



OceanOPS X OceanGliders

**Progress in glider deployments in the
last 20 years**

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Geographical coverage of glider deployments from 2004 to 2025

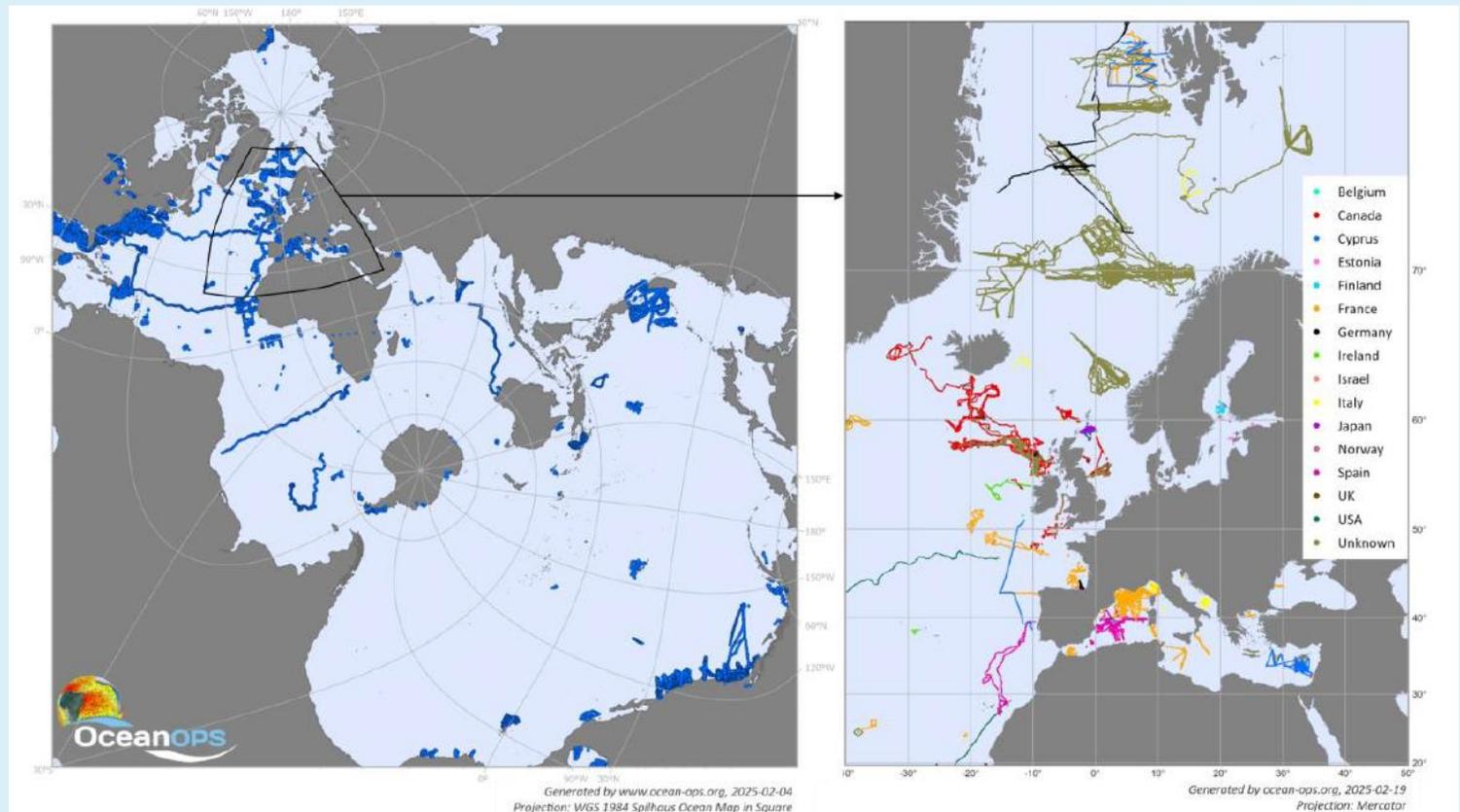
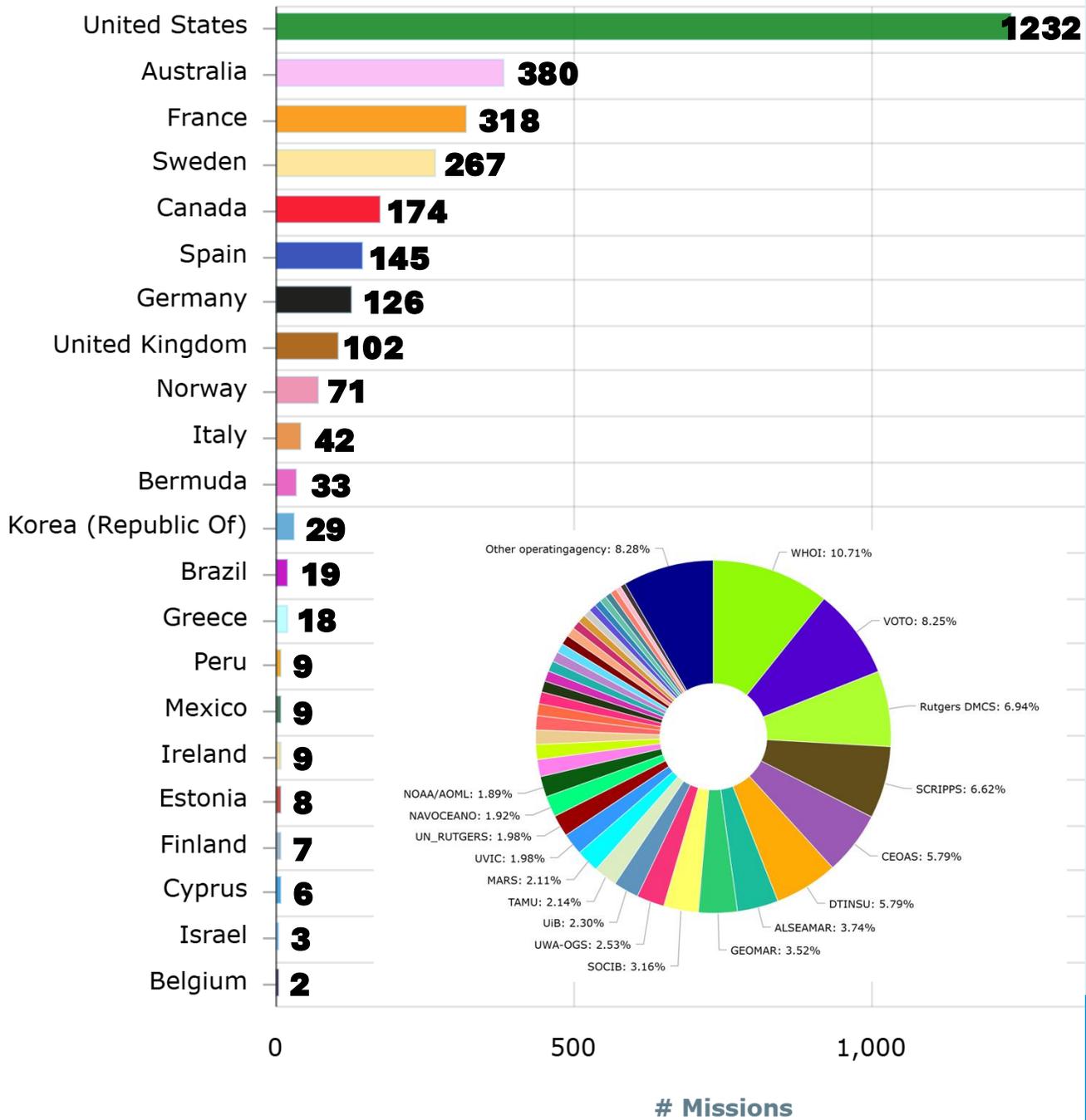


Figure 7: MAS observations since 2004 at global ocean level (left – Spilhaus projection) and at European level (right – Mercator projection), with profiles coloured according to the country deploying the MAS platform), generated by OceanOps based on Coriolis database.

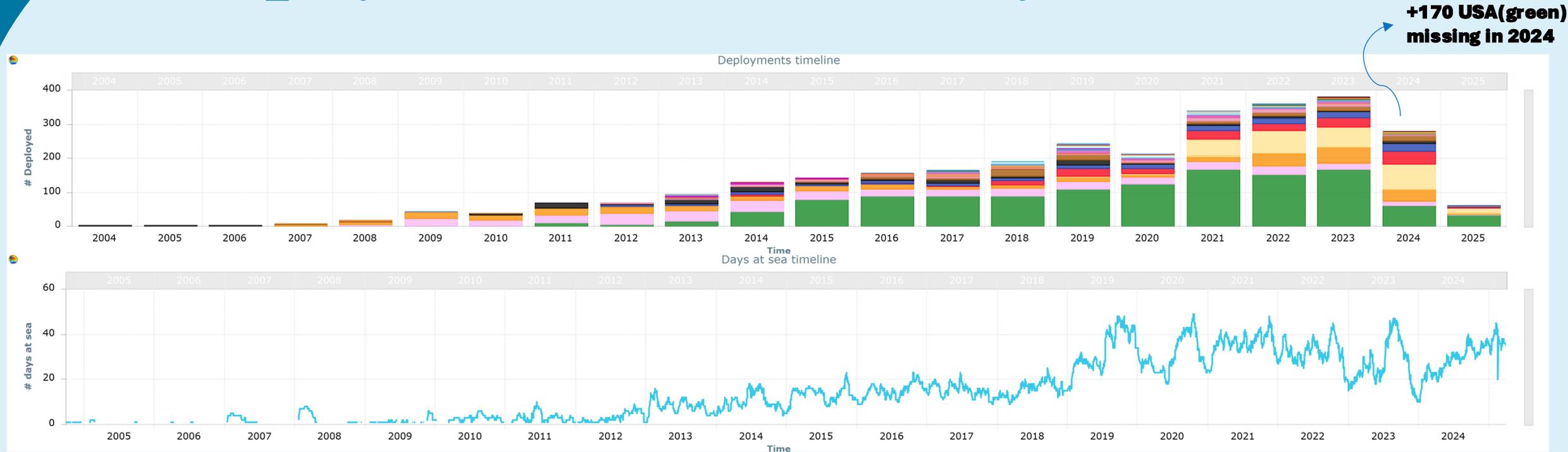
This map illustrates how gliders are today used as observatories to answer specific needs in coastal and offshore waters, in complementarity with the Argo network. Note that some datasets have not yet been received for 2024 and 2025, and that others have not been attributed to a specific country, hence their labelling as 'unknown'.



Distribution Overview

- Total deployments 2004-2025: 3009
- Consideration: We still miss most of 2024 observations for United States.
- Main Operating Agencies (deployments): WHOI (335), VOTO (258), Rutgers DMCS (217), SCRIPPS (207), CEOAS and DTINSU (181), ALSEAMAR (117), GEOMAR (110) and SOCIB (99).

Deployment timeline and day at sea timeline



- The n° of deployments increased in the last decade. Most gliders are deployed by USA, Australia, France, Sweden, Canada and Spain.
- Globally we monitor 40 operational gliders permanently since 2019 (after we'll be adding USA in 2024).



Implementation

- OceanOPS needs to develop some implementation indicators.

Potential implementation KPIs to develop:

- How many deployments/gliders missions per day?
- How many deployments days in a month?
- How many (repetitive) sites sampled?
- National diversity: How many countries deployed a glider?
- Institute diversity: Active programmes in the last 48 months?
- Vertical distance traveled

Data & metadata

- Release of OceanGliders 1.0 and 1st implementation by data center (Coriolis, BODC)
- Harmonized vocabulary among Coriolis / OceanGliders / EGO / UG2 (BODC IDs)
- Working towards centralisation of data (ERDDAP Federation)

Potential data flow KPIs to develop:

- DAC availability = N° of data in each DAC: IOOS, CORIOLIS, OTN, VOTO, AODN)
- OG 1.0 availability
- GTS availability

Instrumentation

- The glider fleet has grown faster in the last 10 years.
- Need to implement some indicators.

Potential instrumentation KPIs to develop:

- Glider fleet: How many gliders were operative in the last 48 months? (es. if the glider is not re-deployed after 2 years, we consider is not part of the fleet)
- Sensor type (n° of cumulative days per sensor)
- Variable type (n° of cumulative days per variable)
- Mission duration: Time evolution of a deployment (es. more or less than 15 days).
- Age of the glider fleet

Staff & Support

	OceanOPS FTE support	Financial support to OceanOPS	In-kind Support	SLA
2024	0.25 FTE	~20.000 \$ (US)	0	-
2025	0.75 + 0.25 FTE	~20.000 \$ (US)	0.75 FTE (France)	Advanced
2026	0.75 FTE + IT support	~20.000 \$ (US)	0.75 FTE (France)	Advanced

Future Perspectives

- Program vision & task team roles
- Renewal of chairs
- UG2 / EGO / OceanGliders relationships
- Performance Indicators (KPIs) to develop
- Monthly/yearly Maps
- DAC, GDAC & GTS monitoring
- Federated ERRDAP
- Automation of metadata collection
- Possible international meeting in 2027



Potential KPIs to develop:

- Implementation indicators
- Instrumentation indicators
- Data flow indicators

Thank you!