



Observations in Ocean Science Value Chain

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Ocean in UN Frameworks: GOOS as Governmental OOS

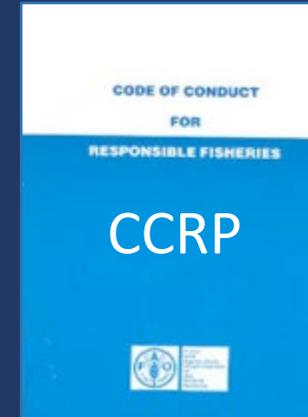
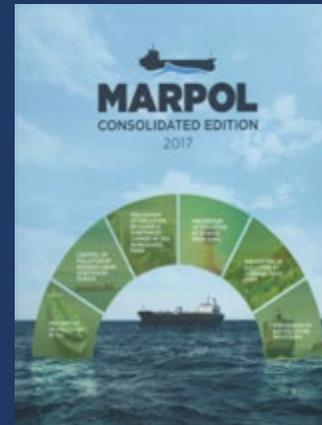
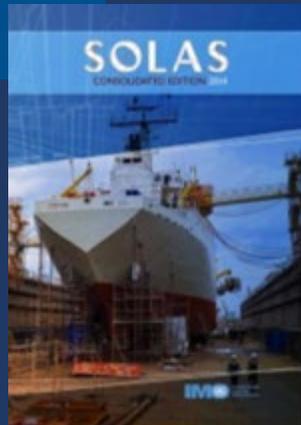


Post-2020 Agenda

Ocean-Climate Dialogue



+ ILBI on Plastic Pollution 2024



Expenditures on SDGs (by OECD)



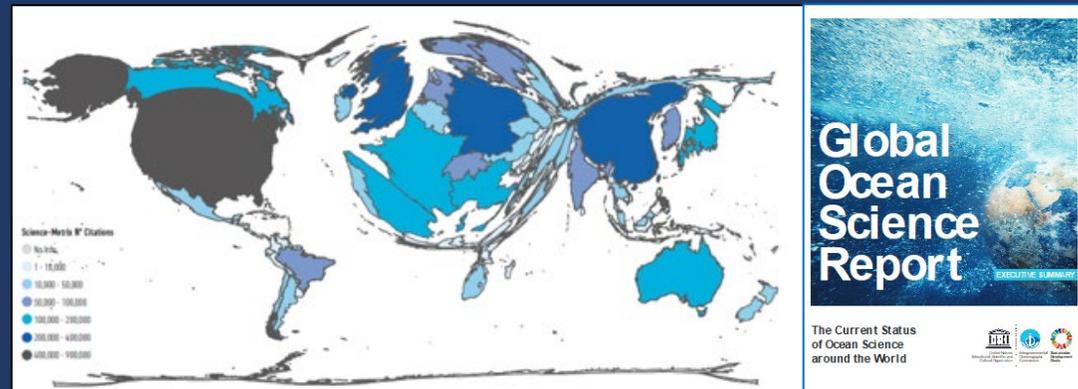
Slow Progress in SDG 14 hampers implementation of most of the 2030 Agenda targets



(Ocean) Economy – basic numbers (*annual, magnitudes*)

GDP of the World	≈ 100 Trillion US\$
Ocean Economy - now	≈ 2-3 Trillion US\$
Global Investment in R/D (GERD)	≈ 2 Trillion US\$ (≈ 1.7% of GDP)
Ocean research	≈ 30-40 Billion US\$ (≈ 1.7 of GERD)
Space exploration	≈ ≈ 100 Billion US\$
Arms race	> ≈ ≈ 2 Trillion US\$
Ocean observations under GOOS	≈ 1 Billion US\$
IOC budget for GOOS	≈ 200 K US\$

Disasters - cost of prevention vs cost of restoration: 1 vs 8-10
+ Major inequalities in capacity:





5 key sectors for transformation:

1. Food (x6)
2. Energy (x 40)
3. Low carbon transport & ports
4. Ocean restoration & protection
5. Tourism

- 20% of Carbon emissions gap
- GDP equivalent of **15 T\$** by 2050

5 “enablers”:

1. Stopping land-based pollution
2. Innovative lower-risk finance
3. **Upgrading ocean accounting**
4. **Data + guidance (= science)**
5. **Ocean planning**

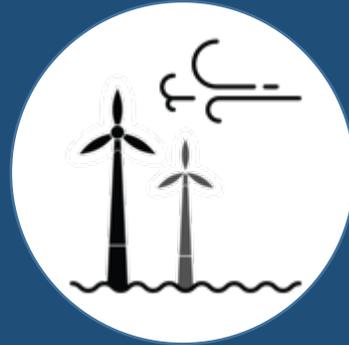
“Sustainable Ocean Planning”

One clearly missed “enabler”:
Climate change mitigation/adaptation

Key Ocean Management Domains



Coastal zone management and adaptation



Marine Spatial Planning/
Sustainable ocean economy
decarbonization



BBNJ,
Marine Protected Areas, LMEs



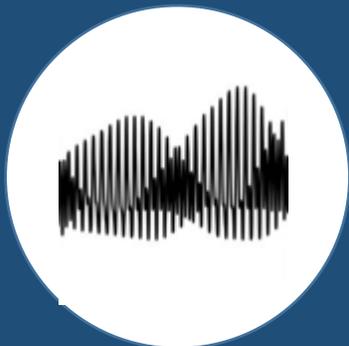
Management of fisheries and aquaculture



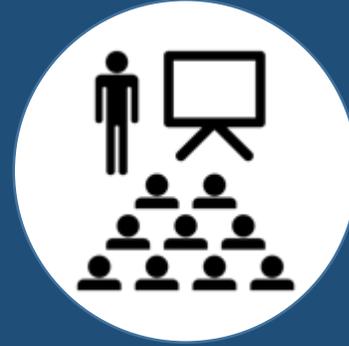
Adaptation and mitigation of climate change, NDCs



Development of national R&D strategies & ocean policies



Real-time oceanographic, weather/climate services



Regional and national capacity development



Early warning systems

IOC Portfolio

E: contributions to 2030 Agenda and SDG 14, UN, UNFCCC + Paris Agreement, BBNJ, CBD, Sendai; Coastal zones, LME, ...

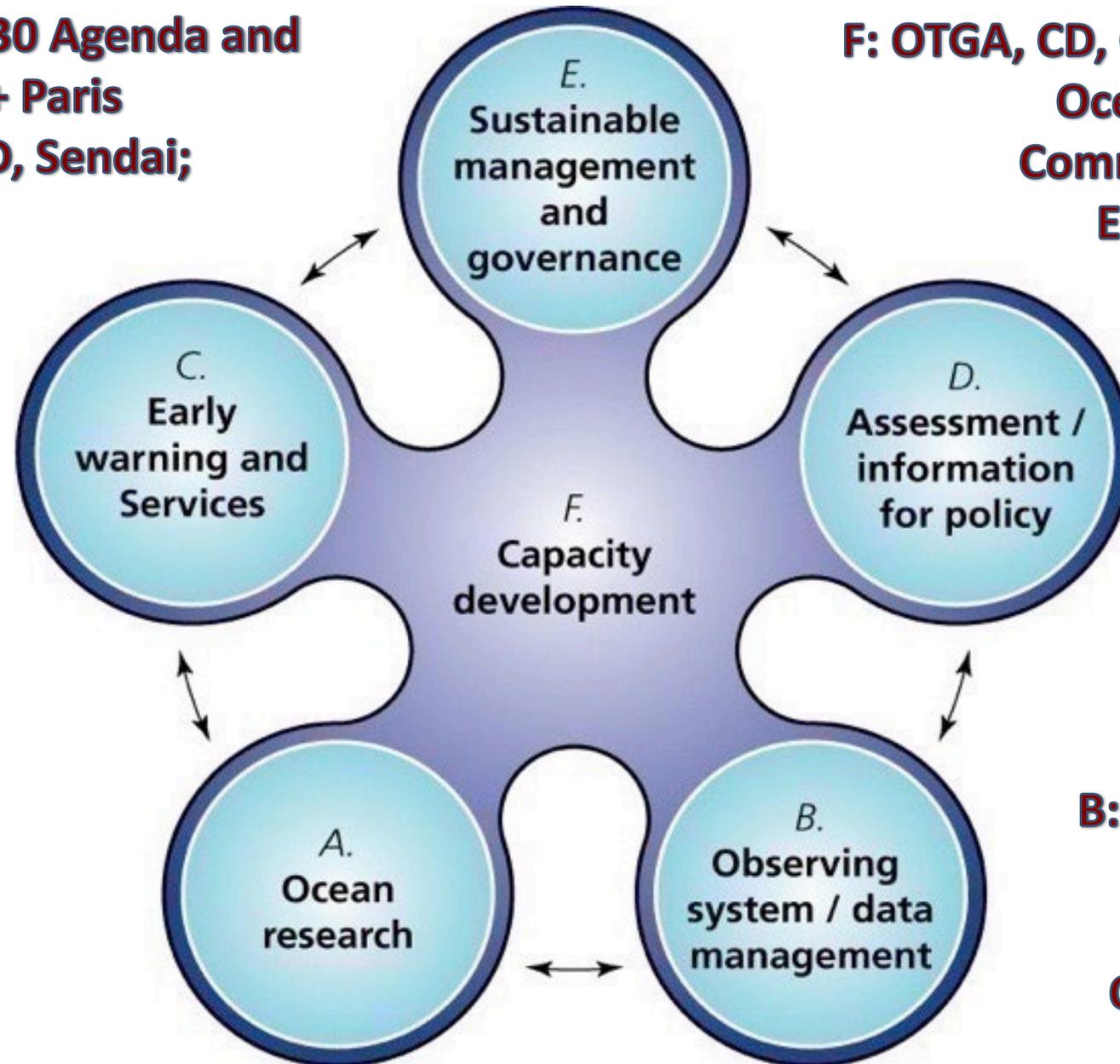
F: OTGA, CD, GOSR, TMT, Ocean literacy, Communication, Education, ...

C: Tsunami, HABs, Ocean Prediction and Services, WMO/IOC JCB, ...

D: StOR, SDG 14.3, SDG 14.a, GEBCO, WOA, IPBES, IPCC, ...

A: IIOE-2, GOAON, GO₂NE, Time Series, TrendsPO, Stressors, Carbon, GESAMP, WCRP, ...

B: GOOS, GLOSS, IODE, OBIS, ...





2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

*The science we need
for the ocean we want*

- Clean
- Healthy and resilient
- Productive
- Predicted
- Safe
- Accessible
- Inspiring and engaging

OCEAN DECADE CHALLENGES



ENDORSED OCEAN DECADE ACTIONS



45 PROGRAMMES
214 PROJECTS
69 CONTRIBUTIONS
420 ACTIVITIES



DECADE ACTIONS LED
BY PARTNERS FROM
42
COUNTRIES

DECADE ADVISORY BOARD

15 MEMBERS
14 COUNTRIES
8 WOMEN
7 MEN
3 MEETINGS



REGIONAL AND NATIONAL COORDINATION

7
REGIONAL
TASKFORCES
AND PROGRAMMES

8
DECADE
IMPLEMENTING
PARTNERS



34
NATIONAL
DECADE
COMMITTEES

9
DECADE
COLLABORATIVE CENTRES/
COORDINATION OFFICES

ENGAGEMENT AND OUTREACH



1 MILLION
REACH

10 PATRONS AND
16 INSTITUTIONAL
MEMBERS OF THE
OCEAN DECADE
ALLIANCE



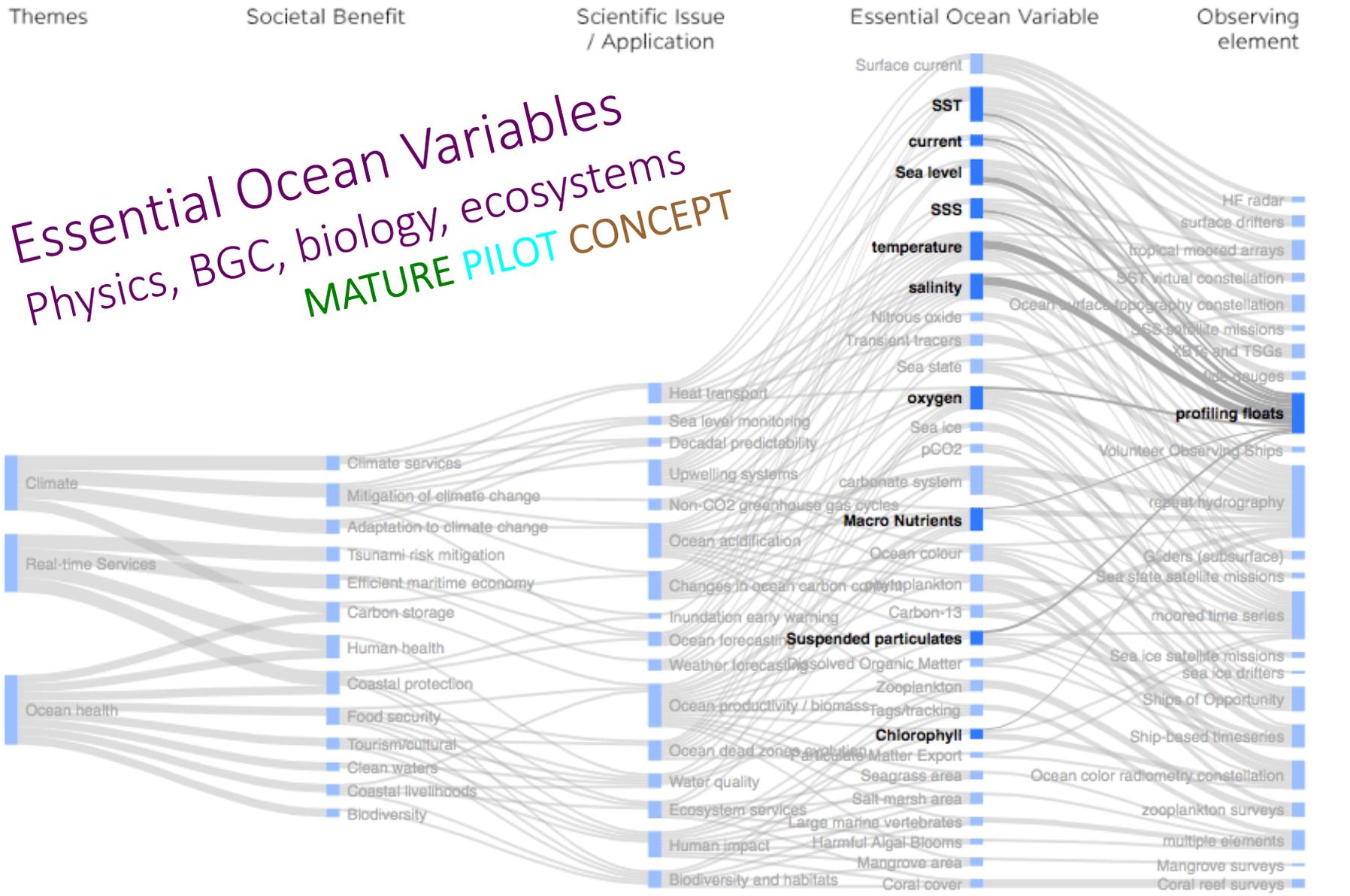
5 INFORMAL
WORKING GROUPS

OVER **20**
MEMBERS
OF THE
FOUNDATIONS
DIALOGUE



6,000
MEMBERS ON THE
OCEAN DECADE NETWORK

REQUIREMENTS



Essential Ocean Variables
 Physics, BGC, biology, ecosystems
 MATURE PILOT CONCEPT

Framework for Ocean Observing

Essential Ocean Variables EOVs

Prepared by the post-OceanObs'09 Task Team for an integrated framework for Sustained Ocean Observing

Key developments and opportunities

- **Climate (UNFCCC and its Paris Agreement → more ocean)**
- **Kunming-Montreal Global Biodiversity Framework, “30 by 30”**
- **BBNJ → “High Seas Treaty”, IOC in the final text**
- **Work on SDG 14**
- **Massively increasing needs for/of sustainable ocean economy**
- **Sustainable Ocean Planning**
- **Ocean Decade moving forward**
- **UN Ocean Conference (Lisbon, 2022) recognized IOC and Decade in its Political Declaration in an unprecedented way**
- **UNOC 2025, Nice, France – towards UN ocean work integration?**