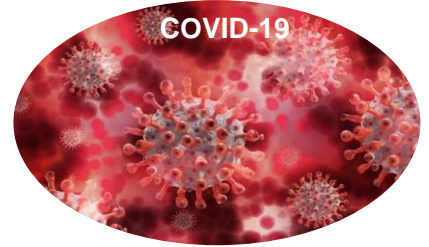
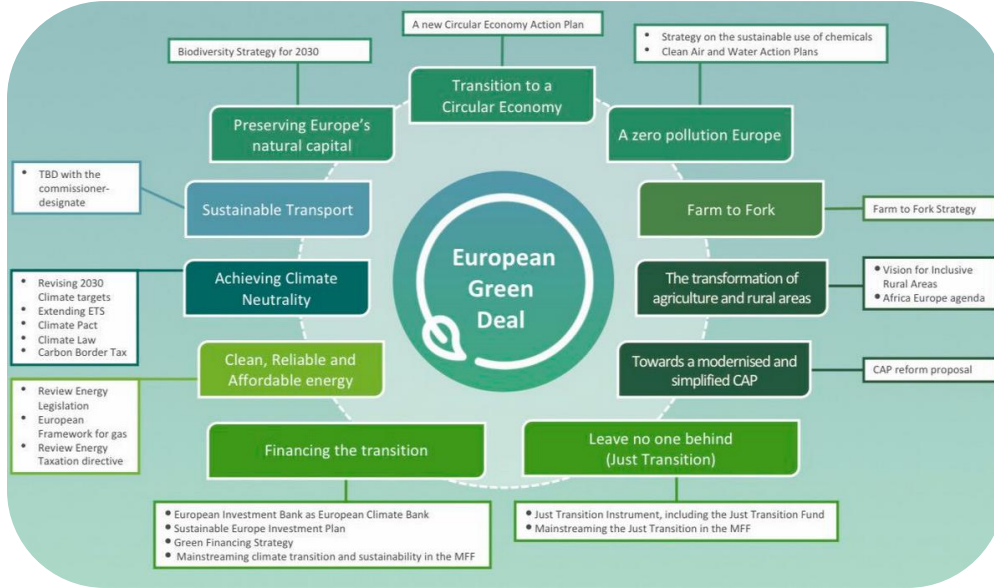


Horizon Europe:

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

Thorsten Kiefer , JPI Oceans

Europe



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



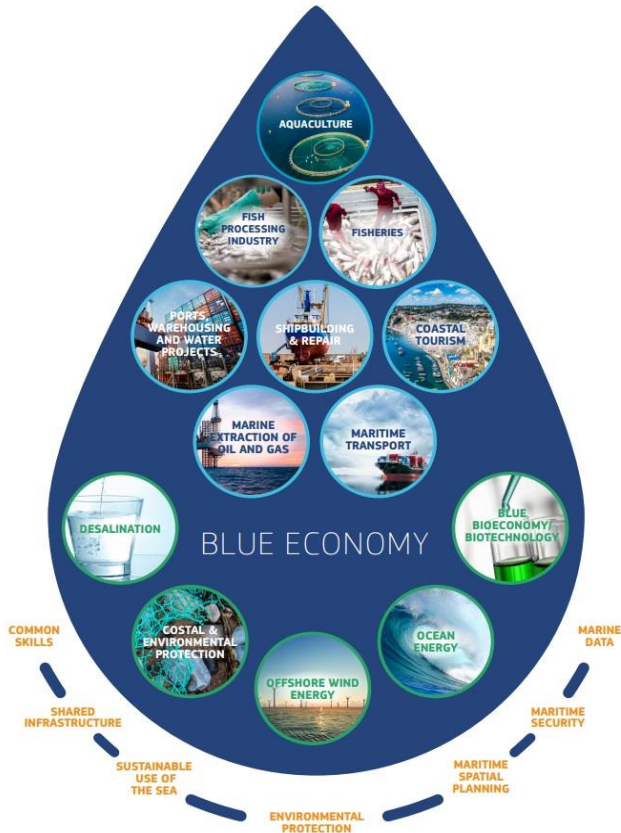
European Partnerships in Horizon Europe

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 program are undertaken by EU countries. Examples; Art. 185/187, EIT-KICs.



A climate neutral, sustainable and productive Blue Economy



Blue economy scope and definition

“... 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.**”*

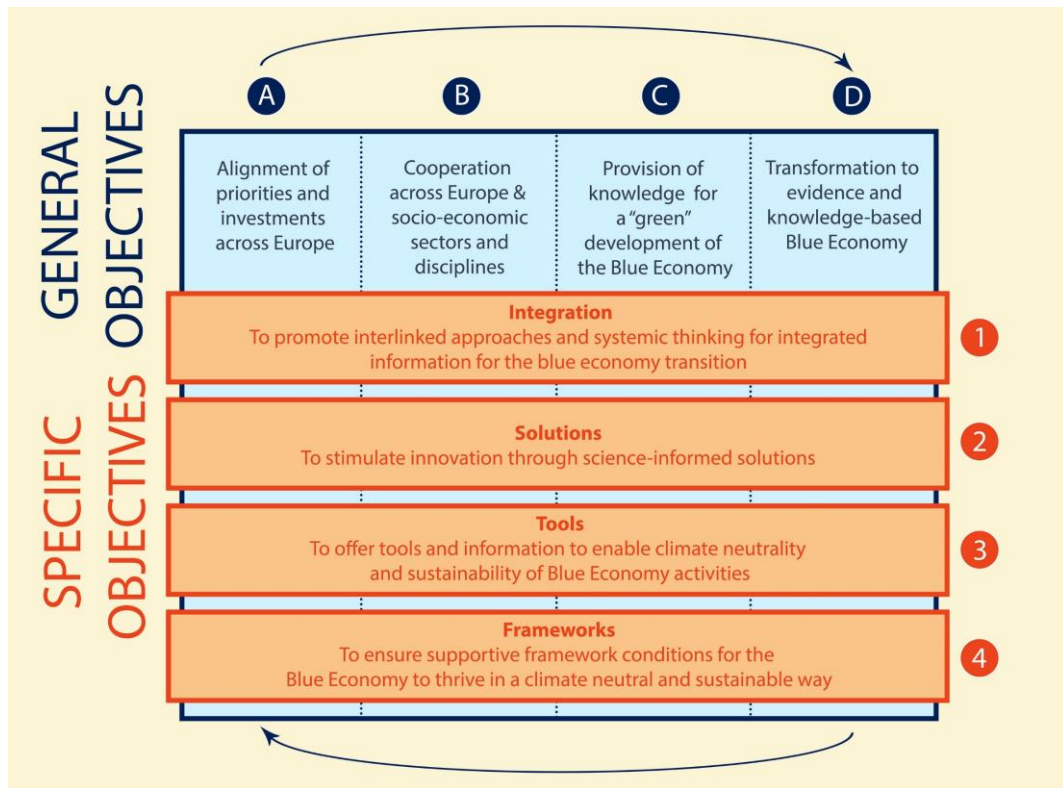
“A climate neutral, sustainable and productive Blue Economy”

Vision:

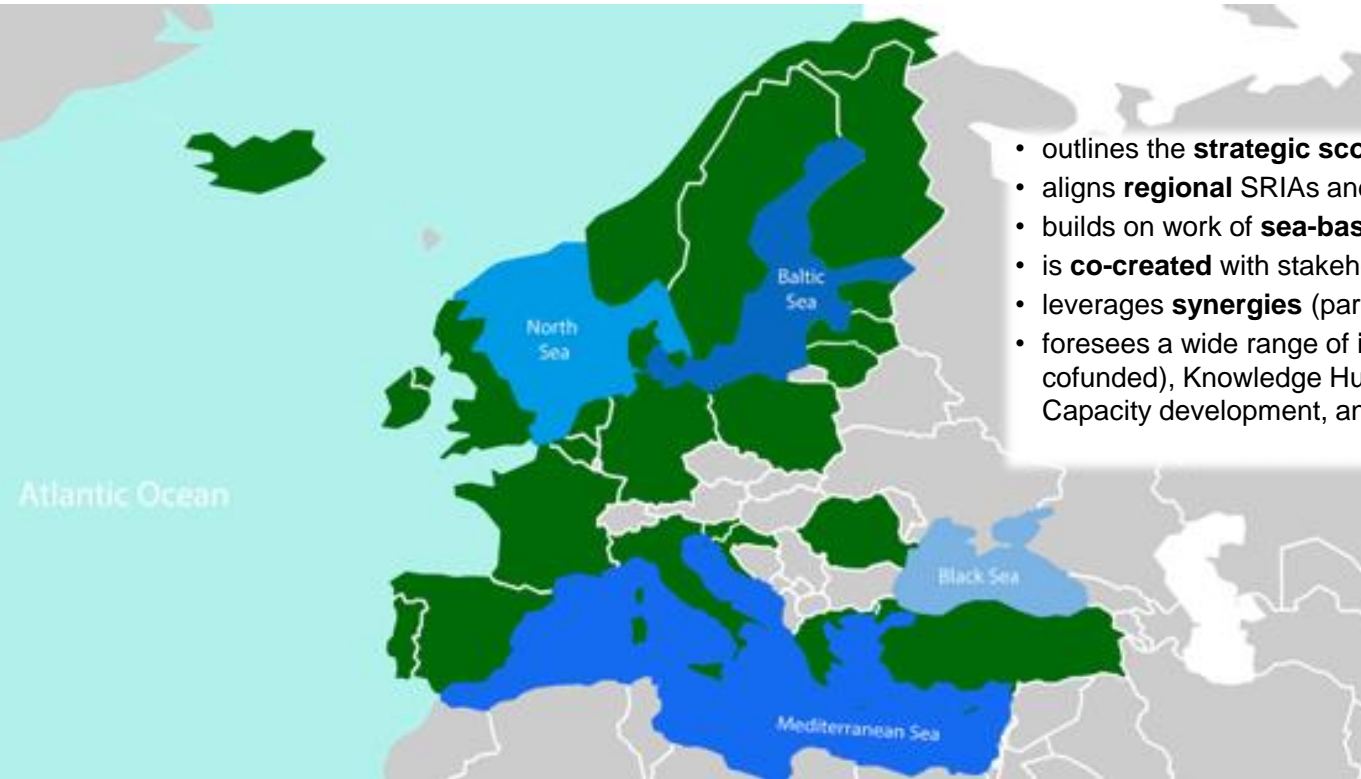
... to enable a **just and inclusive transition** from the current, widely non-sustainable ocean economy to a **regenerative and circular blue economy** that contributes to **restoring the ocean’s health, resilience and the services it provides to people**, by being **climate-neutral, sustainable and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

In a nutshell:

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



Strategic Research and Innovation Agenda



- 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 Sustainable Blue Economy partnership SRIA

Building on existing regional (and thematic) strategic documents

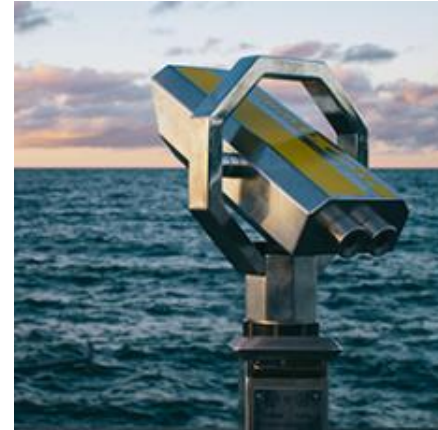


Figure from proposal, July 2020



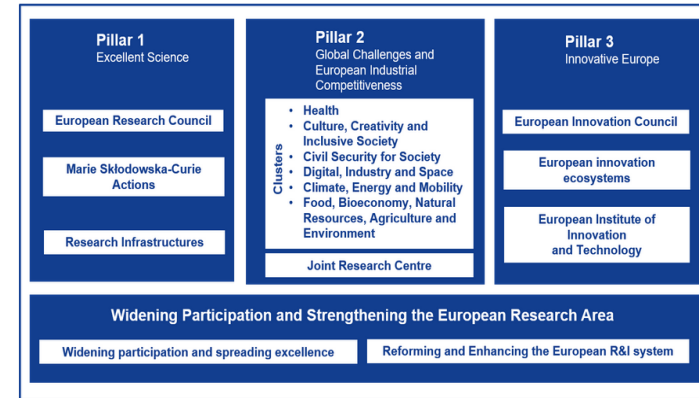
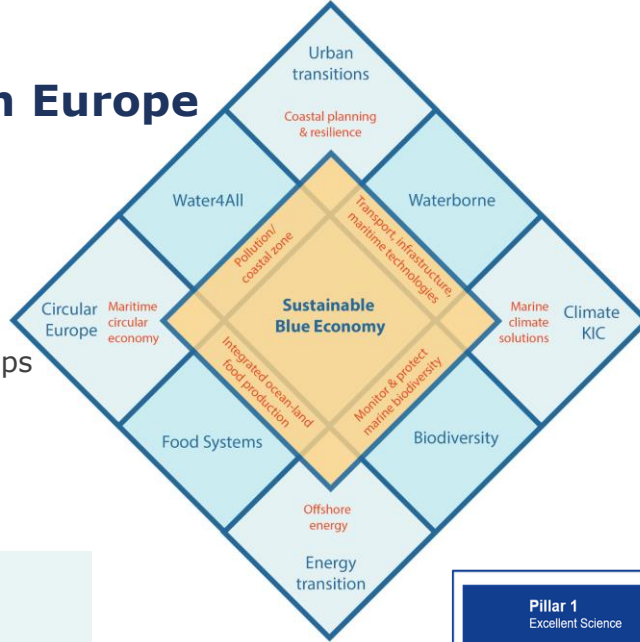
SRIA public consultation (24 November – 16 December 2020).

- 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)

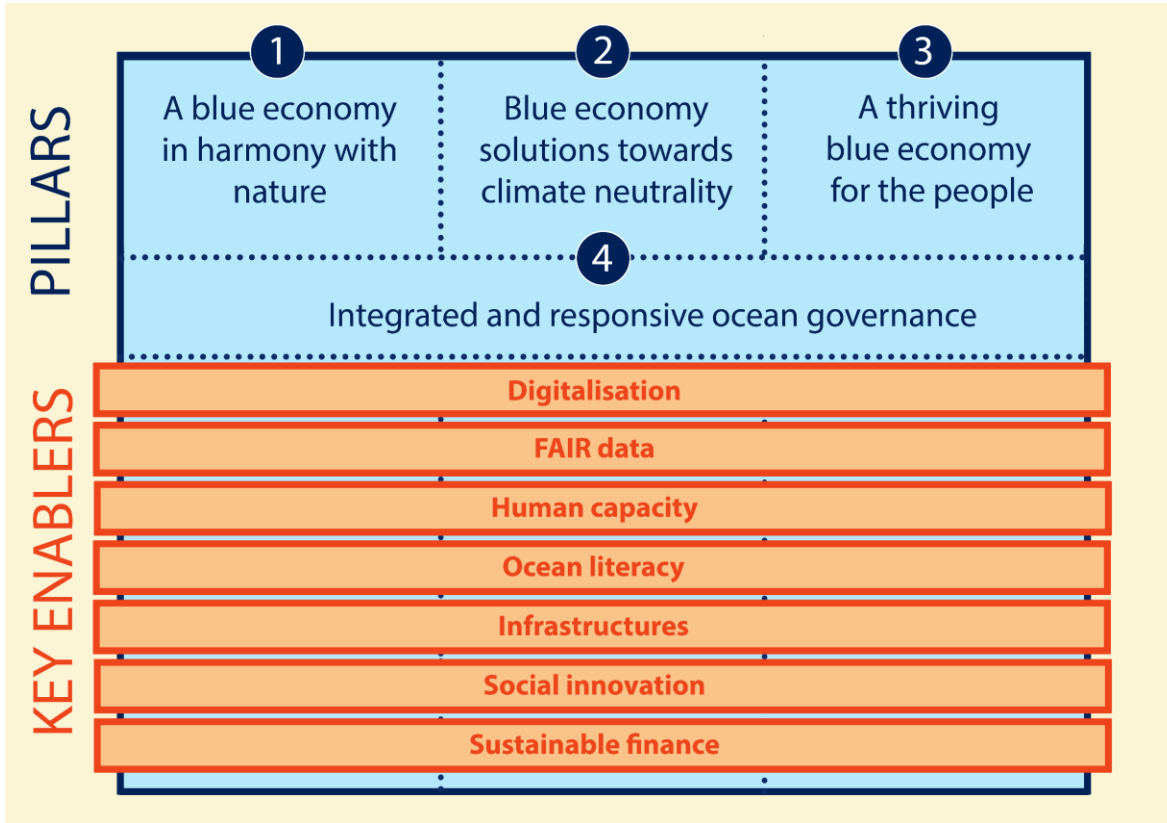


Leverage synergies in Horizon Europe

- 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



Pillar 1

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

**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



Pillar 2

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

**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



Pillar 3

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

**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**



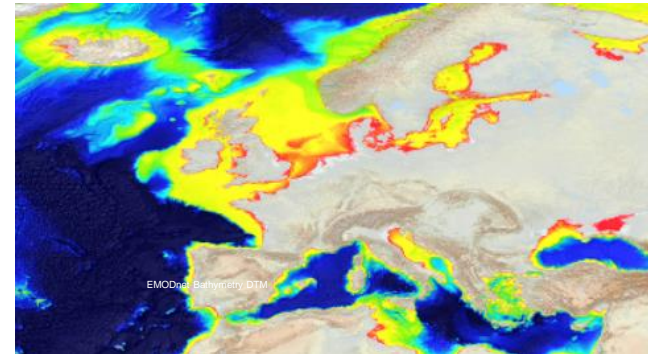
Pillar 4

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



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

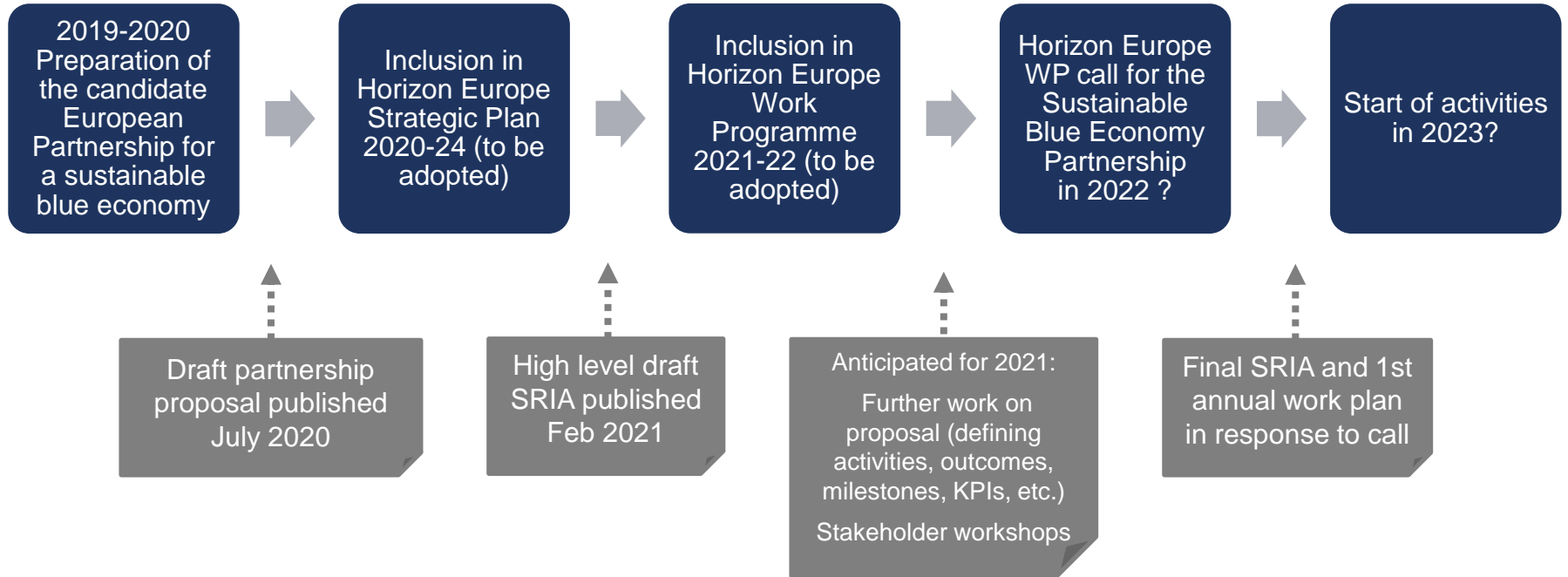
*Sector Labels as in EU Blue Economy Report 2020

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

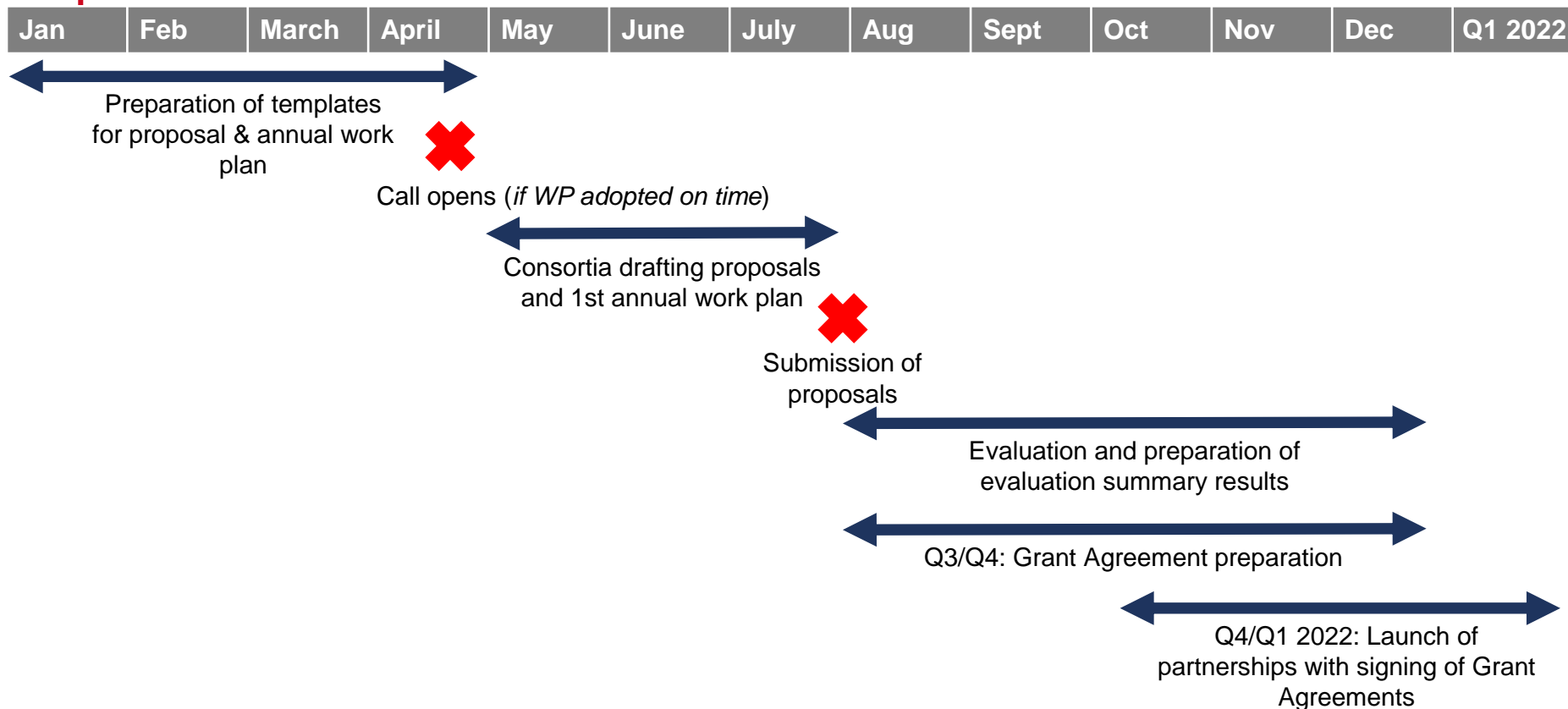
*sectors as defined in the EU Blue Economy 2020 report



Sustainable Blue Economy Partnership timeline



Tentative timeline for the 2021 partnership calls (for reference)



Schematic of a possible governance architecture

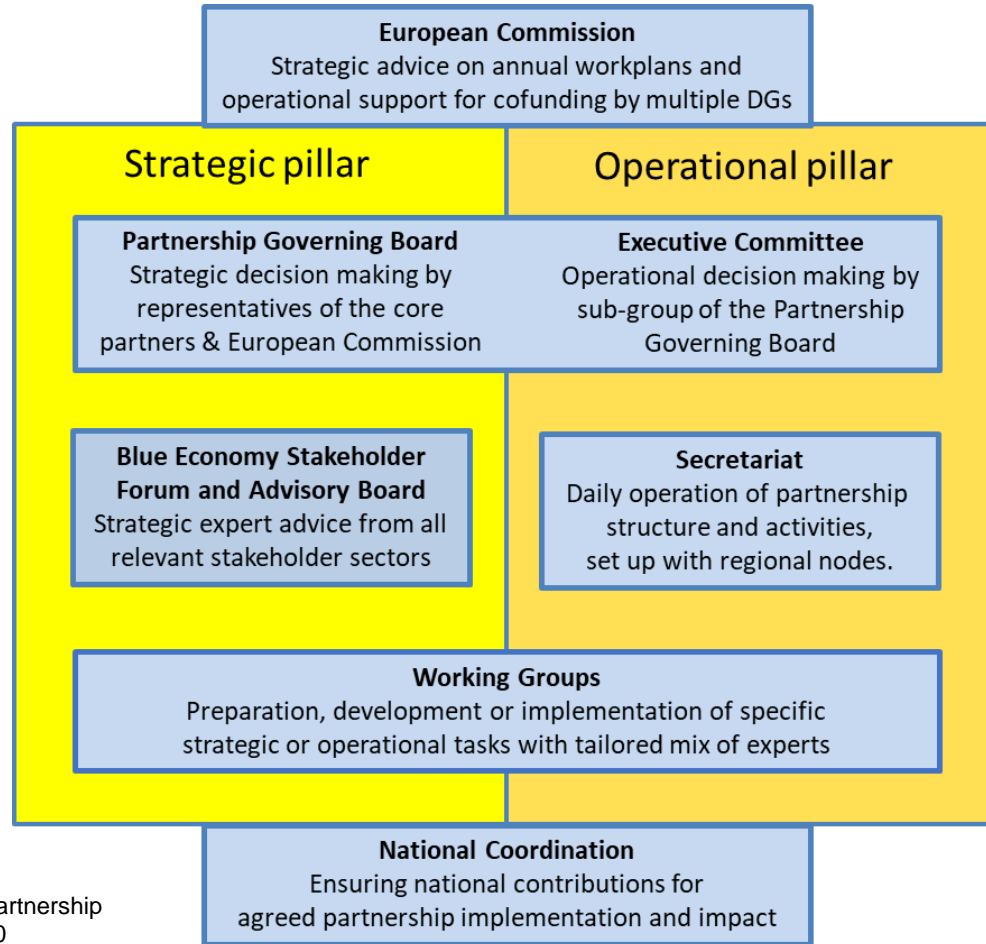


Figure from draft Partnership Proposal, July 2020



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.



**Thank you for
your attention**

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