



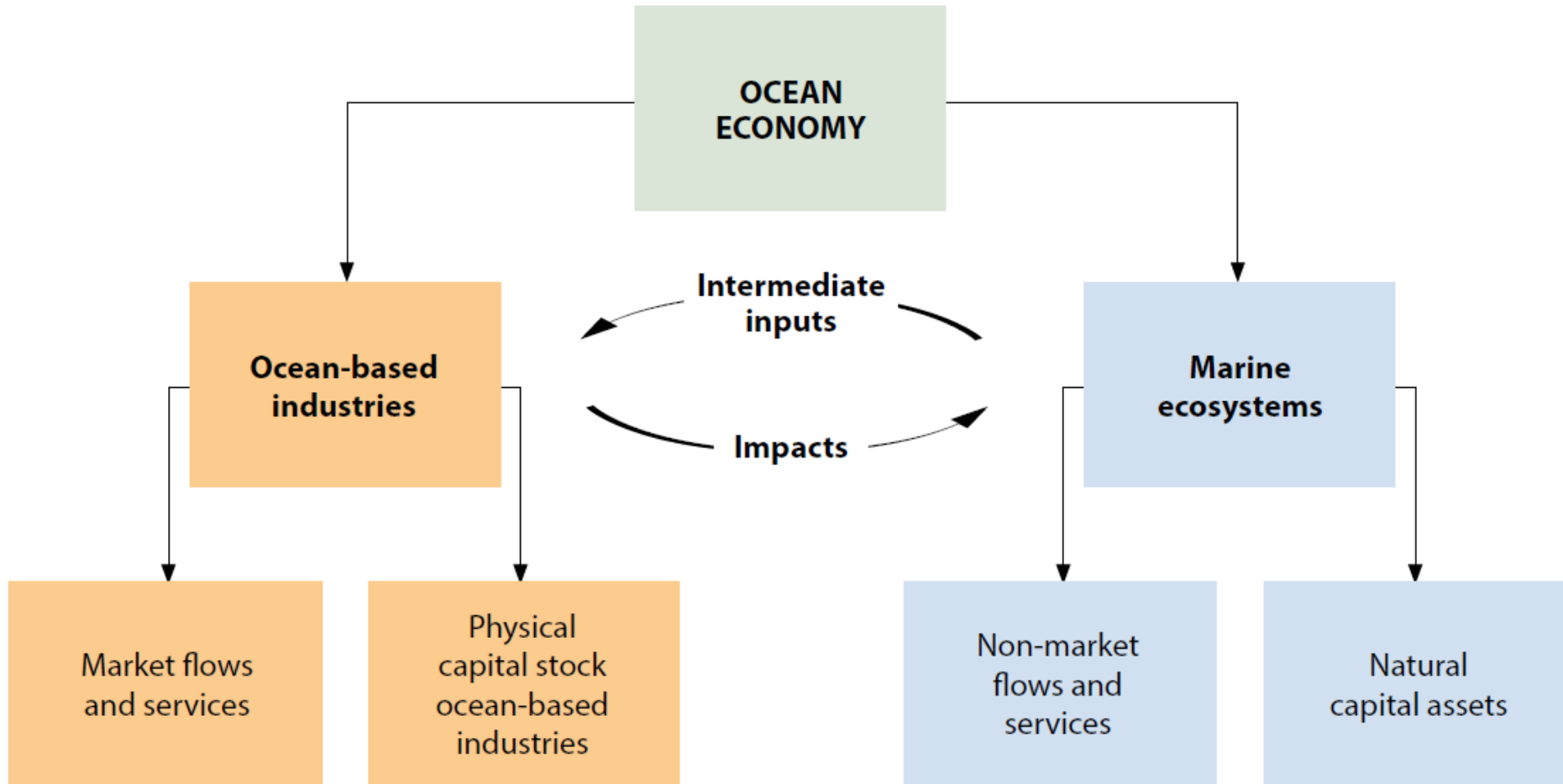
TOWARDS GROWING EVIDENCE TO SUPPORT A SUSTAINABLE OCEAN ECONOMY

SEArca Blue Economy Conference

A blue dimension to the Green Deal: The way towards a sustainable recovery of
the blue economy in Europe, 28 January 2021



The ocean economy: An Interactive and Interdependent system we're getting to know better

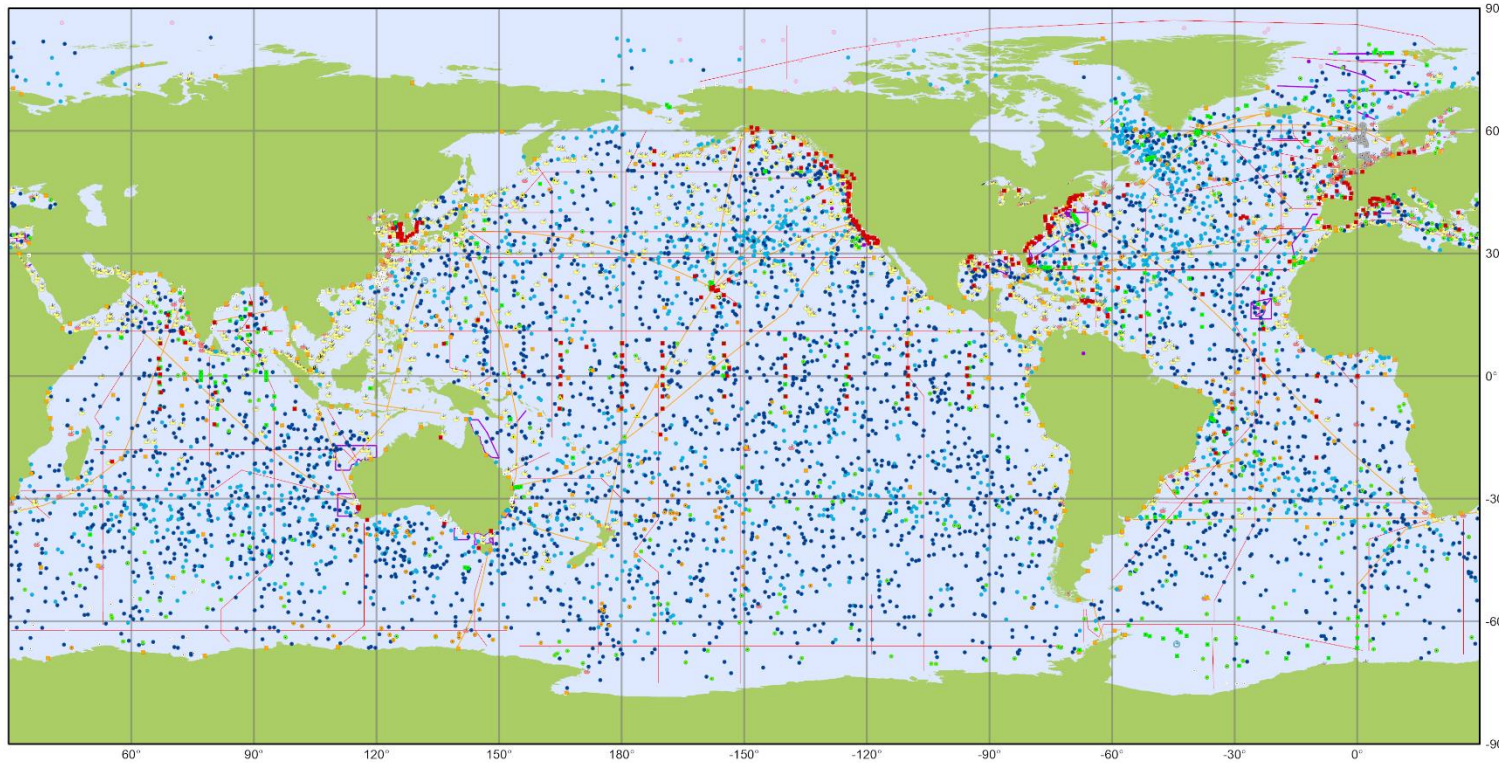


The three pillars of sustainability:

- Economic
- Environmental
- Social



Crucial role of science and ocean observing systems for conservation and sustainable uses of the ocean



Global ocean observing system

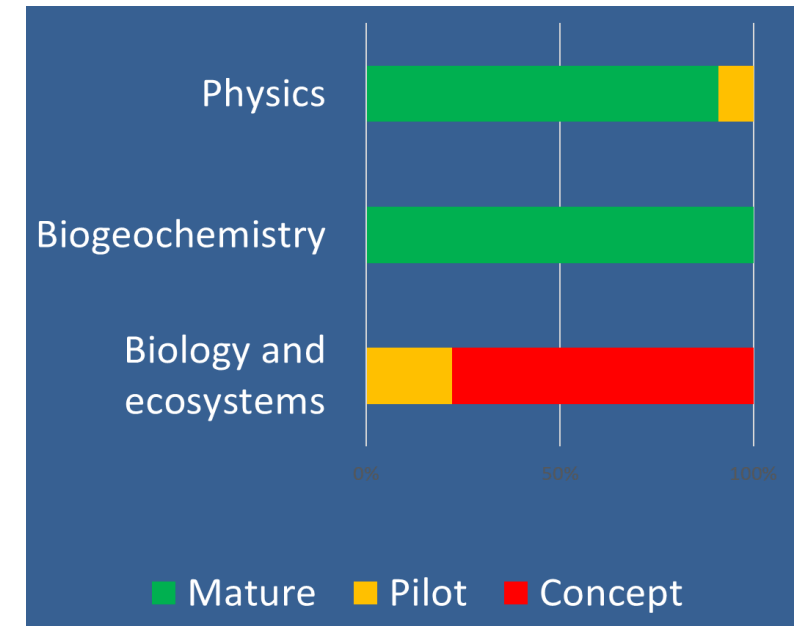
December 2020

- Mobile systems**
 - Core floats - Argo
 - Deep floats - Argo
 - Biogeochemistry floats - Argo
 - Underwater gliders - OceanGliders
 - Drifting buoys - DBCP
- Fixed systems**
 - Polar buoys - DBCP
 - Animal borne sensors
 - Tsunameters - DBCP
 - Offshore platforms - DBCP
 - Moored buoys - DBCP
- Ship based measurements**
 - Ocean reference stations - OceanSITES
 - Sea level gauges - GLOSS
 - High Frequency radars
 - Manned weather stations - SOT/VOS
 - Automated weather stations - SOT/VOS
- Reference lines and areas**
 - Radiosondes - SOT/ASAP
 - Repeat hydrography - GO-SHIP
 - eXpendable BathyThermographs - SOT/SOOP
 - Sampled sites - OceanGliders



Generated by www.ocean-ops.org, 2021-01-27
Projection: World Plate Carree (-150.0000)

Essential Ocean Variables and associated technological readiness levels



OECD elaboration of Delory (2019).

Importance of sustained European Ocean Observing System (EOOS)

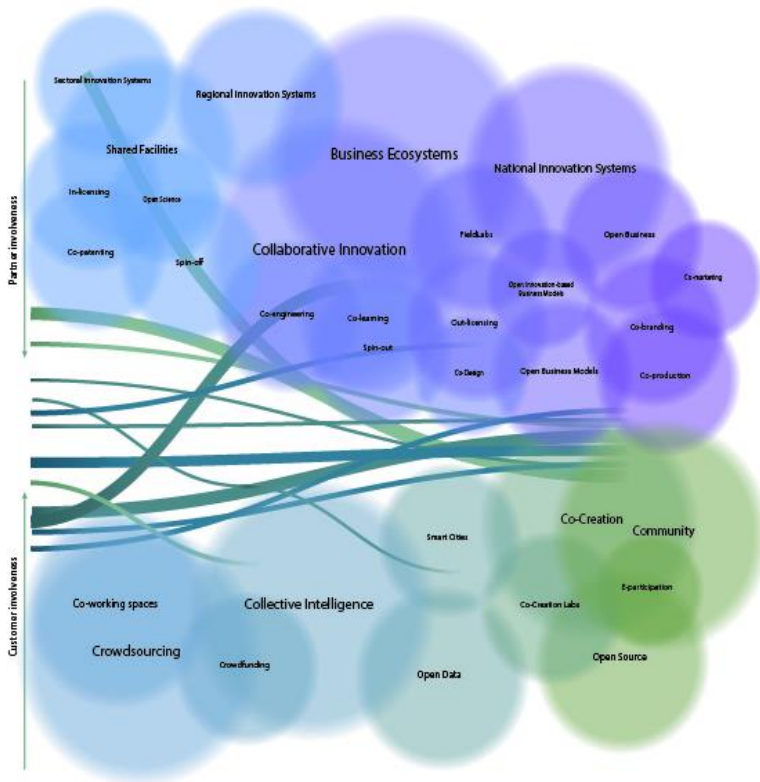


Building on the innovative way organisations cooperate in the ocean economy

Many historical **research- and industry-led** groups (e.g. sectoral industry clusters)

But brand new ocean innovation networks are emerging in response to changing innovation landscape :

- Respond to increasingly multifaceted challenges
- Rapid advances in research leading to new fields needing to connect (robotics, digital)
- New ways to collaborate
- More complex tools and technologies





OECD survey of selected ocean economy innovation networks

Network Orchestrator	
Ocean Frontier Institute	Canada
Offshoreenergy.dk	Denmark
Innovative Business Network (IBN) Offshore Energy	Belgium (Flanders)
Campus mondial de la mer	France
Marine Renewable Energy (MaREI)	Ireland
EXPOSED Aquaculture	Norway
MARE StartUp	Portugal
Scottish Aquaculture Innovation Centre	United Kingdom
Oceanic Platform of the Canary Islands (PLOCAN)	Spain
Marine Autonomous & Robotic Systems Innovation Centre	United Kingdom

- Survey of ten selected ocean economy networks
- All launched in the past 3-4 years
- Innovation focus on marine robotics, energy, seafood...
- Exploration of the benefits and difficulties of collaboration
- Importance of public support
- Issues of funding schemes (“value for money” for funders)
- First insights in how to strengthen networks



What benefits from these research & innovation networks?

Despite differences in models:

- Improved cross-sector synergies
- Accessing various research facilities and specialised knowledge
- Building new scientific capacity and knowledge (and retaining skills)
- Developing & bringing to market brand new products for industry
- Developing new schemes to support blue SMEs and start-ups
- Diffusing knowledge beyond the ocean economy

Independent assessments suggest positive impacts within and beyond the ocean economy.



European Zoom = EC Initiative on a “New Approach for a Sustainable Blue Economy in the EU”

Three interesting axis:

- 1. Embed environmental considerations** in the planning of Blue Economy activities, and that impacts from such activities are prevented or minimised (transformation of the blue economy under the Green Deal’s axes of **decarbonisation, zero pollution, circularity and biodiversity**)
- 2. Forsakes sectorial perspectives, it explores integrated approaches** that facilitate coexistence of activities and create positive externalities, including adaptation to climate change. It strives to strengthen citizen engagement and regional cooperation.
- 3. Multiply “the opportunities offered by new technologies** to improve ocean knowledge and ocean observation, which are the foundations of a sustainable, well-monitored and efficiently managed Blue Economy, with minimum environmental impacts and in balance with marine ecosystems conservation.”



TO conclude... Improved evidence still needed to support recovery and aim for a sustainable ocean economy

A sustainable ocean economy will only be achieved, if its three constitutive **economic**, **environmental** and **social** dimensions are better understood to support evidence based decision-making.

Robust evidence (based on scientific bases) needed:

1. Statistical measurement of industries and ecosystems services (ocean satellite accounting)
2. Adequate environmental impact assessments of economic activities
3. And social well-being indicators (e.g. inclusive growth)

OECD ready to support ever-more decision-makers



The Ocean Economy in 2030



Rethinking Innovation
for a Sustainable Ocean
Economy



Sustainable Ocean for All

HARNESSING THE BENEFITS OF SUSTAINABLE
OCEAN ECONOMIES FOR DEVELOPING COUNTRIES



THANK YOU

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STI OCEAN ECONOMY GROUP
Science, Technology and Innovation Directorate

<http://www.oecd.org/innovation/inno/ocean-economy/>