

*Horizon Europe:*

**Candidate European Partnership for a climate neutral,  
sustainable and productive Blue Economy**

**Name** , Affiliation

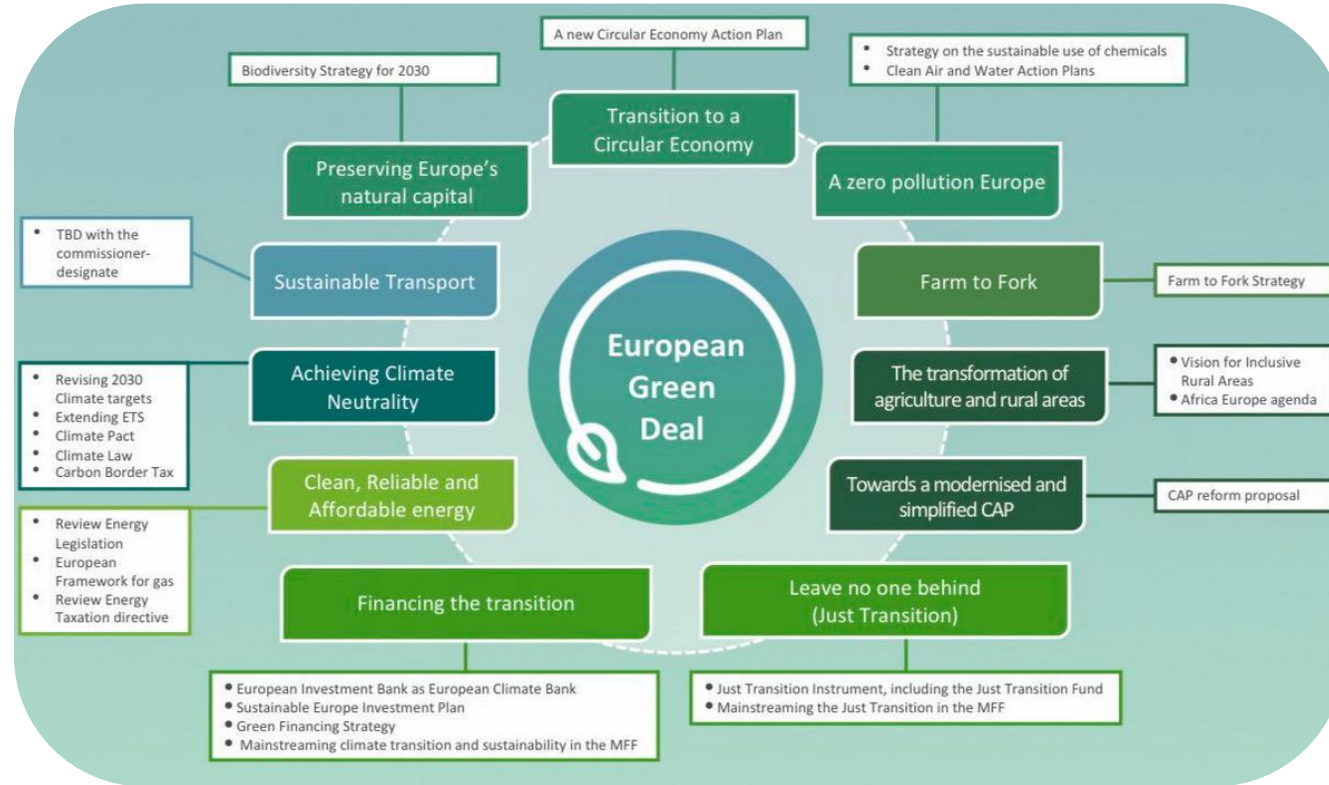


# Challenges and opportunities for Europe

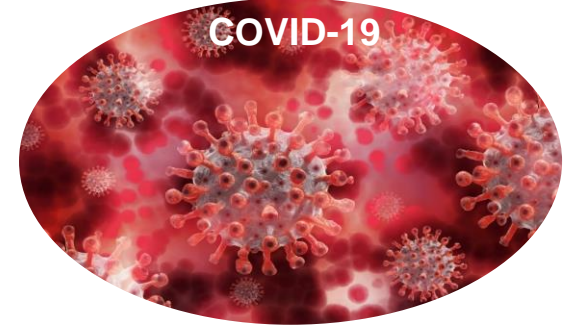
## BIODIVERSITY LOSS



## CLIMATE CHANGE



## COVID-19



## Digitalisation



Addressing challenges and achieving policy targets requires concerted action...

# European Partnerships in Horizon Europe

- Partnerships will be a key implementation tool of Horizon Europe and contribute significantly to achieving the **EU's political priorities**.
- Many transitions and challenges require **EU-wide coordination** and **systemic solutions**.
- The EU will team up with Member States and industry in a partnership to develop a shared long-term vision and to **co-invest in solutions**
- European Partnerships are critical to accelerate the required **green** and **digital transitions** that Europe needs.



# European Partnerships in Horizon Europe

3 types:

- **Co-programmed European Partnerships**  
Partnerships between the Commission and private and/or public partners, based on memoranda of understanding and/or contractual arrangements.
- **Co-funded European Partnerships using a programme co-fund action**  
Partnerships involving EU countries, with research funders and other public authorities at the core of the consortium.
- **Institutionalised European Partnerships**  
Partnerships where the EU participates in research and innovation funding programmes that are undertaken by EU countries. Examples; Art. 185/187, EIT-KICs.



# European Partnerships in Horizon Europe

49 partnerships candidates grouped across 5 areas

FOOD, BIOECONOMY, NATURAL  
RESOURCES, AGRICULTURE &  
ENVIRONMENT

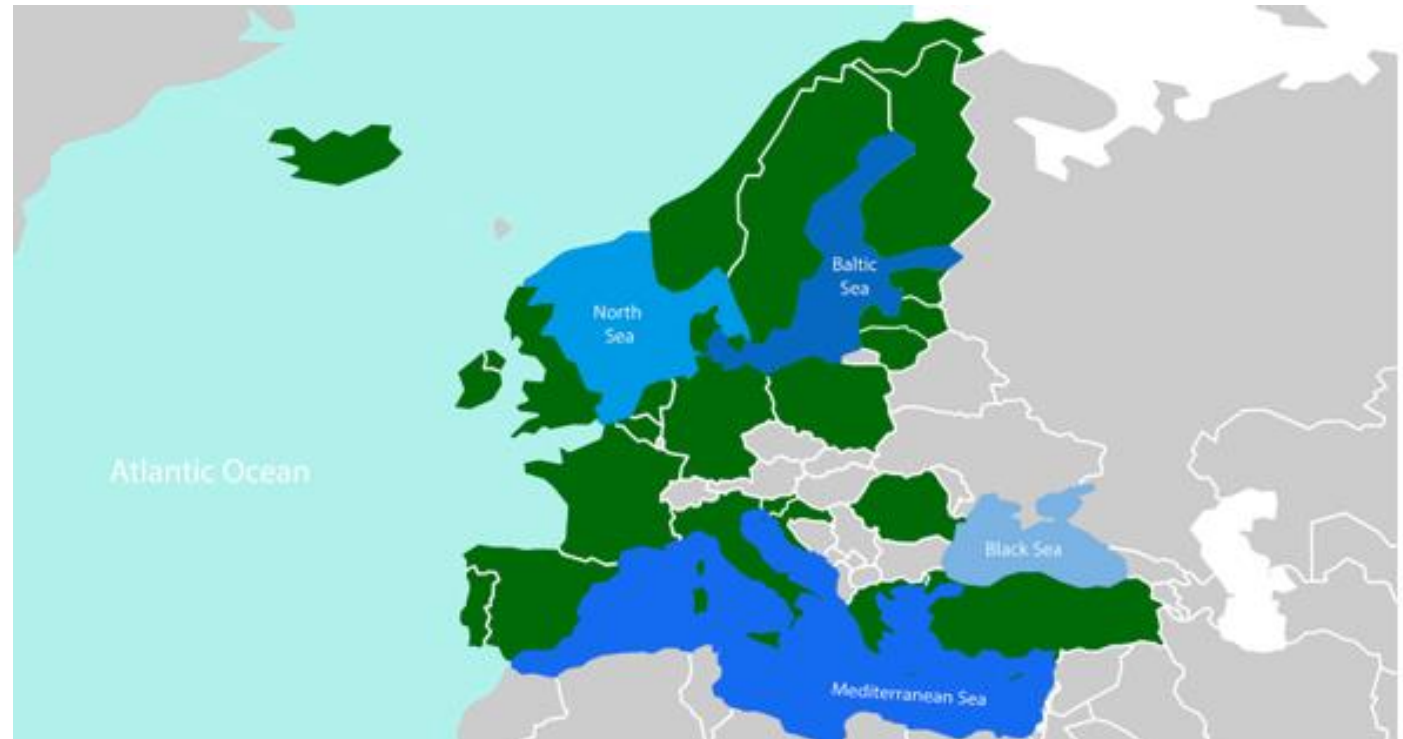
➔ ***“A climate neutral sustainable and productive blue economy”***

DIGITAL INDUSTRY & SPACE

HEALTH

CLIMATE, ENERGY & MOBILITY

PARTNERSHIPS ACROSS  
THEMES





# A climate neutral, sustainable and productive Blue Economy

*“The **transition towards climate neutrality** can only succeed if we work together, steering our policies in a single direction, guided by the UN Sustainable Development Goals and the European Green Deal, we can deliver **an economy that works** for the **people** and the **planet**.”*

Ursula Von der Leyen



*“A **sustainable Blue Economy** will have to play a central role in alleviating the multiple demands on the EU’s land resources and tackling climate change.”*



*win:win solutions - economic development & ecosystem preservation and restoration*



*“A **sustainable ocean economy**, where **protection**, **production** and **prosperity** go hand in hand, can create a healthy ocean that provides solutions to global challenges.”*

# A climate neutral, sustainable and productive Blue Economy



*“... all sectoral and cross-sectoral economic activities based on or related to the oceans, seas and coasts ...”*



*“ ... is comprised of both marine- and terrestrial -based activities... Yet **blue economy value chains** will always incorporate some form of application in or use of marine and coastal space, resources or information.”*

# Evolution of the Partnership

- **Fiche – initial outline of the partnership** (late 2019 /early 2020)
- **Partnership proposal** (online on EC website since July 2020)
- **Partnership description** in *Horizon Europe Work Programme 2021-2022* (including expected impacts)
- **Strategic Research & Innovation Agenda (SRIA)** (February 2021) - outlining the strategic scope of activities.





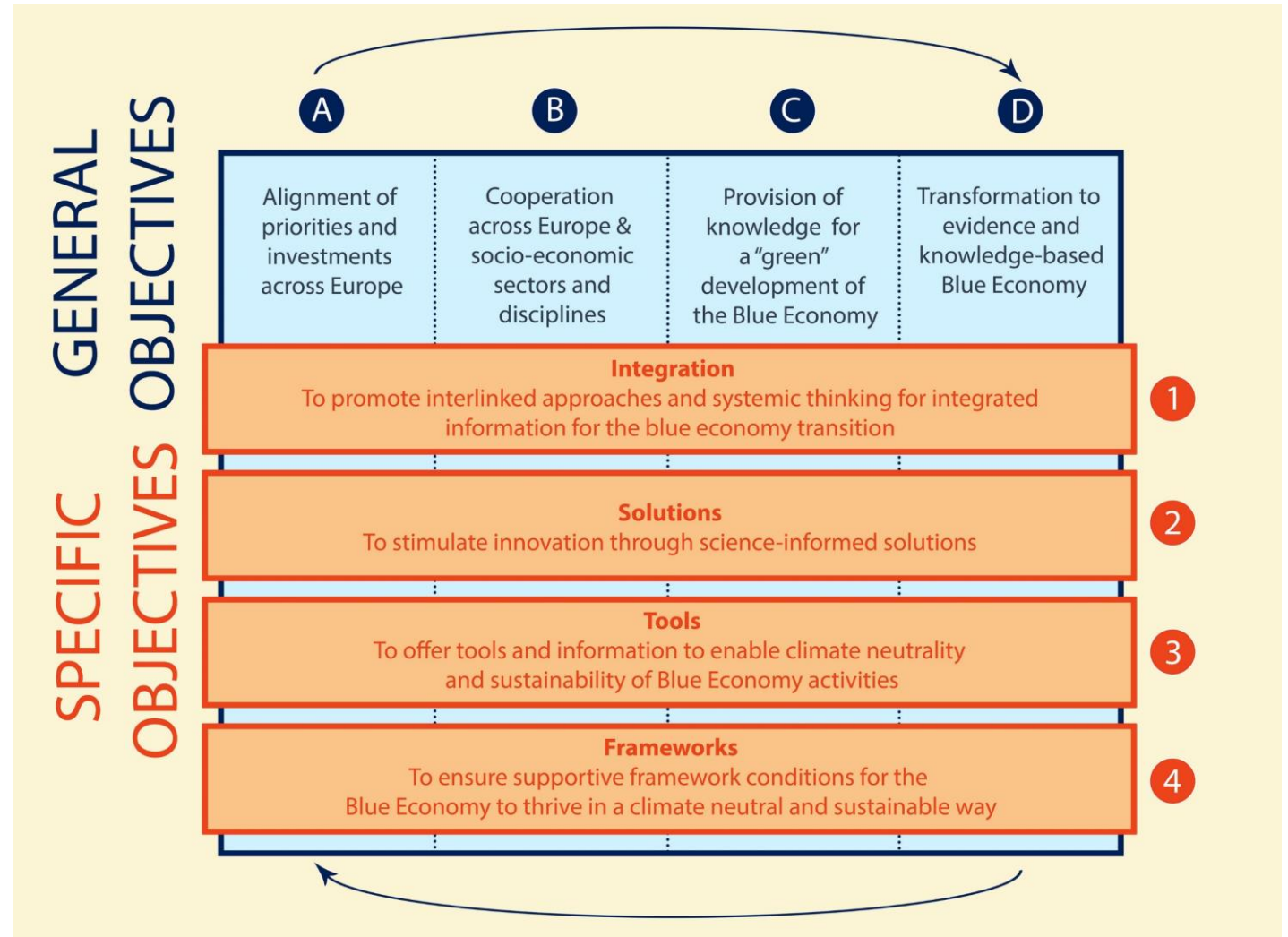
## “A climate neutral, sustainable and productive Blue Economy”

### Vision:

... to enable a **just and inclusive transition** from the current, widely non-sustainable ocean economy to a **regenerative and circular blue economy** that contributes to **restoring the ocean’s health, resilience** and the **services it provides to people**, by being climate-neutral, sustainable and productive.

### In a nutshell:

The **blue** arm of the **Green Deal**

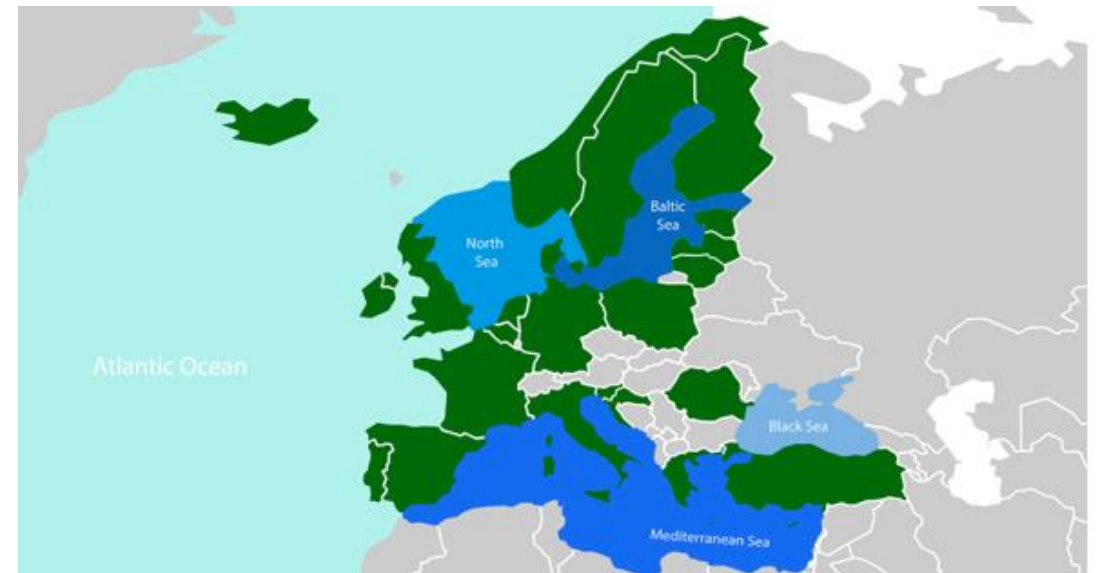


# Strategic Research and Innovation Agenda – process & timeline



## SRIA

- outlines the strategic scope of activities (“high level”)
- aligns regional SRIAs and pan-European strategies
- builds on work of sea-basin initiatives & previously funded projects
- is co-created with stakeholders
- leverages synergies (partnerships, missions, EU & national efforts)
- foresees a wide range of instruments; Joint Calls (EU, national, cofunded), Knowledge Hubs, Policy Labs, Infrastructure sharing, Capacity development, and more.



# Schematic steps towards a Blue Economy partnership SRIA

Building on existing regional (and thematic) strategic documents



Figure from proposal, July 2020

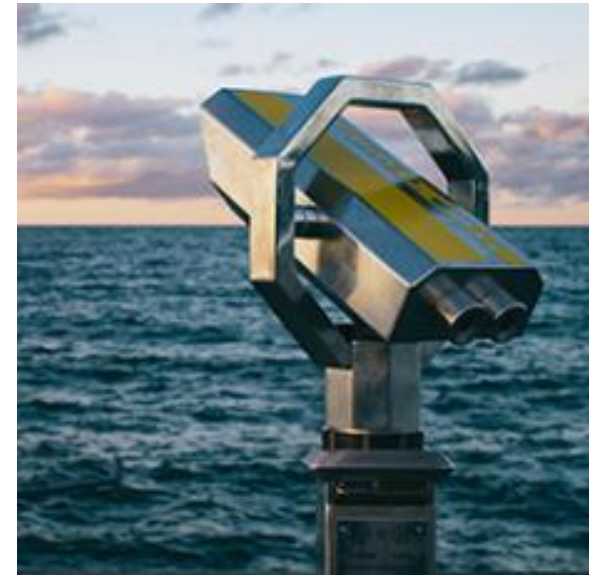


# SRIA Drafting Group Members

Name	Affiliation	Role	Name	Affiliation	Role
Thorsten Kiefer	JPI Oceans	Drafting Lead	Lisette Enserink	Netherlands	National Contact Representative
Willem De Moor	JPI Oceans	Drafting Lead	Petra Wallberg	Sweden	National Contact Representative
Oonagh McMeel	JPI Oceans	Drafting Lead	Martin Visbeck	Germany	Nominated expert
Maurice Heral	France (ANR)	National contact lead	Gerd Kraus	Germany	Nominated expert
Niall McDonough	Ireland (MI) (& Atlantic region)	National contact lead	Petri Suuronen	Finland	Nominated expert
Viorel Vulturescu	Romania	National Contact Representative	Karoliina Koho	BANOS BONUS	RSC CSA
Dennis Lisbjerg	Denmark	National Contact Representative	Margherita Capelletto	Italy / Blue Med	National Contact Representative /RSC CSA
Kathrine Angell-Hansen	Norway	National Contact Representative	Mustafa Yucel	Black Sea CONNECT	RSC CSA

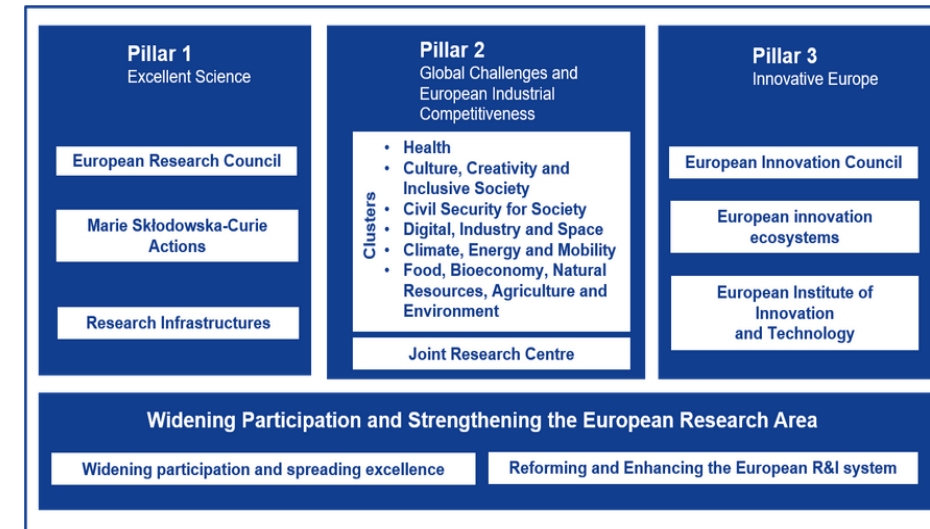
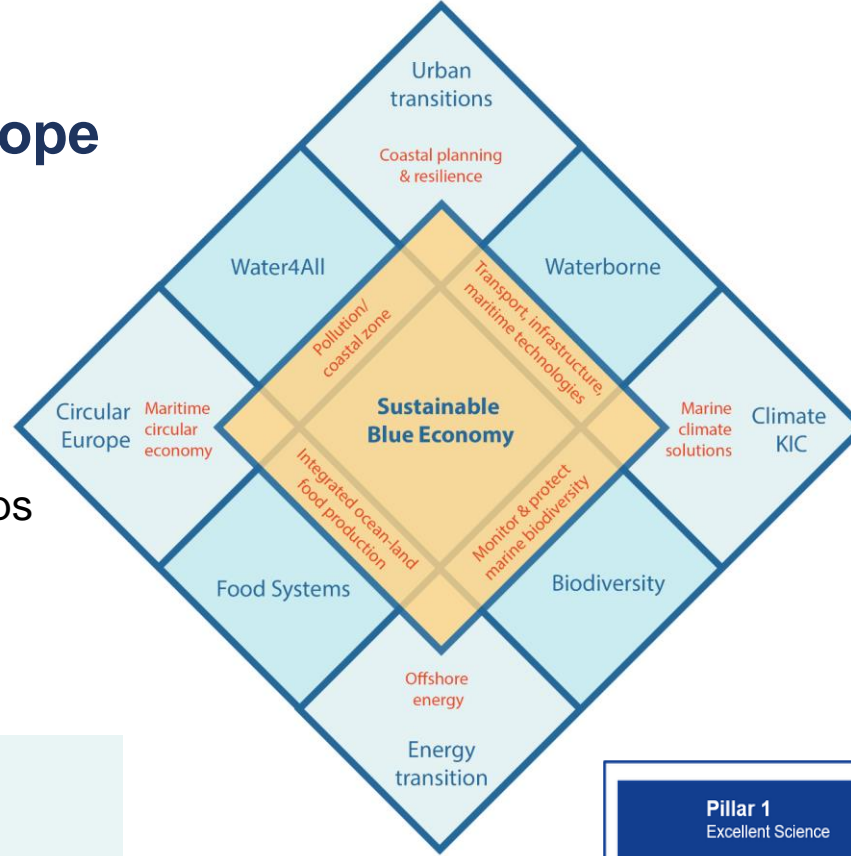
## **SRIA public consultation (24 November – 16 December 2020).**

- Comments sought on relevance of pillars and key enablers, and on relevance and urgency of objectives (incl. opportunity to comment)
- 212 total response from 20 countries - Romania highest (130), followed by Belgium (13) and Germany (10)
- Majority of respondents from research performing organisations followed by respondents from the private sector
- Feedback largely supported SRIA thematic structure:
  - More reference to industry
  - More focus on restorative/ regenerative aspects
  - Specific suggestion for new R&I objectives
- Public report available (available online)



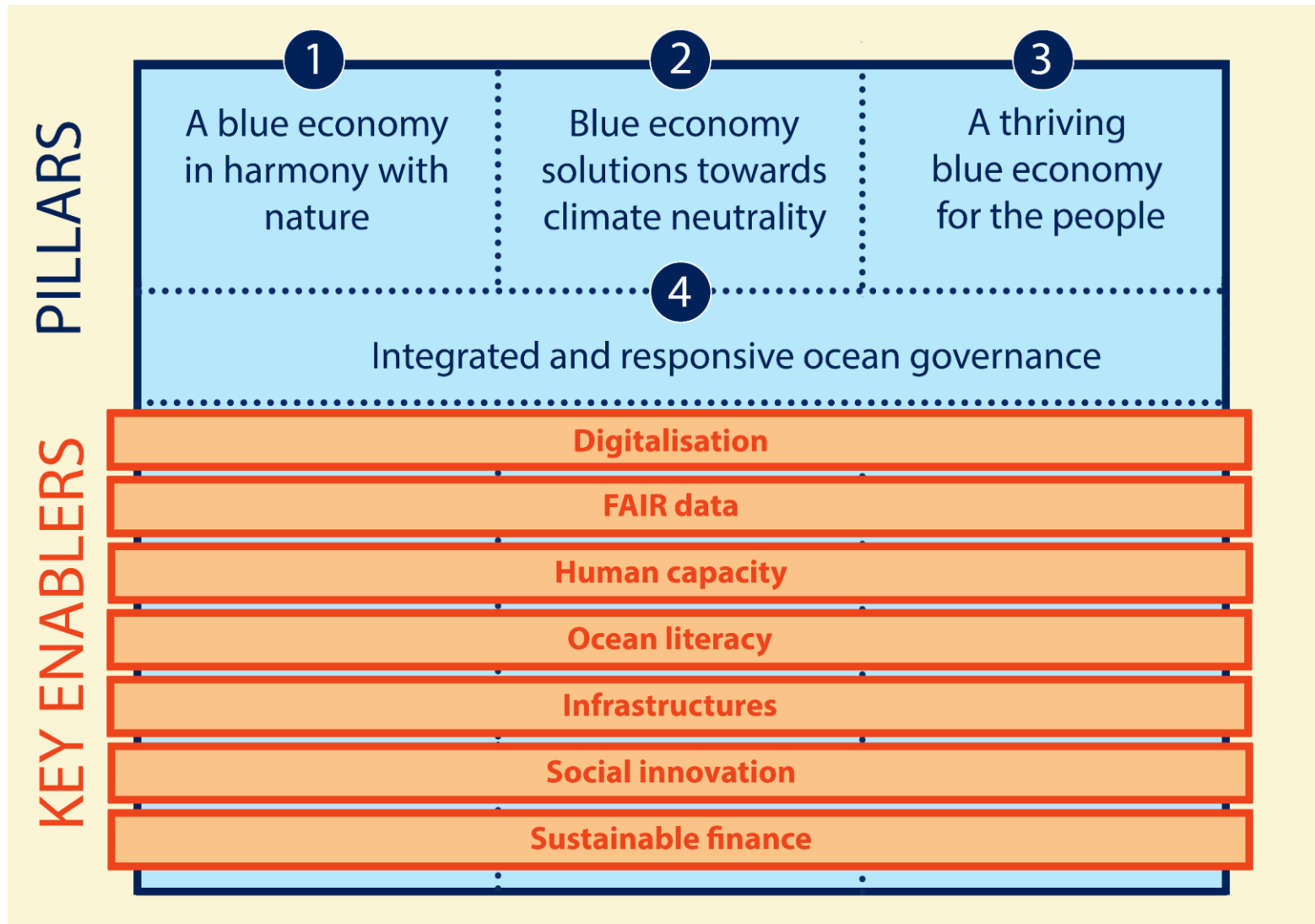
# Leverage synergies in Horizon Europe

- Inter-partnership bilateral dialogues:
- identify synergies and avoid duplications
- Identify joint actions/ activities
- highlight marine component in other partnerships
- establish timelines





# SRIA Schematic - A climate neutral, sustainable & productive blue economy



## Core principles

- Open Science
- Responsible Research and Innovation
- Capacity building
- Co-creation (incl. industry engagement)
- Holistic approach across domains

# Thematic pillars and R&I clusters

*How can the blue economy contribute to the sustainable use, protection and regeneration of marine ecosystems?*

## PILLAR 1

A blue economy in  
harmony with nature

### R&I Objectives Clusters

- Cluster A. Economic development within environmental boundaries
- Cluster B. Reduction of pollution and other forms of disturbance of the marine ecosystem.
- Cluster C. Sustained observation, monitoring and digitalisation of seas and oceans



# Pillar 1. A blue economy in harmony with nature

*How can the blue economy contribute to the sustainable use, protection and regeneration of marine ecosystems?*

## R&I Objectives

- **Cluster A. Economic development within environmental boundaries**
  - i. Enabling Good Environmental Status by characterising ocean health and cumulative impacts of blue economy activities from catchment to the deep sea
  - ii. Protecting, monitoring and restoring ecosystem resilience and marine biodiversity considering also nature-based solutions
  - iii. Understanding and quantifying the ecosystem responses to effects of natural and economic processes that differentiate basin systems from each-other
- **Cluster B. Reduction of pollution and other forms of disturbance of the marine ecosystem.**
  - i. Providing innovative technological, circular and nature-based solutions for prevention and remediation of ecosystem disturbance and pollution including eutrophication, hazardous substances, litter and underwater noise
  - ii. Designing economic practices that reconcile the conservation and restoration of habitats with their sustainable use
  - iii. Scientifically underpinning criteria for the responsible use of non-living marine resources (e.g. sand, gravel, minerals), including from the deep sea
- **Cluster C. Sustained observation, monitoring and digitalisation of seas and oceans**
  - i. Advancing the Digital Ocean concept and developing digital twins for the comprehension of marine ecosystems
  - ii. Achieving more effective and biologically relevant monitoring, surveying and sampling



# Thematic pillars and R&I clusters

*How can the blue economy contribute to climate resilience and climate neutrality by 2050?*

## PILLAR 2

**Blue economy  
solutions towards  
climate neutrality**

### R&I Objectives Clusters

- Cluster A. Zero and negative carbon emissions
- Cluster B. Purpose-driven technological innovations transforming blue economy sectors to climate neutrality
- Cluster C. Climate resilience of coastal socioeconomic and marine ecological systems



## Pillar 2. Blue economy solutions towards climate neutrality

*How can the blue economy contribute to climate resilience and climate neutrality by 2050?*

### R&I Objectives

- **Cluster A. Zero and negative carbon emissions**
  - i. Underpinning innovation to upscale renewable ocean energy
  - ii. Fostering the carbon sequestration capacity of coastal and marine environments ('blue carbon') and preventing carbon seepage to the atmosphere
- **Cluster B. Purpose-driven technological innovations transforming blue economy sectors to climate neutrality**
  - i. Developing sustainable and cost-efficient solutions for construction, maintenance, reuse and multi-use of off-shore platforms
  - ii. Designing green and smart ports, marinas and transport links
  - iii. Enabling novel materials and technologies for sustainable manufacturing and product life cycle management
  - iv. Contributing to innovative and sustainable concepts for ships and recreational boating
- **Cluster C. Climate resilience of coastal socioeconomic and marine ecological systems**
  - i. Developing nature-based solutions to improve responsiveness to natural disasters, increase natural capital and restore ecosystems
  - ii. Quantifying at regional-scale, and across basins, the impacts of climate change (acidification, sea-level rise, deoxygenation, ocean warmings and other stressors) to strengthen ocean and coastal resilience

# Thematic pillars and R&I clusters

*How can the blue economy contribute to people's health, well-being and prosperity in a sustainable, resilient and equitable way?*

## PILLAR 3

**A thriving  
blue economy  
for the people**

### R&I Objectives Clusters

- Cluster A. Sustainable, accessible and safe food, feed and bioproducts
- Cluster B. Resilient, sustainable and safe coastal communities
- Cluster C. Equitable health and well-being
- Cluster D. A safe marine environment and blue economy





## Pillar 3. A thriving blue economy for the people

*How can the blue economy contribute to people's health, well-being and prosperity in a sustainable, resilient and equitable way?*

### R&I Objectives

#### Cluster A. Sustainable, accessible and safe food, feed and bioproducts

- i. Developing new and optimising existing blue bioeconomy and biotechnology value chains
- ii. Reducing and valorising waste, promoting circularity and ensuring safe, healthy, affordable and traceable products
- iii. Innovating sustainable seafood production systems, including offshore, closed, low- and multi-trophic aquaculture and low impact sustainable fisheries

#### Cluster B. Resilient, sustainable and safe coastal communities

- i. Fostering innovation, circularity and job creation in coastal communities through a fair, just and inclusive transition
- ii. Exploring economic opportunities of innovative and sustainable concepts for marine and coastal tourism sectors
- iii. Reducing disaster risk for coastal communities and sectors through strengthened resilience and preparedness to climatic, geological and anthropogenic hazards

#### Cluster C. Equitable health and well-being

- i. Investigating the benefits of blue spaces in enhancing human health
- ii. Reducing human health risks from marine borne pathogens, toxins and toxicants
- iii. Using biodiscovery to develop applications for human-health and well-being

#### Cluster D. A safe marine environment and blue economy

- i. Realising safe and cost-effective offshore operations
- ii. Advancing technologies for autonomous processes and navigation
- iii. Advancing strategies to minimise risk from novel maritime technologies
- iv. Contributing to efficient maritime surveillance

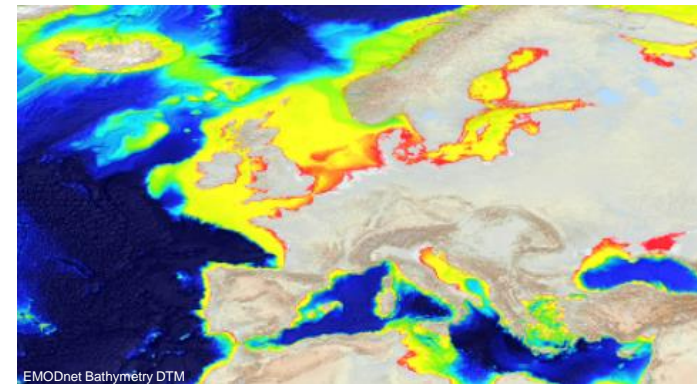
# Thematic pillars and R&I clusters

*How can knowledge-based, inclusive, integrated and responsible ocean governance support the transformation towards a sustainable blue economy?*

**PILLAR 4**  
**Integrated and  
responsible  
ocean governance**

## R&I Objectives Clusters

- Cluster A. Co-created innovative and knowledge-responsive governance at appropriate geographic scale
- Cluster B. Operationalisation of the 'Ecosystem Approach to Management' in the Blue Economy
- Cluster C. Behavioural and structural socio-economic analysis in support of social innovation and social licence to operate for the blue economy



## Pillar 4. Integrated and responsible ocean governance

*How can knowledge-based, inclusive, integrated and responsible ocean governance support the transformation towards a sustainable blue economy?*

### R&I Objectives

#### **Cluster A. Co-created innovative and knowledge-responsive governance at appropriate geographic scale**

- i. Aligning and advancing scientific and regulatory, environmental and local knowledge towards new opportunities in the blue economy
- ii. Identifying trade-offs and synergies and balancing conflicting economic and societal interests
- iii. Exploring models of effective, responsive and integrated governance systems for European, national and local levels
- iv. Creating intelligent digital support systems for environmental decision-making, and reduction of uncertainties for maritime businesses

#### **Cluster B. Operationalisation of the 'Ecosystem Approach to Management' in the Blue Economy**

- i. Contributing knowledge to achieve coherence in policy implementation, including transboundary contexts, across sea-basins, between countries, between terrestrial, coastal and marine/maritime policies, and across sectors
- ii. Delivering data and scientific knowledge for coherent area-based management including Marine Protected Areas, Maritime Spatial Planning and multi-use of marine space
- iii. Developing operational assessment frameworks to evaluate the status of the marine environment and sustainability of human uses

#### **Cluster C. Behavioural and structural socio-economic analysis in support of social innovation and social licence to operate for the blue economy**

- i. Supporting a just transition of all blue economy sectors
- ii. Informing the reform of ocean-related subsidies
- iii. Investigating and valuing ecosystem services for strategic and economic decision-making

# Relation of blue economy sectors\* with the three thematic pillars of Partnership

Sector Labels*	Pillar 1 sustainability	Pillar 2 climate	Pillar 3 people	Specifications for this partnership
<b>Marine living resources</b>				fisheries, aquaculture and processing
<b>Marine non-living resources</b>				including dredging, sand, gravel and aggregate extraction
<b>Marine renewable energy**</b>				offshore wind, tides, waves, solar, hydrographic gradients
<b>Ports activities</b>				including smart ports and marinas
<b>Shipbuilding and repair</b>				including recreational boats, dredging of shipping lanes
<b>Maritime transport</b>				including shipping at low environmental impact
<b>Coastal tourism</b>				including marine tourism and recreation
<b>Bluebioeconomy &amp; biotechnology</b>				including bioprospecting
<b>Marine minerals</b>				mining of metals
<b>Desalination</b>				
<b>Maritime defence</b>	n/a	n/a	n/a	not addressed in the architecture of this partnership
<b>Submarine cables</b>				including for energy and communication

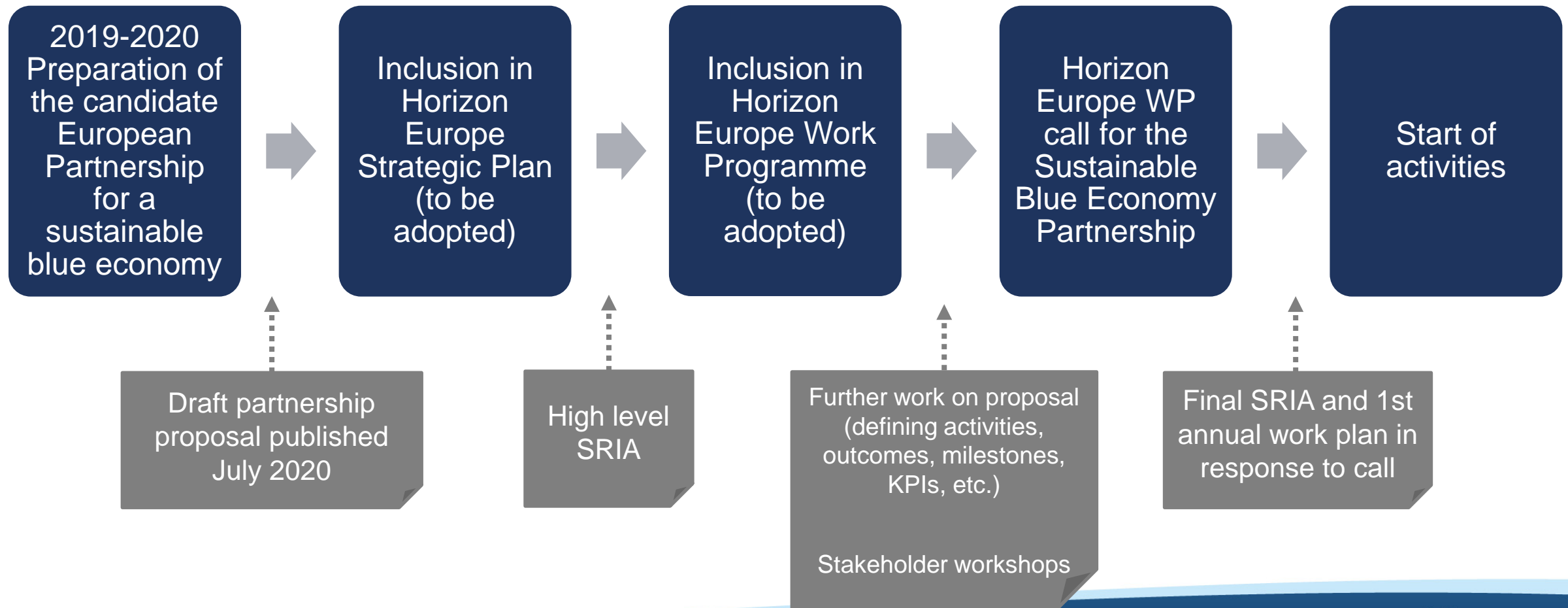
\*Sector Labels as in EU Blue Economy Report 2020

\*\* including the sector "Ocean energy" mentioned in the EU Blue Economy Report 2020

\*sectors as defined in the EU Blue Economy 2020 report



# Sustainable Blue Economy Partnership timeline



## Schematic of a possible governance architecture

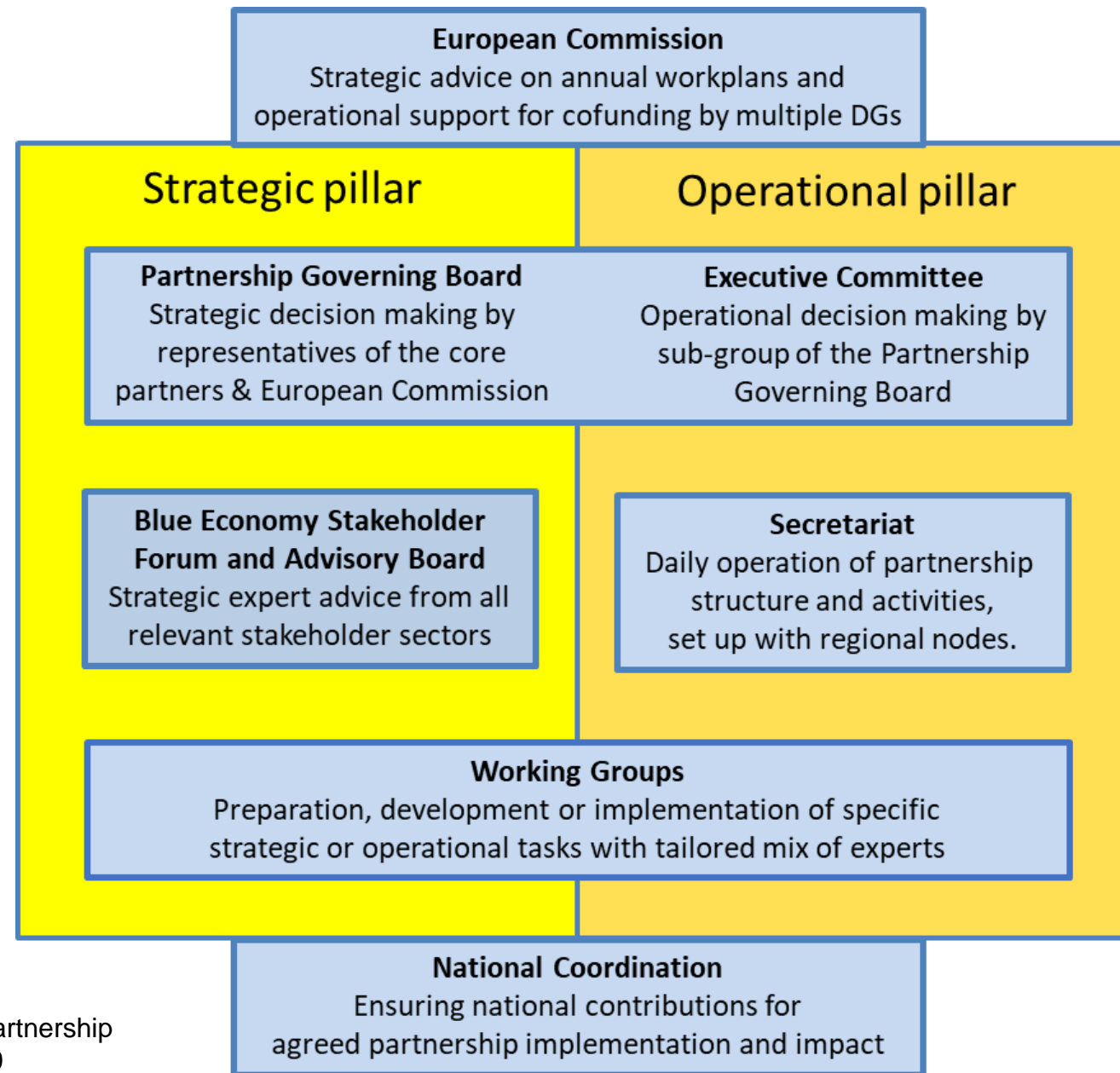


Figure from draft Partnership Proposal, July 2020

# Updated information and access to documents and resources ...

## HORIZON EUROPE CANDIDATE PARTNERSHIP:

### A CLIMATE NEUTRAL, SUSTAINABLE AND PRODUCTIVE BLUE ECONOMY

*The Blue arm of the Green Deal:  
transitioning to a sustainable blue economy*

#### Index:

- Parties involved
- Draft Strategic Research and Innovation Agenda
- Draft proposal for an European Partnership
- Timeline

In 2019 the European Commission asked potential partners to further elaborate proposals for the candidate European Partnerships identified during the strategic planning of Horizon Europe. The process led to a portfolio of 49 European Partnerships. Among them is the Partnership 'A climate neutral, sustainable and productive Blue Economy'. The Partnership aim is to reduce fragmentation by linking existing activities and efforts to combine and align pan-European, regional and national investments and the identified socio-political priorities for marine and maritime R&I. This will offer a value proposition that signifies high return on public R&I investment through collaboration and prospect for sustainable economic development.

#### RESOURCES

- Draft SRIA (.pdf)
- Draft proposal (www.)
- Slide deck (.ppt)
- Objectives figure (.jpg)
- Pillars & enablers figure (.png)

#### CONTACT

- Drafting Group: Thorsten Kiefer (JPI Oceans), Maurice Heral (ANR), Niall McDonough (MI)
- European Commission services: Elisabetta Balzi, Alice Belin, Wendy Bonne

... on JPI Oceans website:

<http://jpi-oceans.eu/climate-neutral-sustainable-and-productive-blue-economy>

JPI Oceans is currently supporting the Member States in the preparation of the Sustainable Blue Economy Partnership, but the governance structure and proposal consortium composition has not yet been developed or established.