



The Global Ocean Observing System

# Ocean Observations in areas under National Jurisdiction

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# The Ocean is key to pressing societal issues



## Climate and weather

The ocean plays a huge role:

- 25% anthropogenic carbon / yr.
- extreme weather prediction
- 90% excess heat

At the same time, it is being affected by climate change.



## Ocean health

Life in the ocean gives us the oxygen we breathe and the food we eat. Overfishing, climate change and pollution are putting biodiversity and food security at risk, and their impacts are critically under-observed.



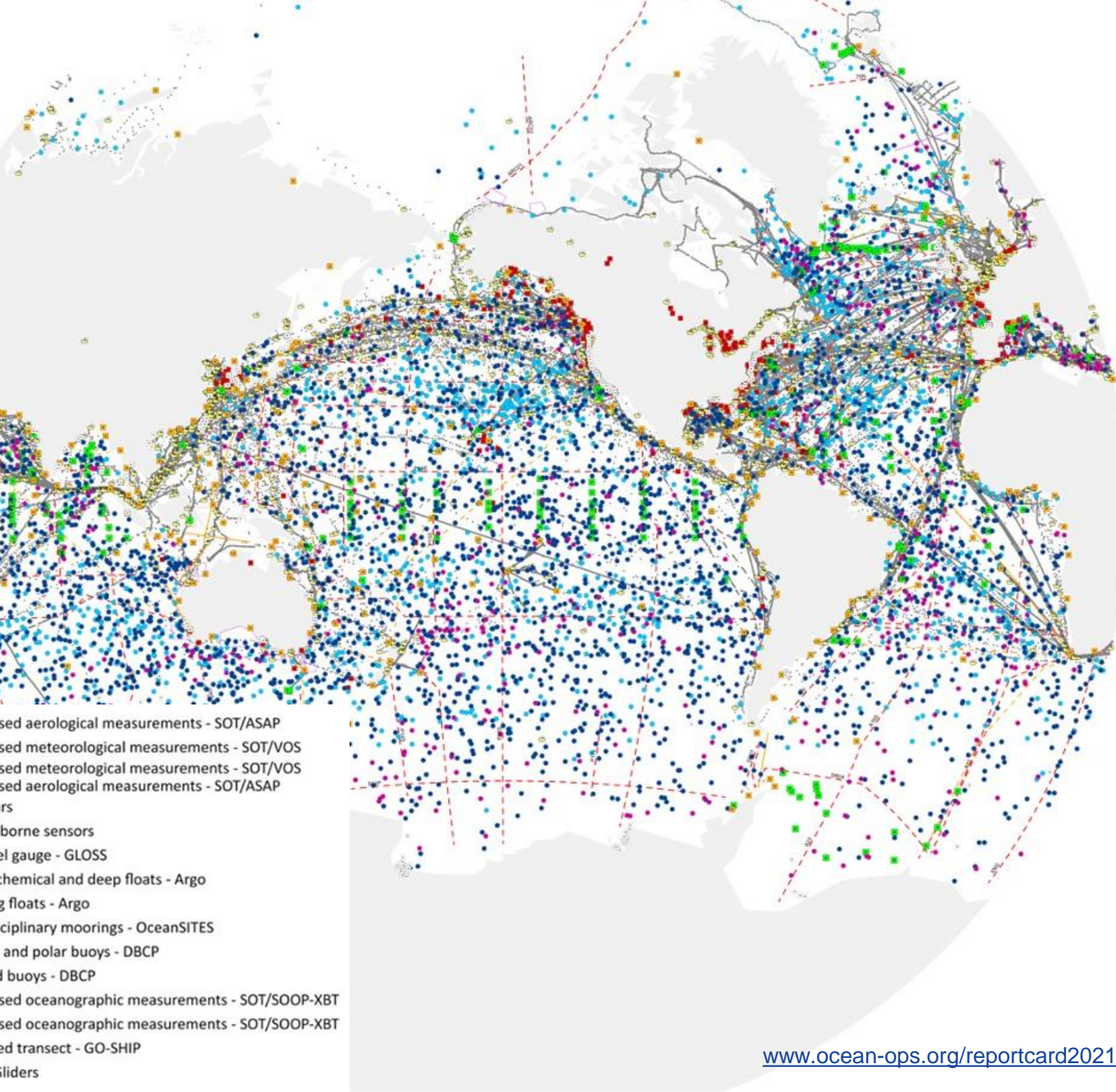
## Coastal communities

Coastal communities are in the front line facing threats posed by changing oceans. Communities in many less developed areas are particularly at risk from changing weather and ocean patterns, and increased disaster risk.

**Ocean observations are pivotal to tackling mitigation, risk assessment, and adaptation**

# Global Ocean Observing System

- 86 countries, 8,900+ observing platforms, 12 global ocean observing networks
- Observing networks highlighted challenges associated with carrying out sustained observations in areas under national jurisdiction and relating to the granting of consent for Marine Scientific Research (MSR)
- Issues raised at:
  - GOOS Steering Committees; SC-6 and SC-7
  - Observations Coordination Group meetings; OCG-8 and OCG-9



# UNCLOS

The 1982 UN Convention on Law of the Sea (UNCLOS) promotes the efficient and equitable utilisation of the resources of the oceans and seas, the conservation of their resources, and the study, protection and preservation of the marine environment, and provides the international legal basis for Exclusive Economic Zones (EEZs) and other areas under national jurisdiction, with different rights and obligations.

- Legal regime for MSR is established in Part XIII - aims to achieve a balance between rights and interests of coastal States and that of other States
- For EEZ - consent shall, in normal circumstances, be granted for MSR carried out for peaceful purposes and to increase 'scientific knowledge of the marine environment for the benefit of all mankind' (Art. 246(3))
- States that conduct MSR activities have duty to provide information on the project to the coastal State (Art. 248) and to comply with certain conditions regarding cooperation and participation



# IOC Work

The IOC has a successful track record in creating a Member State agreed framework and mechanism for the provision of data from the global **Argo Programme** from floats that drift into EEZs, in compliance with UNCLOS.

The Advisory Body of Experts on the Law of the Sea (ABELOS) of the IOC worked on these issues between 2003 and 2009 and developed the foundation for the Argo notification scheme.

- IOC Resolution XX-6 (1999, "The Argo Project")
- IOC Resolution EC-XLI.4 (2008, "Guidelines for the Implementation of Resolution XX-6 of the IOC Assembly Regarding the Deployment of Profiling Floats in the High Seas within the Framework of the Argo Programme")
- Decision IOC/EC-LI/4.8 (2018, "Evolving Capabilities of the Argo Global Array of Profiling Floats")



Deployed Argo float. Credit: Argo Data Management

# WMO Work

In 2018 issues related to marine meteorological observations were raised at the WMO 70th Executive Council. And in 2019, WMO held a Technical Workshop resulted in two resolutions at WMO Eighteenth Congress:

- **Resolution 45 (Cg-18):** “Ensuring adequate marine meteorological and oceanographic observations and data coverage for the safety of navigation and the protection of life and property in coastal and offshore areas”
- **Resolution 46 (Cg-18)** “Future collaboration between WMO and the Intergovernmental Oceanographic Commission on facilitating oceanographic observation in coastal regions in support of Earth system prediction and climate services”

Both resolutions were noted by the IOC Assembly at its 30th session (item 7.1.1)



WORLD  
METEOROLOGICAL  
ORGANIZATION



For a truly global and integrated system, all regions of the oceans need to be adequately sampled, including waters under the jurisdiction of coastal States which represent 30% of the ocean.

# Ocean Observations in Areas Under National Jurisdiction Workshop

- 2 day **Experts Workshop** (12-13 February 2020)
- Included global networks, international law of the sea experts (academic and DOALOS), IOC, GOOS, WMO – **experts providing opinion in their personal capacity**
- Discussed:
  - the value of observations to coastal states
  - concerns of coastal states
  - issues the global networks currently face in undertaking observations in areas under national jurisdiction
  - **solution spaces within UNCLOS**



## EXPERT MEETING REPORT



### Ocean Observations in Areas under National Jurisdiction (OONJ) Workshop

12 - 13 FEBRUARY 2020  
IOC/UNESCO  
Paris, France



NOVEMBER 2021  
REPORT NO.: GOOS-246



# Ocean Observing in EEZs: The Challenges

- Consent process **incompatible with the operational reality** of sustained ocean observing
- **Advance notice** incompatible for some platforms (e.g. drifting buoys or animal-borne sensors)
- Clearance difficulties for **EEZs in dispute**
- Sometimes no national clearance procedure for **new technologies** (e.g. ocean gliders)



A seal-borne ocean sensor. Credit: Clive McMahon, Sydney Institute of Marine Science

# Workshop Outcomes - Solution Spaces

1. Argo Notification Scheme as a process (model)

2. Article 247 of UNCLOS (IOC procedure) - provides for Member States of an intergovernmental body (e.g. IOC) to adopt an MSR project, which then may be carried out after giving notice of intent

3. Update DOALOS published guide: DOALOS publish a “*Guide to the Implementation of the Relevant Provisions of the United Nations Convention on the Law of the Sea*”, which provides guidance and forms for Coastal States to use for for MSR clearance. This could be updated to address some of the issues faced

4. Raising-awareness activities – highly rated as important

5. WMO Recommendations – relevant to their mandate

6. Regional / country arrangements

7. Article 258 of UNCLOS: a means to clarify the status of new ocean observing platforms

Solution Space	GO-SHIP	SOOP XBT / underway	VOS	Drifters	Argo	ABS	OceanGliders	OceanSITES	GLOSS
1 Argo Notification Scheme as a process (model)	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2 Article 247 (IOC)	Partial	Potential	No	Potential	Yes	Potential	Yes	Yes	No
3 Update The Guide	Partial	Potential (XBT)	No	No	No	No	Yes	Yes	No
4 Raising of awareness activities: Increasing transparency – benefits (risks) Enabling environment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5 WMO recommendations	No	Yes	Yes	Yes	Yes	Yes (Future)	Yes	No	Yes (Partial)
6 Regional/country arrangements	Yes (Partial)	Yes (Partial)	No	Yes	Yes	Yes	Yes	Yes	No
7 Article 258 UNCLOS	No	Yes (Partial)	No	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Partial)	No



# Workshop Recommendations

Decision for the Fifty-fifth IOC Executive Council:

- **Calls on DOALOS and WMO to work together with IOC** in solution spaces to support GOOS networks and national understanding and benefit from ocean observations;
- **Invites GOOS to propose awareness-raising and capacity building activities to help States realize the value of observations**, including positive impact on States' adaptation to climate change and sustainable economic development, to be implemented by the IOC, with its other co-sponsors, and with DOALOS;
- **Decides to launch an open-ended intersessional Member State consultation to propose updated Terms of Reference for IOC/ABE-LOS** to include consideration of a dual scientific and legal co-chairship, and timelines for the consideration of cases referred to it by the GOOS Steering Committee; and submit its proposal to reconstitute IOC/ABE-LOS with new terms of reference to the IOC Assembly at its 32nd session in 2023;
- **Requests the GOOS Steering Committee**, together with observing networks and interested parties, **to identify and prepare a limited number of specific 'cases' to be received by IOC/ABE-LOS**, that identify issues and possible solutions, and prioritize topics for discussion..

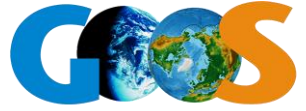
# Raising Awareness in the UN

- **UN Informal Consultation Process 22<sup>nd</sup> Meeting** – ‘ocean observing’ – June 2022

*“Without data, we cannot hope to manage the ocean or its resources, nor improve its current state of declining health... it is also a topic central to the mandates and processes of several UN-Oceans members” - Mr. Miguel de Serpa Soares Under-Secretary-General for Legal Affairs and United Nations Legal Counsel, UN Oceans Focal Point*

Ocean observing in EEZ raised as one element amongst many others at this meeting, noting the need for cooperation between IOC, WMO and DOALOS.





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# Thank you

[goosocean.org](http://goosocean.org)

