystem approach has been suggested to achieve an integrated land, water and living resource management strategy that promotes conservation and sustainable use of them in an equitable way.
For each of the working groups, the following priorities have been identified:

- Marine living resources:
    - Improvement of the evaluation of fishery resources;
    - Optimization and monitoring of proper fisheries management;
    - Animal health: Decreased parasitism including improved epidemiological surveillance
    - Sustainability and environmental impact;
    - Diversification: actions for local development and repopulation as a tool for the conservation and/or recovery of marine and coastal ecosystems;
- <u>Fishing Technologies</u>

- Environmental impact: avoid catching non-target species; detection, management and monitoring of discharges and waste; energy alternatives for the reduction of environmental impact (including acoustic impact); and studies and control of oil, gas and derivative activities and their environmental impact on the marine resources of the coast;
- Fishing park technologies: storage and conservation techniques, automation of fishing processes and adaptation of the boats for the use of discards;
- Energy: savings, energy efficiency and development of energy-efficient and more selective fishing arts;
- Fishing systems: Improvement of selectivity and process automation and optimization of fishing tackle and baits;
- Labour security, naval security, accident prevention and analysis;
- Electronics and ICTs: remote sensing for fishing prediction;

- Aquaculture
  - Food and nutrition: new ingredients for feed and feed optimization and feeding processes;
  - Engineering and management aspects: energy saving and alternative energy; improvement of biomass and average weight estimation techniques; crop isolation techniques; optimization of closed water circuits; offshore farm engineering and promotion of offshore aquaculture; and optimization of coastal and continental aquaculture;
  - Economic and social aspects: revaluation and promotion of the product; innovation in processed products; new species of interest for consumers and producers; economic viability studies; market intelligence and social valuation of aquaculture.
  - Quality, traceability and food safety;
  - Genetics and physiology: breeding selection; cryopreservation of genetic resources; optimization of larval rearing and fattening processes; control of the reproduction of new species and control of sex ratio and precocious puberty;
  - Environment: treatment and reuse of effluents from fish farms and improvement and maintenance of water quality; multi-trophic aquaculture; Studies on the carrying capacity of aquaculture sites and improve knowledge of interactions with ecosystems near aquaculture facilities;
  - Animal health and welfare: prophylaxis and health control; pathology control; improved knowledge of animal welfare and stress indexes;
  - Application and integration of ICTs;
  - Biotechnology.
- Processing Technologies
  - Food safety: improvement of detection systems; methods of identification of species in raw material and final product; lengthen the useful life of the product; and strategies for prevention and detection of pollutants;
  - Quality: optimization of processes and alignment with consumer demands;
  - Traceability: new systems for transmitting information;
  - Environment and sustainability: resource optimization and energy efficiency; systems for the reduction, recovery and valorisation of waste and by-products; and effluent treatment;
  - New products: Management, use and valorisation of discards; use of new species and raw materials, and use of co-products;

- Process technology and conservation: new restructured products; optimization and development of new conservation techniques;
- Increase in training and technology transfer;

- Commercialization
  - Commercial Innovation: product promotion; new products and species; and new marketing and communication strategies with the consumer;
  - Traceability: New technologies for traceability management;
  - Environment: promotion of energy efficiency; waste management, recycling and recovery; use of by-products; and recycling and optimization of packaging management;
  - Food safety and hygiene: process automation; new techniques to improve product handling; and categorization of fishery and aquaculture products;
  - Logistics and distribution: new containers and packaging; and improvement of the sustainability of the logistics chain;
  - Systems to improve the conservation of fresh fish and increase its shelf life;

ANNEX II – European, Mediterranean and Global Marine and Maritime Programmes and Strategies

Each programme/strategy is identified by its title, duration and by the name of the entity responsible for its implementation. A brief description of the programme/strategy contents is reported together with main objectives and where relevant allocated funding.

EUROPEAN AND MEDITERRANEAN PROGRAMS/STRATEGIES/POLICY FRAMEWORKS

1. European Structural and Investment Funds (ESIF) (2014-2020),

Responsible for implementation: Appointed by each member state

1.1 European Maritime and Fisheries Fund (EMFF)[1]

The EMFF is the fund for the EU's maritime and fisheries policies for 2014-2020. It is one of the five European Structural and Investment (ESI) Funds which complement each other and seek to promote a growth and job based recovery in Europe.

Main objectives:
The fund:

- helps fishermen in the transition to sustainable fishing;
- supports coastal communities in diversifying their economies;
- finances projects that create new jobs and improve quality of life along European coasts;
- makes it easier for applicants to access financing;

Funds: €6.4 billion

1.2 European Agricultural Fund for Rural Development (EAFRD)[2]

The EU's rural development policy helps the rural areas of the EU to meet the wide range of economic, environmental and social challenges of the 21st century.Frequently called "the second pillar" of the Common Agricultural Policy (CAP), it complements the system of direct payments to farmers and measures to manage agricultural markets (the so-called "first pillar"). Rural Development policy shares a number of objectives with other European Structural and Investment Funds (ESIF).

Main objectives:
In line with Europe 2020 and the overall CAP, the rural development policy is revolved around three cross-cutting objectives:

- competitiveness of agriculture;
- the sustainable management of natural resources and climate action;
- the balanced territorial development of rural areas.

These three objectives are supported by six key priorities:

- knowledge transfer and innovation in agriculture, forestry, and rural areas;
- enhancing the competitiveness of all types of agriculture and enhancing farm viability;
- promoting food chain organisation and risk management in agriculture;
- restoring, preserving and enhancing ecosystems dependent on agriculture and forestry;
- promoting resource efficiency and supporting the shift toward a lowcarbon and climate-resilient economy in agriculture, food and forestry sectors;

[1] https://ec.europa.eu/fisheries/cfp/emff/

[2] https://ec.europa.eu/agriculture/rural-development-2014-2020_en

- promoting social inclusion, poverty reduction and economic development in rural areas.

Funds: €95.57 billion

1.3 European Social Fund (ESF)[3]

The ESF is Europe's main instrument for supporting jobs, helping people get better jobs and ensuring fairer job opportunities for all EU citizens.

Main objectives:
The ESF will focus on a limited number of priorities in order to make a real impact in addressing Member States' key challenges, which are:

- Employment – EUR 30 billion;
- Education – EUR 26 billion;
- Social inclusion – EUR 21.3 billion;
- Institutional capacity – EUR 3.6 billion.

Funds: Together with the € 3.2 billion special allocation for the Youth Employment Initiative, over EUR 86 billion will be invested in Europe's people over the next seven years

1.4 European Regional Development Fund (ERDF)[4]

The European Regional Development Fund (ERDF) aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. The ERDF supports regional and local development by co-financing investments in R&D and innovation; climate change and environment; business support to SMEs; services of common economic interest; telecommunication, energy and transport infrastructures; health, education and social infrastructures; and sustainable urban development.

Main objectives:
The ERDF focuses its investments on several key priority areas.

- Innovation and research;
- The digital agenda;
- Support for small and medium-sized enterprises (SMEs);
- The low-carbon economy.

The will devote the majority of its resources to:

- R&D – EUR 39.9 billion;
- SMEs – EUR 32.8 billion;
- Low carbon economy – EUR 30.1 billion;
- Transport and energy infrastructure – EUR 25.6 billion

The ERDF will also support cross-border transnational and interregional cooperation under the European Territorial Cooperation goal. This could include partnering with the EU's

[3] http://ec.europa.eu/social/main.jsp?catId=325&langId=en

[4] http://ec.europa.eu/regional_policy/en/funding/erdf/

neighbouring third countries, through programmes under the European Neighborhood Instrument and the Instrument for Pre-Accession Assistance.
Funds: €200 billion

1.5 Cohesion Fund (CF)[5]

The Cohesion Fund encourages investments in priority trans-European transport networks and investments related to energy or transport that benefit the environment in terms of energy efficiency, use of renewable energy, developing transport and supporting intermodal transport.
Support is provided to Member States whose Gross National Income per inhabitant is less than 90 % of the EU average. For the 2014-2020 period, the Cohesion Fund is available in Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia.

Main Objectives

- promoting the production, distribution and use of energy derived from renewable sources;
- supporting energy efficiency and smart energy management;
- investing in the waste sector and water sector;
- improving the urban environment, including decontamination of brownfield sites;
- supporting a multimodal Single European Transport Area;
- developing and improving environmentally-friendly (including low-noise) and low carbon transport systems in order to promote sustainable regional and local mobility;
- developing and upgrading comprehensive, high quality rail, river and sea transport, intermodal transport systems and their interoperability..

Funds: € 63 billion

[5] http://ec.europa.eu/regional_policy/en/funding/cohesion-fund/

2. *WestMED initiative*[6]

The purpose of the WestMED Initiative is to foster sustainable blue growth and jobs, improve safety and security and preserve ecosystems and biodiversity in the western Mediterranean region. The Initiative focuses mainly on the seas and coasts surrounding Algeria, France, Italy, Libya, Malta, Mauritania, Morocco, Portugal, Spain and Tunisia. The Initiative builds on the Union for the Mediterranean process and its Ministerial Declaration on the Blue Economy adopted on 17 November 2015.

Main objectives:
The Initiative focuses on 3 main goals that address core challenges for the region:
A safer and more secure maritime space

- Cooperation between coastguards
- Maritime safety and response to marine pollution

A smart and resilient blue economy;

- This goal largely builds on existing initiatives such as BLUEMED and its strategic Research and Innovation Agenda, and encourages partner countries to be better involved.

Better governance of the sea.

- Spatial planning and coastal management
- Marine and maritime knowledge
- Biodiversity and marine habitat conservation
- Sustainable fisheries and coastal community development

Selected priorities are:

- Strategic research and innovation
- Maritime clusters development
- Skills development and circulation
- Sustainable consumption and production (maritime transport, ports, maritime and costal tourism, marine aquaculture)

Funding Sources: The European Maritime and Fisheries Fund (EMFF), the EU programme for the Competitiveness of Enterprises and SMEs (COSME), the European Neighbourhood Instrument (ENI), the European Regional Development Fund (ERDF), National funds, the European Fund for Strategic Investments (EFSI) and the European Fund for Sustainable Development (EFSD)

3. *General Fisheries Commission for the Mediterranean (GFCM)*

The General Fisheries Commission for the Mediterranean (GFCM) is a regional fisheries management organization (RFMO) established under the provisions of Article XIV of the FAO Constitution. The GFCM initially started its activities as a Council in 1952, when the Agreement for its establishment came into force, and became a Commission in 1997.
The main objective of the GFCM is to ensure the conservation and the sustainable use, at the biological, social, economic and environmental level, of living marine resources as well as the sustainable development of aquaculture in the Mediterranean and in the Black Sea

[6] http://www.westmed-initiative.eu/

4. EU Strategy for the Adriatic and Ionian Region (EUSAIR)[7]

The EU Strategy for the Adriatic and Ionian Region (EUSAIR) is a macro-regional strategy adopted by the European Commission and endorsed by the European Council in 2014. The Strategy was jointly developed by the Commission and the Adriatic-Ionian Region countries and stakeholders, which agreed to work together on the areas of common interest for the benefit of each country and the whole region. The Strategy is defined in a Communication from the European Commission (2014), accompanied by an Action Plan which presents the objectives and concrete pillars and topics of the Adriatic-Ionian Strategy. he EUSAIR covers eight countries: four EU Member States (Croatia, Greece, Italy, Slovenia) and four non-EU countries (Albania, Bosnia and Herzegovina, Montenegro, Serbia).

Main Objectives:
The general objective of the EUSAIR is to promote economic and social prosperity and growth in the region by improving its attractiveness, competitiveness and connectivity. With four EU members and four non EU countries the strategy will contribute to the further integration of the Western Balkans.
The participating countries of the EUSAIR agreed on areas of mutual interest with high relevance for the Adriatic-Ionian countries, being it common challenges or opportunities. The countries are aiming to create synergies and foster coordination among all territories in the Adriatic-Ionian Region in the four thematic areas/ pillars:
Tourism, Environmental Quality, connecting the Region, Blue Growth

[7] http://www.adriatic-ionian.eu/

5. Copernicus Marine Environment Monitoring Service (CMEMS)[8] (2015-2025)

The Copernicus Marine Service has been designed to respond to issues emerging in the environmental, business and scientific sectors. Using information from both satellite and in situ observations, it provides daily state-of-the-art analyses and forecasts of the state of oceans and seas, which offer a capability to observe, understand and anticipate marine environment events.

Main objectives:
CMEMS has defined a Service Evolution Strategy which is intended to guide change over the period of 2015-2025. It identifies the highest priority lines of action that can be summarized as following :

- Ensure availability of required upstream observations
- Deliver high quality products and downstream services at scales at which users operate
- Accessibility of CMEMS data and products
- Maintaining CMEMS as state-of-the-art for all parts of its operations and production considering science and technology evolution.

Four key areas of innovation and research are identified:

- Ocean and Ocean-wave and Ocean-ice coupling;
- Biogeochemistry and ecosystems in the marine environment;
- Coastal; and (iv) Ocean, atmosphere and climate

Resp. of the implementation:
The European Union delegates to Mercator Ocean the role and responsibility of managing the EU budget for delivering the CMEMS on its current multi-annual financial framework 2014-2020

[8] http://marine.copernicus.eu/science-learning/service-evolution/service-evolution-strategy/

6. JPI Oceans[9]

The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) was established in 2011 as an intergovernmental platform, open to all EU Member States and Associated Countries. It aims at a better alignment of efforts and funding in marine research between countries (e.g. through joint calls) and with EC.
The strategy of JPI Oceans is defined by its Strategic Research and Innovation Agenda (SRIA) which was published in May 2015. The vision of the Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) is to enable Blue Growth and jobs, whilst fostering the health and productivity of seas and oceans and addressing the pressures of climate change and human impacts on the oceans.

Main objectives:
The JPI Oceans SRIA identify ten strategic priorities for marine and maritime research in Europe:

- Exploring Deep Sea Resources
- Technology and Sensor Developments
- Science Support to Coastal and Maritime Planning and Management
- Linking Oceans, Human Health and Wellbeing
- Interdisciplinary Research for Good Environmental Status
- Observing, Modelling and Predicting Oceans State and Processes
- Climate Change Impact on Physical and Biological Ocean Processes
- Effects of Ocean Acidification on Marine Ecosystems
- Food Security and Safety Driving Innovation in a Changing World
- Use of Marine Biological Resources through Development and Application of Biotechnology

In addition to the Strategic Areas, three cross-cutting issues have been identified where JPI Oceans can add value in the European landscape.

- Science-Policy Interface
- Human Capacity Building
- Infrastructures

Resp. of the implementation: JPI Oceans member countries

[9] http://www.jpi-oceans.eu

7. *FOOD 2030*[10]

FOOD 2030 is a European Union (EU) R&I policy framework that strives to future-proof our nutrition and food systems for sustainable and resilient food production and consumption, links land and sea and connects a wide diversity of food systems actors.

Main objectives:
FOOD 2030 is built on key Food and Nutrition Security priorities:

- NUTRITION for sustainable and healthy diets
- CLIMATE smart and environmentally sustainable food systems
- CIRCULARITY and resource efficiency of food systems
- INNOVATION and empowerment of communities

8. *The Bioeconomy Strategy*[11]

Europe's Bioeconomy Strategy addresses the production of renewable biological resources and their conversion into vital products and bio-energy. Under the lead of DG Research and Innovation, the Strategy was co-signed by several other Commission departments namely DG Agriculture and Rural Development, DG Environment, DG Maritime Affairs, and DG Industry and Entrepreneurship.

Main objectives:
It is structured around three pillars:

- Investments in research,innovation and skills;
- Reinforced policy interaction and stakeholder engagement;
- Enhancement of markets and competitiveness.

The Strategy proposes answers to the challenges Europe and the world are facing:

- increasing populations that must be fed
- depletion of natural resources
- impacts of ever increasing environmental pressures
- climate change

The Strategy is also needed to ensure that fossil fuels are replaced with sustainable natural alternatives as part of the shift to a post-petroleum society.

[10] https://ec.europa.eu/health/sites/health/files/nutrition_physical_activity/docs/ev_20171129_co04_en.pdf

[11] https://ec.europa.eu/research/bioeconomy/index.cfm?pg=policy&lib=strategy

9. *Mediterranean Strategy for Sustainable Development 2016-2025*[12]

The Mediterranean Strategy for Sustainable Development 2016-2025 provides a strategic policy framework, built upon a broad consultation process, for securing a sustainable future for the Mediterranean region consistent with Sustainable Development Goals. It aims to harmonise the interactions between socio-economic and environmental goals, adapt international commitments to regional conditions, guide national strategies for sustainable development, and stimulate regional cooperation between stakeholders in the implementation of sustainable development.

Main objectives:
As highlighted in its subtitle (Investing in environmental sustainability to achieve social and economic development), the Strategy is underpinned by the conviction that investment in the environment is the best way to secure long-term sustainable job creation and socio-economic development.

- Ensuring sustainable development in marine and coastal areas;
- Promoting resource management, food production and food security through sustainable forms of rural development;
- Planning and managing sustainable Mediterranean cities.
- 4. Addressing climate change as a priority issue for the Mediterranean;
- 5. Transition towards a green and blue economy;
- 6. Improving governance in support of sustainable development.
- Resp. of the implementation:

10. *CPMR Intermediterranean Commission*[13]

CPMR Intermediterranean Commission (IMC) encompasses the issues raised in all the Regions bordering the Mediterranean Sea. It gathers around 40 Member Regions from 9 different EU members states and other countries. Their work focuses on the development of the Euro-Mediterranean dialogue and territorial cooperation, concentrating its efforts on Transport and Integrated Maritime Policy, Economic and Social Cohesion, Water and Energy.

Main Objectives:

- Defending the interests of the Mediterranean Regions in key EU policies: the Mediterranean area has its own specific character to be championed at European level. Mediterranean Regions must work together to ensure that European policies better address their issues when defining priorities and modalities of implementation. This is particularly the case when the policies concern regional development, maritime affairs, agriculture or transportation to mention but a few.
- Incorporating the territorial concept and the role of the regional authorities in the Euro-Mediterranean concept: the Mediterranean Regions are convinced that intensifying the territorial scope of their partnership is the only way to

[12] https://planbleu.org/sites/default/files/publications/mssd_2016-2025_final.pdf

[13] https://cpmr-intermed.org

build a new vision of the Euro-Mediterranean area. On one hand so that public policy can be better instilled among all the different populations through deconcentrated/ decentralised activities; and on the other hand to ensure better-balanced chances of development in the area, between countries, regions and urban intercommunities and the rural world.

- Undertaking strategic "pilot" projects on key themes with a forceful territorial impact: by hosting its different working groups and political dialogue between its members, the Intermediterranean Commission takes position as a think-tank institution embodying the territorial scope of the Mediterranean Union by proposing and developing strategic projects that could be supported by EU mechanisms.

11. *Integrated Maritime Policy*[14]

The Integrated Maritime Policy seeks to provide a more coherent approach to maritime issues, with increased coordination between different policy areas. It focuses on: Issues that do not fall under a single sector-based policy e.g. "blue growth" (economic growth based on different maritime sectors); issues that require the coordination of different sectors and actors e.g. marine knowledge.

Main objectives:
Specifically it covers the following cross-cutting policies:

- Blue growth
- Marine data and knowledge
- Maritime spatial planning
- Integrated maritime surveillance
- Sea basin strategies

It seeks to coordinate, not to replace policies on specific maritime sectors.

[14] https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/limassol_en.pdf

12. ***Blue Growth Strategy***[15]

Blue Growth is the long term strategy to support sustainable growth in the marine and maritime sectors as a whole. Seas and oceans are drivers for the European economy and have great potential for innovation and growth. It is the maritime contribution to achieving the goals of the Europe 2020 strategy for smart, sustainable and inclusive growth.
The 'blue' economy represents roughly 5.4 million jobs and generates a gross added value of almost €500 billion a year. However, further growth is possible in a number of areas which are highlighted within the strategy.

Main objectives:
The strategy consists of three components:

- Develop sectors that have a high potential for sustainable jobs and growth, such as:
  - aquaculture
  - coastal tourism
  - marine biotechnology
  - ocean energy
  - seabed mining
- Essential components to provide knowledge, legal certainty and security in the blue economy
  - marine knowledge to improve access to information about the sea
  - maritime spatial planning to ensure an efficient and sustainable management of activities at sea;
  - integrated maritime surveillance to give authorities a better picture of what is happening at sea
- Sea basin strategies to ensure tailor-made measures and to foster cooperation between countries.
  - Adriatic and Ionian Seas
  - Arctic Ocean
  - Atlantic Ocean
  - Baltic Sea
  - Black Sea
  - Mediterranean Sea
  - North Sea.

[15] https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en

13. Digital Single Market Strategy[16]

The Digital Single Market strategy was adopted on 6 May 2015 and is one of the European Commission's 10 political priorities.
The strategy is made up of three policy pillars:

- **Improving access to digital goods and services**

The Digital Single Market strategy seeks to ensure better access for consumers and business to online goods and services across Europe, for example by removing barriers to cross-border e-commerce and access to online content while increasing consumer protection.

- **An environment where digital networks and services can prosper**

The Digital Single Market aims to create the right environment for digital networks and services by providing high-speed, secure and trustworthy infrastructures and services supported by the right regulatory conditions. Key concerns include cybersecurity, data protection/e-privacy, and the fairness and transparency of online platforms.

- **Digital as a driver for growth**

The Digital Single Market Strategy aims at maximising the growth potential of the European Digital Economy, so that every European can fully enjoy its benefits, notably by enhancing digital skills, which are essential for an inclusive digital society.

Main objectives:

- Boosting e-commerce in the EU by tackling geoblocking, making cross-border parcel delivery more affordable and efficient;
- Modernising the EUcopyright rules to fit the digital age;
- Updating EU audiovisual rules and working with platforms to create a fairer environment for everyone, promote European films, protect children and tackle hate speech;
- Scaling up Europe's response to cyber-attacks by strengthening ENISA, the EU cybersecurity agency, and creating an effective EU cyber deterrence and criminal law response to better protect Europe's citizens, businesses and public institutions;
- Unlock the potential of a European data economy with a framework for the free flow of non-personal data in the EU;
- Ensuring everyone in the EU has the best possible internet connection, so they can fully engage in the digital economy, the so-called "connectivity for a European gigabit society";
- Adapting ePrivacy rules to the new digital environment;
- Helping large and small companies, researchers, citizens and public authorities to make the most of new technologies by ensuring that everyone has the necessary digital skills, and by funding EU research in health and high performance computing.

[16] ps://ec.europa.eu/growth/single-market/digital_it

14. European Network of Maritime Clusters[17]

The European Network of Maritime Clusters is a confederation of Clusters or equivalent structures. It is based on the concept of best practices dissemination and exchange platform through the website, informal talks and an annual summit during which each country gives a brief presentation of the economic situation of its maritime sector and the recent actions of its national organization. All of the member organizations are, or tend to be, cross-industry organizations gathering all or part of the maritime subsectors of their countries.

Main objectives:
The aim is to establish a framework for future common targeted actions.
The type of each national Cluster varies, with some being almost state-controlled or purely private-owned or being an intermediate mix. Some Clusters include inland navigation and or logistic sectors, port industries, coastal tourism, insurance and finance in their scope; others do not.

15. The Barcellona Convention - Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean[18]

The Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) was adopted for the Protection of the Mediterranean Sea. The convention also made provisions for additional legal instruments to be adopted and was soon complemented by the Protocol on pollution from land-based sources (1980), the Protocol concerning Specifically Protected Areas (1982), and the Offshore Protocol (1994).
The 22 Contracting Parties to the Barcelona Convention are: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, and the EU.

Main objectives:
The Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II), which was adopted in 1995, has the following objectives:

- to ensure the sustainable management of natural marine and land resources and to integrate the environment in social and economic development, and land-use policies;
- to protect the marine environment and coastal zones, through prevention of pollution, and by reduction and as far as possible, elimination of pollutant inputs whether chronic or accidental;
- to protect nature, and protect and enhance sites and landscapes of ecological or cultural value;
- to strengthen solidarity amongst Mediterranean coastal states, in managing their common heritage and resources for the benefit of the present and future generations; and
- to contribute to the improvement of the quality of life.

[17] http://enmc.eu/

[18] http://web.unep.org/unepmap/

16. Mediterranean Sea Policy[19]

The central policy framework is still provided by the international Barcelona Convention and associated Mediterranean Action Plan.
In the Mediterranean region, the integrated maritime policy is designed to improve cooperation and governance while also encouraging sustainable growth. It encompasses the following:

- TheWorking Groups for Integrated Maritime Policy in the Mediterranean, involving all the countries bordering on the Mediterranean and regional organisations, which meet annually.
- Tripartite cooperationbetween theEuropean Commission's Directorate-General for Maritime Affairs and Fisheries, theEuropean Investment Bank and the International Maritime Organisation to develop maritime sectors in the Mediterranean, especially in the EU's southern partner countries. Following up this cooperation and the12th FEMIP Conference, the 3 are working together with the secretariat of the Union for the Mediterranean and the countries concerned, on key ideas including
    - developing maritime clusters
    - promoting a network of maritime training institutes and academies
    - developing a virtual knowledge centre for marine and maritime affairs in the Mediterranean.

Main Objectives:
The main objective of the policy is to promote cooperation in order to:

- manage maritime activities,
- protect the marine environment & maritime heritage
- prevent & combat pollution
- improve safety & security at sea
- promote blue growth & job creation.

[19] http://ec.europa.eu/maritimeaffairs/policy/sea_basins/mediterranean_sea/index_en.htm

GLOBAL PROGRAMS/STRATEGIES/POLICY FRAMEWORKS

1. Strategic Plan for Biodiversity 2011-2020; Convention on Biological Diversity[20]

This Plan provides an overarching framework on biodiversity, not only for the biodiversity-related conventions, but for the entire United Nations system and all other partners engaged in biodiversity management and policy development. The rationale for the new plan is that biological diversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being. It provides for food security, human health, the provision of clean air and water; it contributes to local livelihoods, and economic development, and is essential for the achievement of the Millennium Development Goals, including poverty reduction.

Main objectives:
The new plan consists of five strategic goals, including twenty Aichi Biodiversity Targets:
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use;
Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services;
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

2. Transforming our world: the 2030 Agenda for Sustainable Development (2016-2030)[21]

The Agenda calls for action by all countries to achieve 17 Sustainable Development Goals by 2030. These goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

Main objectives:

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls

[20] https://www.cbd.int/convention/

[21] https://www.un.org/sustainabledevelopment/development-agenda/

- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts*
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

3. Ocean Governance The Joint Communication[22]

The Joint Communication is an integral part of the EU's response to the ”United Nations' 2030 Agenda for Sustainable Development, in particular Sustainable Development Goal 14” to conserve and sustainably use the oceans, seas and marine resources . It is based on the political mandate given to Commissioner Vella by President Juncker 'to engage in shaping international ocean governance in the UN, in other multilateral fora and bilaterally with key global partners. The Joint Communication on international ocean governance builds on a widely shared understanding that the ocean governance framework needs to be strengthened, that pressures on the oceans need to be reduced and that the world's oceans must be used sustainably. It also stresses that a better understanding about the oceans is necessary to achieve these objectives.

Main objectives:
The Joint Communication proposes ways the EU can step up and play a stronger role at global and regional level in shaping the way oceans are managed and used. It sets out detailed actions to shape international governance in three priority areas:

- Improving the international ocean governance framework;
- Reducing human pressures on the oceans and creating the conditions for a sustainable blue economy;
- Strengthening international ocean research and data.

[22] https://ec.europa.eu/maritimeaffairs/policy/ocean-governance_en

4. The Maritime Alliance[23]

The Maritime Alliance is the non-profit industry association for the largest BlueTech cluster in the United States and fosters maritime business and BlueTech innovation through collaboration across the U.S. and the world. It focuses on business ecosystem development, economic development and workforce development by bringing together academia, industry and government. It is a membership based organization comprised of some of the world's leading ocean and water technology companies who work together to promote collaboration, innovation and an international Blue Voice. The Maritime Alliance promotes collaboration in the region combined with active national and international outreach.

Main Objectives:
The mission of TMA is "Promoting Sustainable, Science-Based Ocean and Water Industries". TMA serves as an important Blue Voice via unique events, information sharing, national & international outreach, networking, research, and workforce development.

5. Atlantic Strategy[24]

Brings together five countries with Atlantic coastlines (France, Ireland, Portugal, Spain and United Kingdom) at regional, local authority, business and stakeholder levels.

Main Objectives:
The Strategy addresses 5 key areas of challenges and opportunities for the Atlantic Ocean:

- Implementing the ecosystem approach, particularly in respect to fisheries, aquaculture, marine spatial planning and coastal zone management and observation systems;
- Reducing Europe's Carbon Foot Print through offshore renewable energy and associated energy grid; reduction of green house gas emissions from shipping, shifting freight from road to sea (Motorways of the Sea and Short Sea Shipping);
- Sustainable exploitation of the Atlantic seafloor's natural resources, with respect to mineral extraction, use of biodiversity for food, fuel and pharmaceuticals; access to research data;
- Responding to threats and emergencies with respect to maritime safety, natural events, risk assessment, prevention and preparedness, maritime security and surveillance;
- Socially Inclusive Growth with respect to high added value jobs in coastal areas, training for maritime professionals, working conditions for fishermen and seafarers, regional clustering of maritime industries and educational establishments, regeneration via use of tourism.

The priorities of the Action Plan are:

- Priority 1: Promote entrepreneurship and innovation;

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[23] https://maritimealliance.maps.arcgis.com/apps/Cascade/index.html?appid=8a667ebbcab442b5a986cb2cb7b5304f

[24] https://ec.europa.eu/maritimeaffairs/policy/sea_basins/atlantic_ocean_en

- Priority 2: Protect, secure and develop the potential of the Atlantic marine and coastal environment;
- Priority 3: Improve accessibility and connectivity
- Priority 4: Create a socially inclusive and sustainable model of regional development

It should be further noted that the Action Plan makes a link between the funding of these priorities and the European Structural and Investment funds (ESIF). Give the advanced schedule of the Atlantic Strategy, it is possible that it may form a 'blue print', which advises developing sea basin strategies in other areas

6. International Oceanographic Data and Information exchange[25]

The programme "International Oceanographic Data and Information Exchange" (IODE) of the "Intergovernmental Oceanographic Commission" (IOC) of UNESCO was established in 1961. Its purpose is to enhance marine research, exploitation and development, by facilitating the exchange of oceanographic data and information between participating Member States, and by meeting the needs of users for data and information products..

Main Objectives:

The main objectives of the IODE Programme are:

- To facilitate and promote the discovery, exchange of, and access to, marine data and information including metadata, products and information in real-time, near real time and delayed mode, through the use of international standards, and in compliance with the IOC Oceanographic Data Exchange Policy for the ocean research and observation community and other stakeholders;
- To encourage the long term archival, preservation, documentation, management and services of all marine data, data products, and information;
- To develop or use existing best practices for the discovery, management, exchange of, and access to marine data and information, including international standards, quality control and appropriate information technology;
- To assist Member States to acquire the necessary capacity to manage marine research and observation data and information and become partners in the IODE network;
- To support international scientific and operational marine programmes, including the Framework for Ocean Observing for the benefit of a wide range of users.

[25] https://www.iode.org/

7. Global Ocean Ship-Based Hydrographic Investigations Programme (GO-SHIP); Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)[26]

GO-SHIP brings together scientists with interests in physical oceanography, the carbon cycle, marine biogeochemistry and ecosystems, and other users and collectors of hydrographic data to develop a globally coordinated network of sustained hydrographic sections as part of the global ocean/climate observing system. GO-SHIP is a major contributor to and sponsored by the WCRP's Climate Variability and Predictability Experiment (CLIVAR) project and the International Ocean Carbon Coordination Project. GO-SHIP is part of the Global Climate Observing System/ Global Ocean Observing System GCOS/ GOOS.

Main Objectives:
JCOMM coordinates, and develops and recommends standards and procedures for, a fully integrated marine observing, data management and services system that;

- uses state-of-the-art technologies and capabilities;
- is responsive to the evolving needs of all users of marine data and products;
- and includes an outreach programme to enhance the national capacity of all maritime countries.

JCOMM aims to maximize the benefits for its Members/Member States in the projects, programmes and activities that it undertakes in their interest and that of the global community in general.

8. UN Development Program[27]

UNDP works in about 170 countries and territories, helping to achieve the eradication of poverty, and the reduction of inequalities and exclusion. We help countries to develop policies, leadership skills, partnering abilities, institutional capabilities and build resilience in order to sustain development results.

Main objectives:
UNDP focuses on helping countries build and share solutions in three main areas:

- Sustainable development
- Democratic governance and peacebuilding
- Climate and disaster resilience

[26] https://www.jcomm.info/index.php?option=com_oe&task=viewGroupRecord&groupID=295

[27] http://www.undp.org/content/undp/en/home/about-us.html

9. International Ocean Discovery Program, Science Plan 2013-2023[28]

The International Ocean Discovery Program (IODP) is an international marine research collaboration that explores Earth's history and dynamics using ocean-going research platforms to recover data recorded in seafloor sediments and rocks and to monitor subseafloor environments. IODP depends on facilities funded by three platform providers with financial contributions from five additional partner agencies.
ODP expeditions are developed from hypothesis-driven science proposals aligned with the program's "Science Plan Illuminating Earth's Past, Present, and Future" and are carried out in accordance with the program's "Principles of Scientific Investigation".

Main Objectives:
The science plan identifies 14 challenge questions in the four areas of climate change, deep life, planetary dynamics, and geohazards:

1. How does Earth's climate system respond to elevated levels of atmospheric CO2?
2. How do ice sheets and sea level respond to a warming climate?
3. What controls regional patterns of precipitation, such as those associated with monsoons or El Niño?
4. How resilient is the ocean to chemical perturbations?
5. What are the origin, composition, and global significance of deep subseafloor communities?
6. What are the limits of life in the subseafloor realm?
7. How sensitive are ecosystems and biodiversity to environmental change?
8. What are the composition, structure, and dynamics of Earth's upper mantle?
9. How are seafloor spreading and mantle melting linked to ocean crustal architecture?
10. What are the mechanisms, magnitude, and history of chemical exchanges between the oceanic crust and seawater?
11. How do subduction zones initiate, cycle volatiles, and generate continental crust?
12. What mechanisms control the occurrence of destructive earthquakes, landslides, and tsunami?
13. What properties and processes govern the flow and storage of carbon in the subseafloor?
14. How do fluids link subseafloor tectonic, thermal, and biogeochemical processes?

[28] https://www.iodp.org/about-iodp/iodp-science-plan-2013-2023