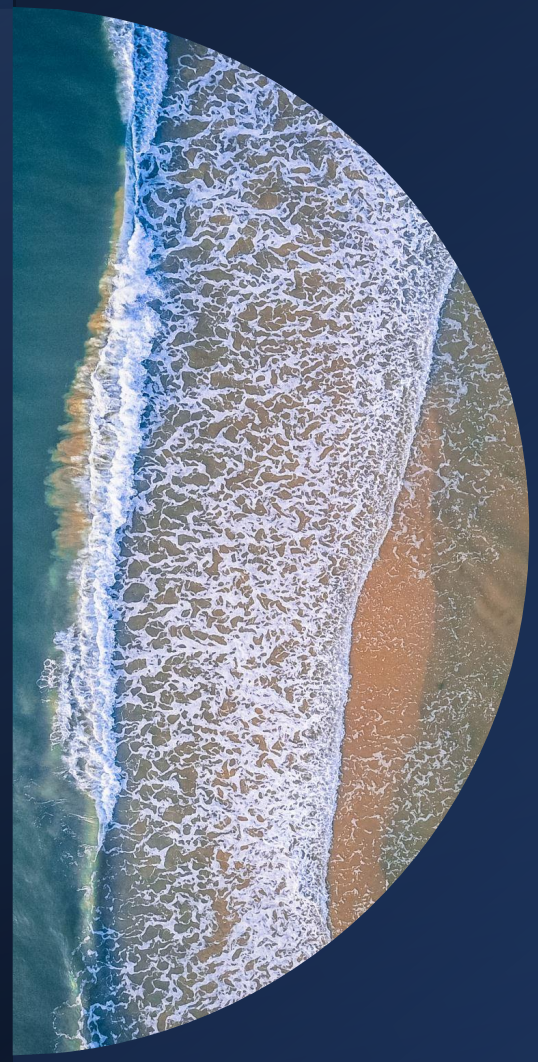
Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal

Towards a national execution plan



Wednesday, 25 September 2024

Interagency Ocean Observation Committee - IOOC
David Legler (NOAA), Lisa Clough (NSF), Laura Lorenzoni (NASA)
COL Staff Support: Nick Rome, Cassie Wilson

IOOC Interagency Ocean Observation Committee

The Coastal Climate Signal (CCS) Task Team

Overview

Climate change is causing intensifying threats to coastal communities and economies that rely on them

A robust coastal observing system is essential to provide timely, high-resolution forecasts and information to coastal communities and decision makers

Coastal observations and forecasts allow coastal communities to prepare, plan, adapt, and respond to the impacts of climate in the coastal zone

Gaps still exist in national coastal ocean observing network

IOOS CCS Report Recommendations:

- Expand coastal observations and support regional-scale models
- Recapitalize and modernize existing infrastructure
- Invest in technological innovation
- Expand regional data integration services
- Increase engagement with historically underrepresented communities

Task Team Objectives & Deliverables

Overarching Goal

- Advance the recommendations developed at the joint IOOC & US CLIVAR Workshop: *Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal*. This joint workshop will bring together representatives from ocean and coastal observing systems and researchers to identify the key science issues that need to be resolved in order to detect and respond to coastal climate change in the coming decades.

Pre-workshop

- Identify key stakeholders to participate in and contribute to the CCS Workshop and anticipated outcomes
- Analyze existing publications related to the coastal climate signal and develop an initial list of gaps in the system

Post-workshop

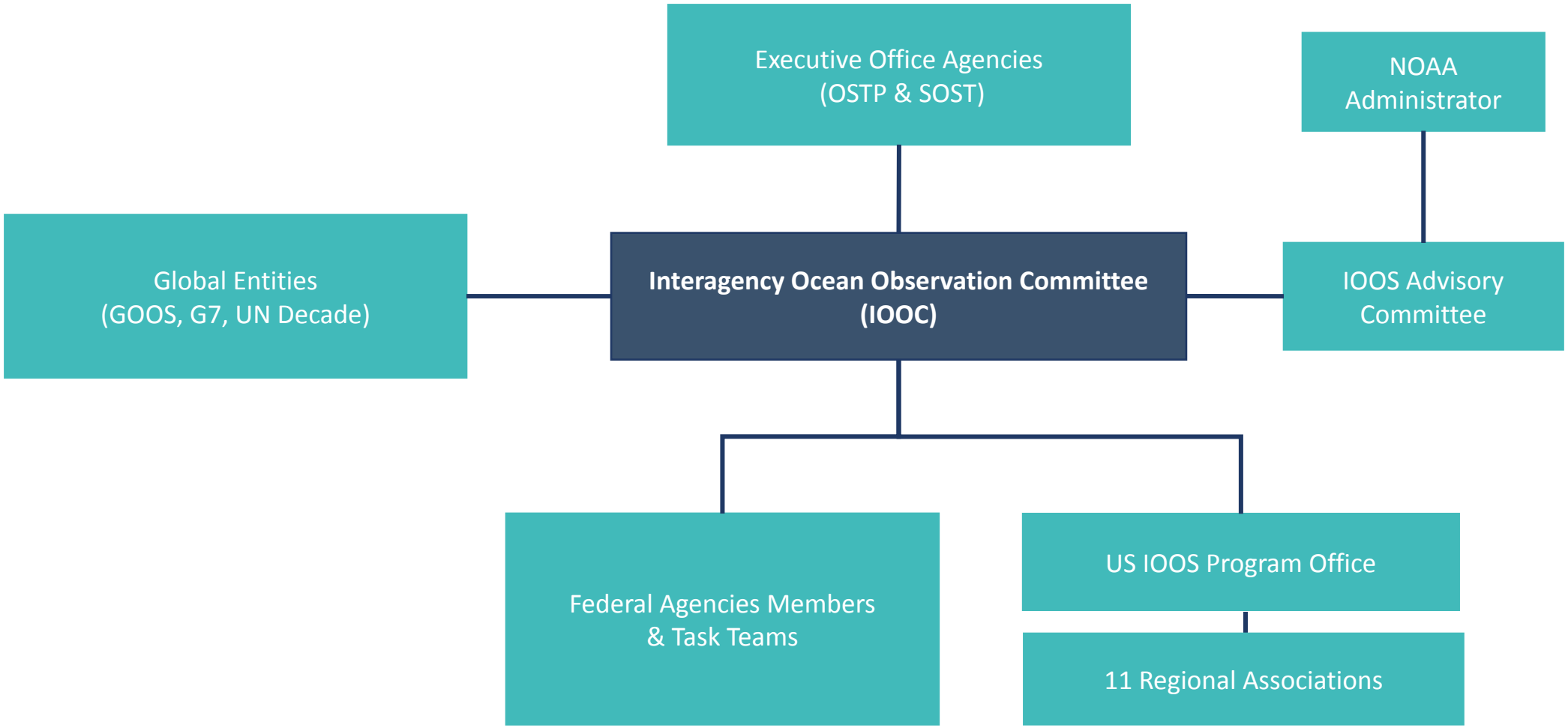
- **Develop a report on addressing the workshop recommendations, including a roadmap to ensure sustained participation of partners and activities to continuously enhance ocean observing systems for climate**

Task Team

Name	Agency
David Legler (co-chair)	NOAA GOMO
Laura Lorenzoni (co-chair)	NASA HQ
Adrienne Sutton	OAR/PMEL
George Voulgaris	NSF/GEO/OCE
Stephen Pacella	EPA
Dwight Gledhill	NOAA OA
Thomas Kilpatrick	BOEM
Kim Hyde	NOAA-NMFS
Jen McWhorter	NOAA-AOML
Patrick Barnard	USGS
Krisa Arzayus	NOAA IOOS
Daniel Stover	DOE
Renu Joseph	DOE
Nick Rome (staff)	UCAR COL
Cassie Wilson (staff)	UCAR COL

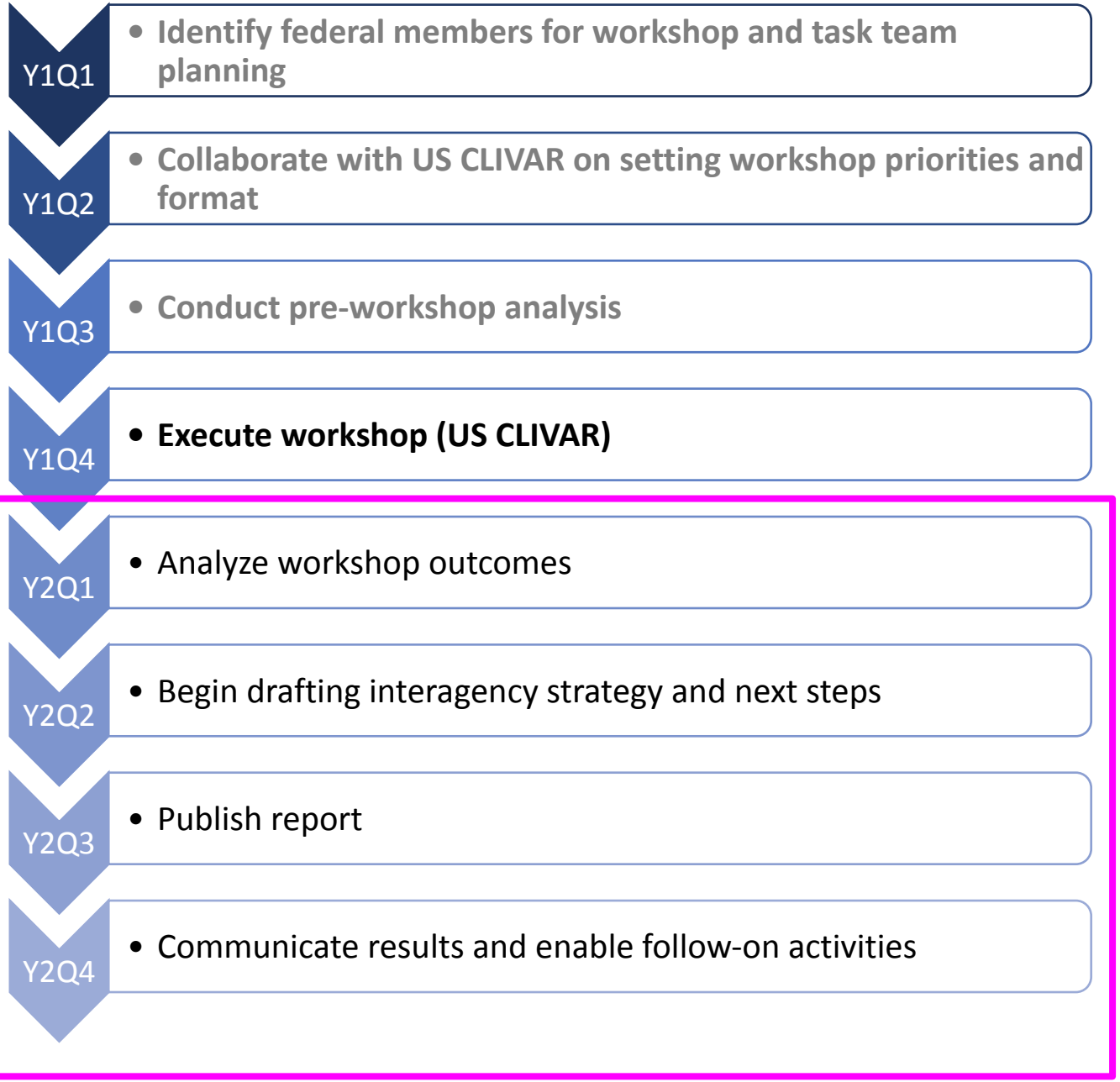
Supported by:

IOOC Governance



Timeline

WE ARE HERE



Anticipated Discussion Elements

- ☑️ Planning and Optimization
- ☑️ Coastal Environments and Signal Detection
- ☑️ Prioritization and Alignment
- ☑️ Cross-disciplinary Expertise
- ☑️ Partnerships
- ☑️ Resource Leverage
- ☑️ Technological Advancements

Next Step: Align with IOOC Strategic Plan

<u>Major workshop themes:</u>

Crystalize the vision

Sustain current efforts

National effort

Enhance obs near and offshore

Address climate signal gaps

Optimize O2, BGC, ecosystem

Modeling/reanalysis

More partners (global, satellites, etc)

Enable co-design/co-production

Goal 1: Ocean Observing System Development:

- System Requirements
- Data Management and Standards
- Solutions-Based Research and Application

Goal 2: Partner Engagement:

- Agency and Interagency Engagement
- Partner Participation and Contributions
- International Collaboration

Goal 3: Ocean Observing System Sustainability:

- Enterprise Alignment
- Integrated Implementation