

OCEAN OBSERVING SYSTEM REPORT CARD 2020

GOOS Observations
Coordination Group

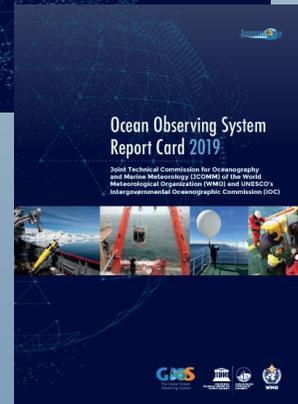
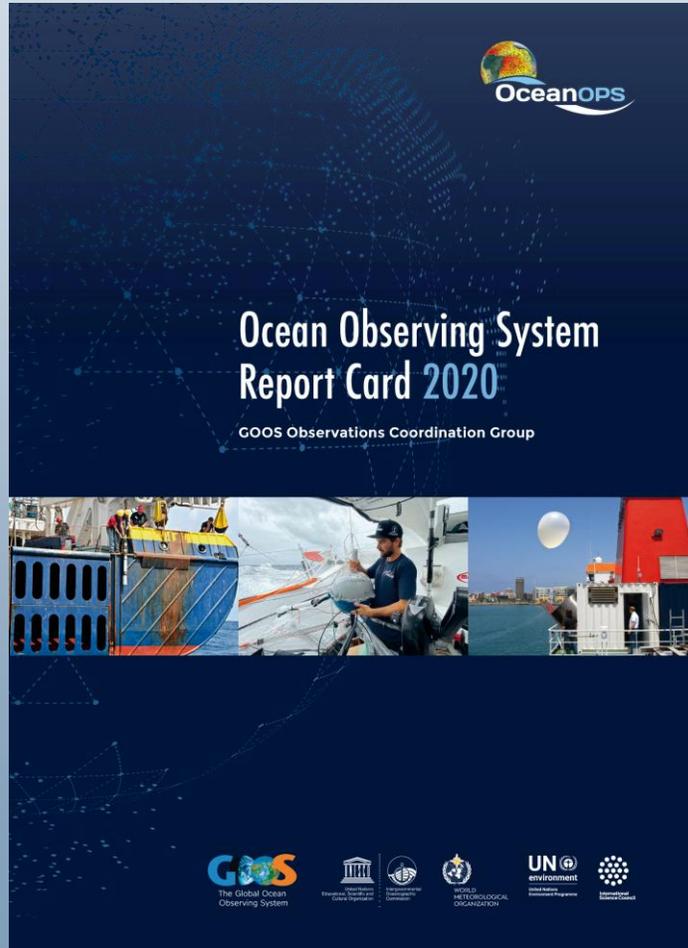
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UNFCCC Earth Information Day, 30 November 2020

ANNUAL OCEAN OBSERVING SYSTEM REPORT

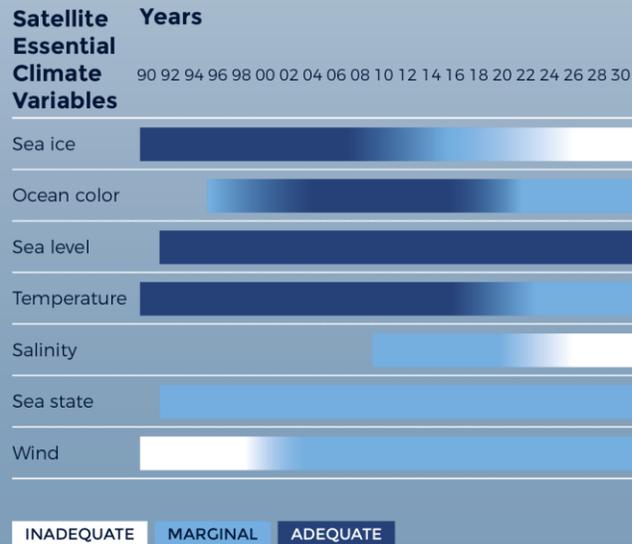
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- Encouraging the development of a truly integrated, sustained, innovative, globally implemented and coordinated observing system
- This 4th edition of the Report Card provides an update on the status and value of the **Global Ocean Observing System** 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 ¹	Implementation Status ²	Data & metadata			Best practices ⁶	GOOS delivery areas ⁷		
		Real time ³	Archived high quality ⁴	Meta-data ⁵		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	
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.

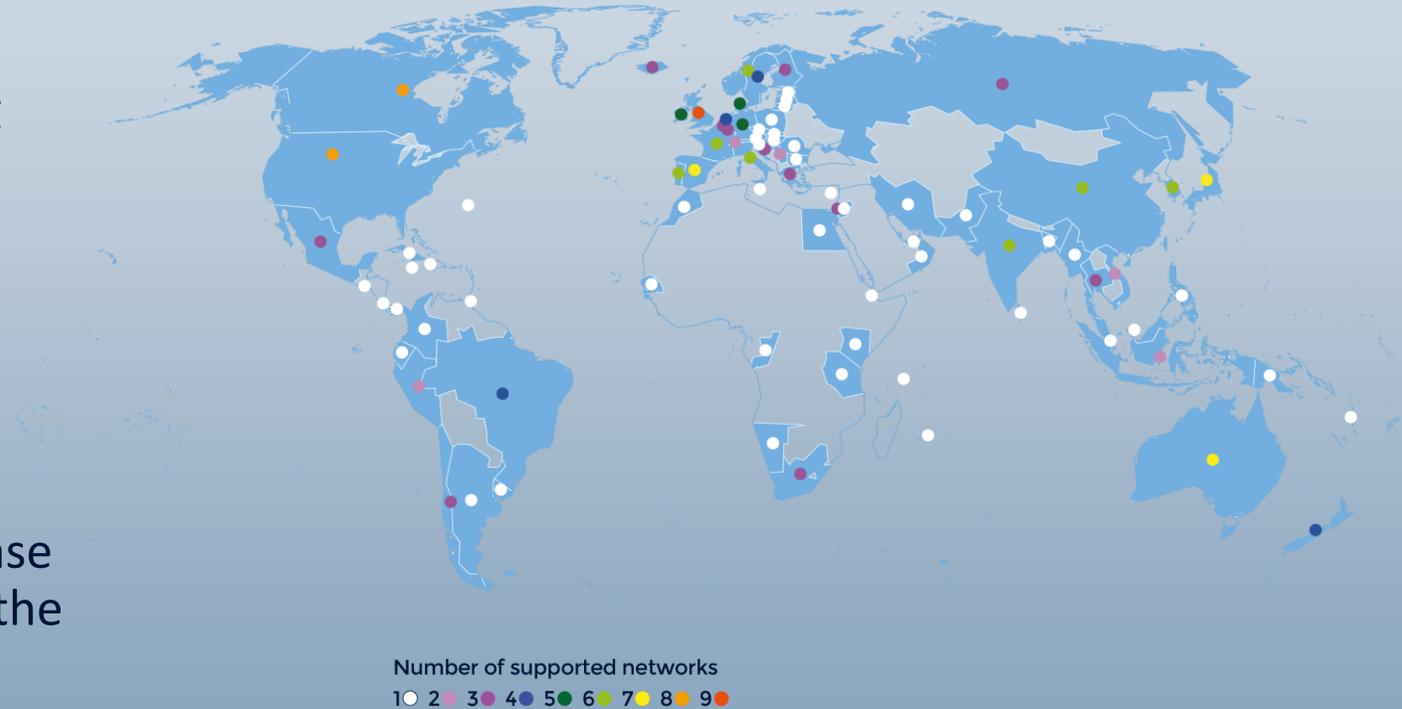
SHIP SUPPORT TO SCIENCE AND SERVICES

- 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
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Observation
Integration
Communication



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