



**Ocean Observing Co-Design**

by The Global Ocean Observing System

# GOOS Co-Design - **Boundary Current Exemplar Project**

Leads:

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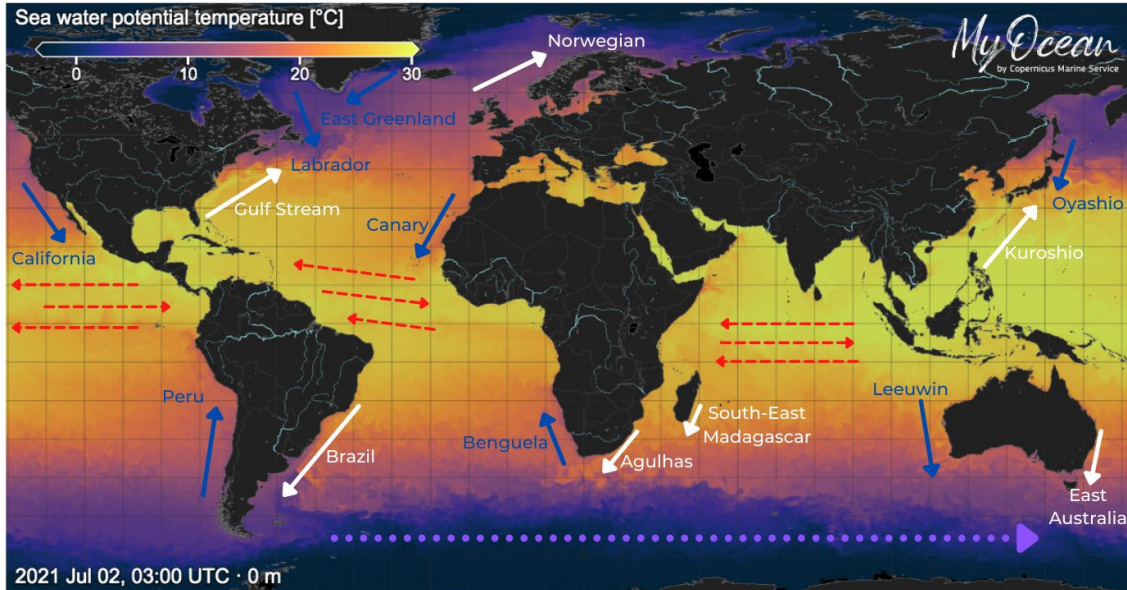
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# Boundary Current Workshops - 2021 and 2022



## Ocean Coordination Group (OCG)-12 [May 2021]

Aim: How do ocean observing networks observe boundary currents (both eastern and western boundary currents)



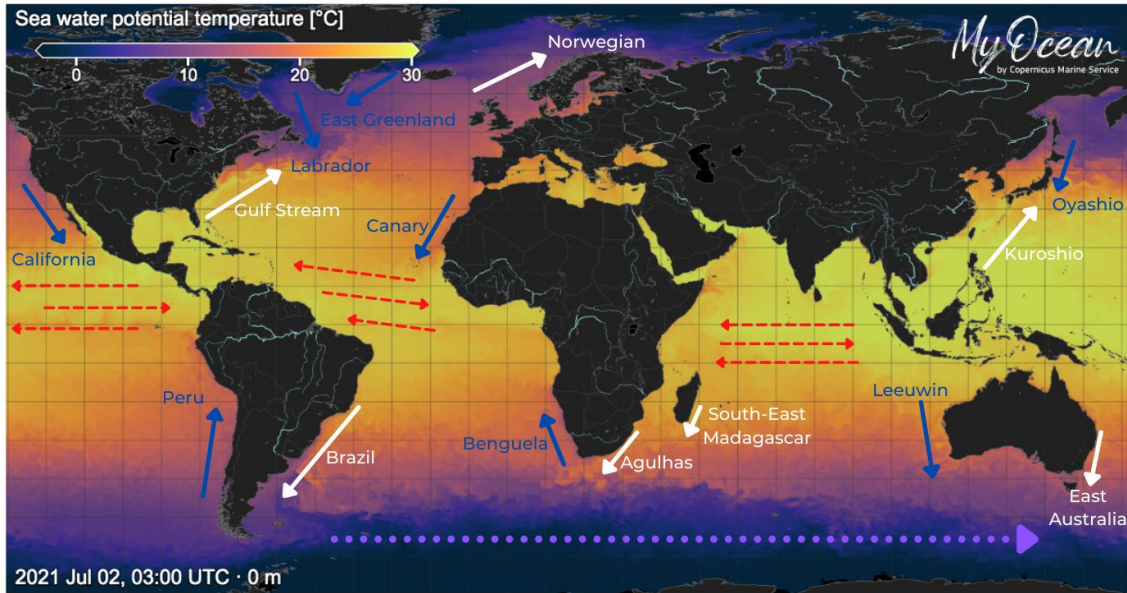
# Boundary Current Workshops - 2021 and 2022



## Ocean Coordination Group (OCG)-13 [May 2022]

Aim: How do ocean observing networks adapt their traditional missions to better capture boundary current dynamics?

→ Decide on a **pilot** Boundary Current region



The collage includes several elements: a diagram of a GliderMan system showing a glider connected to a modem and a satellite (GPS + IRIDIUM) for data transmission; a cross-section of the ocean showing a glider's path and a bathymetric profile; a photograph of a SVP (Surface Velocity Profile) instrument; and an illustration of a ship at sea with a glider being deployed and data being transmitted to the ship.

Diagram 1: GliderMan system showing a glider connected to a modem and a satellite (GPS + IRIDIUM) for data transmission. Labels: GliderMan, modem, data, missions, GPS + IRIDIUM.

Diagram 2: Cross-section of the ocean showing a glider's path and a bathymetric profile. Labels: IFM-GEOMAR, C. Beger.

Image 3: Photograph of a SVP (Surface Velocity Profile) instrument. Labels: SVP, SVP.

Image 4: Illustration of a ship at sea with a glider being deployed and data being transmitted to the ship. Labels: Ship, Glider, Data transmission.

# Boundary Current Workshops - 2021 and 2022



## GOOS Co-Design Workshop [June 2022]

### Boundary Currents Exemplar Project

Aim: Present activities thus far and discuss key questions around co-designing an ocean observing infrastructure

- Stakeholder engagements
- Funding
- Using models to decide on observation placement
- Discussion around the pilot region



### Ocean Decade Co-Design Workshop

Aim: To kick-start the development of Exemplar projects that will pilot and refine transformative co-design processes and best practices.



**Improving carbon data**  
to inform climate targets, such as net zero.



**Advancing cyclone forecasting**  
to save lives and property.



**Sustaining development and conservation of living marine resources**  
by understanding the needs of coastal communities and establishing trusted information.



**Improving storm surge predictions**  
to minimise impacts on vulnerable communities and natural resources.



**Monitoring marine heatwave impacts on biodiversity and economies**  
to ensure food security, protected areas management, tourism, climate and weather services.



**Observing key current systems**  
to support search and rescue services, Marine Protected Area management, wind energy development, fisheries, tourism, shipping and weather forecasts.

# Way forward



## Decision on pilot regions:

- **Agulhas Current** - under-studied, gaps in understanding and very few (if any) sustained observations
- **Gulf Stream** - better understood, better observations (though are all sustained), “fit-for-purpose” observations. Thus lessons that could be learnt?

Develop **value chain**, identify stakeholders, regional funders, users

Develop **proposal**, alongside stakeholder engagement strategy

- Lessons learnt from OOPC Boundary Current (webinars)
- Identify gaps - data sets, literature, scientific engagements

Prepare for **Supporters Forums** - end of November / beginning December

Organize **workshop** to determine gaps, requirements and priorities

