JPI Oceans

JPI Oceans Beyond 2020 Stakeholder Webinar

24 August 2020

JPI Oceans “Beyond 2020” Stakeholder Webinar - Agenda

11:00 - 11:05 **Welcome and Introduction**
Arvid Hallén, *Chair of JPI Oceans Management Board*

11:05 - 11:15 **Strategy Framework process & methodology**
Thorsten Kiefer, *Executive Director of JPI Oceans*

11:15 - 12:00 **Presentation of the Strategy Framework**
Arvid Hallén, *Chair of JPI Oceans Management Board*
Joachim Harms, *Vice Chair of JPI Oceans Management Board*
Corinne Muscat-Terribile, *Vice Chair of JPI Oceans Management Board*

12:00 - 12:10 **Complementarity with Horizon Europe partnership "A climate neutral, sustainable and productive Blue Economy"**
Niall McDonough, *JPI Oceans Internal Advisory Committee & Management Board*

12:10 - 12:25 **Q&A**
Conference participants are invited to submit questions and provide preliminary feedback on the draft Strategy Framework to ensure its relevance & impact

12:25 - 12:30 **Concluding remarks & next steps**
Thorsten Kiefer, *Executive Director of JPI Oceans*

Arvid Hallén

Chair, JPI Oceans Management Board

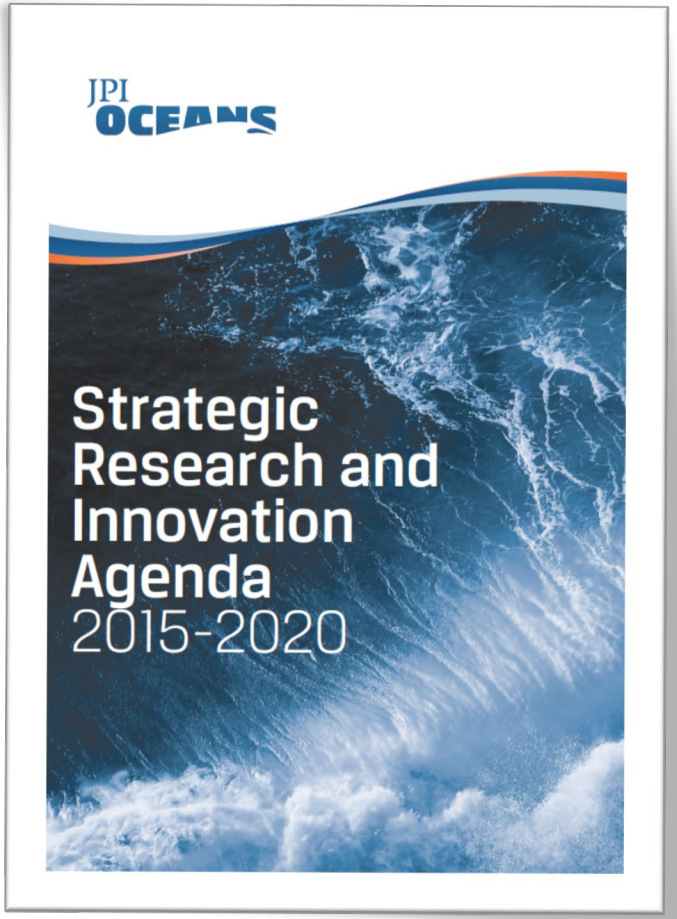
Co-design of strategy and activities

- Given the agile nature and broad scope of the **Strategy Framework**, co-design is key to its success.

- Co-designing with end-users enables participation in idea generation and concept development on the **Joint Actions**, whose final goal is to provide knowledge or solutions to these same users.

Karli Drinkwater

Our expiring strategy:

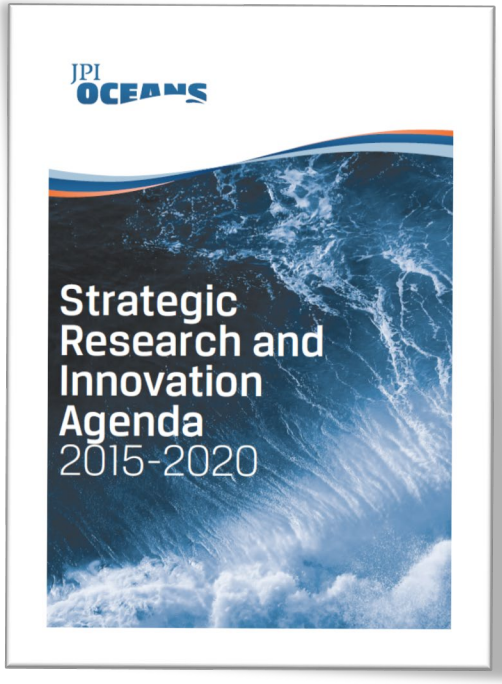


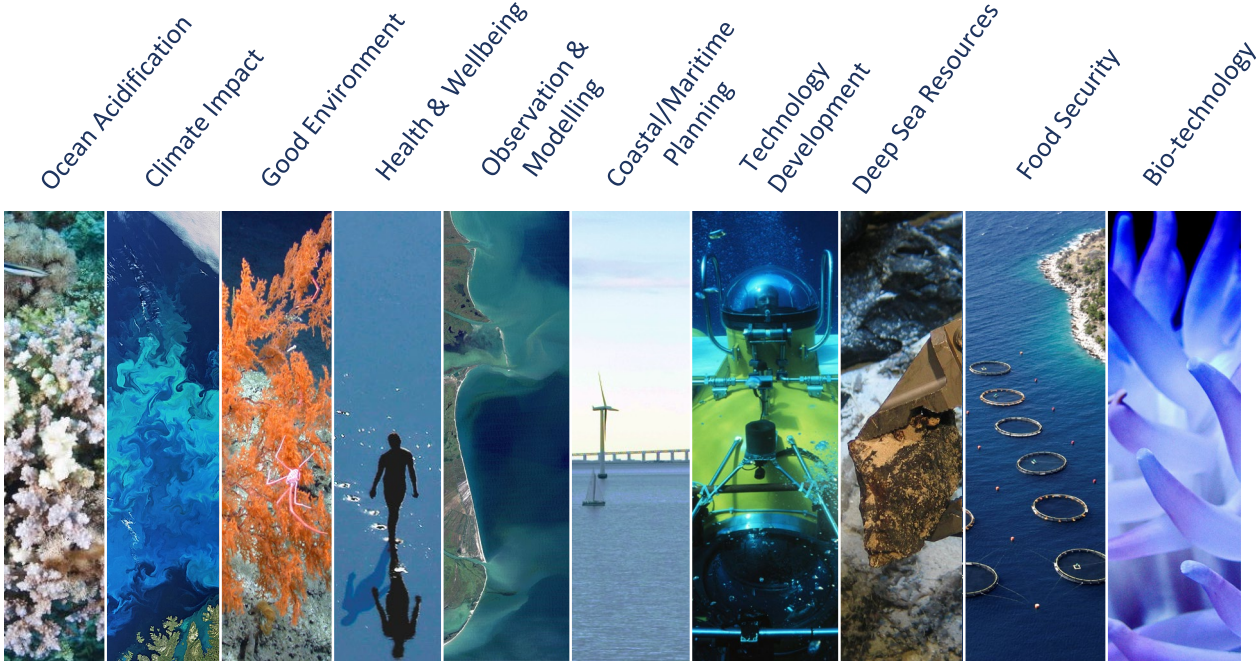
Roadmap – Previous steps, next steps, timeline

Questionnaire and national consultations
Feedback analysis
Draft revision
Approval
Launch

Strategic forward look by countries
Analysis of previous successes and failures
Mapping of landscape of organisations and agendas
Interactive drafting by Internal Advisory Committee and Secretariat

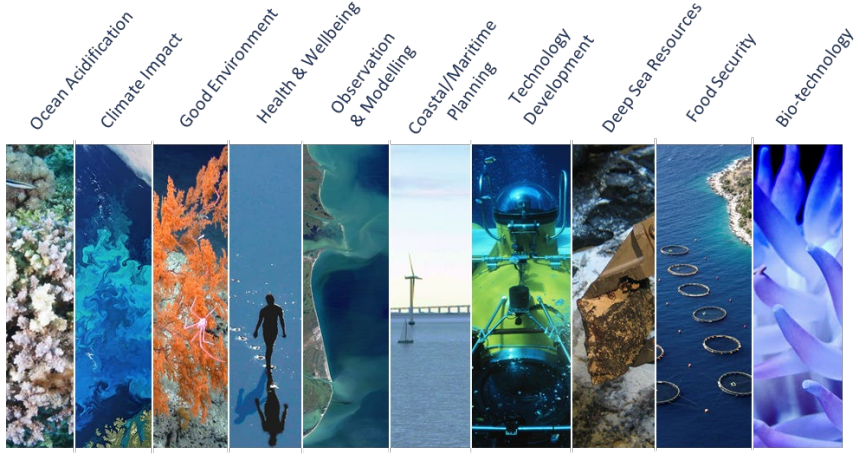
Starting Point: JPI Oceans Strategic Research and Innovation Agenda 2015-2020



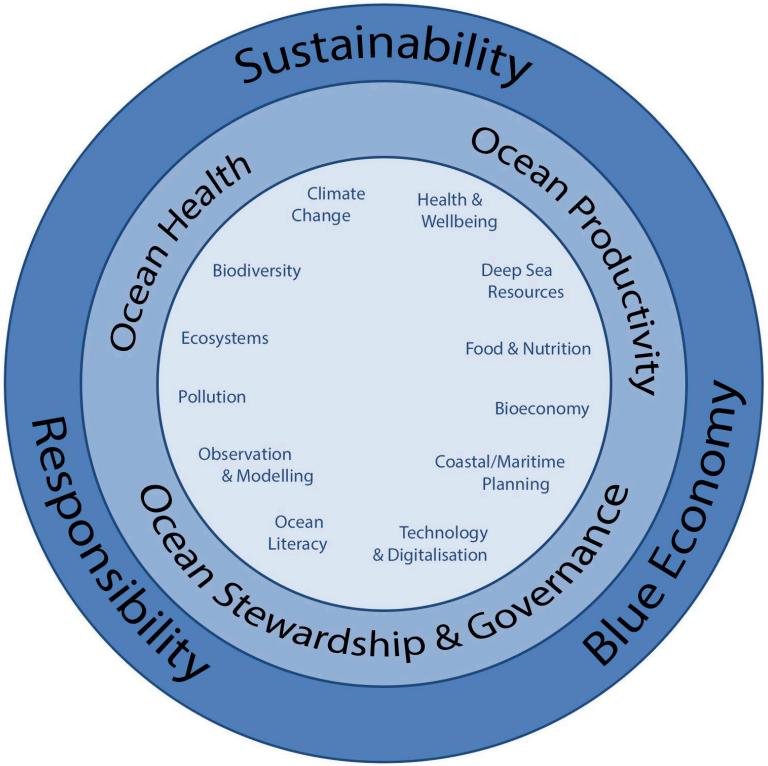


JPI Oceans strategy “refresh”

SRIA 2015-2020



Strategy framework beyond 2020



Some main conclusions upfront

We suggest …

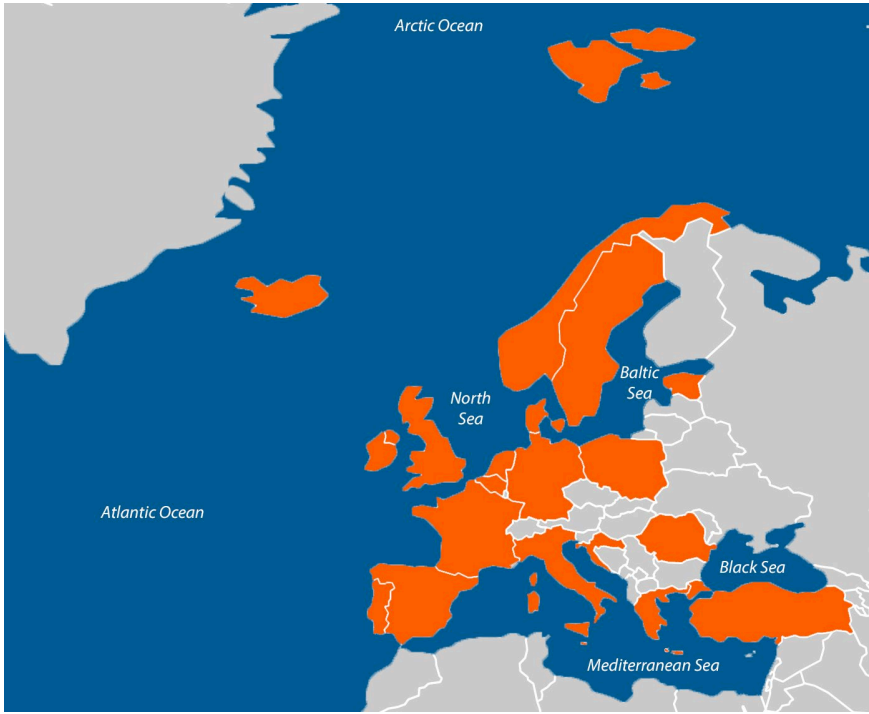
- … to move the strategy's thematic scope from an array of thematic areas to an open thematic space.
- … that the revised strategy will be a "strategic framework“ rather than a fixed multi-year agenda.
- … to further mature JPI Oceans by upscaling the levels of activity and of collaboration.
- … that we continue JPI Oceans interconnected and complementary to the Horizon Europe Blue Economy Partnership.

Arvid Hallén

Chair, JPI Oceans Management Board

What is JPI Oceans?

- JPI Oceans is a **pan-European intergovernmental platform** aiming to increase efficiency and impact of research and innovation for sustainably healthy and productive seas and oceans.
- Members are countries, represented in the Management Board by ministries and funding agencies, plus the European Commission (DG R&I) as non-voting member.
- **National strategies** and priorities are the **main building blocks** of JPI Oceans.



Strategic role of JPI Oceans

- An umbrella for cross-regional coordination of activities.
- A platform for providing the European seas and oceans with an orchestrated voice in the marine and maritime arena.
- Reinforcing EU actions, building on solid foundations of partnering with the European Commission through Horizon Europe and beyond.

Photo credit: @evgenit on Unsplash

Strategic role of JPI Oceans

- To maximize the added value for participating countries, JPI Oceans operates with a **high level of flexibility** allowing countries to participate on a case by case basis.

- JPI Oceans can **act fast** when it comes to identifying **emerging topics** and implementing related actions, thus achieving quick outcomes.

Strategic cornerstones

Our Vision

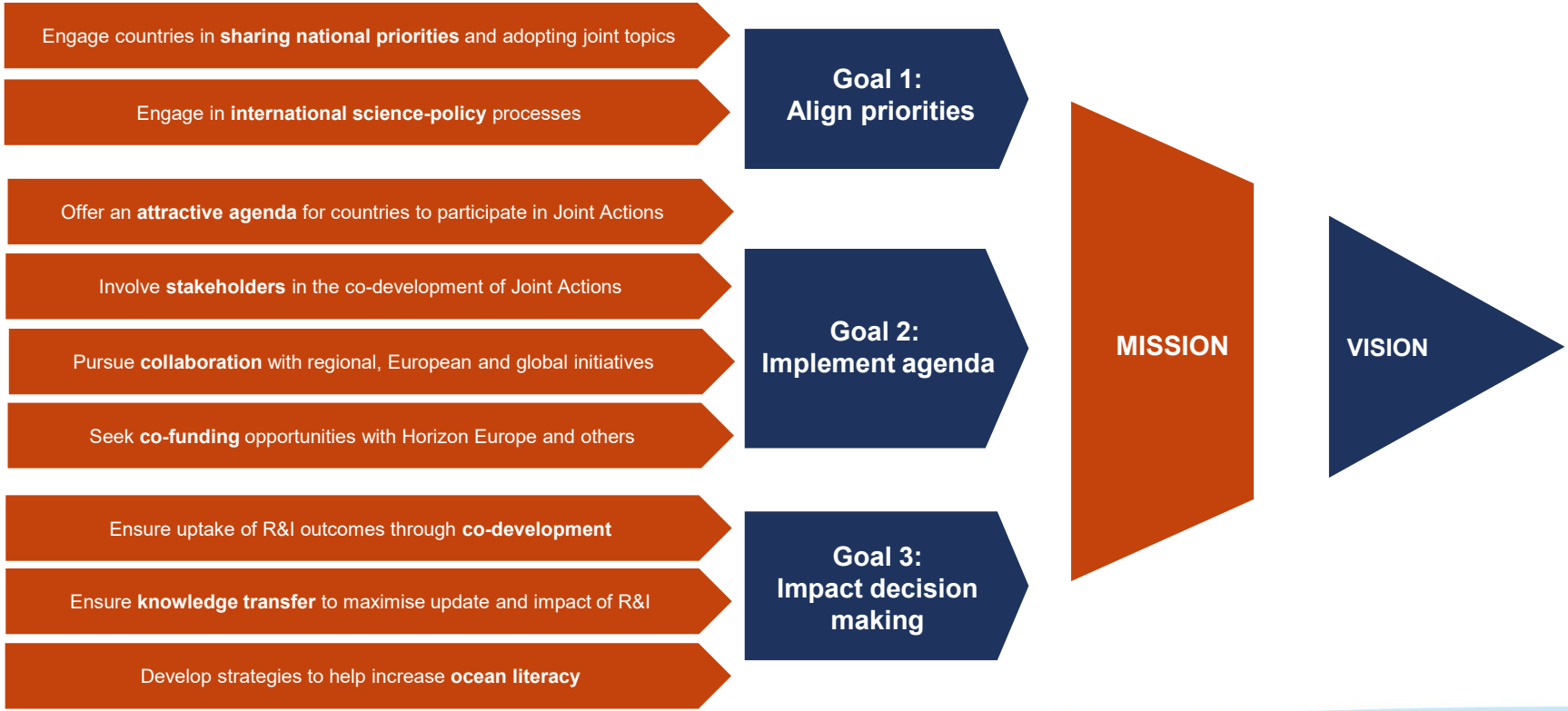
To enable the transformation towards a **sustainable blue economy** whilst fostering the **health and productivity of seas and oceans**.

Our Mission

To facilitate the **efficient provision of expert knowledge and innovative solutions** to enable **informed policy delivery and economic development** that ensures sustainably healthy and productive seas and oceans.

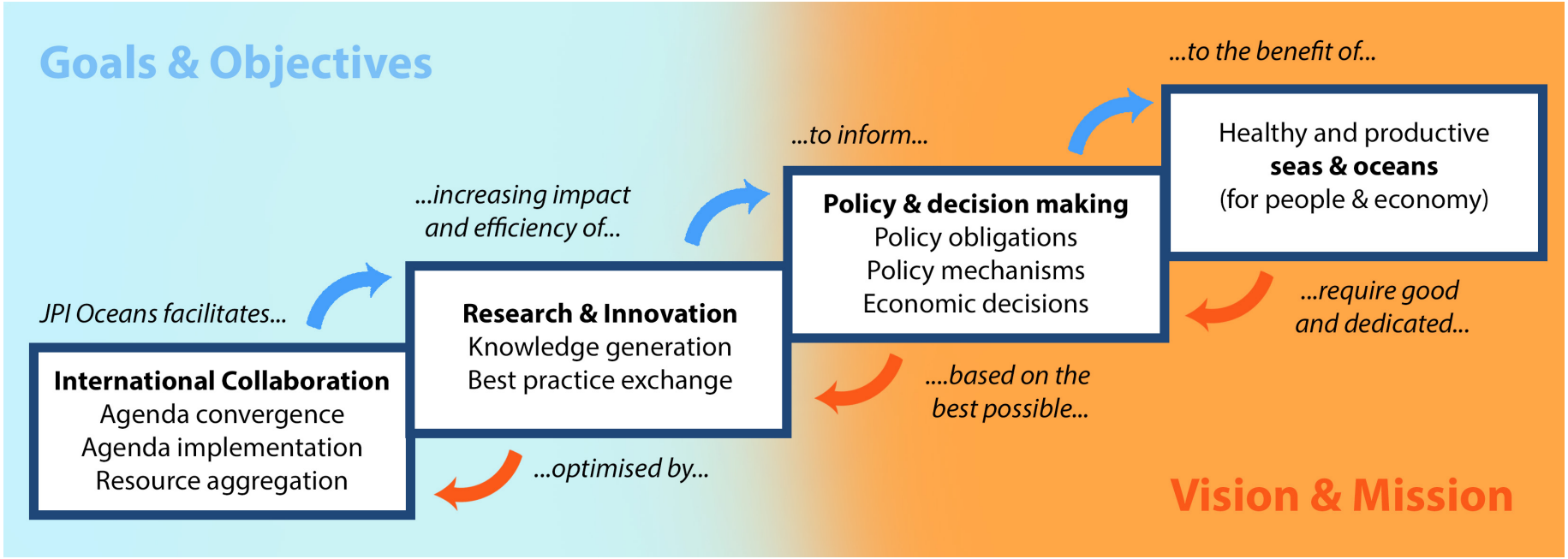
Strategic cornerstones

Operational Goals and Objectives



Strategic cornerstones

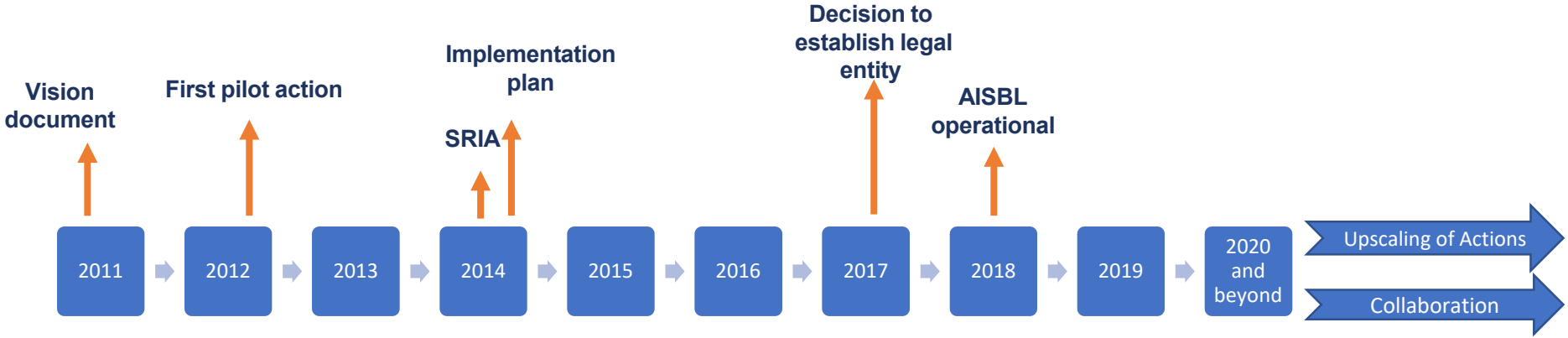
JPI Oceans' strategic narrative



Successes and learning

Building on the experiences of almost one decade of JPI Oceans

Establishment phase I Strategy development I Activity implementation I Organisational transformation | Upscaling phase



Successes and learning

Building on the experiences of almost one decade of JPI Oceans

Strengthening four strategic elements to maintain and increase agility

1) Integration

From 10 broad priority areas to an integrative thematic space and impact ambitions.

2) Early moving

Flexible and pragmatic design of Joint Actions with low bureaucratic thresholds.

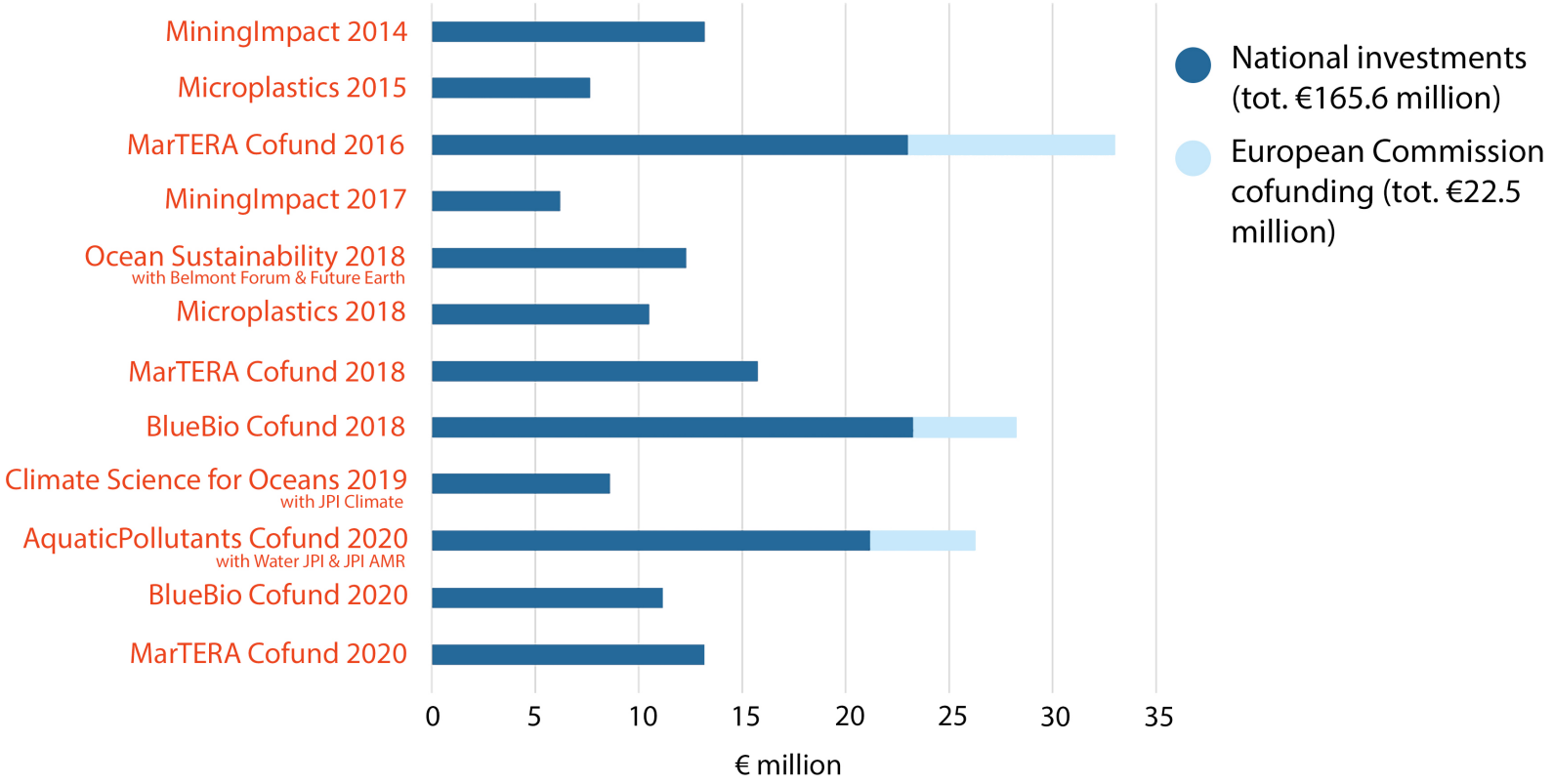
3) Tailored delivery

More attention to impactful syntheses and other output, tailored towards users.

4) Cross-domain collaboration

Closer collaboration with EU initiatives, sea basins, overseas countries, sister JPIs, etc.

Resources for Joint Calls mobilised through JPI Oceans and its partners



Implementation tools for Joint Actions

1. **Joint Calls for project proposals** - incl. cofunded calls, e.g. by the European Commission.
2. **Knowledge Hubs** – well-balanced expert networks to deliver specific products.
3. **Joint Public Procurement** - aggregating national resources to increase buyer power.
4. **Infrastructure sharing** - making the most of existing and often costly national capacities.
5. **Supporting activities** - to prepare new Joint Actions, e.g. foresight or bibliometric studies.

Example I Ecological aspects of microplastics – Cutting edge research for a global problem

tkremmel (CC) pixabay.com

18.2 million Euro

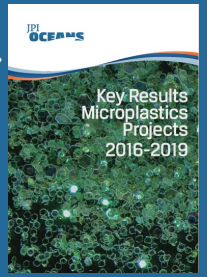
16 participating countries

Example I Ecological aspects of microplastics – Cutting edge research for a global problem

Policy impact:

- G7 Science Ministers
- European Commission's Technical Group on Marine Litter

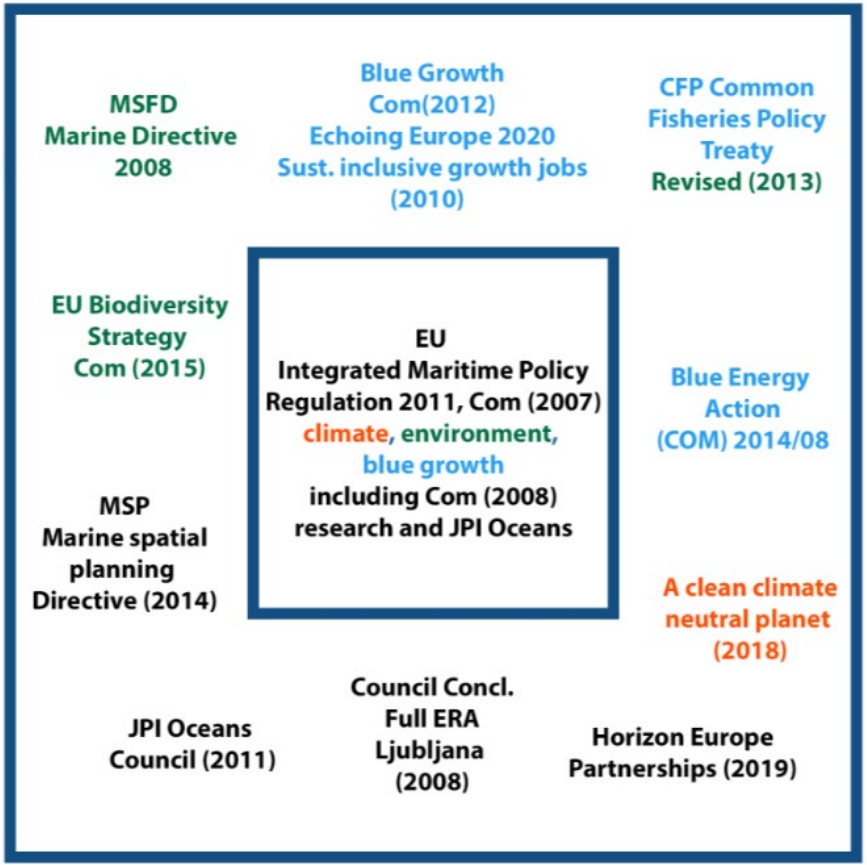
Key Results Microplastics projects:



- Some "**biodegradable**" plastics persist in natural sea conditions.
- **Bioaccumulation** of microplastics does not generally occur in marine species.
- Lethal or acute **toxicity** of microplastics appears to be low.
- Negative **secondary effects** are observed (on digestion, feeding activity, growth, reproduction, chlorophyll production, etc).
- We know little about bioaccumulation and toxicity of smaller (**nano-scale**) plastics.

More: http://jpi-oceans.eu/library

Policy context



Joachim Harms

Vice-Chair, JPI Oceans Management Board

Scope

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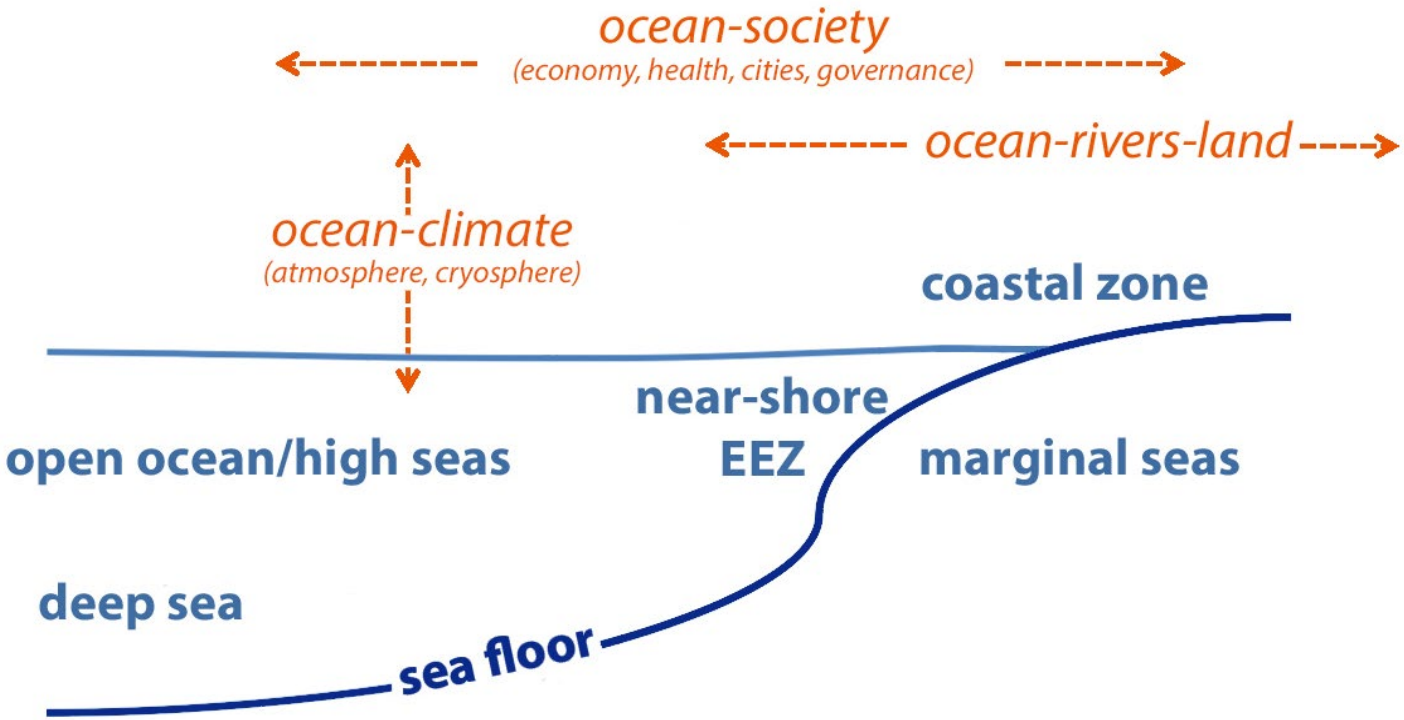
Claudio Büttler on Unsplash

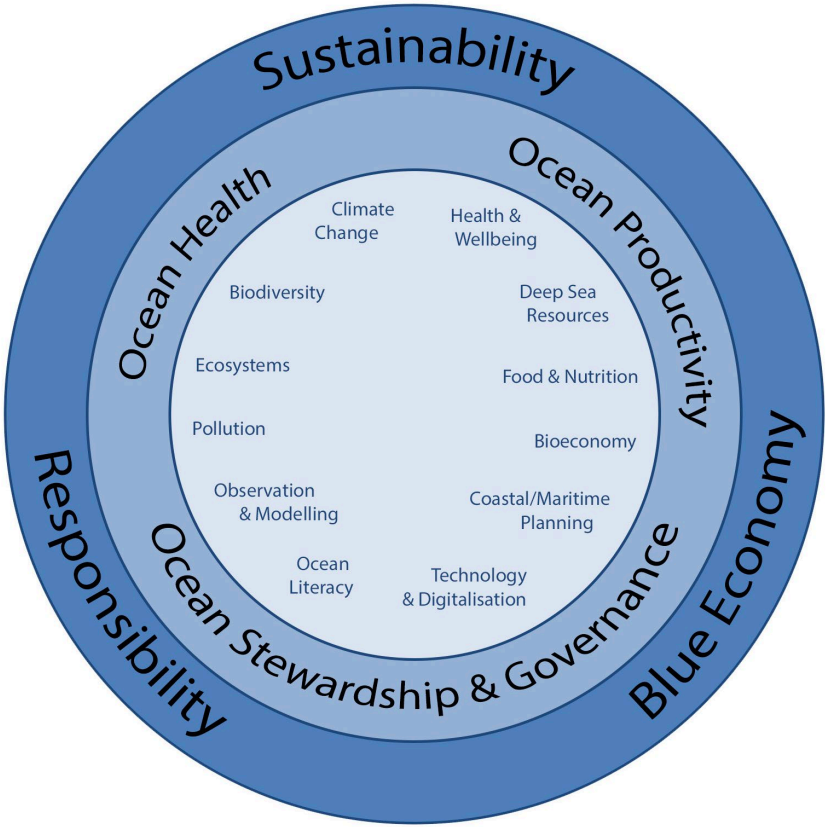
Scope

Domains



Strategy Framework beyond 2020

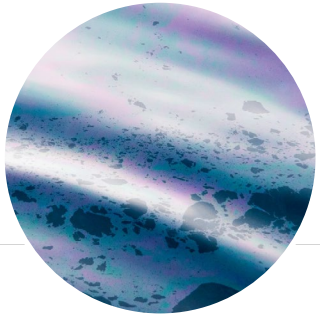
Thematic Scope



Ocean Health

Societal Importance

The ocean plays fundamental roles in **supporting life on Earth** and provides a broad range of **ecosystem services**.



Ante Hamersmit on Unsplash

Increasing anthropogenic pressures intertwined with the historical and current threats and pressures from land-based sources.

Alfred-Wegener-Institut/Stefanie Arndt

Ocean warming and ocean acidification impact on the global oceans independently of the local emission sites.

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Silas Baisch on Unsplash

Ocean Health

Research & Innovation Opportunities

- Achieving Good Environmental Status under the Marine Strategy Framework Directive (MSFD) requires:
  - An **integrated approach** to assess maritime activities or protection measures to ensure synergies between descriptors are maximised and trade-offs minimised.
  - A solid **understanding** of the structure, function and connectivity of marine ecosystems.

Clint Bustrillos on Unsplash

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Ocean Health

Research & Innovation Opportunities

- Better integration of natural and social science disciplines into **ecosystem service assessment** frameworks to consolidate monetary and non-monetary valuations.

- Knowledge on status and trends, and the causes and consequences of **biodiversity loss and degradation** for ecosystem services to foster cost-effective measures and management options.

Silas Baisch on Unsplash

Ocean Health

Research & Innovation Opportunities

- A new level of **systemic research to understand** synergistic, antagonistic and additive **cumulative effects** and ways for managing the causal human activities and pressures.
- Improving the tools for assessing the environmental impacts of pressures, and the efficiency of measures to their reduction or elimination.
- Better understanding effects of acoustic pollution in the marine environment and identifying solutions.

Shaun Dakin on Unsplash

Polina Rytova on Unsplash

Wendy Duble on Unsplash

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Ocean Health

Research & Innovation Opportunities

- **Ocean warming, ocean acidification, sea level rise and oxygen loss** put multiple pressures on ocean health and the communities that rely on it.
- Therefore it is necessary to:
  - Strengthen knowledge and develop innovative approaches to enable informed societal transformation.
  - Progress on observations and coupled modelling to reduce uncertainties of climate-ocean interactions, and the ocean's buffering capacity for heat and CO_2 absorption.
  - Develop innovative carbon neutral options.
  - Research ecologically viable carbon sequestration options.

Willian Justen de Vasconcellos on Unsplash

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Silas Baisch on Unsplash

Ocean Health

Research & Innovation Opportunities

- In the **Arctic**, positive feedback mechanisms have contributed to an amplified surface air temperature increase at twice the rate compared to the global average.

- R&I must deliver towards:
  - More effective adaptation measures for strengthening the resilience of coastlines, coastal communities and exposed ecosystems.
  - Efforts that limit global warming and atmospheric greenhouse gas concentrations.

Alfred-Wegener-Institut / Stefan Hendricks

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Ocean Productivity

Societal Importance

In 2018 the EU Blue Economy directly employed close to **5 million people** and generated around **€750 billion** in **turnover**.

Ocean-based industries have the potential to **double in size by 2030** compared to 2010 according to the OECD report “The Ocean Economy in 2030”.

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Ocean Productivity

Research & Innovation Opportunities

- Sustainability is the goal that underpins the European approach toward the Blue Economy.
  - Crucial to understand the **natural and social systems** related to the ocean.
  - **Fishing, aquaculture** and **tourism** offer demonstrated opportunities and innovative potential for reducing their ecological impacts.

Knut Troim on Unsplash

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Ocean Productivity

Research & Innovation Opportunities

- Understanding Ocean Productivity requires a **systemic approach**.
- New opportunities for efficiency and sustainability gains lie in viewing the role of food from the ocean in the context of whole food system.

Harris Vo on Unsplash

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Ocean Productivity

Research & Innovation Opportunities

- Increased interest in **deep-sea resources** requires an informed discourse on the trade-offs between environmental risks and development opportunities.

- Understanding the impacts of new activities in extreme environments to provide decision makers with a knowledge base for developing evidence- and knowledge-based policies and regulatory frameworks.

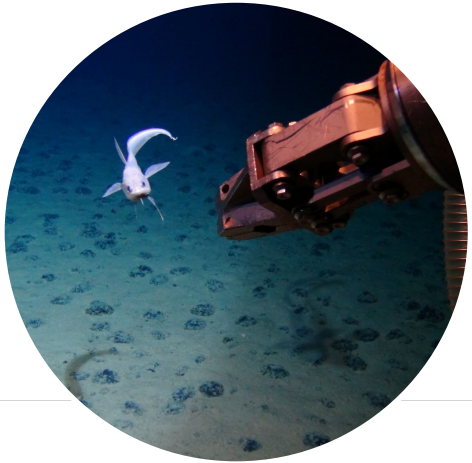

Photo credit: GEOMAR

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Ocean Productivity

Research & Innovation Opportunities

- Opportunities for synergies between land- and sea-based production also lie in the application of **biotechnology**.

- Microorganisms, representing 70-90% of the marine biomass, may hold the key to solutions related to human health, pharmaceutical cures, climate change and ocean pollution.

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Ocean Productivity

Research & Innovation Opportunities

- Application of **sensors, robotics and automation** to increase the safety of operations and provide more cost-effective alternatives to manned operations.

- Maritime application of technologies such as artificial intelligence, automation and distributed ledgers in fisheries and aquaculture.

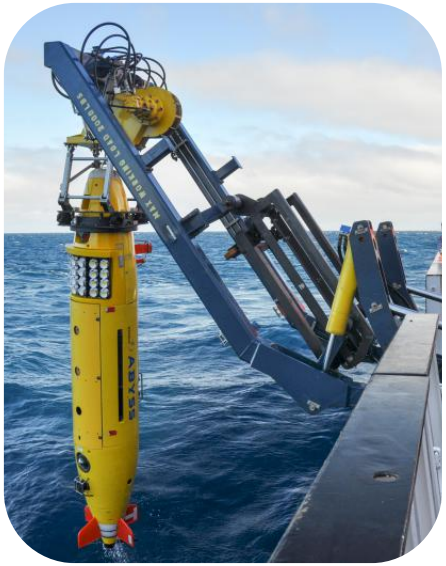

Photo credit: GEOMAR

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Ocean Productivity

Research & Innovation Opportunities

- Sustaining the **service sector** and its underlying natural capital requires promotion of sustainable **blue tourism**.
- There is large growth potential in **eco-engineering**, both as a scientific discipline and as an industry that combines economic growth with marine sustainability.
- **Oceans and human health.**

Derek Liang on Unsplash

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Corinne Muscat-Terribile

Vice Chair, JPI Oceans Management Board

Ocean Governance & Stewardship

Societal importance

Edson Rosas on Unsplash

National and **regional initiatives** to conserve and sustainably manage the ocean within national jurisdictions.

Photo by IISD/ENB | Francis Dejon

Deliberations on the first conservation treaty for the **High Seas** and **Mining Code**.

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Ocean Governance & Stewardship

Research & Innovation Opportunities

- Understanding and predicting changes to the ocean environment.
- Continuous and sustained development of capabilities and capacities of ocean observation, monitoring and numerical modelling.

Ifremer. Olivier Dugornay

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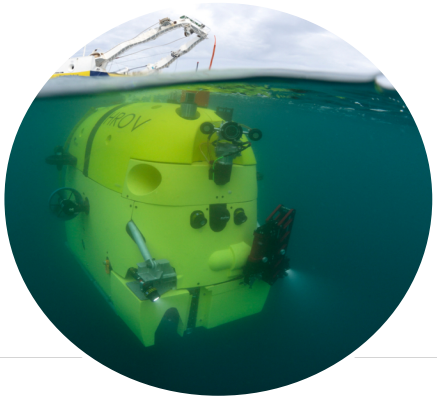
Ocean Governance & Stewardship

Research & Innovation Opportunities

- **Technology** to reduce the ecological impact of activities and unlock and enable new activities and blue economic developments.
- New applications for **maritime technologies in extreme environments** (deep-sea, seabed, Arctic) require new material properties and functions.
- Conclusion: a long-term approach to **cross-sectorial technological cooperation** is required.



Ifremer. Olivier Dugornay

JPI OCEANS

Ocean Governance & Stewardship

Research & Innovation Opportunities

- **Science to support marine spatial planning** (MSP) elaboration and implementation, for effective actions towards the sustainable development of the oceans.

- Transdisciplinary research, engaging multiple scientific disciplines, industry, business, society and policy makers, is needed to integrate environmental concerns into the planning of multi-industrial activities and to meet related governance needs.

Knut Troim on Unsplash

Vidar Nordli-Mathisen on Unsplash

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Ocean Governance & Stewardship

Research & Innovation Opportunities

- Raise individual **awareness** about the interconnection between people and the ocean.
- **Foster an ocean literate society** through the exploration of educational, curricular, participatory, artistic, cultural, media, and other avenues.

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Ocean Governance & Stewardship

Research & Innovation Opportunities

- **Capacity** needed at the specialist level:
  - Early-career researchers
  - Professionals
  - Future leaders and change makers
  - Established experts

- Through its model of international **collaboration**, **exchange** of people and information, and **sharing of facilities and infrastructures**, JPI Oceans is well placed to expand its capacity to advance impact.

VLIZ (Fockedey, Nancy)

JPI OCEANS

Implementation

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Picture credit: Flanders Marine Institute (VLIZ)

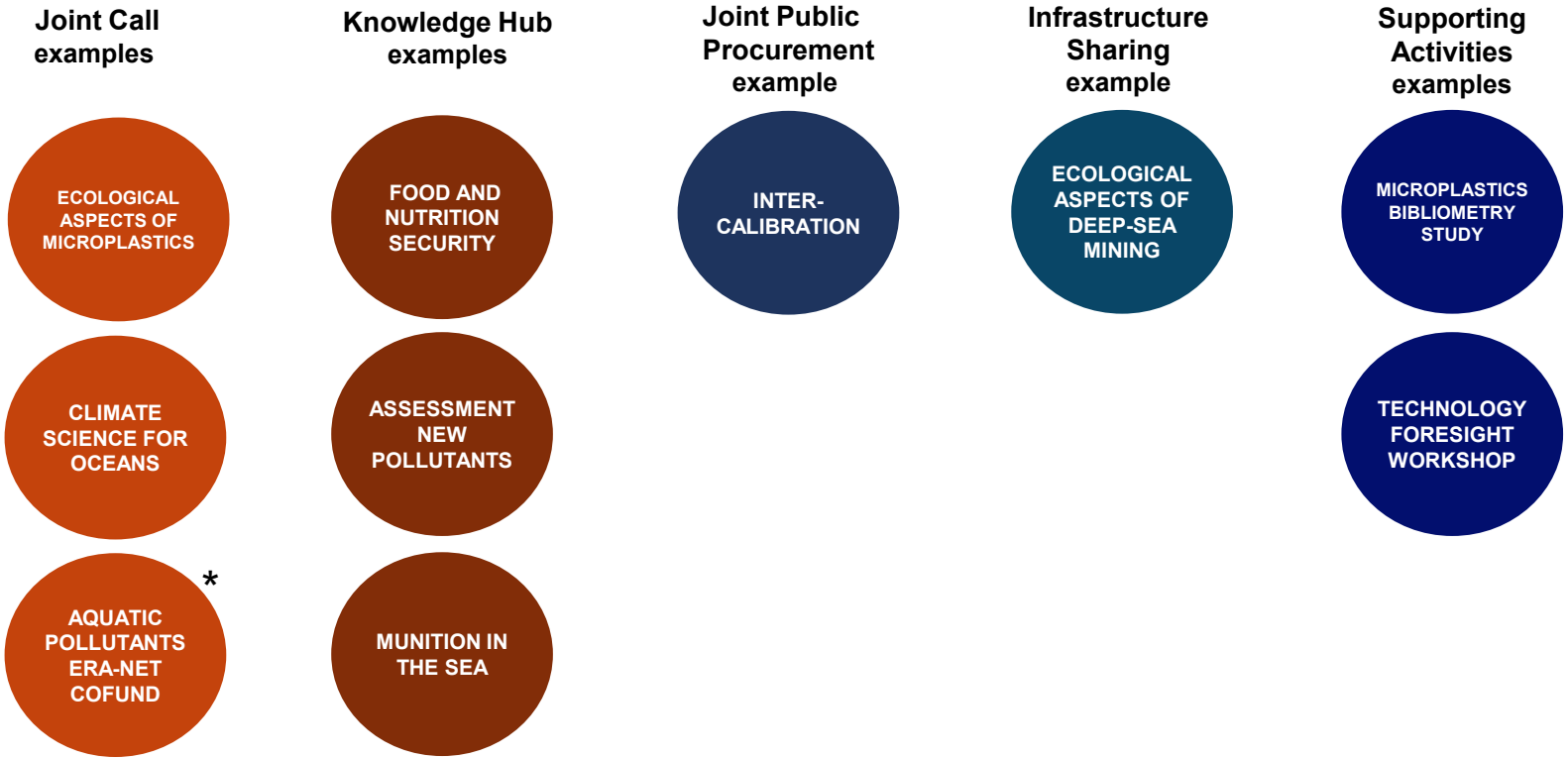
Implementation

Joint actions

A Joint Action is developed around **shared thematic priorities of at least four committing** Member or Associated **Countries.**

The topic is scoped out in a **co-design process** across relevant stakeholder domains, including relevant experts from participating countries, **resulting in a concept paper** that describes the planned implementation elements, outcomes and policy impact.

Implementation tools for Joint Actions



*cofunded by the European Commission under the framework of an ERA-Net Cofund

Example II Science for Good Environmental Status

10 participating countries

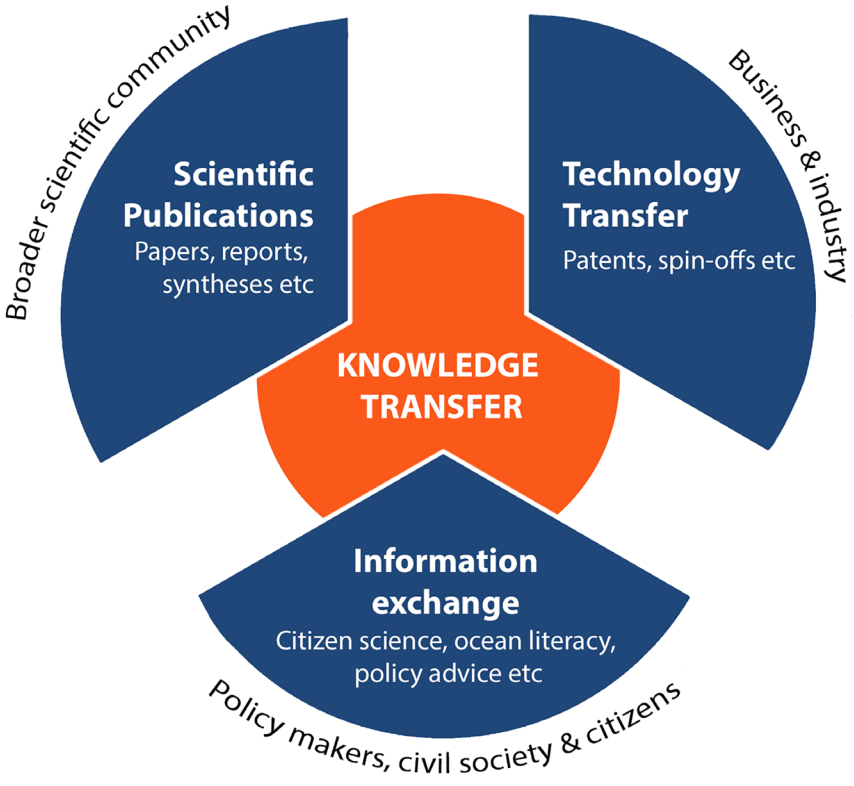
Policy target:

- Marine Strategy Framework Directive

Implementation elements:

- Knowledge sharing expert workshops (transdisciplinary "Knowledge Hub")
- Joint integrated monitoring ("Infrastructure Sharing")
- Augmented observatories ("Joint Public Procurement")

Knowledge transfer



Collaboration with external partners

Regional

Global

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European

Main guiding ambitions for the revised strategy

We would like the revised strategy to …

... continue offering a pan-European **platform for countries** to increase R&I efficiency and impact.

... expand delivery of R&I to national **policy obligations** and **European and global ambitions**.

... maintain and increase operational agility (flexible, pragmatic, early moving and speedy).

… be a "strategic framework“ rather than a fixed multi-year agenda.

... to move the thematic scope from an array of thematic areas to an open thematic space.

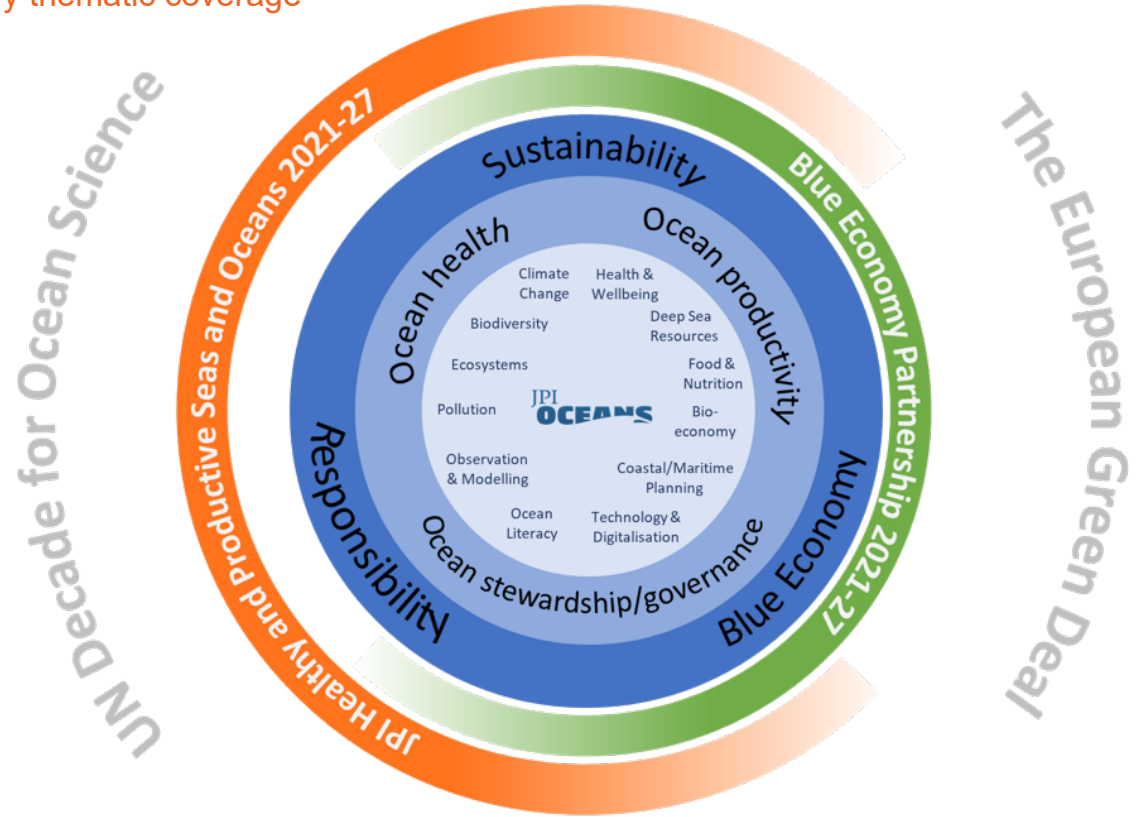
… to further mature JPI Oceans by upscaling the levels of activity and of collaboration.

Niall McDonough

JPI Oceans Internal Advisory Committee
& Management Board

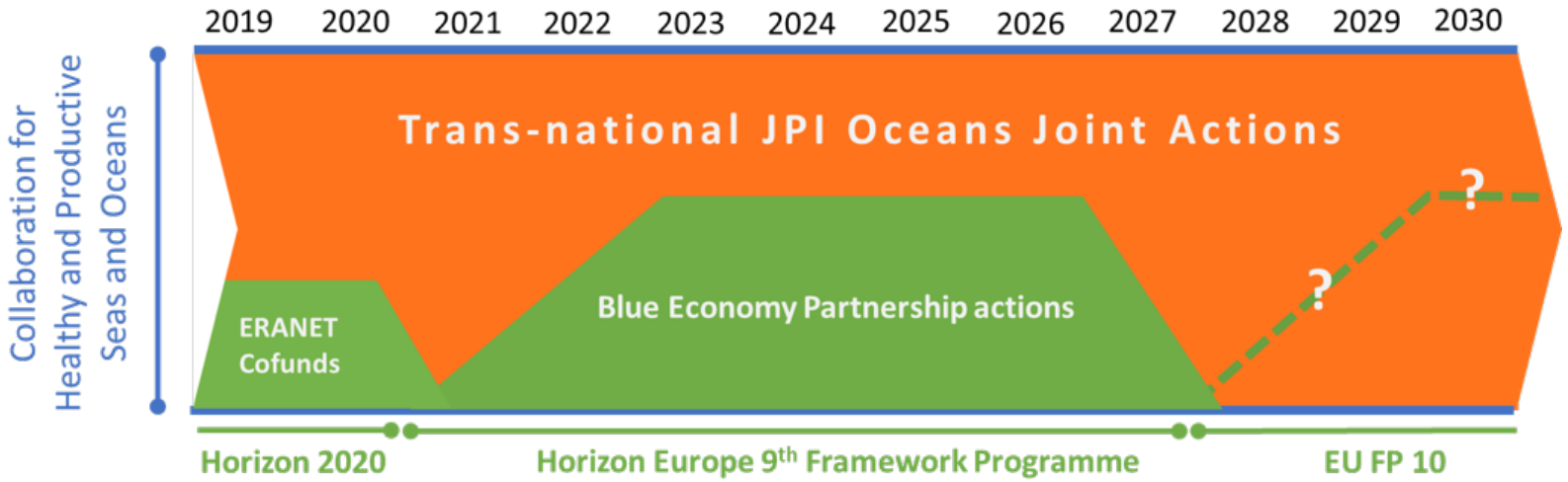
Why run JPI Oceans and the Blue Economy partnership in parallel?

Complementary thematic coverage



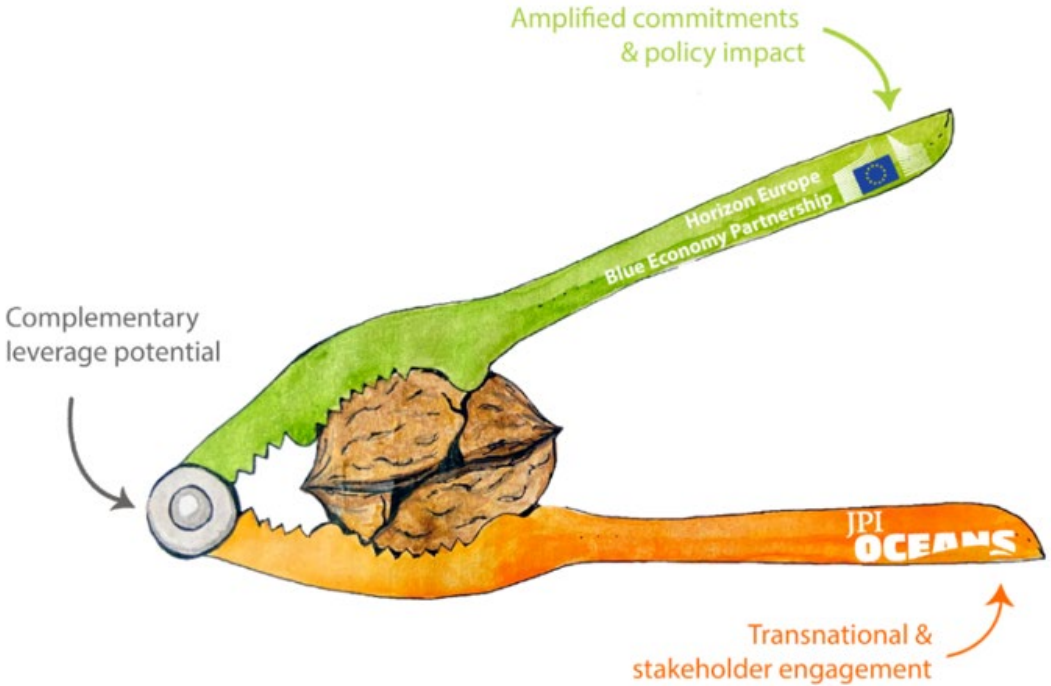
Why run JPI Oceans and the Blue Economy partnership in parallel?

Complementary temporal perspectives



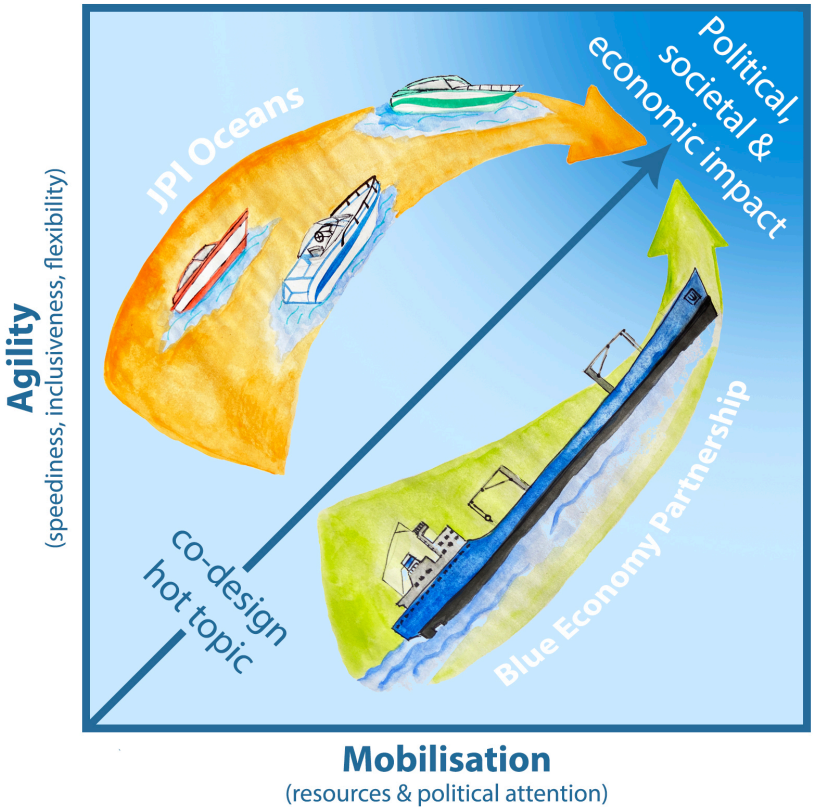
Why run JPI Oceans and the Blue Economy partnership in parallel?

Complementary leverage potential



Why run JPI Oceans and the Blue Economy partnership in parallel?

Complementary implementation strength



Main high-level conclusions

We suggest …

- … to move the strategy's thematic scope from an array of thematic areas to an open thematic space.
- … that the revised strategy will be a "strategic framework“ rather than a fixed multi-year agenda.
- … to further mature JPI Oceans by upscaling the levels of activity and of collaboration.
- … that we continue JPI Oceans interconnected and complementary to the Horizon Europe Blue Economy Partnership.

Survey

- We invite you to share feedback, insights, reflections and experiences that could help JPI Oceans further shape the new strategic framework, by participating in the Stakeholder Feedback Survey.
- The survey is open and accessible until Monday 21 September 2020.
- https://www.surveymonkey.com/r/JPIOceans-Strategy-Framework-Stakeholder-Survey