



2021 United Nations Decade  
2030 of Ocean Science  
for Sustainable Development

# UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT: NOAA Science Advisory Board Update

July 22, 2021

Craig McLean, Member of the Decade Executive Planning Group/Interim Decade Advisory Board



REFRESHER:

# What does the Ocean Decade aim to do?

*Transform* business-as-usual science, technology, & policy

*Facilitate* new partnerships, discoveries, & benefits

“The ocean  
we have”

**Ocean Decade**

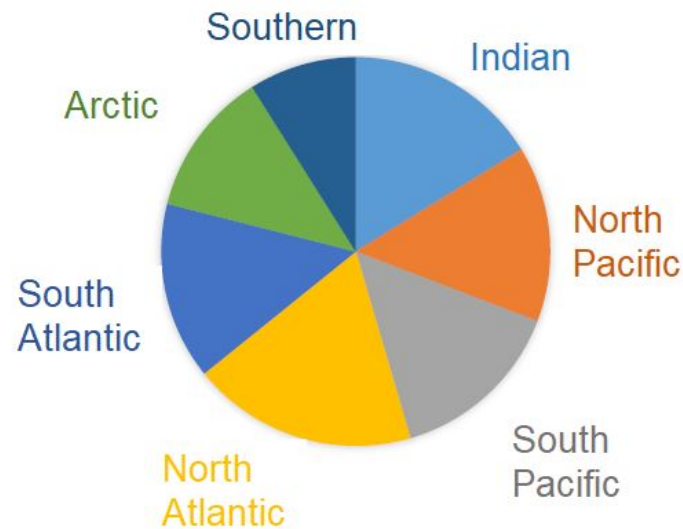
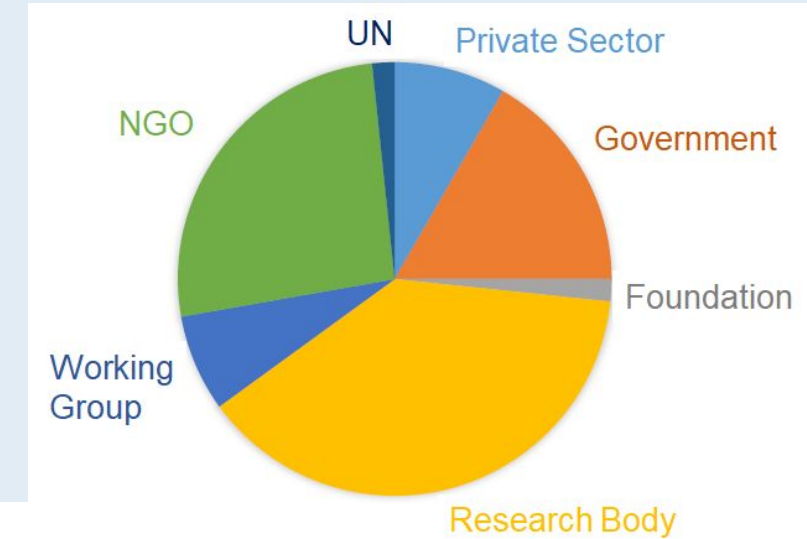
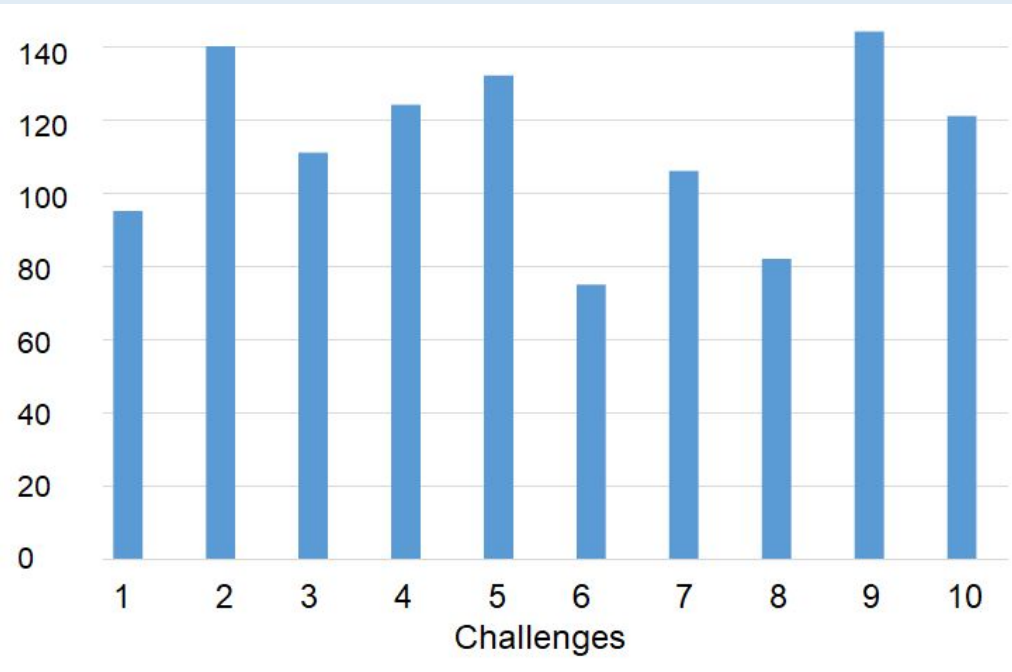
“The ocean  
we want”

# Where did the Ocean Decade originate?



# Response to IOC First Call (Jan 2021)

- 214 program submissions
  - Diversity of proponents, geographies, themes
- 27 contribution submissions
- 28 endorsed programs; 33 endorsed contributions



# U.S. National Committee

- Encourage participation of U.S. universities and research organizations, federal and state agencies, NGOs, industries, and others
- Connect U.S. activities to other efforts internationally
- Foster and support collaboration on Decade projects and engage early career scientists and youth
- Ocean Shots !

**OCEAN DECADE U.S.**

U.S. National Committee for the Decade of  
Ocean Science for Sustainable Development



Visit [nas.edu/OceanDecadeUS](https://nas.edu/OceanDecadeUS) for  
more information!

# 17 USG Submissions - *All Endorsed!*

*Involving all ocean basins, all 7 Decade Outcomes -- as well as all 10 Decade Challenges and 11 of the 17 SDGs!*

## **NASA (2)**

- Sea Level Change Science Team
- Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) Mission

## **NOAA (7)**

- SUPREME Marine Ecosystem Forecasting
- Global Ocean Acidification Observation Network (GOA-ON)
- CEOS-COAST
- World Ocean Database Program
- MPA Sentinel Sites
- Seabed Mapping and Characterization
- Coastal Aquaculture Siting Strategy (CASS)

**Smithsonian (1):** Marine Life 2030, submitted in collaboration with the Marine Biodiversity Observation Network ([MBON](#))

## **NSF (5)**

- GEOTRACES (also a SCOR initiative)
- Navigating the New Arctic (NNA)
- Global Ocean Biogeochemistry Array (GO-BGC)
- Coastlines and People (CoPe)
- International Ocean Discovery Program (IODP)

## **Subcommittee on Ocean Science and Technology (SOST) IWG Ocean Sound and Marine Life (1)**

- United Nations Research Programme on the Maritime Acoustic Environment (UN-MAE)

**Department of State (1):** Integrating Coastal Wetlands Data

*Does not include proposals (aprx 11) submitted by a non-USG entity that named a USG agency as partner.*



# NOAA's endorsed Decade actions

- **SUPREME Marine Ecosystem Forecasting** - Steven Bograd (NMFS)
- **Global Ocean Acidification Observation Network (GOA-ON)** - Meredith Kurz (OAR)
- **Committee on Earth Observation Satellites-Coastal Observations, Applications, Services, and Tools (CEOS-COAST)** - Paul DiGiacomo (NESDIS)
- **World Ocean Database Program** - Hernan Garcia (NESDIS)
- **MPA Sentinel Sites** - Gonzalo Cid (NOS)
- **Seabed Mapping and Characterization** - Alexis Maxwell (NOS)
- **Coastal Aquaculture Siting Strategy (CASS)** - James Morris (NOS)

# From Planning to Implementation (since Oct 2020)

## *December 2020*

- Decade Implementation Plan is released

## *January 2021*

- 240+ actions for Secretariat endorsement; 53 countries

## *February 2021*

- U.S. National Committee features 80+ Ocean Shots at U.S. Decade Launch
- All-interested Hill Decade briefing

## *March-May 2021*

- SOST proposes Decade-IWG, co-chaired by NOAA, NASA & State
- NOCC creation of NOAA Task Force-Ocean Decade
- 40+ Blue-Green NGOs organize support for Decade actions
- 20+ foundations facilitate philanthropic support for Decade actions
- 70+ organizations join the U.S. Ocean Decade Nexus

## *June 2021*

- House subcommittee all interested hearing on Decade & National Ocean Shot
- Decade in Presidential Proclamation of National Ocean Month 2021
- International launch event with 60+ endorsed actions & Dr. Jane Lubchenco



# Planned Decade-related Town Halls/Talks

- **July 14-16:** National Marine Educators Conference
- **Sept 20-23:** MTS Global OCEANS
- **Sept 28-Oct 1:** American Society for Beach Preservation Association
- **Nov 1-11:** Coastal & Estuarine Research Federation (TBC)
- **Dec 1-3:** National Disaster Resilience Conference (TBC)
- **Dec 13-17:** American Geophysical Union (TBC)
- **Jan 23-27, 2022:** American Meteorological Society (TBC)
- **Feb 27-Mar 4:** Ocean Sciences Meeting (TBC)

# Next Steps

1. Encourage rigorous response to the next “Call for Actions”
  - Agencies primed to submit actions via the SOST this fall
2. Encourage/support endorsed Decade Actions and OceanShots
  - America’s incubator for Decade actions that can be supported by public & private donors; directory at [nas.edu/OceanDecadeUS](https://nas.edu/OceanDecadeUS)
3. Plan Decade-themed Town Halls to build interest
4. Nominate American SMEs to the Decade Advisory Board
5. ***What more can we be doing for this Decade?***



# MORE INFORMATION

## Contact

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## Follow all Decade news:

[oceandecade.org](http://oceandecade.org)  
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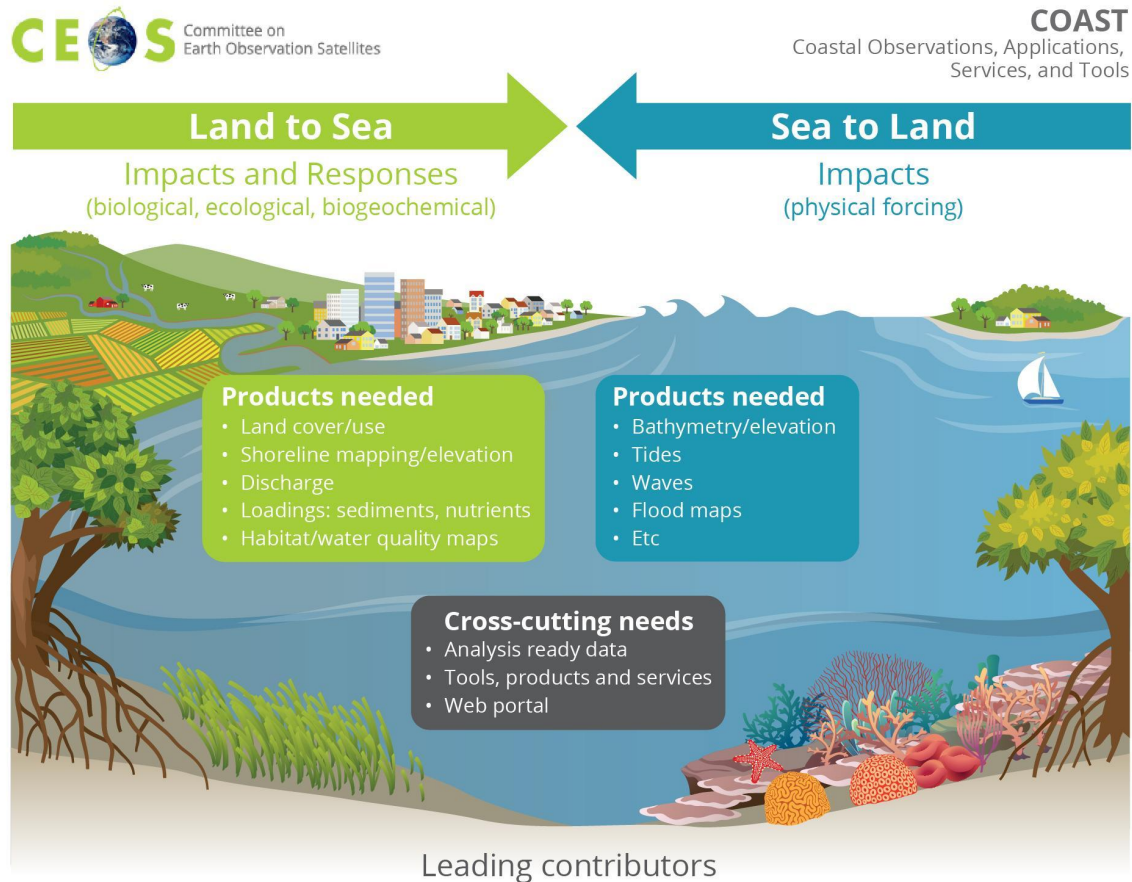




THANK YOU



# Committee on Earth Observation Satellites-Coastal Observations, Applications, Services, and Tools (CEOS-COAST)



**New and improved capabilities to observe the coastal region with satellites to:**

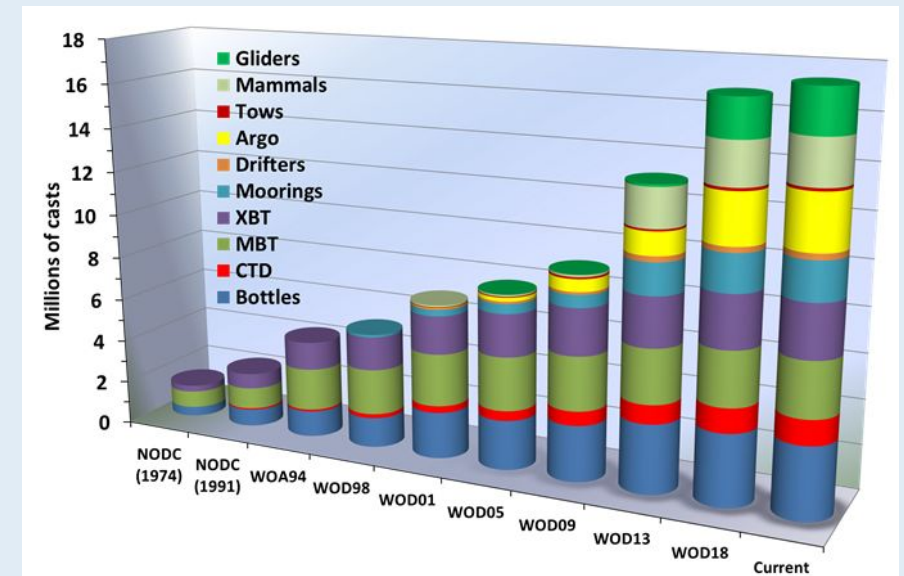
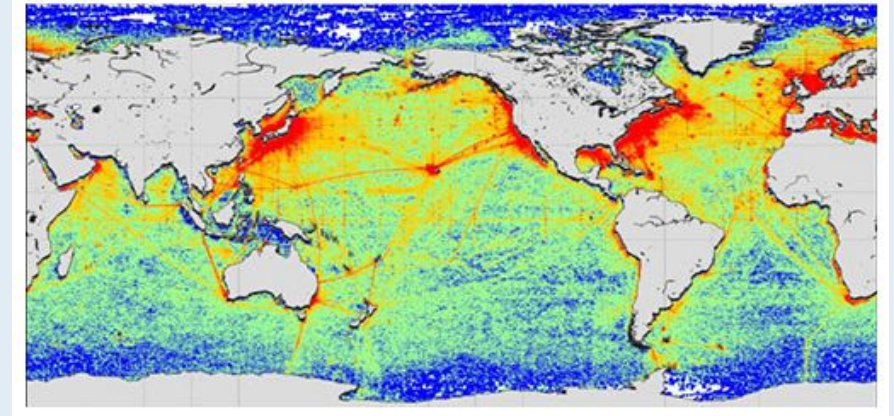
- Address coastal zone challenges and societal impacts
- Increase observations for coastal monitoring
- Build value chain for stakeholder decision-making

# World Ocean Database (WOD)

# Building on the world's largest collection of ocean/coastal profile data, improve database of:

- open and accessible data
- uniformly formatted
- quality controlled

<https://www.ncei.noaa.gov/products/world-ocean-database>



# SUstainability, Predictability, and REsilience of Marine Ecosystems (SUPREME)



## Improving marine ecosystem management with:

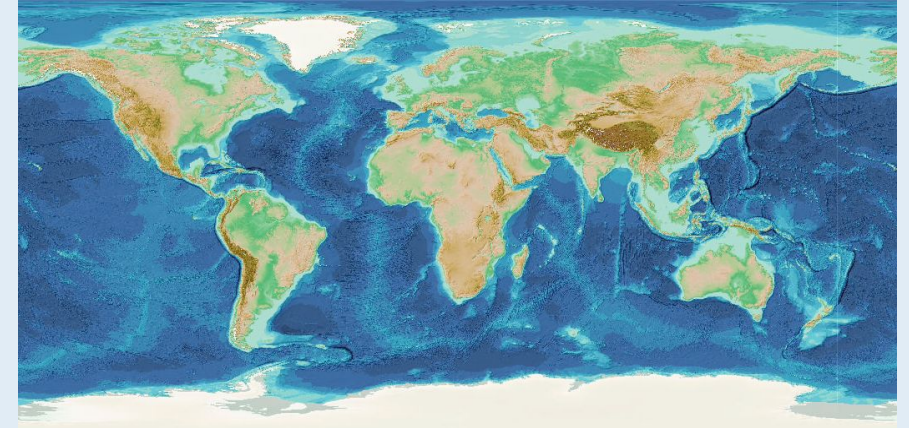
- Improved understanding of marine ecosystem dynamics and climate- and ocean-related forecasts, predictions, and projections
- Increased resilience of marine & coastal resources and the people who depend on them
- Sustainable coastal development and improved food security



# Seabed Mapping and Characterization

## Promoting Seabed 2030 and ocean mapping

- 20% of the ocean is mapped to modern standards
- Seabed 2030 global initiative - map of the full ocean floor by 2030!
- A full ocean map = crucial for Decade outcomes and ocean science



**Collecting of data → Better science → Better decision Making**



# Marine Protected Area Sentinel Sites



## MPAs as sentinel sites for ocean conservation, science and literacy by:

- Understanding climate impacts affecting the ocean
- Promoting research on MPA uses and socioeconomic benefits to coastal communities
- Increasing ocean literacy
- Establishing bigger networks of MPAs

# Coastal Aquaculture Siting Strategy (CASS)

**Unleash the power of big data for spatial planning!**



**Actionable tools and services for healthy, resilient ecosystems while supporting aquaculture development**

- Coastal Planning
- Coastal Siting
- Environmental Interactions
- AquaTools for coastal managers

# Global Ocean Acidification - Observing Network (GOA-ON)

## A Transformative Decade for the Global Ocean Carbon Observing System

- Expand monitoring network
- Accelerate the development of effective biogeochemical sensors
- Ensure publicly available data
- Develop informational products to support decision-makers
- Lower the basic cost of observations





# How will we get there?



- ✓ **Part 1:** provides the rationale, vision, mission and desired outcomes of the Decade.
- ✓ **Part 2:** presents the Decade Action Framework
- ✓ **Part 3:** presents the implementation mechanisms



# IMPLEMENTATION: Desired Outcomes



**A clean ocean** where sources of pollution are identified and removed



**A healthy and resilient ocean** where marine ecosystems are mapped and protected



**A predicted ocean** where society has the capacity to understand current and future ocean conditions



**A safe ocean** where people are protected from ocean hazards



**A sustainably harvested and productive ocean** ensuring the provision of food supply

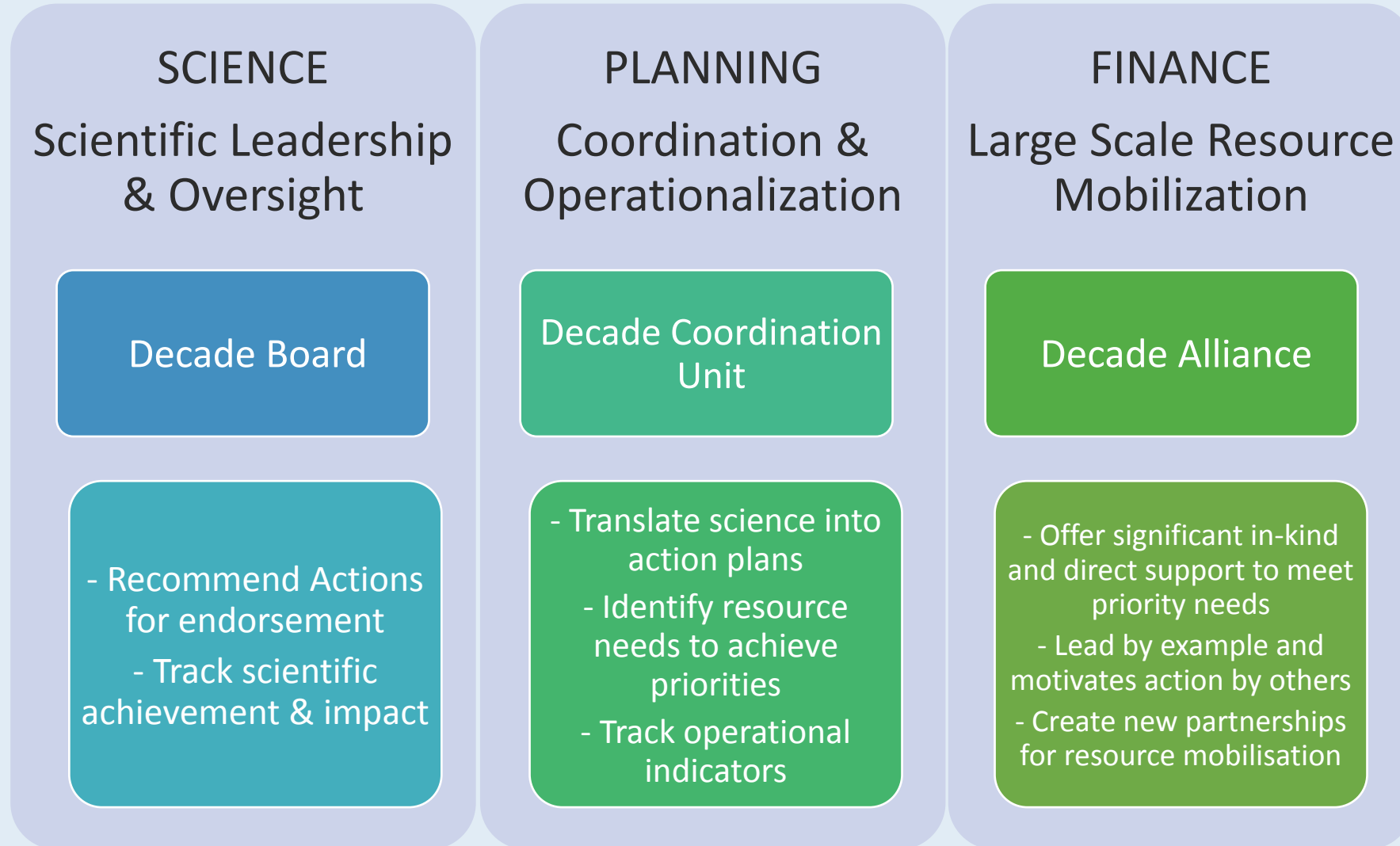


**A transparent ocean** with open access to data, information and technologies



**An inspiring and engaging ocean** where society understands and values the ocean

# IMPLEMENTATION: Mechanisms



# IMPLEMENTATION: Action Framework





# What does the Decade mean for scientists?

## Science For Sustainable Development

### Our Research Makes an Impact

Project: Monitoring the Ocean Improves  
Weather Forecasts

Impact: Adding Ocean Data from  
Directly Beneath a Storm Leads to More  
Accurate Hurricane Forecasts

- Think Big
- Expand Reach of Projects
- Find New Partners
- New Ideas
- International Collaboration
- Leverage Outside Funding

# Timeline for Laboratories

**An Inspiring  
and Engaging  
Ocean**

July 2021

**A Clean  
Ocean**

November  
2021

**A Healthy &  
Resilient  
Ocean**

March 2022

**A Transparent  
& Accessible  
Ocean**

May 2022

2021

2022

**A Predicted  
Ocean**

September  
2021

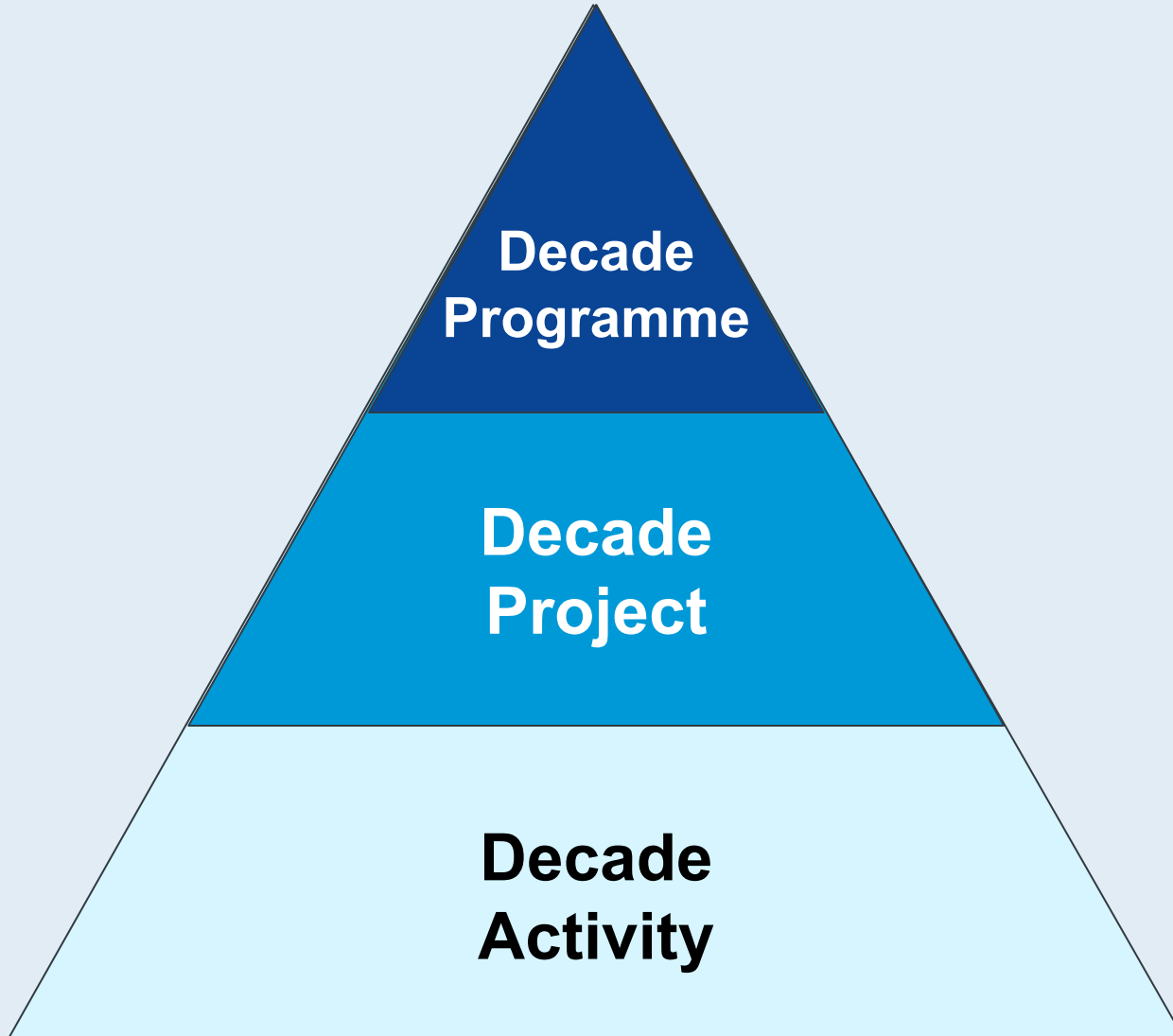
**A Productive  
Ocean**

February 2022

**A Safe  
Ocean**

April 2022

# 1. Next Call for Actions - Get Ready!



- Call for ***Programs*** issued Nov 2020-Jan 2021; endorsements announced by June 2021
- Call for ***Projects*** expected in Sep-Nov 2021; stay tuned for NOCC tasker; endorsements announced by Spring 2021



# Levels of Decade Actions

## Decade Contribution

- Supports the Decade through provision of a necessary in-kind or financial resource.
- Can be either for costs related to the implementation of a Decade Action or for coordination costs.

## Decade Programme

- Global or regional in scale
- Contribute to one or more of the Decade Challenges.
- Long-term (multi-year), interdisciplinary and typically multi-national.
- Includes component projects, and enabling activities.

## Decade Project

- Discrete and focused undertaking of a shorter duration.
- Will typically contribute to an identified Decade programme

## Decade Activity

- Typically a one-off standalone activity
- Can form part of a programme or project or can relate directly to a Decade Challenge or an outcome.

## 2. Ocean Shots: Action incubator!



### OCEAN-SHOT:

*An ambitious, transformational research concept that draws inspiration and expertise from multiple disciplines and fundamentally advances ocean science for sustainable development.*

- Align with Decade Outcomes
- Browse Directory of Ocean Shots - National Committee Website!

