

OceanGliders

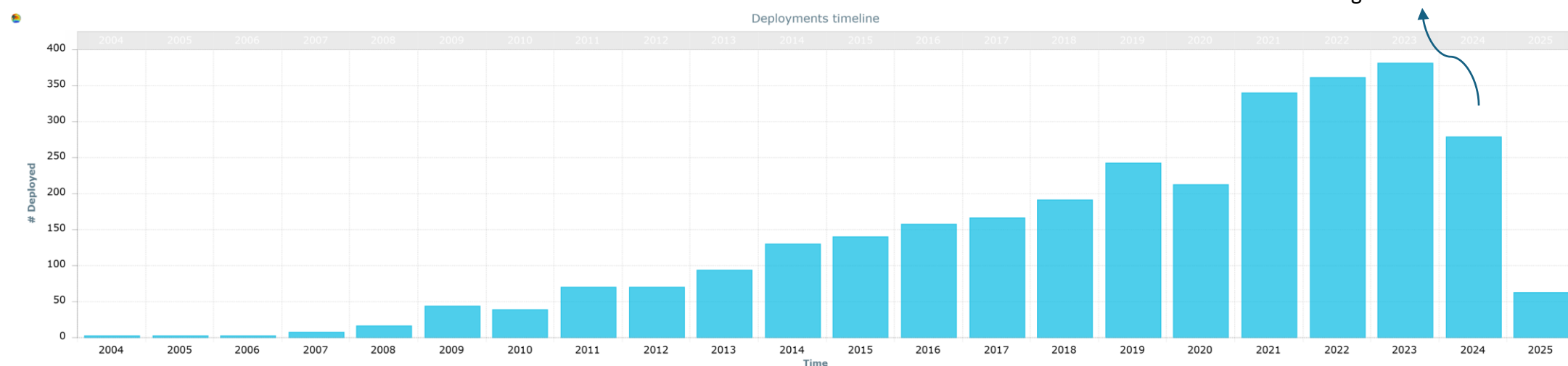
Progress and update in glider deployments in the last 20 years

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Program implementation

Number of annual glider mission: ~ 350 gliders/year

Target: 1000 operating glider/year monitored

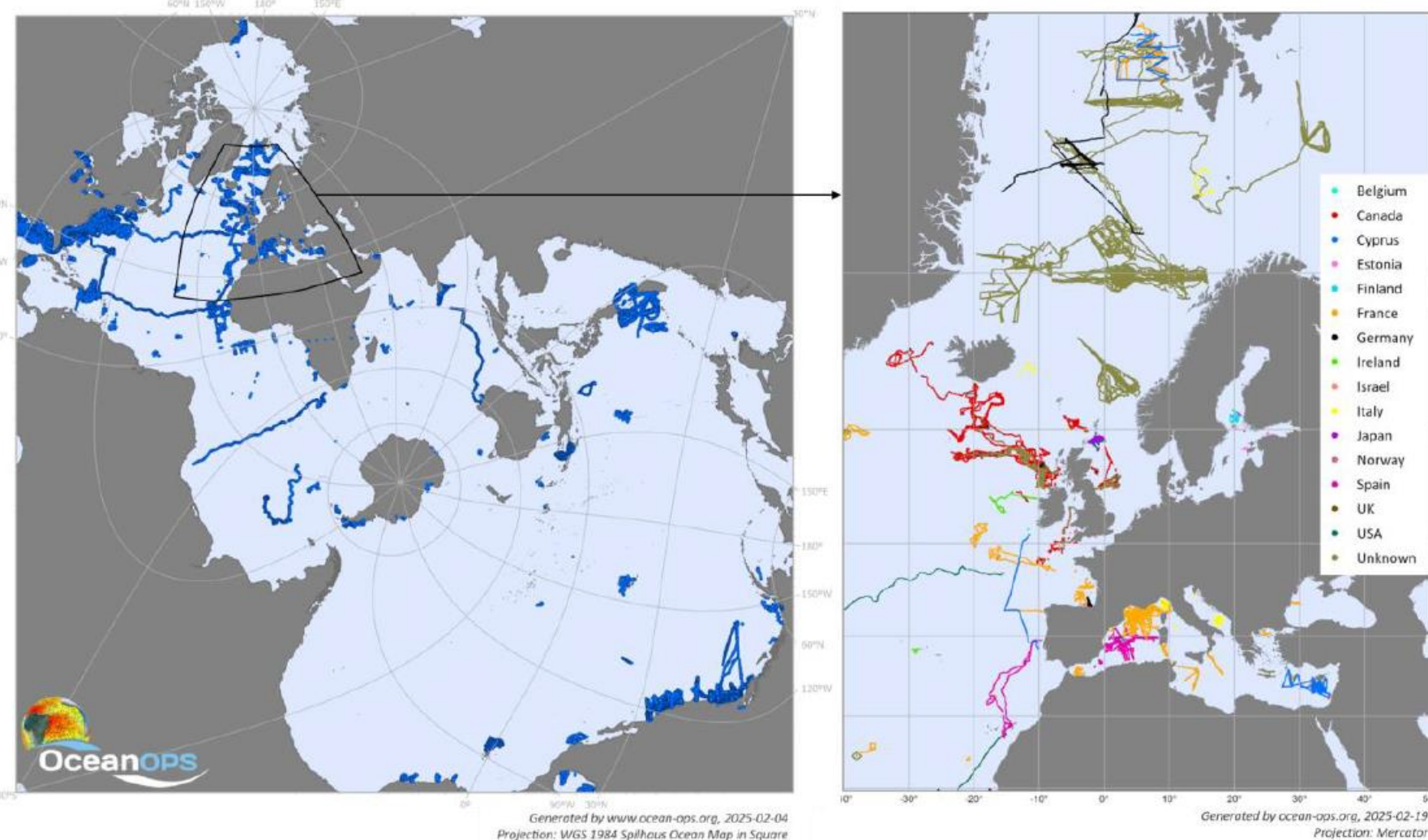


Daily number of glider operating: ~ 40 gliders/day

Target: 100 operating glider/day monitored

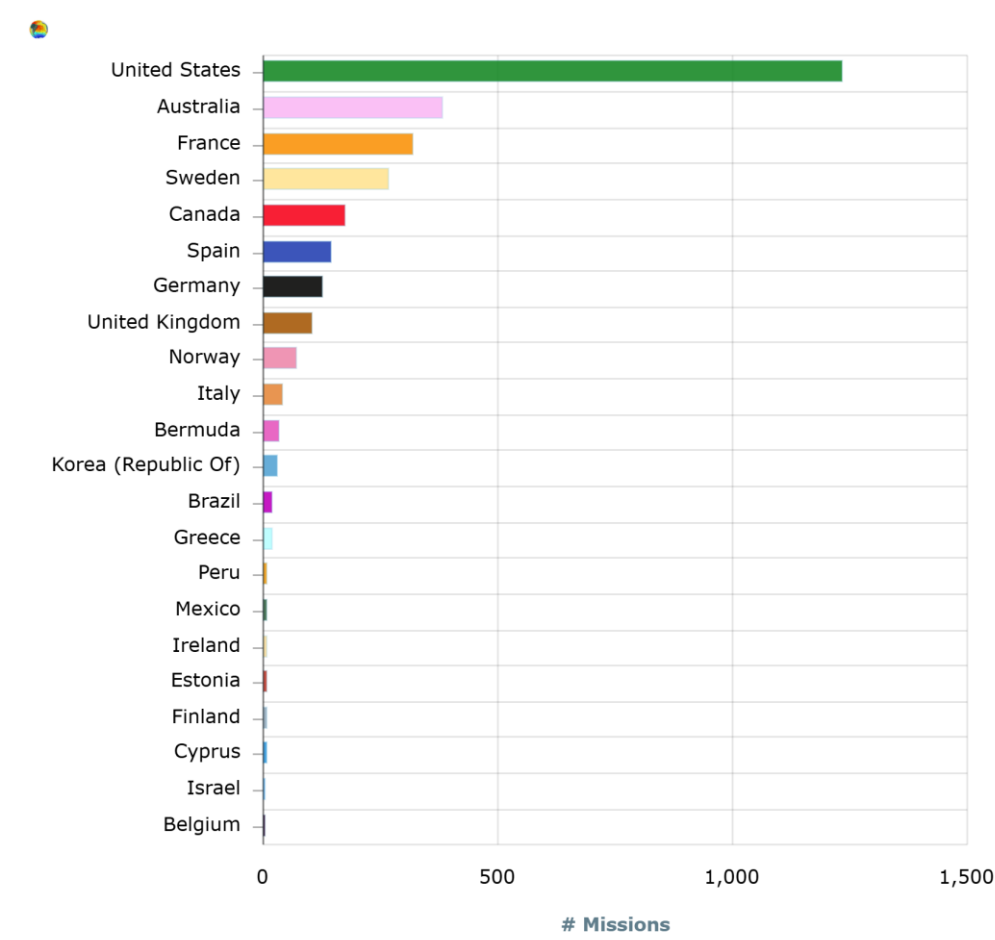


- Expansion of OceanGliders:** The OceanGliders program is expanding globally, the activity of the community and the monitoring are growing in USA, Europe and Canada, while Asia remain under-monitored.
- Enhanced Program Coordination:** Centralization of glider programs in Europe and the USA has streamlined activity monitoring, with both regions fully integrated into the program.
- Achieving Targets by 2030:** Program goals are attainable by 2030 through improved member engagement and efficient data management (OG1.0).
- Global Glider Mission Map:** The map below illustrates part of OceanGliders missions monitored by OceanOPS. Efforts should focus on addressing regional imbalances in the coming years.



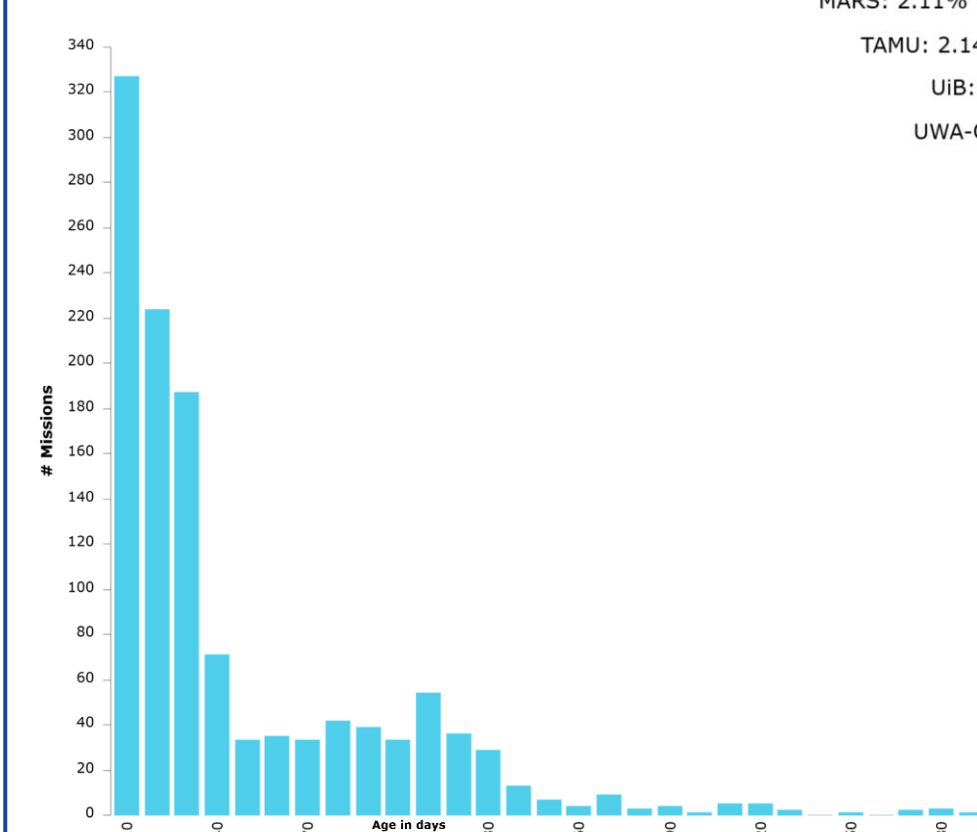
MAS observations since 2004 at global ocean level (left-Spilhaus projection) and at European level (right – Mercator projection), with profiles coloured according to the country deploying MAS platform), generated by OceanOPS based on Coriolis database. Note that some other DACs have not yet been integrated in this map (es. IOOS, VOTO, OTN, AODN).

Program monitoring

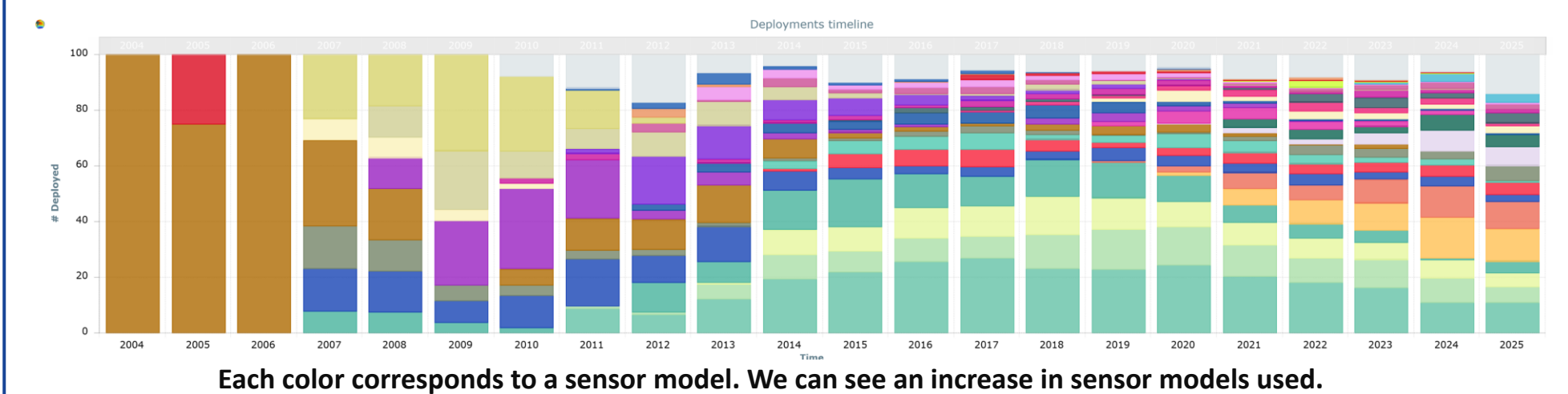


- Global Support for OceanGliders:** OceanGliders is supported by approximately 20 countries over the last 20 years, with growing participation in the last 4 years. The USA leads as the primary provider of glider missions.

- High diversity of Operating Agencies:** Currently, more than forty glider operating agencies are actively monitored in the program. The number of operating agencies is so high that makes it difficult to monitor each of them.



- Glider Mission Durations:** Approximately two-thirds of glider missions have durations of less than 40 days. This metric provides valuable insights into fleet performance and operator behaviors.



- Sensor Payload Monitoring:** Monitoring the sensor payload is crucial for assessing the program's capabilities. The timeline above illustrates a growing diversity of sensors deployed on gliders each year.

Highlights and Future Perspectives

- Program Development and International Expansion:** The program's activity is growing, as well as the participation from Europe and Canada. Western Pacific and Indian ocean regions are under-monitored.

- The International Underwater Glider Conference 2024:** the 9th EGO meeting supported by OceanGliders and the EuroGOOS Glider Task Team took place in Gothenburg, Sweden in June 2024.



- Structured Program Development:** The program is structuring around a GitHub repository hosting data management formats, controlled vocabularies, the BOON team, and Standard Operating Procedures (SOPs) (including vertical velocities recently integrated).

- Release of OG1.0 :** OG1.0 was released in 2024 and implemented by the Coriolis Data Assembly Center (Coriolis, BODC). It is now adopted by the community and constantly updated. Its implementation by the entire community remain a challenge.

- Program vision and priorities:** OceanGliders aims for ambitious targets by 2030, including 1000 missions annually with 100 gliders deployed continuously at sea. Renewal of chairs. Strengthening the UG2 / EGO / OceanGliders relationship. Task team roles.

- Support for Increased Monitoring Capacity:** Adequate funding is essential to enhance monitoring capacity (instrumentation, data flow, and fleet performance). Currently, only one country provides regular funding for OceanGliders and one other provide in-kind support (0.75 FTE) until 2026.

- Develop performance Indicators (KPIs) and maps:** Crucial need to develop Implementation, Instrumentation and Data flow indicators to better steer the program implementation towards its objectives.

- Data and Metadata automatisation:** While data are currently split in different DACs, it is necessary to monitor DAC, GDAC and GTS and push towards a creation of a **federated ERRDAP**.

- Exploring Funding Mechanisms:** to secure funding for a possible international meeting in 2027.