

# OCEAN OBSERVING SYSTEM REPORT CARD 2020

GOOS Observations  
Coordination Group

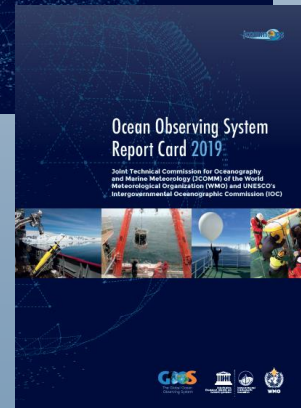
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UNFCCC Earth Information Day, 30 November 2020

# ANNUAL OCEAN OBSERVING SYSTEM REPORT

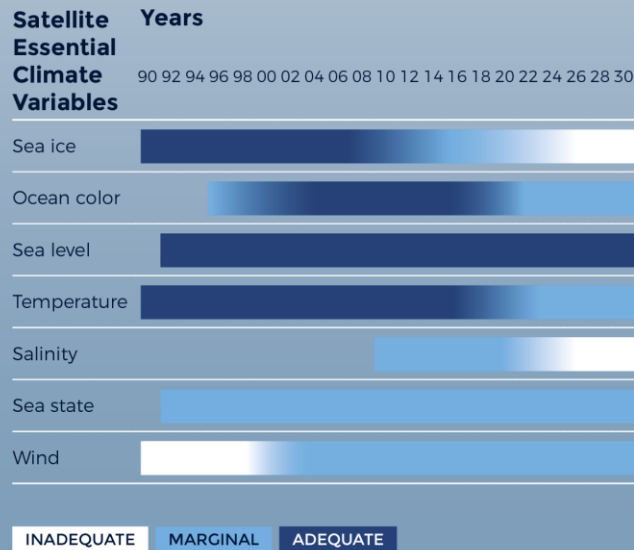
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- Encouraging the development of a truly integrated, sustained, innovative, globally implemented and coordinated observing system
- This 4<sup>th</sup> edition of the Report Card provides an update on the status and value of the **Global Ocean Observing System** contributing to the **Global Climate Observing System**, coordinated through WMO Members, IOC Members States, governments and institutions

# IN SITU AND SATELLITE OBSERVING SYSTEM STATUS

- 9,349 *in situ* platforms (including established arrays and emerging networks) and 170 satellites continuously monitor the global ocean and atmosphere
- The system is assessed on implementation status, real-time, archived and meta data availability, and the availability of documented best practice.



GOOS <i>in situ</i> networks <sup>1</sup>	Implementation Status <sup>2</sup>	Data & metadata			Best practices <sup>6</sup>	GOOS delivery areas <sup>7</sup>		
		Real time <sup>3</sup>	Archived high quality <sup>4</sup>	Meta-data <sup>5</sup>		Operational services	Climate	Ocean health
Ship based meteorological measurements - SOT/VOS	★★	★★★★	★★★★	★★	★★	Operational services	Climate	
Ship based aerological measurements - SOT/ASAP	★	★★★★		★★	★	Operational services	Climate	
Ship based oceanographic measurements - SOT/SOOP-XBT	★★	★★★★	★★★★	★★	★★	Operational services	Climate	
Sea level gauges - GLOSS	★★★★	★★	★★★★	★	★★	Operational services	Climate	
Drifting and polar buoys - DBCP	★★★★	★★★★	★★	★★	★★	Operational services	Climate	
Moored buoys - DBCP	★★	★★★★	★★	★★	★★	Operational services	Climate	
Interdisciplinary moorings - OceanSITES	★★	★★	★★	★★	★★		Climate	Ocean health
Profiling floats - Argo	★★★★	★★★★	★★★★	★★★★	★★	Operational services	Climate	Ocean health
Repeated transects - GO-SHIP	★★★★	★★	★★★★	★★	★★★★		Climate	Ocean health
OceanGliders	Emerging	★★	★★	★★	★★	Operational services	Climate	Ocean health
HF radars	Emerging	★★★★	★★★★	★★	★★★★	Operational services	Climate	Ocean health
Biogeochemistry & Deep floats - Argo	Emerging	★★★★	★★	★★★★	★★	Operational services	Climate	Ocean health
Animal borne ocean sensors - AniBOS	Emerging	★★★★	★★	★★	★★	Operational services	Climate	Ocean health



# UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT

- ***The science we need for the ocean we want***, the Ocean Decade provides a framework for diverse stakeholders to co-design and co-deliver transformational science for the future of the ocean
- One of the Ocean Decade challenges is **to ensure a sustainable ocean observing system that delivers timely data and information accessible to all users on the state of the ocean across all ocean basins.** GOOS will play an important role in achieving this goal over the next decade.



**2021** United Nations Decade  
**2030** of Ocean Science  
for Sustainable Development

## OBSERVING THE OCEAN THROUGH THE EYES OF MARINE ANIMALS



- The new **Animal Borne Ocean Sensors (AniBOS) network** provides cost-effective and complementary observing capability
- In the last decade 500,000 profiles from animal-borne instruments were obtained in high latitudes, coastal shelves and tropical areas - **all regions that are currently poorly covered by traditional observing platforms**
- These measurements enhance studies of climate variability, ecological researches and management applications, also providing data on animal movements and behaviour essential to developing evidence-based sustainable management policies.



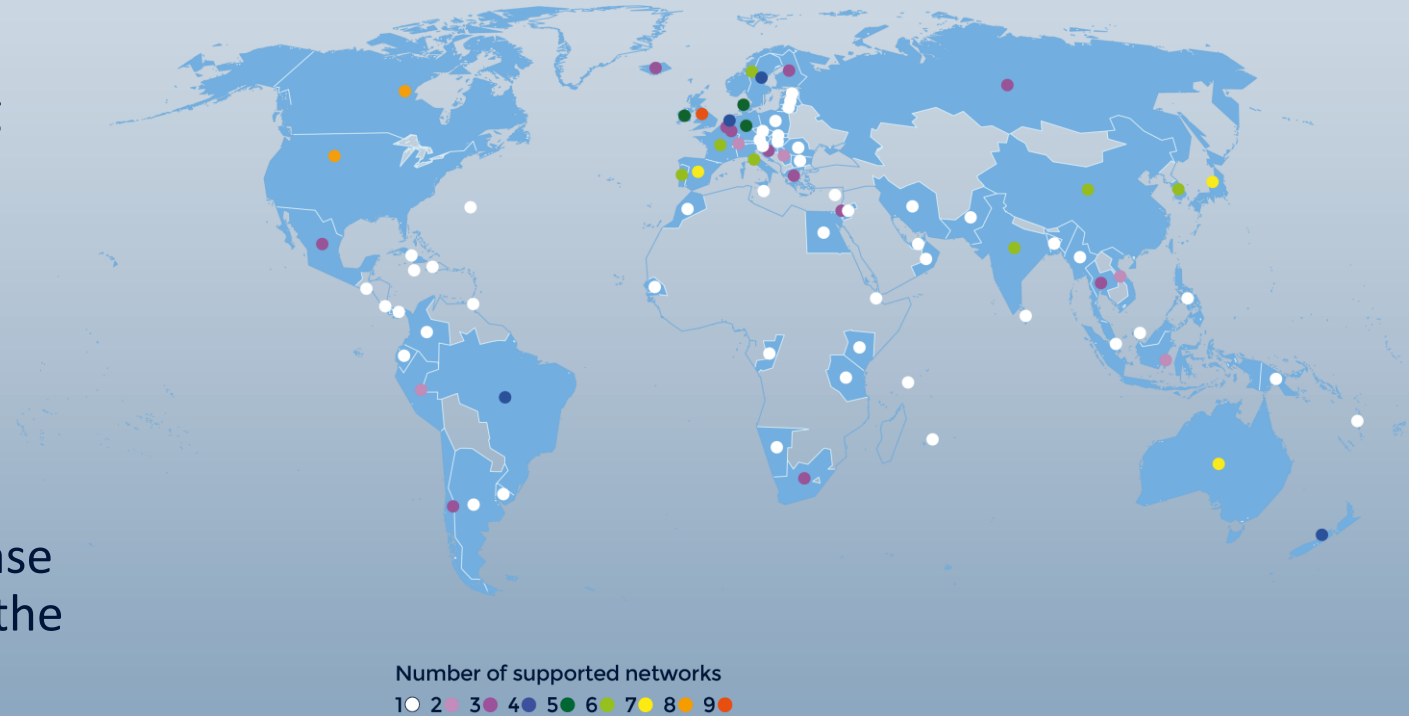
## SHIP SUPPORT TO SCIENCE AND SERVICES

- Ships observations sustain and maintain GOOS at sea, deploying and maintaining ocean instruments and directly taking data
- Research ships take the high-precision, multi-parameter full ocean depth observations that are the bedrock for climate analyses and vital calibration of autonomous instruments.
- Recently, **commercial shipping and private initiatives are getting more involved in cost effective and innovative met-ocean data collection projects, allowing measurements in remote and not yet well sampled areas of the ocean, filling critical observational gaps**, especially during this challenging pandemic period.



## CALL FOR ACTION

- Currently, 86 countries contribute to the Global Ocean Observing effort supporting ocean observations
- Our call:
  - **the current global ocean observing system must grow *e.g.* through the Ocean Decade**
  - **it is critical that governments and the private sector work together** to increase support for ocean observing, to meet the increasing need for ocean knowledge.



Based on operational platforms registered at OceanOPS as of June 2020: 86 countries.

Спасибо  
Thank you  
Gracias  
Merci  
谢谢  
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Observation  
Integration  
Communication



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