Research and Education Coalition for Ocean Sciences

"the ocean coalition"

Paula Bontempi + Officers
(https://theoceancoalition.org)

RECOS

How do we motivate investment as an ocean community for ocean resources?

- Coalition of Academic, Research, Aquaria, Non-profit institutions (18 members and growing)
- 501c(3) like CORE, NAML, etc. (“insubstantial” lobby activity)
- Formed in 2024 to advocate for shared priorities in ocean science, technology, infrastructure, and education
- Venue for collaborative engagement across all ocean institutions – big and small!
- Provide collaborative and bipartisan strategy informed by federal, industry, and other partners and national needs

Politics in Science

- EO Restoring Gold Standard Science
- FY27 OMB/OSTP Priorities Memo
  - Critical and Emerging Technologies - AI, Quantum Information S&T, Advanced Communication Networks, Future Computing Technologies
  - Energy Dominance/New Frontiers – polar research, ocean exploration, observations/mining
  - American Security – Preparedness/resilience – geophysical hazards (cybersecurity a priority)
  - Health and Biotech – food security and environmental drivers of health
  - Space Dominance – human exploration, space weather
- Compact for Academic Excellence In Higher Education
  - Institutional signatories gain “benefits”: access to student loans, research programs, student visas, preferential treatment in tax code.

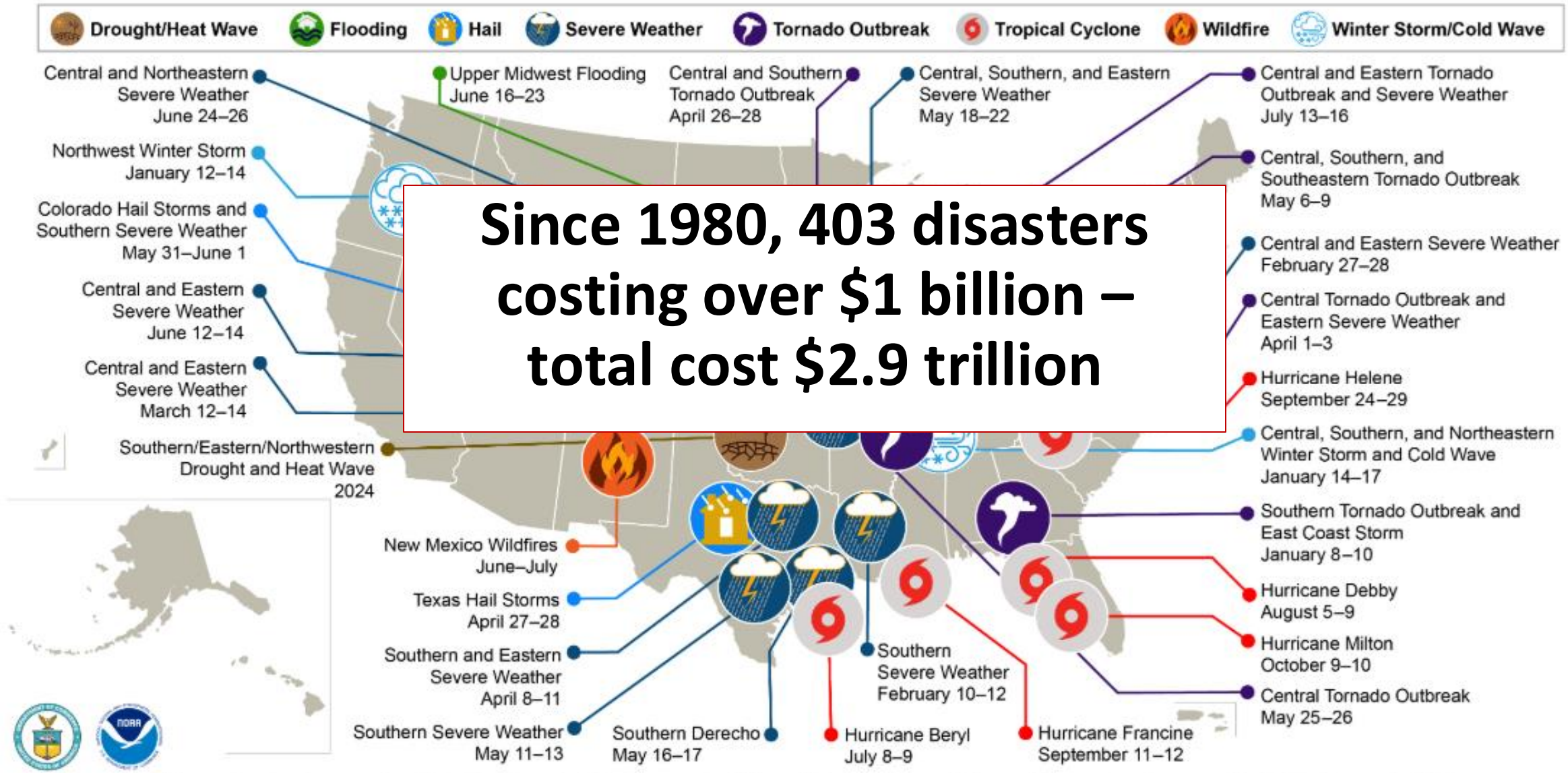
Where is U.S. ocean science now?

- Losing global leadership in ocean science and technology
- Research fleet reduced 50% in last 50 yrs, impaired icebreakers, no US drill ship
- Dwindling federal investment relative to need
- Challenge upskilling/reskilling professionals, graduate student enrollment, and retaining future ocean innovators and explorers

Are we ready for the next 50 years of ocean science?

- Unprecedented changes in ocean and Earth system
- Growing human population
- Rapidly changing geopolitical landscape
- How to build on existing federal investments and priorities (Decadal Surveys, etc.)

U.S. 2024 Billion-Dollar Weather and Climate Disasters



Since 1980, 403 disasters costing over $1 billion – total cost $2.9 trillion

*This map denotes the approximate location for each of the **27 separate billion-dollar weather and climate disasters that impacted the United States in 2024.***

Work of The Ocean Coalition

- Four position papers
  - National Security
  - Workforce and Training
  - Ocean Economy
  - Ocean Infrastructure
- Lead by four sub-committees, consensus of coalition
- Shared widely to support and unify efforts of other groups
- Used to support advocacy, public and legislative engagement

RECOS advances recommendations by working through partners with unique ability/position to reach law makers where they live, in support of unified goals

National security through U.S. Leadership

Recommendation: RECOS supports sustained basic and applied research investments in national security funding for new technologies to observe the ocean environment from seafloor to space over the next decade.

Supporting U.S. Ocean Workforce

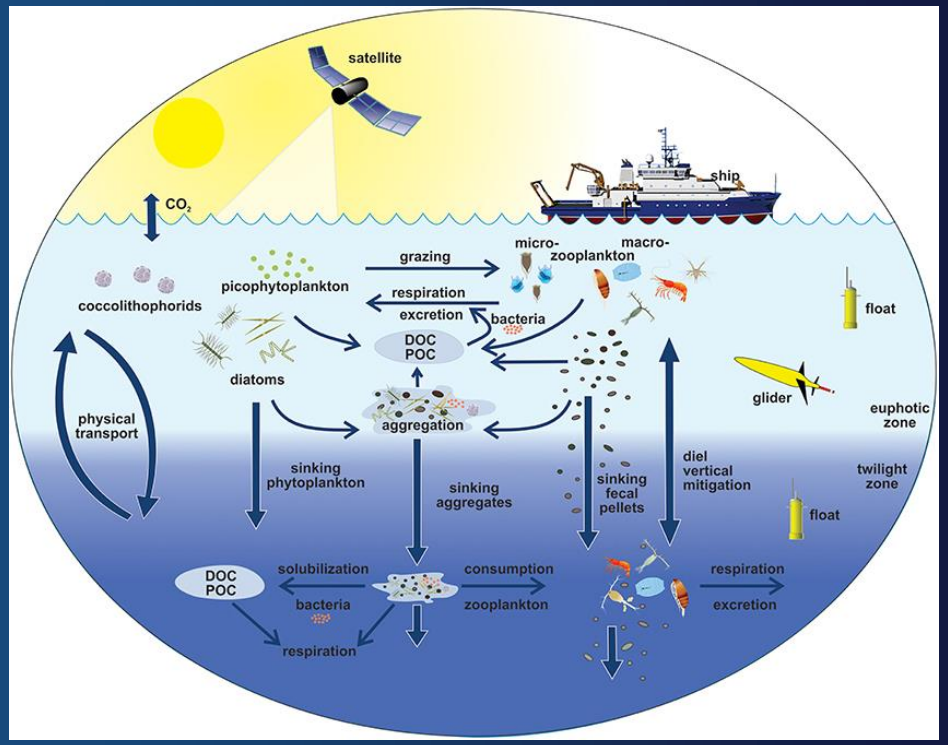
Recommendation:

RECOS supports the continuation of robust funding in Blue Economy workforce training programs with the Department of Commerce, including programs through NOAA and the Economic Development Administration.

Resilient U.S. Ocean Economy

Recommendation:

U.S. investment in science and technology is essential in preparing the nation for current and emerging opportunities. We recommend the highest possible funding levels for basic and applied research programs, including research instrumentation and future academic research fleet recapitalization.



Ocean Infrastructure for U.S. Leadership

Recommendation:

RECOS supports the building of two icebreakers, four global class ocean research vessels, sustained investments in new technologies to observe the ocean at cellular to global scales, and strategic research investments from seafloor to space over the next decade.

Ocean Coalition work to date:

- 18 members committed
- Position papers (engager
- Coordinated over 70 Con
- Supported expert testim
  Science Subcommittee o
- Aided dissemination of tl
- Organized town halls: OS
- Monthly member meetir
- TOR adopted, Officers el
- Membership Annual Mee
- Coordination with COL, N

- Listening sessions for pro
- Industry Engagement
- Support OMB/OSTP FY priorities memo
- We want to hear from you!

RECOS is a RESOURCE

Questions?
Join Us
https://theoceancoalition.org

- Ideas to capture the voice and needs of the whole community?
- What does your institution seek in an organization like this?
- Things we can be doing that you would like to see?
- Input on next priorities?
- How should industry have a voice in this organization?

RECOS

Research and Education Coalition for Ocean Sciences (RECOS)

To advance ocean science and professionals for society by:

1) growing ocean research programs and fostering new ocean research investments and initiatives by building public and government support;

2) promoting high quality education and training of a future professional workforce in ocean sciences, fostering collaborations between scientists and educators, and building trust by enhancing public ocean literacy;

3) advocating for ocean policy issues by bridging the academic, industry, private, non-profit, and aquaria and other partner ocean research communities before Congress, partnering with and providing input to government agencies, and collaborating with non-governmental organizations; and

4) cultivating and promoting awareness, appreciation, and value of the oceans among government agencies, non-governmental organizations and the public.

What are our priorities as a nation?

Infrastructure

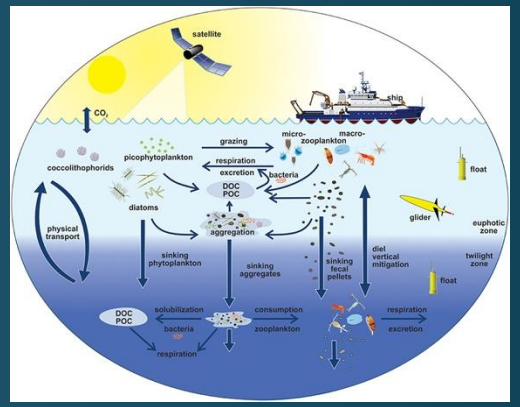
Ships, ice breakers, drilling/coring

Uncrewed systems

Global observing

Facilities/tools

Ocean / Climate nexus



Long-term observations

Models

High-performance computing, AI/ML, quantum computing

Research

Curiosity-driven programs

Applied programs

Management/policy relevant and ready

Ocean literate workforce

Students

Professionals/adult learners

Public

(NASA, 2022)

Grand Challenges for a Sustainable Blue Economy

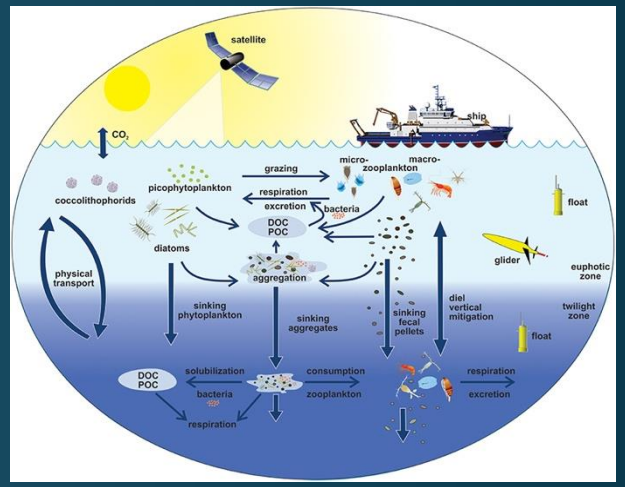
Global Biosphere

Global ocean ecosystems change w/natural and anthropogenic stressors

Identify vulnerable ecosystems

Quantify changes in bio/bgc and Earth system impacts

Elements of Life and Climate



Quantify role of ocean ecosystems in climate regulation

Biogeochemical cycling of elements change in the future,

Impacts of changes on Earth's climate, biodiversity, resource sustainability, and human welfare.

Interface Habitats

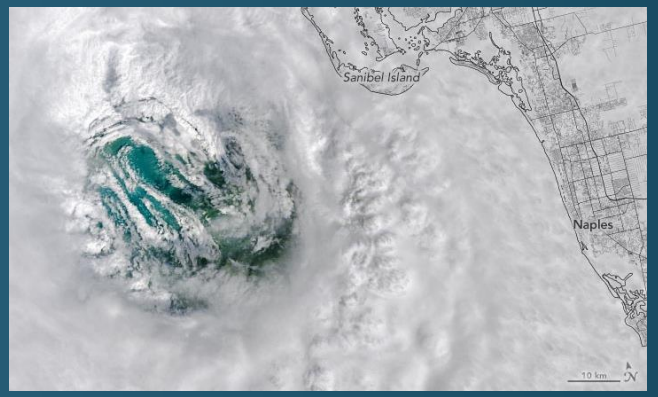
How natural processes and human activities govern the diversity, function, and resilience of life in interface habitats

Resources, services, and value of habitats can be secured and sustained for future generations.

(NASA, 2022)

Grand Challenges for a Sustainable Blue Economy

Transient Events



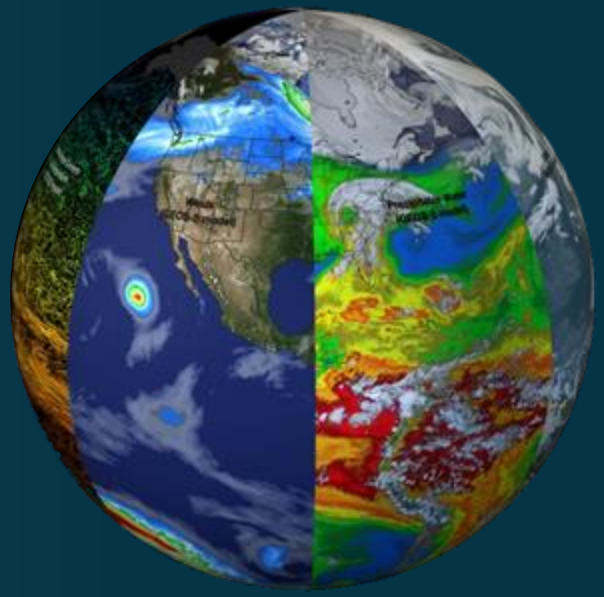
Develop knowledge and infrastructure to detect, quantify, predict, understand marine responses to transient events

Enable preparation, mitigation, and recovery from events and community impacts.

Leveraging Ocean Data and Models

Advance data harmonization, interoperability, synthesis, integration, and mining strategies

Train next-generation scientists to maximize value of RS and modeled data to understand the ocean and its role in the Earth system.



Five Grand Challenges highlight the need to better predict and respond to future change

We must think beyond conventional approaches in our obs, analysis, and understanding of aquatic ecosystems.

(NASA, 2022)