



Project acronym: 4BIZ – Boosting Black Sea Blue Biz

Title: Boosting the Blue Economy in the Black Sea Region by Initiating a Business Collaboration Framework in the field of Fisheries and Aquaculture, Coastal and Maritime Tourism and Maritime Transport

Grant Agreement number: 101077576

Deliverable 3.1

Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps



D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

Deliverable details			
Number	D3.1		
Title	Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps		
Work Package No.	WP3		
Lead Beneficiary	2. ICBSS		
Type	R ¹ – Document, report	Dissemination level	PU ² - Public
Due date	30 Nov 2022	Submission date	31.03.2023
Call	EMFAF-2021-PIA-FLAGSHIP		
Topic	EMFAF-2021-PIA-FLAGSHIP-BLACK		

List of Editors	
Contributing Author(s)	Elpida BESI (ICBSS), Georgia CHANTZI (ICBSS)
Reviewer(s)	

Document Revision History			
Date	Version	Author(s)	Summary of Changes
01/11/2022	1.0		Writing document
31/03/2023	2.0	Elpida BESI (ICBSS), Georgia CHANTZI (ICBSS)	Submission of first draft
22/06/2023	3.0	Elpida BESI (ICBSS), Georgia CHANTZI (ICBSS)	Submission of second draft

¹ [R – Document, report] [DEM – Demonstrator, pilot, prototype] [DEC – Websites, patent filings, videos, etc] [DATA – data sets, microdata, etc] [DMP – Data Management Plan] [ETHICS] [SECURITY] [OTHER]

² [PU – Public] [SEN – Sensitive] [R-UE/EU-R – EU Classified] [C-UE/EU-C – EU Classified] [S-UE/EU-S – EU Classified]

Table of Contents

1. EXECUTIVE SUMMARY	4
2. INTRODUCTION.....	5
2.1. Methodology	5
3. STATE-OF-PLAY FOR BLUE ECONOMY IN THE BALTIC SEA, ATLANTIC OCEAN AND THE MEDITERRANEAN SEA, INCLUDING THE ADRIATIC AND IONIAN MACRO-REGION.....	6
3.1. POLICY REVIEW AT SEA-BASIN LEVEL.....	10
3.1.1. Baltic Sea.....	10
3.1.2. Atlantic Ocean.....	11
3.1.3. Mediterranean Sea.....	11
3.2. REGIONAL FUNDING FRAMEWORKS AND PROGRAMMES	12
4. BEST PRACTICES ON PROMOTING BLUE BUSINESSES IN THE SELECTED SEA-BASINS.....	16
4.1. IDENTIFICATION OF INCUBATORS, ACCELERATORS AND INNOVATION HUBS	16
4.2. IDENTIFICATION OF BEST PRACTICES OF BLUE BUSINESSES AT NATIONAL LEVEL.....	20
4.2.1. BALTIC SEA	21
4.2.2. ATLANTIC OCEAN	21
4.2.3. MEDITERRANEAN SEA	22
5. COMPARATIVE ANALYSIS BETWEEN THE BLACK SEA AND THE SELECTED SEA-BASINS.....	25
5.1. OVERVIEW	25
5.2. IDENTIFICATION OF CHALLENGES AND BEST PRACTICES (MATCHMAKING PROCESS).....	30
ANNEX I.....	38

1. EXECUTIVE SUMMARY

During the last years, the Black Sea countries have increased their interest and their efforts in relation to blue economy initiatives. Although blue businesses in the region are of great potential, many steps have to be taken to effectively support blue businesses and unleash their potential to the fullest.

The project 4BIZ was launched in 2022 with the aim to provide knowledge and an operational supportive framework for the empowerment of blue businesses in the Black Sea focusing on three established blue economy sectors: fisheries and aquaculture, coastal and maritime tourism and maritime transport.

Research was extended outside the Black Sea to other EU sea-basins, i.e. Baltic Sea, Atlantic Ocean, Mediterranean Sea, with the aim to identify good practices at policy and operational levels that could support the mitigation of challenges for blue businesses in the Black Sea.

A policy review of the regional and national frameworks in the selected sea-basins showed the emphasis placed on blue economy in these regions. Diversification of coastal and maritime tourism and fisheries, promotion of aquaculture as an alternative practice of breeding fish, and digitalisation of maritime transport are the most common points of regional and national action plans.

In addition, the emerging need for funding and skilled workforce in the selected sea-basins is covered by the financial and technical support of diverse funding frameworks, as well as by the catalytic role of business incubators, accelerators and innovation hubs. In spite of the fact that the majority of them are EU wide, they target both EU and non-EU Member States, focusing on a wide range of themes (e.g. education, research, digital innovation, market competitiveness, sustainable management of enterprises). Particularly, the incubators, accelerators and innovation hubs constitute meeting points where entrepreneurs communicate, cooperate, exchange ideas and elaborate on their companies.

In this respect, blue businesses across the aforementioned sea-basins are boosted, while they integrate all three pillars of sustainable development (economic, social, and environmental). Worth noting that the ideas which have been developed the most within the following blue businesses and blue business projects are connected with: a) healthy and nutritious products in fisheries and aquaculture industry, b) pesca-tourism and the use of artisanal fishing techniques, c) yachting sector, d) ecotourism, and e) underwater tourism. Generally, the diversification of tourism is considered the key to unlock the potential for blue businesses' growth in a sustainable way.

Following these main guidelines, the Black Sea countries could adopt and replicate the identified best examples, based on their particular needs and priorities. Through a matchmaking process, it is observed that the identified challenges for the Black Sea blue businesses are divided into three categories, based on the timeline for their mitigation: a) Lack of financing to support SMEs and start-ups (short-term), b) blue skills development (short-term), c) business innovation (mid-term), d) resilience to climate change (mid-term), and e) appropriate legal and regulatory framework (long-term).

As for the mitigation measures based on the good practices from the other sea-basins, apart from existing funding frameworks and incubators, accelerators innovation hubs, networking platforms,

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

maritime clusters, online database platforms, ocean literacy and social inclusion could provide significant support to businesses.

As an overall remark, it is worth noting that any efforts towards competitive, green, circular and socially responsible businesses require a top-down and bottom-up approach, both at national and regional levels. Coordination among all involved stakeholders and cross-border cooperation are essential components to boosting blue economy.

2. INTRODUCTION

During the last years, the Black Sea countries have increased their interest and their efforts in relation to blue economy initiatives. Although blue businesses in the region are of great potential, many steps have to be taken to effectively support blue businesses and unleash their potential to the fullest.

The project 4BIZ was launched in 2022 with the aim to provide knowledge and an operational supportive framework for the empowerment of blue businesses in the Black Sea focusing on three established blue economy sectors: fisheries and aquaculture, coastal and maritime tourism and maritime transport.

In the framework of the project, research was extended outside the Black Sea to other EU sea-basins, i.e. Baltic Sea, Atlantic Ocean, Mediterranean Sea, with the aim to identify good practices at policy and operational levels that could support the mitigation of challenges for blue businesses in the Black Sea.

The present report aims to provide a review of policies at regional and national level in the selected sea-basins, as well as to highlight good practices of supporting mechanisms and blue businesses. Its results will feed the ongoing research and consultation activities and will support the development of pilot services under the 4BIZ project.

2.1. Methodology

The identification and assessment of the report is based on a) desk research of online sources and b) the input provided by two 4BIZ deliverables: the Country Reports (D2.1) and the Consolidated Regional Report (D2.2). It is divided into three parts which include: a) an overview of blue economy in the selected sea-basins, including a review of regional and national policies and funding frameworks; b) the identification of best practices of regional and national business incubators, accelerators and innovations hubs, including also best practices of relevant businesses and projects; and c) the comparative analysis between the EU sea-basins and the Black Sea, to provide a better understanding of the current situation in order to propose a matchmaking process to address the identified gaps in blue businesses in the Black Sea region.

In addition to reviewing the regional policy frameworks at EU sea-basin level, the report proceeds with reviewing the relevant national policies in a number of countries from each sea-basin, in order to have a more inclusive overview of blue economy development outside the Black Sea. The countries which have been selected are the following: Baltic Sea- Estonia and Sweden, Atlantic Ocean- Ireland and Spain, Mediterranean Sea- Italy and Tunisia, Adriatic and Ionian region (sub-basin of the Mediterranean) - Albania and Croatia.

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

The targeted countries per sea-basin were selected on the basis of ensuring a variety of coastal countries with different economies and geographic contexts, a combination of EU MS with non-EU MS, taking also into consideration the level of blue economy advancement in the said countries. Particularly:

- a) In the cases of the Baltic Sea and the Atlantic Ocean, Sweden and Spain constitute important focal points in relation to Blue Economy across the aforementioned sea-basins, while Estonia and Ireland have more steps to take so as to be further developed in the sector
- b) Italy represents the North Mediterranean, while Tunisia is on the Southern Mediterranean
- c) In the Adriatic and Ionian macroregion, Albania is not an EU member state, in contrast to Croatia.

3. STATE-OF-PLAY FOR BLUE ECONOMY IN THE BALTIC SEA, ATLANTIC OCEAN AND THE MEDITERRANEAN SEA, INCLUDING THE ADRIATIC AND IONIAN MACRO-REGION

According to the **2022 EU Blue Economy Report**³, **coastal tourism** is the most advanced Blue Economy sector in the European Union, resulting in 63% of the jobs and 44% of the GVA⁴ in the overall EU Blue Economy for the year 2019.

In 2019, in the **Baltic Sea**, coastal tourism and maritime transport were the main Blue Economy sectors in terms of employment (€11 billion GVA and 0.35 million jobs) and GVA (€13 billion), respectively. In the same year, Estonia was the 3rd country in the region –and the 9th country in the EU- where coastal areas accounted for more than three quarters of the total nights spent in tourist accommodation (78%).

In 2020, the **Swedish port of Gothenburg** was among the top 20 EU ports in terms of cargo capacity (17th), while the ports of Tallinn (Estonia) and Helsingborg (Sweden) were among the top 20 EU ports by number of passengers (8th and 12th respectively), although they experienced a strong drop due to the COVID-19 impact.

Most of the countries bordering the Baltic Sea are highly dependent on **marine living resources** (including fisheries and aquaculture); the main species include herring, sprat and cod. The revenue generated by the EU Baltic Sea fleet in 2019 was estimated at almost €224 million, with a GVA over €122 million.

The sea-basin's action plan places emphasis, mainly, on the digitalization and sustainability of maritime transport; and, secondly, on tourism infrastructure development (combining it with fisheries and aquaculture-based activities).

³ European Commission (2022). The EU Blue Economy Report. 2022. https://medblueeconomyplatform.org/wp-content/uploads/2022/05/2022-blue-economy-report_en.pdf

⁴ Gross Value Added

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

Across the **Atlantic Ocean**, the GVA is generated mainly by coastal tourism (€20.4 billion), followed by marine living resources (€6.5 billion). In terms of employment, the main Blue Economy sectors are coastal tourism (0.6 million people), which employs more than all the other sectors combined, and marine living resources (0.18 million people). In general, the Blue Economy in the Atlantic Coast countries generated €34.9 billion of GVA and employed 0.89 million people in 2019.

Coastal tourism dominates Spanish Blue Economy; in 2019, it contributed 78% to Blue Economy jobs and 72% to GVA. However, it should be taken into account that 70-75% of the total coastal tourism in the country took place in the Mediterranean, while 25-30% took place in the Atlantic Coast, including the Canary Islands with about 20% of the total coastal tourism.

Across the North Western Waters (NWW), Ireland has the second largest **fishing fleet** operating in the region, while Spanish fishing fleet is one of the main which operates in the Southern Western Waters (SWW). For Spain, the leading country in the EU's aquaculture production (27%), the Atlantic Coast represents about 44% (including 8 % from the Canary Islands) of the total Spanish aquaculture production in value.

As for **maritime transport**, Bilbao (Spain), located in the Atlantic Coast, ranks 20 in the list of the top 20 EU ports by volume of containers.

Regarding the relevant action plans in the Atlantic coast, the main focus is on the competitiveness of the ports, the diversification of coastal and maritime tourism, as well as the promotion of environmentally friendly fishing practices.

In the **Mediterranean Sea**, Blue Economy generated €67 billion GVA in 2019 and 2.05 million jobs. **Coastal tourism** is the key sector (€41 billion GVA and 1.55 million jobs) followed by maritime transport (€8 billion GVA)⁵.

Table No 1: Blue Economy across the sub-basins of the Mediterranean Sea (2019)

	GVA (2019)	Jobs	Main Blue Economy Sectors
West Mediterranean	€28 billion	0.7 million	Coastal tourism
Adriatic and Ionian Region	€25 billion	1.02 million	Coastal tourism (1 st), Maritime transport (2 nd), Living resources (4 th)
			Coastal tourism (1 st),

⁵ European Commission (2022). The EU Blue Economy Report. 2022. https://medblueeconomyplatform.org/wp-content/uploads/2022/05/2022-blue-economy-report_en.pdf

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

East Mediterranean	€9 billion	0.61 million	Maritime transport (2 nd), Living resources (4 th)
---------------------------	------------	--------------	---

Source: European Commission (2022). *The EU Blue Economy Report. 2022.*

In 2019, Croatia was the 5th country in the EU where coastal areas accounted for more than three quarters of the total nights spent in tourist accommodation (93%). Moreover, Italy had the 3rd largest coastal tourism in terms of employment and GVA. As for maritime transport, the Italian ports of Gioia Tauro, Genoa and La Spezia are in positions 8, 10 and 15 in the list of top 20 EU ports in terms of cargo capacity, while Messina, Reggio di Calabria, Napoli, Capri, Ischia and Piombino are in positions 1, 2, 5, 16, 17, 18 among the top 20 EU ports by number of passengers. The Croatian port of Split is ranks 19 in the same list.

The Mediterranean fleet accounted for 58% of all EU vessels and 46% of the EU employment (FTE) in 2019. The Mediterranean fleet also contributed to 10% of the EU landings in weight and 30% in value. As for aquaculture, Italy has the 3rd largest production in the EU (12%).

In the Mediterranean Sea action plans put special emphasis on: a) marine cluster development and blue skills (for all Blue Economy sectors), b) the diversification of fisheries/ aquaculture and coastal/ maritime tourism, c) the promotion of small-scale fisheries, d) the innovation of the sectors, and e) the access to finance for start-ups and SMEs.

Table No 2: Distribution of employment in the Blue Economy (2019)⁶

	Coastal tourism⁷	Marine Living Resources⁸	Maritime Transport
Estonia (Baltic)	27.864 persons employed	3.100 persons employed	2.538 persons employed
Sweden (Baltic)	82.852	8.105	18.015
Ireland (Atlantic)	55.691	9.431	1.104

⁶ https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-maps/distribution-employment-blue-economy_en

⁷ Including maritime tourism

⁸ Including fisheries and aquaculture

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

Spain (Atlantic)⁹	704.898	119.346	14.187
Italy (Mediterranean)	304.124	74.206	73.011
Croatia (Adriatic-Ionian)	129.739	11.551	8.579

Source: EU Blue Economy Observatory, European Commission (Not available data on Tunisia and Albania).

Table No 3: Distribution of Gross Value Added in the Blue Economy (2019)¹⁰

	Coastal tourism¹¹	Marine Living Resources¹²	Maritime Transport
Estonia (Baltic)	525 GVA (€ million)	49 GVA (€ million)	132 GVA (€ million)
Sweden (Baltic)	3.436	415	1.403
Ireland (Atlantic)	1.651	518	396
Spain (Atlantic)	23.631	3.686	862
Italy (Mediterranean)	10.678	2.761	4.918
Croatia (Adriatic-Ionian)	2.926	155	233

Source: EU Blue Economy Observatory, European Commission (Not available data on Tunisia and Albania).

⁹ Although the report is focused on the Atlantic Coast of the country, these indicators (on both tables) represent both Atlantic and Mediterranean Spain.

¹⁰ https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-maps/distribution-gross-value-added-blue-economy_en

¹¹ Including maritime tourism

¹² Including fisheries and aquaculture

3.1. POLICY REVIEW AT SEA-BASIN LEVEL

3.1.1. Baltic Sea

The Baltic Sea, one of the largest brackish water areas in the world¹³, is surrounded by nine countries: Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Russia, Finland and Sweden. The Baltic Sea ecosystems is under pressure by various nature and human-driven stressors, such as, eutrophication, marine litter, the introduction and spread of non-indigenous species, underwater sound, fishing and habitat loss¹⁴. The countries have early on adopted relevant policies and framework to counter the challenges.

- 1) The **Baltic Sea Action Plan** (BSAP)¹⁵ was adopted by the **HELCOM** Contracting Parties¹⁶ in 2007 and updated in 2021 putting emphasis on the good environmental status of the sea-basin through a wide range of measures and actions. It is worth mentioning that the Baltic Marine Environment Protection Commission - also known as the Helsinki Commission (HELCOM)¹⁷ – is a regional platform for environmental policy making which was established to protect the marine environment of the Baltic Sea from all sources of pollution.
- 2) The **European Union Strategy for the Baltic Sea Region Action Plan**¹⁸, which was also updated in 2021, and its main key challenges are associated with the objectives of the EU Strategy for the Baltic Sea Region: a) saving the sea, b) connecting the region, and c) increasing prosperity.
- 3) The **Entrepreneurship and the Blue Economy in the Baltic Sea Region Action Plan** (2021)¹⁹, which was created within the INTERREG Baltic Sea Region Project “Land-Sea-Act”, as a tool to promote a more balanced development of the Baltic Sea through boosting blue businesses in the region.

The abovementioned action plans aim at achieving environmental sustainability in the wider Baltic Sea region; as well as socio-economic development for the local communities. In this context, fisheries and aquaculture, coastal and maritime tourism, as well as maritime transport are included. These action plans have been developed on the grounds that transnational cooperation, mobilization of stakeholders (e.g. policy, academia, financing institutions and pan-Baltic organisations) and integration of blue economy initiatives are essential to address the said challenges of the sea-basin.

Taking into account the environmental effects of shipping, particular attention is paid on reducing emissions from the industry through different measures, such as establishing funding mechanisms to support innovation and digitalising ports to comply with environmental standards. For these reasons, rules have to be modernised, while the conditions for registering vessels have to be improved.

¹³ <http://stateofthebalticsea.helcom.fi/in-brief/our-baltic-sea/>

¹⁴ <http://stateofthebalticsea.helcom.fi/in-brief/our-baltic-sea/>

¹⁵ <https://helcom.fi/wp-content/uploads/2021/10/Baltic-Sea-Action-Plan-2021-update.pdf>

¹⁶ Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Russia, Finland, Sweden and the European Union

¹⁷ <https://helcom.fi/>

¹⁸ <https://www.balticsea-region-strategy.eu/attachments/article/590824/Action%20Plan%202021.PDF>

¹⁹ <https://maritime-spatial-planning.ec.europa.eu/sites/default/files/action-plan-entrepreneurship-and-the-blue-economy-in-bsr.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

Coastal and maritime tourism plays also an important role with special focus on the enhancement of remote and rural areas, better infrastructure in coastal tourism, the encouragement of maritime cultural tourism and the human capital. Worth noting that investing in human capital in the tourism industry includes training fishers in relation to pescaturism as well as creating networks with aquaculture operators.

In contrast to the regional Action Plans, Estonia and Sweden highlight –via their national Action Plans- the high potential of fisheries and aquaculture as well as the importance of research and quality fish materials to support the development of the sector.

3.1.2. Atlantic Ocean

The Atlantic Ocean is the largest ecosystem in Europe; while according to the 2020 EU Blue Economy Report, it is the largest sea-basin in terms of GVA (Gross Value Added), representing 36% of the EU blue economy GVA²⁰.

In this framework, the **Atlantic Maritime Strategy**²¹ aims to support the sustainable development of blue economy in the EU countries bordering the Atlantic; as well as to ensure its environmental and ecological stability. The Strategy is implemented via the Atlantic Action Plan covering France, Ireland, Portugal and Spain.

Taking into consideration the need for environmental and ecological stability, the Action Plans put emphasis on cooperation and knowledge transfer between companies, research centres and higher education organisations. In this context, it is of high importance to a) promote coastal and maritime tourism through blue skills, environmental certification schemes and innovation capacities, b) prolong tourism seasonality, and c) use cultural heritage in a responsible way for diversifying tourism. In addition, it is considered that SMEs and start-ups could have a critical role in the development of the industry. Regarding maritime transport, ports have to be transformed into hubs where entrepreneurs will elaborate on blue and circular economy, and diversified business activities, such as the maintenance of offshore renewable energy installations or tourism.

Lastly, fishermen have to participate in fishing-for-litter actions as an innovative way to bring ashore the waste caught in their nets during their normal fishing operations. As for fisheries, the national Action Plan of Ireland outlines the great potential and added value of diversified inshore and, consequently, small-scale fisheries as well as the need for communication with the markets.

3.1.3. Mediterranean Sea

The Mediterranean is a semi-enclosed sea, which is bordered by over 20 countries. Its coasts are home to more than 150 million inhabitants, a figure which doubles during the tourist season, as well as to more than 450 ports and terminals that together account for approximately 30% of global sea-borne trade (in volume).

Moreover, half of the EU's fishing fleet is active in the Mediterranean, mostly small-sized and artisanal vessels, together with increasing marine aquaculture production. At the same time, the

²⁰ https://oceans-and-fisheries.ec.europa.eu/ocean/sea-basins/atlantic-ocean_en

²¹ <https://atlantic-maritime-strategy.ec.europa.eu/en/atlantic-strategy-glance/atlantic-strategy>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

sea-basin faces many challenges, including pollution from land sources and ships, marine litter which impacts on biodiversity, overfishing and coastal degradation.²²

For this reason, the European Commission is engaged in **three different fora** in order to promote the sustainable development of the region:

- 1) The **Union for Mediterranean** (UfM) is an intergovernmental Euro-Mediterranean organisation which brings together all countries of the EU and 15 countries of the southern and eastern Mediterranean.
- 2) The **Western Mediterranean (WestMED) initiative** focuses on the sustainable development of the blue economy in this specific region, involving five EU countries (France, Italy, Portugal, Spain and Malta) and five southern partner countries (Algeria, Libya, Mauritania, Morocco and Tunisia).
- 3) The **EU Strategy for the Adriatic and Ionian region (EUSAIR)** is one of the EU's macro-regional strategies. It involves four EU countries (Croatia, Greece, Italy and Slovenia) and six Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, San Marino and Serbia).

The Action Plans on the Mediterranean place special focus on blue economy and the role of SMEs and start-ups to achieve competitiveness, diversification and market innovation (e.g. ecolabelling) in all the sub-sectors. Moreover, establishing blue economy clusters (both national and transnational), ‘‘building’’ blue skills and providing access to finance for all the potential stakeholders are necessary.

Primarily, attention is paid on coastal and maritime tourism, the key sector across the region, especially in terms of innovation and quality; a) creating an R&D platform on new products and services, b) diversifying the cruise and nautical sectors, and c) enhancing the yachting sector. As for fisheries (particularly, small-scale fisheries) and aquaculture, they could contribute significantly to the development of coastal communities' livelihoods, while the national Action Plan of Italy highlights the use of technology, such as market ICT based technologies and other digital tools for small and medium aquaculture farms, to support efficient management of production sites in remote coastal/rural and even off-shore areas. Furthermore, clustering port activities/services throughout the region is appropriate in order to improve the employment prospects for the maritime transport industry.

3.2. REGIONAL FUNDING FRAMEWORKS AND PROGRAMMES

In order to better understand the state-of-play for blue economy in the selected sea-basins, it is necessary to take into account the regional funding frameworks and programmes through which blue economy initiatives can be implemented and developed. Although the majority of them are EU-level focused, they target both EU and non-EU Member States, while their financial support covers a wide range of themes (e.g. education, research, digital innovation, market competitiveness, sustainable management of enterprises etc.). In this regard, these frameworks and programmes fund projects so as to promote blue businesses and, in general, to support the development of blue economy sectors -including fisheries and aquaculture, coastal and maritime tourism, and maritime transport. Furthermore, there are funding mechanisms which are specific to

²² https://oceans-and-fisheries.ec.europa.eu/ocean/sea-basins/mediterranean-sea_en

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

sea-basins, such as the Interreg programmes, that aim to provide financial resources and technical support based on the needs of each region.

- 1) **BlueInvest**²³, enabled by the European Maritime and Fisheries Fund, aims to boost innovation and investment in sustainable technologies for the blue economy, by supporting readiness and access to finance for early-stage businesses, SMEs and scale-ups. The BlueInvest Fund provides finance to funds that are wholly or partly targeting the blue economy or to individual enterprises backed by more general funds. Moreover, there are the Blue Invest Awards for SMEs and Start-ups.
- 2) The **European Structural and Investment Funds** (ESIF), inter alia:
 - a) *European Regional Development Fund*²⁴
 - innovation and support to small and medium-sized businesses
 - b) *European Social Fund Plus*²⁵
 - Modernising labour market institutions and services
 - Adaptation of workers, enterprises and entrepreneurs to change
 - c) *European Maritime, Fisheries and Aquaculture Fund*²⁶
 - growth of a sustainable blue economy
- 3) **Connecting Europe Facility for Transport 2021-2027**²⁷, a funding programme that supports trans-European networks and infrastructures in the sector of transport.
- 4) **Creative Europe**²⁸ supports synergies between cultural and nature tourism, including coastal and maritime heritage.
- 5) **Horizon Europe**²⁹, the financial instrument for the EU's research and innovation strategy. In this regard, the **Sustainable Blue Economy Partnership**³⁰, a Horizon Europe co-funded partnership, enables an effort to pool research and innovation investments and align **national programmes** at pan-European scale, taking into account the sea-basin and Atlantic Ocean dimension. Most of the Baltic Sea countries (including Estonia and Sweden) are members of the partnership – in contrast to the Black Sea where Romania and Türkiye participate in.

²³ <https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1451>

²⁴ https://ec.europa.eu/regional_policy/funding/erdf_en

²⁵ <https://ec.europa.eu/european-social-fund-plus/en>

²⁶ https://oceans-and-fisheries.ec.europa.eu/funding/emfaf_en

²⁷ https://cinea.ec.europa.eu/programmes/connecting-europe-facility/transport-infrastructure_en

²⁸ <https://culture.ec.europa.eu/creative-europe>

²⁹ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

³⁰ <https://bluepartnership.eu/#call>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- 6) The **LIFE Programme**³¹ is the EU’s funding instrument for the environment and climate action. Inter alia, it co-finances innovative projects regarding coastal and maritime tourism, as well as SMEs and start-ups.
- 7) The **European Investment Bank**³² provides SMEs with financing for investments in the 4BIZ focus sectors.
- 8) The **European Bank for Reconstruction and Development**³³ is an international financial institution which “fosters the transition towards open market-oriented economies and promotes private and entrepreneurial initiative”.
- 9) The **World Bank**³⁴ provides a wide variety of financial products and technical assistance helping countries apply innovative solutions to the challenges they face.
 - a) The *Baltic Sea Regional Project*³⁵ (BSRP) facilitated the restoration of a sustainable ecosystem and improved coastal zone management through the introduction of ecosystem-based approaches for land, coastal and open sea environmental management.
- 10) The **European Innovation Council and SMEs Executive Agency**³⁶ provides support to European innovators, researchers, businesses and consumers, opening up opportunities for SMEs.
- 11) The **Interreg Baltic Sea Region** programme³⁷ is a source of EU funding covering the above-mentioned nine countries. Namely, three projects which are relevant with the 4BIZ focus sectors are:
 - a) The *RETROUT project*³⁸ focalizing on an eco-brand enabled to promote the Baltic Sea as a destination for ethical and sustainable coastal fishing tourism.
 - b) *Creative Ports*³⁹ focalize on internationalisation, joint value creation and peer learning in cultural and creative industries.
 - c) The *BestAgersLighthouses project* (2007-2013 Baltic Sea Region)⁴⁰ focused on the implementation of age management interventions in selected small and medium-sized enterprises and public organisations in different Baltic Sea Region countries.

12) The **Interreg Euro-Med** programme⁴¹ is a source of EU funding that aims to make the Mediterranean region smarter and greener and improve the governance between its

³¹ https://cinea.ec.europa.eu/programmes/life_en

³² <https://www.eib.org/en/index.htm>

³³ <https://www.ebrd.com/home>

³⁴ <https://www.worldbank.org/en/home>

³⁵ <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/641111468771619927/europe-and-central-asia-baltic-sea-regional-project-environmental-assessmnet>

³⁶ https://eismea.ec.europa.eu/index_en

³⁷ <https://interreg-baltic.eu/>

³⁸ <https://interreg-baltic.eu/project/retROUT/>

³⁹ <https://interreg-baltic.eu/project/creative-ports/>

⁴⁰ <https://keep.eu/projects/5482/Strategic-Age-Management-for-EN/>

⁴¹ <https://interreg-euro-med.eu/en/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

stakeholders. It gathers 14 countries from the Northern shore of the Mediterranean: 10 EU Member States and 4 countries from the Instrument for Pre-Accession Assistance. Namely, two projects which are relevant with the 4BIZ focus sectors are:

- a) The *BLUEfasma project*⁴² aims to empower innovation capacity of SMEs, maritime clusters and networks in MED islands and coastal areas to support blue circular economy growth in fishing/aquaculture
 - b) The *PSAMIDES project*⁴³ helps ports authorities, clusters and technological & research centres work together as an integrated business ecosystem to optimize the performance of small and medium-sized ports through the implementation of various innovative tools
- 13) The **Interreg ADRION** programme⁴⁴ is a source of EU funding that aims to act as a policy driver and governance innovator for the benefit of more than 70 million people in the Adriatic and Ionian region.
- a) The *BLUE BOOST*⁴⁵ project supports the potential of knowledge/technology transfer, transnational and cross-sectoral cooperation between key innovation actors (e.g., SMEs) of sectors, such as fisheries and aquaculture.
 - b) The *ECO-NautiNET* and *ECO-NautiNET PLUS*⁴⁶ projects promote the realization of a common and innovative ADRION's network dedicated to SMEs, research institutions and business support organizations with aim of improving SME's competitiveness and innovation in the nautical sector and supporting their internationalization.
- 14) In the context of Interreg programmes, **ENI CBC Med** constitutes a hub for cooperation in the Mediterranean. The **Fishery Mediterranean Network (FISH MED NET) project** promotes sea-basin collaboration through working on the diversification and integration of the fisheries industry as well as the enhancement of the innovation processes and increased visibility on global markets.
- 15) The **SwitchersFund**⁴⁷ provides and facilitates direct funding and business support services to existing and future green, circular and social entrepreneurs in the Mediterranean region. It also mobilizes local investors and enterprise support programmes as well as European resources to strengthening Mediterranean start-up projects and raise additional funds.
- 16) The **Instrument for Pre-accession Assistance (IPA) III (2021-2027)**⁴⁸ provides significant financial resources and a wide range of tools and technical options to non-EU countries so as to comply with Union values and to progressively align to its rules, standards, policies and practices with a view to Union membership.

⁴² <https://bluefasma.interreg-med.eu/>

⁴³ <https://psamides.interreg-med.eu/>

⁴⁴ <https://www.adrioninterreg.eu/>

⁴⁵ <https://blueboost.adrioninterreg.eu/>

⁴⁶ <https://econautinet.adrioninterreg.eu/>

⁴⁷ <https://www.theswitchersfund.eu/en/>

⁴⁸ https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/overview-instrument-pre-accession-assistance_en

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- 17) The **Western Balkans Investment Framework (WBIF)** ⁴⁹ is a joint initiative of the EU, financial organisations, bilateral donors and beneficiaries, aimed at enhancing harmonisation and cooperation in investments for the socio-economic development of the region and contributing to the European perspective of the Western Balkans.
- 18) The **Interreg Atlantic Area** programme⁵⁰ is a source of EU funding promoting transnational cooperation among 36 Atlantic regions of five European countries⁵¹. Namely, two projects which are relevant with the 4BIZ focus sectors are:
- a) The *INTEGRATE project*⁵² facilitates the industrial transition towards Integrated Multi-Trophic Aquaculture (IMTA) in the European Atlantic Area.
 - b) *TIDE*, or the ‘‘Atlantic Network for Developing Historical Maritime Tourism’’ project⁵³, focalizes on the use of Virtual Reality and Augmented Reality to create sustainable multi-region maritime tourism attractions (e.g., archaeology and submarine exploration fields).
 - c) The *Atlantic Smart Ports Blue Acceleration Network (AspBAN)*⁵⁴ helps EU Atlantic ports work as blue economy hubs, foster innovation and diversify their business models and revenue sources (Atlantic Awards Winner 2021).

4. BEST PRACTICES ON PROMOTING BLUE BUSINESSES IN THE SELECTED SEA-BASINS

In the following sections, best practices on promoting blue businesses in the Baltic Sea, the Atlantic Ocean and the Mediterranean Sea are presented, by identifying a) incubators, accelerators and innovation hubs; b) businesses across the sea-basins, in the fields of fisheries and aquaculture, coastal and maritime tourism and maritime transport.

4.1. IDENTIFICATION OF INCUBATORS, ACCELERATORS AND INNOVATION HUBS

Overall, it is worth mentioning the vital role of incubators, accelerators and innovation hubs as means for the entrepreneurs to communicate, exchange ideas, create and improve their products and services. In this context, blue businesses, including relevant SMEs and start-ups, could be benefitted also.

Although most of the following supportive mechanisms are EU-wide, there are also platforms which are regional (e.g. Vestbee), sea-basin specific (e.g. AspBAN) or country specific (e.g. IncubAzul). In addition to placing focus on networking, research, dialogue, upskilling etc, the most common point of these communities is their willingness to foster innovation, greener and digitalized processes ensuring the sustainable management of enterprises.

⁴⁹ <https://www.wbif.eu/>

⁵⁰ <https://www.atlanticarea.eu/>

⁵¹ France, Ireland, Portugal, Spain and the United Kingdom

⁵² <http://integrate-imta.eu/>

⁵³ <https://www.tide-atlantic.eu/>

⁵⁴ <https://aspban.eu/en/home/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

i) EU-wide Incubators, Accelerators and Innovation Hubs

- 1) The **Copernicus Incubation Programme**⁵⁵, launched by the European Commission, supports European entrepreneurs and start-ups working with Earth observation and big data from the Copernicus programme, to create innovative, commercially viable products and services. In this context, the Copernicus Start-up Programme and the Copernicus Hackathons have been established.
 - a) *PREParE SHIPS project*⁵⁶ (Sweden): Creation of a system capable of high position accuracy, prediction of future ship positions, and communication of said predictions.
 - b) *SIMROUTE project*⁵⁷ (Spain): This software provides a comprehensive, open and easy tool including pre- and post-processing for ship weather routing simulations, using Copernicus Marine products.
 - c) *SOSeas project* (Spain)⁵⁸: This service aims to reduce drowning and accidents in aquatic spaces through a preventive tool that provides forecasting risk assessment on beaches. Lifeguards and beach administrators can also make use of the system to manage likely events and warnings.
 - d) *PerfeCt - Performance of Aquaculture under Climate change*⁵⁹ (Croatia): Through this project, science-based results are transformed to easily accessible and understandable information useful for aquaculture managers, investors and policy makers, thus creating a valuable link between R&D and industry.
 - e) *GUTTA-VISIR*⁶⁰ (Italy): A decision support system for ferries in the Adriatic Sea which provides operational least-CO2 ferry routes, depending on the forecast meteo- marine conditions.
 - f) *FOR-MTUN*⁶¹ (Tunisia): An operational forecasting system for the central Mediterranean Sea along the Tunisia coast providing accurate marine and coastal environment physical parameters for many applications, such as supporting fisheries, offshore aquaculture and tourism.
- 2) The **EIT Food**⁶², supported by the European Union, is the world's largest & most dynamic food innovation community which connects thousands of startups to more than 200 leading corporations, universities, research centres, and investors.
 - a) *Meet Future*⁶³(Estonia): Development of mycoprotein-based vegan poultry and seafood products.

⁵⁵ <https://www.copernicus.eu/en>

⁵⁶ <https://www.copernicus.eu/en/use-cases/prepare-ships-increased-safety-and-efficiency-shipping>

⁵⁷ <https://www.copernicus.eu/en/use-cases/simroute-comprehensive-ship-weather-routing-system-using-copernicus-marine-products>

⁵⁸ <https://www.copernicus.eu/en/use-cases/soseas-assessment-tool-predicting-dynamic-risk-drowning-beaches>

⁵⁹ <https://www.copernicus.eu/en/use-cases/perfect-performance-aquaculture-under-climate-change>

⁶⁰ <https://www.copernicus.eu/en/use-cases/gutta-visir-decision-support-system-ferries-adriatic-sea>

⁶¹ <https://www.copernicus.eu/en/use-cases/operational-marine-forecasting-system-central-mediterranean-sea-tunisia-coasts-mtun>

⁶² EIT: European Institute of Innovation and Technology, <https://entrepreneurship.eitfood.eu/>

D 3.1 – Report on the assessment and identification of best practices of other regions and seas that could match with the identified gaps

- b) *Marine Feed*⁶⁴ (Sweden): Sea Squirt cultivation with a strong positive environmental impact on the sea
 - c) *Seavolution*⁶⁵ (Spain): An alternative protein technology to enjoy sustainable, healthy, plant-based seafood, with the identical texture, flavor, color, and quality of real fish.
- 3) The **ESA Business Incubation Centres**⁶⁶ constitute the largest network of incubators supporting space related start-ups in Europe (including maritime and aquatic, tourism, and transport industry). The objective is to support entrepreneurs with a space-based business idea and help them developing their product. In the process, they create and grow clusters of space-related start-ups across Europe.
 - 4) The **European Cluster Collaboration Platform**⁶⁷ is the European online hub for industry clusters through which partners can be found per country, region, sector or industrial ecosystem.
 - 5) The **European Boating Industry**⁶⁸ represents the recreational boating and nautical tourism industry in Europe and works on a set of key strategic areas for the sustainable future of the industry.
 - 6) The **European Network of Maritime Clusters**⁶⁹ is a platform for the exchange of information, and networking between the maritime cluster organizations of European Member States. Sweden (Maritime Forum), Ireland (IMDO), Spain (Cluster Maritimo Espanol) and Italy (Federazione del Mare) participate in the network.
 - 7) The **EU CONEXUS (European University for Smart Urban Coastal Sustainability)**⁷⁰ is a strong partnership between nine universities developing science and innovation into a hub of excellence on Smart Urban Coastal Sustainability.
 - a) *South East Technological University*⁷¹ (SETU) in Ireland,
 - b) *Catholic University of Valencia*⁷² in Spain, and
 - c) *University of Zadar*⁷³ in Croatia have joined this network.
 - 8) The **Blue Generation**⁷⁴ project aims to attract and engage young people between 15 and 29 years, and to convert them to pursue a sustainable career in Blue Economy. Spain participates in this initiative.

⁶³ <https://www.eitfood.eu/community/startups/meet-future>

⁶⁴ <https://www.eitfood.eu/community/startups/marine-feed>

⁶⁵ <https://www.eitfood.eu/community/startups/seavolution>

⁶⁶ ESA: European Space Agency, <https://commercialisation.esa.int/esa-business-incubation-centres/>

⁶⁷ <https://clustercollaboration.eu/>

⁶⁸ <https://www.europeanboatingindustry.eu/>

⁶⁹ <https://enmc.eu/index.html>

⁷⁰ <https://www.eu-conexus.eu/en/>

⁷¹ <https://www.wit.ie/>

⁷² <https://www.ucv.es/>

⁷³ <https://www.unizd.hr/eng/>

⁷⁴ <https://www.bluegeneration.org/index.php/en/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- 9) **HATCH**⁷⁵ (Ireland) run multiple innovation programs designed for various business stages (e.g., concerning incubators and accelerators) in order to enable the next generation of food and seafood entrepreneurs all around the world.
- 10) **IncubAzul**⁷⁶ (Spain) is a project intended to be a flagship model for the promotion of the Blue Economy. Its objective is to promote innovation and technology transfers to micro-, small and medium-sized enterprises operating in Andalusia.
- 11) The **BluAct**⁷⁷ transfer network is an urban action initiative that intends to support an improvement and transfer of good practices in the field of Blue Growth innovation and entrepreneurship as implemented by the City of Piraeus (Greece). Italy (Salerno) is included in partner cities.

ii) Regional Incubators, Accelerators and Innovation hubs

- 12) **Vestbee**⁷⁸ is a matchmaking platform for start-ups, SMEs, investors and accelerators in Central and Eastern Europe in order to find relevant connections.

iii) Sea-basin based Incubators, Accelerators and Innovation hubs

- 13) The **Atlantic Smart Ports Blue Acceleration Network (AspBAN)**⁷⁹ helps EU Atlantic ports work as blue economy hubs, foster innovation and diversify their business models and revenue sources (Atlantic Awards Winner 2021).
- 14) The **Mediterranean Blue Acceleration Network (MedBAN)**⁸⁰ aims to mobilize EU blue economy SMEs to adopt greener and digitalized processes. It manages two open call schemes to fund a set of services for SMEs on innovation, training, twin transformation and internationalisation issues.
- 15) **BLUEMED**⁸¹ was a research and innovation initiative for blue jobs and growth in the Mediterranean area. Italy and Tunisia participated in BLUEMED. Now, the “continuation” is under **BlueMissionMed**⁸² which will design, structure and support a well-functioning **basin scale innovation ecosystem**, ensuring fast progress towards the achievement of Mission “Restore Our Oceans and Waters by 2030” objectives and important impact on the society.
- 16) The **Union for the Mediterranean**⁸³ is the intergovernmental Euro-Mediterranean organisation providing a forum to enhance regional cooperation and dialogue, as well as the implementation of concrete projects and initiatives.
- 17) The **Mediterranean Blue Economy Stakeholder Platform**⁸⁴ is a regional networking platform for sharing knowledge and supporting the development of the blue economy.

⁷⁵ <https://www.hatch.blue/>

⁷⁶ <https://www.incubazul.es/en/>

⁷⁷ <https://www.bluact.eu/>

⁷⁸ <https://vestbee.com/>

⁷⁹ <https://aspban.eu/en/home/>

⁸⁰ <https://magellancircle.eu/project/medban-mediterranean-blue-acceleration-network/>

⁸¹ <http://www.bluedmed-initiative.eu/>

⁸² <https://bluemissionmed.eu/>

⁸³ <https://ufmsecretariat.org/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

18) The **Switchers.org**⁸⁵ is the innovative and free platform of the SwitchMed initiative to boost sustainable entrepreneurship that gathers all tools and methodologies developed by MedWaves (e.g., the Switchers Community- the community of sustainable businesses across the Mediterranean- and the Switchers Open Eco-Innovation-the platform connecting companies and entrepreneurs in the region).

4.2. IDENTIFICATION OF BEST PRACTICES OF BLUE BUSINESSES AT NATIONAL LEVEL

The identification of best practices on promoting blue businesses leads to a better understanding on how to approach the subject of blue economy in the sea-basins. Worth mentioning that the aim of demonstrating these best practices is to become achievable under dedicated consulting, training and business benchmarking process from other companies as well. A really important conclusion - based on the findings via the online research- is the fact that, despite the differences between the selected sea-basins, it is observed a “common package of measures” for blue businesses to thrive and become successful.

Firstly, the following companies and the relevant business projects have adopted an approach which is both place-based and ecosystem-based. In other words, they have taken into consideration the local characteristics of each region, as well as their distinct environmental conditions in order to harmonize with cultural and natural heritage and contribute to improving the lives of local communities.

In the context of this multi-faceted approach, special emphasis is placed on innovation and competitiveness of blue businesses which have been implemented through: a) cooperation between scientists and entrepreneurs developing high-value novel products and services, b) conduction of studies in order to better integrate a blue economy perspective within regional maritime planning, c) creation and use of ICT (Information and Communication Technology) tools monitoring and reducing the environmental impact of businesses, and d) certification of ISO standards ensuring food safety, health in the workplace, environmental management etc.

As for the blue economy sectors, it is comprehensible – based once again on the internet searching- that the most successful blue businesses in the selected sea-basins have been developed in fisheries and aquaculture industry, in contrast to coastal and maritime tourism and, lastly, maritime transport.

In any case, the difficulty in finding data and collecting best examples across all the sea-basins and blue economy sectors outlines how important is to design and create open and free online database platforms so as entrepreneurs coming from other regions could discover and be inspired by diverse good practices.

In this regard, the ideas which have been developed the most within the next blue businesses and blue business projects are connected with: a) healthy and nutritious products in fisheries and aquaculture industry, b) pescaturism and the use of artisanal fishing techniques, c) yachting sector, d) ecotourism, and e) underwater tourism. Generally, the diversification of tourism is considered the key to unlock the potential for blue businesses’ growth in a sustainable way.

⁸⁴ <https://medblueeconomyplatform.org/>

⁸⁵ <https://www.theswitchers.org/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

4.2.1. BALTIC SEA

4.2.1.1. Estonia

1) Fisheries and aquaculture:

- The *Estonian Fisheries Information Centre*⁸⁶ promotes cooperation between scientists, aquaculture farmers and fishermen. It undertakes studies and sets up pilot sites.

2) Coastal and maritime tourism:

- *Case study, Northern Coast, Estonia*⁸⁷. The aim of the ‘‘Integrated coastal tourism and mobility planning’’ study is to understand large-scale integrations within emergent spaces of maritime-coastal planning and experienced coastal landscapes by focusing mainly on coastal tourism and mobility issues.

4.2.1.2. Sweden

1) Fisheries and aquaculture:

- *Marine Taste: Sea Urchin Food Products*⁸⁸. A fishing company where the products consist of 100% natural raw material- with no additives.

2) Maritime transport:

- *Case study, Gothenburg Region*⁸⁹. This case-report for the pilot case ‘‘Regional Maritime Strategy for the Gothenburg Region’’ within the Land-Sea-Act project contributes to a better understanding of the preconditions and spatial aspects of maritime business in the region, for better integration of a blue economy perspective in municipal and regional planning. The increased knowledge base can also serve as a basis for the development of a regional maritime strategy.

4.2.2. ATLANTIC OCEAN

4.2.2.1. Ireland

1) Fisheries and aquaculture:

- *Promoting and supporting Irish Seaweed Developers*⁹⁰. This project constitutes a multi-faceted approach to support and develop the Irish Seaweed developers, from education and up-skilling to sales and marketing through a dedicated on-line platform. It also aims to facilitate the delivery of qualifications in aquaculture.

⁸⁶ <https://www.kalateave.ee/en/>

⁸⁷ https://land-sea.eu/wp-content/uploads/2022/01/LSA_Case_Study_-_Estonia.pdf

⁸⁸ <https://marinetaste.com/en/about-marine-taste/>

⁸⁹ https://land-sea.eu/wp-content/uploads/2022/01/LSA_Case_Study_Sweden.pdf

⁹⁰ <https://atlantic-maritime-strategy.ec.europa.eu/en/best-practices-database/promoting-and-supporting-irish-seaweed-developers>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

4.2.2.2. Spain

1) Fisheries and aquaculture:

- *iFishCan*⁹¹. This joint work addresses the issue of Intelligent Waste and loss monitoring test bed for the Fish Can industry. In this context, it aims to validate a test bed in a Spanish fish can factory, which will later allow escalating the initiative to other companies of the fish canning sector improving their sustainability and reducing their costs.

2) Maritime transport:

- *Port of Vigo (Blue Growth Plan/ ICT tool)*. This port positions itself as a model of competitiveness, efficiency, and sustainability in all its activities, facilities, and services (‘‘connected, innovative, green and inclusive port’’). In this context, and as it tries to take part in an ecosystem devoted to knowledge and its transfer, R&D&I, entrepreneurship, and differentiating commercial strategies, the Blue Growth Vigo Plan⁹² has been established. Moreover, an ICT tool⁹³ has been designed and tested with the support of skippers, captains and ship owners operating in the port, in order to prevent the loss of fishing gears and optimize the recycling technologies. The tool serves also to alert and signal the presence of lost or abandoned fishing gears in order to recover them.

4.2.3. MEDITERRANEAN SEA

4.2.3.1. Italy

1) Fisheries and aquaculture:

- *Offshore site AQUALAVAGNA*⁹⁴. The intervention of AQUALAVAGNA can be considered as a best practice for business innovation in aquaculture as well as for strategic alliance building. Thanks to a strong and continuing growth in demand and a stable fishing at the limit of overfishing, aquaculture has reached and will soon exceed the fish production. The excellent characteristics of the breeding site as well as the scrupulous attention to all the phases of the production, fishing and packaging process allow the achievement of a very high quality standard, difficult to find in fish bred in other realities.

2) Coastal and maritime tourism:

- *BLUEMED*⁹⁵ (Italian pilot sites: Underwater Archaeological Park of Baiae, Marine Protected Area of Capo Rizzuto). The project integrates regional development policies, plans and management practices for underwater museums and diving parks for a tourism valorization of underwater natural and cultural heritage. It also places

⁹¹ <https://www.azti.es/en/proyectos/eit-ifishcan/>

⁹² https://planbleu.org/wp-content/uploads/2020/09/cahier19_Blue_Economy_EN.pdf

⁹³ Information Communication Technology tool, <http://oceanets.eu/>

⁹⁴ https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1582293946.pdf

⁹⁵ https://planbleu.org/wp-content/uploads/2020/09/cahier19_Blue_Economy_EN.pdf

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

emphasis on diversified and competitive tourism products with distinct local characteristics by adopting a ‘‘place-based’’ approach.

3) **Multi-sectorial** (yachting sector including **coastal and maritime tourism** and **maritime transport**):

- *Marina Sant'Andrea*⁹⁶. In the context of the iBLUE project⁹⁷, which contributed to the sustainable development of the yachting sector in the Mediterranean through the establishment of an innovative 3 pillars business model (3-PBM/ environmental, social, economic pillars), this marina was included in the database of best practices.

4.2.3.2. Tunisia

1) **Fisheries and aquaculture:**

- *L' Homard*⁹⁸. The company, a leader in the freezing and packaging of seafood in Tunisia, markets its products on the local market, and exports 70 per cent of total production, mainly to Spain and Italy. At the start of the EU-funded SwitchMed/MED TEST II project, it was already ISO 9001 and ISO 22000 certified. With the support of the project, the company intends to start introducing ISO 14001. Moreover, it has been observed:
 - Recovery of waste and noncompliant raw materials
 - Energy and water consumption optimisation
 - Implementation of good practices and optimisation of procedures, such as the management of the cold rooms and the performance of timing tests

2) **Coastal and maritime tourism:**

- *Ecomel*⁹⁹. This initiative carried by the association PINNA is located in a privileged setting, in the Bay of Melloula-Tabarka with preserved landscapes and isolated from the tourism of Tabarka in Tunisia. The project establishes underwater educational trails in the bay that make sustainable use of resources in collaboration with local inhabitants. Underwater hiking, snorkelling, fishing boat trips, meals at fishermen's homes, meetings with local people, and camping contribute to the promotion of local heritage and ecotourism in a sustainable way.

3) **Multi-sectorial** (including **fisheries** and **coastal and maritime tourism**):

- *Tnagem*¹⁰⁰. This initiative is dedicated to ecotourism and sustainable artisanal fishing in the archipelago of Kerkennah. Tnagem contributes to the sustainable management of resources and allows artisanal fishermen of Ouled Ezzedine in the Kerkennah islands a better quality of life. In this framework, the initiative has helped to safeguard an artisanal fishing technique, entitled ‘‘Charfiya’’ or ‘‘Charfia’’.

⁹⁶ http://www.rcdi.pt/uploads/4_ThematicSeminar_iBLUE_Lisbon_NadiaP_15H15_18H20.pdf

⁹⁷ https://planbleu.org/wp-content/uploads/2020/09/cahier19_Blue_Economy_EN.pdf

⁹⁸ https://www.greenindustryplatform.org/sites/default/files/Lhomard_en.pdf

⁹⁹ <https://www.theswitchers.eu/en/switchers/an-underwater-trail-in-tunisia-a-sustainable-innovation/>

¹⁰⁰ <https://www.theswitchers.eu/en/switchers/ecotourism-artisanal-fishing-kerkennah-can/>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

4.2.3.3. Albania (Adriatic and Ionian region)

1) Fisheries and aquaculture:

- *Carp fishing- Revitalizing Lake Shkodër*¹⁰¹. 420 fishers take part in this FAO initiative (AdriaMed project) to improve sustainable fishing practices and rebuild breeding stocks by using aquaculture-based practices in the region (building temporary net enclosures to support egg deposition for the breeding of carp).

4.2.3.4. Croatia (Adriatic and Ionian region)

1) Fisheries and aquaculture:

- *Cromaris*¹⁰²: This local company, certified with ISO standards for quality, environmental management, food safety as well as for Organic fish farming, has been committed to raising public awareness on sustainable aquaculture improving the capacity to address aquaculture related issues, while also has fostered the adoption of innovative processes. All the demonstrated practices could be achievable under dedicated consulting and business benchmarking process from other companies as well.

2) Coastal and maritime tourism:

- *BLUEMED*¹⁰³ (Croatian pilot sites: Cavtat Underwater Archaeological Sites). The project integrates regional development policies, plans and management practices for underwater museums and diving parks for a tourism valorization of underwater natural and cultural heritage. It also places emphasis on diversified and competitive tourism products with distinct local characteristics by adopting a ‘place-based’ approach.

3) Multi-sectorial (yachting sector including coastal and maritime tourism and maritime transport):

- *Tehnomont Marina Veruda*¹⁰⁴. In the context of the iBLUE project¹⁰⁵, which contributed to the sustainable development of the yachting sector in the Mediterranean through the establishment of an innovative 3 pillars business model (3-PBM/ environmental, social, economic pillars), this marina was included in the database of best practices.

¹⁰¹ <https://www.fao.org/fao-stories/article/en/c/1618554/>

¹⁰² https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1582293946.pdf

¹⁰³ https://planbleu.org/wp-content/uploads/2020/09/cahier19_Blue_Economy_EN.pdf

¹⁰⁴ http://www.rcdi.pt/uploads/4_ThematicSeminar_iBLUE_Lisbon_NadiaP_15H15_18H20.pdf

¹⁰⁵ https://planbleu.org/wp-content/uploads/2020/09/cahier19_Blue_Economy_EN.pdf

5. COMPARATIVE ANALYSIS BETWEEN THE BLACK SEA AND THE SELECTED SEA-BASINS

5.1. OVERVIEW

The next groups of tables aim to be an additional tool for the better understanding of the differences and similarities between the Black Sea countries and the countries in the selected sea-basins, regarding the challenges that the business sector faces. It should be noted that a) although the following indicators i.e. Competitiveness (Governance and business environment), Ease of finding skilled employees and Financing of SMEs, are not blue economy focused, they contribute to the wider picture of economic development and competitiveness; b) they provide a comparison of the situation in the pre-covid-19 pandemic and pre-war in Ukraine periods, and c) they represent both the Atlantic and Mediterranean Spain, despite of the report’s focused on the Atlantic Coast of the country.

i. Tables No 4 and 5: Competitiveness (Governance and business environment) (2018-2019)¹⁰⁶

In Tables 4 and 5, it is observed that the average of Competitiveness index (Governance and business environment) of the Black Sea countries is lower (**61.8 points**) than the average of the selected countries of the other sea-basins (**68.74 points**). Comparing the two tables, the highest value is in Sweden (**81.2**) and the lowest value is in Tunisia (**56.4**), while the highest value regarding the Black Sea is in Bulgaria (**64.9**) in contrast to Ukraine (**57**). Although Bulgaria, Romania and Türkiye have higher value than Albania, Croatia and Tunisia, their level of competitiveness is much lower than that of the other countries (Estonia, Ireland, Italy, Spain and Sweden).

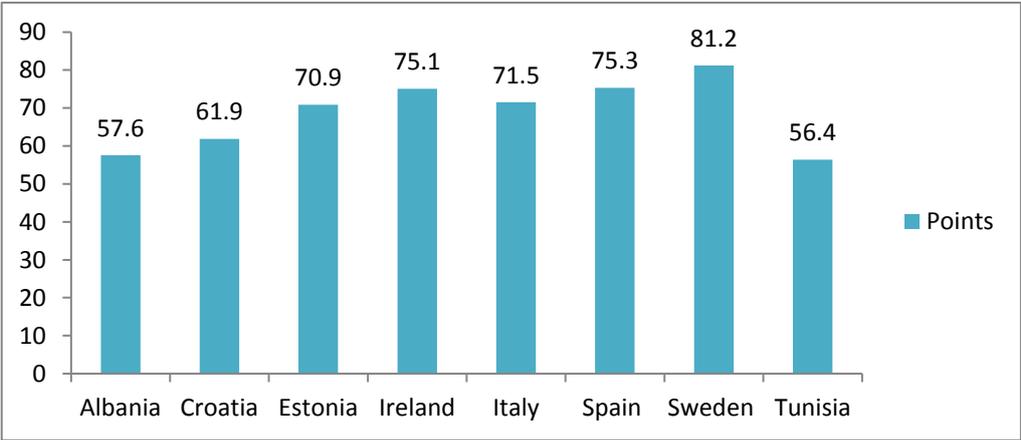
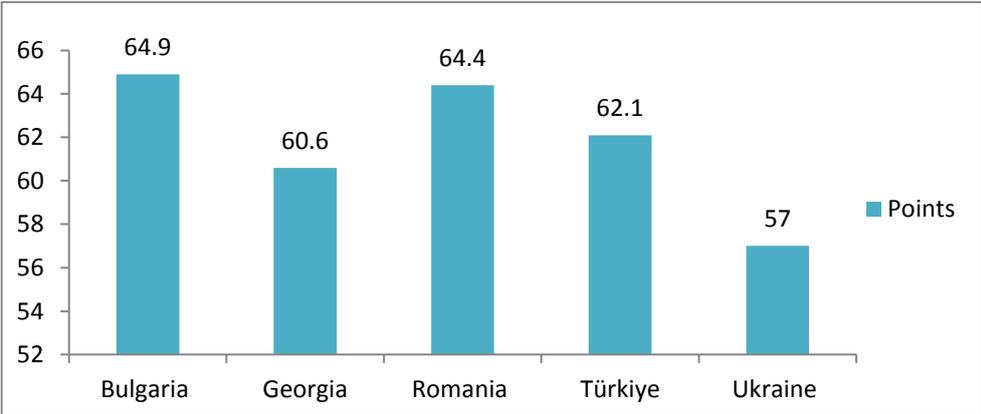


Table 4. Source: The World Economic Forum



itions, Infrastructure, ICT
al system, market size,

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

Table 5. Source: The World Economic Forum

ii. Table No 6: GCI 4.0: Ease of finding skilled employees (2019)¹⁰⁷

Table 6 shows the ease of finding skilled employees; Sweden has the highest indicator value at **4.82** whereas Croatia has the lowest indicator value at **3.15**. Ukraine (**4.40**) is the only Black Sea country being above the world median (**almost at 4.20**) (pre-war), and Romania has the lowest indicator value in the region (**3.25**). However, the data regarding Türkiye (**3.92**), Bulgaria (**3.62**) and Georgia (**3.56**) show that there is not significant variation from the indicator value of Tunisia (**4.01**), Albania (**3.89**) and Estonia (**3.53**).

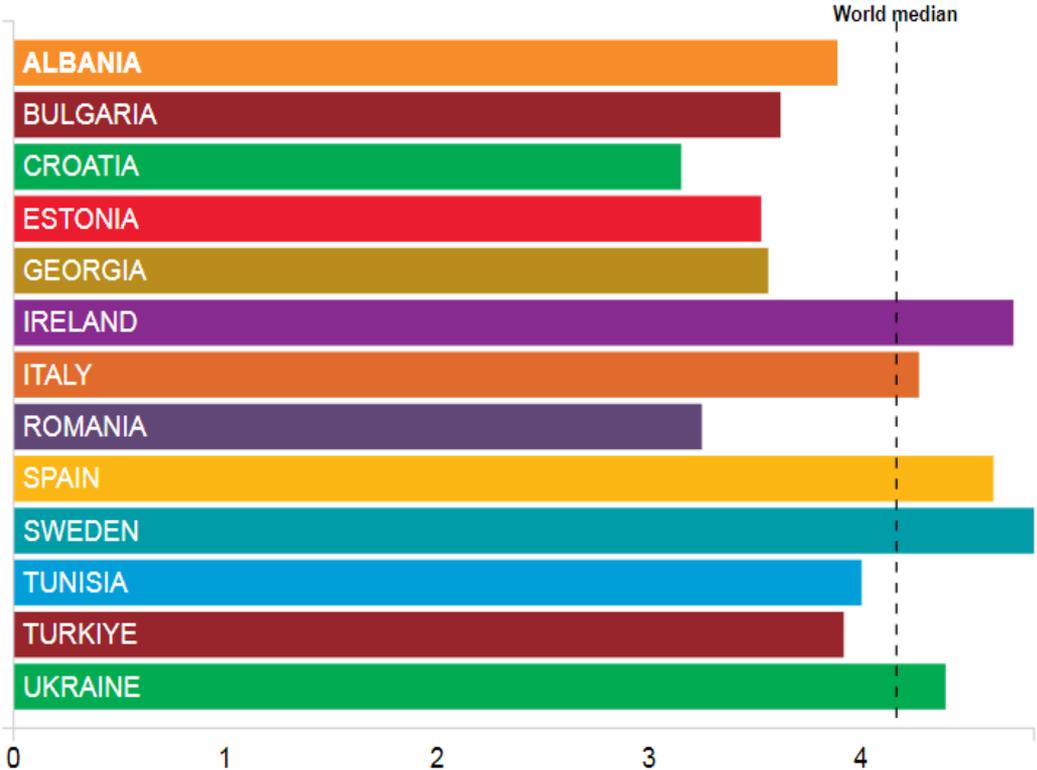


Table 6. Source: World Economic Forum Global Competitiveness Index

¹⁰⁷ In your country, to what extent can companies find people with the skills required to fill their vacancies, https://tcdata360.worldbank.org/indicators/hbofb9929?country=ALB&indicator=414,01&countries=HRV,ITA,TUN,IRL,ESP,SWE,EST,BGR,ROU,TUR,UKR,GEO&viz=bar_chart&years=2019

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

iii. Tables No 7-11: GCI 4.0: Financing of SMEs (2017-2019)¹⁰⁸

Tables 7-11 indicate to what extent Small and Medium Enterprises across the selected countries access finance for their business operations. Each table is dedicated to another sea-basin and sub-basin (No 7: Baltic Sea, No 8: Atlantic Ocean, No 9: Mediterranean Sea, No 10: Adriatic and Ionian Region, No 11: Black Sea).

In 2019, Sweden had the highest value (4.74) while the country with the lowest value was Italy (3.28). Apart from Sweden (4.74), Estonia (4.27) and Spain (4.26), Bulgaria (4.11) and Türkiye (3.98) were also above the world median (almost at 3.90), while Ukraine was the Black Sea country with the lowest value (3.35). However, it is worth noting that: a) among all countries, Romania had the highest year-on-year average growth rate at 12.35% whereas Tunisia had the lowest year-on-year average growth rate at -3.15%, b) the Baltic Sea countries, Sweden and Estonia, experienced a year-on-year average growth rate of -2.82% and -0.99%, respectively, for the time period 2017 to 2019, in contrast to c) the Black Sea countries which all experienced significant growth for the same time period, particularly Romania (12.35%), Bulgaria (6.7%) and Ukraine (6.51%) [(Türkiye (0.98%) and Georgia (0.42%)).

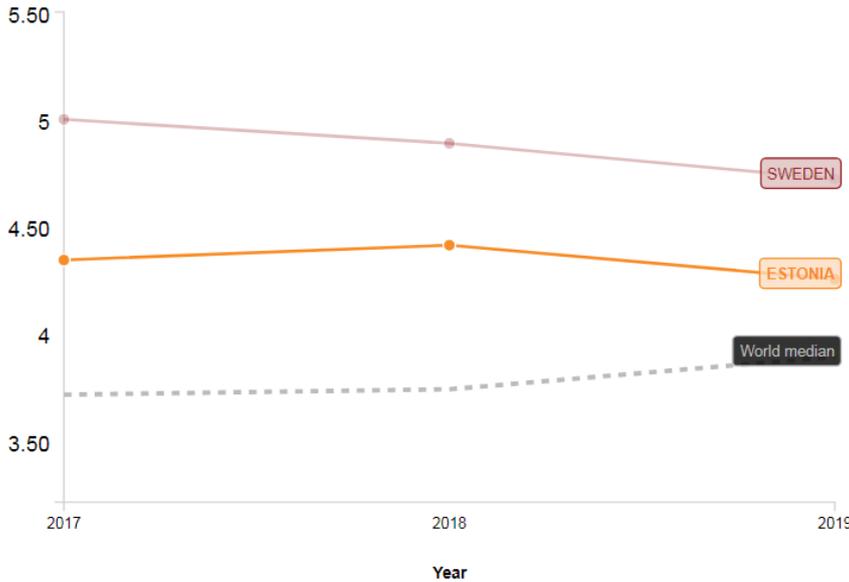


Table 7. Source: World Economic Forum Global Competitiveness Index

¹⁰⁸ In your country, to what extent can small- and medium-sized enterprises (SMEs) access finance they need for their business operations through the financial sector.
https://tcdata360.worldbank.org/indicators/h2dobg184?country=BRA&indicator=41434&viz=line_chart&years=2017,2019

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

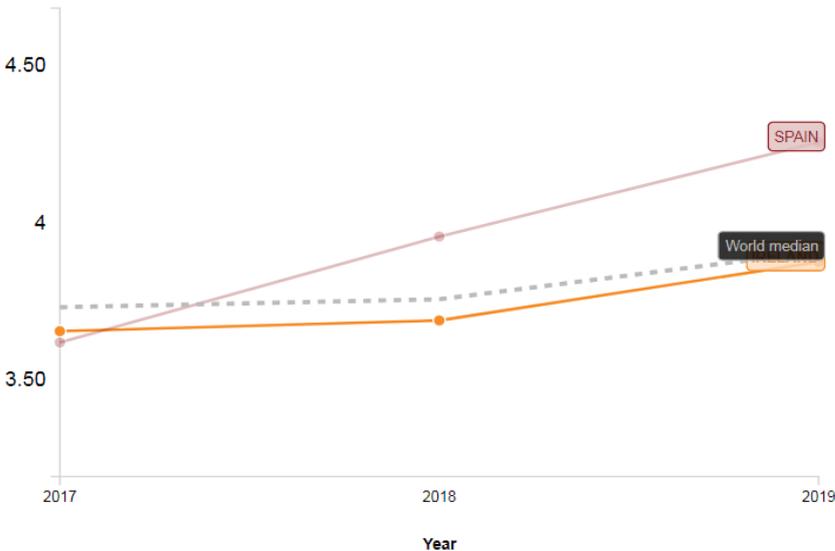


Table 8. Source: World Economic Forum Global Competitiveness Index

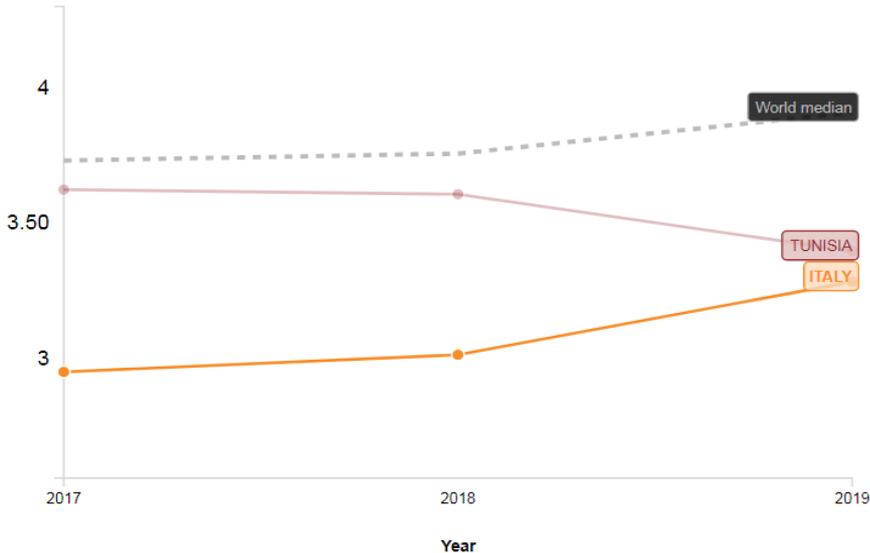


Table 9. Source: World Economic Forum Global Competitiveness Index

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

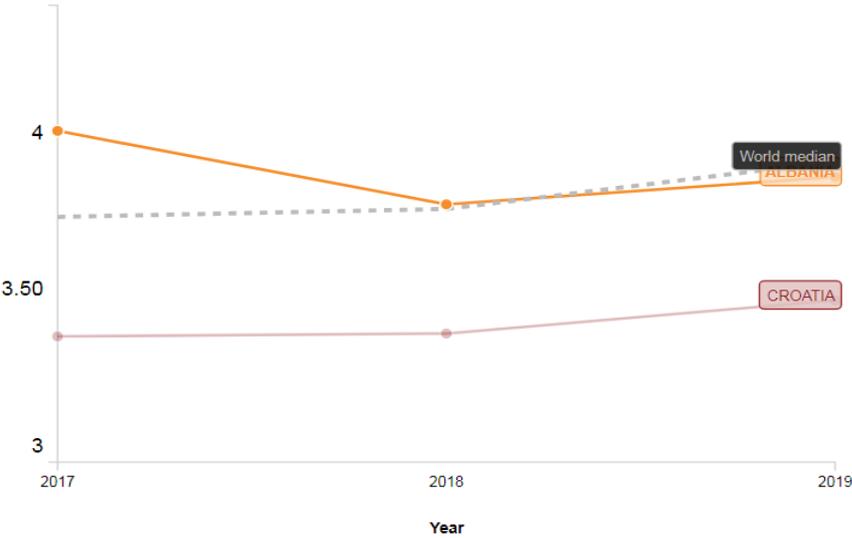


Table 10. Source: World Economic Forum Global Competitiveness Index

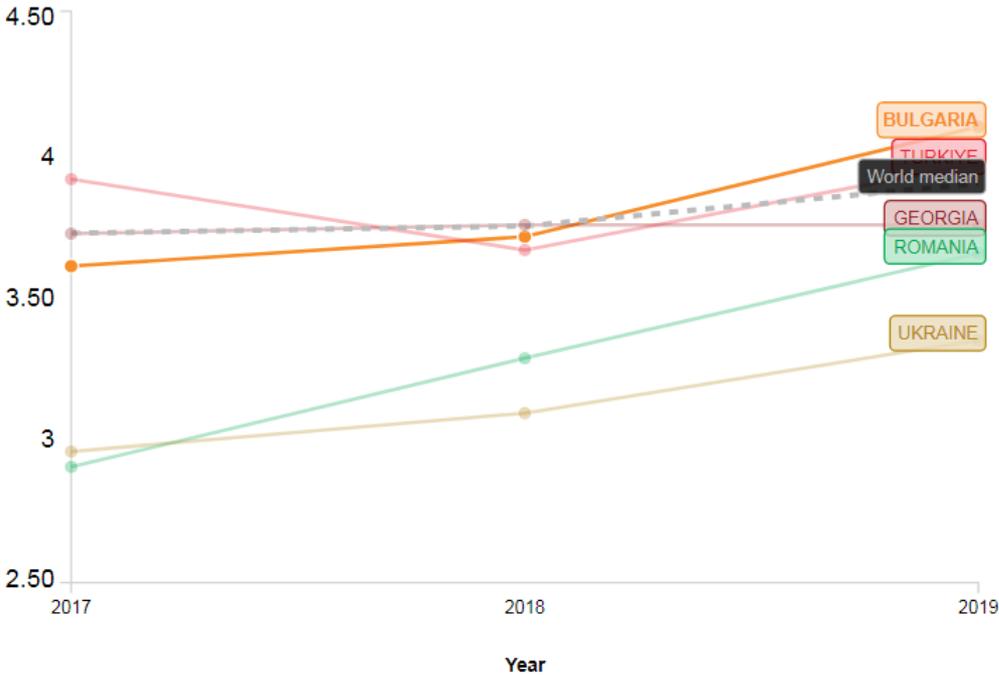


Table 11. Source: World Economic Forum Global Competitiveness Index

Overall, Tables 4-11 show that the Black Sea countries have to take many steps to effectively support their companies, including blue businesses and SMEs, and increase the competitiveness of their business environments. Skilled employees and access to finance for SMEs play a vital role in this process. In any case, it is essential to note the progress the countries have made during the last years –despite the difficulties. With regards to blue businesses in the fields of fisheries and aquaculture, coastal and maritime tourism and maritime transport, this progress could be continued better by taking into consideration and replicating or adopting good practices from other sea-basins and adapting them to the needs of each Black Sea country.

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

5.2. IDENTIFICATION OF CHALLENGES AND BEST PRACTICES (MATCHMAKING PROCESS)

In the context of this assessment and taking into consideration the **Country Reports (4BIZ D2.1)** and the **Consolidated Regional Report (4BIZ D2.2)**, several key outputs can be extracted concerning the main gaps that have to be filled in order to empower blue businesses in the Black Sea, as well as the best practices of the other sea-basins that could match with these identified gaps.

Table 12 includes the main identified gaps for businesses in the Black Sea countries (Bulgaria, Georgia, Romania, Türkiye and Ukraine). These are divided into three categories based on the time needed to be adequately addressed, i.e. Green: short-term, Orange: mid-term, Red: long-term. The second column includes proposed mitigation measures as identified from good practices in the selected EU sea-basins. The third column provides the said good examples that could be followed up through a match-making exercise with the relevant identified Black Sea businesses.

Identified Challenges for the Black Sea businesses	Mitigation measures based on good practices from other EU sea-basins	Good examples from other sea-basins
<p>Lack of financing to support SMEs and start-ups</p>	<ul style="list-style-type: none"> • Funding frameworks • Link between sustainability and the reduction of costs • Online database platforms • Best practice sharing platforms • Ocean literacy and raising awareness 	<ul style="list-style-type: none"> • BlueInvest • iFishCan • Switchers.org • BluAct • Cromaris
<p>Blue skills development and life-long learning to meet market demands</p>	<ul style="list-style-type: none"> • Business incubators/ accelerators/ innovation hubs • Communication and cooperation of businesses with academia • Networking platforms/ Cooperation with other companies • Maritime clusters • Best practice sharing platforms • Ocean literacy and raising awareness 	<ul style="list-style-type: none"> • Copernicus Incubation Programme • EU CONEXUS • EIT Food • European Cluster Collaboration Platform • BluAct • Cromaris

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

<p>Cooperation between the stakeholders /Networking</p>	<ul style="list-style-type: none"> • Business incubators/ accelerators/ innovation hubs • Communication and cooperation of businesses with academia • Networking platforms/Cooperation with other companies • Maritime clusters 	<ul style="list-style-type: none"> • Atlantic Smart Ports Blue Acceleration Network • Estonian Fisheries Information Centre • Vestbee • European Network of Maritime Clusters
<p>Public engagement; Local communities and socially vulnerable groups</p>	<ul style="list-style-type: none"> • Social inclusion • Ocean literacy and raising awareness • Creation of an alternative, ethical and “eco-brand” • Online database platforms • Best practice sharing platforms • Protection and promotion of natural and cultural heritage • Diversification of products • Digitalization of services • Link between the enhancement of sustainability and the reduction of costs 	<ul style="list-style-type: none"> • Ecomel • Cromaris • RETROUT, Interreg Baltic Sea Region • Mediterranean Blue Economy Stakeholder Platform • BluAct • Tnagem • BLUEMED, Italy and Croatia • GUTTA-VISIR, Italy, Copernicus Incubation Programme • iFishCan
<p>Business innovation</p>	<ul style="list-style-type: none"> • Business incubators/ accelerators/ innovation hubs • Communication and cooperation of businesses with academia • Networking platforms/ Cooperation with other 	<ul style="list-style-type: none"> • HATCH • EU CONEXUS • Mediterranean Blue Acceleration Network • European Cluster

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

	<p>companies</p> <ul style="list-style-type: none"> • Maritime clusters • Online database platforms • Best practice sharing platforms 	<p>Collaboration Platform</p> <ul style="list-style-type: none"> • Switchers.org • BlueAct
<p>Research and technology transfer</p>	<ul style="list-style-type: none"> • Funding frameworks • Business incubators/ accelerators/ innovation hubs • Communication and cooperation of businesses with academia • Diversification of products • Digitalization of services • New technologies • Maritime clusters • Smart Specialization (place-based approach) 	<ul style="list-style-type: none"> • European Innovation Council and SMEs Executive Agency • European Boating Industry • Estonian Fisheries Information Centre • Tnagem • PREParE SHIPS project, Sweden, Copernicus Incubation Programme • SOSeas, Spain, Copernicus Incubation Programme • European Network of Maritime Clusters • BLUEMED, Italy and Croatia
<p>Resilience and adaptation to climate change</p>	<ul style="list-style-type: none"> • Creation of an alternative, ethical and “eco-brand” • Communication and cooperation of businesses with academia • Diversification of products • Digitalization of services • New technologies • Smart Specialization (place-based approach) 	<ul style="list-style-type: none"> • RETROUT, Interreg Baltic Sea Region • EU CONEXUS • Marine Taste: Sea Urchin Food Products • BLUEMED, Italy and Croatia • FOR-MTUN, Tunisia, Copernicus Incubation Programme

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

	<ul style="list-style-type: none"> • Ocean literacy and raising awareness • Protection and promotion of natural and cultural heritage 	<ul style="list-style-type: none"> • BLUEMED, Italy and Croatia • BluAct • Ecomel
<p>Branding and marketing / Internationalisation</p>	<ul style="list-style-type: none"> • Creation of an alternative, ethical and ‘eco-brand’ • Diversification of services • Digitalization of services • New technologies • Certification of ISO standards • Best practice sharing platforms • Link between the enhancement of sustainability and the reduction of costs 	<ul style="list-style-type: none"> • RETROUT, Interreg Baltic Sea Region • Tnagem • BLUEMED, Italy and Croatia • PerfeCt, Croatia, Copernicus Incubation Programme • L’ Homard • Promoting and supporting Irish Seaweed Developers project • iFishCan
<p>Lack of incentives to support blue businesses due to their high cost</p>	<ul style="list-style-type: none"> • Creation of an alternative, ethical and “eco-brand” • Diversification of services • Digitalization of services • New technologies • Certification of ISO standards • Best practice sharing platforms • Link between the enhancement of sustainability and the reduction of costs 	<ul style="list-style-type: none"> • RETROUT, Interreg Baltic Sea Region • Tnagem • GUTTA-VISIR, Italy, Copernicus Incubation Programme • Port of Vigo (ICT tool) • Cromaris • Switchers Community • iFishCan
<p>Lack of legal and regulatory framework to</p>	<ul style="list-style-type: none"> • Link between the enhancement of sustainability and the 	<ul style="list-style-type: none"> • iFishCan

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

<p>support blue businesses</p>	<p>reduction of costs</p> <ul style="list-style-type: none"> • Online database platforms • Best practice sharing platforms • Ocean literacy and raising awareness • Creation of an alternative, ethical and “eco-brand” • Smart Specialization (place-based approach) • Protection and promotion of natural and cultural heritage 	<ul style="list-style-type: none"> • Mediterranean Blue Economy Stakeholder Platform • Switchers Community • Carp fishing-Revitalizing Lake Shkodër, Albania, AdriaMed • RETROUT, Interreg Baltic Sea Region • BLUEMED, Italy and Croatia • Ecomel
<p>Fragile geopolitical context</p>	<ul style="list-style-type: none"> • Support of transnational or regional cooperation networks, e.g. associations, clusters, etc • Ocean literacy and raising awareness • Protection and promotion of natural and cultural heritage • Best practice sharing platforms 	<ul style="list-style-type: none"> • iFishCan • Promoting and supporting Irish Seaweed Developers project • Switchers Open Eco-Innovation • Carp fishing-Revitalizing Lake Shkodër, Albania, AdriaMed • RETROUT, Interreg Baltic Sea Region • BLUEMED, Italy and Croatia • Tnagem

Table 12.

It is noted that many proposed mitigation measures could respond to more than one identified challenges. Besides, measures are **interconnected** with three cross-cutting priorities:

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- 1) **A common strategic approach** at local, national and regional level which boosts all the Blue Economy sectors and takes into consideration all these pillars: a) society, b) environment, c) economy, d) technology, e) policy, and f) research.
- 2) The integration of all three pillars of **sustainable development**: a) **economic**, b) **social**, and c) **environmental**.
- 3) Support services have to empower existing and future Blue Economy entrepreneurs in order to be **green, circular and social**.

As mentioned, weak or no access to funding and blue skills are identified as the most pressuring challenges for the business market. Funding frameworks, such as **BlueInvest**, **European Investment Bank** and **European Innovation Council and SMEs Executive Agency**, provide early-stage businesses, SMEs and start-ups with financing for investments. **Interreg Europe** has also supported the business innovation of many companies related to the 4BIZ focus sectors (e.g. via the use of Virtual Reality and Augmented Reality for sustainable maritime tourism attractions (TIDE, **Interreg Atlantic Area**) or through empowering the innovation capacity of SMEs, maritime clusters and networks regarding fisheries and aquaculture (BLUEfasma, **Interreg Euro-Med**)]. In this regard, the **NEXT Black Sea-basin Programme (Interreg VI-B)**¹⁰⁹ constitutes a funding tool strengthening the existing links between the participating countries¹¹⁰ and building new ones in the field of research & innovation and environmental protection.

As for blue skills, the role of business incubators, accelerators and innovation hubs is crucial, as these facilitate the exchange of information, connect entrepreneurs with other companies, universities and investors, as well as they boost the creation of **commercially viable products and services**. Indicatively, some of their main activities:

- Trainings, seminars, workshops, conferences and hackathons, such as the **Copernicus Start-up Programme**, the **Copernicus Hackathons** and the **Blue Generation** which focuses on young people (15-29 years old)
- Networking of different industry clusters (**European Cluster Collaboration Platform**)
- Diversification of products, e.g. supporting the development of mycoprotein-based vegan seafood products (Meet Future, Estonia, **EIT Food**)
- Digitalization of services and introduction of new technologies, e.g. the creation of a forecasting system providing accurate marine and coastal environment physical parameters for many applications, such as supporting fisheries, offshore aquaculture and tourism (FOR-MTUN, Tunisia, **Copernicus Incubation Programme**)
- Research and technology transfer through the cooperation between scientists and businesses[**EU CONEXUS (European University for Smart Urban Coastal Sustainability)**: Ireland, Spain, Croatia]
- Best practice sharing platforms, such as the **BluAct** transfer network of good practices in the field of Blue Growth innovation and entrepreneurship

¹⁰⁹ <https://blacksea-cbc.net/>

¹¹⁰ Armenia, Bulgaria, Georgia, Greece, Moldova, Romania, Türkiye and Ukraine

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- Online database platforms which provide information and useful tools to boost sustainable development, such as **Switchers.org**. It is worth mentioning that these platforms ensure more visibility and transparency as for the current situation, the development of blue businesses and their results.

Furthermore, lack of incentives to support blue businesses is also a barrier, related mainly to ineffective legal and regulatory frameworks and weak awareness about blue economy potential. In this context, Black Sea blue businesses should focalize on **the link between the enhancement of sustainability and the reduction of costs, i.e. the positive environmental impact of blue businesses could contribute to their economic growth**, in order to be competitive. From Spain come the following good examples: iFishCan, a Spanish fish can factory which addresses the issue of Intelligent Waste and loss monitoring test bed for the Fish Can industry; Port of Vigo, an ICT tool has been designed and tested with the support of skippers, captains and ship owners operating in the port, in order to prevent the loss of fishing gears and optimize the recycling technologies.

With regards to competitiveness, there are many tools connected to marketing and branding that could be exploited:

- Diversification of products (Tnagem, **Tunisia**: ecotourism and sustainable artisanal fishing)
- Digitalization of services (GUTTA-VISIR, **Italy**, Copernicus Incubation Programme: a decision support system for ferries in providing operational least-CO2 ferry routes, depending on the forecast meteo- marine conditions)
- ISO standards (Cromaris, **Croatia**: certified with ISO standards for quality, environmental management, food safety as well as for Organic fish farming)
- Skilled workforce (Promoting and supporting Irish Seaweed Developers, **Ireland**: a multi-faceted approach to develop the Irish Seaweed developers, from education and up-skilling to sales and marketing through a dedicated on-line platform)
- Smart specialisation (BLUEMED, Underwater Archaeological Park of Baiae and Marine Protected Area of Capo Rizzuto, **Italy** and Cavtat Underwater Archaeological Sites, **Croatia**: adopting a “place-based” approach in underwater museums and diving parks with distinct local characteristics)
- Prevention from natural hazards and accidents (PREParE SHIPS, **Sweden**, Copernicus Incubation Programme: a system capable of high position accuracy, prediction of future ship positions, and communication of said predictions / SOSeas, **Spain**, Copernicus Incubation Programme: a preventive tool providing forecasting risk assessment on beaches which lifeguards and beach administrators can also make use of)

Companies are encouraged to create -with the appropriate financial and technical support- **an attractive ethical and “eco” brand**. Good examples are RETROUT, **Interreg Baltic Sea Region**: ethical and sustainable coastal fishing tourism. Furthermore, the launch of an alternative brand could facilitate the attraction of new investors and clients.

Cooperation between businesses and academia plays also an important role, as **science-based results have to be transformed to accessible market products** useful for investors. The link between Research & Development and industry has good examples from the other basins, e.g.

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

PerfeCt, **Croatia**, Copernicus Incubation Programme: project for aquaculture under climate change; Estonian Fisheries Information Centre, **Estonia**: related to fisheries and aquaculture.

Ocean literacy and raising awareness of society at large, contributes also to the sustainable development of blue economy. There are relevant good examples from the other sea-basin towards this end:

- Ocean literacy and raising awareness (Cromaris, **Croatia**: the company has been committed to raising public awareness on sustainable aquaculture improving the capacity to address aquaculture related issues, while its demonstrated practices could be achievable under dedicated consulting and business benchmarking process from other companies as well)
- Environmental protection (Marine Feed, **Sweden**, EIT Food: sea squirt cultivation with a strong positive environmental impact on the sea / Carp fishing- Revitalizing Lake Shkodër, **Albania**: improving sustainable fishing practices and rebuild breeding stocks by using aquaculture-based practices in the region)
- Healthy lifestyle (Marine Taste: Sea Urchin Food Products, **Sweden**: a fishing company where the products consist of 100% natural raw material- with no additives)
- Social inclusion and empowerment of local communities (Ecomel, **Tunisia**: fishing boat trips, meals at fishermen's homes, meetings and underwater educational trails with local people)
- Protection and promotion of natural and cultural heritage (Ecomel, **Tunisia**: promoting ecotourism in the Bay of Melloula-Tabarka / Tnagem, **Tunisia**: safeguarding an artisanal fishing technique, entitled "Charfiya" or "Charfia")

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

ANNEX I.

BALTIC SEA

The most important key points concerning these sectors and their links with blue businesses are:

1) **Baltic Sea Action Plan**

- a) *S26*: Work towards securing ship financing and innovation funding to support more sustainable shipping and to ensure maritime transport components in applicable funding mechanisms

2) **European Union Strategy for the Baltic Sea Region Action Plan**

- a) *3.5., Action 1*: Support measures including digitalisation in reducing emissions from shipping
- b) *3.6., Action 3*: Facilitate innovative technologies & solutions in the Baltic Sea region (Policy Area Transport)
- c) *3.10., Action 1*: Transnational tourism development in remote and rural areas
- d) *3.10., Action 2*: Investing in people, skills and technology in the tourism industry
- e) *3.11., Action 1*: Promoting the Baltic Sea region cultural and creative industries, encouraging creative entrepreneurship

3) **Entrepreneurship and the Blue Economy in the Baltic Sea Region Action Plan**

- a) *3.1, Action 1.2*: Establish ports as meeting points for entrepreneurs
- b) *3.2, Action 2.1*: Establish regional tourism
- c) *3.2, Action 2.2*: Promote better use of existing infrastructure and space for coastal tourism
 - Train fishers in pescaturism
 - Create networks between tourism stakeholders and aquaculture operators

3.2, Action 2.3: Improve cooperation among tourism enterprises and other stakeholders

POLICY REVIEW AT NATIONAL LEVEL

5.2.1.1. **Estonia**

1) **Agriculture and Fisheries Strategy 2030**¹¹¹

¹¹¹ <file:///Z:/ICBSS%20Projects/4biz%202022/poka-2030-executive-summary-2021.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- a) *Direction 7: Research, innovation and knowledge transfer/ Purpose: Knowledge creation and knowledge transfer will support the achievement of the objectives of agriculture and fisheries*
- b) *Direction 8: Sustainable fisheries/ Objectives:*
 - The fisheries and aquaculture sector is sustainable and competitive
 - The fisheries and aquaculture sector produces high-quality products with high added value and high export potential

2) **Tourism Strategy for 2022-25**¹¹²

5.2.1.2. Sweden

- 1) **Strategy for Swedish fisheries and aquaculture 2021-2026** (in Swedish)¹¹³
- 2) **Action plan for the development of Swedish aquaculture 2021-2026** (in Swedish)¹¹⁴
- 3) **Swedish National Tourism Strategy**¹¹⁵
- 4) **Swedish Maritime Strategy - for people, jobs and the environment**¹¹⁶
 - a) Knowledge and innovation
 - The knowledge that already exists needs to be made more accessible and disseminated actively
 - Promoting innovation is measure to facilitate the commercialisation of the products that are developed
 - b) Conditions for the business sector and industry-specific measures
 - Cooperation and clusters at local and regional level are important conditions for growth and development. Clusters also play a key role in giving visibility to the potential of the maritime sector.
 - c) Transport
 - Strengthening the competitiveness of Swedish ports
 - Reviewing the rules concerning cabotage and registration of vessels with the aim of modernising the rules and improving the conditions for registering vessels
 - d) The sea as a natural resource/Marine foodstuffs

¹¹² Not available

¹¹³ <https://www2.jordbruksverket.se/download/18.3258773a179c55014dd4490d/1622622996825/ovr598.pdf>

¹¹⁴ <https://www2.jordbruksverket.se/download/18.3258773a179c55014dd4457a/1622622688851/ovr596.pdf>

¹¹⁵ Not available

¹¹⁶ Not available, Summary: <file:///Z:/ICBSS%20Projects/4biz%202022/A+Swedish+maritime+strategy+-+or+people,+jobs+and+the+environment.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- Balance between fishing fleets and fishing opportunities
 - Access to quality fish materials that meet consumer requirements at competitive prices
 - Revision of the EU Regulation on autonomous tariff quotas
 - Aquaculture: identification of suitable geographical areas and technologies
- e) Leisure and tourism
- Maritime cultural heritage
 - Maritime culinary tourism
 - Angling and recreational boating
 - Prolonging the tourist season

ATLANTIC OCEAN

1) 2013-2020 Atlantic Action Plan¹¹⁷

a) *Priority 1: Promote entrepreneurship and innovation/Objectives:*

- sharing knowledge between higher education organisations, companies and research centres
- enhancement of competitiveness and innovation capacities in the maritime economy of the Atlantic area

b) *Priority 3: Improve accessibility and connectivity/ Objective:*

- promoting cooperation between ports
- enabling ports to diversify into new business activities such as the maintenance of offshore renewable energy installations or tourism

c) *Priority 4: Create a socially inclusive and sustainable model of regional development / Objective:*

- preserving and promoting the Atlantic's cultural heritage
- combating seasonality and improving prospects for SMEs through diversification of maritime and coastal tourism products and development of niche markets

¹¹⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0279&from=EN>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

2) **Atlantic Action Plan 2.0**¹¹⁸. This revised action plan (2020) aims to ‘unlock the potential of blue economy in the Atlantic area while preserving marine ecosystems and contributing to climate change adaptation and mitigation’.

a) *Pillar I*: Ports as gateways and hubs for the blue economy

- *Goal 1*: Foster short-sea shipping links in the Atlantic area to better integrate Ireland
- *Goal 2*: Ports as catalysts for business

b) *Pillar II*: Blue skills of the future and ocean literacy

- *Goal 3*: Quality education, training and life-long learning

c) *Pillar IV*: Healthy ocean and resilient coasts

- *Goal 7*: The fight against marine pollution
- promote business actions based on the circular economy, develop incentives and environmental certification schemes
- promote fishing-for-litter actions to encourage all fishermen to bring ashore the waste caught in their nets during their normal fishing operations

POLICY REVIEW AT NATIONAL LEVEL

5.2.1.3. Ireland

1) **Irish Inshore Fisheries Sector Strategy 2019-2023**¹¹⁹

- a) *6.3, Objective 1*: Improve the attractiveness of the sector to encourage new entrants and retain talent
- b) *6.4, Objective 1*: Improve and optimise the economic efficiency of inshore fishing enterprises
- c) *6.4, Objective 2*: Improve the connectivity and communication between fisheries and markets
- d) *6.4, Objective 3*: Support improved added value to existing landings at sea and through the value chain
- e) *6.4, Objective 4*: Explore and prioritise diversification opportunities using the knowledge and expertise of the sector

2) **Corporate Plan 2021-2025**¹²⁰ (Fisheries)

¹¹⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0329&rid=1>

¹¹⁹ <https://bim.ie/wp-content/uploads/2021/02/BIM-Inshore-Fisheries-Sector-Strategy-2019-2023.pdf>

¹²⁰ <https://www.fisheriesireland.ie/sites/default/files/2021-12/ifi-corporate-plan-2021-2025.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- a) 5.1, Develop and implement a HR strategy to support Inland Fisheries Ireland ‘s Corporate plan 2021 to 2025
- b) 6.1, Ensure business process excellence through the development of appropriate strategies and processes incorporating value for money and sustainability
- c) 7.1, Develop an innovation strategy to increase organisational agility, improve efficiency, communication and public service delivery to sustainably develop improve and protect fish habitats

3) **People, Place and Policy – Growing Tourism 2025**¹²¹

- a) 2.1, A changing approach to human resources and training in tourism
- b) 2.2, Competitiveness, research, and innovation in the Irish tourism sector
- c) 4.1, Local Authorities supporting communities in tourism
 - The identification of tourism as a priority in the Local Economic and Community Plans, and the provision of support to start-up and developing tourism enterprises will be aligned with the Local Authorities tourism objectives and plans for their areas.

4) **Irish Maritime Directorate Strategy 2021-2025**¹²²

- a) *Core Objective 5: Strive for Organisational Excellence and Innovation*
 - *Goal 5.2: Ensure that adequately trained and experienced personnel are in place to deliver on the Irish Maritime Directorate’s objectives*

5.2.1.4. **Spain**

1) **Sustainable Tourism Strategy of Spain 2030**¹²³

MEDITERRANEAN SEA

In this context, the following documents have been adopted:

1) **Union for the Mediterranean (UfM) Ministerial declaration on Sustainable Blue Economy (2021)**¹²⁴

- a) 27. Ministers call for

¹²¹ <https://assets.gov.ie/15792/8b462712683748e7bcec6c7d5c7ecd2a.pdf>

¹²² <https://assets.gov.ie/126317/f65a05bc-3990-48ab-8c7d-1fe19cfb2acc.pdf>

¹²³ Not available, <https://turismo.gob.es/en-us/estrategia-turismo-sostenible/paginas/index.aspx>

¹²⁴ <https://ufmsecretariat.org/wp-content/uploads/2021/02/Declaration-UfM-Blue-Economy-EN-1.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

- The promotion of the Startup Europe Mediterranean (SEMED) initiative, aiming, in partnership with BLUEMED, to connect all the actors of the innovation system in the Mediterranean area as well as other instruments and initiatives to support the sustainable development, job creation and competitiveness of Blue economy SMEs
 - The establishment of blue economy clusters - including transnational ones, the strengthening of existing clusters, and increased cooperation between national clusters in the Mediterranean
- b) 35. Ministers recall the significance of the small-scale fisheries (SSF) sector in supporting the livelihoods of coastal communities across the Mediterranean, and call for further support to the GFCM's Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and Black Sea (RPOA-SSF) as a vital political commitment to strengthen and support sustainable SSF in the region as well as their resilience to shocks
- c) 36. Taking into account the potential for development of aquaculture and blue bio-economy in the Mediterranean, Ministers emphasize the GFCM's Strategy for the Sustainable Development of Aquaculture as instrumental to ensure a level playing field in the Mediterranean and bring about a more competitive, sustainable, profitable and equitable aquaculture sector
- d) 37. Ministers call for further research, innovation and support to SMEs to diversify the sustainable blue bio-economy in the Mediterranean and invite UfM countries to invest in market innovation, including ecolabelling and traceability to support more sustainable and resilient seafood systems
- 2) **Initiative for the sustainable development of the blue economy in the western Mediterranean**¹²⁵ (WestMED)
- a) *Goal 2: A smart and resilient blue economy*
- *Priority 2.2, Marine cluster development*
 - *Priority 2.3, Skill development and circulation*
- 3) **EUSAIR Action Plan**¹²⁶ (EUSAIR)
- a) *1.1., Blue technologies*
- Macro-regional cluster development
 - Improving access to finance and promoting start-ups
- b) *1.2., Fisheries and aquaculture*
- Diversification and profitability of fisheries and aquaculture
 - Developing skills

¹²⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017SC0130&from=EN>

¹²⁶ <https://www.adriatic-ionician.eu/wp-content/uploads/2020/04/EUSAIR-SWD-2020.pdf>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

c) 2.1., Maritime transport

- Clustering port activities/services throughout the region

d) 4.1., Diversified tourism offer (products and services)

- Diversification of the cruise and nautical sectors and enhancement of the yachting sector
- Sustainable tourism R&D platform on new products and services

e) 4.2., Sustainable and responsible tourism management (innovation and quality)

- Network of Sustainable Tourism businesses and clusters
- Facilitating access to finance for new innovative tourism start-ups
- Training in vocational and entrepreneurial skills in tourism
- Adriatic-Ionian action for more sustainable and responsible tourism
 - Establishment of an Adriatic-Ionian Charter to encourage sustainable and responsible tourism practices in the Region

POLICY REVIEW AT NATIONAL LEVEL

5.2.1.5. Italy

1) **Implementation Action Plan (2020-2025) for the Italian Bioeconomy Strategy BIT II**¹²⁷

a) *Action 2.* Launch of pilot actions to support circular Bioeconomy in the domains of agrifood, biobased, wood and forest, marine and maritime and urban sectors

- 1.1.4, Blue Bioeconomy
 - promote the development of sustainable fisheries, also through new fishing and market ICT based technologies
 - develop smart solutions for the use of digital technologies for small and medium aquaculture farms, to support efficient management of production sites in remote coastal/rural and even off-shore areas

b) *Action 4.* Promote engagement, education, skills upgrading, attitude, training, and entrepreneurship across the Bioeconomy

- promote Open Innovation initiatives to accelerate a scale-up of innovative solutions in the Bioeconomy field developed by start-up and SMEs

¹²⁷ https://cnbbsv.palazzochigi.it/media/2078/iap_2332021.pdf

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

5.2.1.6. Tunisia

- 1) **Ten-Year Tourism Action Plan 2016-2025**¹²⁸
- 2) **The Blue Economy in Tunisia: An opportunity for Integrated and Sustainable Development of the Sea and Coastal Areas (World Bank)**¹²⁹ that recommends initial guidelines for a national strategy.

5.2.1.7. Albania (Adriatic and Ionian region)

- 1) **National Strategy for Sustainable Tourism Development 2019-2023**¹³⁰
 - a) *Policy Goal 2: Improvement of Tourism Services*
 - *Goal 2.1*, Development of new evaluation models, standardization, certification and classification of services for tourism and tour operators
 - *Goal 2.2*, Establishment of a Regulatory and Institutional Framework for the development of vocational education and qualifications in tourism, as well as training of human resources engaged in the sector
 - *Goal 2.3*, Development of Regulatory and Institutional Framework for the Development of Services and Operation of Tourism Ports and Activities in their function
 - b) *Policy Goal 3: Consolidation and Development of Tourism Products*
 - *Goal 3.1*, Development of a Seaside and Maritime Tourism Program and creation of new products
- 2) **‘Realizing the Blue Economy Potential in Albania’** (2020)¹³¹: The World Bank published this study to fill the knowledge gaps to help advance Albania's vision of the Blue Economy, in the context of the country's aim of joining the EU, with fisheries and tourism being the two most important sectors.

¹²⁸ <https://switchmed.eu/policy/scp-naps-monitoring-implementation/tunisia/>, <https://switchmed.eu/wp-content/uploads/2020/04/03.-SCP-NAP-tourism-Tunisia-in-french.pdf>

¹²⁹ Tunisie en bleue économie: Opportunité pour un développement intégré et durable de la mer et des zones côtières » Banque mondiale. 2022. World Bank, Washington, DC.
<https://documents1.worldbank.org/curated/en/099155101182322674/pdf/P17059606ec41606a0982boff5cabb6bc3e.pdf>

¹³⁰ <https://turizmi.gov.al/wp-content/uploads/2019/12/National-Tourism-Strategy-2019-2023-EN.pdf>

¹³¹ World Bank. 2020. Realizing the Blue Economy Potential of Albania © World Bank,
<https://openknowledge.worldbank.org/bitstreams/0e31273d-a69e-523a-92ec-d49b483daa1c/download>

D 3.1 – Report on the assessment and identification of best practices of other regions and sea-basins that could match with the identified gaps

5.2.1.8. Croatia (Adriatic and Ionian region)

1) Sustainable Tourism Development Strategy until 2030¹³²

a) *Strategic Goal 3: Competitive and innovative tourism*

2) Transport Development Strategy of the Republic of Croatia (2017-2030)¹³³

a) Maritime transport

¹³² Not available

¹³³

https://mmpi.gov.hr/UserDocsImages/dokumenti/INFRASTRUKTURA/Infrastruktura%2010_19/Transport%20Development%20Strategy%20of%20the%20Republic%20of%20Croatia%202017-2030%2029-10_19.pdf