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Coordination and Support Action

Horizon 2020 - BG-13-2016 Grant Agreement 727453

BLUEMED CSA Coordinators' Meeting 11-12 January 2018 Report

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INTRODUCTION

The BLUEMED Coordination and Support Action (CSA) is a project funded by the European Commission within the Horizon 2020 programme aimed at supporting the implementation of the BLUEMED Initiative.¹ The latter offers a shared strategic framework for working towards a healthy, productive and resilient Mediterranean Sea that is better known and valued. It is designed to tap the full potential of the marine and maritime sectors, leveraging transnational cooperation to create new 'blue' jobs and promote and improve social wellbeing, sustainable prosperity and the environmental status of the region and its surroundings.

The project aims to be active at Mediterranean, European, national and local level. Its Work Package 5 (The Global Med) is specifically dedicated to integrating the results of other projects working in the fields covered by BLUEMED and creating synergies to attain the common goal of promoting blue growth and innovation in the Mediterranean basin.

In this context, on 11th and 12th January 2018, the Malta Council for Science and Technology (MCST) as task leader (Task 5.1), organised a Coordinators' meeting aimed at capitalizing on the results of other mostly EU-funded projects working on topics related to the BLUEMED priorities.

The following is a report presenting the main points discussed during the meeting and decisions regarding future steps for intra-project collaboration.

¹ <u>http://www.bluemed-initiative.eu/the-bluemed-initiative/</u>

bluered 1. RATIONALE OF THE MEETING

One of the outcomes of the BLUEMED Conference A *Basin of Research and Innovation for Sustainable Growth*, that took place in Sliema, Malta, on 18-19 April 2017, under the aegis of the Maltese Presidency of the EU was that:

BLUEMED shall facilitate the connection of relevant projects and initiatives of the whole Med area, so that results are shared and uptaken while the BLUEMED SRIA is injected and its actions implemented...²

The BLUEMED Initiative clearly states that it cannot be an insular initiative; it can only flourish if it opens up to other initiatives and transmits the concept not only at supranational and national level, but also at project level.

The BLUEMED Strategic Research and Innovation Agenda (SRIA)³ that sets out the challenges tackled by the project as well as the goals and actions it promotes, is a living document that is updated regularly by the project partners as part of a bottom-up approach based on the input of a broad base of stakeholders. The feedback provided by the different projects attending this meeting will contribute to the development and consolidation of the SRIA. At the same time, the invited projects are encouraged to take on elements of the BLUEMED concept and incorporate them in their work.

The rationale behind this first Coordinators' meeting was therefore that of bringing together the coordinators of projects active within the blue growth sector so as to explore ways of working together to achieve common goals, in so doing avoiding fragmentation and reducing the duplication of efforts. Following a first scoping exercise, it was decided that invited projects would not only be winners of Blue Growth calls under Horizon 2020 but also projects funded via other instruments (Interreg-Med, DG MARE, ERA-NET, national funds, etc.).

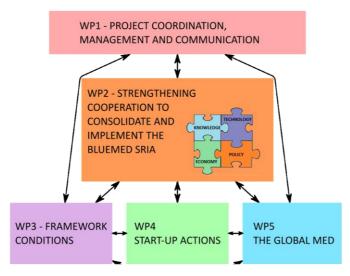


Figure 1.1: BLUEMED Work Packages

² <u>https://www.eu2017.mt/en/Press-Releases/Documents/PR170986 EN.pdf</u>

³ <u>http://www.bluemed-initiative.eu/strategic-research-and-innovation-agenda/</u>

bluened 2. presentation of bluemed initiative, csa and sria

Following a cultural visit to the Maritime Museum in nearby Vittoriosa, a short welcome by European Commisison project officer Marta Iglesias and a quick tour de table⁴, the BLUEMED project coordinators introduced the participants to the BLUEMED Initiative, the CSA and SRIA.

BLUEMED Project Coordinator Fabio Trincardi from CNR started with some brief reminders of why it is so important to protect the Mediterranean Sea and sustainably make use of its myriad resources (natural resources, cultural assets, tourism, etc.). The Mediterranean Sea represents 30% of global sea-borne trade by volume and 25% of the oil traffic. With around 450 ports and terminals, it is the second largest market for cruise ships. It is a biodiversity hotspot with 400 UNESCO sites and 236 Marine Protected Areas (MPAs). It also embodies a unique culture with a tradition for healthy living and wellbeing. Unfortunately, it is also a sea under a great deal of pressure, both in terms of environmental stresses as well as geopolitical complexities.

Dr Trincardi then gave an overview of the main steps and outcomes of the Initiatve, from its inception in December 2014 to the Valletta Declaration of May 2017.⁵ He explained how the governance of the project is structured, with a Steering Board chaired by Italy and the European Commission's DG RTD and DG MARE, and composed of state representatives from Cyprus, Croatia, France, Greece, Malta, Slovenia, Spain, Portugal, Belgium and Montenegro. The Board relies on the CSA project for the implementation of strategic actions and works with experts, including from JPI Oceans and other R&I initiatives in the Mediterranean area.

Dr Trincardi also gave an overview of the Horizon 2020 Blue Growth calls and the projects⁶ awarded the different grants, explaining why it was so important for these projects to keep communication channels open at all times.

He then briefly described the BLUEMED CSA – a 4-year project awarded 3 million euros under the call BG-13-2016, involving 11 partners from 9 countries, with 5 Work Packages structured around four Platforms. These Platforms, namely "Knowledge", "Technology", "Economy" and "Policy" are active observatories for stakeholders from the Mediterranean basin, from EU and non-EU countries, to interact and bring their expertise and competence to convey the message of national communities, sectors, agencies and institutions.

He concluded with a summary of the project's key actions and expected achievements, always with the rationale of changing the mindset for blue growth in the Mediterranean, transforming it into a hotspot of innovation.

⁴Refer to List of Participants in Annex.

⁵ <u>http://www.bluemed-initiative.eu/valetta-declaration/</u>

⁶ <u>www.bluemed-initiative.eu/mediterranean-h2020-projects/</u>



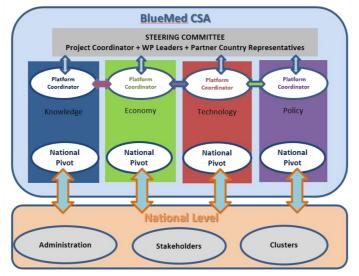


Figure 2.1: BLUEMED Structure and Platforms

Following this general introduction to BLUEMED at the political and project level, Popi Pagou from HCMR, as leader of Work Package 5, went into more depth on the BLUEMED SRIA and the challenges, goals and actions under every platform. She explained the bottom-up process that enables this living document to be updated on a regular basis. She touched upon the survey that was conducted by BLUEMED partners with the help of national experts (project pivots).

To conclude this introductory part and as a way of triggering the discussion, Margherita Cappelletto from CNR raised some points on why BLUEMED aims at collaborating with a large number of projects. She listed the projects invited to attend this meeting (refer to list of participants in Annex) and outlined the benefits to be reaped by not working in silos, amongst others:

- better aligning projects and going beyond national priorities/jurisdiction;
- learning from each other, e.g. creating better interfaces between sectors and actors so as to drive local innovation;
- connecting existing initiatives and projects;
- identifying a wide range of existing tools, beyond Horizon 2020.

Ms Cappelletto mentioned how the achievements of other projects including concluded projects entirely dedicated to the Mediterranean, such as the PERSEUS project⁷, for example, could be used as models for designing innovative Blue Growth trajectories, triggering specific synergies and integrated themes in the Mediterranean. Amongst other things, she also stressed the importance of engaging non-EU countries.

Finally, she encouraged project coordinators to register on the Virtual Knowledge Centre⁸, a centralised platform for marine and maritime information aimed at improving synergies across different initiatives and projects in the Mediterranean region, managed by the Union for the Mediterranean.

⁷ http://www.perseus-net.eu/site/content.php

⁸ <u>http://www.bluemed-initiative.eu/virtual-knowledge-centre/</u>



Every project coordinator presented one or more projects. All the powerpoint presentations are available on the BLUEMED website.9 The following is a nonexhaustive summary of the main goals of the projects with a focus on links with the BLUEMED concept.

ECOPOTENTIAL ¹⁰ Improving future ecosystem benefits through Earth Observations	Antonello Provenzale
Objectives	

Objectives:

- Making best use of Earth Observations to study ecosystems and improve management and conservation in Protected Areas and beyond
- Focusing on given Protected Area(s) and identifying the main Ecosystem Services of interest and the functions/processes supporting them
- Identifying indicators for the state of the ecosystem and of ecosystem processes (DPSIR SoE), for the most important control factors on the ecosystem, for the main (human-induced) pressures (DPSIR Pressures).
- Identifying the most critical/endangered/fragile ecosystem components and • identifying indicators of the impacts/response of ecosystem structure, functions and services (DPSIR Impacts)
- Identifying, retrieving, collecting and extending the data base (in situ and Remote Sensing) for the above indicators and the relevant Essential Variables
- Identifying societal and management responses (DPSIR Responses) and developing conservation and management policy options

Comments with reference to BLUEMED:

- The project has identified challenges that could be taken on in the BLUEMED SRIA, e.g. the challenge of a deeper integration of Remote Sensing with in situ data, possibly mediated by the use of Essential Variables for Ecosystems
- The project provides data, results and knowledge to larger-scale infrastructures and programmes: GEO (GEO ECO), eLTER, LifeWatch
- The project is an example of how guidance can be offered to policy makers, e.g. the workshop "Spaced" organised in Brussels on 10 January 2018¹¹

MERCES ¹² Restoring Marine Ecosystems	Roberto Danovaro
Objectives:	
Raising awareness on restoration activities, promoti sustainable multidisciplinary approach	ng an innovative and
Encouraging different stakeholder groups to share k	nowledge and identify the
best practices for restoration	
Creating a network with other EU projects on ecosys	tem restoration

⁹ <u>http://www.bluemed-initiative.eu/bluemed-csa-coordinator-meeting-pptx-january-2018-malta/</u> ¹⁰ <u>http://ecopotential-project.eu/</u>

¹¹ <u>http://ecopotential-project.eu/news-meetings/2015-10-16-13-48-29/207-spaced-an-ecopotential-</u> workshop-in-bruxelles.html

¹² <u>http://www.merces-project.eu/</u>



- Fostering capacity building for key marine policy-makers in Europe
- Engaging policy and decision-makers

Comments with reference to BLUEMED:

- The BLUEMED SRIA could address the need for more Natural Heritage-based professions specialized in habitat restoration
- It could promote spatial planning as a way of identifying habitats
- It could highlight the role of SMEs
- Knowledge on the legal policies allowing restorations and new restoration protocols should be used for BLUEMED future initiatives and in developing the Blue Agenda

JERICO-NEXT ¹³	Simon Keeble
Toward a sustained Pan-European JERICO-RI	Simon Keeble

Objectives:

- Understanding the complexity of the coastal ocean by understanding the coupling between physics, biogeochemistry and biology
- Delivery of a harmonized research infrastructure for coastal observations, compliant with EMODNET and Copernicus
- Ensuring the sustainable provision of high-quality coastal multidisciplinary observations that can support: Progress and breakthrough in marine science, European policies and national duties, and the development of business activities (e.g. marine services)
- Producing a long-term strategy for further development, integration, sustainability and relevance of coastal observatories in Europe

Comments with reference to BLUEMED:

- Transnational Access is available to enable access to European infrastructures that may otherwise be unavailable
- BLUEMED could help leverage investment for better understanding of coastal environments
- No need for new data sharing platforms; they already exist. What BLUEMED can do is encourage projects to make their data available via existing platforms

ODYSSEA ¹⁴ Operating A Network Of Integrated Observatory Systems In The Mediterranean Sea	Simon Keeble
Objectives:	

- Making marine data accessible and operational, while fostering job creation
- Working directly with a variety of stakeholders; it is not only the research community that is working with marine data
- Extending observation capacity (9 observatories filling data gaps)
- Services generation, networking, training and capacity building across the whole Mediterranean region, including North African countries

Comments with reference to BLUEMED:

¹³ <u>http://www.jerico-ri.eu/</u>

¹⁴ <u>http://odysseaplatform.eu/</u>



• BLUEMED can integrate the idea that one needs to generate business cases in order to provide long-term sustainability for projects

EONav ¹⁵	Kris Lemmens
Earth Observation for Maritime Navigation	Ki is Lemmens

Objectives:

- Unique observational capabilities and computational models based on spaceborne data to calculate the route for the ships to follow
- Sail plan to: increase a ship's energy efficiency; lower fuel consumption; reduce emissions; increase navigational safety of maritime transport

Comments with reference to BLUEMED:

• Clear link with SRIA: Smart, greener maritime transport and facilities in the Mediterranean; developing innovative design and management solutions for eco-friendly vessels and fuel saving

	SolAqua¹⁶ Floating photovoltaics		Luciano Mulé Stagno
Objectives:			
		 _	1

- Solving energy problems by means of floating photovoltaics
- A prototype for an offshore photovoltaic farm that would be directly competitive with on-ground systems
- Floating structures tested for 3 years; next prototype will be the size of a small ship increased durability

Comments with reference to BLUEMED:

• Cities have the same problems as small island states and therefore Malta's experience can be used as model in Europe and beyond

Sea Litter Critters ¹⁷ and CLAIM ¹⁸ Cleaning Litter By Developing and Applying Innovative Methods in European Seas	Ilaria Schiavi
Objectives:	

- SLC: a feasibility study looking into the market appeal of a small automated waste collection vessel called the 'Sea Litter Critter', which not only picks up litter but treats it on-board (completely unmanned vehicles not yet allowed by regulations for navigation)
- Using plasma technology to break down solid waste with no risk of dioxins and furans emissions (problem of other combustion-based waste treatment methods)

¹⁵ <u>http://www.eonav.com/page/homepage</u>

¹⁶

https://www.um.edu.mt/newspoint/news/features/2016/06/solaquafloatingsolarpanelsprojectnear scompletion

¹⁷ <u>http://www.irissrl.org/</u>

¹⁸ <u>http://www.cordis.europa.eu/news/rcn/141802_en.html</u>



- CLAIM: looking developing models that will determine and allow visualizing the concentration of visible and invisible litter in the Mediterranean and the Black Sea
- developing a pre-filtering system and a photocatalytic device to be used in wastewater treatment plants to prevent invisible litter entering our seas

Comments with reference to BLUEMED:

- Clear link to SRIA filling an identified knowledge gap (cleaning the Med)
- BLUEMED could address a main challenge encountered by these projects: too many regulations and not enough policy to treat the marine litter
- Governance tools need to be developed BLUEMED could help in this respect

LINCOLN¹⁹

Lean Innovative Connected Vessels

Lucia Ramundo

Objectives:

- Developing three new added value vessels with innovative on board equipment, using lean design methodology and IoT solutions, able to be used in diverse maritime coastal activities and sectors in an efficient and sustainable way
- Improving vessel design and manufacturing through the LEAN Product Development methodology, fostering EU SME maritime competitiveness
- Developing and delivering IoT-based solutions for the maritime professional market, enhancing EU SME technological capabilities
- Adopting Lifecycle environmental and economic assessment to provide sustainable vessel solutions

Comments with reference to BLUEMED:

- The project addresses goals identified in the BLUEMED SRIA: Developing innovative marine-based technologies, methodologies and approaches with a view to boosting the sustainable economic growth of the European maritime sectors and the conservation and upgrading of the marine environment, resources and cultural heritage
- Fostering innovative multidisciplinary research and cooperation activities addressing the relevant Mediterranean challenges
- Providing knowledge-based support for the implementation of EU policies and directives on marine and maritime issues in the Mediterranean

MUSES²⁰ Multi-Use in European Seas	Bruce Buchanan
Objectives:	

- Contributing to policy, legal and administrative harmonization and improvement to overcome barriers to Environmental, Spatial and Economic multi-use
- Providing a comprehensive understanding of environmental, spatial, economic and societal benefits of Multi-Use

¹⁹ <u>http://www.lincolnproject.eu/</u>

²⁰ <u>https://muses-project.eu/</u>



- Highlighting inappropriate regulatory, operational, environmental, H&S, societal and legal barriers to Multi-Use; distinguishing between real and perceived barriers
- Proposing solutions and actions to be taken
- Case studies for 5 different sea basins including the Mediterranean

Comments with reference to BLUEMED:

- The project addresses goals identified in the BLUEMED SRIA: fostering innovative multidisciplinary research and cooperation activities addressing the relevant Mediterranean challenges
- Providing knowledge-based support for the implementation of EU policies and directives on marine and maritime issues in the Mediterranean
- Promoting public awareness and understanding of how important sustainably prosperous resources of the Mediterranean Sea for the surrounding countries and for Europe as a whole
- Developing innovative marine-based technologies, methodologies and approaches with a view to boosting the sustainable economic growth of the European maritime sectors and the conservation and upgrading of the marine environment, resources and cultural heritage

PERSEUS²¹ Policy-oriented marine Environmental Research for the Southern EUropean Seas	Nikos Streftaris
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Objectives:

- Providing a policy-science interface
- Science-based recommendations for policy makers, focusing on the open seas: help and support EU countries on MSFD; develop a "Smart Monitoring" strategy; develop awareness groups and increase capacity building; design an innovative, small R/V for shallow areas
- Support policy makers in EU and non-EU summer schools, courses for stakeholders, adaptive marine policy (AMP) framework and tool box

Comments with reference to BLUEMED:

• The project has closed but can serve as a model of stakeholder involvement and bridging science and policy

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Objectives:

- Increasing the competitiveness of the Mediterranean aquaculture sector by tackling biological, technical and operational weaknesses that underlie the stagnation of marine fish production in the last decade, while addressing social and environmental responsibility and contributing to "Blue Growth"
- Target species: Gilthead sea bream (Sparus aurata) and European sea bass

²¹ <u>http://www.perseus-net.eu/site/content.php</u>

²² <u>http://performfish.eu/</u>

<u>blueMed</u>

(*Dicentrarchus labrax*), representing 92.8% of the EU Mediterranean marine fish production volume

• Applying a user-centric approach

Comments with reference to BLUEMED:

- Fully aligned with the aims and SRIA of BLUEMED:
- Ecosystem-based management of Mediterranean aquaculture and fisheries
- Increasing the competitiveness of the Mediterranean aquaculture sector that is considered a Key Sectoral Enabler in the Mediterranean
- Developing new strategies, technologies and practices to make aquaculture sustainable while promoting the investment in best technologies
- Cooperation between the public and private sectors
- Maximisation of the leverage effects of research investments and their influence on public policy
- Public understanding of the value of the Mediterranean blue economy
- Improved skills for a well-equipped workforce

PANACeA ²³	
Streamlining management efforts in Protected Areas for an enhanced Protection in the Mediterranean Sea	Dania Abdul Malak

Objectives:

- Addressing multiple pressures using integrated monitoring protocols and transferable management tools
- Synthesizing results of relevant regional projects in the Mediterranean to: provide evidence and reliable data on effective transferable measures and protocols to ensure effective protection of biodiversity; reduce pressures on Mediterranean biodiversity and ensure the adequate provision of ecosystem services

Comments with reference to BLUEMED:

• Concrete suggestions for amendment of SRIA:

Under Knowledge Platform CHALLENGE A. Mediterranean Sea ecosystems: services, resources, vulnerability and resilience to natural and anthropogenic pressures:

Addition of GOAL A4. Conserving and Protecting Mediterranean Biodiversity

- Effective co-management within and outside PAs (FishMPABlue2, MedWet, ...)
- Better adaptation and resilience (MPA-Adapt, Confish, AMAre, ECOSUSTAIN)

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

Addition of GOAL C1. Reducing the risk of disasters using as a priority Nature-Based Solutions

 Coastal management and flood regulation/reduction (MedWet, POSBEMED, ...)

²³ <u>http://msp-platform.eu/projects/panacea-streamlining-management-efforts-protected-areas-enhanced-protection</u>



Re-establishment of the function of marine habitats through better management (Confish, AMAre, MedSeaLitter, Act4Litter)

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Objectives:

- GOOS regional alliance for Operational Oceanography at the Med Sea
- Fostering operational oceanography in the Mediterranean Sea and promoting collaboration: improved fitness for purpose; greater awareness; increased down-streaming; improved capacity

Comments with reference to BLUEMED:

- Main events can be linked with BLUEMED events
- Can work with BLUEMED to engage North African partners
- BLUEMED SRIA could address the need to: improve the modelling for coupling hydrology and ocean components; sediments modelling; national and local in situ observations (e.g. river runoff; nutrients and sediment loads) and coastal satellite products (e.g. altimetry, ocean-colour) as well as citizen science observing systems; capacity building and training for coastal downscaling and applications development based on CMEMS products

European Global Ocean Observing System Gorringe

Objectives:

- Promoting and implementing Operational Oceanography
- Ensuring sustained observations and models are made in European seas underpinning a suite of fit-for-purpose products and services for marine and maritime end-users

BleuTourMed ²⁶ The Community of Sustainable Tourism in the	Nelly Bourlion
Mediterranean Region	

Objectives:

- To facilitate knowledge sharing and the capitalisation of results of 14 Modular Projects of the Med Community on Sustainable Tourism (ST)
- Community building: keeping the community active, synthesizing and harmonizing the results of the MPs, identifying possible common thematic objectives, synergies on methods and tools and common spatial context
- Communication: driving the external flow of information on results of the community to the Med Programme, other horizontal projects and the main EU

²⁴ <u>http://www.mongoos.eu/</u>

²⁵ www.eoos-ocean.eu

²⁶http://planbleu.org/en/activites/tourisme/bleutourmed-maritime-and-coastal-sustainabletourism-mediterranean



and Med target groups

• Capitalisation: transferring results delivered by MPs to a variety of target groups and stakeholders at EU and Med level, in order to mainstream project results and policy messages

Comments with reference to BLUEMED:

- Clear link on sustainable innovations in the tourism sector
- A focus on ST innovations in one of the Med ST Community's deliverables
- Athens Declaration of the Med Sustainable Tourism Community already published on BLUEMED's website

AMARe ²⁷ Actions for Marine Protected Areas	Celia Vassiliki
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Objectives:

- Shared methodologies and geospatial tools for multiple stressors assessment, coordinated monitoring/management, multi-criteria analyses with stakeholders' engagements
- Specific pilot actions in selected MPAs to solve issues on hot spots of conflicts affecting marine biodiversity and the services it provides

Comments with reference to BLUEMED:

• Clear link with SRIA: Goal of Effective Maritime Spatial Planning in the Mediterranean (Economy Platform Challenge E), specifically actions 2 and 3

ECOAST ²⁸	
New methodologies for an ecosystem approach to spatial and temporal management of fisheries and aquaculture in	Celia Vassiliki
coastal areas	

Objectives:

• Integrating ecological, social and economic approaches within a unified framework to provide overall information for the future development of fisheries and aquaculture in coastal areas, also including spatial conflicts with other users and the stakeholders' point of view

Comments with reference to BLUEMED:

• Clear links to SRIA on promoting sustainable use of the resources; developing fishing strategies; monitoring, assessment and management of protected areas

PROTOMEDEA ²⁹	
Towards the establishment of Marine Protected Area	Celia Vassiliki
Networks in the Eastern Mediterranean	

Objectives:

• Proposing a Marine Protected Area (MPA) network in Greece & Cyprus, taking

²⁸<u>http://msp-platform.eu/projects/ecoast-new-methodologies-ecosystem-approach-spatial-and-temporal-management-fisheries</u>

²⁷ <u>http://msp-platform.eu/projects/amare-actions-marine-protected-areas</u>

²⁹ <u>http://www.protomedea.eu/en/</u>



into account the protection of ecological characteristics and Essential Fish Habitats (EFH), significant areas for fisheries, as well as their socio-economic impacts through a participatory bottom-up process

• Identifying coherent networks of MPAs in the Mediterranean based on sound scientific knowledge to promote a sustainable Blue Economy in the region

Comments with reference to BLUEMED:

• Clear links to SRIA on Goal of Developing optimal fishing strategies (Economy Platform Challenge B), technologies and practices, specifically actions 1 and 3

4. SALIENT POINTS OF DISCUSSIONS IN WORKING GROUPS

On the second day of the meeting, the participants were divided into two groups and asked to delve deeper into the goals and actions³⁰ of the BLUEMED SRIA. They were invited to idenfity which actions their projects address, which bottlenecks they have encountered so far, and whether the actions proposed in the SRIA should therefore in their view be modified to reflect the reality on the ground.

One working group focused on the goals and actions pertaining to the platforms of Knowledge and Economy while the other focused on Technology. The Policy Platform was seen as a cross-cutting issue that was discussed by both groups.

~	Working Group 1 Knowledge and Economy	Working Group 2 Technology	
bluemed	ECOPOTENTIAL	JERICO-NEXT	
	Sea Litter Critters & CLAIM	EONAV	
	PERSEUS	LINCOLN	EINAV
	PANACeA	MUSES	LINCOLN
CLANING LITTER BY DEVILOPING AND APPLYING INNOVATIVE METHODS IN EUROPEAN SEAS	PerformFISH	ODYSSEA	MUSES
PERSEUS	BleuTourMed	MONGOOS & EuroGOOS	PerformFISH
	AMARe & ECOAST	SAVE SEA CRITTERS	EuroGOOS
ODYSSE	4		*
PANACe	A	PLEASE DON'T LITTER	AMAre

Figure 4.1: Participating projects

What follows is a summary of the comments, suggestions and recommendations put forward by the participants during the discussions. They will be taken on board by the BLUEMED CSA partners in the upcoming update of the SRIA.

³⁰ A full list of actions under every Goal can be found in the SRIA: <u>http://www.bluemed-initiative.eu/wp-content/uploads/2017/09/BLUEMED-SRIA Update final.pdf</u>



KNOWLEDG	E PLATFORM
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean	 GOAL A1. Developing new technologies and tools GOAL A2. Generating new products and services GOAL A3. Cleaning the Mediterranean Sea
CHALLENGE B. Mediterranean Sea dynamics: developing services in the field of sustainable adaptation to climate change and plans for mitigation	GOAL B1. Understanding and forecasting the Mediterranean Sea dynamicsGOAL B2. Preparing to climate changeGOAL B3. Climate services for the Mediterranean
CHALLENGE C. Hazards and the protection of coastal areas in the Mediterranean	GOAL C1. Reducing the risk of disasters

Figure 4.2: Knowledge Challenges and Goals of BLUEMED SRIA

Participants discussing actions to address the challenges identified in the BLUEMED SRIA with regard to the knowledge gap brainstormed on how BLUEMED could provide the required push forward in this regard and support policy developments. They also discussed how their specific projects addressed the actions set out in the SRIA and how the projects could work together to foster synergies and avoid fragmentation and duplication of efforts.

The crucial importance for the Mediterranean of ensuring the **commitment of non-EU countries** was stressed by many participants.

They highlighted the need to closely link actions under the Knowledge platform to those under the Economy platform, prioritising actions tackling those knowledge gaps that can translate into economic outputs and blue jobs. Participants highlighted the importance of the Start-Up Actions foreseen under BLUEMED's Work Package 4 in this regard, and how selected entities could take the feasibility or foresight studies resulting from this support to the next level thanks to the SME Instrument.

More concretely, participants pointed out some lacunae in the SRIA, e.g. the absence of 'micro-biodiversity', which could link to aquaculture and its clear economic importance. The relevance of biodiversity at the bottom of the foodweb and the use of bioremediation to tackle pathogens and waste in aquaculture were brought up in this context. The theme of circulatory processes in waste management was stressed: BLUEMED could promote the required change in mindset for waste to be seen as a resource of economic value.

Some participants suggested that more research needs to be done on linking microbiota with sensory observation tools, and that this could be the subject of one of the Start-Up Actions. Another topic that was identified as absent from this part of the SRIA is big deltas.

blueMed

Participants suggested that Challenge A lacked a specific goal on conserving and managing protected areas, including best practices on adaptation and resilience. The MPA network requires better coordination from a policy perspective, something BLUEMED could help promote.

On climate change (Challenge B), participants stressed the need to bear in mind the consequences it could have on blue growth, e.g. new opportunities in terms of aqauculture species, culture and tourism. Some participants suggested BLUEMED could contribute to an integrated climate adaptation strategy.

Some Goals and Actions were seen as too broad (e.g. Challenge C, particularly on hazardous materials) and requiring some fleshing out. The importance of adopting an integrated coastal zone management approach and adding nature-based solutions to reduce hazards was highlighted. Coastal erosion is also a topic that was flagged as needing beefing up. Actions should include good practices on coastal management and flood reduction and the re-establishment of coastal habitat functions.

The link with science policy was made clear here, as a coordinated approach is required to not only protect the coast from erosion and geological hazards but also to conserve anthropogenic villages and ecosystems. BLUEMED could contribute by serving as an integration and consolidation tool in this respect. It could provide the platform for existing plans and knowledge to be consolidated, making sure they are effectively addressing the reality on the ground. The importance of communicating this information to policy makers in an appropriate format was highlighted by several participants.

ECONOMY	PLATFORM
CHALLENGE A. Innovative businesses based on marine bio-resources in the Mediterranean	GOAL A1. Developing new technologies and tools GOAL A2. Generating new products and services
CHALLENGE B. Ecosystem-based management of Mediterranean aquaculture and fisheries	GOAL B1. Develop optimal fishing strategies, technologies and practices GOAL B2. Develop optimal aquaculture strategies, technologies and practices
CHALLENGE C. Sustainable tourism in the Mediterranean	GOAL C1. Linking tourism and environment GOAL C2. Developing smart technologies and dedicated services
CHALLENGE D. Maritime clusters in the Mediterranean	GOAL D1. From traditional maritime economic to blue growth activities
CHALLENGE E. Maritime Spatial Planning and Integrated Coastal Zone Management in the Mediterranean	GOAL E1. Strengthen synergies among science, industry, policymakers and societyGOAL E2. Effective maritime spatial planning in the Mediterranean

4.2 THE BLUE ECONOMY

Figure 4.3: Economy Challenges and Goals of BLUEMED SRIA



Here again, the link with the Knowledge platform was explicitly mentioned. The importance of identifying economic drivers and collecting data from stakeholders as diverse as chambers of commerce, fishers' associations, SMEs, unions of ports and cruiseships, transnational business organisations, start-up fora, business angels and insurance companies were brought up.

Several participants felt that BLUEMED needed to prioritise actions on the basis of their economic impact. Given that BLUEMED actions are proposals that need to be taken up by different actors, participants suggested that the SRIA be translated into an intervention logic for each area, with clearly defined targets and desired impacts.

The link between the actions under the Knowledge Platform and those under the Economy Platform was not always seen as being clear enough in the SRIA, e.g. how to translate Goal A2 on products and services of economic value with respect to marine litter.

Certain innovative areas were seen as missing under Challenge A, e.g. **the issue of how to best re-use or transform marine protein**, which is a very topical issue in the fisheries sector. This can be linked with the commercial use of microbiota (in the same way as algae).

Some participants mentioned that lack of data on the deep sea also automatically translates into missed economic opportunities.

Food was highlighted as a key gap in the SRIA goals under the Economy platform. Food and the Bioeconomy are very important topics that will strongly feature in the new Framework Programme (FP9). One of the very pertinent questions asked was: How can BLUEMED contribute to making sure the Mediterranean fully participates in FOOD 2030? Topics mentioned include nutrition and sustainable diets, climate-smart food systems, the circulatory use of food systems and the innovative empowerment of communities with respect to food production.

One of the key issues mentioned in this context was capacity building for responsible fishing and fish rearing. BLUEMED could contribute by addressing certain missing links, such as the combined assessment of depleting fish stocks, the increase in plastics and the training of fishers and aquaculture centres. This could also be a task for BLUEMED ambassadors.

Participants also felt that **energy should feature strongly** under the economic priorities and that the offshore aspect needed to be given more prominence here. Under Challenge D, for instance, marine clusters could be expanded to include energy clusters together with some specific energy-focused actions.

A goal on ocean literacy and citizen science was also seen as lacking.

Other concrete modifications to the SRIA proposed were: adding smart water management practices such as aquaponics to Goal B2; beefing up Goal C1 to include ecosystems and the environment (beside communities and culture).



4.3 TECHNOLOGY ASPECTS OF BLUE GROWTH

TECHNOLOG	Y PLATFORM
CHALLENGE A. Smart, greener maritime	GOAL A1. Greening vessels and facilities
transport and facilities in the	GOAL A2. Safer maritime transport in the
Mediterranean	Mediterranean
CHALLENGE B. Observing systems and	GOAL B1. Towards an observing system
operational oceanography capacities in	of systems
the Mediterranean	GOAL B2. Tailor-made sensors and
	platforms
	GOAL C1. Changing the rationale: one
CHALLENGE C. Multi-purpose offshore	platform, multiple uses and activities
platforms in the Mediterranean	GOAL C2. Train for blue offshore
	professionals
	GOAL D1. Towards a shared management
CHALLENGE D. Marine and coastal	approach to cultural heritage in the
cultural heritage in the Mediterranean:	Mediterranean
discovering, protecting and valuing	GOAL D2. Increase the economic impact
	of the Mediterranean's cultural heritage

Figure 4.4: Technology Challenges and Goals of BLUEMED SRIA

With reference to the overall scope of the SRIA, participants highlighted certain missing topics: the chemical treatment of vessel corrosion; measuring the impact of pollution in ports on human health and ecosystems; the regulatory framework for unmanned vessels; the integration of offshore renewable energy; smart solutions to safety issues on board ships and the improvement and impacts of desalination processes.

Specifically on Technology, Participants proposed broadening the areas of geographical coverage of Challenge A to include port areas and deltas as well as to broaden the vision to include smart digital tools and services.

Some of the actions under Goal A2 require rephrasing, according to several participants. More information needs to be included on risk mapping (action 1), inclusion of coastal zones (action 2), support for search and rescue operations (action 3). The skills gaps in terms of IT and technology also needs to be addressed in this context.

Beyond the availability of data, the issue of monitoring and analysing this data in a way that makes it easy to use for stakeholders was highlighted. BLUEMED could have a role to play here. For instance, **one way of reducing pollution in harbours is that of knowing in advance what the ships will be discharging.** Also, monitoring the sea level in ports could reduce the chance of hazards faced by ships upon entering a port. Once again, training harbour masters and ship captains in this regard was mentioned as being of crucial importance.

The internet of things as a solution for marine observation and monitoring was mentioned as a point linking Challenges A and B.

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The same comment for a clearer definition of certain actions was made with regard to operational oceanography and observing systems (Challenge B). Participants active in the field of data management considered the **actions related to the creation of a system of systems insufficient**, given the complexity of the task at hand. The lack of funding and clear jurisdiction were highlighted as major stumbling blocks in this regard. While there was some disagreement on the organisation of national data collection systems (a 'national' Copernicus) feeding into a European platform, the group agreed that more detail is necessary in the BLUEMED SRIA if political backing for a system of systems is to be obtained. The need for a small introduction under Goal B1 was deemed necessary.

The need to link energy and aquaculture uner Goal B2 was mentioned.

The group debate on Challenge C focused on the **practical difficulties of implementing multi-purpose offshore platforms**. Issues such as the costeffectiveness of these platforms, uncertainties about investment, the nearimpossibility of making very diverse actors with different needs work together, the non-existence of appropriate insurance schemes, unknown environmental impacts and the hazards of climate change were brought up. Examples of pilot platforms in the Canary Islands and the bottlecks encountered were shared. Some participants felt that **promoting smaller platforms or making better use of existing platforms would be more realistic** suggestions to put forward. The importance of integrating renewable energy on such platforms was also highlighted.

On Goal C2, participants commended the idea of creating a Mediterranean training centre on safety in offshore oil and gas operations, which would include the environmental risks and training in new technologies.

On Challenge D, participants felt that too much emphasis was placed on cultural heritage, to the detriment of natural heritage. A separate goal on environmental heritage was thus suggested. **The digitisation of tourist services should include the option for tourists to participate in protecting the environment (via specific apps)**. The action on the common disclosure and data sharing policy could be moved to a new Challenge E.

This **new Challenge E** proposed by the group was to make sure the Technology Platform successfully tackled the digital aspect of tools and services. This could be called the **Blue Growth Digital Agenda**.

5. GENERAL RECOMMENDATIONS ON WAY FORWARD

Following the presentation of a summary of the two Groups' discussions and suggestions, a number of questions was put forward for debate in plenary.

The subject of clustering projects in order to tackle bilateral issues was raised. Certain project coordinators in the room agreed that this exercise was very useful. Projects such as ECOPOTENTIAL, PANACeA and LINCOLN, for instance, had clear reasons to interact and exchange information on MPAs and ecosystem management and protection.

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On this specific subject, however, project coordinators warned against the dangers of putting economic concerns before environmental aspects when it comes to promoting blue growth. While certain ecosystem services may not be viewed as having a monetary value, their importance remains crucial. This ties with the concept of payment for ecosystem services, which is a subject that needs to be explored in greater depth and taken up by policy makers.

Participants agreed that projects could help each other when it comes to sharing information and disseminating their results to the public and policy makers. Joint events are one way of doing so. However, several participants highlighted the need to find alternative ways of communicating information due to the problem of 'stakeholder fatigue'. One solution could be that of organising fewer but larger events. Joint surveys and blogs were also mentioned.

Nevertheless, several participants stated that in their experience the most efficient way of gathering and disseminating information was that of going to the target audience and not expecting (e.g.) muscle farmers to attend a stakeholder event. Users want and need individual treatment and cannot always be put in one pot. This was particularly stressed by user-centred projects like PerformFISH and AMARe.

Participants suggested that BLUEMED could act as a 'connecting tissue' between projects. BLUEMED could consider creating a forum or app, which would facilitate the planning of events on related topics under the umbrella of blue growth in the Mediterranean. Such an app could be used to list the dates of upcoming events, helping projects organise events back-to-back or in tandem, also with a view to minimising travel and its impact on climate change. The EEN database of events was suggested as a model for this. The BLUEMED Community Portal available on the website³¹ could serve this purpose.

Some examples of projects and calls addressing knowledge transfer were mentioned, e.g. the COLUMBUS project (which was invited to attend this meeting but declined due to other commitments), the winners of the Horizon 2020 call on the re-use of data and the current Copernicus call on data usage.

On the issue of data sharing and transfer, it was suggested that BLUEMED could campaign for projects to subscribe to the Group on Earth Observations (GEO)³², the intergovernmental organisation working to improve the availability, access and use of earth observations for the benefit of society. This is one way of tackling the issue of fragmentation. BLUEMED could consider working in close collaboration with GEO to encourage the relevant projects to share their observation data, thus acting as a central link for the Mediterranean making sure that all the main actors know about the GEO knowledge sharing platform.

Participants suggested that **BLUEMED could help create a community of project coordinators**. The need for a platform where the projects can interact and form synergies was once again highlighted in this context.

³¹ <u>http://www.bluemed-initiative.eu/bluemed-community-portal/</u>

³² <u>https://www.earthobservations.org/index2.php</u>



BLUEMED needs to address the fact that not all the potential users of data are aware of the availability of this data. It is therefore important to let the stakeholders and decision makers know about projects. Finally there is a need for metadata to help stakeholders make better use of what is available. There is a lack of knowledge of how many users require the data generated by marine and maritime projects. BLUEMED could play a role in that context.

Other ideas for future collaboration mentioned were common summer schools, training courses and cruises.

Summary of Recommendations on the BLUEMED SRIA Pillars and Policy

Knowledge

- Importance of connecting Knowledge to Economy; prioritizing actions that translate into economic benefit. Bearing in mind that some ecosystem services are crucial without having an economic value per se (ref. concept of payment for ecosystem services)
- Changes proposed to BLUEMED SRIA:
 - **Missing topics:** micro-biodiversity; deltas; deep sea; bioremediation to tackle pathogens in aquaculture; linking microbiota with sensory observation tools (flagged as potential Start-up Action)
 - **New Goals:** i) Circulatory processes in waste management; ii) Managing and conserving protected areas
 - **More detail:** hazardous materials; ICZM; coastal erosion
 - **Clearer link:** i) science policy e.g. coordinated approach addressing coastal management and conservation of anthropogenic villages/ecosystems; ii) Climate Change and Blue Growth: Integrated climate adaptation strategy

Economy

- Importance of identifying economic drivers with data from different stakeholders: chambers of commerce, fishers' associations, SMEs, unions of ports and cruiseships, transnational business organisations, start-up fora, business angels and insurance companies
- <u>Changes proposed to BLUEMED SRIA:</u>
 - **Missing topics:** Marine protein, Ocean literacy and Citizen Science; Economic impact of combined effects of different hazards and pollution (flagged as task for BLUEMED Ambassadors); Aquaponics
 - **New Goals:** Food and the Bioeconomy (flagged as potential Start-up Action) in light of FOOD 2030
 - **New Actions:** i) Conserving and Protecting Mediterranean Biodiversity: *Effective co-management within* and *outside PAs* and *Better adaptation and resilience* (Goal A4); ii) Reducing the risk of disasters using as a priority Nature-Based Solutions: *Coastal management and flood regulation/reduction* and *Re-establishment of the function of marine habitats through better management* (Goal C1); iii) Smart water management practices e.g. aquaponics (Goal B2)
 - **Greater focus:** Energy (e.g. Challenge D could include energy clusters)
 - **Clearer link:** Knowledge Gap and Economy actions: Marine litter (Goal A2)

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Technology

- Beyond providing data, importance of monitoring and analysing this data in a way that makes it easy to use for stakeholders
- Importance of sharing data on existing platforms (e.g. GEO)
- <u>Changes proposed to BLUEMED SRIA:</u>
- Missing topics: chemical treatment of vessel corrosion; measuring impact of pollution in ports on human health and ecosystems; regulatory framework for unmanned vessels; integration of offshore renewable energy; smart solutions to safety issues on board ships and improvement and impacts of desalination processes; Internet of things as a solution for marine observation and monitoring
- Geographical coverage (Challenge A): include port areas; deltas
- **Vision** (Challenge A): broaden to include smart digital tools and services
- Rephrase Actions: i) include information on risk mapping (Goal A2 action 1);
 ii) inclusion of coastal zones (action 2); iii) support for search and rescue operations (action 3)
- **More detail/complexity:** i) operational oceanography and observing systems (Challenge B); ii) system of systems (Goal B1) ; iii) multi-purpose offshore platforms (Challenge C) = promoting smaller platforms could be more realistic
- Share focus: cultural/natural heritage (Challenge D)
- New Challenge proposed: Blue Growth Digital Agenda (Challenge E)

Policy	
Non-EU Med countries: engagement & political commitment crucial	
• Campaigning for improved policy: management of MPAs; coastal	
management and flood reduction; re-establishment of coastal habitat functions; sea litter	
Regulatory Framework required: unmanned vehicles	
• Bridging science and policy: capitalise on past projects e.g. PERSEUS	
• Intervention logic per SRIA area, clearly defined targets and desired impacts	

Figure 4.4: Summary of Recommendations (Presentations and Working Groups)

CONCLUSION

As a follow-up of the Maltese Presidency Conference *A Basin of research and innovation for sustainable growth*, this Coordinators' meeting marks a key milestone in raising awareness on the BLUEMED vision and in connecting projects at different stages of implementation dealing with blue growth activities in the Mediterranean. It was also an opportunity to work with other projects to collect specific inputs on the BLUEMED process, including comments on the SRIA.

The meeting was concluded with an overview of the next steps of the BLUEMED CSA: the update of the SRIA, the national White Papers currently being drafted, the upcoming call for Start-Up Actions and the setting up of a network of funders.

A second Coordinators' meeting is planned for 2019. BLUEMED will ensure that R&I projects and initiatives funded by different programmes are invited with a view to expanding the network and enhancing collaboration. In the meantime, however, it



was agreed that project coordinators would be informed of any developments of the BLUEMED SRIA and the setting up of the suggested forum. BLUEMED partners also agreed to disseminate actions related to the BLUEMED Initiative, given that project coordinators will need to be informed on the processes and progress of the Initiative in order to effectively incorporate the BLUEMED concept within their projects. Project coordinators were also encouraged to follow BLUEMED's social media, website and newsletter.

An effort will be made by BLUEMED partners to follow ongoing projects by attending, where possible, their main events. Invitations could also be sent to the project coordinators to attend some of the running activities of BLUEMED, with a view to ensuring long-term collaboration. This could pave the way for future joint initiatives under FP9 as well as other relevant R&I programmes targeting the Mediterranean region.



ANNEX 1

AGENDA

BLUEMED CSA Coordinators' Meeting 11-12 January 2018 Villa Bighi, Kalkara, Malta

Thursday 11th January 2018

9.30:	Visit of the Maritime Museum (Vittoriosa)
11.45:	Registration at Villa Bighi (Kalkara)
12.00:	Welcome lunch
13.00	Introductory speech by the European Commission Marta Iglesias, DG RTD
13.15:	Presentation of the BlueMed Initiative and CSA Fabio Trincardi, CNR
13.30:	Presentation of the BlueMed SRIA Popi Pagou, HCMR
14.00:	Including projects in BlueMed - Tips for triggering the discussion <i>Margherita Cappelletto, CNR</i>
14:30:	Presentation of blue growth projects by Project Coordinators
16.30:	Coffee break
17.00:	Wrap-up of Day 1 and information on Day 2 discussions
18.00:	Dinner

Friday 12th January 2018

- 9.00: Presentation of remaining project/s
- 9.30: Working Groups/Discussions
- 11.00: Coffee break
- 11.30: Working Groups/Discussions
- 13.00: Lunch
- 14.15: Presentation of Working Group results
- 15.00: Coffee break
- 15.30: Sum-up and future steps



ANNEX 2

LIST OF PARTICIPANTS

19 projects were represented at the meeting. Several Bluemed partners and a European Commission Project Officer were also present. Two representatives of Malta's national maritime agency, Malta Marittima, attended in their capacity as national BLUEMED pivots.

Table 1. List of projects and participants

Project	Funding Programme	Contact Person	Contact Details
ECOPOTENTIAL	H2020-SC5	Antonello Provenzale	antonello.provenzale@cnr.it
JERICO-NEXT	H2020-INFRAIA	Simon Keeble/ Aldo Drago	<u>simon@bluelobster.co.uk</u> <u>aldo.drago@um.edu.mt</u>
EONav	H2020-SC2	Kris Lemmens	kris.lemmens@offshorenavigat ion.com
MERCES	H2020-SC5	Roberto Danovaro	MERCES@univpm.it
Sea Litter Critters and CLAIM	H2020-BG	Ilaria Schiavi	ilaria.schiavi@irissrl.org
LINCOLN	H2020-BG	Lucia Ramundo	lucia.ramundo@polimi.it
MUSES	H2020-BG	Bruce Buchanan	Bruce.Buchanan@gov.scot
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PerformFISH	H2020-SFS	Katerina Moutou	kmoutou@bio.uth.gr
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