



HORIZON EUROPE

THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

ELISABETTA BALZI

Healthy Mediterranean Sea Pilot workshop

14 September 2021



A success story

CLAIM Project – Cleaning Litter by developing and Applying Innovative Methods in European seas

Technologies will prevent litter from entering the sea at two main source points: **waste-water treatment plants** and **river mouths**

A photocatalytic nano-coated device will be developed for use in treatment plants to **clean micro-plastics**, harnessing the power of the sun to jump-start the degradation of nanoparticles.

The project will also deploy a thermal treatment device for energy recovery from collected litter on-board ships and also in ports.

[Check out the results of Horizon 2020 projects to tackle plastic pollution in our ocean & sea](#)

HORIZON EUROPE

EURATOM


SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND
Exclusive focus on defence research & development

Research actions

Development actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*
Exclusive focus on civil applications

**Pillar I
EXCELLENT SCIENCE**




European Research Council

Marie Skłodowska-Curie

Research Infrastructures

**Pillar II
GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS**




Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre

**Pillar III
INNOVATIVE EUROPE**



European Innovation Council

European Innovation Ecosystems

European Institute of Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

Fission

Joint Research Center

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

HE Pillar II. Budget for clusters & for JRC

in current prices

Cluster 1	Health	€8.246 billion (including €1.35 billion from NGEU)
Cluster 2	Culture, Creativity & Inclusive Societies	€2.280 billion
Cluster 3	Civil Security for Society	€1.596 billion
Cluster 4	Digital, Industry & Space	€15.349 billion (including €1.35 billion from NGEU)
Cluster 5	Climate, Energy & Mobility	€15.123 billion (including €1.35 billion from NGEU)
Cluster 6	Food, Bioeconomy, Natural Resources, Agriculture & Environment	€8.952 billion
	JRC (non-nuclear direct actions)	€1.970 billion

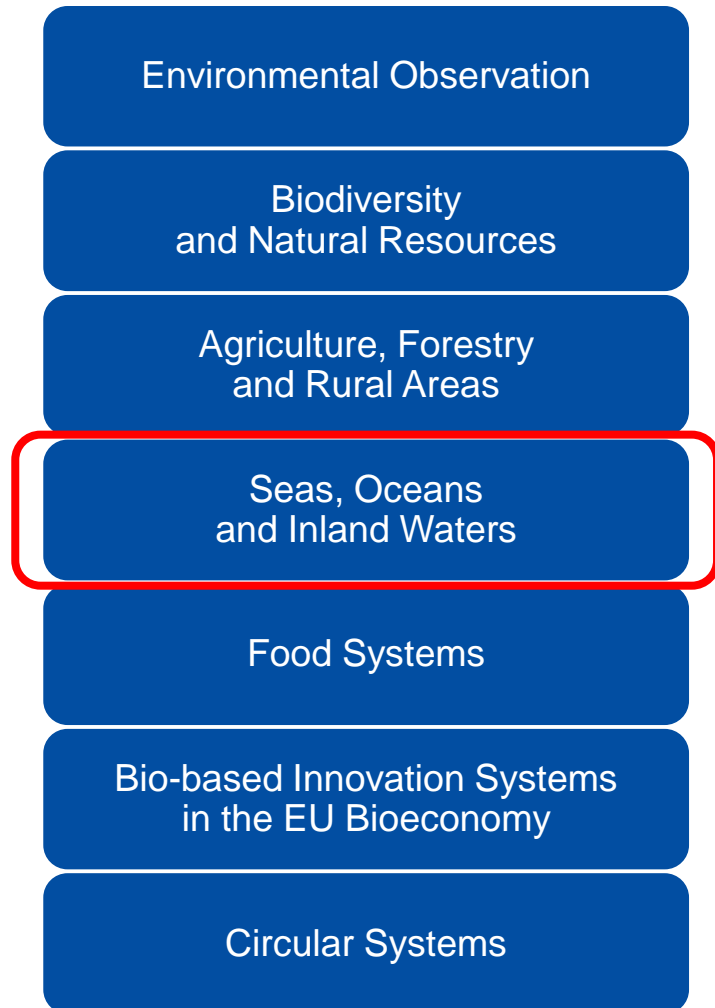
Clusters are including a budget for Partnerships and Missions
NGEU is Next Generation EU programme – Recovery Fund

Cluster 6. Area of Intervention: Seas, Oceans and Inland Waters

- Protect, restore and sustainably manage marine, inland and coastal ecosystems and prevent pollution, in a context of an improved and responsible governance framework
- Sustainably unlock the vast and unexploited economic potential of seas, oceans and inland waters aiming at producing more safe food, bio-based ingredients and raw material without increasing pressures on them, as well as the potential of aquaculture
- Partnering approaches, including sea basin and macro-regional strategies, and for contributing to International Ocean Governance commitments

CLUSTER 6 WP2021-2022: structure

FP Intervention Areas



Work Programme. Destinations



https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-9-food-bioeconomy-natural-resources-agriculture-and-environment_horizon-2021-2022_en.pdf

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-12-missions_horizon-2021-2022_en.pdf

Horizon Europe website: <http://ec.europa.eu/horizon-europe>

HORIZON EUROPE MISSIONS

Mission 'Restore our Ocean and waters by 2030' -



What are missions

EU missions should:

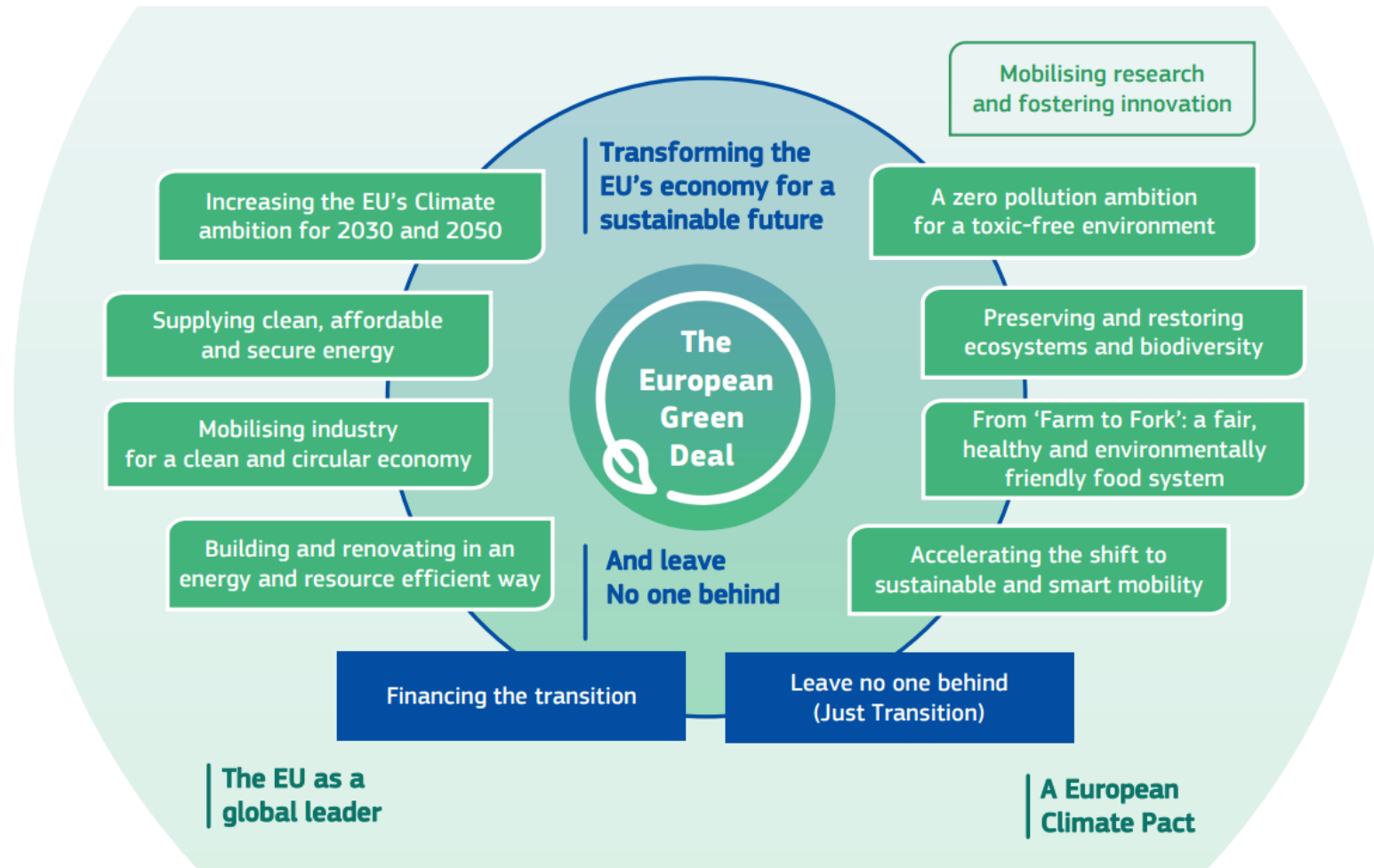
- Be **bold and inspirational**, with wide societal relevance
- Indicate a **clear direction**: targeted, measurable and time-bound
- Be **ambitious but realistic** research and innovation actions
- Spark innovation **across disciplines, sectors and actors**
- Be based on a **bottom-up** approach of multiple solutions



<https://europa.eu/!kw43Uc>

Mission Restore our Ocean and Waters

- The European Union can only fulfil its European Green Deal objectives with a healthy ocean
- Healthy ocean is only possible with a healthy water system.



Mission objectives and targets

Restore our ocean and waters by 2030

Protect and restore marine and freshwater ecosystems and biodiversity in line with EU Biodiversity Strategy

Protect a minimum of 30% of the EU's sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.

Strictly protect at least 10% of the EU's sea area

At least 25,000 km of free-flowing rivers are restored

Contribute to relevant upcoming marine nature restoration targets incl. degraded seabed habitats and coastal ecosystems

Prevent and eliminate pollution of our ocean, seas and waters in line with EU Action Plan towards Zero Pollution

Reduce by at least 50% plastic litter at sea

Reduce by at least 30% microplastics released into the environment

Reduce by at least 50% nutrient losses, the use and risk of chemical pesticides

Make the Blue Economy carbon neutral and circular in line with the European Climate Law

Eliminate greenhouse gas emissions from maritime economic activities in the EU and sequester those emissions that cannot be avoided (net zero maritime emissions)

Develop zero-carbon and low-impact aquaculture, and promote circular, low-carbon multi-purpose use of marine and water space.

Mission Objective

Restore our Ocean and Waters by 2030

Specific objectives

1. Protect and restore marine and freshwater ecosystems and biodiversity in line with EU Biodiversity Strategy

2. Prevent and eliminate pollution in line with EU Zero Pollution Action Plan

3. Make the sustainable blue economy carbon-neutral and circular in line with EU Climate Law

Cross-cutting enablers

A. Digital Ocean and Water Knowledge System
B. Public mobilisation and engagement

Outputs

Danube river basin Lighthouse

Atlantic and Arctic coast Lighthouse

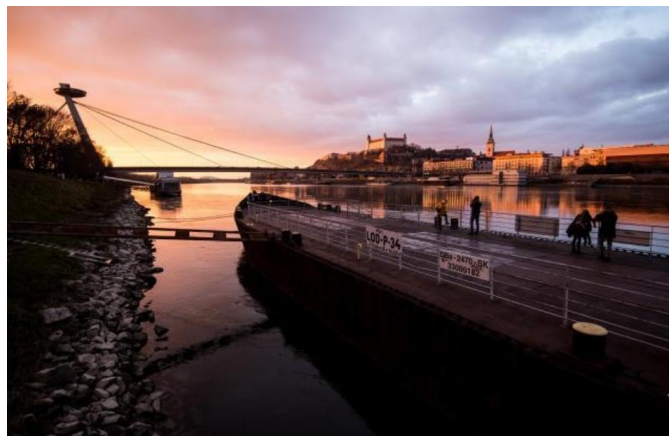
EU-wide Blue Parks conservation actions

Mediterranean Sea basin Lighthouse

Baltic and North Sea Lighthouse

Mission lighthouses

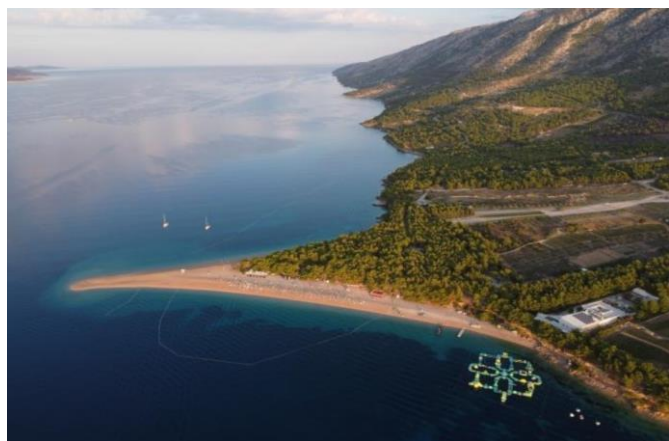
Danube river basin



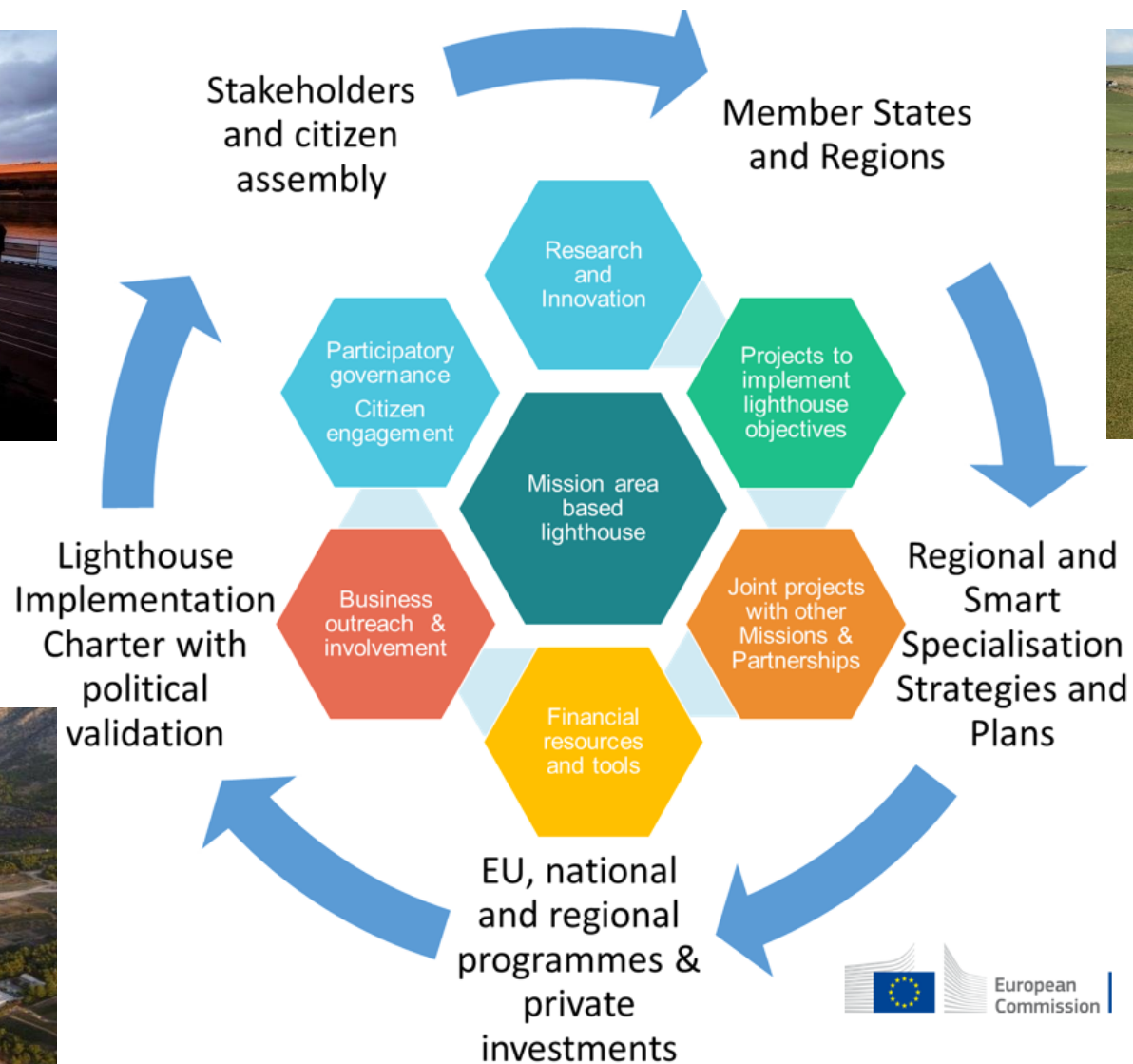
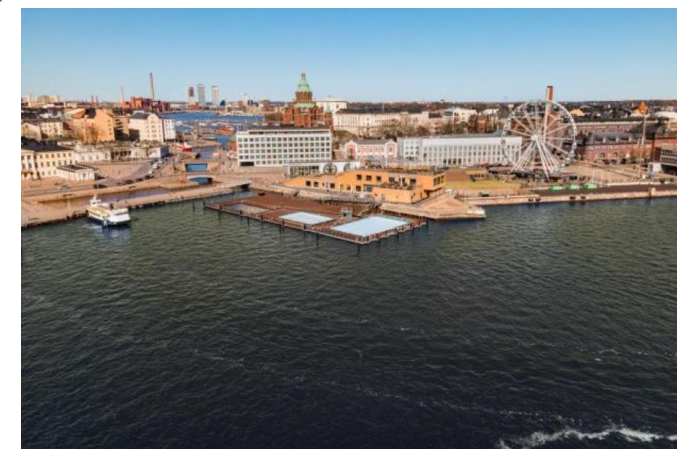
Atlantic & Arctic basin



Mediterranean sea basin



North and Baltic sea basin



Implementing the Mediterranean Sea lighthouse

Lighthouse objectives

- Connect and structure existing activities, disseminate and upscale solutions and mobilise relevant actors.
- Develop and deploy solutions to prevent, minimise, eliminate and monitor pollution in the Mediterranean Sea and its major river catchment areas
- Initial focus on plastic pollution, while agricultural pollution (nutrients) and urban/industrial pollution (chemicals), as well other sources of pollution such as pharmaceuticals and noise will subsequently be addressed

Support from Horizon Europe

- Preparatory steps towards Implementation charters
- Lighthouse technical and financial platforms and coordination activities
- Scalable breakthrough innovations to prevent and minimise marine and freshwater pollution.
- Enabling conditions including citizen assemblies: setting up, piloting and running them

Commitment from lighthouse partners

- The lighthouse partners (Member States, macroregions, regions, international partners, other stakeholders) should define, based on existing agreements, concrete measures for the basin for pollution reduction.
- Commit partners to addressing the Mission objectives including through their own programmes, instruments and initiatives

HORIZON-MISS-2021-OCEAN-01-01 PREPARATION FOR DEPLOYMENT OF 'LIGHTHOUSE DEMONSTRATOR'...



INDICATIVE BUDGET

5 mln EUR in total



IMPORTANT

Possible JRC participation

DEADLINE

14 September 2021



EXPECTED OUTCOMES

- ✓ Improved capacity to identify areas and solutions for effective lighthouses and scale ups, effective and timely deployment and de-risking of scale ups;
- ✓ Transformative and systemic portfolio approach to solutions addressing the challenges which the ocean, seas and waters are facing
- ✓ Increased awareness of stakeholders and citizens about the mission's objectives,
- ✓ Full and early uptake and support of the mission by the Member States and Associated countries, regions and other stakeholders and citizens.

Digital
transformation

Related impacts:
Awareness raising &
outreach

Participatory
governance

#EUmissions

#MissionOcean

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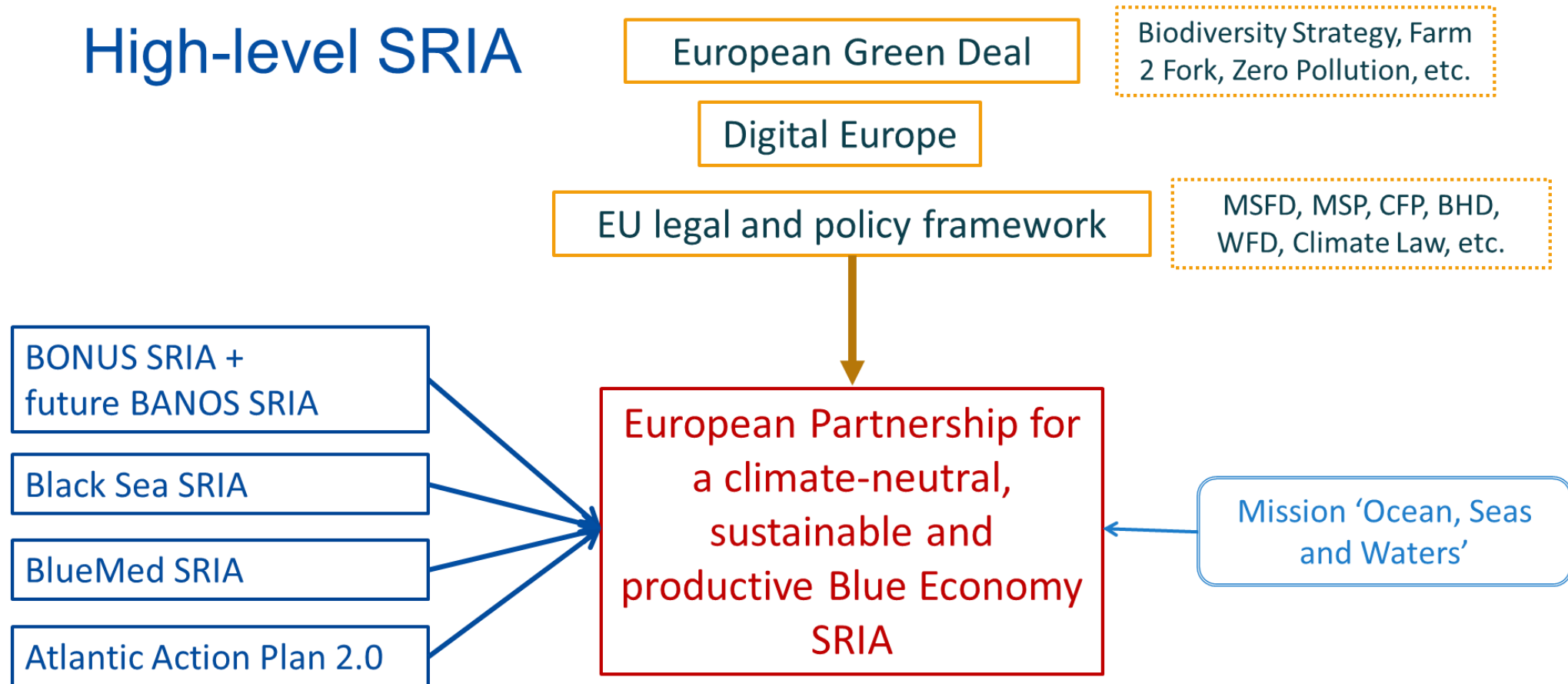
HORIZON EUROPE

European Partnership for a Climate Neutral, Sustainable and Productive Blue Economy



Sustainable Blue Economy Partnership

High-level SRIA



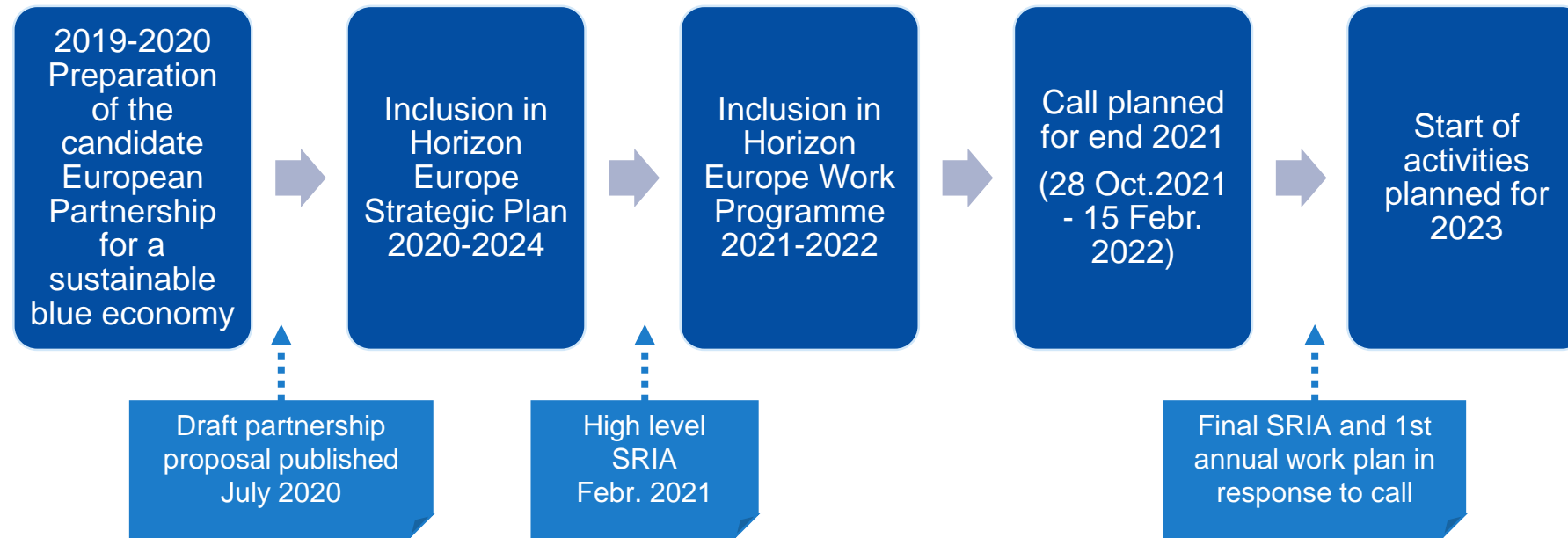
Sustainable Blue Economy Partnership

High-level SRIA

Rationale –
SRIA thematic
matrix structure –
proposed pillars

Pillar 1	Pillar 2	Pillar 3
A blue economy in harmony with nature	Blue economy solutions towards climate neutrality	A thriving blue economy for the people
Pillar 4 Integrated and responsive ocean governance		
KEY ENABLERS		
Digitalisation		
FAIR Data		
Infrastructures		
Ocean literacy		
Social innovation		
Sustainable finance		
Human capacity		

Sustainable Blue Economy Partnership timeline



#HORIZONEU #EUMISSIONS

Get involved!



<http://ec.europa.eu/horizon-europe>
RTD-HORIZON-EUROPE-MISSIONS@ec.europa.eu



MERCI EMMANUELLE!

