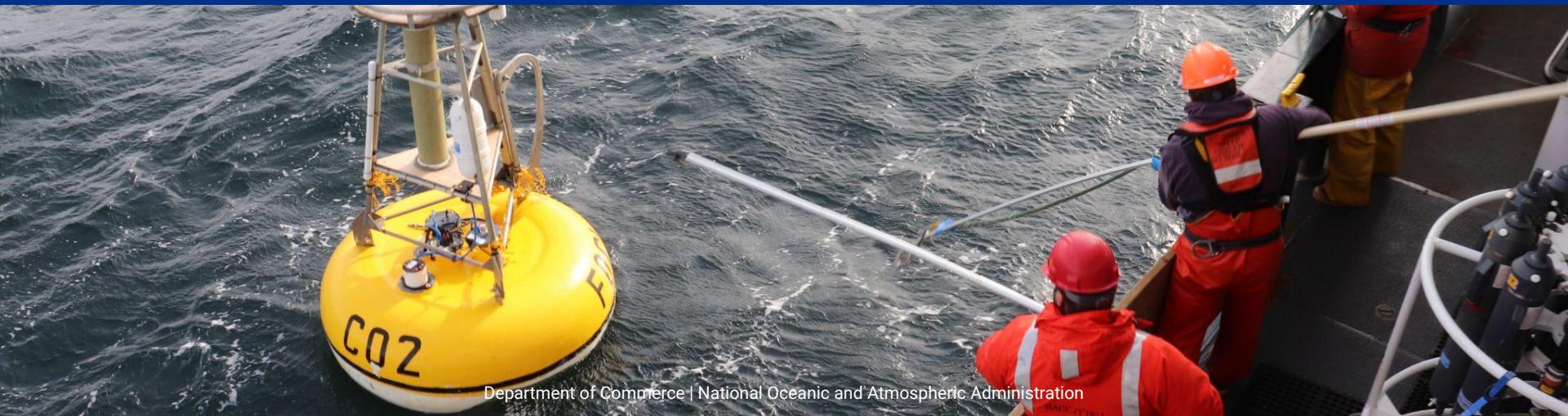




NOAA
GLOBAL OCEAN
MONITORING & OBSERVING

Welcome to the GOMO Community Workshop





NOAA
GLOBAL OCEAN
MONITORING & OBSERVING

Global Ocean Monitoring and Observing Program

David M Legler, Director
GOMO Community Workshop
July 25, 2023



GLOBAL OCEAN OBSERVING SYSTEM



Today

86 countries
8700 + observing
platforms
170 satellites
13 global networks

**GOMO is the leading
ocean in-situ
observing program**

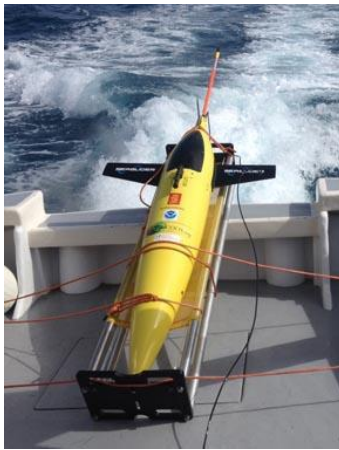
"Weather forecasting systems will run off the rails if they don't have the surface pressure information over the ocean"
- Lars Peter Riishojgaard, Director of the Earth System Branch WMO



*Depicting ocean observations over 1 year

GOMO MISSION (2021 - 2025)

To provide and support high quality global ocean observations and research to improve our scientific understanding and inform society about the ocean's role in environmental change.

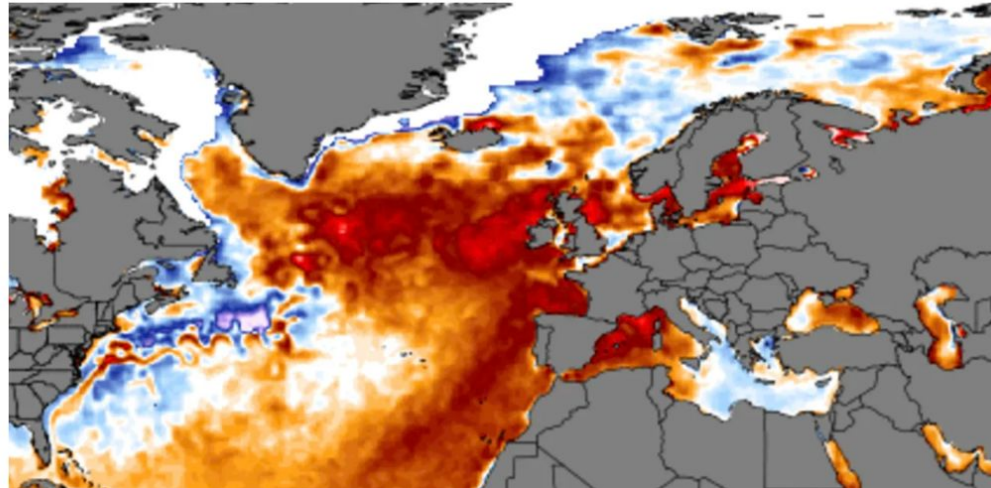


HIGHLIGHTS - MARINE HEATWAVES

The North Atlantic is experiencing a ‘totally unprecedented’ marine heat wave

By Laura Paddison, CNN

Updated 5:44 PM EDT, Tue June 20, 2023



The Maritime Executive

INTELLECTUAL CAPITAL FOR LEADERS



NJ State Police Replace Famed Waterfront Commission in Port Crime Fight



Report: SM Line is Planning to Bid Up To \$3 Billion to Acquire HMM

1514 Views 38 Shares

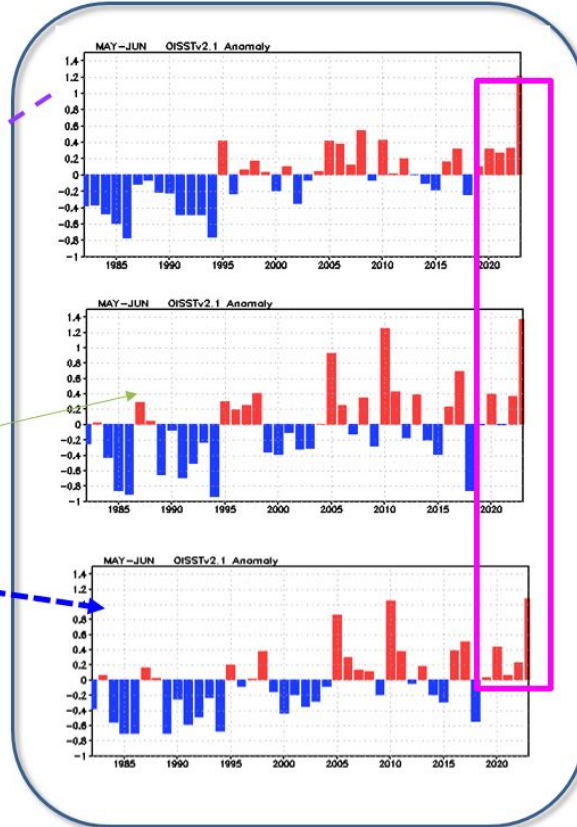
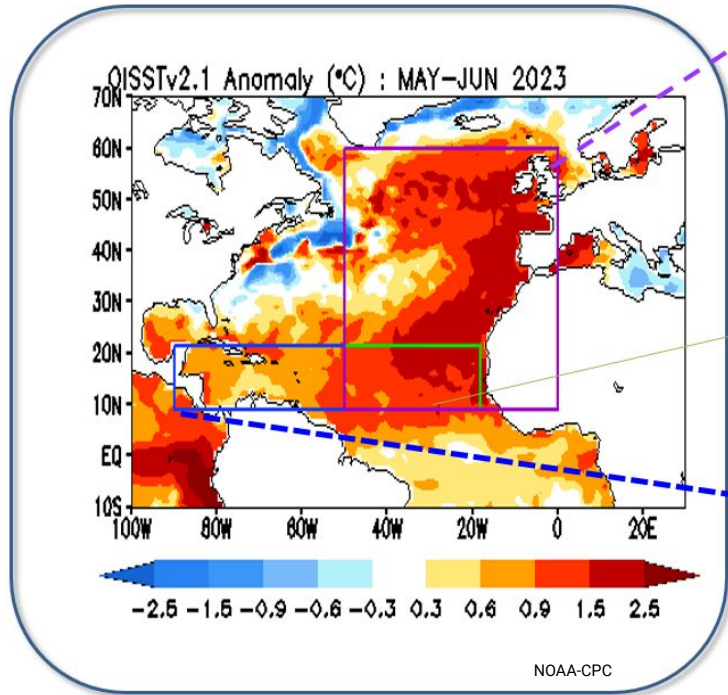


How Marine Heat Waves Affect the Ocean - And What Can Be Done

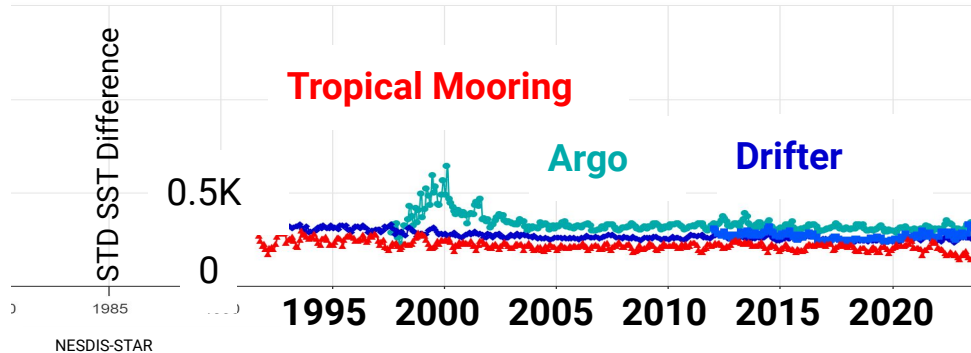
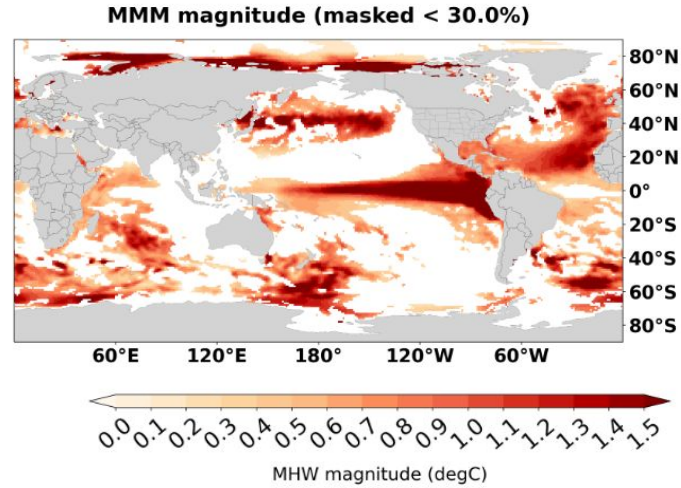
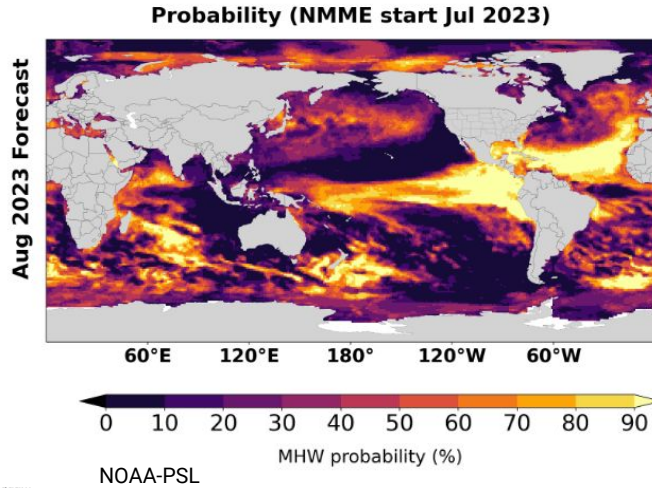
As we enter El Niño, periods of surging temperatures at sea are predicted to grow more frequent and intense.



HIGHLIGHTS - MARINE HEATWAVES



HIGHLIGHTS - MARINE HEATWAVES



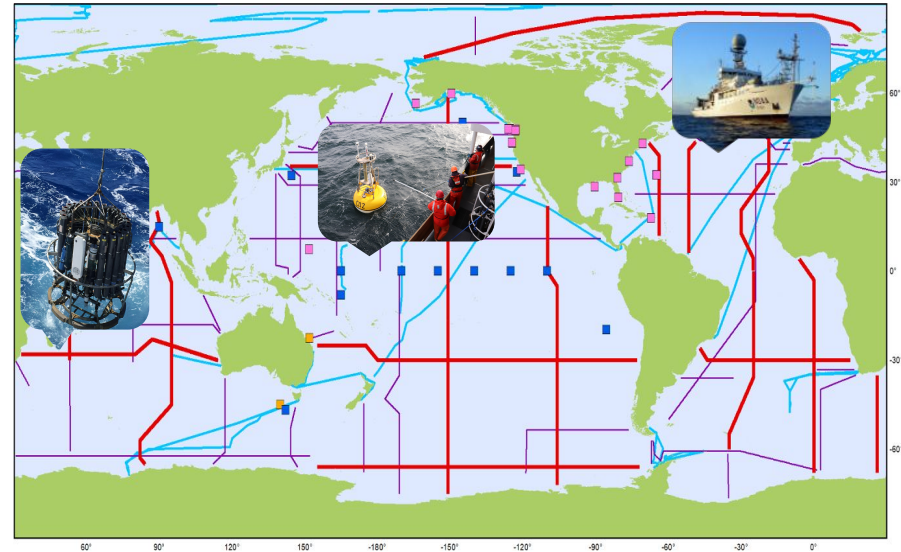
- GOMO data ground-truth SST products & Marine Heat Wave forecasts
- Ocean and atmosphere contributions? Need for more/different observations?
- Implications for marine life?

THE GLOBAL OCEAN CARBON NETWORK provides *long-term observations* of carbon from the *sea surface* to the *ocean interior* on a range of *spatial and temporal scales* and a *variety of platforms*

- ★ **Quantify ocean sink and storage** → *GO-SHIP Repeat Hydrographic / CO₂ / Tracer Surveys*
- ★ **Variability in surface fluxes** → *Surface water pCO₂ from Ships and Moorings*
- ★ **Data analysis and product development** → *Global Carbon Data Management and Synthesis Project*

Total ~\$5M

*AOML, PMEL, GML, NCEI, UW/CICOES, UMiami/CIMAS, SIO/CIMEAS, CU, BIOS
+ ~30 International partners*

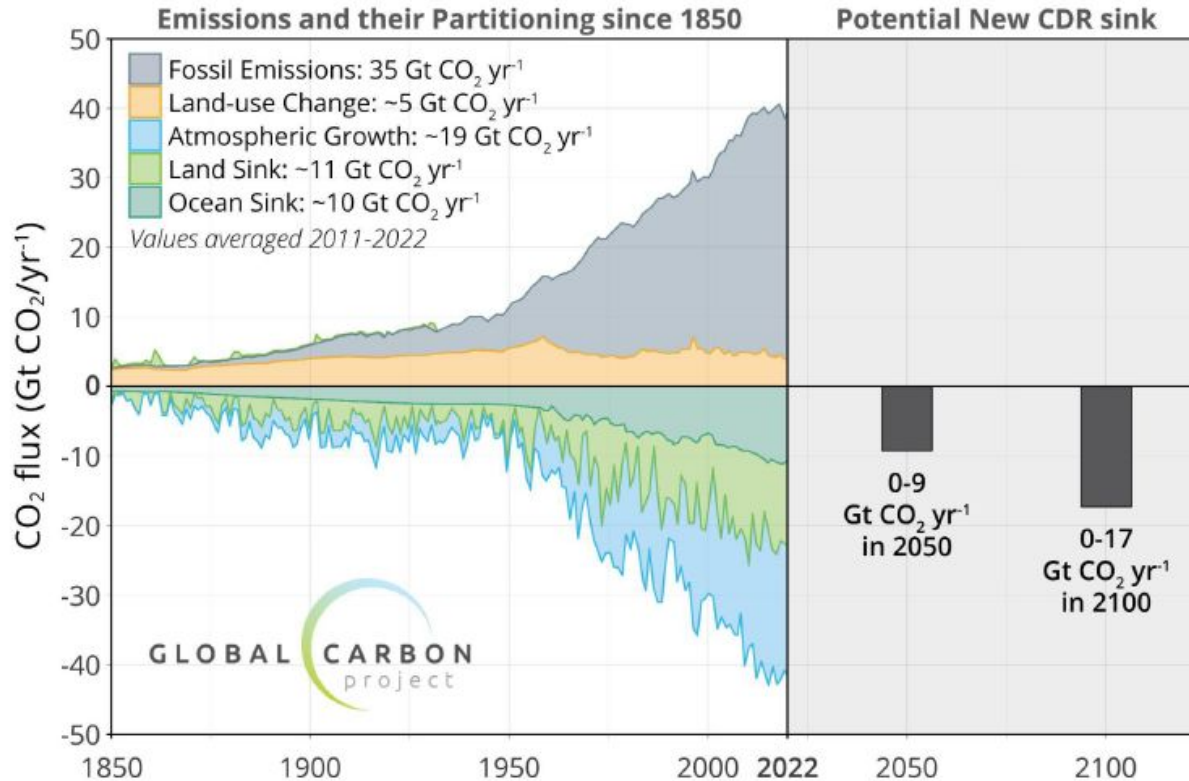


Global Ocean Carbon Network

July 2018

- Coastal Ocean CO₂ Mooring (USA)
- Open Ocean CO₂ Mooring (USA)
- CO₂ Mooring (other countries)
- GO-SHIP Line (USA)
- GO-SHIP Line (other countries)
- SOCONET

HIGHLIGHTS - OCEAN CARBON

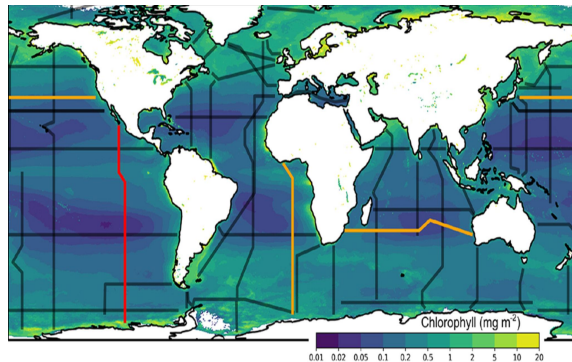


OCEAN CARBON OPPORTUNITIES



SOCONET

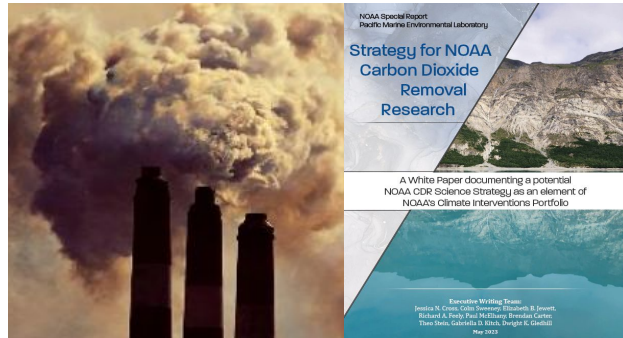
- ★ Expand global observations of air-sea CO₂ fluxes
- ★ Enable countries to assess progress towards achieving the long-term goals of the Paris Climate Agreement.
- ★ Links to NOAA's [Global Greenhouse Gas Reference Network](#).



Bio GO-SHIP

- ★ Quantify the impact of biological processes on the carbon, oxygen and nutrient cycles
- ★ Characterize the distribution of global biodiversity

Supported by
GOMO, OER, NASA



Marine Carbon Dioxide Removal

- ★ Maintain GOMO's ocean carbon baseline observations
- ★ Develop the next generation of in situ ocean sensors and autonomous platforms
- ★ Evolve physical & BGC obs to include co-located biological measurements

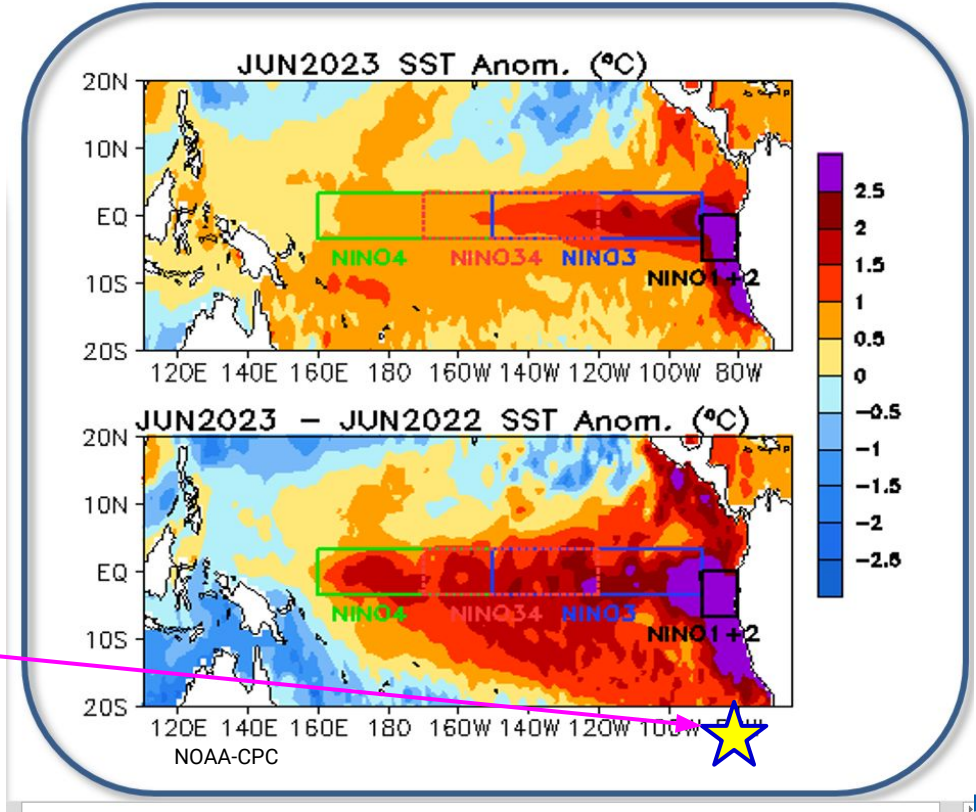
Partners: GOMO, OAP, IOOS,
NSF, DOE, DON, ClimateWorks



HIGHLIGHTS- ENSO

- Western wind anomalies set off downwelling Kelvin waves->subsurface warming in central/east Pacific...
- Coastal warming signal now evident
- El Niño Predicted...

What is happening at Stratus mooring?



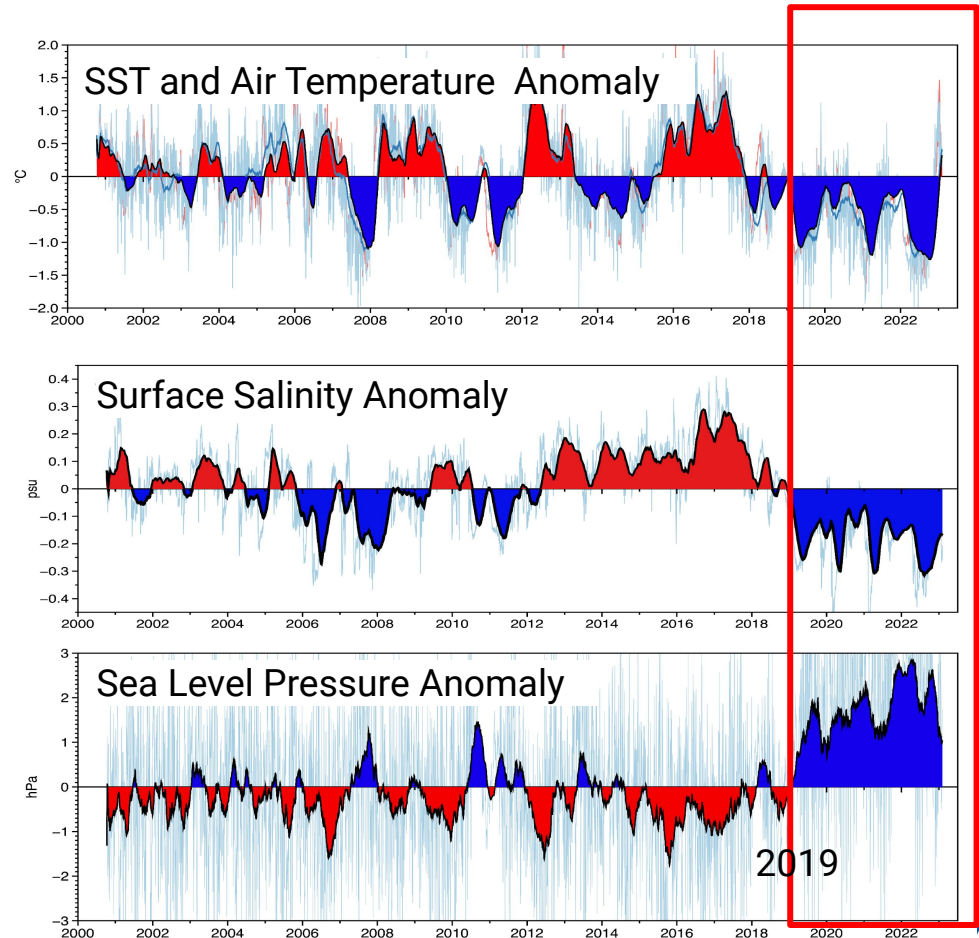
HIGHLIGHTS- ENSO

Abrupt shift in several surface parameters

- Why? What supports freshening as well as cooling in evaporative regime off northern Chile during La Niña?

CMIP Models still showing significant biases compared to in-situ buoys over 20 years of data

Stratus ORS



HIGHLIGHTS - HURRICANES



Working to define and address NOAA priorities to enhance the integration of ocean observations



Sponsoring advancements in hurricane observing technologies & ocean data assimilation



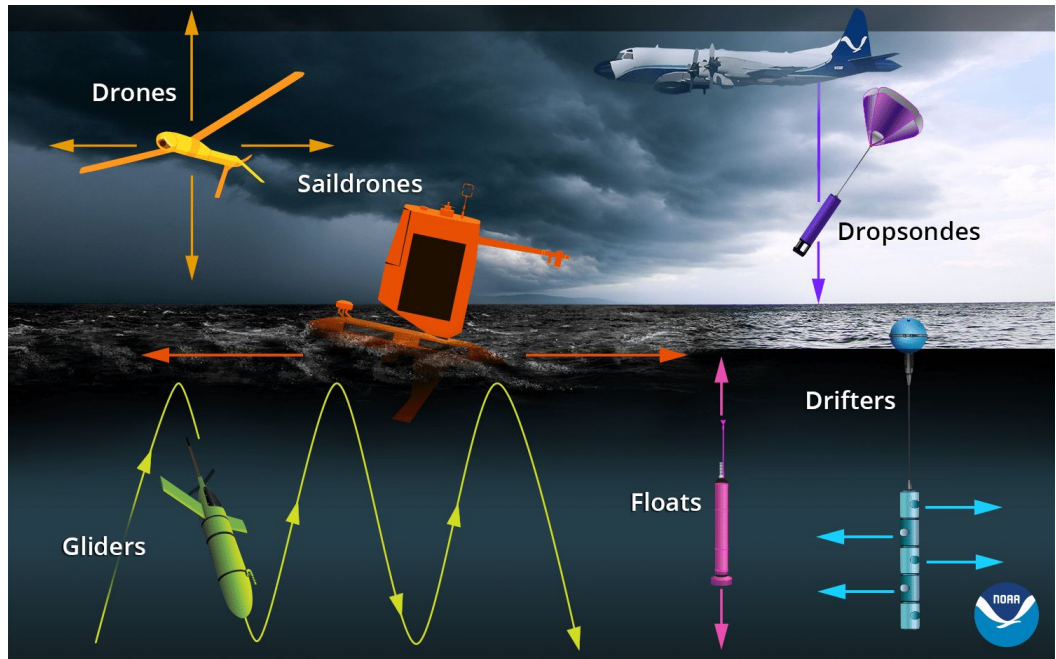
Fostering international partnerships through the GOOS Observing Co-Design Programme

HIGHLIGHTS - CHAOS Experiment

Unfunded program →
\$2M allocated from the FY22
Disaster Relief Supplemental
Act (DRSA) to support **CHAOS**

- Supporting a focused **ocean-atmosphere observing experiment** this 2023 hurricane season
- 8 funded projects
- 7 **early career scientists** as lead or co-investigators

CHAOS: Coordinated Hurricane Atmosphere-Ocean Sampling



Credit: NOAA PMEL



COMMUNICATIONS

In the past year:

- Transitioned website to WordPress
- Hired two Knauss Fellows who are both 50% communications focused
- Increased capacity to report news:
 - **12 news stories** since Jan. 2023; notably more feature stories and more @NOAAResearch social media shares than in the past
 - **28 Hot Items** in the Weekly Report for NOAA Senior Managers since Jan. 2023
- Released the video, [“The Evolution of the Global Ocean Observing System”](#), which was **shared to NOAA.gov** for Earth Day
- Published 88 [Funded Projects](#) to the GOMO website:

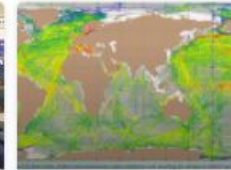


GOMO Supports Successful International World Ocean Day Celebration

From June 8-11th, roughly 1,000 high school students and 4,000 members of the public gathered to celebrate and learn about the oceans during a multi-day outreach event for World Ocean Day in Cape Town, South Africa. Visitors were exposed to life as a working marine scientist through a tour of the 600 foot South African

[READ MORE](#)

July 18, 2023



Latest Ocean Carbon Data Atlas Shows a Significant Decline in Ocean CO2 Measurements

Surface Ocean CO2 Atlas (SOCAT) Version 2023 Released: Version 2023 of the Surface Ocean CO2 Atlas (SOCAT), released on June 20, 2023, shows a dramatic decline in carbon dioxide (CO2) observing efforts in the world's ocean. The number of CO2 measurements provided to SOCAT has decreased by almost half since 2017 due to a slow

[READ MORE](#)

July 15, 2023



Meet the Women Advancing NOAA Hurricane Research and Forecasting

How seven women across NOAA are leading advances in hurricane technology, observing, and forecasting. Hurricanes, also known as tropical cyclones, are among the most destructive natural disasters. These storms pose major risks to coastal communities and cost billions of dollars each year in damages. Impacts are expected to increase with warming ocean temperatures, rising sea

[READ MORE](#)

June 15, 2023



U.S. Ambassador to Iceland Visits NOAA Ship Ronald H. Brown After 55-day GO-SHIP Cruise Docks in Reykjavik

After 55 days at sea and a successful re-occupation of 130 ocean stations as a part of the successful GO-SHIP cruise, the Ronald H.



2023 Women in Sciences Leadership Workshop

GOMO oversees the start, growth, and transfer of a successful leadership training program. The Women in Sciences Leadership Workshop was held April 12-13, 2023 at the University of Arizona. The two-day workshop hosted 50



Ocean Observing Tech Enhances Climate Education in the Cook Islands

Through the SOCAT educational program, Aqva's mission to help understand the ocean's role in the earth's climate is shared across generations. On the island of Mapepe of the

Funded Projects

globalocean.noaa.gov/funded-projects

The Global Ocean Monitoring and Observing Program funds research projects that improve our understanding of the global ocean. We work with researchers at NOAA's programs and labs, such as the Atlantic Oceanographic and Meteorological Laboratory (AOML) and the Pacific Marine Environmental Laboratory (PMEL), as well as researchers from institutions across the country. Learn more about the variety of research we fund from the tropics to the Arctic in the table below.

* These projects received funding from the [Bipartisan Infrastructure Law \(Infrastructure Investment and Jobs Act\)](#)

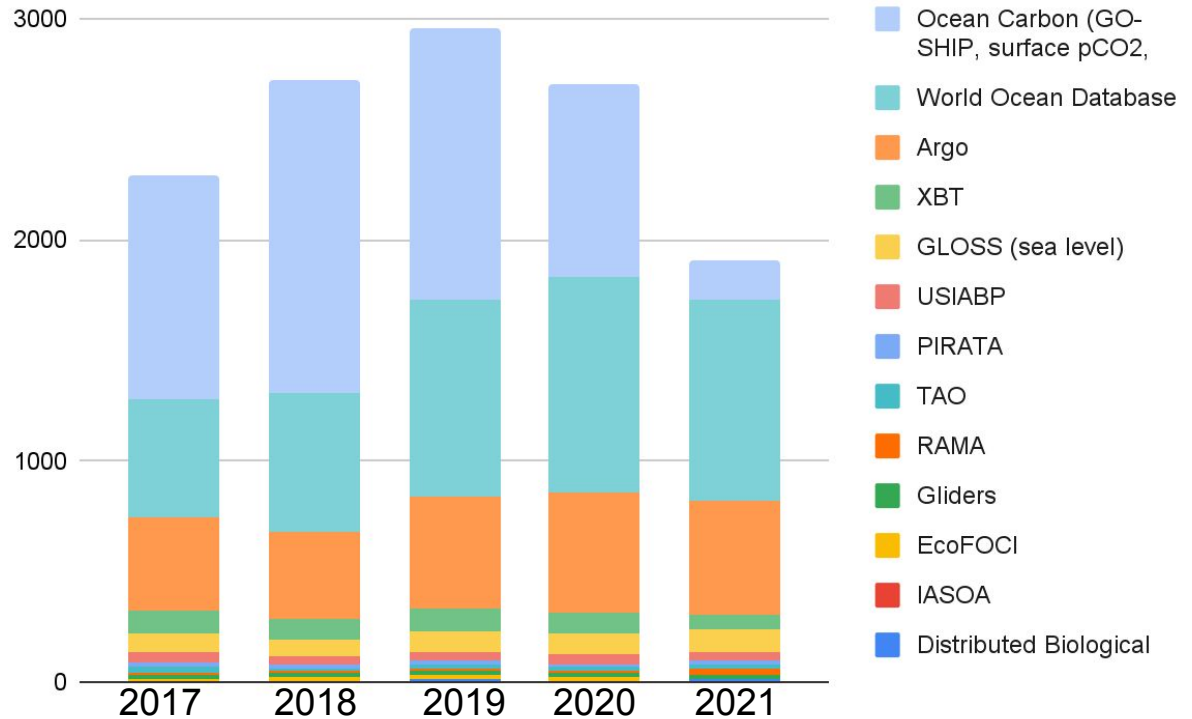
** These projects received funding from the [Disaster Relief Supplemental Act](#)

Show 25 ▾ entries

Fiscal Year (FY) ▾	Project Name ▲	Principal Investigator(s) ▲	Affiliation(s) ▲	Category ▲
FY23	Building Capacity and Advancing The Next Generation of Tropical Cyclone Scientists	Travis Miles	Rutgers University	Extreme Events
FY23	Early Career Ocean Professional (ECOP) participation in Observing Air-Sea Interactions Strategy (OASIS) UN Ocean Decade activities	Meghan Cronin, Nick Rome	NOAA PMEL, UCAR Center for Ocean Leadership	Coordination & Leadership
FY23	** Next Generation Autonomous Underwater Glider for Sustained Ocean Monitoring Along the US East Coast	Robert Todd	Woods Hole Oceanographic Institution	Extreme Events
FY23	Arctic Air	Calvin Mordy, Jiaxu Zhang	CICOES / University of Washington	Technology Development
FY22 & FY23	* Enhancing the OneArgo Infrastructure	Susan Wijffels	Woods Hole Oceanographic Institution	Ocean & Climate
FY22 & FY23	* BIL Support for Improving the U.S. Argo Program for Global Ocean Observations	Alison Gray	University of Washington	Ocean & Climate

GOMO IMPACT MEASURE

GOMO data
are a key
foundation
of ocean
and marine
science



NEW TEAM MEMBERS & ROLES



Alyse Larkin
Carbon Observing
and Sea Level
Program Manager



Cynthia Garcia
Arctic Program
Manager



Sandy Lucas
Arctic Research
Program Director

NEW TEAM MEMBERS & ROLES



Jesse Gwinn
Sea Grant Knauss Fellow
South Pacific Observing &
Communications



Sarah Tucker
Sea Grant Knauss Fellow
Arctic & Communications



Diego Rivera
Holling Scholar 2023
University of Florida

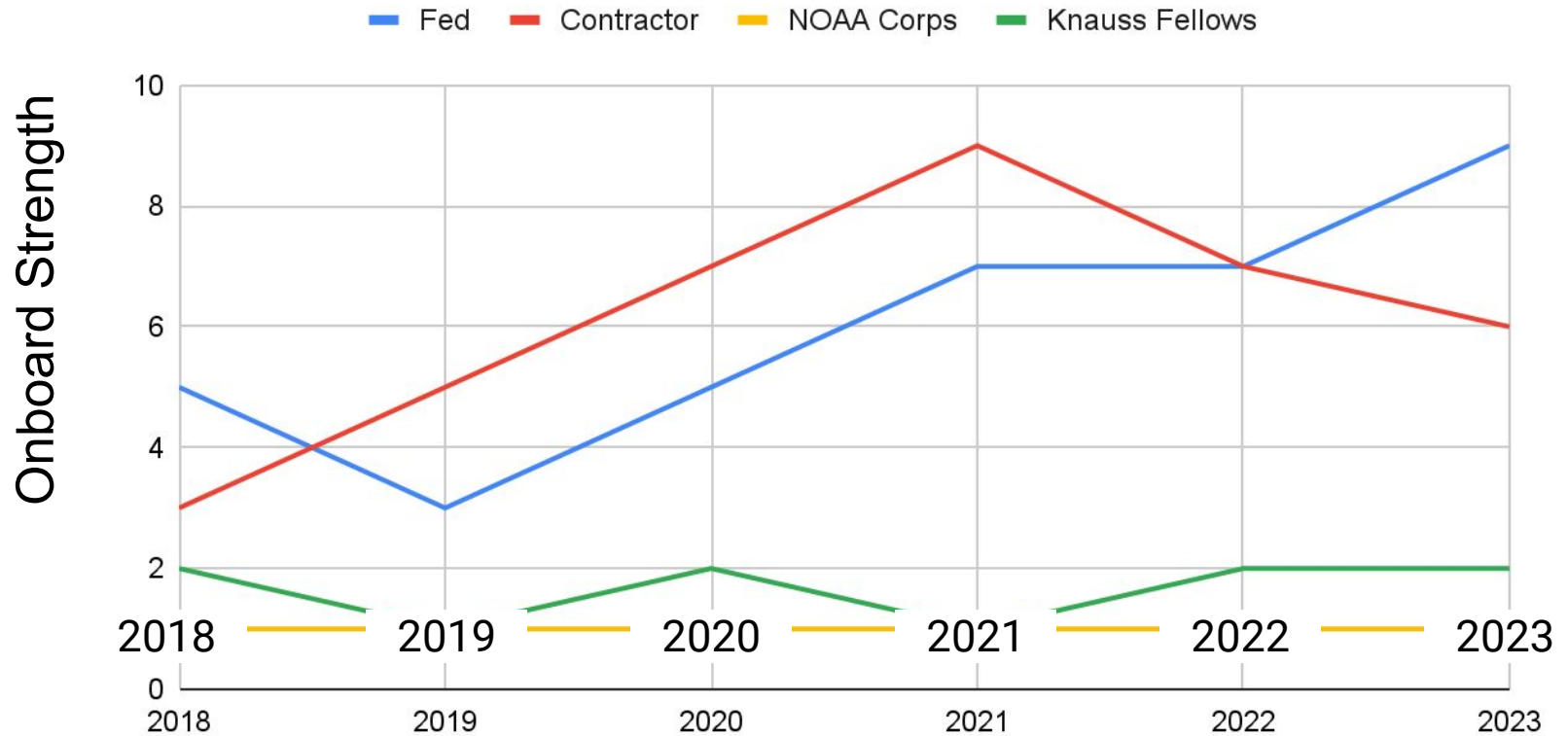


Kelli Ong
EPP/MSI Scholar 2023
UC Santa Cruz



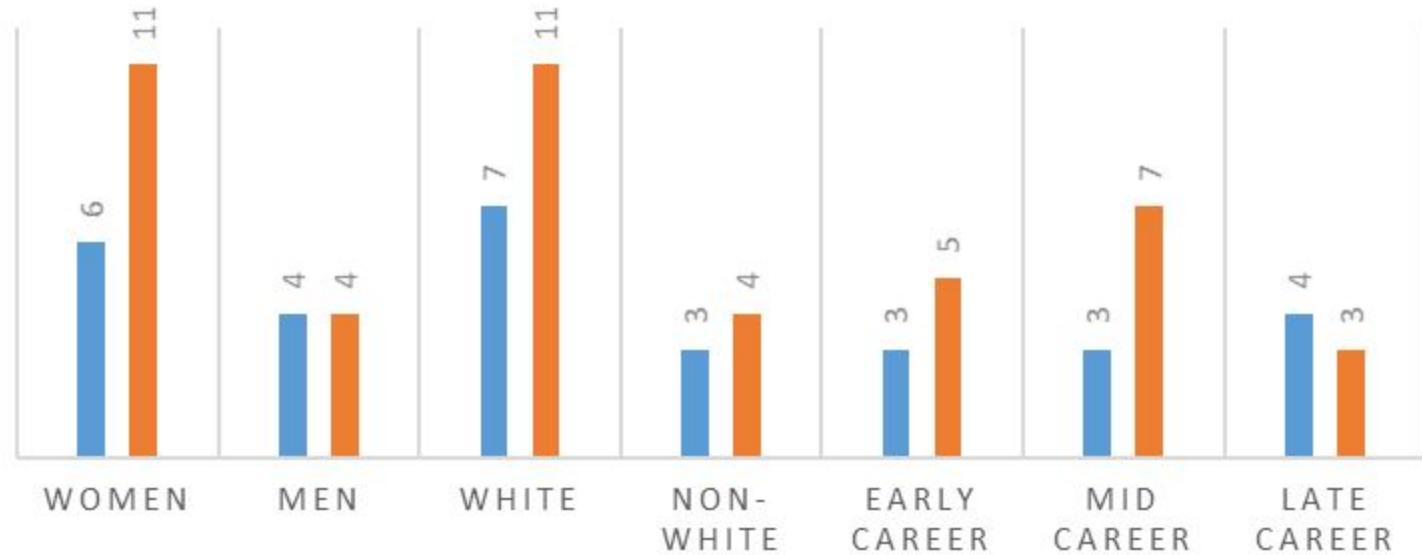
GOMO's INCREASED DIVERSITY

GOMO Workforce Trends



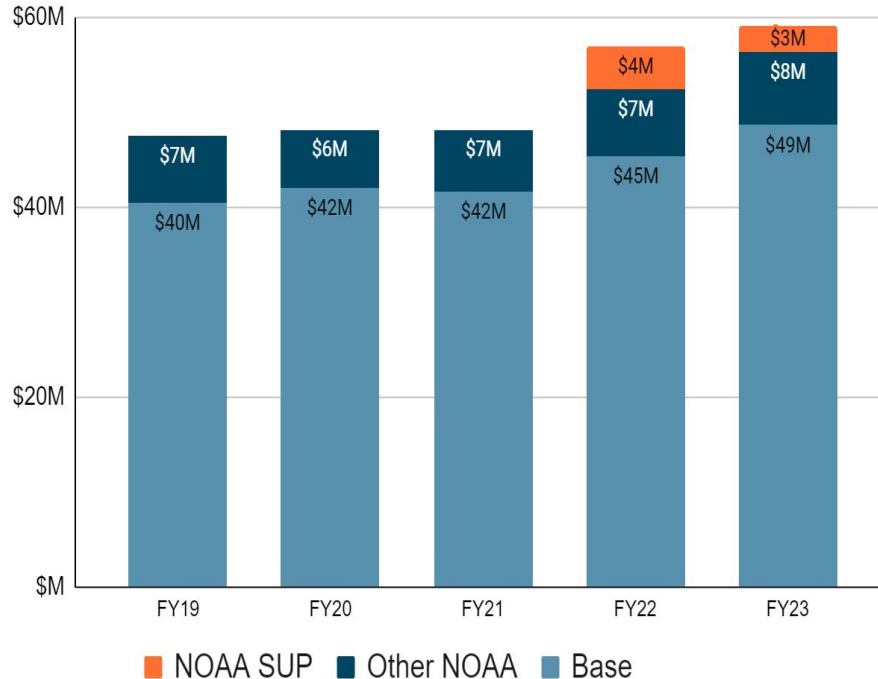
GOMO DEMOGRAPHICS: 2016 VS. 2023

■ 2016 ■ 2023



GOMO BUDGET

GOMO Fiscal Years 2019-2023



- FY20 (+\$2M): Increases across the portfolio; Argo, Oceansites, COVID
- FY21 (+\$0.4M): Iridium cost increases
- FY22 (+3M): Iridium and supplementals
- FY23 (+4M): Increases across the portfolio; ship time; Argo;



FY22-23 FUNDING HIGHLIGHTS

- Increased ship time costs: \$1.5M-FY22, \$1.9M-FY23
- Supplementals
 - Disaster Supplemental: CHAOS Experiment - \$2M (1-time funding)
 - Infrastructure (IIJA/BIL): \$5.7M for FY22+FY23
 - \$2.5M - Tropical Moored Buoy Array replenishment
 - \$2.2M - Argo
 - \$1.0M - Other mooring hardware
- FY23 GOMO Strategic Initiatives focusing on Innovation, UN Decade Activities, DEIA \$500K
 - Hurricanes: Early Career Scientists support
 - Pilot activity to move real-time data into the cloud
 - Arctic ocean monitoring
 - Support for indigenous community engagement (eg micro grants, etc)
 - Education and outreach



FY24 OUTLOOK

- Ron Brown off-line for mid-life repair
 - GOMO, and NOAA labs contributing costs for replacement charters
 - Amount still TBD (\$\$\$)
- Infrastructure/BIL funding - anticipated to continue
- Overall - Congress is unlikely to provide increases
 - Senate mark: GOMO unchanged from FY23
 - House mark



GOMO REVIEW AND NEEDED CHANGE

Impressive work, extremely important, impactful, internationally recognized leadership

- Change is needed for GOMO to realize its full PROGRAM potential
- Clarify and strengthen GOMO's identity
- New organizational model - prioritize
- More stakeholder input
- Pursue partnerships (eg private sector)
- Data activities!



GOMO is committed to change...



DIALOGUES WITH INDUSTRY

The Dialogues

- Facilitate dialogue between government, science and industry across the value chain
- Lower barriers and increase opportunity for private sector engagement and partnership
- Actionable recommendations for GOOS, government, science, and industry to act on
- 4 Sessions: Sep 2022 – Feb 2023

Opportunity to expand observing capacity, increase efficiency, and support blue economy

Instrument provision

Supply and development of sensors and platforms

Multi-sectoral ocean architecture

Integrating new observing networks and business models

User driven ocean information services

Core and downstream services

Looking ahead

New technology for the Ocean Decade

DIALOGUES WITH INDUSTRY

Focus Areas

1

Improving the market

- Market visibility
- Aggregation of demand
- Rethinking risk to accelerate growth
- Bringing in new actors

2

Societal/ Governmental change

- Data as an asset and mission as a service
- Change perception of ocean information

3

Collaboration to grow

- Standards
- Intermediaries
- Public/Private data access
- Blue tech clusters, incubators, and accelerators

4

Market elements shaping the future

- Workforce
- Technology transfer
- Emerging technology

Categories

38 recommended next steps
Which are most important to the GOMO community?



Notice of Funding Opportunity

Ocean-based Climate Resilience Accelerators

National Ocean Service, NOAA



<https://ioos.noaa.gov/about/governance-and-management/inflation-reduction-act/accelerators/>

The Opportunity: Ocean-Based Climate Resilience Accelerators

What. NOAA will provide a combined total of \$60M in funding over the course of approximately 5 years to accelerator entities that will use that funding to develop and provide business accelerator services to start-ups and small businesses in multiple defined “theme areas”.

Why. To promote the climate resilience of the U.S. by addressing critical needs associated with ocean resources and coastal communities.

How. Selected accelerators will develop and implement programming to assist entrepreneurs and small businesses as they advance technologies and sustainable business models supporting key, identified theme areas related to emerging ocean and coastal-related topics.

THEME AREAS



Ocean Renewable Energy



Coastal and ocean-based carbon sequestration monitoring and accounting



Hazard mitigation and coastal resilience

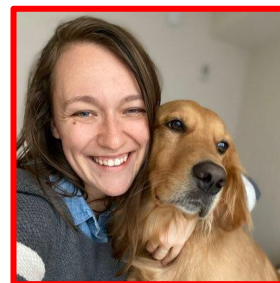


Ecosystem services management

MEETING GOALS

- Share recent accomplishments, discuss opportunities for further improvement, and identify solutions to challenges;
- Discuss and gather input on GOMO's 2022 Program Review
- Identify ways to advance diversity, equity, and inclusion;
- Strengthen connections and collaborations within our community and identify new opportunities to engage more broadly;
- Develop messages to raise the visibility of GOMO's work





Sea Grant Fellows (8)



Thank You



Extra slides to consider



NOAA's Technical Assistance

NOAA will provide technical assistance and support to the accelerator entities throughout the process to ensure that the program design aligns with the identified goals and objectives by:

- Providing access to NOAA's network of place-based partners that are already working on products and services in the four theme areas and that can help identify market opportunities.
- Using regular and structured dialogues, workshops, and events with scientists, technologists, and the accelerator entities to provide the accelerator entities a mechanism to clarify needs that address the climate resilience themes.

NOAA's NETWORK OF PLACE-BASED PARTNERS INCLUDES:

- Regional Ocean Partnerships
- Integrated Ocean Observing System Regional Associations
- National Marine Sanctuaries
- National Estuarine Research Reserves
- Coastal Zone Management programs
- Sea Grant College Programs
- NOAA and state-based Regional Climate Service Providers
- NOAA Laboratories, Science Centers, and Cooperative Institutes
- University-based Climate Adaptation Programs
- National Weather Service Coordination and service delivery networks

WEBINAR PURPOSE

To provide program-specific application guidance for NOFO applicants.

AGENDA

Setting the stage with background information on NOAA and the NOFO

About the Phase 1 and Phase 2 applications and awards

Questions and answers

Access to additional materials



The screenshot shows the Grants.gov website interface. At the top, there is a search bar with the text "SEARCH: Grant Opportunities" and a "GO" button. Below the search bar is a navigation menu with options: HOME, LEARN GRANTS, SEARCH GRANTS, APPLICANTS, GRANTORS, SYSTEM-TO-SYSTEM, FORMS, CONNECT, and SUPPORT. The main content area is titled "VIEW GRANT OPPORTUNITY" and displays the following information:

- NOAA-NOS-IOOS-2023-2008077
- FY2023 Ocean-Based Climate Resilience
- Department of Commerce

There are two buttons: "Apply" and "Subscribe". Below this, there are tabs for "SYNOPSIS", "VERSION HISTORY", "RELATED DOCUMENTS", and "PACKAGE". The "SYNOPSIS" tab is selected, showing a "General Information" section with the following details:

Document Type:	Grants Notice	Version:	Synopsis 4	
Funding Opportunity Number:	NOAA-NOS-IOOS-2023-2008077	Posted Date:	Jul 10, 2023	
Funding Opportunity Title:	FY2023 Ocean-Based Climate Resilience	Last Updated Date:	Jul 08, 2023	
Opportunity Category:	Discretionary	Original Closing Date for Applications:	Sep 11, 2023	
Opportunity Category Explanation:		Current Closing Date for Applications:	Sep 11, 2023	
Funding Instrument Type:	Cooperative Agreement	Archive Date:	Oct 11, 2023	
Category of Funding Activity:	Environment	Estimated Total Program Funding:	\$5,000,000	
Category Explanation:	The NOAA Climate Resilience Accelerators funding opportunity seeks to fund accelerator entities that will support businesses navigating commercialization pathways for ocean-based climate resilience solutions that support NOAA's mission to help communities prepare for, adapt to, and build resilience to climate challenges. NOAA has developed climate resilience theme areas that align with the U.S. Ocean Climate Action Plan (https://www.whitehouse.gov/content/uploads/2023/03/Ocean-Climate-Action-Plan_Final.pdf), and expects results of this opportunity to support relevant actions, such as:		Award Ceiling:	\$250,000
	- Maintain and expand ocean basic and applied research, observing networks, modeling, forecasting, synthesis, and technology development.		Award Floor:	\$50,000
	- Develop new and innovative technologies and information pathways for ocean climate action.			
	- Expand coastal mapping, monitoring, observational systems, research, and modeling to inform science-based decision-making capabilities and advance use of nature-based solutions.			
	- Advance research, technologies, and observation systems to support climate-ready marine resources and communities.			
	- Enhance community resilience to ocean change by developing ocean-based solutions that help communities adapt and thrive in our changing climate.			

The "Category Explanation" text continues: "This funding opportunity announcement addresses Phase One of what will be implemented as a two-phase process. Phase One - Scoping and Design of a Climate Resilience Accelerator Program. NOAA will award up to \$250,000 per awardee over 8 months to support up to 15 qualified accelerator entities in scoping, planning, and designing an ocean-based climate resilience-focused accelerator program design that aligns with NOAA mission areas and addresses climate resilience challenges. A visual timeline for phase one and phase two of the Ocean-based Climate Resilience Accelerators program will be provided publicly via website within 2 weeks of the announcement of this funding opportunity. NOAA will invite winning applicants to engage in public workshops and webinars designed to convene a range of federal, state, local, territorial, and tribal agencies, non-governmental organizations, trade, and academic organizations, and other relevant entities to identify regional and/or sector specific..."

Phase 1: Proposal Design

Focus: Identifying potential accelerator entities and funding them to design accelerator programming

Key content.

- Describe the applicant's existing and planned resources, including climate resilience expertise. Resources and expertise may exist as part of the accelerator entity, current partners, or new proposed partnerships.
- Include a description of how the Phase 1 award funds will be spent and a timeline for the development of an accelerator program design including key design milestones.
- Include a plan for how the Accelerator entity will advance diversity, equity, inclusion, justice, and accessibility.
- Describe current and proposed partner's role and commitment to economic growth in the selected climate resilience theme area(s).

PROPOSAL CONTENT

1. Title Page
2. Project Summary
3. Project Narrative (up to 5 pages)
4. Standard SF-424A Budget Form with budget for each fiscal year of the proposal
5. Detailed Budget Narrative (See [here](#) for more information)
6. Diversity, equity, inclusion, justice, and accessibility plan
7. Appendices
 - a. Supporting materials
 - b. Resumes
 - c. CD-511 Certification Regarding Lobbying.
 - d. SF-424B Assurances - Non-Construction Programs.

GOMO Moored Time Series (OceanSITES)

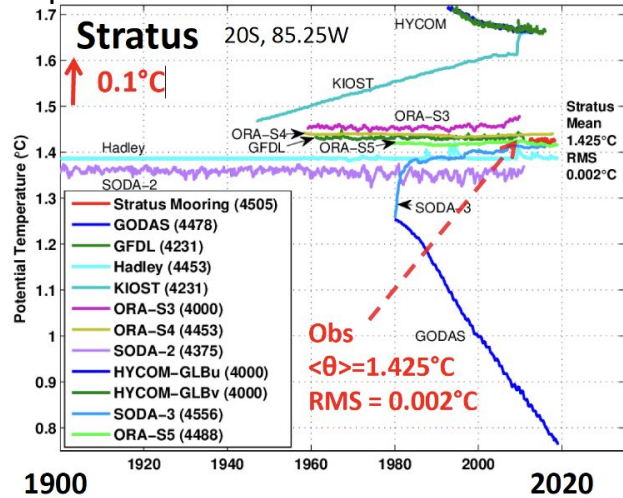
Assessing and benchmarking reanalyses and climate models

Trade wind sites:

At the surface – models underestimate heat into ocean

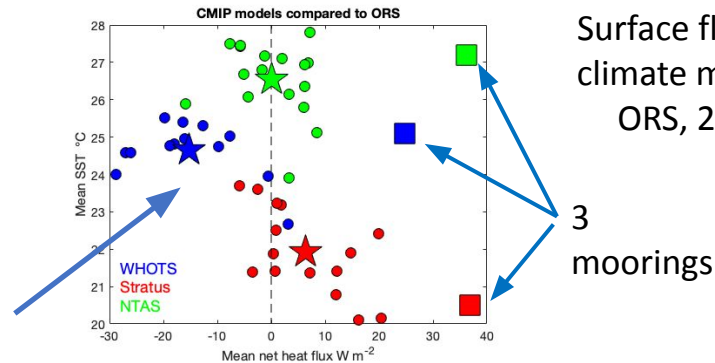
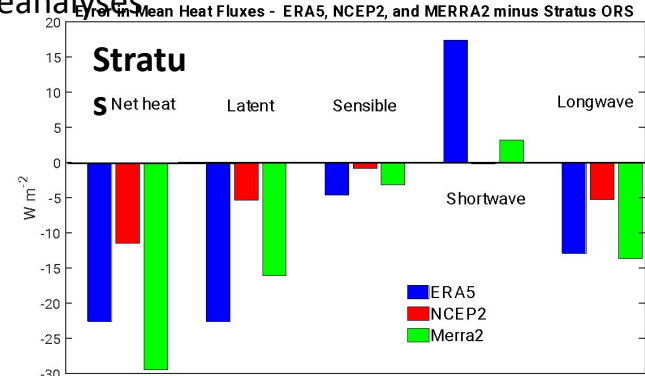
At the surface – models have SST biases

Deep – new time series allow checking model deep temperature



Deep ocean temperature – near bottom, models and reanalyses

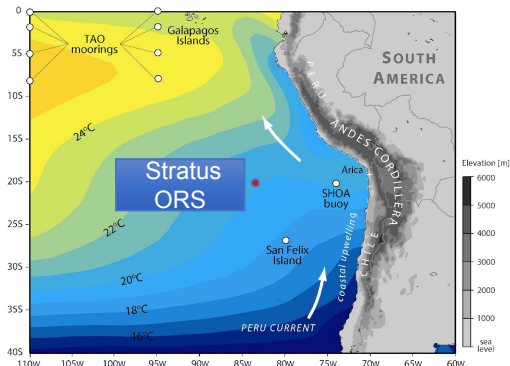
20-year mean heat fluxes – atmospheric reanalyses



Surface fluxes and SSTs in climate models vs Stratus ORS, 20-year means

GOMO Moored Time Series (OceanSITES)

Monitoring climate variability, quantifying processes



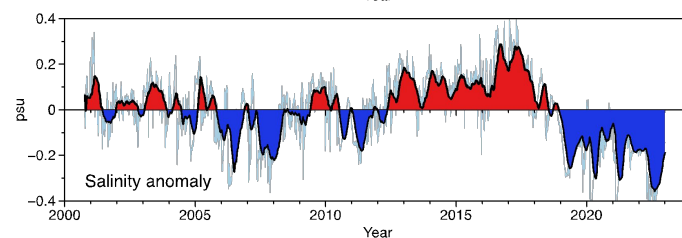
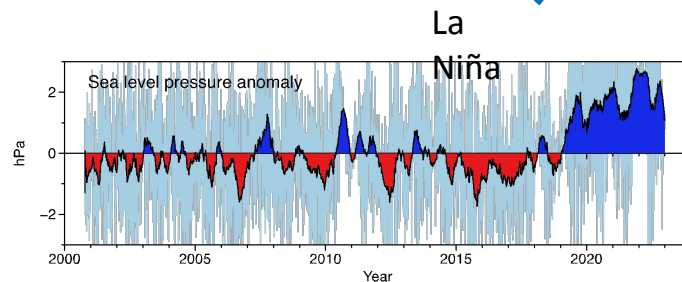
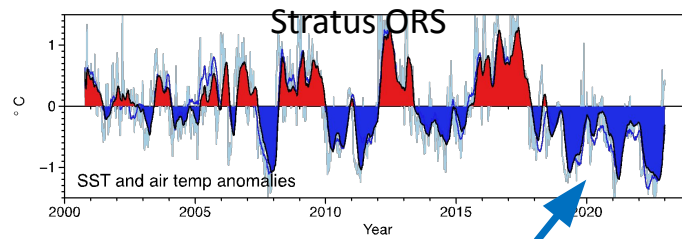
Coincident accurate surface meteorology and observations of ocean temperature, salinity, velocity, dissolved oxygen.

Provide:
 Accurate air-sea fluxes
 Quantification of one-dimensional ocean processes
 Tracking interannual variability

Investigating:
 What supports freshening as well as cooling in evaporative regime off northern Chile during La Niña

Well-instrumented surface mooring, deployed first in 2000, annual refresh,

Anomalies (departures from long-term mean annual cycle) at





Ocean Observing Co-Design

by The Global Ocean Observing System



**2021
2030** United Nations Decade
of Ocean Science
for Sustainable Development

Ocean Observing – a Foundation for Sustainable Development

David Legler | Director, Global Ocean Monitoring & Observing, National Oceanic & Atmospheric Administration

Sabrina Speich | Professor, Physical Oceanography & Climate Sciences, Institut Pierre-Simon Laplace

Emma Heslop | Acting Director, Global Ocean Observing System, IOC-UNESCO

Ann-Christine Zinkann | NOAA / UCAR

Andrea McCurdy | COL / NASA

Mairéad O'Donovan | GOOS, IOC-UNESCO

— THE OCEAN



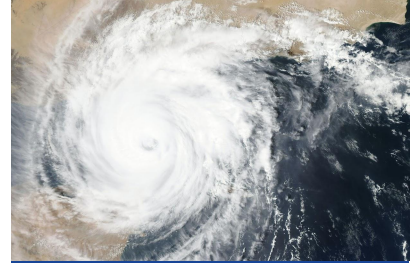
Provides 50% of our planet's **oxygen**



Absorbs 25% of anthropogenic **carbon** every year



Provides **food security** for 3 billion people



Absorbs heat, drives **extreme weather** and controls climate

...if we don't have the **ocean observations** underpinning our decisions, we might as well be guessing at solutions

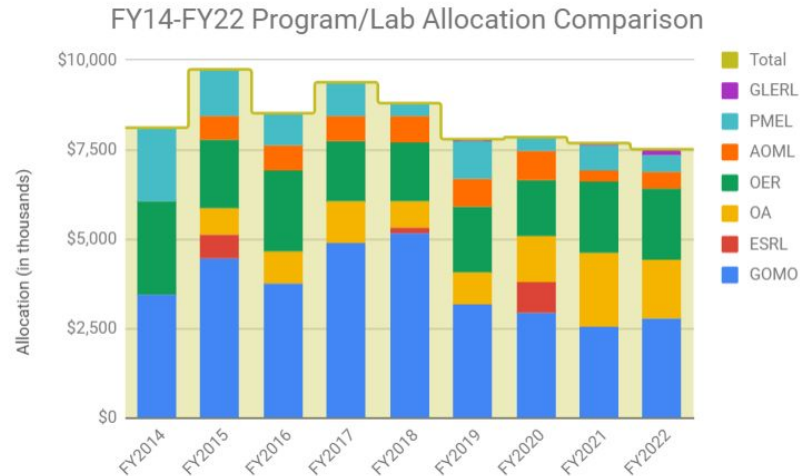
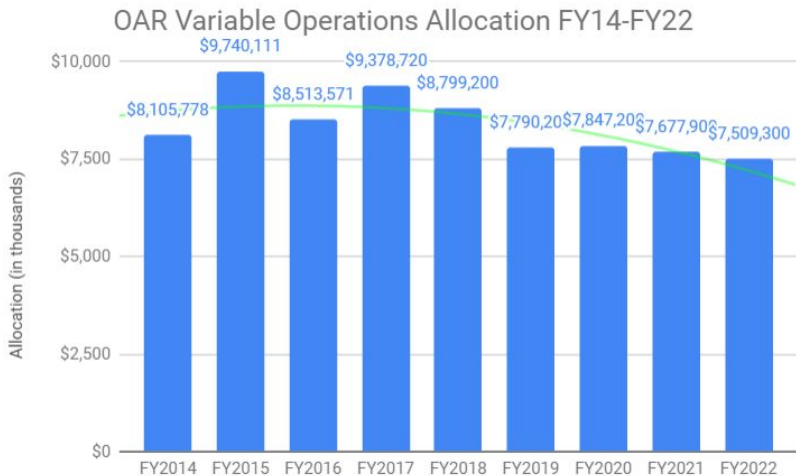
— OCEAN DRIVEN IMPACTS ON SOCIETY



A stylized map of Europe is shown on the left side of the slide. The map is overlaid with a complex network of thin, multi-colored lines (blue, green, yellow, red) and small colored dots, suggesting a data network or infrastructure. The background of the entire slide is a solid dark blue.

**Sufficient to address accelerating
climate impacts and societal needs?**

Historical OMAO Allocation Data (FY2014-FY2021)



- Decreased OMAO support, decreased allocation to GOMO mission
- **FY22 (FY23), GOMO paid > \$1M (\$1.5M) ship time (+ anticipated lost equipment)**
- GOMO partnerships provide > 200 days of ship time each year to deploy/maintain NOAA buoys and regional ocean research
 - **Foreign countries provide more ship time than NOAA to service our assets**
- OMAO performance issues plague allocated time on NOAA ships

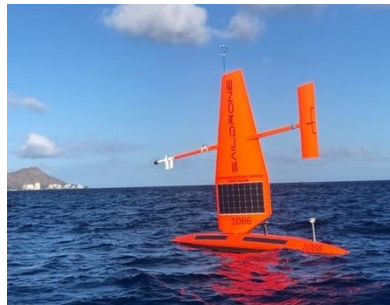


GOMO 2021-2025 STRATEGIC GOALS



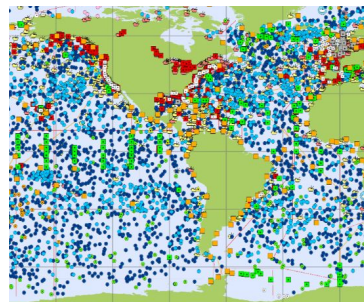
GOAL 1

Sustain global ocean monitoring and observing for long-term continuity and improve data quality and system efficiency.



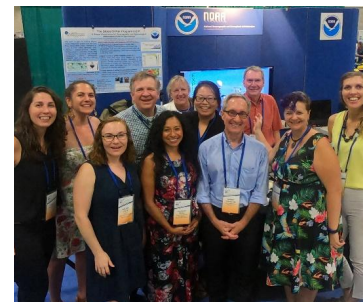
GOAL 2

Innovate & evolve the ocean observing network to address emerging needs & opportunities for ocean health, ocean economy, weather & climate.



GOAL 3

Improve the value, accessibility, and usability of observational data for informed decision-making.



GOAL 4

Develop and capitalize on the expertise and capacity of the ocean observing enterprise.



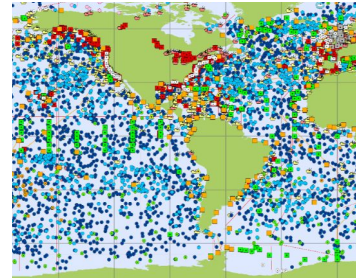
GOMO 2021-2025 STRATEGIC GOALS



GOAL 1 (4)
Sustain...



GOAL 2 (14)
Innovate & evolve...



GOAL 3 (6)
Improve the value, accessibility...



GOAL 4 (8)
..expertise and capacity...

- Areas of emphasis include tropical Pacific, Arctic, biogeochemistry, boundary-current regions
- GOMO goals and objectives address current and emerging challenges of great societal interest, e.g. ocean carbon, hurricanes, marine heat waves, Arctic sea ice/ecosystems, etc
- Performance measures (outputs and impacts) assess impacts within and external to the program
- Improving integration along the value-chain (e.g. through co-development) is an overarching need
- An Arctic Strategy document is in preparation to provide more specifics for those activities

OAR's STRATEGY 2020-2026

VISION: *Deliver NOAA's Future.*

Conduct and deliver world-class science dedicated to the NOAA mission of science, service, and stewardship.

MISSION: *Research, Develop, Transition.*

Conduct research to understand and predict the Earth system; develop technology to improve NOAA science, service, and stewardship; and transition the results so they are useful to society.

GOALS:

1. Explore the Marine Environment

Increase knowledge of the oceans, coastal areas, and Great Lakes to support resource management and public awareness.

2. Detect Changes in the Ocean and Atmosphere

Produce, analyze, and interpret observation records to understand the Earth system and inform the public.

3. Make Forecasts Better

Improve accuracy, precision, and efficiency of forecasts and predictions to save lives and property and support a vibrant economy.

4. Drive Innovative Science

Cultivate and deliver mission-relevant research to lead the environmental science community.

VALUES:

-Commit to Diversity

-Explore to Solve

-Uphold Scientific Integrity

-Engage from Local to Global



<https://research.noaa.gov/External-Affairs/Strategy#>



NOAA Weather, Water and Climate Strategy FY 2023-2027



NOAA Priorities

Science, Service and Stewardship



Climate

Establish that NOAA is the authoritative source for climate products and services that can be applied to a diverse range of missions.



Balance

Advance NOAA's complementary work on environmental stewardship and economic development with a particular focus on the New Blue Economy.

noaa.gov/our-mission-and-vision

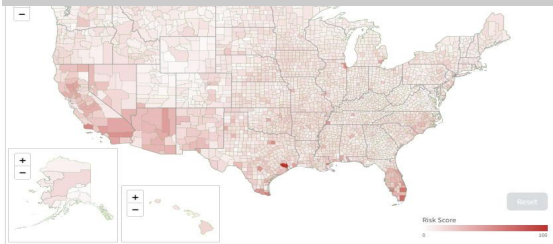


Equity

Exhibit equity in how we build and provide services. Within NOAA, we will promote diversity, equity, inclusion and accessibility in the workforce. Externally, we will provide equitable access to our products and services.



Develop and Deliver Climate Products and Services



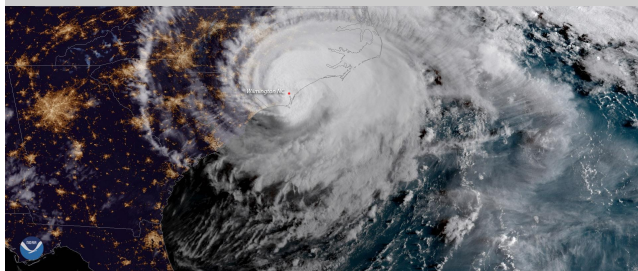
Economic Development



Equity & Workforce



Satellites



Facilities



ADMINISTRATION AND NOAA PRIORITIES

White House Priorities: protecting public health and the environment, building resilience to climate change, advancing social justice, and creating jobs.

NOAA Priorities (TBD by new NOAA leadership).

Early indications:

- Develop/deliver climate products/services
- Economic development (blue economy)
- Equity and diversity



NOAA STRATEGY

2020-26

VISION: *Deliver NOAA's Future.*

Conduct and deliver world-class science dedicated to the NOAA mission of science, service, and stewardship.

MISSION: *Research, Develop, Transition.*

Conduct research to understand and predict the Earth system; develop technology to improve NOAA science, service, and stewardship; and transition the results so they are useful to society.

VALUES

Commit to Diversity

Explore to Solve

*Uphold Scientific
Integrity*

*Engage from Local
to Global*

GOALS:



Explore the Marine
Environment



Detect Changes in
the Ocean and
Atmosphere



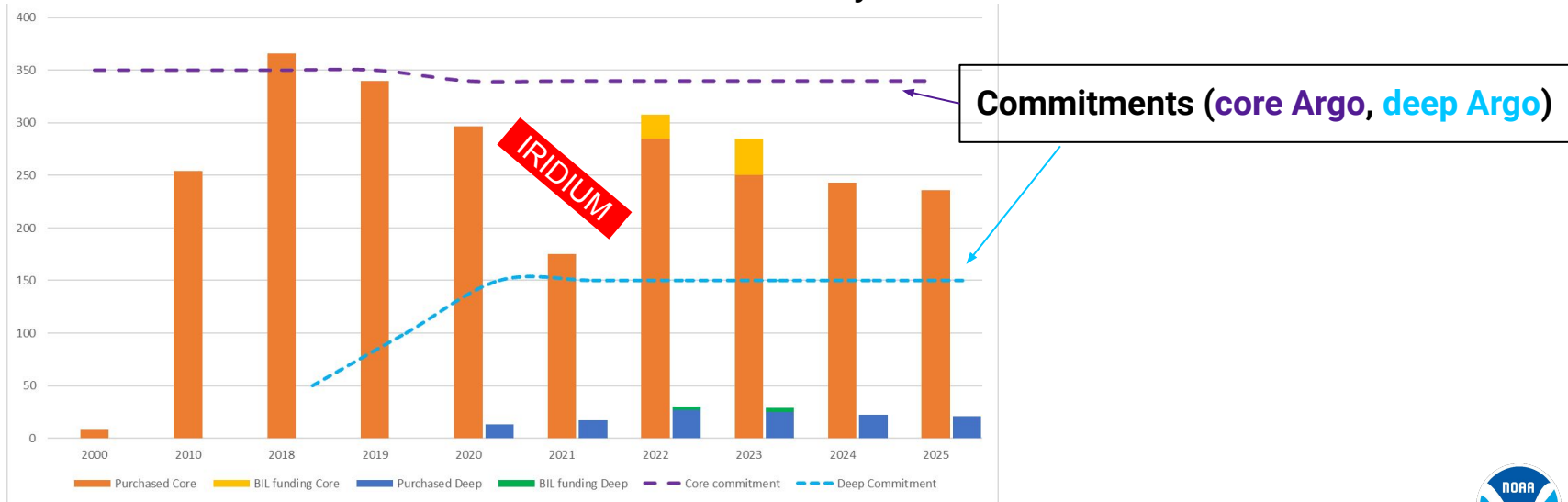
Make Forecasts
Better



Drive Innovative
Science

SUSTAINABILITY VS INNOVATION

- Sustainability and innovation are challenging to manage
- Arctic research and observing is especially vulnerable and insufficiently funded
- New innovative projects started, and innovation is evident across the program
- Through review process, multiple ocean time series sites have been stopped
- Without action, more reductions on the way...



NOAA's FY22-26 Strategic Goals

01 BUILD A CLIMATE READY NATION

Building a Climate Ready Nation by establishing NOAA as the primary federal authoritative provider of climate information and services in the whole-of-government response to tackling the climate crisis



02 MAKE EQUITY CENTRAL TO NOAA'S MISSION

Integrating equity into our core operations



03 ACCELERATE GROWTH IN AN INFORMATION-BASED BLUE ECONOMY

Promoting economic development while maintaining environmental stewardship with a focus on advancing the New Blue Economy.

