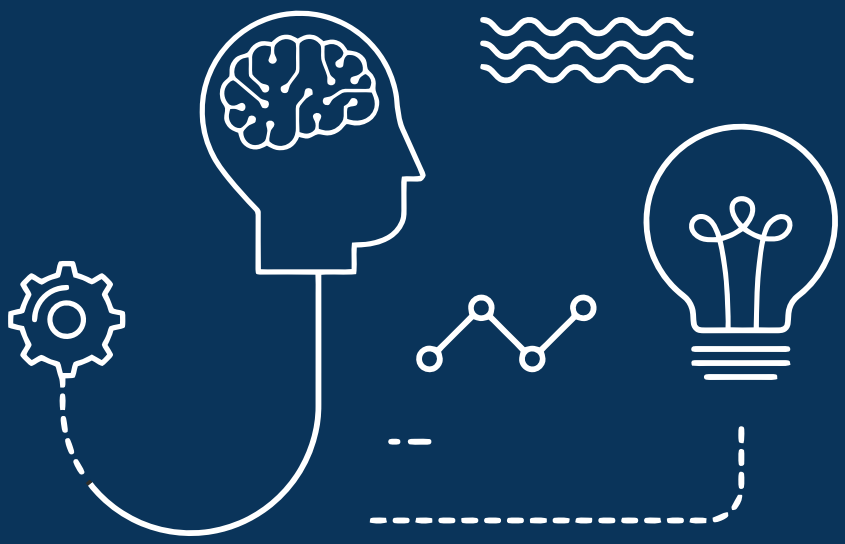

BLUEMED

PRELIMINARY IMPLEMENTATION PLAN

(CORE DOCUMENT)

Horizon 2020 – BG-13-2016
Grant Agreement 727453

Coordination and Support Action

June 2020

blueMed

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727453

COORDINATION AND SUPPORT ACTION

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PRELIMINARY IMPLEMENTATION PLAN D2.9

June 2020

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		Revised draft (RV)	
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ACRONYMS

ASC = Aquaculture Stewardship Council

CIESM = The Mediterranean Science Commission

COST = European Cooperation in Science and Technology

CPRM = Conference of Peripheral Maritime Regions

CSA = Coordination and Support Action

EASME = Executive Agency for Small and Medium-sized Enterprises

EATIP = European Aquaculture Technology and Innovation Platform

EC = European Commission

EIT Climate-KIC = European Innovation Tec

EFTP = European Fisheries Technology Platform

EMFF = European Maritime and Fisheries Fund

EMODNET = European Marine Observation and Data Network

EMUNI = Euro-Mediterranean University

ENI CBC-MED = European Neighbourhood Instrument Cross Border Cooperation in the Mediterranean

EOSC = European Open Science Cloud

ESIF = European Structural and Investment Funds

ESOF = European Science Open Forum

ESFRI = European Strategy Forum on Research Infrastructures

EUMOFA = European Market Observatory for Fisheries and Aquaculture products

EUSAIR = European Strategy for the Adriatic-Ionian Region

FAO = Food and Agriculture Organization

FARNET = Fisheries Areas Network

FoS = Friends of the Sea

GFCM = General Fisheries Commission for the Mediterranean

GSO BlueMed WG = Group of Senior Officials BlueMed Working Group

IOC/UNESCO = Intergovernmental Oceanographic Commission/United Nation Educational, Scientific and Cultural Organization

Interreg = European Union's instrument supporting cooperation across borders

LIFE = European Union's funding Programme for the environment and climate action

MedECC = Mediterranean Experts on Climate and Environmental Change

MCSA/RISE = Marie Sk odowska-Curie Actions/Research and Innovation Staff Exchange

MRE = Marine Renewable Energy

MSC = Marine Stewardship Council

MSP = Maritime Spatial Planning

PRIMA = Partnership for Research and Innovation in the Mediterranean Area

S3 = Smart Specialization Strategies

SEA-EU = European University of the Seas

SEMED = Start-up Europe Med

SRIA = Strategic Research and Innovation Agenda

UfM = Union for the Mediterranean

UNEP/MAP = United Nation Environemnt Programme/Mediterranean Action Plan

UNIMED = Mediterranean Universities Union

WESTMED = Western Mediterranean Blue Economy Initiative

WRAP = Waste and Resources Action Programme

SCOPE

The governance of our common Mediterranean Sea in the present circular scenario requires an adaptable co-owned plan of actions, interconnecting science and innovation to policy, citizens and the environment, and addressing multiple dimension, from local to international.

The **BlueMed Implementation Plan** provides a **medium-term operational tool to develop sustainable Blue Economy in the Mediterranean area**. By conveying practical inputs, it accompanies the following trajectories:

· Definition of the Smart Specialization Strategies[1] by **Regions**;

· Alignment of **national** marine and maritime strategies;

· **European** R&I Programming, with particular reference to the European Commission Horizon Europe Mission Areas[2] "Adaptation to Climate Change including Societal Transformation & Climate-neutral and smart cities" and "Healthy oceans, seas, coastal and inland waters" as well as the candidate Partnerships on "A climate neutral, sustainable and productive Blue Economy" and on "Zero-emission waterborne transport";

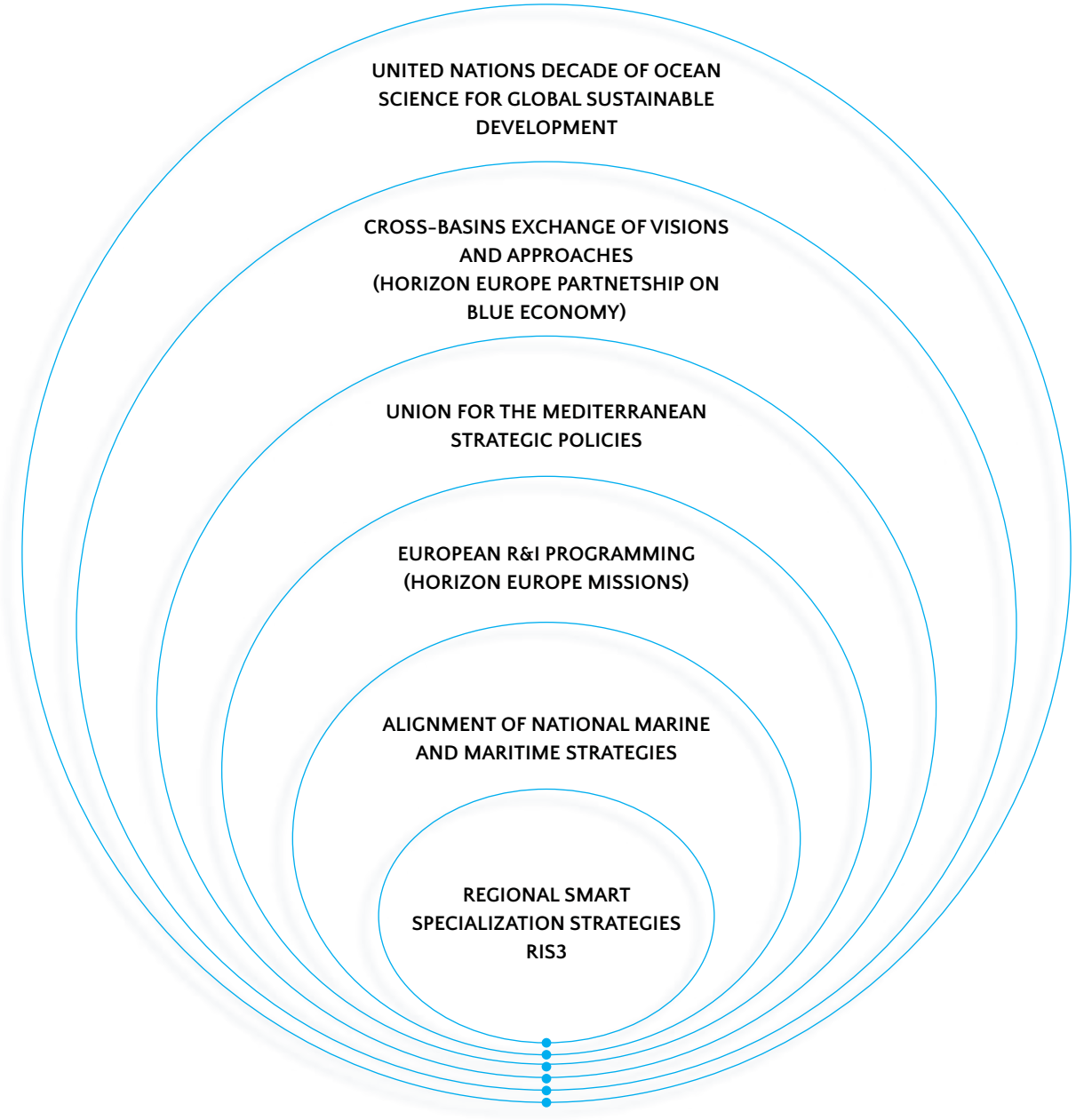
· Development of the Union for the **Mediterranean**[3] strategic policies, i.e. Ministerial on Blue Economy;

· **Cross-basins** exchange of visions and planning approaches;

· Contribution, at Mediterranean scale, to the design of the actions of the United Nations Decade of Ocean Science[4] for **global** Sustainable Development.

1 https://ec.europa.eu/jrc/en/research-topic/smart-specialisation
2 https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe_en
3 https://ufmsecretariat.org/
4 https://www.oceandecade.org/about

Scope of the BlueMed Implementation Plan, from local to global scale



BLUEMED KEY MILESTONES

- May 2014 BlueMed Initiative set-up in the framework of the EU Blue Growth Strategy
- December 2014 BlueMed Vision Document endorsed at the Competitive Council
- October 2015 Venice Declaration launching the BlueMed SRIA
- November 2015 UfM Declaration on the Blue Economy adopted
- October 2016 BlueMed Coordination and Support Action begins
- May 2017 Valletta Declaration on strengthening Euro-Mediterranean cooperation through Research and Innovation undersigned
- February 2018 Group of Senior Officials BlueMed Working Group established
- October 2018 Pilot Action for a healthy plastic-free Mediterranean Sea launched
- April 2019 BlueMed SRIA priorities agreed
- December 2020 BlueMed Implementation Plan

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PEOPLE ENGAGED IN THE BLUEMED COMMUNITY

INTRODUCTION

The BlueMed Research and Innovation Initiative[5] is an intergovernmental regional-scale initiative launched in 2014 during the Italian Presidency of the European Union, aiming to advance a shared vision for a healthier, productive, resilient, better-known and valued Mediterranean Sea. It addresses research and innovation through a multi-disciplinary approach, linking economy, environment and humans, to build sustainable Blue Growth by means of networks of actors and international science diplomacy efforts. Since 2017, with the signature of the Valletta Declaration[6], the Initiative is formally joined by 16 EU and non-EU Mediterranean countries and steered by the Euro-Mediterranean Group of Senior Officials BlueMed Working Group (GSO BlueMed WG), co-chaired by the European Commission and the co-chair of the Union of the Mediterranean (currently Jordan) and supported by the Secretariat of the Union of the Mediterranean.

The GSO BlueMed WG endorsed at first the **BlueMed Strategic Research and Innovation Agenda**[7] (SRIA) and then this BlueMed Implementation Plan. As part of the process, it launched on November 7th 2019 at Ecomondo fair in Rimini, the **BlueMed Pilot Initiative on Healthy Plastic-free Mediterranean Sea**[8].

Revolving around four pillars of key challenges (Table 1), the BlueMed SRIA is an **excellent framework** for the Mediterranean countries to develop and **align** their marine and maritime Research and Innovation agendas.

5 www.bluemed-initiative.eu/
6 http://www.bluemed-initiative.eu/valetta-declaration/
7 http://www.bluemed-initiative.eu/wp-content/uploads/2018/12/BLUEMED-SRIA_Update_2018.pdf
8 http://www.bluemed-initiative.eu/pilot-action-on-a-healthy-plastic-free-mediterranean-sea/

BLUEMED KEY CHALLENGES		
KNOWLEDGE	ECONOMY	TECHNOLOGY
A. Mediterranean Sea ecosystems: characterize present dynamics, services, resources, vulnerability and resilience to natural and anthropogenic pressures	A. Innovative businesses based on marine bio-resources in the Mediterranean	A. Smart, greener and safer maritime transport and facilities in the Mediterranean
B. Mediterranean Sea: forecast changes of the basin under climate and anthropogenic pressures and develop services in the field of sustainable adaptation to climate change and plans for mitigation	B. Ecosystem-based management of Mediterranean aquaculture and fisheries	B. Observing systems and operational oceanography capacities in the Mediterranean
C. Hazards and protection of coastal areas and open sea in the Mediterranean	C. Sustainable tourism and cultural heritage in the Mediterranean	C. Innovative offshore industrial platforms including marine renewable energy and co-use
D. Innovative blue growth trajectories: biotechnologies, food, and the deep sea and offshore resources	D. Maritime clusters in the Mediterranean	D. Marine and coastal natural and cultural heritage in the Mediterranean: discovering, protecting and valuing
	E. Governance of maritime space and marine resources in the Mediterranean	
Cross-cutting enablers for Blue Jobs and Blue Growth		

Table 1
The four pillars (Knowledge, Economy, Technology and Cross-cutting) and related key challenges of the BlueMed R&I Agenda

To reach the objectives that will contribute to address the challenges identified in the BlueMed SRIA, a common plan based on actions needs to be implemented. The present text is a step in this direction.

The BlueMed Coordination and Support Action (CSA), which is the EC funded project supporting the development of the BlueMed Initiative, led the process to engage the community of stakeholders belonging to Mediterranean countries in the co-design and drafting of the Plan, according to a methodology described in detail in the section Methodology to develop the Implementation Plan and reach the 13 priorities.

The **level of participation reached was large and can be considered one of the major strengths of the process**, which contributed to create a cohesive BlueMed Community. The list of authors and contributors includes indeed the **GSO BlueMed WG's delegates**, the **partners of the BlueMed CSA** supporting the Initiative, the Coordinators and **National Pivots** animating the BlueMed Platforms, i.e. the tool set-up for consultation and engagement of national stakeholders, as well as other key experts.

This document present the priority goals sketched in Table 2 and addresses thematic and structuring activities to be developed in order to ignite a transformative process at Mediterranean level. It will be disseminated to relevant research and innovation funders and committers. The first opportunity for promoting the joint actions is indeed offered by:

- the Union for the Mediterranean (UfM) Stakeholders' on-line Consultation preparing the Ministerial on Blue Economy;
- the BlueMed Funders' Workshop (the last of a series of three during the lifetime of the BlueMed CSA, which has contributed to the consolidation of an *Operational Network of BlueMed Funders*).

The active role of all contributors continues to be thus crucial, also to promote, propose, discuss and agree on actions to be undertaken in the next 3-4 years.

BLUEMED PRIORITY GOALS	
THEMATIC	Understanding Pollution Impacts, Mitigation, and Remediation in the Mediterranean Sea
	Support solutions for sustainable production and consumption of food from the sea
	Preparing to climate change and define adaptation/ mitigation measures
	Linking tourism, tourists and environment
	Effective maritime spatial planning in the Mediterranean
	Greening vessels, facilities and services
	Towards an observing system of systems
	Exploring the potential of blue-biotech
	Promote the role of Marine Renewable Energies (MRE) in the energy transition phase
CROSS-CUTTING	Open data, open science, open innovation
	Building capacity, blue skills and blue professionals
	Strengthen synergies among science, industry, policy-makers and society
	From traditional maritime economy to blue growth activities

Table 2
Sketch of the BlueMed priorities. The BlueMed Pilot Initiative Healthy Plastic-free Mediterranean Sea launched in 2019 is under implementation in the framework of Priority 1.

SOCIETAL CHALLENGE IN THE MEDITERRANEAN AND POLICY SYNERGIES WITH OTHER INITIATIVES

The **BlueMed SRIA** and the derived **BlueMed Implementation Plan** are policy-driven and policy-oriented instruments aimed at inform, support and impact on a wide range of International and EU policy instruments and processes.

The Challenges, clustered in Knowledge, Economy, Technology and Cross-cutting Enablers, are qualified through Goals and Actions and cover most of the aspects related to Mediterranean marine ecosystems and resources, including most coastal and sea uses and the human dimension. As such, they intercept and influence a wide variety of policy processes and initiatives, the EC R&I Framework Programme 2021-2027 Horizon Europe[9] and specifically the Mission Area on *Healthy oceans, seas, coastal and inland waters* being among the most relevant.

BlueMed is contributing to reach several **Sustainable Development Goals**[10] of the **UN 2030 Agenda**[11], focusing on SDG14-Life below Water but also targeting SDG12- Sustainable Consumption and Production and SDG17-Partnerships for Sustainable Development.

Climate change is a key topic in the Mediterranean, being addressed in BlueMed in terms of assessment, trends, impacts on ecosystems and sea uses, as well as needs of mitigation and adaptation. A close connection is clearly needed, and already partially established, with i) international policies and targets, ii) EU strategies, with particular reference to the new **EU Green Deal**[12] proposed by the Commission and the EU strategy on adaptation to climate change, iii) scientific working groups and networks operating at EU and at Mediterranean scale (e.g. UfM WG on Climate Change and MEDECC).

9 https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en
10 https://sustainabledevelopment.un.org/?menu=1300
11 https://sustainabledevelopment.un.org/post2015/transformingourworld
12 https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

The implementation of the bulk of EU and national environmental strategies and legislation requires continuous production of knowledge on ecosystem functioning, understanding of impacts from anthropogenic pressures and of ongoing trends due to climate change, effectiveness of the measures implemented at large and local scale. The full understanding of goods and services provided by coastal and marine ecosystems is essential to address their sustainable exploitation and conservation. In particular, preserving and restoring ecosystems and biodiversity, in line with present and future objectives of the **UN Convention on Biological Diversity**[13] and the **EU Biodiversity Strategy**[14].

The specific characteristics of the Mediterranean Sea make its equilibrium delicate and strategic at the same time, from a political and economic point of view as well as from an ecological point of view. The Mediterranean is the meeting point of three continents and it is crossed by a third of the world maritime traffic. Its biological and mineral resources are of fundamental importance for the countries bordering its shores. Therefore, those resources are the subject of a wide and articulated international cooperation activity aimed at reconciling very different interests. It is worth mentioning that part of the Basin, although relatively close to the mainland, is still subject to the legal regime of the high seas, and therefore open to free use and exploitation by all states (UNCLOS, art. 87). A clear definition of the **Ocean Governance** scalable to the Mediterranean is the prerequisite for rational organization of the use of marine space and the interactions between its uses, to balance demands for development with the need to protect marine ecosystems, and to achieve social and economic objectives in an open and planned way. As such, Maritime Spatial Planning is a key enabling factor for a sustainable development of sea economy, according to EU **Directive 2014/89/EU**[15]. The preparation of the maritime spatial plans will offer the opportunity to all Mediterranean countries, to rethink and improve in a transboundary context their strategy on sea economy, as sectoral and as integrated strategies, encouraging multi-purpose uses, and to develop a vision for the future.

13 https://www.cbd.int/
14 https://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm
15 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0089

The need and the importance of better Ocean Governance is recognized by the **International Ocean Governance Communication** adopted by the EC in October 2016 (Join(2016)49) and the resolution approved by the European Parliament on 16 January 2018 (2017/2055(INI)). The Communication represents an integral part of the EU's response to the UN 2030 Agenda for Sustainable Development and contains 14 sets of actions in three priority areas: i) improving the international ocean governance framework; ii) reducing pressure on oceans and seas and creating the conditions for a sustainable blue economy; iii) strengthening international ocean research and data. Actions 13 - Strengthening investment in 'blue' science and innovation and 14-International ocean research, innovation and science partnerships make specific reference, among others, to the BlueMed Initiative.

The **Circular Economy Package**[16] (COM(2015)614), adopted by the Commission on 2 December 2015, is presently the main tool to support the transition towards a more circular economy in the EU. It includes legislative proposals on waste, with long-term targets to reduce landfilling and increase recycling and reuse, lowering energy consumption and carbon dioxide emissions levels. Since then, the Commission has put forward a number of key initiatives (COM2017(33)) to support Circular Economy. These initiatives cover the full value chain, from production to consumption, waste management and use of secondary raw materials. A specific strategy was recently adopted on **plastics in a circular economy perspective (COM(2018)33)**, with a detailed list of future EU measures to implement it. The Circular Economy concept applies in the Blue Growth arena to almost all sectors of sea economy (e.g. energy, fisheries, transport, tourism) and all components of the value chain (production, consumption, waste management and recycling). Margins for innovation are huge on materials, technologies and processes and ranges of options for implementation are wide. Policy measures are crucial in this sense, while research and innovation from public and private actors is key.

16 https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF

The challenge on "how can more food and biomass be obtained from the oceans in a way that does not deprive future generations of their benefits" (Commissioner Karmenu Vella request to the EU's Scientific Advice Mechanism) can be answered through a combination of actions that require all consolidated knowledge of marine systems and innovative ideas and technologies. They span from measures for more sustainable fisheries, new aquaculture solutions, integrated use of by-products and co-uses related to the exploitation of marine biomasses and new sources of raw materials, new fishing and farming grounds. As such, BlueMed should significantly contribute to the **EU R&I initiative FOOD2030**[17], on Food and Nutrition Security (FNS), the broader EU strategy **"from Farm to Fork"**, and to the **FAO-GFCM Initiatives MedFish4Ever** and **FishForum**.

BlueMed is comprehensively relevant for the **EU Integrated Maritime Policy**[18] (COM(2007)575) and the **Blue Growth Strategy**[19] (COM(2012)494; COM(2014)254/2) topics and challenges are expressed also through Goals and Actions on safety and efficiency of sea transportation systems, on marine renewables to stimulate the contribution of the sea to the ongoing energy transition towards a low-carbon economy and EU Green Deal objectives, on promotion of sustainable coastal and maritime tourism through smart technologies and services.

Most of the above challenges and objectives are part of the Agendas, Strategic documents and Action Plans of existing **Regional and Territorial Frameworks, Strategies and Initiatives** such as **Barcelona Convention**[20], **WestMED**[21], **EUSAIR**[22], **UfM WG on Blue Economy**[23] **and CPMR**[24]. Synergies with BlueMed Initiative are already well established and should be further reinforced during and for the deployment of the Implementation Plan.

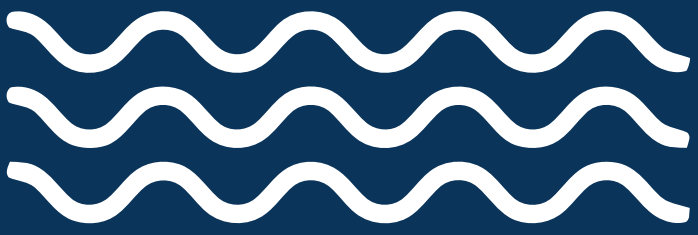
17 https://ec.europa.eu/research/bioeconomy/index.cfm?pg=policy&lib=food2030
18 https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0575:FIN:EN:PDF
19 https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en
20 https://web.unep.org/unepmap/1-barcelona-convention-and-amendments
21 https://www.westmed-initiative.eu/
22 https://www.adriatic-ionian.eu/
23 https://ufmsecretariat.org/ufm-working-group-blue-economy/
24 https://cpmr.org/

Moreover, collaboration and synergies with other **Sea Basin Initiatives** such as Baltic, Atlantic, North Sea and Black Sea is ongoing and should be reinforced, developing cross-border research and innovation cooperation at and across the sea-basin scales on both thematic and structural actions, in view of the Partnership tool foreseen in the next R&I EU Framework Programme Horizon Europe.

Finally, BlueMed shall promote its Implementation Plan in the framework of the Mediterranean component of the **UN Decade of Ocean Science for Sustainable Development 2021-2030**[25], that aims at providing for the seas&ocean community and beyond, a pathway to work collaboratively, demonstrating the productivity and relevance of the global science community for addressing societal issues, as well as raising the visibility of these collective actions.

25 https://en.unesco.org/ocean-decade

PLANNED JOINT ACTIONS



A set of Strategic and Promotional Joint Actions is proposed to implement 13 priorities, including thematic and cross-cutting, as from 2020 and beyond. The BlueMed priorities were selected:

- following the endorsement of the BlueMed SRIA updated version in 2018 by the GSO BlueMed WG;

- according to a methodology set-up by the BlueMed CSA;
and developed via:

- a collaborative work led by co-champion countries (two per each priority);

- further consultation with key stakeholders (about 48) via the BlueMed Platforms.

The main objective of the described Joint Actions that have been designed taking into account the multiple synergies needed to effectively develop them, is to address the respective priorities and promote activities for cooperation and collaboration between Mediterranean countries, towards the capitalisation and alignment of marine research programmes and strategies to fulfil the objectives of the BlueMed Initiative.

HOW TO READ THE TEXT

- Priority number

- SRIA key challenge(s) the priority is connected

- Title of the Priority

- Statement summarizing the relevance of the Priority

- Operational receipt to reach a priority goal

- A set of Strategic Actions, i.e. larger and medium-long term initiatives and activities, with specific scientific or structural content, that require strong commitment and additional dedicated resources from Research Funders. For each Strategic Action, it is reported:

- A set of Promotional Actions that are feasible to be possibly achieved with the support of the BlueMed CSA within the project´s lifetime

An indicative timing for launching	
The suggested duration, i.e. timeframe	t <1-1 yr tt <5 yr ttt >5 yr
The proposed instrument to undertake them and	
A tentative budget scale	€ < 50 k€ €€ < 1 M€ - 1 M€ €€€ < 10 M€ €€€€ > 10M€

(PRIORITY 1)

UNDERSTANDING POLLUTION IMPACTS, MITIGATION, AND REMEDIATION IN THE MEDITERRANEAN SEA

Support the proper management and improvement of the marine environment and connected activities from filling the knowledge gaps to identifying recycling solutions, in the perspective of the blue circular economy and the Green Deal. Improve in parallel the understanding on the functioning of the Mediterranean Sea ecosystem.

Develop coastal and marine potential hazard/pollution sources maps to identify hot spots and areas that are particularly exposed to the impact of multiple stressors and propose possible solutions.

Define distribution, concentration and provenance of all forms of garbage at the sea surface, within the water column, the sea floor and the coastal-estuarine environments; rise awareness through literacy and citizen-science.

Quantify impact in terms of economic activities, jobs, well-being of citizens and ecosystems, of plastic waste; reduce its generation, prevent littering and exploit opportunities from collection and recycling.

Explore and propose solutions to reduce the input of pollutants from atmosphere, land and sea, linking with monitoring/mitigation technology actions.

Measure and identify emerging chemical compounds from terrestrial sources, determining contaminant dispersal in all marine matrices; characterize sources, pathways and effects on marine ecosystems; develop early warning tools.
Fill gaps in understanding the Mediterranean Sea dynamics, biogeographic patterns, biodiversity, and ecosystem functions using novel monitoring, e.g. satellite, marine drones, molecular/genetic tools to develop new end-to-end models forecasting the carrying capacity of the Mediterranean ecosystems.

Strategic Action/1	**Scale up of the BlueMed Pilot Action on Healthy Plastic Free Mediterranean Sea**
Indicative starting time	2021
Suggested timeframe	tt
Proposed funding programmes and instrument	Horizon Europe – Mission area: Healthy oceans, seas, coastal and inland waters, in a Multi-Programme Framework (e.g. EMFF, Interreg, ENI CBC-MED, LIFE) & National Pilot Hubs & Summit of the Two Shores
Tentative budget	€€€

Strategic Action/2	**Joint JPI-Oceans Action on 'Science for Good Environmental Status'**
Indicative starting time	2021

Suggested timeframe	t
Proposed funding programmes and instrument	Co-fund call (variable geometry)
Tentative budget	€€

Promotional Action/1	**e-training course on marine litter**
Indicative starting time	September 2020
Proposed instrument	BlueMed CSA task
Tentative budget	€

Promotional Action/2	**BlueMed & JPI-Oceans joint workshop** on 'Science for Good Environmental Status'
Indicative starting time	September 2020
Proposed instrument	BlueMed CSA task, promoted by Italy and Co-champions, in coordination with JPI-Ocean Secretariat
Tentative budget	€

(PRIORITY 2)

SUPPORT SOLUTIONS FOR SUSTAINABLE PRODUCTION AND CONSUMPTION OF FOOD FROM THE SEA

The economic driver "Food" is one of the shared Mediterranean cultural roots. Improvements in the fisheries and aquaculture sectors are necessary with the aim to make these economic activities more environmentally and economically sustainable. The concept of Sustainable Food Consumption contrasts with the increase of the demands of food, e.g. during touristic season, and the increase of food waste, requires new practices leading to improved society behaviours, better consumer practices, implementing the European Strategies 'From farm to fork', Food 2030, and at global level the relevant UN-Sustainable Development Goals.

Identify and protect marine biota as a new source of proteins for human consumption.

Develop Mediterranean aquaculture: new management tools, ecosystem-based approach, tackling pathogens; develop conceptual models for Integrated MultiTrophic Aquaculture (IMTA).

Study and evaluate the best processes to adapt and diversify aquaculture activities (species and systems) and capacities in a changing environment, including for small and medium-scale farms.

Rethink the approach to the management of by-products and by-catch from fisheries and aquaculture in the production chain.

Assess Fish Stocks in a holistic frame taking into account climate change and alien species diffusion.

Develop innovative methods and tools for monitoring and governing Mediterranean aquaculture and fisheries, in line with existing policies.

Strategic Action/1	**Call of calls:** enhance/capitalize on calls for projects as Blue Labs, EU funding calls, Research organizations to launch a **Call for competition on e.g. Fishing and aquaculture eco-label products, Research on multi-modal platforms (including offshore wind farms and aquaculture, linking with P9 on Marine Renewable Energies), Essential Fish Habitat Approach, Impact of Trawling, etc.**
Indicative starting time	2021
Suggested timeframe	tt
Proposed funding programmes and instrument	ESIF/EMFF + PRIMA + Aquatic Pollutants ERANET Cofund
Tentative budget	€€

Promotional Action/1	**Capacity building activity on artisanal fisheries connecting with the possible scale-up of the BlueMed Start-up Action LabMaf fisheries connecting with the possible scale-up of the BlueMed Start-up Action LabMaf**
Indicative starting time	September 2020

Proposed instrument	BlueMed CSA task
Tentative budget	€

Promotional Action/2	**Workshops** for targeted stakeholders, such as Maritime Clusters, Research Organizations and/ or the European Commission to **share BlueMed information about production of food from the sea, consumption and security**.
Indicative starting time	May 2021
Proposed instrument	European Maritime Day Workshop proposed by the BlueMed CSA in alignment with relevant H2020 projects (e.g. PerformFish, MedAID, Summer, BlueGrowthFarm, SEAFOODOF TOMORROW)
Tentative budget	€

Promotional Action/3	**Coordination Workshop entitled "It's time to align! Food production, security and consumption from the Sea" to develop Strategies and Plans designed for sustainable fishing, aquaculture and seafood** via alignment and coordination with WestMED and EUSAIR, other organizations and initiatives (GFCM-FAO; WRAP; UfM), EU organizations (FARNET, EATIP, EFTP, EUMOFA) and coordination for eco-label aquaculture and fishing products (MSC, FoS, ASC, and Advisories Councils for Fisheries and Aquaculture).
Indicative starting time	December 2020 (possibly within the BlueMed CSA multi-thematic Conference)
Proposed instrument	Joint BlueMed CSA taskforce with and MedFish4ever Initiative and GFCM-FAO
Tentative budget	€

Promotional Action/4	**Exchange of best practices and dissemination between Mediterranean countries on good food practices to society (reduce consumption and tourism food waste, co-design new strategies to preserve and freeze products, etc.)**
Indicative starting time	March 2021
Proposed instrument	BlueMed CSA task in alignment with an ongoing relevant project (e.g. Interreg STREFOWA) and a Communication event (if possible engaging renowned Chefs from several Med countries)
Tentative budget	€€

(PRIORITY 3)

PREPARING TO CLIMATE CHANGE AND DEFINE ADAPTATION AND MITIGATION MEASURES

The Mediterranean has been recognized as a climate change vulnerability "hotspot" by the IPCC. There is a need to fill gaps in scientific knowledge with regards to understanding regional climate change and its impacts on the ecosystems and the services they provide and hence on human population, its health and safety by exploiting and improving observation capacities. Contribution is expected on EU and global policies, including UN-Sustainable Development Goals.

Make a comprehensive assessment of climate and anthropogenic related risks and opportunities in the Mediterranean Sea ecosystem and human environment from the coastal zone to the deep ocean, including extreme climate events, acidification, sea level rise, flooding and sprawling of invasive species favored by increasing temperature of the water column.

Develop, enhance and deliver user-friendly tools for disseminating climate information related to Mediterranean atmosphere, coastal and deep ocean areas.

Develop climate adaptation and mitigation strategies coupling Climate Change and Blue Growth activities targeting the Mediterranean coasts.

Identify how activities, such as freshwater use, can enhance impacts of climate change through increased coastal subsidence, salt wedge penetration and ultimately increased flooding and desertification risks.

Launch a Pan-Mediterranean program on coastal freshwater reserves: quantification of reservoirs, state of the water (available quantity, quality, contaminants, depth beneath surface), level of exploitation and frames for sustainable use of this good. Promote innovative desalinization practices in areas with lack of freshwater minimizing negative impacts on shallow marine ecosystems.

Develop operational observing platforms, early warning systems and decision matrices to address natural marine disasters such as tsunami events, coastal slides, storms, while assessing and controlling progressive coastal and geological processes such as erosion, habitat destruction or coastal landslides.

Standardize and expand coastal-monitoring systems across the Mediterranean region to maintain updated data and information on extreme climatic events, sea-level rise, coastal erosion and other coastal risks.

Strategic Action/1	**Integrated Programme** to increase knowledge on **the impact of global change on Mediterranean marine ecosystems** (food webs, biodiversity, habitats) and therefore on the following key social and economic drivers: - Fisheries and aquaculture (linking with P2 on Sustainable food production); - Tourism (*linking with P5 on Tourism*); - Transport Routes (*linking with P7 on Transport*). by exploiting appropriate observing systems (*linking with P4 on Observing Systems*).
Indicative starting time	2022

Suggested timeframe	tt
Proposed funding programmes and instrument	Horizon Europe – Mission Areas: Adaptation to Climate Change including Societal Transformation & Climate-neutral and smart cities & Healthy oceans, seas, coastal and inland waters targeted cross-Missions R&I actions & European Investment Bank Blue Sustainable Ocean Strategy (Blue SOS) & LIFE Call
Tentative budget	€€€€

Promotional Action/1	**Climate-KIC Start-ups**
Indicative starting time	September 2020
Proposed instrument	EIT Climate-KIC call
Tentative budget	€€

Promotional Action/2	**Towards a Climate Change Mediterranean Sea Capital of the Year**
Indicative starting time	January 2021
Proposed instrument	Joint BlueMed CSA, UNEP/MAP & UfM task
Tentative budget	€

(PRIORITY 4)

TOWARDS AN OBSERVING SYSTEM OF SYSTEMS

Support marine and coastal observation to better understand the complex marine ecosystem and its functioning; to measure and assess its evolution under different stressors and manage resources sustainably; to provide essential information for decision-making; to identify risks and set-up a rapid response to hazards. Improve in parallel the accessibility to open multidisciplinary and high quality data for scientists and other key stakeholders involved in Blue Growth activities. Strengthen the collaboration with non-EU Mediterranean countries by promoting the use of existing data; sharing of new technologies; participating in joint monitoring of the marine environment and sharing the commitment for sustainable development.

Develop technologies towards an integrated Mediterranean observing system, capitalizing on existing networks and consortia, including European Strategy Forum on Research Infrastructures, and national/regional/local infrastructures, in line with the overall European contribution to global observing systems, such as in the Common Information Sharing Environment (CISE) approach.

Support long term and long-time series observing systems for climate change's impact evaluation.

Implement ICT, Big Data Analysis and Cloud Service Platforms to take advantage of multi-sectoral data management and sharing opportunities for the Mediterranean.

Develop appropriate systems to foster Citizen Science initiatives and protocols to complement environmental and ecosystem monitoring.

Strategic Action/1	**Regional Task Force on Coastal Observing Systems** for defining laboratories of reference; set-up a coordinated network of coastal multidisciplinary observing stations; reinforce the access to land-based facilities and strengthen Transnational Access calls to facilitate access for non-EU scientists
Indicative starting time	March 2021
Suggested timeframe	ttt
Proposed funding programmes and instrument	Cross-border cooperation Programme, Horizon Europe, EMFF, Interreg Med
Tentative budget	€€€

Strategic Action/2	**Cooperation Programme for environmental** data collection and sharing between marine economic sectors, environmental authorities, research sectors, and citizens
Indicative starting time	March 2021
Suggested timeframe	ttt
Proposed funding programmes and instrument	Interreg Med, Cross-border cooperation Programme, EMFF, HE
Tentative budget	€€€

Promotional Action/1	**Mediterranean Conference on marine and coastal observation**
Indicative starting time	Annual meeting, starting March 2021
Proposed instrument	Copernicus, JPI Oceans, EMFF, UNEP/MAP
Tentative budget	€ (for one meeting)

(PRIORITY 5)

LINKING TOURISM, TOURISTS AND ENVIRONMENT

Develop sustainable and low environmental footprint solutions as precondition for preserving the natural and cultural heritage in the long term. Implement the transition towards a more sustainable tourism with the support of socio-economic research and the exploitation of prospects offered by the digitalization to support decisions making, including the "European Strategy for more Growth and Jobs in Coastal and Maritime Tourism". Since tourism is a key asset of Mediterranean coastal regions, while exerting high pressures on the coastal and marine environment, this integrated goal calls for co-tackling the following:

- Preparing to climate change and define adaptation/mitigation measures;

- Reducing the coastal risk of disasters and their effects;

- Technology solutions for the Mediterranean natural and cultural heritage including augmented reality and underwater/seafloor remote observations;

- Building capacity, blue skills and blue professional.

Promote synergies between tourism and other productive activities encouraging networking with other economic sectors and among destinations.

Develop monitoring and evaluation systems of tourism flows, assessing carrying capacities of destinations, to support an efficient management of tourism flows and impacts leading to an effective governance of a greener and sustainable tourism industry.

Develop methodology, tools and systems for assessing environmental impacts of tourism and its drivers in the Mediterranean area focusing on coastal urbanization trends (tourist ghost cities) and related pressures to improve protection of coastline ecosystems.

Focus on big data analytics and ICT technologies and services to strengthen access to sustainable development policies, more efficient use of natural resources and cultural heritage, and management of infrastructures in coastal and marine areas.

Train a new generation of marine technicians/scientists to conduct research on the protection and valorization of the marine cultural heritage, including 3D and 4D rendering and augmented observation.

Strategic Action/1	**Digital ecosystems for coastal tourism destinations to support the design of policies:** from opportunities' mapping to intelligence production
Indicative starting time	2023
Suggested timeframe	tt
Proposed funding programmes and instrument	Cross-border cooperation Programme/R&I action & COST Action
Tentative budget	€€

Promotional Action/1	**Connecting multiple actors for integration:** Panoramed, UNWTO, EU Sustainable Tourism Group
Indicative starting time	2021
Proposed instrument	Mobilization of (Co-champion countries) National Pivots
Tentative budget	€

Promotional Action/2	**Beyond commodities: Exploit tourism as vehicle for environmental-friendly behaviours**
Indicative starting time	December 2020 (possibly within the BlueMed CSA multi-thematic Conference)
Proposed instrument	Stakeholders' (e.g. ship companies) Conference
Tentative budget	€

(PRIORITY 6)

EFFECTIVE MARITIME SPATIAL PLANNING IN THE MEDITERRANEAN

MSP is about promoting the rational use of the sea and improving decision-making; it is an essential part of the governance of the maritime space in the Mediterranean Sea. It is at the base of any socio-economic development and conservation effort. The increase in maritime activities and the development of new initiatives in the Mediterranean naturally lead to competition between maritime activities or between such activities and the environment. This is particularly true for coastal areas and ports where a variety of maritime activities take place, such as fishing, aquaculture, maritime transport, dredging/sand extraction and coastal tourism, but it also applies to offshore and deep-sea environments and activities. It is in the interest of all Mediterranean countries to seek to balance sectoral interests and use space more efficiently, thereby contributing to the long-term sustainable use of marine resources. Implying a paradigmatic change in the management of the commons, it requires multidisciplinary R&I, both in terms of conceptual approaches and analysis and in terms of dedicated technologies to support the governance on the field, as well as it requires synergies among science, industry, policy-makers and society.

Promote coherence between terrestrial and maritime planning, improving the understanding at proper spatial scales of Land-Sea Interactions (LSI),

integrated management of land and maritime activities and resources and reducing impacts to the marine environment.

Address transboundary maritime spatial planning issues to understand problems and opportunities (social, economic, environmental), strengthen knowledge on environmental pressures across borders and raise awareness on a better definition of maritime zones in the Mediterranean as an important enabling factor for shared and sustainable blue growth.

Raise awareness, develop better understanding of MSP needs and drivers and test solutions for planning and management of deep-sea spaces and resources of the Mediterranean in a transboundary framework.

Develop better understanding and capability to quantify cumulative effects/ impacts of anthropogenic pressures on environmental components and resources, to support MSP scenarios development and robust planning decisions, in close connection with MSFD objectives and measures and other conservation measures (i.e. potential areas for new MPAs, improved connectivity of the MPA network, transboundary offshore protected areas, reduced impact on existing MPAs from other maritime uses).

Define approaches and tools to identify the trade-offs between ecological dynamics and socio-economic needs, taking into account marine ecosystems goods and services and their environmental, economic and social value, to inform and improve adaptive planning and management scenarios.

Build a "Knowledge Catalogue" for MSP in the Mediterranean and promote the connection of existing Geoportals, from national to EU to International, on environment and human activities.

Promote innovative technologies, services and coastal ecological engineering solutions for a sustainable management and resulting protection of coastal areas from coastal erosion, flooding and pollution.

Improve stakeholder engagement methods and practices in support of effective marine spatial planning.

Strategic Action/1	**Mediterranean MSP Knowledge Catalogue** (MSPKC, a dedicated web and collaborative catalogue collect and share metadata for MSP-relevant datasets, portals and tools)
Indicative starting time	2020
Suggested timeframe	t
Proposed funding programmes and instrument	EMFF, ENI CBC-MED
Tentative budget	€€

Strategic Action/2	Monitoring, supporting, adapting the implementation process of MSP in the Mediterranean, in connection with MSEG DG Mare, UNEP-MAP, Mediterranean Countries and through the participation of BlueMed as Observer in the new pilot project MSP-MED (EMFF-2019-1.2.1.8) launched by EASME.
Indicative starting time	2020-2022
Suggested timeframe	t
Proposed funding programmes and instrument	BlueMed-CSA task, EMFF, HE, Interreg, National Funds (variable geometry)
Tentative budget	€€

Promotional Action/1	**UNESCO/IOC-DG MARE MSPglobal Initiative** – Pilot on the Western Mediterranean
Indicative starting time	2019-2021
Proposed instrument	BlueMed CSA task, UNESCO/IOC-DG MARE
Tentative budget	€

Promotional Action/2	**OECD-UNESCO/IOC-BlueMed joint Conference on Ocean Economy and Innovation:** Linking economy potential and marine ecosystem health through Maritime Spatial Planning
Indicative starting time	September 2020
Proposed instrument	BlueMed CSA task, UNESCO/IOC, National funds
Tentative budget	€

Promotional Action/3	**Training courses on MSP for sustainable Blue Growth (two folded Action) on:** **- "Science-Policy-Society interactions in ecosystem-based marine resource management and planning";** **- "Ecosystem-Based Management in/for MSP"**
Indicative starting time	2020-2021
Proposed instrument	BlueMed CSA task, in collaboration with Interreg MED Biodiversity Protection Community
Tentative budget	€

Promotional Action/4	**Joint capitalization with Projects ADRION-Portodimare and MED-Pharos4mpas**
Indicative starting time	2020
Proposed instrument	BlueMed CSA task, in collaboration with Portodimare and Pharos4mpas Projects
Tentative budget	€

(PRIORITY 7)

GREENING VESSELS, FACILITIES AND SERVICES

Develop innovative solutions to reduce the environmental footprint of commercial as well as tourism-oriented maritime transports and port infrastructures in line with the European Commission's long-term strategy for a climate neutral society by 2050 and the Marine Strategy Framework Directive. Monitor the effectiveness of the implemented strategies and contribute to the proposal of new regulations.

Implement multidisciplinary integrated methodologies to evaluate the impact of ships and harbours on the environment at transnational level, exploit new technologies and tools to monitor pollution.

Towards zero emission ships and harbors: support the use of LNG, methanol, hydrogen, biofuels, the electrification of ships and ports, the use of fuel cells, the design of solar and wind power generation, the optimization of energy management, the research on new materials and technologies for drag, biofouling and noise reduction.

Develop new vessel concepts, i.e. flexible, modular and high efficiency ships, using new materials (e.g. high strength, reduced weight, smart, etc.)

and advanced design and production techniques, with lower manufacturing, construction, installation, dismantling and recycling costs from the perspective of the circular economy.

Design and develop innovative green infrastructure solutions and tailored software to improve the sustainability of logistics and ports.

Towards efficient Motorways of the Sea (MoS) and their connections among Ports: improve traffic monitoring system, develop feasibility studies, identifying main obstacles, and innovative methodologies/tools for the efficient functioning of the existing MoS and the establishment of new ones.

Conduct in situ measurements and develop modelling (including Big-Data modelling) tools to understand the distribution, intensity and sources of underwater noise, as well as its effect on marine species.

Strategic Action/1	**BlueMed labelled cross-cutting best practices to address underwater noise**
Indicative starting time	2023
Suggested timeframe	t
Proposed funding programmes and instrument	JPI-Oceans, Horizon Europe (e.g. co-Programmed candidate Partnership on Zero emission waterborne transport), Interreg MED, Eranet Cofund "Martera"
Tentative budget	€€€

Strategic Action/2	**Joint BlueMed-WestMED Action on 'Emission Control Area Implementation'**

Indicative starting time	2021
Suggested timeframe	t
Proposed funding programmes and instrument	Co-fund Call, Horizon Europe, EMFF
Tentative budget	€€

Strategic Action/3	**Multidisciplinary R&D to implement tailor made solutions for ports of different type and size towards zero impact infrastructures, services and operations** (e.g. sustainable building, clean energy generation and storage, bunkering, waste management). **Definition of regulations for docking in Mediterranean ports.**
Indicative starting time	2021
Suggested timeframe	tt
Proposed funding programmes and instrument	Interreg, Horizon Europe (e.g. co-Programmed candidate Partnership on Zero emission waterborne transport), Connecting Europe Facility (CEF) Transport
Tentative budget	€€

Promotional Action/1	**Multidisciplinary, trans-Mediterranean training course on green technologies for shipping**
Indicative starting time	2021

Proposed instrument	BlueMed CSA task/ specific call (EMFF, Horizon Europe, Co-Programmed Partnerships) Pharos4mpasProtection Community Protection Community
Tentative budget	€

Promotional Action/2	**BlueMed-Waterborne Joint meeting on "Low Carbon Sustainable and Intelligent Marine Technology"**
Indicative starting time	December 2020 (within the BlueMed CSA multi-thematic Conference)
Proposed instrument	BlueMed CSA task
Tentative budget	€

Promotional Action/3	**Scale up of the BlueMed Start-up Action BlueBoatsMed**
Indicative starting time	by October 2020
Proposed instrument	media campaign and participation to conferences
Tentative budget	€

(PRIORITY 8)

EXPLORING THE POTENTIAL OF BLUE-BIOTECH

The marine environment is a potential key provider of biotechnological novelty. The high biodiversity of Mediterranean marine organisms might have a high potential for applications in biotechnology, materials and engineering. To generate new products and services, the biotechnological potential of the marine resources need to be bridged with their exploration and exploitation. This implies to fill a frontier knowledge gap at the crossroads of biotechnology, food production, and sustainable use of bio-resources with socioeconomic impacts in several fields, exploiting convergences with biotech infrastructures, and access the still-untapped marine biotechnological resources on a larger scale.

Increase and improve the knowledge on the Mediterranean Sea as a source of new molecules and compounds deriving from marine microbes, algae, seaweeds and invertebrates to be used for new drugs, functional ingredients for human health, industry and environmentally-applicable molecules or organisms.

Fostering collaborative research through transdisciplinary fields of expertise (e.g. genomics, data bases, outreach, economics) to evaluate Blue Biotechnologies for their economic impact as a growing field, and promote:

(i) the concept of industry-academia partnerships as a win-win collaboration system; (ii) education through training the next generation of marine biotechnologists.

Create, improve, share or implement dedicated regulatory frameworks and policies on the use and exploitation of Mediterranean Sea bio-resources and/or biomasses for biotechnological purposes, and to share such common policies and practices among all the actors of blue-biotech in the Mediterranean area.

Strategic Action/1	**Panoramed Innovation Project on Blue Bioeconomy towards a strategic Alliance for Blue Bioeconomy in the Mediterranean**
Indicative starting time	2020
Suggested timeframe	tt
Proposed funding programmes and instrument	Interreg-MED, Panoramed Call for Strategic Project
Tentative budget	€€

Promotional Action/1	**Thematic conference on Mediterranean Blue Biotech**
Indicative starting time	December 2020 (within the BlueMed CSA multi-thematic Conference)
Proposed instrument	Joint BlueMed CSA and Ocean4Biotech COST Action operational thematic conference, BioBased Industries Joint Undertaking (BBI JU)
Tentative budget	€

Promotional Action/1	**Training course on Blue Biotechnologies and Blue Bio-economy aiming at the creation of blue careers**
Indicative starting time	January 2021
Proposed instrument	Call for opportunities, e.g. Bluebio COFUND additional activities, BlueMed CSA, DG-MARE/ EASME Blue skills call
Tentative budget	€

(PRIORITY 9)

PROMOTE THE ROLE OF MARINE RENEWABLE ENERGIES (MRE) IN THE ENERGY TRANSITION PHASE

Increase the competitiveness of MREs with respect to other consolidated forms of renewable energy. Strengthen research efforts to tackle remaining technological gaps and to further exploit the potential of sea and wind. Analyse potential co-activities of MREs for designing integrated multi-purpose platforms that can serve both energy and other maritime sectors. Define and launch awareness-raising actions among industries, research sector and civil society to increase public understanding and facilitate the acceptance of MRE projects. Encourage governments to provide regulatory frameworks and clearly evaluate available marine renewable resources to support the development of MREs. Strengthen capacity building and the development of specialised skills to increase the fraction of installed MRE power plants.

Develop large demonstration projects to sustain commercial MREs development, including Floating Offshore Wind Turbine which is particularly relevant in the Mediterranean

Develop technology design tools for MRE: impact of biofouling and corrosion on components, behavior of structures/components in fatigue, innovative monitoring strategies, anchoring.

Tool development farm architecture and integration with electric networks and energy storage (Hydrogen...).

Study and improve the acceptability of MRE projects through an enhanced knowledge of their environmental interactions and a thorough multidisciplinary evaluation including socio-economic dimension.

Strategic Action/1	**Focus on the interactions of MREs with marine ecosystems and socio-ecosystems studies:** identification of the physical-biological coupling in the modifications induced by the MRE projects, instrumentation adapted to the monitoring, modelling the reef effect locally and globally and the interactions with avifauna.
Indicative starting time	2022
Suggested timeframe	tt
Proposed funding programmes and instrument	Horizon Europe, Interreg MED
Tentative budget	€€€

Strategic Action/2	R&D on multi-purpose platform combining green energies production and storage (hydrogen, etc.) with fishing and aquaculture, tourism, offshore research, marine life and environmental monitoring, maritime surveillance and pollution monitoring. **Modelling of economic impacts and interactions with other maritime uses and activities.**
Indicative starting time	2022
Suggested timeframe	ttt

Proposed funding programmes and instrument	Horizon Europe, Interreg MED
Tentative budget	€€€

Promotional Action/1	**Competence and Training Centre on Marine Renewable Energies**
Indicative starting time	starting 2021
Proposed instrument	Co-fund centre, promotion of this activity and relevant lobbying actions to be led by co-champion countries. DG-MARE/EASME Blue skills call, Erasmus +.
Tentative budget	€€€

Promotional Action/2	**Mediterranean Conference on Marine Renewable Energies**
Indicative starting time	Annual meeting, starting April 2021
Proposed instrument	Thematic conference sponsored by private industries and cities/local communities active in the field, support from relevant maritime clusters. Relevant lobbying actions to be led by co-champion countries.
Tentative budget	€ (for one meeting)

(PRIORITY 10)

OPEN DATA, OPEN SCIENCE, OPEN INNOVATION

Support knowledge sharing about health, evolution and functioning of Mediterranean basin's marine and coastal ecosystems with researchers, public policy makers and private sector to ensure the preservation of the basin's resources, develop sustainable activities, control pressures and anticipate the responses to global change. Strengthen the open access to high-quality data both to create a common understanding of Mediterranean challenges and to support smart and innovative data applications in marine-related economic activities.

The goal calls to support in parallel the development of a Mediterranean observing system of systems to enable the collection of high-quality data on marine and coastal environments (see Priority 4).

Promote and regulate transparency with regard to the results of research conducted or 'owned' by public/private companies and institutions, and public authorities, and take action to make them more readily available to the society.

Create a ''Blue Cloud" for Marine data accumulation (e.g. oceanographic, bioptical, genomics, -omics, and -metaomics) at Mediterranean level. Promote standardization and interoperability of technological solutions with specific reference to the maritime field with innovate "guides to the use" explaining what diverse sets of data are available, standardized sampling and analyses methodologies. Linking all "guides" to their corresponding Blue Cloud database.

Implement ICT, Big Data Analysis and Cloud Services Platforms to take *advantage of multi-sectoral data management and sharing opportunities for the Mediterranean.*

Integrate the Information Communication Technologies-ICT (Big Data, Internet of Things-connected objects, Deep Learning, etc.) in the development of observing systems to deliver high-tech products and services for traditional and emerging sectors such as fisheries, aquaculture, MREs, transports (e.g. Motorways of the Sea, Locations of Ports, navigation conditions), etc.

Strategic Action/1	**Blue Economy Mediterranean Observatory MedBlueNet** (integrated data service connected with Emodnet and Copernicus)
Indicative starting time	2021
Suggested timeframe	ttt
Proposed funding programmes and instrument	Horizon Europe, alignment and coordination with relevant initiatives and bodies (Emodnet, Copernicus, Eurostat, Medstat, EOSC, ESFRI)
Tentative budget	€€€

Strategic Action/2	**Creation of a Mediterranean European Open Innovation Network in blue technologies**
Indicative starting time	2021
Suggested timeframe	ttt
Proposed funding programmes and instrument	DG Growth, Interreg, ENPI, UfM
Tentative budget	€€

Promotional Action/1	**Mediterranean Blue Data Conference towards an open data approach to share best practices within/ among countries**
Indicative starting time	Annual meeting, starting March 2021
Proposed instrument	Copernicus, Horizon Europe, UNEP/MAP, UfM, Eurostat
Tentative budget	€ (for one meeting)

Promotional Action/2	**Blue Mediterranean Open Access Journal**
Indicative starting time	Bi-annual publication, starting 2021
Proposed instrument	Co-fund open access journal with willing partners/ countries. Promotion of this activity and relevant lobbying actions led by supporting co-champion countries. Engage the support of the EC and other relevant bodies/initiatives/national funds.
Tentative budget	€€

(PRIORITY 11)

BUILDING CAPACITY, BLUE SKILLS AND BLUE PROFESSIONALS

The human element is a crucial factor to responsibly unlock the Blue Growth potential of the Mediterranean Sea. Furthermore, human capital constitutes an overarching condition to achieve the region's economic, knowledge and technology priorities, in terms of research and innovation. There is a need to close the skills gap between the education on offer and the labour market by increasing cooperation between academia and industry and increasing the attractiveness of the blue sectors. In addition, the sustainability of blue jobs is related to the degree of ocean literacy. The goal shall be reached in the framework of international cooperation and through coordinated transboundary networks.

Develop a network of training research centres to train new professionals on sampling, recording and working on marine environmental, engineering and scientific level.

Align high-education curricula, design joint MSc, PhD programs, short-term scientific exchanges, to prepare the next generation of blue-economy scientists, technologist and entrepreneurs. Establishing a coordinated network of marine institutes, universities, stations, observatories and public and private companies.

Develop an electronic platform for e-mentoring of young start-uppers in blue growth acting like a virtual incubator to create a lively ecosystem of entrepreneurs of innovation.

Exploit new digital technologies for training purposes, including for operators, including Virtual or Augmented Reality.

Thematic & targeted actions encompass:

For managers. Co-develop training courses and knowledge exchange activities to improve the level of institutional, technical and human capacities at national level for the implementation of Maritime Spatial Planning and Maritime Governance.

For citizens. Promote capacity building to increase resilience to natural disasters of Mediterranean countries, including knowledge of historical events such as earthquakes, coastal slides, tsunami and coastal flooding.

For operators. Improve Mediterranean training centres and capabilities to carry out projects for safety in oil & gas and MREs offshore operations, including knowledge of environmental risks and new technologies.

For researchers. Train a new generation of marine technicians/scientists to conduct research on the protection of the marine cultural heritage.

Strategic Action/1	**Cross-discipline Programme on the human element @ Sea** to enhance the education and curricula of human resources via brain circulation
Indicative starting time	2022
Suggested timeframe	ttt

Proposed funding programmes and instrument	Joint effort by: EC, UfM, UNIMED, EMUNI, SEA-EU, IOC/UNESCO, in the framework of the UN-Decade of Ocean Science for Sustainable Development with the support of tailored platforms, e.g. BlueGeneration Project Job Portal
Tentative budget	€€€

Promotional Action/1	**BlueMed & IOC/UNESCO joint meeting on marine literacy**
Indicative starting time	2022
Proposed instrument	BlueMed CSA task and IOC/UNESCO Programme
Tentative budget	€

Promotional Action/2	**Launch a BlueMed Hackathon focused on skills' innovation**
Indicative starting time	March 2021
Proposed instrument	Joint BlueMed & DG-MARE event (e.g. back-to-back BlueInvest Med)
Tentative budget	€€

Promotional Action/3	**SEALINES BlueMed Start-up Action training series for young workers**
Indicative starting time	2021
Proposed instrument	EASME DG-MARE/Blue Skills Call & BlueGrowth Summer School
Tentative budget	€€

(PRIORITY 12)

STRENGTHEN SYNERGIES AMONG SCIENCE, INDUSTRY, POLICY MAKERS, AND SOCIETY

Achieving strong synergies between all Blue Economy Stakeholders in the Mediterranean is an important aspect of a sustainable blue economy in particular when considering the geo-political complexity of the Area. Stronger synergies will enhance knowledge transfer among knowledge sectors. Scientific outcomes would be incorporated by other sectors through actions' co-design, thus impacting in terms of economic development, jobs, and well-being of citizens. Continuous interaction among relevant stakeholders shall be enhanced and guaranteed, also in compliance with relevant Sustainable Development Goal.

Develop participatory approaches to take decisions by improving the dialogue with civil society, considering its importance (e.g. awareness, inputs, transparency, participation, consensus and support) and its specific technicalities (e.g. engagement at local level, language, ambassadors).

Support Maritime Spatial Planning and Integrated Coastal Zone Management through research on multi-level governance and management of multi-stakeholder processes, improving the dialogue with civil society, in a science to policy approach.

Take full consideration of long-lasting effects of historical human interventions on coastal systems including river diversions, damming, digging of canals, and construction of hard structures for coastal defense, landfills with toxic materials and spread of pollution through time.

Provide scenarios of environmental change, investigating the impacts on biodiversity and ecosystems goods and services, of alternative socioeconomic development pathways, policy options and blue growth scenarios.

Enhance awareness at both civil and political levels of the degradation of the marine environment, which presents crucial security challenges in terms of disruption of national economies, displacement of people, degeneration of national identities and loss of lives.

Include citizens' science in monitoring and sampling strategies while increasing awareness on the biases intrinsically related to citizen's science, which is hindered for example beyond the visible horizon or in dark deep water.

Coordinated approach addressing coastal management and conservation of anthropogenic villages/ecosystems involving local communities.

Strategic Action/1	**The BlueMed citizens' science action** (*linking with P4-Strategic Action/2*)
Indicative starting time	2021
Suggested timeframe	t
Proposed funding programmes and instrument	Countries/local administration and UfM labelled project

Tentative budget	€

Strategic Action/2	**The BlueMed Platforms' Constellation (multi-level cross-stakeholders' hubs)**
Indicative starting time	2023
Suggested timeframe	tt
Proposed funding programmes and instrument	European Partnership – A climate neutral, sustainable and productive Blue Economy/Expert Groups + ESIF/S3 + ENI CBC-MED Capitalization
Tentative budget	€€

Promotional Action/1	**Showcasing the role of BlueMed Young Communication Ambassadors**
Indicative starting time	September 2020
Proposed instrument	BlueMed CSA workshop at ESOF Conference
Tentative budget	€

Promotional Action/2	**Blue Cafes** (*targeting citizens, linking with P11-Promotional Action/1*)
Indicative starting time	September 2020/May 2021
Proposed instrument	Joint BlueMed countries and relevant associations task, e.g. in the framework of the European Researchers' Night or the initiative *European Maritime Day in your country*
Tentative budget	€

(PRIORITY 13)

FROM TRADITIONAL MARITIME ECONOMY TO BLUE GROWTH ACTIVITIES

Clusters can facilitate the exchange of knowledge, communication and best-practices between stakeholders and potentially boost economic growth and rapid technological development in the Mediterranean region, enabling also the exchange of good practices between the two shores of the Mediterranean Sea and among different stakeholders. The availability of data is a major ingredient for the transition towards smart and responsible blue growth; innovative business approaches should be envisaged including circular economy to adapt to the blue bioeconomy and zero-waste economy.

Promote public-private partnerships to overcome the obstacles to the flourishing of new activities e.g. in emerging markets, such as: offshore wind, mineral resources in the high seas, biotechnologies, coastal ecological engineering, satellite data services, etc. through federation of actors of research/industry, increasing visibility, international representation.

Develop economic studies to identify the specialization of different areas and regional clusters and identify the most productive and sustainable activities.

Establish innovative methodologies to assess the impacts of different programmes and actions on the evolution of maritime sectors and economy.

Favour incubators and connect startups, investors, accelerators, entrepreneurs, corporate networks, universities for increasing innovative blue ecosystems.

Strategic Action/1	**Mediterranean Forum on Blue Innovation**
Indicative starting time	October 2021 (to meet the launch of Horizon Europe)
Suggested timeframe	ttt
Proposed funding programmes and instrument	Integrated EASME + SEMED + Countries actions.
Tentative budget	€€€

Strategic Action/2	**Exchange of staff' Pilot Programme between key and less developed marine and maritime players**
Indicative starting time	2022
Suggested timeframe	t (exchanges should be minimum a two-weeks period)
Proposed funding programmes and instrument	Alignment of Secondment Programmes at country level + MCSA/RISE + Private foundations´ support.
Tentative budget	€€

Promotional Action/1	**Match-making event to exploit the opportunities of the *BlueInvest* Platform** bringing together innovators to sit and talk on investment opportunities with innovators, the financial community and stakeholders of traditional maritime economy to boost the economic potential of the Mediterranean Sea while protecting its marine resources.
Indicative starting time	March 2021
Proposed instrument	BlueMed networking event with a "speed-dating" format, with the collaboration of the BlueMed Operational Network of Research Funders and the BlueInvest Platform
Tentative budget	€€

Promotional Action/2	**Test the transition on adaptation to climate change and sea-level rise in coastal areas, and long-term strategy re-design of coastal infrastructures** (*linking with P12 on Strengthen synergies*)
Indicative starting time	December 2020 (within the BlueMed CSA multi-thematic Conference)
Proposed instrument	Academy-Industry-Policy makers joint brainstorming event
Tentative budget	€

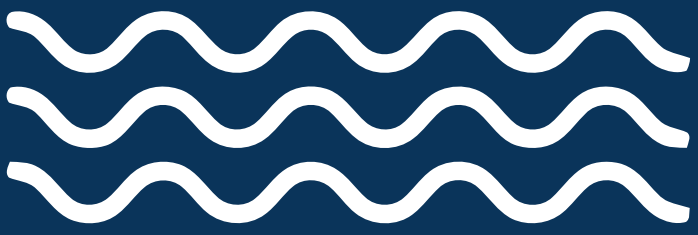
CATALOGUE OF INSTRUMENTS

1
Research & Innovation joint programmes

2
Connectivity/Alignment/ Supporting actions

3
Infrastructures

4
Capacity Building



This part of the Implementation Plan reviews the instruments that could be used to concretely work on the 13 priorities and reach the underlying goals. Given the wide scope of BlueMed, implementing the actions identified as priorities requires the use of a range of instruments. The choice of the most suitable tools for an action will have to take into account all relevant actors, the level of the resources required and the time needed to achieve the objectives set.

Some frameworks and financing programmes that can be used to support research and innovation for the blue economy in the Mediterranean already exist or are planned for the next future. Indeed, some of them have been proposed as possible instruments among others in addressing the planned Joint Strategic Actions presented in the previous section. There are, however, still gaps, and the implementation of certain strategic actions will certainly require new mechanisms to be put in place.

The work carried out in BlueMed[26] has shown that many institutional and non-institutional actors include in their strategies, whose scope can be international, national or regional, elements aiming at the development of a sustainable blue economy. While this can be seen as an opportunity, the search for efficiency requires **ensuring the proper alignment of the different actions and the coordination of the different stakeholders**.

The catalogue below lists potential instruments that could be used for transnational and alignment actions and assesses their interest for implementing BlueMed's priorities. The typology of actions is based on the work carried out by the CSA Oceans[27] in support of the Joint Programming Initiative (JPI) Oceans.

One of the characteristics of the Mediterranean area is the significant gaps in economic development and resources allocated to R&I between the Northern and Southern shores. Northern countries Members of the European Union benefit from the numerous tools and significant resources put in place by the European Commission to support research, innovation and economic

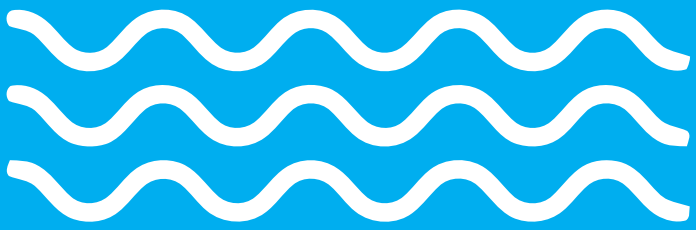
26 BlueMed CSA, Deliverable 2.6 - Marine and Maritime RTDI Strategies, available at: http://www.blue-med-initiative.eu/wp-content/uploads/2018/10/BLUEMED-CSA_D2.6-RI-Strategies_final.pdf
27 CSA Oceans, Deliverable 2.4 - Proposal for procedures for design and management of joint actions

development. Some of the cooperation instruments are accessible to non-European countries through targeted association agreements (e.g. Tunisia's association to Horizon 2020). However, the resources mobilised in this respect remain much lower than those committed in EU Member States.

The following list provides an overview of the main instruments available or that are most likely to be available in the time-frame relevant for the implementation of BlueMed priorities. While based on the analysis of present landscape, it acknowledges the transition phase between the two major EU 7-years R&I framework programmes as well as the forthcoming implementation phase of the UN-Decade of Ocean Science for Sustainable Development. This can bring new tools opening innovative opportunities while overcoming some actual ones.

1 Research & Innovation joint programmes

These are instruments with the capacity to launch calls for projects and to fund transnational collaborative research and innovation actions.



INSTRUMENT

Horizon 2020[28]/Horizon Europe[29], EU Research and Innovation programmes

For EU Member States and associated countries, these programmes are major and powerful tools for fostering R&I and developing transnational cooperation through collaborative projects involving public and private actors. Horizon 2020 (2014-2020) funds projects according to three priorities: Excellent science, Societal challenges and Industrial leadership.

The next programme Horizon Europe (2021-2027) will be based on 3 pillars: Excellent science, Global Challenges and European Industrial Competitiveness and Innovative Europe. Horizon Europe targets impacts that support the Political guidelines in the EC, especially a EU Green Deal and an Economy that works for People. Next to tools similar to those of Horizon 2020 (e.g. collaborative projects funded under 6 Clusters/Societal challenges), Horizon Europe will include new instruments currently under development: missions and partnerships.

Five mission areas have been identified. Among them, the mission "Healthy oceans, seas, coastal and inland waters" will address issues linked to BlueMed priorities.

Partnerships will be reserved for actions that are not covered by the other parts of Horizon Europe. Three types of partnerships are proposed:

- Co-programmed European Partnerships between the Commission and private and/or public partners, based on memoranda of understanding and/or contractual arrangements;

28 https://ec.europa.eu/programmes/horizon2020/en
29 https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en

- Co-funded European Partnerships, involving EU countries, with research funders and other public authorities at the core of the consortium. This type of partnership is similar to ERA-NETs Co-fund;

- Institutionalised European Partnerships where the EU participates in research and innovation funding programmes that are undertaken by a number of EU countries based on articles 185 or 187 of the Treaty on the Functioning of the European Union. Such long lasting partnership will be appropriate for the support of JPIs (see below) by the EC.

As part of Horizon 2020, the European Institute of Innovation (EIT) was created to increase Europe's ability to innovate by nurturing entrepreneurial talent and supporting new ideas. Through Knowledge and Innovation Communities (KICs), EIT supports the development of dynamic, long-term European partnerships among leading companies, research labs and higher education. For 2021-2027, a revised EIT Regulation and a Commission Decision on the Strategic Innovation Agenda for 2021-2027 will be proposed to the European Parliament and the Council.

Under the Environmental and Climate policies of the EU, the **LIFE programme** is a funding instrument which aims mainly at:

- Helping move towards a resource-efficient, low carbon and climate resilient economy, improve the quality of the environment and reverse biodiversity loss;

- Support better environmental and climate governance at all levels

EXAMPLE 1

ERA-NET COFUND[30]

Under Horizon 2020, ERA-NET (European Research Area Network) is a funding instrument designed to support public-public partnerships in the establishment of networking structures and coordination of joint activities. It focuses on transnational research and innovation and supports single joint calls mainly funded by the Member States partner of the ERA-NET. 27 ERA-NET proposals addressing each one thematic R&I area (e.g. Biodiversa: Consolidating the ERA on biodiversity and ecosystem services) have been selected in H2020. "This instrument has proven its capacity to significantly strengthen transnational cooperation by establishing lasting cooperation among countries and creating a critical mass of resources to tackle EU societal challenges. It has contributed to the coordination of national programmes and to a lesser extent to the alignment of national policies. The instrument has facilitated widening participation of lower performing countries"[31].

EIT Climate KIC is a knowledge innovation community established and funded by the European Institute of Innovation and Technology (EIT). It identify and support innovation that helps society mitigate and adapt to climate change by:

- Convening networks of expertise that bring together partners from business, academia, and the public and non-profit sectors
- identifying, sourcing and placing public and private funds that stimulate innovation
- runing a range of inspirational education programmes for students, post graduates and professionals.
- Catalysing innovation through the support of initiatives like ideas platform, incubator programmes, accelerators

30 https://ec.europa.eu/programmes/horizon2020/en/h2020-section/era-net
31 European Commission, Analysis of ERA-NET Cofund actions under Horizon 2020

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

The framework laid down for Horizon Europe and the priorities identified by the European Commission for the next years in the area of environment and economy suggest that some of BlueMed's priorities can be supported by future European funding programmes. A challenge will be to **reduce the gaps between Northern and Southern Mediterranean countries**. In this respect, the opportunity to create a dedicated partnership to associate more closely the countries on the southern and eastern shores of the Mediterranean should be envisaged. Such partnership would require a strong support of the government of participating countries from both shores and can build on relevant projects like the ERANET-MED.

INSTRUMENT

Joint Programming Initiatives (JPIs)[32]

The aim of the joint programming process is to pool national research efforts in order to make better use of Europe's research and development resources and tackle common European challenges more effectively. This is based on the observation that even if European national research programmes are at a high level, they cannot tackle some of today's major societal challenges alone.

Joint Programming Initiatives are developed in a structured and strategic process where EU countries agree on a voluntary basis on common visions and Strategic Research Agendas (SRA) to address major societal challenges.

EXAMPLE 1

JPI OCEANS[33]

JPI Oceans is an intergovernmental platform that strives to increase the impact of national investments in marine and maritime research and innovation. It contributes to aligning national priorities and implement joint actions including the launch of joint calls for transnational research and innovation projects and sharing of research infrastructures. JPI Oceans has 20 member countries including two non-Member States of the EU (Norway and Turkey).

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

The study of a JPI like partnership between Mediterranean countries focused on Blue Economy related Research and Innovation and in coordination with JPI Oceans could be an opportunity to enhance and align efforts to implement BlueMed priorities actions.

32 https://ec.europa.eu/programmes/horizon2020/en/h2020-section/joint-programming-initiatives
33 www.jpi-oceans.eu

INSTRUMENT

Article 185 initiatives

Article 185 of the Treaty on the Functioning of the European Union (TFEU) allows the EU to participate in research programmes jointly undertaken by several EU countries with the possibility to associate non-European countries. The criteria to identify potential article 185 initiatives are set out in the Horizon 2020 programme:

- a clear definition of the objective to be pursued;
- a clear and firm commitment from the participating Member States;
- indicative financial commitments of the participating countries, including prior commitments to align national and/or regional investments for transnational research and innovation and, where appropriate, to pool resources;
- its relevance to the EU policy objectives and the added value of the action at EU level;
- the critical mass, with regard to the size and the number of programmes involved, the similarity or complementarity of activities and the share of relevant research they cover;
- a well-prepared joint programme and priorities;
- a well-organised implementation structure.

EXAMPLE 1

PRIMA[34]

(Partnership for Research and Innovation in the Mediterranean Area, 2018–2028) in an ongoing Art 185 aiming at developing innovative and sustainable solutions in agriculture, food production and water provision, encouraging application by communities, enterprises and citizens.

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

Covering the areas of agriculture and freshwater resources in the Mediterranean, PRIMA does not cover marine issues. This framework can only marginally be used to implement the priorities of BlueMed. In this way, the two initiatives can facilitate the alignment of regional priorities with national and international ones.

34 http://prima-med.org/

INSTRUMENT

INTERREG[35]

European Territorial Cooperation (ETC), better known as Interreg, is one of the two goals of cohesion policy and provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. The overarching objective of European Territorial Cooperation (ETC) is to promote a harmonious economic, social and territorial development of the Union as a whole. Interreg is built around three strands of cooperation: cross-border (Interreg A), transnational (Interreg B) and interregional (Interreg C). The on-going programme is INTERREG V (2014-2020). The advantage of Interreg programmes is to involve the (administrative) regions. INTERREG primarily concerns the regions of the EU Member States. Some programmes are, however, marginally open to partners from countries neighbouring the EU.

EXAMPLE 1

INTERREG MED PROGRAMME 2014-2020[36]

The Interreg MED Programme 2014-2020 is the transnational European Cooperation Programme for the Mediterranean area. It gathers 13 European countries from the Northern shore of the Mediterranean. The main objective of the Interreg MED Programme is to promote sustainable growth in the Mediterranean area by fostering innovative concepts and practices and a reasonable use of resources. The total budget for the 2014-2020 period amounts to 265 Mio €, composed of 224 Mio € ERDF (European Regional Development Fund), 9 Mio IPA (Instrument of Pre-Accession) and national co-funding.

35 https://ec.europa.eu/regional_policy/fr/policy/cooperation/european-territorial/
36https://interreg-med.eu

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

Although not targeting research and innovation, INTERREG programmes finance transnational innovative projects in support of economic and territorial development. They could therefore be appropriate for the funding of some BlueMed actions, including structuring.

INSTRUMENT

European and Maritime Fisheries Fund[37]

The EMFF is the fund for the EU's maritime and fisheries policies for 2014-2020. It is one of the five European Structural and Investment Funds (ESIF) which seek to promote a growth and job based recovery in Europe. As an instrument for supporting the European Common Fishery Policy, EMFF:

- helps fishermen in the transition to sustainable fishing
- supports coastal communities in diversifying their economies
- finances projects that create new jobs and improve quality of life along European coasts
- supports sustainable aquaculture developments

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

For European MSs, the EMFF is a privileged tool for accompanying the fishery and aquaculture sectors toward sustainable practices and then support the implementation of the **BlueMed priority goal "Support solutions for sustainable food production and consumption"**.

37 https://ec.europa.eu/fisheries/cfp/emff_en

INSTRUMENT

European Neighbourhood Policy[38]

The European Neighbourhood Policy (ENP) governs the EU's relations with 16 of the EU's closest Eastern and Southern Neighbours. To the South: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine*, Syria and Tunisia and to the East: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. Stabilisation of the region, in political, economic, and security related terms, are at the heart of the ENP. Joint priorities for cooperation focused on good governance, human rights, and security. This includes also economic development for stabilisation.

EXAMPLE 1

ENI CBC "MEDITERRANEAN SEA BASIN PROGRAMME"[39]

The 2014-2020 ENI CBC "Mediterranean Sea Basin Programme" is the largest Cross-Border Cooperation (CBC) initiative implemented by the EU under the European Neighbourhood Instrument (ENI). The Programme brings together the coastal territories of 14 countries in view of fostering fair, equitable development on both sides of the Mediterranean. Through calls for proposals, ENI CBC Med finances cooperation projects for a more competitive, innovative, inclusive and sustainable Mediterranean area.

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

Although ENP only deals marginally with Research and Innovation, this instrument could be used to support actions more related to blue economy, provided the promotion of the implementation plan towards Managing Authorities.

38 https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/european-neighbourhood-policy_en
39 www.enpicbcmed.eu

INSTRUMENT

Private foundations/NGOs

Created within large private companies or as NGOs, foundations are committed – sometimes with very significant resources – to supporting well-defined actions in line with their missions and which may involve public or private actors. Many foundations have stated objectives of supporting research and innovation, environmental preservation, sustainable development, capacity building and education.

EXAMPLE 1
ONE OCEAN FOUNDATION[40]

One Ocean Foundation develops specific projects that help safeguard marine life. Recently it has launched a "Business for Ocean Sustainability" research project. Produced with the support of SDA Bocconi, McKinsey & Company and CSIC, the project – focusing for this first edition on the Mediterranean Sea, but with cross-border potential – examines the current relationship between ocean sustainability and the economy from a new perspective. More than 220 international companies, start-ups, associations and NGOs are involved, spanning 13 industry sectors.

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

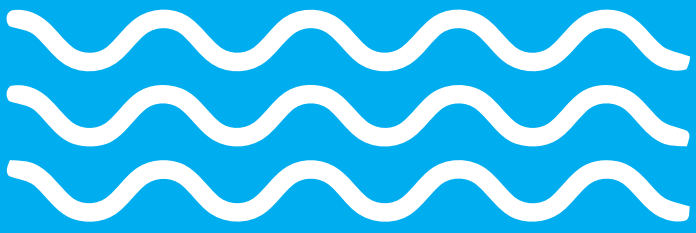
This way of financing R&I actions proposed by BlueMed could be further explored by **identifying foundations whose missions fall within the scope of the BlueMed Initiative** and engage them in the funders' network.

40 https://www.1ocean.org/

2

Connectivity/ Alignment/ Supporting actions

Different types of instruments that aim at fostering alignment, information exchange, community building and coordination among a broad diversity of stakeholders.



INSTRUMENT

Networking tools

As a general principle, networking tools are understood as networks where stakeholders can share information and coordinate their actions. Such tools intend to contribute to the development of an interactive community of a specific topic/ area and ultimately to promote dialogue and opportunities for operational collaboration among stakeholders. There are a multitude of networking tools linked to blue economy in the Mediterranean.

Big events and exhibitions/fairs/conferences (e.g. Ecomondo, Euromaritime) are also powerful tools for sharing new ideas and promoting sustainable innovations. To develop the investment in the private sector and supporting start-ups and SMEs, programmes, platforms and events which organize meetings between entrepreneurs, investors, researchers, corporates and innovation stakeholders are essential (e.g. BlueInvest[41], COST[42]).

EXAMPLE 1

THE MEDITERRANEAN BLUE ECONOMY STAKEHOLDER PLATFORM (MEDBESP)[43]

The MedBESP – former Virtual Knowledge Center – is a regional networking platform for sharing knowledge and for supporting the development of the blue economy. MedBESP is an operational tool for a service goal developed by the European Commission – DG Maritime Affairs and Fisheries and currently managed by the Union for the Mediterranean (UfM). The ultimate objective is to contribute to the development of an interactive Blue Economy Community.

41 https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1451
42 https://www.cost.eu/
43 http://www.medblueconomyplatform.org/vkc

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

In the Mediterranean, there are various institutional organisations of this nature, in diverse areas (UNEP/MAP, GFCM, CIESM, CRPM...), representing as much networking capacities on which to build on to promote priority sharing and operational efficiency for the BlueMed Implementation Plan. Networking opportunities and tools also exist at the non-institutional level (e.g. MedPAN on Marine Protected Areas).

INSTRUMENT

Sea basin regional strategies[44]

In accordance with the European maritime policy, macro-regional sea basin initiatives are being implemented in the seas bordering Europe. They promote growth and development strategies that exploit the strengths and address the weaknesses of each large sea region. These initiatives do not launch their own calls for projects, but rather act as mechanisms for assisting the setting up of cooperative projects in the areas identified as priorities. They involve EU Member States but also neighbouring countries. The Mediterranean is concerned by EUSAIR[45] for the Adriatic-Ionian region and WestMED[46] for the Western Mediterranean.

EXAMPLE 1
EUSAIR'S 4 PILLARS

- Blue Growth (Blue technologies, Fisheries and aquaculture, Maritime and marine governance and services)
- Connecting the Region (transports maritimes et terrestres, réseaux d'énergie)
- Environmental Quality (the marine environment and transnational terrestrial habitats and biodiversity)
- Sustainable Tourism (Diversified tourism offer, Sustainable and responsible tourism management)

44 https://ec.europa.eu/maritimeaffairs/policy/sea_basins_en
45 www.adriatic-ionian.eu
46 www.WestMED-initiative.eu

EXAMPLE 2

WESTMED'S GOALS

- Safer and more secure maritime space
- Resilient and smart blue economy
- Better governance of the sea

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

These sea basin strategies are focused on the coordination of marine policies among countries based on national hubs. Both have priorities related to the blue economy innovation and sustainable development. Ensuring a good coordination of BlueMed with these key players is crucial for effective communication and the promotion of coherent priorities.

INSTRUMENT

Smart Specialisation Strategy[47]

The European Commission's Cohesion Policy aims to reduce differences and ensure a balanced development between regions, and to ensure growth across Europe. Structural Funds are among its main tools. Its efficient use and management has been a crucial factor for many regions in Europe to overcome the economic crisis and strengthen the recovery in a sustainable way. For this reason, over the programming period 2014-2020, developing a Research and Innovation strategy for Smart Specialisation Strategy (RIS3) has been a prerequisite in order to receive funding from the European Regional Development Fund (ERDF). The Smart Specialisation Platform (S3P) assists Member States and regions to develop, implement and review their RIS3 Smart Specialisation Strategies. These include a focus on identifying niche areas of competitive strength, solving major societal challenges, bringing in a demand-driven dimension, fostering innovation partnerships emphasising greater coordination between different societal stakeholders and aligning resources and strategies between private and public actors from different governance levels.

EXAMPLE 1
MARITIME CLUSTERS

Maritime clusters are effective tools to support local stakeholders active in the Blue Economy to identify areas for further development and ensure sustainable growth and jobs. They do so by supporting innovative products and services, internationalisation of micro, small and medium enterprises, dissemination of new knowledge and skills and ultimately integration of sectoral policies at local, European and national levels.

47 https://ec.europa.eu/jrc/en/research-topic/smart-specialisation

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

Maritime Clusters have therefore been growingly acknowledged as essential booster for innovation and diversification of the Blue Economy and therefore they should play a major role in the development of blue companies and start-ups. Addressing Regions to update their Smart Specialization Strategies according to the BlueMed Implementation Plan, where relevant, is a concrete alignment action to be promoted.

INSTRUMENT

Foresight

Foresight studies shed light on the future. By analysing trends and identifying risks with the support of a broad expertise, scenarios for the next decades can be designed to elaborate policies, to guide investments and to build a shared view of possible trajectories for the society.

EXAMPLE 1
MED 2050[48], BUILDING THE MEDITERRANEAN FUTURE TOGETHER

In 2017, Plan Bleu (a Regional Activity Center of UNEP/MAP), was mandated by the Contracting Parties of the Barcelona Convention to launch a new foresight study on the environment and development in the Mediterranean by 2050. MED 2050 is an ambitious foresight exercise designed as an original science-policy interface, aiming at mobilizing decision makers and stakeholders from the North and South of the Mediterranean, going beyond geographical and institutional borders. Its goal: confront several possible visions of the Mediterranean future by 2050 (with an intermediate step at 2030) and co-construct solid and grounded transition paths towards common goals.

48 http://planbleu.org/fr/activites/med-2050-une-initiative-modulaire

EXAMPLE 2

MEDECC[49], SCIENTIFIC ASSESSMENT OF CLIMATE AND ENVIRONMENTAL CHANGES IMPACTS IN THE MEDITERRANEAN BASIN

The network of Mediterranean Experts on Climate and Environmental Change (MedECC) was created in 2015. MedECC is an independent international scientific expert network to support decision-makers and to educate/inform the general public on the basis of available scientific knowledge and on-going research. MedECC includes more than 600 scientists from 35 countries.

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

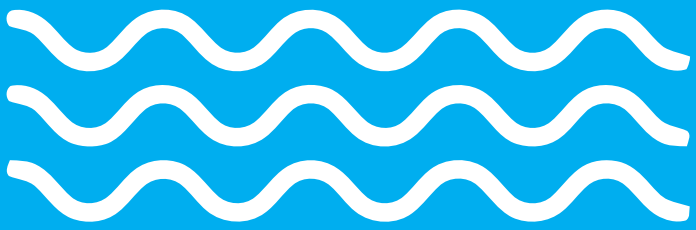
The priorities of the BlueMed SRIA and the actions proposed are the result of consultation with a wide range of stakeholders. The priorities that emerge can therefore feed into the prospective work undertaken on the region, in particular MED 2050. Conversely, the results of forward-looking reflections could usefully contribute to consolidating and updating the SRIA BlueMed.

49 www.medecc.org

3

Infrastructures

Establishing and maintaining appropriate infrastructures to support marine and environmental research and innovation is a challenge. At the European level, a significant effort was made in the various R&I Framework Programmes to develop these costly tools and promote trans-national access.



HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

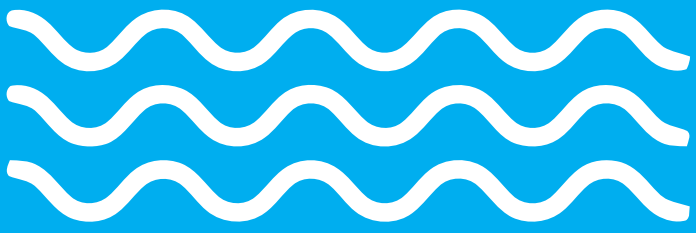
A number of existing infrastructures partly meet the needs identified in BlueMed. Taking into account the specificities of the Mediterranean region and above all the significant imbalance between the countries of the North and the South, important gaps remain to be filled. The priorities in this area are described in the BlueMed deliverable "BlueMed Research Infrastructures Roadmap"[50]. This roadmap aims at giving an overview of the actions to be carried out at the Mediterranean level to further support the scientific needs of research and innovation communities and it results from a long bottom-up process carried out throughout the whole CSA.

50 BlueMed CSA, Research Infrastructure Roadmap, Deliverable 3.4

4

Capacity building

In a knowledge-based economy, increasing people knowledge in relation with the surrounding environment not only brings to the achievement of new research results but also to the enhancement of innovation potential and creation of new jobs. International collaboration has been directly linked to high-quality science and innovation.



INSTRUMENT

Students and scientific staff exchange

International mobility has indeed a direct and beneficial impact especially for students and young scientists on career development, cultural maturity and language skills. In this regard, Europe has set up specific instruments (Marie Sk odowska-Curie Actions, ERASMUS+) that have proven to be successful.

EXAMPLE 1
ERASMUS+ (2014–2020)

Erasmus+[1] is the EU programme for education, training, youth and sport for the period 2014-2020. Erasmus+ funds academic and youth mobility and cooperation projects that involve partners from "Programme Countries" and "Partner Countries" throughout the world. Partner countries are located all over the world and include the countries of the Southern Mediterranean: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia.

INSTRUMENT

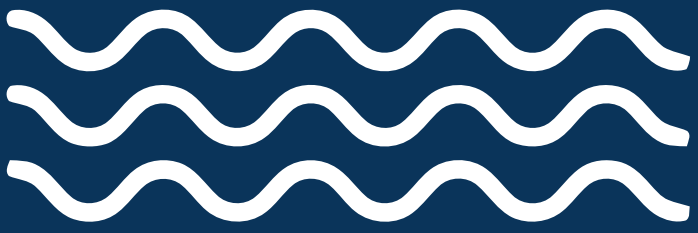
Vocational Education and Training (VET)

In almost all sectors of the Blue Economy the availability of appropriate vocational training courses is a necessary condition for the creations of jobs. Attention should therefore be paid to the provision of short training programmes that develop skills meeting the needs of employers and which are in agreement with the national/regional strategies and investments.

HOW CAN IT BE APPLIED TO BLUEMED CONTEXT

The **development of blue skills is crucial to provide the conditions for a dynamic blue economy**. Although certain initiatives targeting the Mediterranean region (e.g. Mediterranean Universities Union – UniMed, the Euro-Mediterranean University – EMUNI, the European University of the Seas – SEA-EU, the Advanced Master/Summer School in Sustainable Blue Growth), there is a need to strengthen these capacity building tools in order to reduce gaps among countries.

MONITORING AND KEY PERFORMANCE INDICATORS (KPIs)



What will BlueMed implement? The priority goals. How? Through a set of proposed instruments. These two aspects have been addressed in the previous sections. But how the actions undertaken will be monitored and their impact evaluated? A tool-suite addressing macro-descriptors/indicators covering processes and progress is presented in this section.

To cope with the ambition of the BlueMed Initiative it is essential to develop a methodology and suitable tools to monitor the implementation process itself against the evolution of the Blue Growth in the Mediterranean, in relation with the typologies of activities promoted in the Implementation Plan, which will produce different effects in different time scales:

- the **Strategic Joint Actions**: larger actions and initiatives occurring on a longer time scale. The preparation of their implementation will require more time and they are expected to induce wider changes in the Mediterranean region and will have consequent benefits for countries who will undertake them. However, the changes they will occur may be less tangible and harder to measure;

- the **Promotional Joint Actions**: specific and punctual actions, possibly implemented with the support of BlueMed CSA within the project's lifetime. There are expected to have visible and tangible results quite soon;

In the specific case of BlueMed, and according to the very dense available literature related to assessing the results and impacts of a project/an action, it seems relevant to use different mechanisms and therefore different types of indicators to measure the results and then the impacts of the planned joint actions presented in the Implementation Plan.

In the same way as Promotional Joint Actions and Strategic Joint Actions will occur on different time scales, two assessment mechanisms can occur at different stages: the **monitoring process (1)** and the **impact evaluation process (2)**.

1) **Monitoring** can be performed in a continuous manner that is developed periodically (for example one time per year) during the whole period of the implementation of BlueMed joint planned actions. Such monitoring activity will enable to follow the implementation of activities and assess whether they are conducted according to what is planned in the IP and if there is a need to adapt the initial postulate. It measures the interventions in itself and the methods used by the different stakeholders to act. Two types of indicators will be used for this monitoring process:

A] Indicators to monitor the implementation of Strategic planned Joint Actions: they will provide information on the way Strategic planned Joint Actions are undertaken and will measure the resources and efforts used for their implementation (including the different levels of cooperation).

Coordination/alignment/efficient dialogue with other relevant strategic research initiatives
Effective involvement of academics, industry, regulatory agencies and policy makers
Total number of calls successfully launched
Number and share of calls supported by EC Cofunds
Number and share of international calls (participation from countries beyond EU)
Amount and share of national funds allocated to calls
Total strategic joint actions launched
Number of strategic joint actions funded in the framework of Horizon Europe
Number of strategic joint actions/cooperation with Interreg projects
Number of strategic joint actions/cooperation launched with regional initiatives
Number of strategic joint actions/cooperation involving private sector
Total number of countries involved in the launch of strategic joint actions
Number of new political agreements on sharing R&I infrastructures among Med countries
Amount of joint budgets/projects for shared use of R&I infrastructures

Number of new established Open Access policies
Number of joint centres of excellence/training centres created in the framework of BlueMed
Number of impact/feasibility studies led before launching major activities/ initiatives
Number of new clusters for specific marine economic activities
Extent of member states indicating that BlueMed Initiative influenced the national focus of research programmes (upon the development of a shared survey)
Integration of BlueMed SRIA in national policies and strategies/programmes
Number of stakeholders using the BlueMed website
Identifiable coordination/alignment of strategic research programmes at different scales

Table 3
Examples of indicators to monitor the implementation of strategic planned joint actions

B] Indicators to monitor the implementation of Promotional Joint Actions: they will assess tangible and direct results produced by promotional actions presented in the document, as they are expected to be implemented quickly, possibly within the project's lifetime and will produce easily measurable and highly visible results. Monitoring the implementation of Promotional Joint Actions of the IP can start as soon as first promotional actions are launched.

Number of conferences/workshops organized in BlueMed framework
Number of events and meetings involving BlueMed community and civil society
Total number of people who attended conferences/workshops/events organized in BlueMed framework
Number of trainings taking place (including remote e-trainings) organized in the BlueMed framework

Number of people who attended the trainings organized in the framework of BlueMed
Number of events bringing together different blue economy stakeholders organized in the framework of BlueMed
Production of communication/dissemination materials (manuals, leaflets, brochures, websites, mobile applications)
Number of scaled up BlueMed Start-up Actions and other BlueMed related activities
Number of conferences/meetings where BlueMed Ambassadors intervened
Number of journalistic articles mentioning BlueMed activities
Launch of new pilot actions in the framework of BlueMed
Total amount of funding used for promotional joint activities

Table 4
Examples of indicators to monitor the implementation of Promotional Joint Actions

2) An **impact evaluation** refers to the assessment of a project or an initiative in the long term (after an initial period of 3 to 5 years). Indeed, the term "impact" covers a wide range of changes, positive or negative, occurring over a medium-to-long period of time, produced by an intervention, directly or indirectly, intended or unintended[51]. In the framework of BlueMed, all the planned Joint Actions presented in the IP (promotional and strategic) are expected to produce benefits for the Mediterranean Sea on a medium and long term.

Therefore, **indicators developed for BlueMed impact evaluation** will assess wide and long-term effects of both the Promotional and Strategic Joint Actions planned in relation with BlueMed SRIA priorities. The changes expected to be induced by the whole BlueMed Initiative may have consequences on the Mediterranean environment, ecosystems, economy, policy frameworks and society.

Examples of impacts: on EU and national policies, alignment of national research programmes, impact on environmental protection policies, collaboration between BlueMed community and other relevant major

51 (OECD) 2010, Glossary of Evaluation and Results Based Management (RBM) Terms, OECD (2010)

initiatives, impact on specific economic sectors, emergence of new cooperation networks, changes of mentalities regarding a specific topic, sustainable jobs' creation (thus employment)...
Exploiting available data and literature, these indicators have been tailor maiden for the BlueMed SRIA priorities presented in this document.

It is important to note that this category of indicators focuses on desirable wide change occurring in the Mediterranean, which can be not very much tangible at first sight. In addition, it seems important to add that all transformative changes occurring in the Mediterranean and maritime environment cannot automatically and directly be linked to BlueMed, but still, the implementation of proposed activities in the IP is expected to generate added value to the region and measurable impact. **The BlueMed impact evaluation's indicators are presented in the following table and more details on the way to use them are presented in the Annex 2.**

P1	Surface of coastal and marine protected areas in km2 Surface of marine mammal protected areas in km2 Numbre of patents in the field of climate change mitigation tchnology development related to plastics recycling Number of visitor on BLUEMED Pilot action website page dedicated to the Pilot Action on a Healthy Plastic-free Mediterranean Sea Concentration of key harmful contaminants measured in the relevant matrix (biota, sediment, seawater) Trens in the amount of litter washed ashore and/or deposited coastlines Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximun regulatory levels in commonly cosumed seafood Number of new regulations on pollution limitation/prevention/control
P2	Fisheries technology development Economic value of fisheries, as a percentage of GDP Fishery fleet, total number of vessels Fisheries capture of marine fishes in tonnes Economic value of aquaculture, as a percentage of GDP Aquaculture production, in tonnes Proportion of fish stock within safe biological limits Number of fish threatened species Number of fishers ans fish farmes
P3	Total number of patents in the field of climate change mitigation technology development Trend in abundance, temporal occurrence, and spatial distribution of non-indigenus species, particularly invasive, non-indigenous species, notably risk areas Number of new regulations in the field of climate change mitigation and adaptation
P4	Number of non-EU scientist who have access to European marine RIs

 P5	Employment in tourism Proportion of bathing sites awarded the Blue Flag out of total coastal bathing sites
 P6	Length of coastline subject to physical disturbance due to the influence of man-made structures
 P7	Number of patents in the field of climate change mitigation technologies related to maritime transportation Vessls´operational pollution, in million tones Annual mean of fuel consumption by ships of over 5000G Annual mean concentration of fine particulate matter of less than 2.5 microns of diameter (PM2.5) in coastal urban areas
 P8	Number of firms active in biotechnology
 P9	R&D public investments for renewable energy Number of national renewable energy incentives Share of fossil fuels in total primary energy sypply Total renewable capacity energy, in MW
 P10	Number of scientific publications in the field of marine science in open access
 P11	Share of population with tertiary education Number of universities delivering trainings in marine sciences Total number of Master degrees in marine sciences Total number of Master degrees in marine sciences Share of population holding a PhD marine sciences Total number of vocational trainings in links with technical blue skills development
 P12	Number of Blue Living Labs and other innovation ecosystems linking science and industry
 P13	[Not available at this stage]

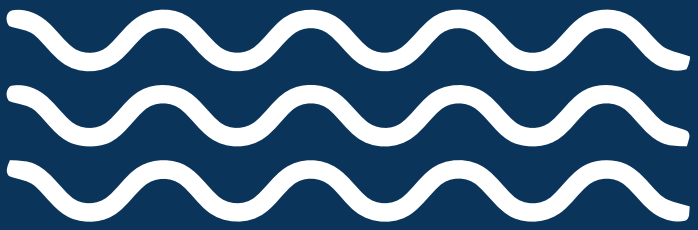
Table 5
Non-exclusive list of indicators proposed for impact evaluation of the 13 BlueMed Priorities

Leading such a monitoring and impact evaluation requires a certain amount of efforts and resources. In order to be as efficient as possible, to optimize the remaining time and limit additional financial and human resources related to this exercise, it is suggested that:

- Actions leaders/committers and main stakeholders who will implement Strategic Joint Actions could be directly in charge of the monitoring and impact evaluation exercise for the Strategic Joint Action(s) they will be supervising (indicators in the table 3 and indicators in the table 5).

- CSA members could be in charge of monitoring the implementation of Promotional Joint Actions (indicators in table 4) until the end of the CSA.

METHODOLOGY TO DEVELOP THE IMPLEMENTATION PLAN AND TO REACH THE 13 PRIORITIES FROM THE SRIA



BlueMed Initiative set-up and launch (2014-2017)

The present Implementation Plan is a distillation of a long process originated with political commitments initiated in 2014: **the BlueMed Initiative, set up in May 2014** in the framework of the European Strategy on Blue Growth, is a political initiative aiming at advancing a shared vision for a more healthy, productive, resilient, better known and valued Mediterranean Sea, promoting the citizens' social well-being and prosperity, now and for future generations, and boosting economic growth and jobs.

Nine European countries (Cyprus, Croatia, France, Greece, Italy, Malta, Portugal, Slovenia and Spain) and Romania, with the support of the European Commission, signed in **October 2015** the Venice declaration on Mediterranean Sea Cooperation, **launching a Strategic Research Marine and Maritime Research and Innovation Agenda for Blue Growth, the BlueMed SRIA**[52].

In **November 2015**, the **Union for the Mediterranean (UfM) endorsed the BlueMed agenda** with the Declaration on the Blue Economy, inviting non-EU countries to join the BlueMed Initiative.

A first important recognition of the collaborative work was the launch of a set of BlueMed dedicated calls for proposals under the EU-H2020 2016-2017 and DG-MARE Work Programmes (Blue Labs, Blue Careers and Blue Technologies) mobilizing an amount of about 50M€, including the BG-13-2016 Support to the BlueMed Initiative: Coordination of marine and maritime research and innovation activities in the Mediterranean under which the project *BlueMed Coordination and Support Action* was granted.

An important milestone was then reached in **May 2017, when all the UfM and EU member states endorsed the Valletta Declaration** under the auspices of the Maltese Presidency of the Council of the European Union with the support of the European Commission. The Valletta Declaration on "Strengthening Euro-Mediterranean Cooperation through Research and Innovation", welcomed the BlueMed initiative as a means to promote a healthy, productive and resilient Mediterranean Sea and stress the importance of structuring Euro-Mediterranean cooperation in marine and maritime sectors to encompass a broad range of objectives comprising the creation of new, blue jobs and social well-being while also being mindful of sustainable development and the preservation of the environment in the Mediterranean area. Following the signature of the Valletta declaration, the BlueMed Group of Senior Officials BlueMed Working Group was established.

52 www.bluemed-initiative.eu/wp-content/uploads/2016/12/Bluemed-SRIA_A4.pdf

BlueMed SRIA consultation and update process (2018)

After the launch of the BlueMed SRIA in October 2015, the document was updated twice, during 2017 (www.bluemed-initiative.eu/wp-content/uploads/2016/12/Bluemed-SRIA_A4.pdf) and 2018 (www.bluemed-initiative.eu/wp-content/uploads/2016/12/Bluemed-SRIA_A4.pdf), firstly by the Consortium of 11 partners from 9 European countries involved in the BlueMed Coordination and Support Action (CSA) and secondly with a revision of the SRIA also by the non-European countries being part of the Mediterranean Basin.

That updated version of the BlueMed SRIA was fully endorsed at the time by the Euro-Mediterranean Group of Senior Officials (GSO) BlueMed Working Group (WG), which is the steering body of the BlueMed Initiative and is co-chaired by DG Research and Innovation of the European Commission and the current co-chair of the Union for the Mediterranean, the country of Jordan. The GSO BlueMed Working Group is also supported by the Secretariat of the Union for the Mediterranean (UfMS).

The success in the process of updating the BlueMed SRIA and the importance of all inputs received through the process from many stakeholders gave birth to a new very extensive SRIA with 13 key challenges at Mediterranean level divided in 4 pillars and deployed in 34 goals and a large number of actions. In that sense, a distillation exercise had to be done to prioritise on some of these challenges and actions highlighted in the SRIA and focus on the joint implementation of a set of actions addressing the most pressing aspects agreed by European and non-European stakeholders.

It was during the Euro-Med GSO BlueMed WG meeting organised in the framework of the BlueMed Week held in October 2018 at UfM Secretariat in Barcelona that, upon the proposal from Italy, the European Commission and the whole GSO BlueMed WG agreed on the idea to launch a pilot action on Healthy Plastic-free Mediterranean free to be jointly developed.

BlueMed SRIA prioritisation process (2019)

The BlueMed CSA jointly designed a methodology to select in a coordinated and standardised way the most pressing priorities within the BlueMed SRIA. The main challenge about the process was to design a method rigid enough to allow comparable results but also flexible enough to allow countries to share their national perspective, including on social, geographical or economic aspects.

The process was designed to allow, before comparing results at international level among countries as explained below in the 'Methodology', a certain degree of flexibility to the countries to formulate their priorities internally according to the most suitable mechanism for their own country, e.g. through a stakeholders´ consultation, inter-ministerial agreement, agreement among their BlueMed National Pivots, or even a mix of them all.

Methodology

AT NATIONAL LEVEL

· Step 1

All countries **scored all SRIA goals from 1 to 10** based on 4 criteria (scientific, economic, technology and policy impact at Mediterranean level) and they classified goals between short and long term.

· Step 2

All countries generated a top10 list of priority goals based on step 1 and following 10 criteria agreed at CSA level:

a. Goal clearly in the field of research & innovation;

b. Goal addresses an issue which is relevant for the Mediterranean Sea;

c. A realistic action plan can be established for the next years (favour g/a that could be developed in the short term);

d. Possibility to have a leverage effect (convergence of the BlueMed priorities with other strategies, e.g. Regions);

e. Expected impact in terms of economic development, jobs, well-being of citizens, etc.;

f. Gaps and risks;
g. Required conditions (infrastructures, human resources, possibility of funding, etc.);
h. The 'across-pillar' added value;
i. Goal clearly filling a gap;
j. Goal not overlapping with existing initiatives/projects.

· A motivation for the selection of goals and main actions was requested in their opinion to achieve those goals.

All different processes followed at national level were welcome for steps 1 and 2.

· 14 countries gave feedback on steps 1 and 2 (Croatia, Cyprus, Egypt, France, Italy, Spain, Greece, Malta, Jordan, Morocco, Portugal, Slovenia, Tunisia and Turkey);

· The BlueMed CSA went through the analysis of the data and crossed results in 2019 with quite positive conclusions:

Many countries had a high degree of coincidence on their selection of priorities;

Some countries like France or Italy interpreted differently the prioritisation exercise enriching the reflexion process, i.e. by aligning with other relevant initiatives such as WestMED and clustering priorities;

Non-EU countries gave a very detailed and thorough feedback.

AT INTERNATIONAL LEVEL

· Step 3

National exercises and a comprehensive matrix of results were distributed and discussed in a dedicated meeting in March 2019 by the BlueMed CSA Steering Committee jointly with the BlueMed Platforms' Coordinators;

· The priorities proposed, grouped in 'thematic' and 'cross-cutting' , were the most chosen ones by countries and are indicated as 'primary' in the tables below. A 'secondary' group of priorities, whose rating was just below the threshold, emerging as relevant from the technical discussions, was also added. Following the clustering approach, relevant SRIA goals highly related to the selected ones were equally highlighted. A strong emphasis on the across-pillar value was also given by associating together actions belonging to different sectors.

· Step 4

A final set of 13 priorities was presented to the GSO BlueMed Working Group for their analysis and endorsement in April 2019.

Upon GSO BlueMed WG´s endorsement, the BlueMed CSA started to reflect on how to bring the BlueMed priorities into actions and activities to be implemented, which would be the core part of the present BlueMed Implementation Plan, integrating the developments of the Pilot action on "Healthy Plastic-free Mediterranean free".

From BlueMed Priorities to Actions (2019-2020)

The following step towards the drafting of the BlueMed Implementation Plan was to propose a new methodology to feed the 13 BlueMed priorities with Actions and Activities to be implemented by the BlueMed community in the upcoming years.

The aim of the taskforce composed by the Coordinators and Work Package leaders of the BlueMed CSA jointly with the BlueMed Platform Coordinators

was to propose a process as participatory and inclusive as possible, giving all stakeholders in all Mediterranean countries the chance to **co-design actions and activities** under each priority.

In order to encourage Med countries to take ownership of the process and the challenges to address, a list of co-champion countries responsible for each priority was proposed, always pairing a European and non-European country in order to maximize the use and scope of international instruments allowing the implementation of actions and activities.

In some cases, countries proactively expressed a particular interest in supporting the work on one given priority, and were involved in the works.

BlueMed Priority	Co-Champion countries	Supporting country
Understanding Pollution Impacts, Mitigation, and Remediation in the Mediterranean Sea	Italy - Tunisia	
Support solutions for sustainable food production and consumption	Spain - Egypt	Italy
Preparing to climate change and define adaptation/mitigation measures	Greece - Morocco	
Towards an observing system of systems	France - Algeria	Malta
Linking tourism, tourists and environment	Cyprus - Tunisia	Slovenia
Effective maritime spatial planning in the Mediterranean	Italy - Turkey	Spain Egypt
Greening vessels, facilities and services	Italy - Turkey	Egypt
Exploring the potential of blue-biotech	Italy - Tunisia	Egypt
Promote the role of Marine Renewable Energies (MRE) in the energy transition phase	France - Turkey	
Open data, open science, open innovation	France - Turkey	Malta Spain
Building capacity, blue skills and blue professionals	Greece - Egypt	Italy
Strengthen synergies among science, industry, policy-makers and society	Malta - Jordan	
From traditional maritime economy to blue growth activities	Croatia - Israel	Spain France

One of the challenges of this exercise was to get comparable information and use a common template that would allow a proper analysis of the data and countries´ feedback.

For that purpose, a "Fiche" template was drafted based on the following conceptual outline of the Implementation Plan:

Part 1 - From vision to Actions	→	**Setting the scene:** The SRIA and the prioritization of actions
Part 2 - Mapping and discussing implementation options and potentials	→	**How the SRIA could be deployed at regional / sub-regional and sectorial levels,** starting from high priority actions: - Programmes and initiatives of relevance, including research and data infraestructures Target sectors and groups Funding options and agencies Recent and ongoing relevant projects
Part 3 - Activities to promote SRIA implementation	→	**What can be done in the short-term** to promote the implementation of the SRIA: Networking, engagement, aligment, lobbying Training and capacity building Start-up and pilot actions Communication and outreach

It has to be noted that the outline of the Implementation Plan has been also discussed and endorsed at the level of the GSO BlueMed WG.

The 13 Fiches were filled-in over summer 2019 by the co-champion countries together with representatives of the supporting countries and circulated to the BlueMed Platforms in advance of their 2019 meeting (October, UfM Secretariat, Barcelona).

The meeting´s dynamic in which almost all representatives could attend all parallel discussions and give their input on each priority, allowed key discussion.

The aim of the sessions was also to agree, based on the Part 3 of the Fiches ("Activities to promote the SRIA Implementation"), **on a limited number of promotional and strategic activities**, which upon endorsement of the GSO BlueMed WG would be the skeleton of the present draft Implementation Plan. Based on the outcomes and agreements of the BlueMed meeting in Barcelona, an initial proposal of actions and activities to be implemented was presented to the GSO BlueMed WG in November 2019.

BlueMed IP endorsement, promotion and operationalization (2020 and beyond)

The **BlueMed Implementation Plan** was finally endorsed in Venice in January 2020. In parallel, some promotional actions already started, in particular if already foreseen in the lifecycle of the BlueMed CSA project and/or because of the commitment of the co-champion country willing to lead the process towards the implementation of the actions.

In this regard, the **leadership of the co-champion countries is essential** in the years to come, accomplishing the promotional activities and being proactive in triggering the necessary steps towards the implementation of the actions. At the same line, the **Operational Network of Funders** set-up in the framework of the BlueMed CSA has equally a crucial role in **ensuring the future execution of the Implementation Plan beyond the lifetime of the BlueMed CSA**.

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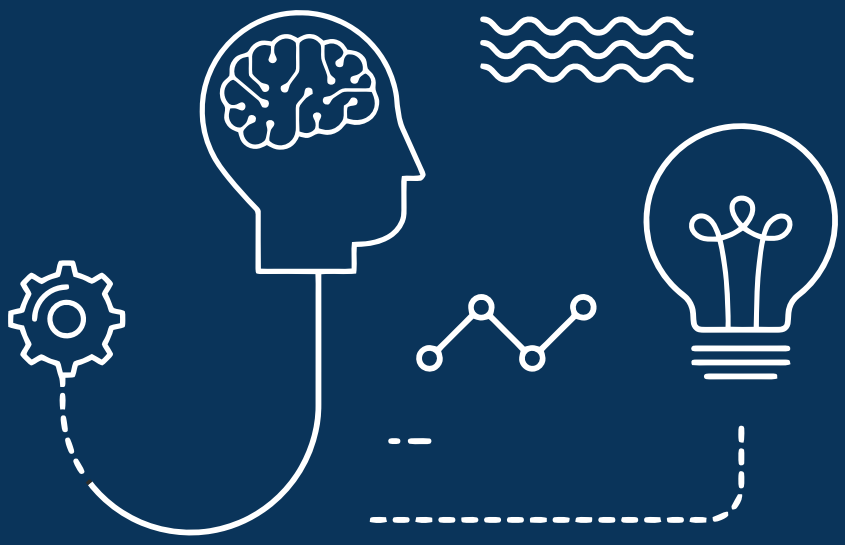

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