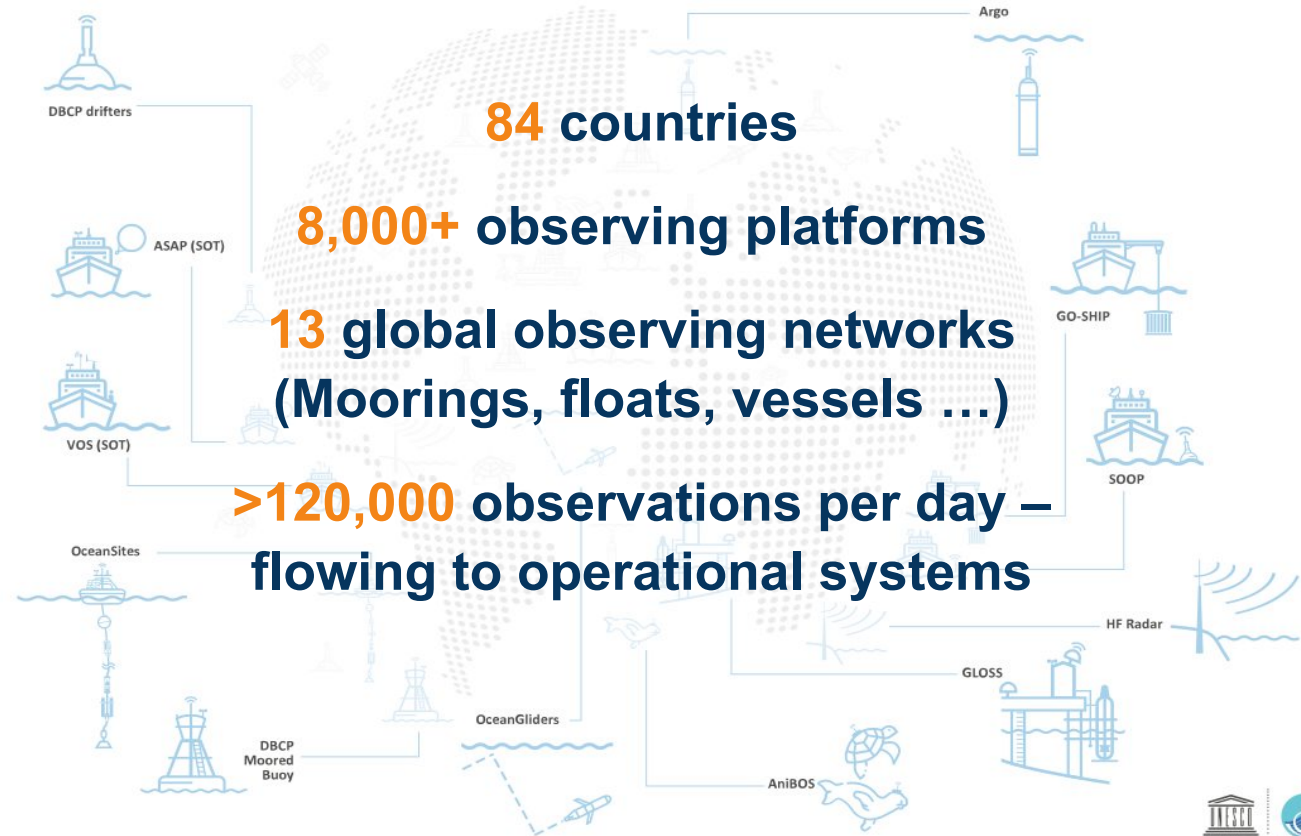
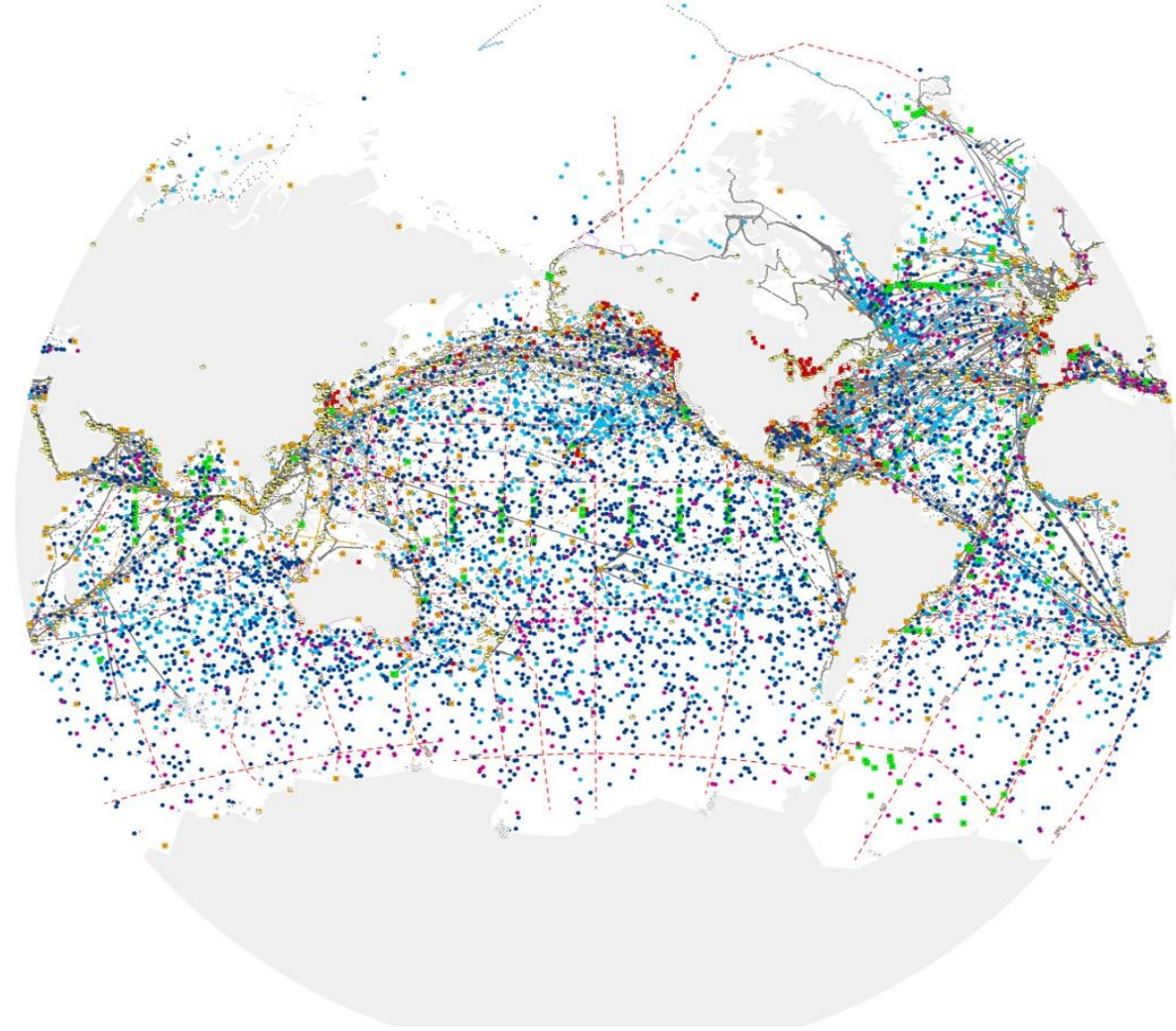


# GOOS Today



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Intergovernmental  
Oceanographic  
Commission



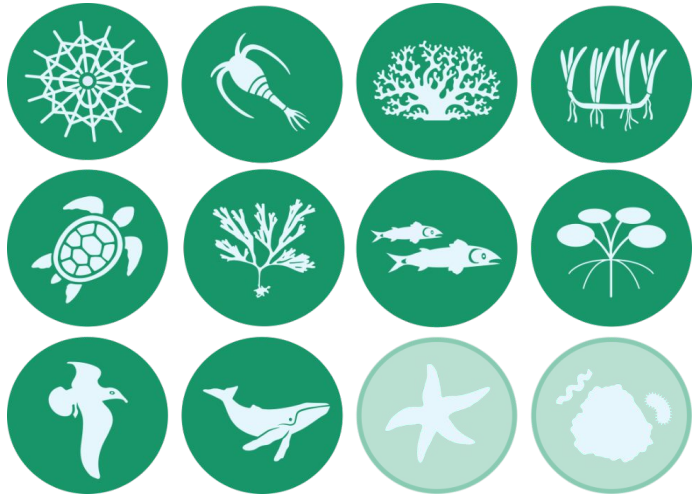
# Essential Ocean Variables (EOVs)



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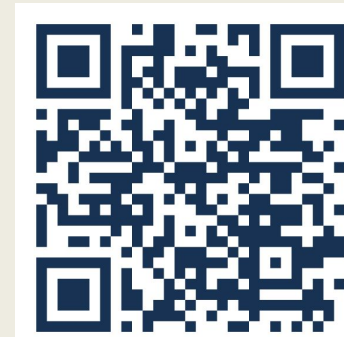
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Minimum set of ocean variables that are needed to efficiently monitor the state and health of the ocean



## 12 EOVs for Biodiversity

*Phytoplankton, Zooplankton, fish abundance, Sea turtles, Seabirds, Marine mammals, Coral, Seagrass, Macroalgal, Mangrove*



**GOOS BioEco Portal:**  
search (metadata) for  
monitoring programs




**OBIS: the largest  
database for marine  
life observations**

# Challenges in data exchange and marine research



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 **GOOS BioEco Metadata Portal** UNDER DEVELOPMENT [Statistics](#) [About](#) [User Guide](#) [Open GeoNode](#)

Select Essential Ocean Variables (EOVs)

<input type="checkbox"/> Birds	<input type="checkbox"/> Mangrove
<input type="checkbox"/> Fish	<input type="checkbox"/> Microbes
<input type="checkbox"/> Hard coral	<input type="checkbox"/> Phytoplankton
<input type="checkbox"/> Invertebrates	<input type="checkbox"/> Seagrass
<input type="checkbox"/> Macroalgae	<input type="checkbox"/> Turtles
<input type="checkbox"/> Mammals	<input type="checkbox"/> Zooplankton

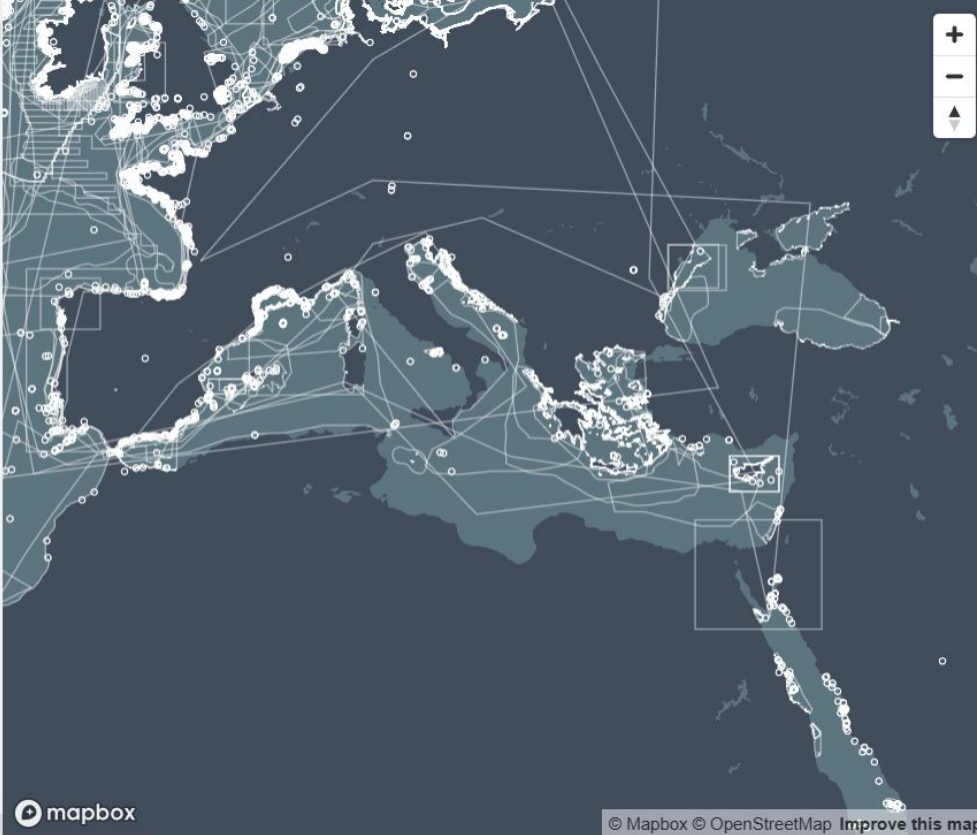
Subvariables

Readiness levels

Requirements

Coordination

Data



mapbox © Mapbox © OpenStreetMap [Improve this map](#)

**Outdated mindsets and practices (co-design)**

**Political and legal issues**

**Unappropriated  
International coordination**

# Emerging technologies to improve data collection



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## Passive acoustic

*Track marine species, monitor anthropogenic noise and study ecosystem health*



## eDNA

*A non-invasive and cost-effective method to collect genetic material*



## Underwater imagery, coupled with AI

*A cutting-edge technology for marine species observations and recognition*

