



# **Study to support investment for the sustainable development of the Blue Economy**

Service Request No EASME/EMFF/2017/038

Competitive Multiple Framework Service  
Contracts for the provision of *Studies related to the future development of Cohesion Policy and the ESI Funds (Lot 3)*

D13b – Literature Review

September – 2018



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**EUROPEAN COMMISSION**

Executive Agency for Small and Medium-sized Enterprises (EASME)  
Unit A3 - EMFF

*European Commission  
B-1049 Brussels*

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## Executive summary

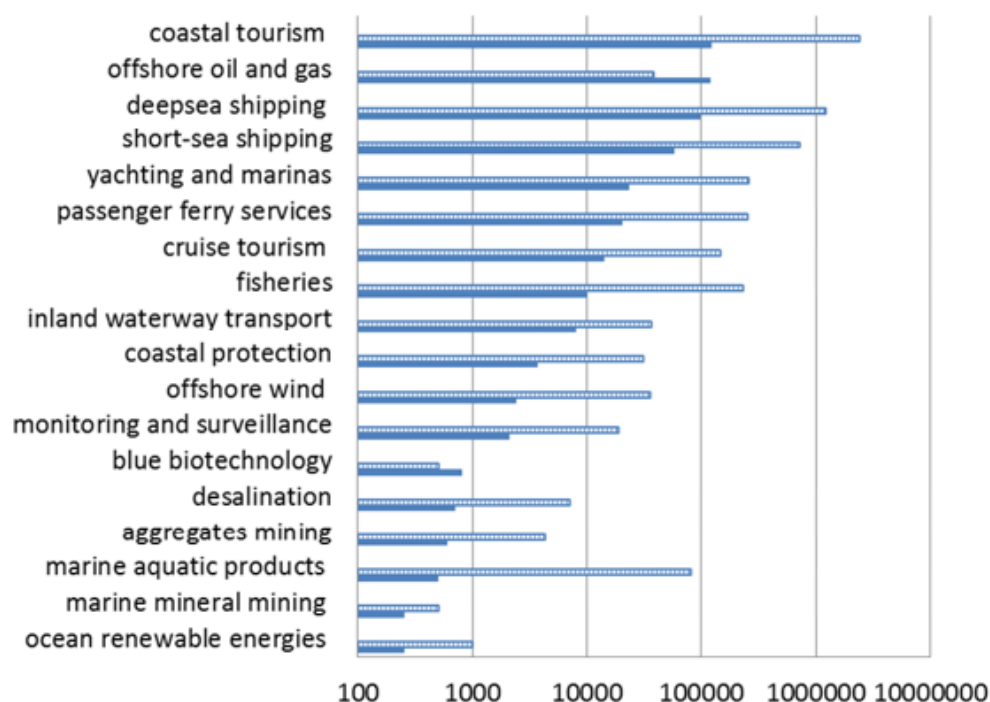
The report includes the overview of the literature for Service Request EASME/EMFF/2017/038 “Study to support investment for the sustainable development of the blue economy”.



### Blue economy

The overall impact of blue economy is very significant including gross value added (GVA) of **500 billion EUR per year** and total employment in EU's of **5,400,000 jobs**. In the graph below different blue economy sectors are presented, where the first line presents information about employment and the second line presents gross value added.

Figure 1. Employment and gross value added of blue economy sectors



Depending on the sector there is a different impact on employment and gross value. The main blue growth sectors from the list above are:

- **Maritime, coastal and cruise tourism** has now become the largest single maritime economic activity, employing 2.35 million people, equivalent to 1.1% of total EU employment. Coastal and maritime tourism is one of the five sources of new jobs and growth in blue economy.
- **Blue energy** – in 2011 off-shore wind energy accounted for 10% of installed capacity, employed 35 000 people directly and indirectly across Europe and represented €2.4 billion in annual investments in Aquaculture.
- **Aquaculture** – more than 90% of aquaculture businesses in the EU are SMEs, providing around 80 000 jobs. The aquaculture production in 2012 was 3.365 billion EUR and return on investment 7%.
- **Marine mineral resources** - global annual turnover of marine mineral mining can be expected to grow from virtually nothing to €5 billion in the next 10 years and up to €10 billion by 2030.

- **Blue biotechnology** - while estimated current employment in the sector in Europe is still relatively low and a gross value added of €0.8 billion, the growth of the sector will offer high-skilled employment.

The blue economy activities depending on the sector could be divided in mature economic activities; growth stage activities; and pre-development activities. The list of main economic activities according to growth potential is included below.

Table 1. *Main economic activities*

Mature economic activities	Growth stage activities	Pre-development activities
Short-sea shipping	Marine aquatic products	Blue biotechnology
Offshore oil and gas	Offshore wind	Ocean renewable energy
Coastal tourism	Cruise shipping	Marine minerals mining
Coastal protection	Maritime monitoring and surveillance	



## Blue economy growth

The main blue growth sectors were provided in the table above but in order to achieve the planned growth factors enabling blue growth should be considered. Some of the main development factors and proposed responses are presented in the table below.

Table 2. *Main development factors and proposed responses*

Enabler	Proposed response and actions taken
<b>Marine Data</b>	Marine data are held by public and private companies and the objective is to make data more interoperable and to have a better use of data available. The main initiatives are Copernicus Marine Environment Monitoring Service (CMEMS); Data Collection Framework; European Marine Observation and Data Network (EMODnet).
<b>Maritime Spatial Planning</b>	Spatial planning to be used to facilitate wind energy development.
<b>Environment Protection</b>	Member states will take measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. The key document is Marine Strategy Framework Directive.
<b>Skills Development</b>	Innovation and research financed via Horizon2020 and Knowledge and Innovation Communities.
<b>Maritime Security</b>	The main objective is to detect and react to illegal or dangerous activities at sea.
<b>Marine and Maritime Research</b>	Financed by Horizon2020.

The planned growth also will be achieved by developing and implementing sea basin strategies, cooperation supported by regional initiatives; working with stakeholders; developing maritime clusters; applying smart specialisation principles and ensuring international cooperation.

One of the most important growth factors is sufficient financing available and the main financial sources are described below.



## Blue economy financing

Blue economy growth is financed via grants and different financial instruments. For the programming period 2014-2020 the largest grant provider is European Structural and Investment Funds with dedicated financing to blue growth amounting to EUR 5.5. billion

from ERDF, EUR 2 billion from European Maritime and Fisheries Fund (EMFF) and EUR 2 billion from Cohesion Fund (CF). Innovative projects are financed via Horizon 2020 (EUR 260 million) and EU Finance for Innovation. Connecting Europe Facility (CEF) supports Motorways of the Sea Policy actions (360 million) and Competitiveness of Enterprises and Small and Medium Size Enterprises (COSME) supports entrepreneurship. EU grant instrument LIFE related to environment project financing is not widely used.

For the programming period 2021-2027 the budget discussions just started with draft budget announced on 2<sup>nd</sup> of May, 2018 but based on the initial budget subject to further discussions and approval by the Member States there is significant funding allocated to EFSI and Horizon 2020.

Some of the blue economy sectors need capital-intensive infrastructure and the demand for risk financing is high. The required financing could be ensured by European Fund for Structural Investments (EFSI) where project advice could be received from the European Investment Advisory Hub and project ideas placed at the European Investment Project Portal. Following the update of EFSI Regulation the total planned EFSI financing for different economic sectors is 500 billion EUR. More detailed information about financing options available is presented in the table below.

Table 3. Funding source and proposed response

Funding Source	Proposed response and actions taken
<b>European Structural and Investment Funds (ESIF) programming period 2014 - 2020</b>	<p><b>EMFF</b> is specifically tailored to Europe's seas and coasts – <b>EUR 6.4 billion</b> for the programming period 2014-2020. Four priorities amounting to <b>EUR 2 billion directly relates to blue growth</b>. From the <b>European Regional and Development Fund (ERDF) EUR 5.5 billion are allocated to blue economy</b>. The CF has allocated more than EUR 2 billion to blue growth projects. The <b>European Social Fund (ESF)</b> is contributing to more training and setting-up of schools specialized in marine.</p>
<b>Financing Innovation</b>	<p><b>Horizon2020</b> contribution amounts to EUR 260 million. The Commission together with the EIB Group launched “<b>InnovFin – EU Finance for Innovations</b>” with support rate up to 50 %. <b>NER300</b> programme supports innovative low-carbon energy demonstration project.</p>
<b>Connecting Europe Facility (CEF), Competitiveness of Enterprises and Small and Medium Size Enterprises (COSME)</b>	<p><b>CEF</b> supports blue growth via “Motorways of the Sea” Policy by focusing on environmental projects related to port infrastructure and training activities. In the last 2 years, the Commission has granted a total of nearly <b>EUR 360 million</b> to 40 actions, which has triggered a European-wide investment of EUR 965 million. Green Shipping Guarantee Programme is intended to provide guarantees to activities related to sustainable shipping. Project example provided. <b>COSME</b> aims to promote entrepreneurship and improve the business environment for SMEs. So far, three projects related to Blue Growth and promoting sustainable maritime tourism have been supported with a budget of nearly <b>EUR 617 500</b>.</p>
<b>LIFE+</b>	<p>The number of LIFE projects that have a marine element is quite low overall currently 32 projects implemented with a total European contribution of <b>EUR 34.6 million</b>.</p>
<b>Risk financing through investment platform for Europe</b>	<p>In the blue economy, the need for capital-intensive infrastructure and the demand for risk financing are high. The European offshore wind energy industry alone needs to attract between <b>EUR 90 billion and EUR 123 billion by 2020</b>. The investment needs are to reduce the investment risk in scaling up emerging sectors, enabling infrastructure, green infrastructure and others. Three Investment Plans for Europe pillars are: mobilizing finance via EFSI; European Investment Advisory Hub and European Investment Project Portal; improving the investment environment.</p>



## Communication platforms

The different communication platforms available serve different purpose including:

- **Information exchange** about materials available, upcoming events and thought leadership material. As examples could be mentioned Maritime Affairs web page, the European Cluster Collaboration Platform.
- **Linking different blue growth sector players**, for instance, Blue Bio-economy Forum (to be established), Ocean Energy Forum, Maritime Forum.
- **Linking different industrial and researchers groups**, for instance, Global Entrepreneurship Hub, EU Science hub.
- **Investment platforms**, for instance, Marine Investment for Blue Economy, the European Investment Project Portal, EIF-NPI Equity Platform.

## 1 Introduction

The report includes the literature overview in relation to Service Request EASME/EMFF/2017/038 "Study to support investment for the sustainable development of the blue economy". The report has been prepared in the time period April, 2018 – May, 2018 and provides only high level overview on information available about blue growth in different studies and EC documents.

Each subchapter includes information on a separate data source - report / document / study with a reference made to the document analysed at the beginning of sub-chapter followed by the most important information from the data source. The subchapter is concluded with the recommendation how data included in the report could be used for the Service Request study.

**Structure of the Report.** The report is structured under the following four main chapters.



**Blue Economy** – providing an overview of the main sectors of Blue Economy, information about some selected subsectors and economic data characterising those sectors. The reports analysed include EC Communication Reports, web pages, JRC Technical documents and different studies done by external consultants. The chapter includes an overview of blue economy and detailed analysis about the following sectors: **nautical tourism, maritime and coastal tourism, biotechnology and aquaculture**. According to different studies there are five main innovative, high-potential maritime sectors: blue energy, aquaculture; coastal and maritime tourism; blue biotechnology; and sea-bed mining.



**Blue Economy Development** – providing information about Blue Economy development activities. The reports analysed include different studies, JRC Technical documents and Commission Staff Working Documents. The analysis includes information about **blue growth followed by growth strategy for five main blue growth sectors and smart specialisation**. Development strategies are also described in the **maritime clusters development, sea basin cooperation, blue growth for the Baltic Sea Region, blue growth within the North Sea Region and English Channel and Marine Investment for Blue Economy**.



**Access to Finance** includes information about blue economy financing principles, principles of sustainable investment in blue economy, process for analyzing maritime economy data, finance conditions for investments in blue economy. Information about different **investment platforms**, including European Investment Project Portal, Marine Bio-economy Forum, Seal of Excellence, Atlantic Action Plan. Information mostly is based on the data available in different web pages and presentations.



**Communications Platforms** including information about different web based platforms where industry participants can exchange their views, receive information about upcoming events, potential investors and other relevant information.

### Report Limitations

The review includes reports highlighted in the Technical Specification, however there are other reports relevant to this study. Only the main information included in the studied reports is provided, for more detailed information, original documents to be consulted

## 2 Blue Economy

### 2.1 Overview of blue economy

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

Blue Growth opportunities for marine and maritime sustainable growth (2012, 12 pages)<sup>1</sup>, Brussels, 13.9.2012 COM (2012) 494 final

**Related material** – Innovation in the Blue Economy: realising the potential of our seas and oceans for jobs and growth (2014)<sup>2</sup> – not analysed in detail. Brochure on Blue Economy with main sectors and data on employment and growth.<sup>3</sup>

The EC Communication document provides an overview of EU blue economy, including definition and information about employment and gross value added; examples from different Member States about projects related to blue economy; information about on-going EU initiatives, including regulatory framework and different actions; and blue growth focus areas.



#### Definition of blue economy

The individual sectors of the blue economy are interdependent, depending on others using the sea sustainably. They rely on common skills and shared infrastructure such as ports and electricity distribution networks. The overall impact of blue economy is gross value added (GVA) – **500 billion EUR per year** and total employment in EU's blue economy **5,400,000 jobs**.

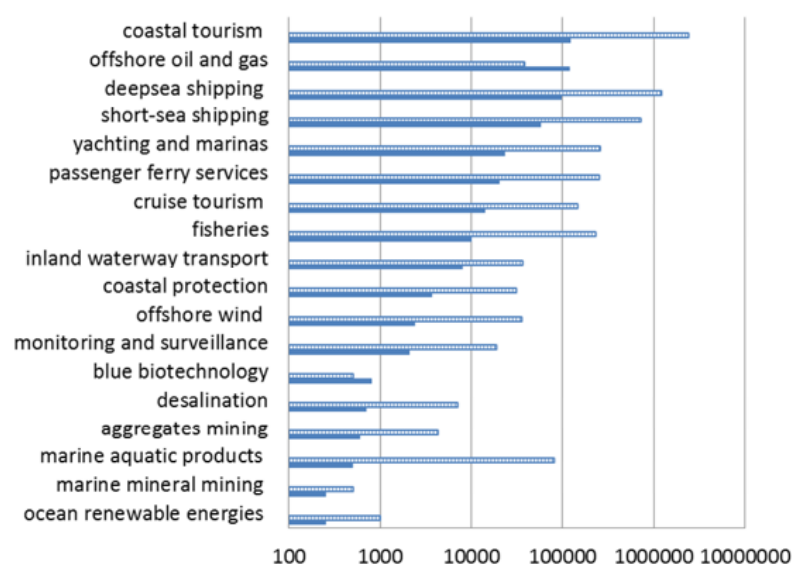
In the graph below different blue economy sectors are presented, where the first line presents information about employment and the second line presents gross value added.

<sup>1</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/com\\_2012\\_494\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/com_2012_494_en.pdf)

<sup>2</sup> [http://cor.europa.eu/en/activities/stakeholders/Documents/COM\(2014\)254%20final.pdf](http://cor.europa.eu/en/activities/stakeholders/Documents/COM(2014)254%20final.pdf)

<sup>3</sup> <https://blueeconomyfund.com/wp-content/uploads/2018/01/Infographics-Blue-Growth-Maritime-Affairs-European-Commission.pdf>

Figure 2. *Employment and Gross value added of Blue Economy Sectors*



**Applicability to the Study** – to verify that potential future projects have been identified for all subsectors and the number and size of potential projects correspond to the size of sub-sector.



### Blue growth focus areas

In addition to the definition of blue economy the document presents the main blue growth areas which are in some cases grouped differently as in blue economy definition. The main blue growth focus areas are described below.

**Blue energy** – in 2011 off-shore wind energy accounted for 10% of installed capacity, employed 35 000 people directly and indirectly across Europe and represented €2.4 billion in annual investments in Aquaculture.

**Aquaculture** – more than 90% of aquaculture businesses in the EU are SMEs, providing around 80 000 jobs.

**Maritime, coastal and cruise tourism** – the maritime and coastal tourism sub-sector has now become the largest single maritime economic activity, employing 2.35 million people, equivalent to 1.1% of total EU employment.

**Marine mineral resources** - global annual turnover of marine mineral mining can be expected to grow from virtually nothing to €5 billion in the next 10 years and up to €10 billion by 2030.

**Blue biotechnology** - while estimated current employment in the sector in Europe is still relatively low, and a gross value added of €0.8 billion, the growth of the sector will offer high-skilled employment.

**Applicability to the Study** – to verify that potential future projects have been identified for all blue growth focus areas.



### Member States strategic investments

The document also provides examples of Member States strategic investments with one of the most important initiatives being **Member States maritime clusters** – groupings of larger industries, smaller suppliers and educational establishments that reinforce each

other through their close proximity. The examples of Member States strategic investment initiatives are presented below.

**Ireland** – INFOMAR programme for refurbishing of the Bremerhaven port

**Venice** – 8 billion EUR MOSE project aimed at protecting the city of Venice from floods

**UK** – London Gateway with 1.5 billion EUR investment reducing carbon emissions by bringing containers nearer to their final destination

**Scotland** – offshore energy industry

**France** – Brest is the largest maritime cluster

**Belgium** – Ostend has made land and quays available for renewable energy companies close to research institutes

**Applicability to the Study** – the project examples could be used for the new project identification to better understand the potential of blue growth projects.



### The main drivers and challenges

The document provides an overview of the main drivers and challenges, including, centres for new ideas and innovation; rapid technological progress in working offshore in ever-deeper waters; land and freshwater are finite resources; and the need to reduce greenhouse gas emissions.

**Applicability to the Study** – the main drivers and challenges could be used to identify new project ideas.

## 2.2 Maritime Affairs

**Maritime Affairs – Blue Growth web page**<sup>4</sup>



The web page provides information about all main maritime sectors.

### Aquaculture

Farming finfish, shellfish and aquatic plants is one of the world's fastest growing food sectors; it already provides the planet with about half of all the fish we eat. In Europe, aquaculture accounts for about 20% of fish production and directly **employs some 85 000 people**. The sector is mainly composed of **SMEs or micro-enterprises in coastal and rural areas**. EU aquaculture is renowned for its high quality, sustainability and consumer protection standards. EU overall output has been more or less constant in volume since 2000 whereas global production, at the same time, has been **growing by nearly 7% per year**.

The Commission intends to boost the aquaculture sector through the Common Fisheries Policy Reform, and in 2013 published **Strategic Guidelines** presenting common priorities and general objectives at EU level. Four priority areas were identified in consultation with all relevant stakeholders: **reducing administrative burdens; improving access to space and water; increasing competitiveness; exploiting competitive advantages due to high quality, health and environmental standards**.

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<sup>4</sup> [https://ec.europa.eu/maritimeaffairs/policy/blue\\_growth/](https://ec.europa.eu/maritimeaffairs/policy/blue_growth/)



### **Coastal and maritime tourism**

The extraordinary beauty, cultural wealth and great diversity of EU's coastal areas have made them the preferred destination for many holidaymakers in Europe and abroad, making coastal and maritime tourism an **important tourism sector**. **Employing over 3.2 million people**, this sector generates a total of **€ 183 billion** in gross value added and representing **over one third of the maritime economy**. As much as 51% of bed capacity in hotels across Europe is concentrated in regions with a sea border.

As part of EU's Blue Growth strategy, the coastal and maritime tourism sector has been identified as an area with **special potential to foster a smart, sustainable and inclusive Europe**. It is the biggest maritime sector in terms of gross value added and employment and, is expected to **grow by 2-3% by 2020**. In 2012, Cruise tourism alone represents **330,000 jobs and a direct turnover of €15.5 billion and is expected to grow**.

### **Blue biotechnology**

Blue biotechnology is concerned with the exploration and exploitation of the resulting diverse marine organisms in order to develop new products. Exploration of the sea biodiversity could enable to develop new pharmaceuticals or industrial enzymes that can withstand extreme conditions, and which consequently have high economic value. In the long term, it is expected that the sector will offer high-skilled employment and significant downstream opportunities.

### **Ocean energy**

Seas and oceans offer a vast renewable energy resource, particularly, but not only, along the Atlantic seaboard. Ocean energy technologies are currently being developed to exploit the potential of tides and waves as well as differences in temperature and salinity.

The development of this emerging sector would not only help us to achieve our renewable energy and greenhouse gas reduction targets, but it could fuel economic growth through innovation and create new, high-quality jobs.

### **Seabed mining**

The quantity of minerals occupying the ocean floor is potentially large. Seabed mining is concerned with the retrieval of these minerals to: ensure security of supply; and fill a gap in the market where either recycling is not possible or adequate, or the burden on terrestrial mines is too great. Numerous organisations within the EU are presently engaged in seabed mining activities, both as technology providers and as mine operators. The sector, though small, has been identified as having the potential.

**Applicability to the Study** – the web page could be used to identify additional studies and information about different blue growth sectors.

## **2.3 Maritime and coastal tourism**

### **Study in support of policy measures for maritime and coastal tourism at EU Level (2013, 161 pages)<sup>5</sup>**

**Written by Ecorys, MRAC, S.PRO**

The purpose of the study was to develop a precise definition of maritime and coastal tourism; identify, verify and substantiate the problems; analyse the existing regulatory framework; complement and complete – where possible - data gaps that are important in light of the development of policy packages; suggest policy objectives and support the operationalisation of policy actions; analyse economic, social and environmental

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<sup>5</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/study-maritime-and-coastal-tourism\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/study-maritime-and-coastal-tourism_en.pdf)

impacts; provide policy recommendations; outline possible monitoring and evaluation arrangements.

The report includes information about importance of coastal and maritime tourism, the analysis of EU level problems, analysis of priority axis including enhancement of competitiveness; addressing seasonality and accessibility; strengthening sustainability; promoting skills, innovation and access to resources and impact assessment of the proposed policy actions. The study also provides information about sectors value chain and key performance data, for instance, employment and gross value.



## Definitions and main challenges

**Maritime tourism** covers tourism that is largely water-based rather than land-based (e.g. boating, yachting, cruising, nautical sports), but includes the operation of landside facilities, manufacturing of equipment, and services necessary for this segment of tourism.

**Coastal tourism** covers beach-based recreation and tourism (e.g. swimming, surfing, sun bathing), and non-beach related land-based tourism in the coastal area (all other tourism and recreation activities that take place in the coastal area for which the proximity of the sea is a condition), as well as the supplies and manufacturing industries associated to these activities. **The main challenges** are reflected in the table below.

Table 4. Main challenges

<b>Volatility of demand through years and seasons poses economic challenges</b>	Volatility of EU demand is particularly high for maritime and coastal tourism; seasonality is particularly high if compared to other touristic destinations; mobile high-spending tourists are increasingly attracted by global destinations; growing global demand: BRICs visitors as an opportunity and a challenge; cruise demand increases in size but remains volatile.
<b>Response capacity is limited: a fragmented and uncoordinated sector</b>	Fragmented and uncoordinated sector; enduring squeeze of profitability can have knock-on effects on capability to invest; cruise destinations face hurdles in generating and capturing value; limited capability to capture non-EU demand; non-EU demand can further increase volatility; mass tourism business model in crisis; fragmentation and lack of cooperation hinder unlocking of potential; fragmented and limited EU-level data hinder the thoroughness of analysis.
<b>Enduring problems in accessibility and visibility</b>	Limited connectivity especially of islands; lack of integrated transport modal means limited accessibility of foreign demand; larger size of cruise ships limits accessibility of ports; limited land-side accessibility; hurdles for less mobile tourists and cruise passengers; limited visibility neutralises potential appeal to foreign and non-EU visitors.
<b>Current business models are posing growing environmental and social concerns</b>	The “sun and beach” mass-tourism model externalises increasing pressures on the environment; a thorough waste management control for cruise ships is essential to prevent environmental disasters; current coastal tourism business models are often posing pressure on local communities and cultures; environmental deterioration due to unsustainable models affects future tourism potential; limited awareness of the specific skill needs in the sector.
<b>A structural lack of skills is limiting innovation and access to resources</b>	Limited awareness of the specific skill needs in the sector; shortage of marketing and other skills required for product diversification; limited spill-overs of existing knowledge to local actors; a sector with limited appeal on the labour market .

To address the challenges identified the following action steps are suggested: **enhance competitiveness; address seasonality and accessibility; strengthen sustainability; promote skills, innovation and access to resources.**

**Applicability to the Study** – to assess if the projects address the problems identified.

## 2.4 Growth and jobs in Coastal and maritime tourism

### A European Strategy for more Growth and Jobs in Coastal and Maritime Tourism, 2014, COM (2014) 86 final



The Blue Growth Communication of 2012 listed coastal and maritime tourism as one of five focus areas for delivering sustainable growth and jobs in the blue economy. It employs almost **3.2 million people**, generating a total of **€ 183 billion in gross value added** and representing over **one third of the maritime economy**. More than four out of nine nights spent in accommodation establishments in the EU are spent in coastal areas. In 2012 **crui se tourism** alone generated a direct turnover of **€ 15.5 billion and employed 330,000 people**; European ports had 29.3 million passenger visits, a 75% over 2006<sup>6</sup>. Half of European coastal tourism's jobs and value added are located in the Mediterranean, but the Atlantic, Baltic and Black Sea regions have significant shares too. Attracting more than one third of all tourism business in Europe, coastal areas are important for growth and jobs, in particular for young people, since 45% of tourism workers are between 16 and 35 years old.

The main challenges are to **stimulate performance and competitiveness**, address the data gaps to improve planning and destination management; to manage tourism demand fluctuations greatly due to changing economic, financial and political situations. Moreover, a decrease in transport costs has increased competition between European coasts and low-cost destinations worldwide, adding to the volatility of demand. The Commission recently revised the Visa Code and proposed to simplify procedures for non-European travellers. In addition, coastal and maritime tourism concerns should be addressed in the on-going "Senior" and "Accessibility" initiatives and in the "European Destinations of Excellence"<sup>7</sup>. Communication and promotion initiatives targeting specific non-European countries could also be developed.

Due to the continuing economic crisis most tourism **SMEs have limited or no access to credit for investments and innovation**. This is partly because businesses across EU sea basins do not sufficiently use synergies, which causes fragmentation and limited economic gain. There will be a 'blue jobs' section in the EURES Portal, which provides information for jobseekers and employers. Quality of service is an essential source of competitive distinction. It is therefore important to ensure that tourists can rely on high-quality services across the EU and that this quality is consistently assessed. A recent proposal on European Tourism Quality principles aims to increase consumer security and confidence in tourism services.

**Applicability to the Study** – to assess if the projects address the problems identified.

## 2.5 Nautical tourism

### Assessment of the Impact of Business Development Improvements around Nautical tourism, Final Report (2016, 280 pages)<sup>8</sup>

Written by ICF in association with Deloitte, Marine South East, Sea Teach, IEEP

<sup>6</sup> Cruise Lines International Association "The Cruise Industry", 2013 edition  
[http://www.senato.it/application/xmanager/projects/leg17/attachments/documento\\_evento\\_procedura\\_commissione/files/000/000/632/Documentazione\\_Clia\\_Europe.pdf](http://www.senato.it/application/xmanager/projects/leg17/attachments/documento_evento_procedura_commissione/files/000/000/632/Documentazione_Clia_Europe.pdf)

<sup>7</sup> [http://ec.europa.eu/enterprise/sectors/tourism/eden/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/tourism/eden/index_en.htm)

<sup>8</sup> [https://www.researchgate.net/profile/Rupert\\_Haines2/publication/316551681\\_Assessment\\_of\\_the\\_Impact\\_of\\_Business\\_Development\\_Improvements\\_around\\_Nautical\\_Tourism/links/590357954585152d2e92e949/Assessment-of-the-Impact-of-Business-Development-Improvements-around-Nautical-Tourism.pdf](https://www.researchgate.net/profile/Rupert_Haines2/publication/316551681_Assessment_of_the_Impact_of_Business_Development_Improvements_around_Nautical_Tourism/links/590357954585152d2e92e949/Assessment-of-the-Impact-of-Business-Development-Improvements-around-Nautical-Tourism.pdf)

**Related material** - "A European Strategy for more Growth and Jobs in Coastal and Maritime Tourism (2014)"<sup>9</sup> – not analysed in detail.

The purpose of the study was to identify issues affecting the nautical tourism sector that could benefit from action at EU level, specify options for such interventions and assess their likely impacts. The report includes an overview of nautical tourism; strategic problems analysis and baseline scenario; justification for EU action; and strategic investment option assessment. The report also includes technical data on professional skipper licences; private skipper licences; on-board safety equipment; satellite applications; marinas and boating; combined products; and boat recycling.



### **Nautical tourism sector overview**

**Nautical tourism** is a subsector of coastal and maritime tourism, which is promoted as an important source of job creation and growth in the Blue Economy. In its 2012 Communication on Blue Growth the Commission identified coastal and maritime tourism as one of the five sources of new jobs and growth in the Blue Economy. Equipment repair, boat charter, marinas – accounts for half of annual revenue. The key facts characterizing nautical tourism are:

The main countries – **23 out of 28 Member States** has coastal line

Total employment in the sector **200,000 – 234,000**

The total annual revenues – **20 – 28 billion EUR**

Gross value added (GVA) – **183 billion EUR**

Number of enterprises involved in the sector **12,000 – 14,000**

**Applicability to the Study** – to verify that identified new projects sufficiently cover the sector taking into the sector relevance to blue growth.



### **The main challenges /proposed areas of intervention**

The document includes an overview of the main sub-sector which mostly relate to the technical development of subsector and where EU intervention could be needed, for instance, Inhibiting growth of nautical tourism in Europe; having negative impact on environment; creating barriers to access to recreational boating as a leisure activity; professional and private skipper qualifications; on-board safety equipment; satellite applications; marinas and combined tourism products; and end of life boats (ELB).

**Applicability to the Study** – to verify that identified new projects sufficiently cover the sector taking into the sector relevance to blue growth.

## **2.6 Aquaculture Sector**

### **JRC Scientific and Policy Reports. The Economic Performance of the EU Aquaculture Sector (period 2008 – 2012, 444 pages)**<sup>10</sup>

The report focuses on the performance of aquaculture sector and provides an overview of the structure, social, economic and competitive performance of aquaculture sector at national and EU level. The data covers the period from 2008 to 2012 including detailed information. The report includes aquaculture sector overview, the structure of the EU

<sup>9</sup> The 2014 Commission Communication "A European strategy for more Growth and jobs in Coastal and Maritime Tourism" (the CMT strategy)

<sup>10</sup> [https://stecf.jrc.ec.europa.eu/documents/43805/839433/2014-11\\_STECF+14-18+-+EU+Aquaculture+sector\\_JRCxxx.pdf](https://stecf.jrc.ec.europa.eu/documents/43805/839433/2014-11_STECF+14-18+-+EU+Aquaculture+sector_JRCxxx.pdf)

aquaculture sector (analysis by main products – by type of fish), national chapters about 27 Member States (Croatia excluded as prepared for period 2018 – 2012) including information about production volume, value and main segments, areas for growth in the EU aquaculture sector.

**Applicability to the Study** – national chapters can be used to get supporting facts for projects identified.



### **Aquaculture sector overview**

The report provides an overview of aquaculture sector including large volume of statistical data for 2008 – 2012 about different subsectors, type of fish, seas, Member States, etc. It also includes an analysis of statistical data and identification of tendencies affecting the sectors. The data included – number of enterprises, production and sales, employment, wages, gross value added, return of investment, productivity, future expectation indicator. The main data characterising the sector are as follows:

EU is the largest market for the fish in the world

Aquaculture production in 2012 – **3.365 billion EUR**

The total turnover in 2012 - **4.365 billion EUR**

Return on Investment **7 %**

The main producer countries - **Spain, UK, France, Greece** making up to 70 % of volume

Total employment in the sector **69,000 – 80,000**

Number of enterprises involved in the sector **12,000 – 14,000**

The main products - **Marine** - 179 million Earnings Before Interest & Taxes (EBIT); **Shellfish** - 130 million EBIT; **Freshwater production** - 32.6 million EBIT

**Applicability to the Study** – the identified project list could be verified based on the size of the sector, and main producer countries to ensure that they are sufficiently covered.



### **The main challenges**

The report includes information about main challenges which in many cases are operational and only few relates to regulatory framework. The examples of main challenges include specialisation; economies of scale; vertical integration; need to increase the size of farm; increase knowledge about the existing aquaculture production; sophisticated technologies needed in North of Europe; environmental regulations; licensing process; and **lack of credit financing in the Mediterranean countries.**

**Applicability to the Study** – to follow-up on the issue identified – lack of credit financing in the Mediterranean countries.

## 2.7 Biotechnology Sector

### Ecorys, MRAC, S.PRO. Study in support of Impact Assessment work on Biotechnology (2014, 234 pages)<sup>11</sup>

This study was conducted in support of the development of potential policy options for the EU and a possible impact assessment for marine or Blue Biotechnology as it can be termed in the context of furthering the aims of Blue Growth. In addition, a database of stakeholders in Blue Biotechnology has been developed. The purpose of the study was to identify, verify and substantiate the problems; analyse the existing regulatory framework; complement and complete – where possible- data gaps that are important in light of the development of policy packages; suggest policy objectives and support the operationalisation of policy actions; analyse economic, social and environmental impacts; provide policy recommendations; outline possible monitoring and evaluation arrangements. The report provides information on the sector value chain, economic data, SMEs.



#### Definition and sector characteristics

**Marine biotechnology** is the use of marine bio-resources as the target or source of biotechnological applications; marine resources are used to develop products or services. **The main sector characteristics** are reflected in the table below.

Table 5. Main sector characteristics

<b>Sectors</b>	Main sectors health, cosmetics, food, energy, aquaculture, environmental services
<b>Socio-economic indicators</b>	Maximum number of employees 39,750. EUs Bio-economy sector that values the sector at EUR 2 trillion and identifies the sector as supporting 22 million jobs, then a simple estimate is that each job in the biotechnology sector is worth some EUR 91 000.
<b>Key enabling technologies</b>	Industrial biotechnology. Research financed by Horizon2020.
<b>Capital</b>	Information about four main types of capital provided: IPOs, Follow-on, debt, and venture.
<b>The role of SMEs</b>	Limited information available
<b>Opportunities and constrains for SMEs</b>	Horizon2020 programme
<b>Products and services already in use</b>	Table with examples provided
<b>Drivers in the blue biotechnology sector</b>	Drivers identified per sub-sector
<b>Barriers to blue biotechnology</b>	Coordination, finance, knowledge, regulatory, policy, access to resources, supply, etc.
<b>Stakeholder coordination</b>	ERA-NET; EU Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI-OCEANS); CSA MarineBiotech; The Knowledge Based Bio-Economy Network (KBBE-NET); European Technology Platforms (ETPs); EuroMarine; Marine Genomics for Users (MG4U); EUR-OCEANS Consortium (EOC); MarineKIC Initiative
<b>Clusters and other national networks</b>	Information about national networks provided – France, Norway, Spain, UK, Belgium, Denmark, Germany and Iceland. For instance, France, ALLENI Groupe Mer; Biogenouest; CapBiotek - Regional Cluster in Biotechnologies in Brittany; Atlanpole Blue Cluster - Regional Cluster in Biotechnologies in Pays de la Loire; Pole Mer Bretagne - Global economic competitiveness cluster in Brittany; Pole Mer PACA - Global economic competitiveness

<sup>11</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/study-blue-biotechnology\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/study-blue-biotechnology_en.pdf)

cluster in Provence-Alpes-Côte d'Azur; Europole Mer "Blue Network"

To address the challenges identified the following action steps are suggested: **enhance cooperation between research, SMEs and upscale businesses at an EU level; promote integration of knowledge and exploratory infrastructure; facilitate access to finance for second and third rounds of product development; improve clarity and completeness of legal framework.**

**Applicability to the Study** – to use national networks to identify new projects and promote project ideas.

### 3 Blue Economy Development

#### 3.1 Blue Growth

##### Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts (2012, 202 pages)<sup>12</sup>

##### Written by Ecorys, Deltares, Oceanic Development



The main aim of the Blue Growth project was to provide policy-makers at EU and sea basin level with a comprehensive, robust and consistent analysis of possible future policy options to support smart, sustainable and inclusive growth from the oceans, seas and coasts. The report includes information about importance of maritime economic activities; the future potential of blue growth; analysis of sea basins (for instance, Baltic Sea, North Sea, Black Sea); synergies and tensions; Clusters (for instance, Ireland, Gulf of Venice, Gdansk, Oostende); areas of intervention and policy rationale. Indicative size of maritime economic activities (page 35) is provided and analysis of gross value added. It also includes different project examples from FP7 and FP6 in relation on R&D activities.

**Applicability to the Study** – information about different growth factors and estimates could be used to identify new project ideas or to verify the existing.



##### Policy actions

The document includes information about suggested policy actions in order to further ensure Blue Growth. Some of the actions relate to anticipation of maritime skills needed; fostering integrated local development; stimulating public engagement; promoting maritime spatial planning; providing maritime cluster support. The most relevant proposed policy actions for the study could be promotion of maritime Research & Development; boost access to finance - to foster maritime economic actors in the pre-development stage; investing in smart infrastructure.



##### Economic activities

The report includes information about different economic activities which are grouped in mature, growth and pre-development activities. The list of main economic activities is provided in the table below.

Table 6. List of main economic activities

Mature economic activities	Growth stage activities	Pre-development activities
Short-sea shipping	Marine aquatic products	Blue biotechnology
Offshore oil and gas	Offshore wind	Ocean renewable energy
Coastal tourism	Cruise shipping	Marine minerals mining
Coastal protection	Maritime monitoring and surveillance	

The report also includes practical suggestions how to boost economic activities, for instance, cooperation with upstream and downstream suppliers; commercial exploitation of technological capacity; synergies between different subsectors. The size of different economic activities and growth rates are provided (page 42).

<sup>12</sup> <https://webgate.ec.europa.eu/maritimeforum/system/files/Blue%20Growth%20Final%20Report%2013092012.pdf>



**Applicability to the Study** – when assessing the potential project ideas to analyse to which economic activity stage do they belong and verify that there is a sufficient number of project ideas from growth stage activities and how pre-development activities are financed.



### Boost access to finance

The study also highlights the necessity for sufficient funding to finance growth activities and includes information about potential sources of financing including European Maritime and Fisheries Fund (EMFF); European Regional Development Fund (ERDF); European Social Fund (ESF); Horizon 2020 for the pre-development stage activities, especially for the demonstration projects; European Investment Bank (EIB) financial support mechanisms. Additional access to finance activities, include financial guarantees under EU programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME), EIB loans, EIB operation of its Risk Sharing Finance Facility.

**Applicability to the Study** – to verify which of the financing sources are applicable to the study by taking into account that planning for the programming period 2014-2020 has been finalised and many projects have been completed or are under implementation and new Multi Annual Financial Framework has not been approved yet.

## 3.2 Growth strategy for five blue growth sectors

### COMMISSION STAFF WORKING DOCUMENT Report on the Blue Growth Strategy

**Towards more sustainable growth and jobs in the blue economy, Brussels, 31.3.2017 SWD (2017) 128 final<sup>13</sup> (61 pages)**

**Related documents** - The Marine Strategy Framework Directive (MSFD) adopted in 2008, not analysed in detail.

The report includes the description and analysis of the main five innovative, high-potential maritime sectors: **blue energy, aquaculture; coastal and maritime tourism; blue biotechnology; and sea-bed mining**. It is followed by the factors which are enabling blue growth and promoting partnership approach through sea basin strategies and initiatives, regional initiatives, working with stakeholders and international cooperation. A special chapter is dedicated to boosting investment covering different financial sources, including, ESIF, CEF, COSME, LIFE+ and others. The last chapters relate to making blue growth strategies fit for future challenges and today's trends in the blue economy.



### Five main maritime sectors

The Commission Staff Working Document concentrates on five main maritime sectors by identifying specific bottlenecks and market failures. The summary information is provided in the table below.

Table 7. Major maritime sectors and bottlenecks

Sector	Proposed response and actions taken
<b>Ocean Energy</b>	The Ocean Energy Forum (private-public process) and Ocean Energy Strategic Roadmap. Supported by EU Research programmes and EU structural funds. Offshore wind energy (also financed by the EIB). Ocean energy (financed by H2020, start-ups).

<sup>13</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/swd-2017-128\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/swd-2017-128_en.pdf)

Sector	Proposed response and actions taken
<b>Aquaculture</b>	Collaborative work with national administrations via multiannual national plans. For instance, Portugal (establishing special law), Italy (Guidance to the regions), Spain (framework law), Greece and Italy (online registers for facilities). EMFF (planning period 2014 -2020) planned 1.2 billion EUR.
<b>Maritime Tourism</b>	Support regional cooperation, create joint products such as nautical or cultural routes and create higher-value jobs. The largest employer in the blue economy. Nautical tourism (also financed by ERDF), Cruise shipping (the second largest in the world), underwater cultural heritage. Activities implemented via Community Led Local Development – fisheries local action groups, fishing tourism.
<b>Blue Biotechnology</b>	To use EU research programmes to support research development and create pre-commercial ventures closer to the market. Activities financed by FP7 and Horizon2020. Examples, Pharmasea.
<b>Seabed Mineral Resources</b>	Advanced research and technological development for the extraction of mineral resources from the deep sea. Development of strategic environmental plan for Atlantic. Very complex issue where legal, economic, technological, geological and environmental issues to be taken into account. Financed by FP7 and Horizon2020.

**Applicability to the Study** – to verify that project opportunities are identified from all the main maritime sectors. To use the existing platforms operational to promote the new project ideas and discuss project financing issues.



### Factors enabling blue growth

The Commission Staff Working Document also includes a description of factors enabling blue growth.

Table 8. Factors enabling blue growth

Enabler	Proposed response and actions taken
<b>Marine Data</b>	Marine data are held by public and private companies and the objective is to make data more interoperable and to have a better use of data available. The main initiatives are Copernicus Marine Environment Monitoring Service (CMEMS); Data Collection Framework; European Marine Observation and Data Network (EMODnet).
<b>Maritime Spatial Planning</b>	Spatial planning to be used to facilitate wind energy development. Project examples include projects in Romania, Bulgaria (MARSPLAN project), Baltic SCOPE and others.
<b>Environment Protection</b>	Member states will take measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. The key document is Marine Strategy Framework Directive.
<b>Skills Development</b>	Innovation and research is financed via Horizon2020 and Knowledge and Innovation Communities.
<b>Maritime Security</b>	The main objective is to detect and react to illegal or dangerous activities at sea.
<b>Marine and Maritime Research</b>	Financed by Horizon2020.

**Applicability to the Study** – to verify that project opportunities identified are supporting and are in line with factors enabling blue growth.



### Promotion of partnership approach

The Commission Staff Working Document includes a description related to the promotion of partnership approach.

Table 9. Partnership approach

Partnership Approach	Proposed response and actions taken
<b>Sea Basin Strategies and Initiatives</b>	Sea basin strategies for Baltic Sea, Adriatic and Ionian Sea, Black Sea, Mediterranean Sea, North Sea and the Atlantic Ocean. The framework for cooperation between the EU, the Member States and their regions. So far sea-basin strategies have been developed in three macro-regions: the Atlantic Ocean, the Baltic and the Adriatic and Ionian Sea. Information provided about each sea basin.
<b>Regional Initiatives</b>	Examples of regional projects are provided.
<b>Working with stakeholders</b>	European Maritime Day, European Marine Observation and Data network, A Blue Economy Business and Science Forum, the European Atlas of the seas, Maritime Forum, Advisory Councils.
<b>International Cooperation</b>	Carried out under sea basin strategies.

**Applicability to the Study** – to use the existing stakeholder’s platforms to promote new projects and project financing.



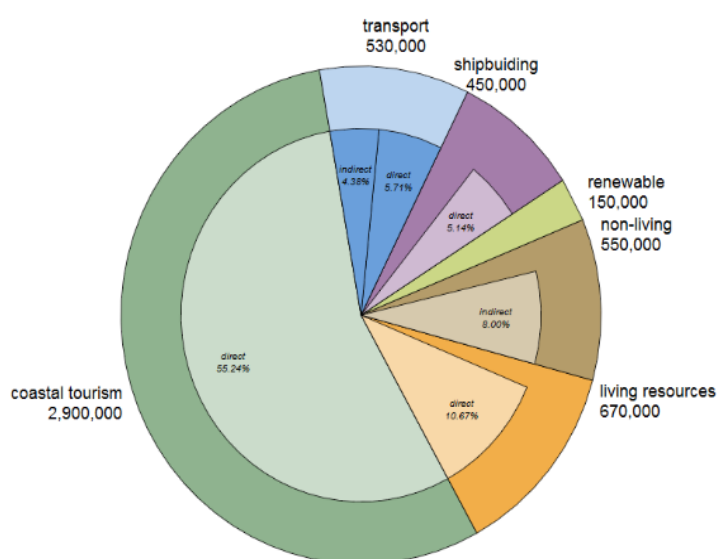
### Boosting Investment

The Commission Staff Working Document includes a description of different financial sources to finance blue growth projects.

Table 10. Funding source

Funding Source	Proposed response and actions taken
<b>European Structural and Investment Funds (ESIF) programming period 2014 - 2020</b>	The European Maritime and Fisheries Fund (EMFF) is specifically tailored to Europe's seas and coasts – EUR 6.4 billion for the programming period 2014-2020. Four priorities amounting to EUR 2 billion directly relates to growth. Project examples are provided. From the European Regional and Development Fund EUR 5.5. billion are allocated to blue economy. Project examples are provided. The European Social Fund is contributing to more training and setting-up of schools specialized in marine. No funding quantification is provided. Project example provided. The Cohesion Fund has allocated more than EUR 2 billion to blue growth projects. Project examples provided.
<b>Financing Innovation</b>	Horizon2020 contribution amounts to EUR 260 million, project examples provided. The Commission together with the EIB Group launched “InnovFin – EU Finance for Innovations”. Support rate up to 50 %, no quantification on amount is provided, project example provided. NER300 programme to support innovative low-carbon energy demonstration projects, example of project provided.
<b>Connecting Europe Facility (CEF), Competitiveness of Enterprises and Small and Medium Size Enterprises (COSME)</b>	CEF supports blue growth via Motorways of the Sea Policy by focusing on environmental projects related to port infrastructure and training activities. In the last 2 years, the Commission has granted a total of nearly EUR 360 million to 40 actions, which has triggered a European-wide investment of EUR 965 million. Green Shipping Guarantee Programme is intended to provide guarantees to activities related to sustainable shipping. Project example provided. COSME aims to promote entrepreneurship and improve the business environment for SMEs. So far, three projects related to Blue Growth and promoting sustainable maritime tourism have been supported with a budget of nearly EUR 617 500. Project example provided.

Funding Source	Proposed response and actions taken
<b>Risk financing through investment platform for Europe</b>	In the blue economy, the need for capital-intensive infrastructure and the demand for risk financing are high. The European offshore wind energy industry alone needs to attract between EUR 90 billion and EUR 123 billion by 2020. The investment needs are to reduce the investment risk in scaling up emerging sectors, enabling infrastructure, green infrastructure and others. Three Investment Plan for Europe pillars will be used: mobilizing finance via EFSI; European Investment Advisory Hub and European Investment Project Portal; improving the investment environment. Several project examples provided.
<b>LIFE+</b>	The number of LIFE projects that have a marine element is quite low overall currently 32 projects implemented with a total European contribution of EUR 34.6 million. Project example provided.



**Applicability to the Study** – to use the current funding available and to suggest further improvements to get more projects under the current funding mechanisms.

### Trends in blue economy

Today's trends in blue economy relate to coastal tourism (2.9 million people employed), living resources, non-living, transport, shipbuilding and renewables. Turnover, value added and number of people employed are provided by sub-sector.

### 3.3 Smart Specialisation

**JRC Technical Reports. Blue Growth and Smart Specialisation (2016, 24 pages)**<sup>14</sup>, **How to catch maritime growth through "Value Nets", S3 Policy Brief Series No.17/2016**

**Written by Ecorys and JRC-IPTS, Seville (Spain)**

The report provides an introduction to the blue growth concept; blue growth as EU priority and information about regions who have marked blue growth as priority (mainly **UK, Ireland, South of Italy, Greece, France, Poland, Germany, Denmark**, page 5), blue growth and innovation. The policy support is suggested in enabling knowledge and competency development and sharing; the usage of maritime clusters as a tool to

<sup>14</sup> <http://s3platform.jrc.ec.europa.eu/documents/20182/154989/Blue+Growth+and+Smart+Specialisation.+How+to+catch+maritime+growth+through+%27Value+Nets%27/17053ed6-705f-4905-9963-c63a78df26bc>

promote Smart Specialisation; stimulate trans-boundary cooperation; promote collaborative Labs and “unexpected spillovers”.



## Overview of maritime economic activities

A total of six broad maritime functions have been distinguished: Maritime transport and shipbuilding; Food, nutrition, health and eco-system services; Energy and raw materials; Leisure, working and living; Coastal protection; and Maritime monitoring and surveillance. Each of maritime activity is divided in further sub-activity and for each sub-activity the innovativeness is analysed (page 11). The importance of value chain concept is underlined and for maritime economy the concept of value nets is proposed. The report sets out several ways how to build “Blue Value Nets” through: expanding relationships through suppliers and enablers; sharing infrastructure; boosting blue clusters and networks; promoting collaborative labs. For each of the blue value nets concepts practical examples from different countries are provided.

**Applicability to the Study** – to use an analysis of maritime economic activities to identify additional sectors for new project opportunities.

### 3.4 Development of maritime clusters

#### Support activities for the development of maritime clusters in the Mediterranean and Black Sea areas<sup>15</sup> (2014, 76 pages)

Written by Ecorys, MRAC, S.PRO



This project was tasked to provide policy makers at the EU and sea-basin levels an updated analysis of the current status and potential development of maritime clusters in the Mediterranean and Black Sea areas. The study comprises seven consecutive tasks. It starts with the establishment of a list of existing clusters in the field of the maritime economy, in both the Mediterranean and the Black Sea, including clusters in both EU and non-EU countries.

**Maritime clusters** were selected based on four criteria: a) critical mass; b) existence of several maritime economic activities; c) existence of research, training and other supporting infrastructures; and, d) the potential for future development. The analysis of the clusters has resulted in a shortlist of six maritime clusters that together provide a balanced package: Marine cluster Bulgaria, Po<sup>^</sup>le Mer Méditerranée (France), NAPA (Adriatic), Piraeus (Greece), Idimar (Balears, Spain) and AgroBioFishing cluster Palermo (Italy).

**The concept of (maritime) clusters** revolves around mechanisms to increase productivity; growth and jobs; business-to-business and research cooperation; competency development and knowledge sharing; marketing and visibility; smart infrastructure and planning; trans-boundary cooperation.

**The actions to be completed include:** foster an effective policy framework; enable competency development and knowledge sharing; engage clusters in Maritime Spatial Planning and Integrated Coastal Zone Management; embrace maritime clusters as part of Smart Specialisation; promote marketing and visibility of maritime cluster; stimulate trans-boundary cooperation; enhance good maritime cluster management (enabler).

**Clusters are important to economic development** and competitiveness. They can underpin an increase in productivity and operational efficiency. Clusters facilitate efficient access to specialised inputs, services, employees, information, institutions,

<sup>15</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Maritime%20Clusters%20in%20MED-BS%20def\\_0.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Maritime%20Clusters%20in%20MED-BS%20def_0.pdf)

training programmes and other public goods, and they ensure ease of coordination and transactions across firms.

**Applicability to the Study** – to identify and discuss potential project ideas at cluster level.

### 3.5 Development of Sea basin cooperation

#### **Studies to support the development of sea basin cooperation in the Mediterranean, Adriatic and Ionian, and Black Sea<sup>16</sup>**

Written by EUNETMAR, POSEIDON LTD, s.PRO GmbH, Cogea

**Related document** - Maritime Strategy for the Adriatic and Ionian Seas<sup>17</sup>, not analysed.



#### **Analysis to support the elaboration of the Adriatic and Ionian maritime Action Plan; Executive Summary (2012, 17 pages)**

The Executive Summary builds on the findings from the Analysis of Blue Growth needs and potential per country, seeking to identify gaps in legislation and implementation of rules, technologies, investments and research, and to propose specific actions to bridge those gaps in order to improve the European Union Strategy for the Adriatic and Ionian Regio (EUSAIR). The European Commission used this study as a basis upon which to draft the EUSAIR Action Plan.

The first pillar is **driving innovative maritime and marine growth** with the main **focus areas** and related topics, namely fisheries, aquaculture and blue R&D, play a remarkable role in the maritime dimension of the macro-region. Socio-economic and legislation gaps were identified. The second pillar is **connecting the region**. The analysis revealed availability of a great deal of data at port level in EU countries, which confirms that this pillar is highly specific to the Adriatic-Ionian region. Among all activities, short-sea shipping has been identified as one of the most promising. Important role is played by European Marine Observation and Data Network (EMODNET). The third pillar - **preserving, protecting and improving the quality of the environment** is a pre-requisite to the development of most marine and maritime activities. The fourth pillar is **increasing regional attractiveness** and tourism is one of the most promising activities for the entire Adriatic-Ionia.

**Applicability to the Study** – to verify if selected projects for the region are in line with defined strategies and pillars.



#### **Full Report 1<sup>18</sup>**

The study describes the **blue growth needs and potential of Mediterranean and Black Sea countries** by providing a breakdown of their marine and maritime sectors making up their blue economy and related scenario for growth. Country fiches have been conceived for identifying blue growth needs and potential, by providing a breakdown of the marine and maritime activities at national level.

The main part of the report includes 3 page summaries of each Country fiche and related Policy Recommendations; Annex 1 - Country fiche guide: it is an introductory guide providing all information needed for a proper understanding of the Country fiches and

<sup>16</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Exec%20sum%20Adr-Ion\\_31-3-2013.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Exec%20sum%20Adr-Ion_31-3-2013.pdf)

<sup>17</sup> [https://ec.europa.eu/maritimeaffairs/policy/sea\\_basins/adriatic\\_ionian\\_en](https://ec.europa.eu/maritimeaffairs/policy/sea_basins/adriatic_ionian_en)

<sup>18</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Report\\_1\\_full\\_final.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Report_1_full_final.pdf)

related methodology used for compiling them; Annex 2 - Country fiches: 12 documents (one for each country included in the scope of this Study, plus related Annexes), providing the requested breakdown of marine and maritime sectors of each country and identifying the most promising activities which could make up each country's economy; Annex 3 - Assessment of policies: all national and regional policies and financial instruments linked to the most promising activities have been analysed in order to identify elements perceived to favour or hinder the sustainable growth.

Policy recommendations have been formulated for those activities identified as "most relevant and promising" in the related country, given that these activities represent the "growth potential of each country's blue economy". **The country fiches prepared for Italy, Slovenia, Croatia, Bosnia- Herzegovina, Montenegro, Albania, Greece, Malta, Cyprus, Turkey, Romania and Bulgaria.**

**Applicability to the Study** – the key document to understand country priorities and areas for potential projects.



**Full Report 2, Analysis to support the elaboration of the Adriatic and Ionian maritime Action Plan<sup>19</sup> (2014, 91 pages), Annexes to Report 2<sup>20</sup>**

The objective of the study was to identify the Blue Growth needs and potential of Mediterranean and Black Sea countries and assess the potential for policy and project-based cooperation in the Mediterranean and Black Sea regions. The report is linked with the first report (Report 1) and related Country fiches, where a breakdown of marine and maritime activities of the Mediterranean and Black sea countries has been provided, in order to define the "Blue Economy" of the area and tracing possible scenarios for growth of each country.

This Report 2 is made up of four thematic reports corresponding to the four Pillars of the EU Strategy for the Adriatic and Ionian Region (EUSAIR), namely: **Driving innovative maritime and marine growth; Connecting the Region; Preserving, protecting and improving the quality of the environment; Increasing regional attractiveness.**

**Applicability to the Study** – the key EU strategies for the region.



**Full Report 3, Black Sea – identification of Elements for Sea Basin Cooperation<sup>21</sup> (2014, 53 pages without Annexes)**

The report includes information about cooperation between EU and other Black sea countries which currently takes place largely on a bilateral basis. Multilateral cooperation of the Black Sea countries with the EU is largely confined to sectoral initiatives such as the Interstate Oil and Gas Transport to Europe (INOGATE), the Transport Corridor Europe-Caucasus-Asia (TRACECA), the Black Sea Pan-European Transport Area (PETra), and the now ceased Danube-Black Sea Task Force (DABLAS). Therefore promotion of deeper regional integration for the Black Sea region is assessed via five case studies listed below.

**TRACECA:** The TRACECA model which includes the participation of all Black Sea states except Russia and the Central Asian countries has fundamentally been successful because it allows the regional countries to be the key beneficiaries of the program albeit

<sup>19</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Report%202\\_21\\_03\\_2014.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Report%202_21_03_2014.pdf)

<sup>20</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Annex\\_21-03-2014-2.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Annex_21-03-2014-2.pdf)

<sup>21</sup> <https://webgate.ec.europa.eu/maritimeforum/system/files/Report%203%20%28Task%204%29%20Final%20final%2014-4-14.pdf.pdf>

via EU financing. It highlights regional cooperation and the potential for further such cooperation, linking west and east.

**The Bulgaria-Turkey IPA Cross-border Cooperation Programme:** is important because it highlights a 'shared management approach' between an EU member state and a candidate country.

**MONINFO 1 & 2:** which include the **participation of all Black Sea littoral state** and the BSC, and funded primarily by the EU, highlights the importance of a holistic approach, regional cooperation, and the sustainability of projects in light of slow to reform institutional structures and capacities.

**INOGATE:** The INOGATE model includes the participation of most Black Sea states (except BU, RO, and RU) and the five Central Asian states. It is EU funded, includes the involvement of a number of DG's of the EU. Its major strengths, apart from support the energy cooperation between the EU and its Eastern partners, is its durability and its commitment to the regional approach.

**The BS-SAP:** project includes all Black Sea littoral states and is funded by UN bodies, the World Bank, the GEF, the EU and the participating states. It demonstrates the adoption of the project as one of regional ownership, even if most of the funding came from the Black Sea nations overcome the region's political and socio-economic divisions to commit to sea- basin level initiatives that share knowledge and expertise, and encourage the sustainable growth of maritime economic activities.

**Applicability to the Study** – to use current specific examples in order to identify new project opportunities.



#### **Full Report 4, Mediterranean Sea – Identification of Elements and Geographic Scope of Maritime Cooperation<sup>22</sup> (2014, 55 pages)**

The overarching objective of the report is to identify elements and to provide a general framework for developing sea basin maritime cooperation in the Mediterranean Sea and to determine the most appropriate geographical scope (sea basin level, regional level) to be used to this purpose. The geographical scope includes EU Member States: **Spain, France, Italy, Slovenia, Croatia, Malta, Greece, Cyprus, as well as candidate and potential candidates in the Mediterranean: Bosnia and Herzegovina, Montenegro, Albania and Turkey.** The countries participating in the European Neighbourhood Policy are also considered in the light of potential North-South cooperation initiatives and projects, namely Morocco, Tunisia, Algeria, Egypt, Palestine, Israel, Lebanon and Jordan.

Overall, 149 cooperation projects and initiatives related to blue growth and integrated maritime policy have been identified<sup>16</sup>, about a third of which are specific to the Adriatic and Ionian basin. The extent of transnational cooperation in research, for instance, is probably underestimated considering the importance of informal networking in this field. However, it provides a general overview of the sources of funding, the nature of cooperation and its main focuses.

**The main conclusions** included: leadership role of the EU in the area to strengthen cooperation on maritime issues; two sub-basins stand out in respect with the intensity of existing cooperation: the North-Western Mediterranean region (France, Italy and Spain) and the Adriatic and Ionian region; the two country-islands, Malta and Cyprus, show a high level of cooperation in the marine and maritime fields ; potential role in the dynamics of North-South cooperation in the Mediterranean basin and at the interface between the two most active sub-basins, clearly stands out; growing involvement of non-EU countries can be observed; existing cooperation focuses on tourism,

<sup>22</sup> <https://webgate.ec.europa.eu/maritimeforum/system/files/Task%205-Report4.pdf>



environmental monitoring and maritime transport; the large number of projects and initiatives with an environmental dimension, whether it be as the primary objective or not, illustrates the importance of the issue and the necessity to tackle it at transnational level; cooperation in the field of maritime transport focuses in particular on short-sea shipping, with a significant concentration of projects in the Adriatic and Ionian area; sustainable management of fish stock; research and development on the sustainability of marine aquaculture; sustainability of small-scale fisheries; development and organisation of the supply-chain; integrated Coastal Zone Management and Maritime Spatial Planning.

**Applicability to the Study** – to use current specific examples in order to identify new project opportunities.

### 3.6 Blue growth for the baltic sea region



**Towards an implementation strategy for sustainable blue growth agenda for the Baltic Sea region<sup>23</sup> (2013, 89 pages without Annexes)**

**Written by EUNETMAR, COEGA, AND International, Eurofish International Organisation, s.PRO**

The study has aimed at identifying the potential for Blue Growth in the Baltic Member States and at sea-basin level and to provide recommendations for its development in the context of the EU Strategy for the Baltic Sea Region (EUSBSR). Assessing the contribution and the effectiveness of maritime actions set in the EUSBSR in implementing the EU Integrated Maritime Policy in the region and to provide recommendations on how this could be strengthened, in particular taking into account the Blue Growth Potential. **Countries – Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden.**

Chapter 2 is summarising the state of play and growth potential of the maritime economy at the level of each of the eight EU Member States of the Baltic Sea Region (BSR); Chapter 3 is identifying the potential for Blue Growth at sea-basin level and provides recommendations for joint actions at transnational level in order to exploit this potential. Chapter 4 is assessing the contribution and the effectiveness of maritime actions set in the EUSBSR in particular in implementing actions that support exploiting the Blue growth Potential of the BSR and provides recommendations on how this could be strengthened. **Strategies are provided for the main sectors**, e.g. ship buildings, fish for human consumption, blue biotechnology and others.

The BSR is not only special due to the unique environmental challenges of the Baltic Sea as such and the relatively higher wealth and education of the people living here, but also the **long-standing tradition of transnational cooperation**. HELCOM, the Council of the Baltic Sea states (CBSS), Vision and Strategy around the Baltic Sea (VASAB), Baltic Sea States Subregional Co-operation (BSSSC) or the Nordic Council of Ministers are just a few of the numerous transnational bodies that have been operating in the region for a long time already. This cooperation reached yet another level with the adoption of the EU Strategy for the Baltic Sea Region (EUSBSR) in 2009 as the first ever example of a macro-regional strategy. With its three overall objectives "Save the Sea, Connect the Region and Increase Prosperity" the EUSBSR aims to provide an integrated strategic framework for the large variety of actors, policies and funding mechanisms within the region and link them to European policies.

In line with the Blue Growth communication, the main aim is rather to **highlight areas where based on cooperation among all or a selected number of Baltic Sea**

<sup>23</sup> [https://webgate.ec.europa.eu/maritimeforum/system/files/Final%20Report%20Revision%206%20Dec%202013\\_NEW%20TEMPLATE.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Final%20Report%20Revision%206%20Dec%202013_NEW%20TEMPLATE.pdf)

**Region countries, good potential exists** to induce a positive development across the economic, environmental as well as social dimensions of the EU 2020 strategy by working with and in the Baltic Sea.

**Applicability to the Study** – the key document to understand country priorities and areas for potential projects.



**Towards an implementation strategy for sustainable blue growth agenda for the Baltic Sea region, Executive Summary<sup>24</sup> (2017, 7 pages)**

**Written by ECORYS, s.PRO GmbH**

For the Baltic Sea region the following mix of high-potential and emerging thematic areas was suggested: Shipping; Blue Bio-economy (including aquaculture); Coastal and maritime tourism; Environmental and monitoring technology. The priorities were identified by engaging and outreaching 275 blue growth stakeholders. The summary of drivers for main thematic areas are presented below.

*Table 11. Core drivers and challenges of thematic areas*

Thematic Area	Core drivers and challenges
<b>Shipping</b>	Digitalisation and high tech: maritime clouds, computer power, smart sensors, big data and automation systems; Up-scaling of vessels sizes and cargo volumes per port; Governmental actions in favour of autonomous shipping; Environmental regulations; Oil price developments.
<b>Bio-economy</b>	Political strategies promoting the blue Bio-economy on various levels; The obligation to achieve Good Environmental Status <sup>1</sup> and ongoing challenges caused by eutrophication and pollutants as a driver for innovative measures and technologies; Inconsistent and unclear regulatory framework regarding special blue Bio-economy activities; Strong research and development (R&D) capacities and high innovation potential of BSR R&D institutions and small and medium-sized enterprises (SMEs); Lack of dedicated and efficient blue Bio-economy business support structures; Presence of blue Bio-economy- related BSR-wide networks and platforms; Technical advances such as increased efficiency due to marine robotics and modelling techniques
<b>Coastal and maritime tourism</b>	Seasonality of demand calls for diversification of products and services; Concentration of tourism in a few centres (e.g. cruise ports or sea-side resorts) necessitates better development of (and connections to) hinterland destinations and new attractions away from city centers; Demographic change and new demand patterns require new specific touristic products; Digitalisation opens new possibilities for selling and creating touristic products; Local stakeholders need to benefit from coastal tourism and not suffer from it; Awareness of sustainability and the quality of the experience are becoming more important; The BSR is a safe and secure place.

**Applicability to the Study** – to assess if new projects could be identified in BSR priority areas.

<sup>24</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/issbgabsr-exec-summary\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/issbgabsr-exec-summary_en.pdf)

### 3.7 Blue growth within the EU North Sea Region and english channel

**Study on Blue Growth and Maritime Policy within the EU North Sea Region and English Channel<sup>25</sup> (2014, 59 pages without Annexes). Country summaries<sup>26</sup>**

**Written by ECORUS, MRAG, s.PRO**

The study includes the state of play and growth potential of four countries (using structured template): **Belgium, Germany, the Netherlands and Norway**. Furthermore, when zooming in on the development of particular sectors, data on the North Sea-related activities in Sweden, Denmark, the UK and France were also taken into account. The study chapters are country analysis; state of play: most promising and relevant sectors in the sea-basin; future Scenarios for the most relevant and promising sectors in the sea-basin; and conclusions and recommendations.



#### Country Overview

The region of the North Sea is highly industrialised, with major port areas along the shores and increased offshore activities taking place. Some of the industries have been undergoing significant changes with both increased production (e.g. offshore wind) and stagnating or decreasing production (e.g. oil and gas). In addition to primary production, the region also serves as a home to many up- and downstream activities for its main sectors as well as hosting strong educational and research capacities.

Taken together, the North Sea coast is a crucial region for Europe's Blue Economy: its maritime economy is estimated to represent a GVA of at least € 150 billion (out of just under € 500 billion for the EU as a whole), and employs at least 850 000 people (out of 5.4 mln. people for the EU as a whole). These estimates include Belgium, Germany, Netherlands, and Norway as a whole; the UK, France, Denmark and Sweden are included in part.

The North Sea coast of **Belgium** counts at least an approximate 37 000 maritime jobs, contributing to a GVA of € 4 billion per year. Both deep-sea and short-sea shipping are crucial, but so are coastal tourism and the construction of water projects (e.g. port breakwaters, coastal protection structures, dredging of access channels). While many of these activities have been long established in the country, construction of water projects and inland waterway transport demonstrate strong development potential still. Offshore wind, centred around Oostende, has been identified as the most promising activity. Short-sea shipping (Antwerp) has growth potential as well, while Zeebrugge is still growing in the area of deep-sea shipping as well as cruise shipping – mostly due to the proximity of Brugge as a major tourism attraction.

The North Sea-coast **of Germany** employs at least an estimated 170 000 people, 4 000 enterprises and a GVA of € 14 billion. This part of the coast features above all shipping and fishing. While deep-sea shipping has been negatively impacted by the economic and financial crisis, a slow recovery process has now been underway. Offshore wind is one of the most rapidly developing sectors in Germany as the extension of offshore wind energy is a main focus of the Federal Government since the country's decision to phase out nuclear power and step up climate protection targets. In March 2013, a total of 320 Megawatt (MW) were in operation (of which 50 MW in the Baltic Sea), another 1 600 MW under construction and 10 000 MW approved, most in the North Sea. The long established shipping industries are resilient and strong in terms of innovativeness,

<sup>25</sup> [https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/Final%20Report%20North%20Sea\\_corr\\_03032014.pdf](https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/Final%20Report%20North%20Sea_corr_03032014.pdf)

<sup>26</sup> <https://webgate.ec.europa.eu/maritimeforum/node/3555>

sustainability and development potential. Most activities are centred around four clusters which are rather diversified in nature: Ems-Axis, Metropolitan Region Bremen-Oldenburg, Metropolitan Region Hamburg, and Schleswig-Holstein.

**The Netherlands** has a diversified maritime economy, worth at least € 13 billion, and employing about 140 000 across 9 000 enterprises. Deep-sea and short-sea shipping are important and centred around the Rotterdam and Amsterdam ports, as well as some other harbours. Off-shore oil & gas is the second largest maritime industry, however growth prospects are bleak. Attention is shifting towards construction of water projects, which has grown steadily over the past years. Key industry players are presenting solid average annual growth year by year also through mergers and acquisitions (e.g. of Smit-Tak by Boskalis). Innovation is one of the main drivers of growth in the sector and research institutes such as TU Delft and Deltares help to strengthen the competitive position of the maritime economy in the Netherlands and its export potential. Shipbuilding remains important in the north of the country. Inland waterways and yachting count a large number of small enterprises.

In addition to the above, **the North Sea economy includes four countries in part.** Of the United Kingdom's total marine employment of about 550 000, more than 330 000 can be attributed to activities in the North Sea region, while more than € 43 billion is generated in the North Sea. For Denmark and Sweden, no sea-basin split is available. In the case of France one region, Nord-Pas- De-Calais has access to the North Sea and as such generates approximately €2 billion GVA from maritime economic activities, particularly inland waterway transport and passenger ferry services. In the case of Denmark, qualitative assessment indicates substantial shares related to the North Sea, with the region of Mid Jutland alone account for some € 2.2 billion. GVA and more than 12 000 jobs. In both the UK and Denmark, the oil & gas sector is the largest contributor to GVA while coastal tourism and short-sea shipping contribute most to employment. In Sweden, the Va "rstsverige region around Gothenburg has the highest concentration of maritime activities and accounts for about € 860 mln GVA and some 12 000 jobs mainly in shipyards, ship repair and inland waterway transport.



## Development Potential

Following on from the findings of the country analysis, a number of key sectors with relevance and strong future development potential have been studied at the level of the North Sea as a whole, namely:

- **Offshore wind.** In a short period, the North Sea has become **the most important concentration of offshore wind turbines in the world.**
- **Offshore oil & gas in the North Sea region has been an important source** of employment and revenue as well as an essential energy source with low or no geopolitical risk as opposed to specific third country imports that could be threatened by political instability of the state of origin or country of transit.
- **Aquaculture.** Compared to other coastal areas, the North Sea basin is not a primary focus for marine aquaculture due to climate (particularly water temperature), lack of sheltered sites (coastal topography) and historical levels of pollutants in the basin.
- **Shipbuilding.** Shipbuilding is a long established sector in the region and consists of two major economic activities: the construction and maintenance of ships at yards and the supply of marine equipment which, especially in the North Sea region, are well integrated and working together in clusters. While in the North Sea as well as elsewhere in Europe.
- **Deep-sea shipping.** Deep-sea shipping is a highly significant maritime activity for the countries bordering the North Sea basin.

- **Cruise tourism.** The cruise sector is an important player in the region and its overall GVA in the North Sea region is estimated to be in the range of € 800-1 000 million while the number of jobs is estimated at around 10 000.
- a) **Coastal protection.** Coastal protection is of particular importance for the region as parts of its coastal areas are highly susceptible to coastal erosion. This is especially the case for the southern part of the sea-basin - also the areas with the highest densities of population industry activity and other concentration of assets - resulting in potentially high negative impacts.



### Actions Needed

The overarching review of activities concluded both on a country as well as on a sectoral level across the sea-basin confirms the crucial importance of availability and accessibility of: Information and information exchange platforms facilitating collaborations amongst and between industry stakeholders, local and regional authorities reaching beyond the North Sea boundaries; Continuous investments and development of the research and innovation potential as well as infrastructure; Strong focus should be maintained in sustainability of off- and on-shore facilities as well as operational activities; Increased support and focus on cross-sectoral initiatives such as supergrid, multi-purpose islands, energy atolls, etc.; Support to SME spin-offs and start-up companies; Support to marine spatial planning initiatives as a tool to facilitate cross-sectoral and cross-border dialogues in order to adapt to the changing regional maritime landscape.

**Applicability to the Study** – the key document to understand country priorities and areas for potential projects.

## 3.8 Marine investment for the blue economy

### Marine Investment for the Blue Economy<sup>27</sup>



**Marine Investment for the Blue Economy (MARIBE)** is a Horizon2020 project that aims to unlock the potential of multi-use of space in the Blue Economy and to support sustainable growth in the marine and maritime sectors as a whole. The project objectives are to Identify opportunities for Blue Growth sectors to cooperate with other sectors via multi-use of space or in multi-use platforms; assist in the development of the most promising project combinations; provide information on the socio-economic context and the key technical and non-technical challenges facing these projects based in part on lifecycle learning; use the consortium's diverse network to introduce project stakeholders to key advisors and potential investors

MARIBE is particularly interested in **promoting smarter and more sustainable use of the sea** through the sharing of space. It has investigated the potential of combining the activities of different maritime sectors in the same place or on a specifically built platform in order to make more efficient use of space and resources. It pays particular attention to new and emerging industries that can benefit greatly from the synergies created, increasing their chances of survival and enabling future growth. These sectors are often referred to as Blue Growth industries; Marine Renewable Energy, Aquaculture, Marine Biotechnology and Seabed Mining. By developing Blue Growth industries and encouraging smarter use of our seas, MARIBE hopes to fulfil its aim of promoting jobs and growths.

One of the Work Packages D6.4 provides information about investment community consultation; **compiling a database of investors**; a survey set out among identified investors.

<sup>27</sup> <http://maribe.eu/blue-growth-deliverables/>

**Applicability to the Study** – to use the list of investors if publicly available.

### 3.9 Sustainable development of EU aquaculture

**Strategic Guidelines for the sustainable development of EU aquaculture<sup>28</sup>, 2013, COM (2013), 229 final**



In 2010, the value of EU aquaculture production was **€ 3.1 billion for 1.26 million tonnes of production**. The EU seafood market is currently supplied for 25% from EU fisheries, 65% from imports and 10% from EU aquaculture. EU total apparent consumption of fishery and aquaculture products reached some 13.2 million tonnes. There is a growing gap – estimated at 8 million tons – between the level of consumption of seafood in the EU and the volume of captures from fisheries and it could be filled by environmentally, socially and economically sustainable EU aquaculture.

The identified gaps could be closed by:

- **Cooperation with the processing industry** which can further improve job creation and competitiveness in both sectors;
- **Simplifying administrative procedures.** Administrative costs and lead time play an important role in determining the overall competitiveness and development of an economic sector. At the moment, only limited information is available on time taken and the costs of issuing licenses for a new aquaculture farm.
- **Coordinated spatial planning.** Having spatial plans in place can help reducing uncertainty, facilitating investment and speeding up the development of sectors such as aquaculture or offshore renewable energy, enhancing the competitiveness of EU aquaculture.
- **Improved market organisation** and structuring of aquaculture producer organisations. Production and marketing plans, together with the EU Market Observatory should help aquaculture producers to identify business opportunities and to adapt their marketing strategies. Promoting a level playing field for EU operators by exploiting their competitive advantages
- **High environmental, animal health and consumer protection standards** are among the EU aquaculture's main competitive factors and should be more effectively exploited to compete on the markets.
- **Multiannual national strategic plan** for the promotion of sustainable aquaculture.
- Complementarity with European Maritime and Fisheries Fund. Exchange of best practices **Aquaculture Advisory Council**

**Applicability to the Study** – to contact JRC regarding a list of stakeholders and to check that projects identified address those challenges.

### 3.10 Knowledge of deep sea mining

**Study to investigate state of knowledge of deep sea mining<sup>29</sup> (2014, 271 pages)**

**Written by ECORUS, MRAG, United Nations Environment Programme Collaborating Centre**

**Related materials** – FP7 projects MIDAS and Blue Mining.



Marine mining and deep sea mining are part of the EU's Blue Growth strategy under the thematic area of marine mineral resources. According to the estimates, up to 10% of global production of minerals such as cobalt, copper

<sup>28</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1477555805378&uri=CELEX:52013DC0229>

<sup>29</sup> <https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/FGP96656%20DSM%20Interim%20report%20280314.pdf>

and zinc could come from the ocean floors by 2030, providing global annual turnover of up to €10 billion. The primary goal for the European Union is to identify the economic feasibility and environmental impact of accessing and extracting deep sea minerals deemed strategic, as well as to ensure the competitive position of European stakeholders.

The study looks to collect all available information – as accessible – on the technology, the economic, legal, geological, environmental and social factors that are relevant for deep sea mining operations. Impact assessment on seabed mining with the intention to ensure that EU Member States and stakeholders are able to capitalise on the potential of seabed mining to generate sustainable growth and jobs. The aim of the technology analysis task is to identify and describe the value chain of deep sea mining from extraction to refining. A value chain analysis will be followed that takes into consideration separate options for processing, and include both land and sea-based processing technologies.

**Applicability to the Study** – it is an interim study and focuses on technical details of mining.

### 3.11 Potential of European Atlantic

**Study on Deepening Understanding of Potential Blue Growth in the European Atlantic<sup>30</sup> (2014,) Access to study was denied**



The aim of the study was to examine in closer detail the individual development patterns of the maritime industries within the European Union and their prospects for future development. Within this framework, this study presents the state of play and growth of five countries: **France, Ireland, Portugal, Spain and the United Kingdom**, bordering the Atlantic Arc. There are country papers about Ireland, the United Kingdom, Spain, Portugal and France.

**Applicability to the Study** – to request access rights to the report and evaluate country specific information.

### 3.12 Blue Economy in western Mediterranean

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS , Initiative for the sustainable development of the blue economy in the western Mediterranean {SWD(2017) 130 final<sup>31</sup>} COM(2017) 183 final (2017, 15 pages)**



The maritime economy of the **western Mediterranean region has huge potential** for development in all maritime related sectors. The region has 200 ports and terminals and nearly 40 % of all goods (by value) pass through the Mediterranean. The western Mediterranean region attracts the largest number of tourists in the Mediterranean basin, in part because of its art and cultural wealth. It is a biodiversity hotspot, with 481 marine protected areas, including Natura 2000 sites. The region is a rich fishing ground, accounting for over 30 % of the total value of landings at first sale in the Mediterranean and providing more than 36 000 direct jobs on fishing vessel.

**The region faces a number of challenges** which add to its general geopolitical instability: a prolonged economic and financial crisis with high youth unemployment in several countries, growing coastal urbanisation, the overexploitation of fish stocks, marine pollution and last but not least the refugee crisis. To overcome the crisis the main priorities are: increase safety and security; promote sustainable blue growth and jobs; and preserve ecosystems and biodiversity in the western Mediterranean.

<sup>30</sup> <http://www.tpeamaritime.eu/wp/?p=289>

<sup>31</sup> <http://europeanmemoranda.cabinetoffice.gov.uk/files/2017/04/ST-8511-2017-INIT-EN.pdf>

**Some of the specific actions** to overcome those challenges relate to:

- **Increase cooperation** between coastguards across the two shores of the western Mediterranean region through actions such as networks among training centres, joint training and staff exchanges.
- **Support capacity building** in areas such as illegal unreported and unregulated fishing, vessel traffic service, maritime search and rescue, fight against smuggling of migrants and other illicit trafficking at sea (including through the further development of the Seahorse Mediterranean Network).
- **Encourage data sharing** on maritime traffic by giving southern countries support to improve their infrastructure (Automatic Identification System/Vessel Traffic Monitoring and Information System) and help them access existing platforms (SafeSeaNet and Marine Pollution Common Emergency Communication and Information System).
- **Enhance capacity** (planning, preparedness and tools) to respond to and counter marine pollution from accidents. Promote bio-based innovative industries and services, including food ingredients, pharmaceuticals, cosmetics, chemicals, materials and energy.
- **Develop new technologies** for ocean observation and monitoring, including of deep- water and seafloor biological and other resources. Develop new concepts and protocols by private companies and maritime operators to maximise the use of infrastructure, ships and platforms for scientific, environmental, safety and security purposes. Develop tailor-made solutions and new technologies to harness marine renewable energies and to mitigate and adapt to climate change.
- **Develop capacity building for knowledge** and technology transfer. Support the development of medium, small and micro enterprises in the blue economy (through national maritime clusters, incubators, boosters, business angel services and tailor-made financial vehicles). Foster an effective network of maritime clusters across the region. Establish regional clusters on renewable energy, wellbeing and active ageing, based on marine and maritime resources and technologies.

**Applicability to the Study** – to review if new projects identified reflect challenges identified and are in line with suggested actions.



## 4 Access to Finance

### 4.1 Blue economy finance principles

#### Declaration of the sustainable blue economy finance principles<sup>32</sup> (2018, 2 pages)



According to OECD projections by 2030 the Blue Economy could outperform the growth of the global economy as a whole, both in terms of value added and employment. The main finance principles are **protective, compliant, risk-aware, systemic, inclusive, cooperative, transparent, purposeful, impactful, precautionary, diversified, solution-driven, partnering, science-led.**

**Applicability to the Study** – to ensure that blue economy finance principles are followed.

### 4.2 Principles of sustainable investment in blue economy

#### Principles for sustainable investment in the blue economy; scoping, gap analysis and recommendations<sup>33</sup> (2017, 30 pages without annexes)

Written by Accenture



The document includes analysis of different **definitions of blue economy**, elements of sustainable blue economy (established industries, emerging industries, ecosystem services), benefits of blue economy, landscape of sustainable investment, risks associated with unsustainable investment (regulatory risks, market risks, physical risks).

This study analysed existing sustainable investment initiatives and engaged with investors and investment experts to build the case for and propose a set of Principles for Sustainable Investment in the Blue Economy. Nine 'foundational' Principles based on widely accepted principles for sustainable investment are supplemented by eight 'blue' principles that are specific to achieving a sustainable ocean economy. These Principles recognise core principles of sustainable investment including compliance, transparency, disclosure as well as the specific challenges of investment in the Blue Economy. Together, they form the recommendations for Principles for Sustainable Investment in the Blue Economy.

The principles are defined as **Golden Rules** - the principles should be agnostic of investor sector, instrument, strategy and sector of the Blue Economy; the principles should build on what already exists whilst addressing challenges specific to the ocean's context; the principles should be easy for investors to understand and apply; the principles should provide a 'North Star' for investors to shift from compliance to impact. **Foundational principles** are the same as blue economy finance principles. **Blue principles** also correspond to as blue economy finance principles.

**Applicability to the Study** – to ensure that blue economy finance principles are followed.

### 4.3 Framework for analysing maritime economy data

#### Study on the establishment of a framework for processing and analysing of maritime economic data in Europe<sup>34</sup> (2017, 122 pages)

Written by CETMAR, COTEGA, POSEIDON

<sup>32</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/declaration-sustainable-blue-economy-finance-principles\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/declaration-sustainable-blue-economy-finance-principles_en.pdf)

<sup>33</sup> [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/principles-sustainable-investment-in-blue-economy-report\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/principles-sustainable-investment-in-blue-economy-report_en.pdf)

<sup>34</sup> <https://publications.europa.eu/en/publication-detail/-/publication/9c132514-982d-11e7-b92d-01aa75ed71a1>



The study cross checks the data provided by other studies with the main aim to assess the data available for blue economy analysis. The study included common lineation of maritime activities, indicators for maritime activities, identification of data sources that can ensure continuity in supply, collecting and processing the data, peer-review process. As part of the study the database with relevant data has been prepared.

The main conclusions of the study – data are not available for certain activities, there are occasional data gaps, indirect employment multipliers are not available for extraction of aggregates. Coastal tourism (40 % of value added, 3 million employment or 55 % from blue economy employment) is by far the largest economic activity in terms of value added and jobs created, because tourism is not a single economic activity. Traditional sectors still take most out of the blue economy. Extraction of oil and gas generates more than 18 % of the value added (1% employment) of the whole blue economy. Maritime transport is another important “traditional” activity with 17 % of the value added.

There are differences between value added and employment. Capital intense activities generates more value added than employment and the opposite is true for labour intense activities.

**Applicability to the Study** – if needed to evaluate the planned projects with respect to employment and value added and define priorities.

#### 4.4 Finance conditions for investments in blue economy

##### **Study on Access to Finance conditions for Investments in Bio-based Industries (BBI) and the Blue Economy<sup>35</sup> (2017, 111 pages)**

Written by InnovFin Advisory



The study collects **information on the investment and access-to-finance conditions for Bio-based Industries (BBI) and Blue Economy (BE) projects** and companies in the European Union, and evaluates the need and potential for dedicated public (risk-sharing) financial instruments (PFI) as well as for other policy actions at the EU and Member State levels that can catalyse (crowd-in) private sector investments in BBI and BE. The study includes the definition of Bio-economy, bio-based industries, Blue Economy; EU bio-economy strategy; description of concept of circular economy; high level analysis of financial market participants.



#### **Main Findings**

The study concludes the following: BBI and BE **projects face issues accessing private capital**. Regulation and market and demand framework conditions are perceived as the most important drivers and incentives but also present the biggest risks and challenges for both BBI and BE project promoters (PP) as well as financial market participants (FMP) to invest in the Bio-economy. The main funding gaps in financing the Bio-economy exist in (i) BBI and BE projects scaling up from pilot to demonstration projects and (ii) particularly in BBI, moving from demonstration to flagship/first-of-a-kind (FOAK) and industrial-scale plants. The main findings regarding financial issues for both sectors are presented below.

Table 12. Main findings regarding financial issues

Finding	Additional evidence
<b>BBI and BE projects face</b>	The majority of BBI and BE projects surveyed (77% or 33 out of 43 projects in total, 20 out of 27 in BBI and 13 out of 16 in BE) face access-to-finance issues

<sup>35</sup> [http://www.eib.org/attachments/pj/access\\_to\\_finance\\_study\\_on\\_bioeconomy\\_en.pdf](http://www.eib.org/attachments/pj/access_to_finance_study_on_bioeconomy_en.pdf)

Finding	Additional evidence
<p><b>issues accessing private capital</b></p> <p><b>Regulation and market and demand framework conditions are perceived as the most important drivers</b></p>	<p>Market and demand risks rank as the highest business risk factor for investments in BBI and BE for groups of project promoters. Regulatory risks rank as the second highest business risk factor for investments in BBI and BE. Financial market participants recognise the role of a stable and supportive regulatory framework. Operational and technological risks primarily for BBI projects, mainly related to risks during the demonstration phase of BBI project. Financial risks are mentioned by both BBI and BE promoters and relate primarily to the risks that both BBI and BE projects demonstrate low or volatile profitability. Issues with public funding, which, according to BBI and BE project promoters, relate to the fact that public funding targets mainly the R&amp;D phase of projects and less the demonstration and commercialisation phases.</p>
<p><b>Main funding gaps</b></p>	<p>The main funding gaps exist in (i) Bio-based Industries and Blue Economy projects scaling up from pilot to demonstration projects and (ii) particularly in Bio-based Industries, moving from demonstration to flagship/first-of-a-kind (FOAK) and industrial-scale projects. Data from the capital structure of BBI and BE projects suggests that push mechanisms such as grants are not sufficient in size or catalytic impact and need to be complemented by different public and private sector interventions to fill the BBI and BE funding gaps</p>
<p><b>Financial market participants (FMP) are attracted by the growth potential of the Bio-economy</b></p>	<p>The key drivers of FMPs' interest and investment in the Bio-economy are its sustainable features and large future growth potential. FMP perceive investments into the Bio-economy as very risky. Information asymmetry and technology risk limit FMPs' propensity to invest in BBI and BE, steering private capital towards more mature projects. The perceived instability of the market and fluctuating demand for BBI and BE products hinder FMP from investing in the sector. Regulation and market and demand framework conditions can be important drivers but can also present the biggest risks and challenges for financial market participants to invest in the Bio-economy. BBI and BE projects require a significant investment volume whilst generating unstable revenues and cash flows, increasing the financial risk for investors. FMP identify two funding gaps faced by BBI and BE project promoters.</p>
<p><b>Existing public financial instruments are utilised but their catalytic impact could be further enhanced</b></p>	<p>Bio-economy strategies are a key trigger for providing PFI, which are widely used both within and outside the EU. Grants dominate the PFI landscape, while access to innovative financial instruments is limited. EU initiatives focus primarily on supporting the R&amp;D phase and less support is available for commercialization. Existing funding in the EU flows mostly to the bio-energy (including bio-fuels) and agricultural sectors, with less support for value-added product development.</p>
<p><b>Policy actions and/or new or modified public financial instruments could de-risk Bio-based Industry and Blue Economy investments and catalyse (crowd-in) private capital</b></p>	<p>The evaluation of the existing financial toolbox of EU public programmes and instruments in support of BBI and BE projects highlights the importance of risk-sharing instruments as pull mechanisms to incentivise and attract private capital capable of filling funding gaps. Demand side: In terms of funding, project promoters ask for adapted or new PFI, primarily loans and guarantees that can absorb the financial and business risks of BBI and BE and carry favourable conditions. Supply side: In terms of funding, financial market participants ask for different and targeted PFI for each funding gap.</p>

**Applicability to the Study** – to assess how newly identified projects and funding sources are addressing the study findings.



## Main Recommendations

The main recommendations regarding financial issues for both sectors are presented below.

Table 13. Main recommendations regarding financial issues

Recommendation	Description
<b>Regulatory Framework</b>	Establish an effective, stable and supportive regulatory framework for BBI and BE at the EU level, which is essential
<b>Promotion of financing available</b>	Further reinforce awareness about InnovFin and the European Fund for Strategic Investments (EFSI), which can match the funding needs of certain BBI and BE projects
<b>Risk sharing instruments</b>	Develop a new EU risk-sharing financial instrument dedicated to BBI and BE, potentially taking the form of a thematic investment platform that can meet the funding needs of BBI and BE projects and mobilise private capital
<b>Knowledge sharing platform</b>	Explore the creation of an EU-wide contact, information exchange and knowledge sharing platform or other channels to facilitate relationships between BBI and BE project promoters, industry experts, public authorities and financial market participants active or seeking to become active in the Bio-economy.

**Applicability to the Study** – to consider if some of the recommendations could be addressed via newly identified projects.

#### 4.5 funding blue growth 2014-2020

##### DG MARE Blue Growth Strategies and Actions, presentation<sup>36</sup>



The following funding sources could be used to finance blue growth projects (actual funding depends on the related EU fund programming document):


- **All ESI Funds** (ERDF (incl. ETC), ESF, Cohesion Fund = € 350 billion, EAFRD = €95.6 billion, **EMFF= €5.7 billion**) via grants, financial instruments, public procurement, trans-nat. cooperation, feasibility studies, administrative capacity building, tech. assistance.
- **Horizon2020** for mostly transnational research and innovation projects (e.g. "Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy" but certainly also for maritime relevant projects under Industrial Leadership), incl. non-EU, grants, financial instruments. Total Horizon 2020 funding is €79.4 billion and BONUS programme
- **COSME for SME competitiveness**, financial instruments, business support, cluster cooperation: € 2 billion
- **Erasmus+** for students, teachers, pupils mobility and training: €14.5 billion
- **Creative Europe for culture & creative sector** - grants, financial instruments: €1.4 billion
- **Digital service part of CEF** for EU wide e-government and open data platforms: procurement and grants (€0.85 billion)
- **LIFE programme for environment and climate**, incl. financial instruments: € 3,4 billion
- Programme for **Employment and Social Innovation** ("EaSI"): € 0.92 billion
- **European Fund for Strategic Investments** (EFSI), € 315 billion.

**Applicability to the Study** – to use the information to understand the potential sources of project financing from the EU budget.

<sup>36</sup> [https://www.fes-europe.eu/fileadmin/user\\_upload/Claus\\_Schultze\\_DG\\_Mare\\_Blue\\_Growth\\_PPTs\\_3005\\_2016.pdf](https://www.fes-europe.eu/fileadmin/user_upload/Claus_Schultze_DG_Mare_Blue_Growth_PPTs_3005_2016.pdf)

## 4.6 funding blue growth 2021-2027

### **A Modern Budget for a Union that Protects, Empowers and Defends. The Multiannual Financial Framework for 2021-2027. 02.05.2018, COM (2018) 321 final<sup>37</sup>**

 At the time of preparation of literature review only the first budget proposition is available. Based on the initial communication the following funding could be applicable to blue growth: InvestEU Fund (13 billion EUR); CEF (20 billion EUR, 10 billion EUR from CF); ERDF (200 billion EUR); CF (42 billion EUR); ESF (89 billion EUR); EMFF (5 billion EUR); Horizon Europe (86 billion EUR). .

**Applicability to the Study** – to use the information to understand the potential sources of project financing from EU budget for the next programming period.

## 4.7 European Maritime and fisheries fund 2014-2020

 The **European Maritime and Fisheries Fund (EMFF)** is one of the five European Structural and Investment Funds which complement each other to deliver more jobs and growth in the EU. It has an **overall budget of €6400 million for the period 2014-2020**. The key priorities and related funding are: sustainable fisheries (26.9%), sustainable aquaculture (21%), implementation of Common Fisheries Policy (19.1 %), marketing and processing (17.6%), employment and territorial cohesion (9%), technical assistance (5.1%), integrated Maritime Policy (1.2%). Overview about EMFF is provided in brochure<sup>38</sup>. The largest funding recipients are Spain, France, Italy, Poland, Portugal, Greece<sup>39</sup>.

**EASME supports** the European Commission and notably its Directorate-General for Fisheries and Maritime Affairs (DG MARE) in developing and implementing two main policy areas, namely the Integrated Maritime Policy and Common Fisheries Policy<sup>40</sup>. The European Commission has delegated to EASME the implementation of part of the **EMFF actions under direct management, representing a budget of €340 million** for the programme period. EASME financed project examples are included in portal<sup>41</sup>. Most of the calls for proposals managed by EASME are closed<sup>42</sup>.

EASME manages funding dedicated to the development and implementation of:

- **Integrated governance** of maritime and coastal affairs;
- **Cross-sectoral initiatives** such as integrated maritime surveillance, maritime spatial planning, marine data and knowledge;
- Sustainable economic growth, employment, **innovation and new technologies** within emerging and prospective maritime sectors;
- **Scientific advice and knowledge** for fisheries within and beyond EU-waters, covering environmental, economic or social aspects;
- Fisheries control and enforcement within a regional perspective to foster **co-operation between Member States**.

**Applicability to the Study** – to monitor if there are new calls for proposals which could be relevant to project promoters.

<sup>37</sup> [https://ec.europa.eu/commission/sites/beta-political/files/communication-modern-budget-may\\_2018\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/communication-modern-budget-may_2018_en.pdf)

<sup>38</sup> [https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/op-overview-fact-sheet\\_en.pdf](https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/op-overview-fact-sheet_en.pdf)

<sup>39</sup> <https://ec.europa.eu/fisheries/cfp/emff/>

<sup>40</sup> <https://ec.europa.eu/easme/en/european-maritime-and-fisheries-fund>

<sup>41</sup> <https://ec.europa.eu/easme/en/news/european-commission-about-fund-10-new-blue-growth-projects>

<sup>42</sup> <https://ec.europa.eu/easme/en/funding-opportunities>

## 4.8 Horizon 2020 and blue growth 2014-2020

### Presentation on Horizon 2020 contribution to Blue Growth<sup>43</sup>



Examples of FP7 success stories: ACCESS – Arctic Climate Change, Economy and Society; TROPOS – Modular Multi-use Deep Water Offshore Platform Harnessing and Servicing Mediterranean, Subtropical and Tropical Marine and Maritime Resources; ECO2 – sub-seabed CO2 Storage: Impact on Marine Ecosystems. First calls for proposals launched in 2014 – 2015. **There are no funding opportunities at the moment.** The last call for proposals closed on 14 February 2017<sup>44</sup> but there are new opportunities forthcoming<sup>45</sup>. The programming for Horizon 2020 opportunities is done for two year period and brochure is available for blue growth opportunities 2018 – 2020<sup>46</sup> with 9 relevant topics and total planned funding 166.5 million EUR. The main topics are climate – ocean; food and oceans; maritime value chains; land-sea connection; international cooperation. Additional information could be obtained at Participant Portal<sup>47</sup>.

Blue Growth Areas in Horizon 2020:

- **Sustainable exploiting the diversity of marine life.** Focusing on understanding of marine ecosystems and the limits for their sustainable exploitation, unlocking the biotechnological potential of marine organisms and understanding how marine life can cope with environmental change.
- **New offshore** challenges;
- Exploitation of **deep sea resources**;
- **Ocean observation technologies** / systems;
- **Socio-economic aspects.**

**Applicability to the Study** – to use upcoming calls for proposals to finance different research activities and to already completed research project results to identify new project opportunities.

## 4.9 European fund for strategic investment

### European Investment Bank, European Fund for Strategic Investment<sup>48</sup>



The **European Fund for Strategic Investments (EFSI)** is an initiative to help overcome the current investment gap in the EU. Jointly launched by the EIB Group and the European Commission, it aims to mobilise private investment in projects which are strategically important for the EU. To further boost investment, the European Commission proposed to double the duration and size of EFSI. On 12 December 2017, Members of the European Parliament voted to adopt the Regulation to extend and enhance EFSI. The **EFSI 2.0 Regulation** entered into force on 30 December 2017 and increases the investment target **from EUR 315 billion to at least EUR 500 billion.**

The resources under EFSI are enabling EIF to deploy its existing support for SMEs at a higher and faster rate than initially anticipated and to increase its response to a very strong market demand. Initial EFSI resources under the SME Window are used to accelerate and enhance the deployment of **existing EU flagship programmes -**

<sup>43</sup> <http://www.who.edu/filesserver.do?id=183227&pt=2&p=192949>

<sup>44</sup> <https://ec.europa.eu/inea/en/horizon-2020/blue-growth>

<sup>45</sup> <https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bg-2018-2020.html#c.topics=callIdentifier/t/H2020-BG-2018-2020/1/1/1/default-group&callStatus/t/Forthcoming/1/1/0/default-group&callStatus/t/Open/1/1/0/default-group&callStatus/t/Closed/1/1/0/default-group&+identifier/desc>

<sup>46</sup> [http://ec.europa.eu/information\\_society/newsroom/image/document/2017-46/bg\\_2018-2020\\_B846F782-B6BD-8477-F4A2C5B20B196678\\_48372.pdf](http://ec.europa.eu/information_society/newsroom/image/document/2017-46/bg_2018-2020_B846F782-B6BD-8477-F4A2C5B20B196678_48372.pdf)

<sup>47</sup> <http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

<sup>48</sup> <http://www.eib.org/efsi/index.htm>

**COSME and InnovFin** - which EIF manages on behalf of the European Commission and to significantly increase by EUR 2.5 billion the Risk Capital Resources mandate for equity investments, which EIB has entrusted to EIF.

EFSI has invested 294 signed projects, in addition 90 projects have been approved and 35 pre-approved. At EFSI web page the project lists are available, projects are grouped according to the following sectors: RDI, Smaller companies, Energy, Digital, Transport, Environment and Resource Efficiency, Social infrastructure.

Under EFSI, EIF is now implementing a new set of equity financial instruments to support more vulnerable entities within the EU ecosystem, encompassing micro, small and medium enterprises, social enterprises, social sector organisations and small mid-caps.

**Investment Platforms** are a tool for pooling investment projects with a thematic or geographic focus. They can bring together co-investors, public authorities, experts, social partners and representatives of the civil society and other relevant actors. To benefit from EFSI resources deployed through the EIB, projects need to undergo the standard **EIB due diligence process**. This process helps to verify if project is eligible for EIB financing. If it is and the operational department proposes that it be backed by EFSI, it will be presented to the independent Investment Committee to decide on the use of the EU-guarantee.

In particular, **EFSI projects need to be**: economically and technically sound; In at least one of the EFSI eligible sectors as defined in Article 9<sup>49</sup> of the EFSI Regulation<sup>50</sup> Contributing to EU objectives, including sustainable growth and employment; mature enough to be bankable; priced in a manner commensurate with the risk taken. Following a positive outcome of the due diligence process, projects are submitted for approval by the relevant EIB Group Governing Bodies.

#### 4.10 EIF-NPI equity platform

##### EIF-NPI Equity Platform<sup>51</sup>



The **EIF-NPI Equity Platform** is a collaborative initiative launched by the EIF in 2016 that **promotes knowledge sharing and best practices between EIF and national promotional institutions (NPIs) or banks (NPBs)** across EU Member States. Its ultimate goal is to enhance access to funding for SMEs and Midcaps, support defragmentation of equity markets, and match national, EU and private sources of funding.

This initiative is established on the occasion of the Investment Plan for Europe, and as a response to priorities set by EU stakeholders and NPIs. It will **guide EIF and NPIs in implementing equity investments, including EFSI related activities**. EIF shares the objective of NPIs active across the EU of supporting a well-functioning European Venture Capital and Private Equity market for the ultimate benefit of European SMEs and Midcaps. The main component of the EIF-NPI Equity Platform is NPI membership in a multilateral General Forum dedicated to defining strategic opportunities for enhanced collaboration with EIF or amongst NPIs.

The initiative is targeting national promotional institutions or banks active in the EU Member States. Interested institutions which are eligible can apply for membership in the EIF-NPI Equity Platform General Forum. Membership is governed by the Charter and the operations of the General Forum are governed by the relevant rules of procedure. Investment proposals to be submitted to EIF's Equity Investment Department.

<sup>49</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R1017&from=EN>

<sup>50</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2396&from=EN>

<sup>51</sup> [http://www.eif.org/what\\_we\\_do/equity/NPI/index.htm](http://www.eif.org/what_we_do/equity/NPI/index.htm)

Through the EIF-NPI Equity Investment Platform, a non-binding governance framework, EIF offers the possibility for National Promotional Institutions (NPIs) to match the total budget of investments under the EFSI SME Window on a 1:1 basis.

**ENSI is a cooperation and risk sharing platform** between the European Investment Fund (EIF) and several National Promotional Institutions (NPIs) and more generally, economic development institutions in the EU – to encourage SME lending via the capital markets. The ENSI partner institutions are EIF, the EIB, the EBRD and others.

**ENSI will provide: funding and capital relief**, reduction of portfolio concentration and/or deconsolidation of SME portfolios **to financial intermediaries**, subject to compliance with the applicable mandates and internal guidelines of the ENSI partner institutions; A single-contact access to a pool of joint support measures provided by ENSI partner institutions; A harmonised and transparent framework with streamlined procedures; Co-ordination and strengthening of promotional activities across European promotional institutions in a flexible, efficient and transparent manner.

Eligible originators are **financial institutions duly authorised to carry out SME lending** or leasing activities according to the applicable legislation, established and operating in one or several of the EU Member States. The selected financial institution will be required to build a new portfolio of SME loans, leasing or guarantees commensurate to the involvement of the participating ENSI partner institutions. The financial institution shall also provide information on the securitised portfolio and on any of the agreed additional lending to the participating ENSI partner institutions.

#### 4.11 European investment project portal

##### European Investment Project Portal (EIPP)<sup>52</sup>



At the European Investment Project Portal both **project promoters** and **potential investors (worldwide)** can register. The Portal is used to register different type of opportunities covering different sectors, for instance, energy efficiency, transport, healthcare, renewable energy, broadband infrastructure or SMEs. There are 280 projects registered and they could be searched / analysed as infrastructure or innovative projects; start-up and SMEs projects. Minimum project size is EUR 1 million.

**The EIPP was created** on the basis of Article 15 of Regulation (EU) 2015/1017 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal. Specific details on the EIPP are laid down in Commission Implementing Decision (EU) 2016/1942, as amended by the Commission Implementing Decision (EU) and 2017/919 of 29 May 2017.

**The European Commission screens projects** on the basis of the admission criteria laid down in the Commission Implementing Decision (EU) 2016/1942 as amended by the Commission Implementing Decision (EU) 2017/919. Once submitted projects will be published after 45 working days. The publication depends on how clearly a project is described and how promptly requested information is provided. Projects are kept in the portal for 3 years. During that time, project promoters are encouraged to give updates on how their projects are progressing.

The following **information about projects** is presented: project title, project description, percentage already financed; sector; country and region. In addition, the **project pitch book** is added which is available to authorized users.

**EIPP partners are:** Bpifrance, the French public investment bank; Caisse des Dépôts et Consignations (CDC, France) and its subsidiaries constitute a public group serving the public interest; Cassa depositi e prestiti (CDP) is the National Promotional Institution which has been supporting Italy's growth; The Council of Europe Development Bank (CEB); EBAN is the pan-European representative for the early stage investor

<sup>52</sup> <https://ec.europa.eu/eipp/desktop/en/index.html>



community; The European Committee of the Regions; the European Investment Bank (EIB); The European Investment Fund (EIF); EuroQuity offers matchmaking services to SMEs and investors across Europe and Africa; The European Startup Network (ESN) unifies Europe's national start-up associations; Global Infrastructure Hub (GI Hub) is a G20 initiative; Instituto de Crédito Oficial (ICO) is a state-owned corporate entity attached to the Ministry of Economy of the Spanish Government; The Agency for Investments and Competitiveness of the Republic of Croatia; KfW is the promotional bank of the Federal Republic of Germany; The Seal of Excellence is a quality label awarded to project proposals submitted to Horizon 2020; SOURCE is a global learning and collaborative platform; the World Bank Group.

**Applicability to the Study** – to review EIPP portfolio with regards to relevant projects and to provide a link into EIPP into the newly established investment portal.

## 5 Forums and communication platforms

### 5.1 Marine biO-Economy forum

#### Marine Bio-economy Forum<sup>53</sup>



**The Blue Bio-economy Forum has not been established yet** as a tender to develop the Forum has been announced by EASME on 07.09.2017. EASME wishes to enter into a service contract to set up a 'Blue Bio-economy Forum' that will bring together a partnership of industry, public authorities, academia, and finance in order to strengthen Europe's competitive position in the emerging blue Bio-economy.

The new **Forum's role** will be to identify measures to open up markets for emerging products, to explore further research needs, or to point to areas where seed funding is required. The Forum will deliver a pipeline of medium to long term projects aiming to grow the EU's blue Bio-economy sector. The Forum should be established from 2018 and will gather all relevant stakeholders, including producers and processors of aquatic biomass for products such as novel foods, feeds, pharmaceuticals, nutraceuticals and novel materials.

The aim of the Forum will be to develop a shared understanding of the current status of the emerging blue Bio-economy in Europe and to collectively identify strategic developments, market opportunities, appropriate financial assistance, regulatory actions and research priorities to advance the blue Bio-economy in Europe. The Forum shall also seek to exploit synergies between blue Bio-economy sectors which can benefit from the innovative and optimal uses of aquatic biomass by sourcing biomass for a particular purpose (e.g. to make animal feed) but especially by valorising and using the remainder for other applications (e.g. cosmetics).

**Applicability to the Study** – to discuss with Forum developers how initiative could be linked with investment platform to be developed.

### 5.2 Ocean energy forum

#### Ocean Energy Forum<sup>54</sup> part of Maritime Forum



The Ocean Energy Forum was formed of 3 work streams for Environment & Consenting, Finance and Technology; each work stream had a Steering Committee and Chair. The three work streams allowed consensus building to take place at a topic-specific level thus enabling pragmatic solutions to issues to be developed. The Forum and the Chairs were supported by a Secretariat, appointed April 2015, whose responsibility is the production and timely delivery of the Strategic Roadmap. The Strategic Roadmap was delivered to the European Commission on 08 November 2016.

**Applicability to the Study** – to discuss with Forum administrators how to link with investment platform to be developed.

### 5.3 Seal of excellence

#### Seal of Excellence<sup>55</sup>

The Seal of Excellence is the high-quality label awarded to projects submitted to Horizon 2020 which were deemed to deserve funding but did not receive it due to budget limits. It recognizes the value of proposal and supports the search of alternative funding. Seal of Excellence is one of the partners of European Investment Project Portal. By registering on the Portal the project will be visible to a growing network of international

<sup>53</sup> <https://ec.europa.eu/easme/en/tender/10151/marine-bioeconomy-forum>

<sup>54</sup> <https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1036>

<sup>55</sup> <https://ec.europa.eu/research/soe/index.cfm>

investors, including the EIB, the World Bank, the European Business Angels Network and the European Startup Network.

The initiative was launched by Commissioner Moedas and Commissioner Crețu on 12 October 2015, in the context of the mandate received from President Juncker to maximise synergies between Horizon 2020 and Structural Funds.

**Example of Seal of Excellence** - the SME Instrument under Horizon 2020 was selected as the ideal candidate to begin implementation of the Seal of Excellence due to its high popularity, high competitiveness and limited funding capacity compared to demand. It supports breakthrough innovations in close-to-market activities by SMEs. An SME whose SME Instrument proposal received the Seal of Excellence will be looking for financial support for two types of activities:

- **Feasibility assessment activities** (Phase 1) – which would have (if successful) received €50 000 lump-sum grant, covering 70% of total cost of the project
- **Innovation development & demonstration activities** (Phase 2) – which would have (if successful) received a grant ranging between €500 000 and €2.5 million, covering 70% of total cost of the project

**Applicability to the Study** – to provide the link to the newly established platform and to review Horizon2020 projects marked with Seal of Excellence as they could be potentially added to the project list.

## 5.4 Atlantic action plan

### Atlantic Action Plan<sup>56</sup>



**The Atlantic Action Plan** has been set up by the European Commission in August 2014 to provide an updated information on research and investment priorities, news, interesting events and networking opportunities. Another purpose of the Action Plan is to provide a "match-making platform" to find potential project partners and advise on the use of EU and national or regional financial instruments for projects implementing the Action Plan.

The European Commission has adopted an Atlantic Action Plan in March 2013 to revitalize the marine and **maritime economy of France, Ireland, Portugal, Spain, and the United Kingdom**. The Atlantic Action Plan's objectives are in line with EU's "Blue Growth" initiative which is the maritime contribution to achieving the goals of the Europe 2020 strategy for smart, sustainable and inclusive growth.

The Atlantic Action Plan portal includes investment ideas (project ideas could be posted in the portal by project promoters). In addition, information about funding opportunities is placed on the portal, options to find a partner, best practice examples and other information.

**Applicability to the Study** – to provide the link in the newly established platform as different funding possibilities for selected countries are placed in the Atlantic Action Plan. To review project ideas recorded in the platform in order to identify new projects.

## 5.5 Global entrepreneurship hub

### The Global Entrepreneurship Hub<sup>57</sup>



**The Global Entrepreneurship Hub** has been set up for innovation in logistic, maritime and energy and is the first World Port Accelerator. PortXL focuses on building the ecosystem that creates value for all stakeholder by accelerating start-ups in a time frame of 3 months by an intense mentorship driven program focusing on port related industries. Ecosystem consists of founders, investors and corporate partners (Van Oord, Port of Rotterdam, EY, ECE, Shell, Vopak, Boskalis, Uniper,

<sup>56</sup> <http://www.atlanticstrategy.eu/en/about/about-us>

<sup>57</sup> <https://portxl.org>

Rabobank, Rotterdam Port Fund, InnovationQuarter, City of Rotterdam, Thales and Rotterdam The Hague Airport) that support and accelerate the entrepreneurial journey. Information about different new start-ups is provided.

The main current challenges are **blockchain, autonomous shipping, cyber security, emission reduction, digitalisation of logistics, internet of things, wind energy, ballast water treatment**.

**Applicability to the Study** – to use the platform to promote new projects and if available analyse projects posted on the platform.

## 5.6 EU science hub

### The Joint Research Centre, EU Science Hub<sup>58</sup>



The EU Science Hub brings together scientific **knowledge produced by the Joint Research Centre (JRC)**, the science and knowledge service of the European Commission. It is the platform for information and exchange about all **scientific activities carried out by the JRC** and by institutes across Europe. The JRC Science Hub aims to gradually integrate and aggregate all of the European Commission's science related activities, tools, laboratories, facilities, databases and networks. The Science Hub enhances the transparency and openness of the JRC and further enables the open access policy of scientific research data.

The Joint Research Centre is the European Commission's science and knowledge service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy. The JRC is a Directorate-General of the European Commission under the responsibility of Commissioner for Education, Culture, Youth and Sport.

This is a living platform which we hope serves well the information and exchange needs of the scientific community, policy and decision-makers and the general public. The JRC is funded by the EU's framework programme for research and innovation, Horizon 2020, for its non-nuclear work and by the EURATOM Research and Training Programme for its nuclear work. The sectors analysed include agriculture and food security Energy and transport, environment and climate change, innovation and growth, and others.

**Applicability to the Study** – to contact JRC in order to identify scientific projects which could be commercialised.

## 5.7 Maritime Forum

### Maritime Forum<sup>59</sup>



The Maritime Forum aims to improve communication amongst EU maritime policy stakeholders allowing to communicate via a common platform. For each of the sectors and subsectors information about **articles and events** is provided.

It provides information about EU sea basins, blue economy including, blue bio-economy, blue energy (offshore energy), non-living resources, data about blue economy, tourism, maritime transport.

**Applicability to the Study** – to use for data research and analysis as this is one of the most complete platforms with regards to information sources.

<sup>58</sup> <https://ec.europa.eu/jrc/en>

<sup>59</sup> <https://webgate.ec.europa.eu/maritimeforum/en/node/4073>

## 5.8 Marine investment for blue economy

### Marine investment for blue economy<sup>60</sup>



The web page is dedicated to MARIBE project – Horizon2020 project that aims to unlock the potential of multi-use of space in the off-shore economy (blue economy). Through learning from past EU projects and successful business models, MARIBE identifies key opportunities for synergistic collaboration. By helping partners to determine and develop the best business structure to support their cooperation, MARIBE will allow them to achieve increased efficiency and economic performance and will also benefit the general development of their Blue Growth sector.

Identify opportunities for Blue Growth sectors to cooperate with other sectors via multi-use of space or in multi-use platforms and assist in the development of the most promising project combinations. Provide information on the socio-economic context and the key technical and non-technical challenges facing these projects based in part on lifecycle learning. Use the consortium's diverse network to introduce project stakeholders to key advisors and potential investors.

**Applicability to the Study** – to contact project implementers or analyse the project documentation in order to identify new project.

### 5.9 The european cluster collaoration platform



**The European Cluster Collaboration Platform<sup>61</sup>** is an open community where information, news, events and reports with international character that may be relevant to the cluster community could be placed. It includes information about 15 fishing and fishing products cluster organisations.

**Applicability to the Study** – to use platform to promote blue growth projects.

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<sup>60</sup> <http://maribe.eu>

<sup>61</sup> <https://www.clustercollaboration.eu>

## 6 Annexes

### 6.1 List of documents analysed

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

- **Blue Growth opportunities for marine and maritime sustainable growth (2012, 12 pages), Brussels, 13.9.2012 COM (2012) 494 final**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/com\\_2012\\_494\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/com_2012_494_en.pdf)
- **Maritime Affairs – Blue Growth web page**  
[https://ec.europa.eu/maritimeaffairs/policy/blue\\_growth/](https://ec.europa.eu/maritimeaffairs/policy/blue_growth/)
- **Study in support of policy measures for maritime and coastal tourism at EU Level (2013, 161 pages)**  
**Written by Ecorys, MRAC, S.PRO**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/study-maritime-and-coastal-tourism\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/study-maritime-and-coastal-tourism_en.pdf)
- **A European Strategy for more Growth and Jobs in Coastal and Maritime Tourism, 2014, COM (2014) 86 final**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/coastal-and-maritime-tourism\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/coastal-and-maritime-tourism_en.pdf)
- **Assessment of the Impact of Business Development Improvements around Nautical tourism, Final Report (2016, 280 pages)**  
[https://www.researchgate.net/profile/Rupert\\_Haines2/publication/316551681\\_Assessment\\_of\\_the\\_Impact\\_of\\_Business\\_Development\\_Improvements\\_around\\_Nautical\\_Tourism/links/590357954585152d2e92e949/Assessment-of-the-Impact-of-Business-Development-Improvements-around-Nautical-Tourism.pdf](https://www.researchgate.net/profile/Rupert_Haines2/publication/316551681_Assessment_of_the_Impact_of_Business_Development_Improvements_around_Nautical_Tourism/links/590357954585152d2e92e949/Assessment-of-the-Impact-of-Business-Development-Improvements-around-Nautical-Tourism.pdf)
- **JRC Scientific and Policy Reports. The Economic Performance of the EU Aquaculture Sector (period 2008 – 2012, 444 pages)**  
[https://stecf.jrc.ec.europa.eu/documents/43805/839433/2014-11\\_STECF+14-18+-+EU+Aquaculture+sector\\_JRCxxx.pdf](https://stecf.jrc.ec.europa.eu/documents/43805/839433/2014-11_STECF+14-18+-+EU+Aquaculture+sector_JRCxxx.pdf)
- **Study in support of Impact Assessment work on Biotechnology (2014, 234 pages)**  
**Written by Ecorys, MRAC, S.PRO**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/study-blue-biotechnology\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/study-blue-biotechnology_en.pdf)
- **Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts (2012, 202 pages)**  
**Written by Ecorys, Deltares, Oceanic Development**  
<https://webgate.ec.europa.eu/maritimeforum/system/files/Blue%20Growth%20Final%20Report%2013092012.pdf>
- **COMMISSION STAFF WORKING DOCUMENT Report on the Blue Growth Strategy**  
**Towards more sustainable growth and jobs in the blue economy, Brussels, 31.3.2017 SWD (2017) 128 final (61 pages)**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/swd-2017-128\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/swd-2017-128_en.pdf)
- **JRC Technical Reports. Blue Growth and Smart Specialisation (2016, 24 pages), How to catch maritime growth through “Value Nets”, S3 Policy Brief Series No.17/2016**  
**Written by Ecorys and JRC-IPTS, Seville (Spain)**  
<http://s3platform.jrc.ec.europa.eu/documents/20182/154989/Blue+Growth+and+Smart+Specialisation.+How+to+catch+maritime+growth+through+%27Value+Nets%27/17053ed6-705f-4905-9963-c63a78df26bc>

- **Support activities for the development of maritime clusters in the Mediterranean and Black Sea areas ((2014, 76 pages)**  
**Written by Ecorys, MRAC, S.PRO**  
[https://webgate.ec.europa.eu/maritimeforum/system/files/Maritime%20Clusters%20in%20MED-BS%20def\\_0.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Maritime%20Clusters%20in%20MED-BS%20def_0.pdf)
- **Studies to support the development of sea basin cooperation in the Mediterranean, Adriatic and Ionian, and Black Sea**  
**Written by EUNETMAR, POSEIDON LTD, s.PRO GmbH, Cogea**  
[https://webgate.ec.europa.eu/maritimeforum/system/files/Exec%20sum%20Adr-Ion\\_31-3-2013.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Exec%20sum%20Adr-Ion_31-3-2013.pdf)
- **Analysis to support the elaboration of the Adriatic and Ionian maritime Action Plan; Executive Summary (2012, 17 pages)**  
<https://publications.europa.eu/en/publication-detail/-/publication/c5d2a084-68c9-4b9a-b600-4677da7f1492/language-en>
- **Full Report 1**  
[https://webgate.ec.europa.eu/maritimeforum/system/files/Report\\_1\\_full\\_final.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Report_1_full_final.pdf)
- **Full Report 2, Analysis to support the elaboration of the Adriatic and Ionian maritime Action Plan (2014, 91 pages), Annexes to Report 2**  
[https://webgate.ec.europa.eu/maritimeforum/system/files/Report%202\\_21\\_03\\_2014.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Report%202_21_03_2014.pdf) [https://webgate.ec.europa.eu/maritimeforum/system/files/Annex\\_21-03-2014-2.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Annex_21-03-2014-2.pdf)
- **Full Report 3, Black Sea – identification of Elements for Sea Basin Cooperation (2014, 53 pages without Annexes)**  
<https://webgate.ec.europa.eu/maritimeforum/system/files/Report%203%20%28Task%204%29%20Final%20final%2014-4-14.pdf.pdf>
- **Full Report 4, Mediterranean Sea – Identification of Elements and Geographic Scope of Maritime Cooperation (2014, 55 pages)**  
<https://webgate.ec.europa.eu/maritimeforum/system/files/Task%205-Report4.pdf>
- **Towards an implementation strategy for sustainable blue growth agenda for the Baltic Sea region (2013, 89 pages without Annexes)**  
**Written by EUNETMAR, COEGA, AND International, Eurofish International Organisation, s.PRO**  
[https://webgate.ec.europa.eu/maritimeforum/system/files/Final%20Report%20Revision%206%20Dec%202013\\_NEW%20TEMPLATE.pdf](https://webgate.ec.europa.eu/maritimeforum/system/files/Final%20Report%20Revision%206%20Dec%202013_NEW%20TEMPLATE.pdf)
- **Towards an implementation strategy for sustainable blue growth agenda for the Baltic Sea region, Executive Summary (2017, 7 pages) Written by ECORYS, s.PRO GmbH**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/issbgabsr-exec-summary\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/issbgabsr-exec-summary_en.pdf)
- **Study on Blue Growth and Maritime Policy within the EU North Sea Region and English Channel (2014, 59 pages without Annexes). Country summaries**  
[https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/Final%20Report%20North%20Sea\\_corr\\_03032014.pdf](https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/Final%20Report%20North%20Sea_corr_03032014.pdf)  
<https://webgate.ec.europa.eu/maritimeforum/node/3555>
- **Marine Investment for the Blue Economy**  
<http://maribe.eu/blue-growth-deliverables/>
- **Strategic Guidelines for the sustainable development of EU aquaculture, 2013, COM (2013), 229 final**  
<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1477555805378&uri=CELEX:52013DC0229>

- **Study to investigate state of knowledge of deep sea mining (2014, 271 pages)** Written by ECORUS, MRAG, United Nations Environment Programme Collaborating Centre  
<https://webgate.ec.europa.eu/maritimeforum/sites/maritimeforum/files/FGP96656%20DSM%20Interim%20report%20280314.pdf>
- **Study on Deepening Understanding of Potential Blue Growth in the European Atlantic (2014,)** Access to study was denied  
<http://www.tpeamaritime.eu/wp/?p=289>
- **COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS , Initiative for the sustainable development of the blue economy in the western Mediterranean {SWD(2017) 130 final} COM(2017) 183 final (2017, 15 pages)**  
<http://europeanmemoranda.cabinetoffice.gov.uk/files/2017/04/ST-8511-2017-INIT-EN.pdf>
- **Declaration of the sustainable blue economy finance principles (2018, 2 pages)**  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/declaration-sustainable-blue-economy-finance-principles\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/declaration-sustainable-blue-economy-finance-principles_en.pdf)
- **Principles for sustainable investment in the blue economy; scoping, gap analysis and recommendations (2017, 30 pages without annexes)** Written by Accenture  
[https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/principles-sustainable-investment-in-blue-economy-report\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/principles-sustainable-investment-in-blue-economy-report_en.pdf)
- **Study on the establishment of a framework for processing and analyzing of maritime economic data in Europe (2017, 122 pages)** Written by CETMAR, COTEGA, POSEIDON  
<https://publications.europa.eu/en/publication-detail/-/publication/9c132514-982d-11e7-b92d-01aa75ed71a1>
- **Study on Access to Finance conditions for Investments in Bio-based Industries (BBI) and the Blue Economy (2017, 111 pages)** Written by InnovFin Advisory  
[http://www.eib.org/attachments/pj/access\\_to\\_finance\\_study\\_on\\_bioeconomy\\_en.pdf](http://www.eib.org/attachments/pj/access_to_finance_study_on_bioeconomy_en.pdf)
- **DG MARE Blue Growth Strategies and Actions, presentation**  
[https://www.fes-europe.eu/fileadmin/user\\_upload/Claus\\_Schultze\\_DG\\_Mare\\_Blue\\_Growth\\_PPTs\\_3005\\_2016.pdf](https://www.fes-europe.eu/fileadmin/user_upload/Claus_Schultze_DG_Mare_Blue_Growth_PPTs_3005_2016.pdf)
- **A Modern Budget for a Union that Protects, Empowers and Defends. The Multiannual Financial Framework for 2021-2027. 02.05.2018, COM (2018) 321 final**  
[https://ec.europa.eu/commission/sites/beta-political/files/communication-modern-budget-may\\_2018\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/communication-modern-budget-may_2018_en.pdf)
- **Presentation on Horizon 2020 contribution to Blue Growth**  
<http://www.who.edu/files/server.do?id=183227&pt=2&p=192949>
- **European Investment Bank, European Fund for Strategic Investment**  
<http://www.eib.org/efsi/index.htm>
- **EIF-NPI Equity Platform**  
[http://www.eif.org/what\\_we\\_do/equity/NPI/index.htm](http://www.eif.org/what_we_do/equity/NPI/index.htm)
- **European Investment Project Portal (EIPP)**  
<https://ec.europa.eu/eipp/desktop/en/index.html>
- **Marine Bio-economy Forum**  
<https://ec.europa.eu/easme/en/tender/10151/marine-bioeconomy-forum>



- **Ocean Energy Forum part of Maritime Forum**  
<https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1036>
- **Seal of Excellence**  
<https://ec.europa.eu/research/soe/index.cfm>
- **Atlantic Action Plan**  
<http://www.atlanticstrategy.eu/en/about/about-us>
- **The Global Entrepreneurship Hub**  
<https://portxl.org>
- **The Joint Research Centre, EU Science Hub**  
<https://ec.europa.eu/jrc/en>
- **Maritime Forum**  
<https://webgate.ec.europa.eu/maritimeforum/en/node/4073>
- **Marine investment for blue economy**  
<http://maribe.eu>
- **The European Cluster Collaboration Platform**  
<https://www.clustercollaboration.eu>

