

2019 Global Ocean Science Education (GOSE) Workshop

November 13-15

American Society of Civil Engineers Bechtel Conference Center
Reston, VA

Conducted by

COSEE and College of Exploration in Partnership with the
Atlantic Ocean Research Alliance and the Seabed 2030 Project

AGENDA

The 2019 GOSE Workshop Goals are to:

1. explore the importance of ocean observations and seabed mapping to society;
2. identify strategies and activities to support the United Nations Decade of Ocean Science for Sustainable Development; and
3. identify strategies to train and support business and industry partners for enhancement of the Blue Economy.

Objectives:

- Bringing together the ocean science, education, policy, and business/industry sectors
- Integrating seabed mapping and ocean observing research results into education resources for enhanced global societal ocean literacy, decision making, and sustainable development
- Identifying industry needs for education opportunities of the existing marine-related workforce

WEDNESDAY, November 13, 2019

- 9:00 **Welcome and Introductions**
 Gail Scowcroft, Graduate School of Oceanography, University of Rhode Island
 Peter Tuddenham, College of Exploration
 Ivan Conesa-Alcolea, European Commission
- 9:15 **Workshop Goals and Overview** (Gail Scowcroft and Peter Tuddenham)
- 9:30 **Plenary I: Overview of UN Decade of Ocean Science for Sustainable Development**
 Craig McLean, National Oceanic and Atmospheric Administration and Executive
 Planning Group, UN Decade
- 10:00 **Plenary II: Ocean Literacy for the Decade**
 Francesca Santoro, Intergovernmental Oceanographic Commission
- 10:20 **Coffee Break**
- Why Do We Need Ocean Observation?**
- 10:40 **Panel I: Importance of Ocean Observing for Society and Related Education Activities**
 Moderator: Ana Noronha, Ciencia Viva



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2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development



Panelists:

Dina Eparkhina, European Global Ocean Observing System

Frank Mueller-Karger, University of South Florida

Kaitlin Noyes, Bermuda Institute of Ocean Sciences

- 11:15 **Plenary III: Global Ocean Observing System 2030 Strategy Report**
Joaquín Tintoré Subirana, Balearic Islands Coastal Observing System
- 11:40 **Breakout Group I: Integrating Ocean Observation into Ocean Education/Ocean Literacy Initiatives**
Example Discussion Topics:
A. Using ocean observing data in programs for museum and aquarium audiences during the Decade
B. Using ocean observing data in K-12 science
C. Using ocean observing data in social science and humanities
D. Currently available ocean observation resources and materials
E. Using the media and social media to highlight ocean observation initiatives
- 12:20 **Breakout Group I Reports**
- 12:40 **Lunch**
- Why Do We Need Seabed Mapping?**
- 13:20 **Panel II: Importance of Seabed Mapping for Society and Related Education Activities**
Moderator: Paula Keener, Global Ocean Visions
Panelists:
Gordon Johnston, International Federation of Surveyors and AORA
Tommy Furey, Marine Institute, Ireland
Laura Brothers, U.S. Geological Survey
Nicola Bridge, National Marine Aquarium (UK) and European Marine Science Educators Association
Robert Pani Pilla, Friends of Marine Life
- 14:10 **Plenary IV: Seabed 2030 Report**
Vicki Ferrini, Lamont-Doherty Earth Observatory and Seabed 2030 Project
- 14:30 **Breakout Group II: Integrating Seabed Mapping into Ocean Education/Ocean Literacy Initiatives**
Example Discussion Topics:
A. Using seabed mapping and bathymetry products in programs for museum and aquarium audiences during the Decade
B. Using seabed mapping and bathymetry products in K-12 science
C. Using seabed mapping and bathymetry products in social science and humanities



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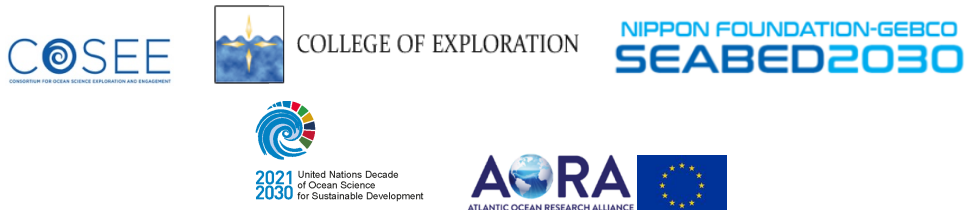


- D. Currently available seabed mapping resources and materials
- E. Using the media and social media to highlight Seabed 2030 and other mapping initiatives

- 15:10 **Breakout Group II Reports**
- 15:25 **Coffee Break**
- 15:45 **Plenary VI: Strategies for the Engagement of Business and Industry**
Michael Jones, TMA BlueTech™
- 16:10 **Working groups on seabed mapping and ocean observing meet to discuss breakout group actions and formalize plans for implementation during the Decade**
- 16:50 **Working Group Reports**
- 17:10 **Lightning Round I: Student Presentations**
Moderator: Nicola Bridge, National Marine Aquarium and EMSEA
Presenters:
Emiliano Gonzalez Santin, Ulster University
Maria Pontiki, University of Delaware
Bianca Prohaska, Florida State University and AORA U.S. Ambassador
Jaya Roperez, Center for Coastal and Ocean Mapping
Alicia Wilson, University of Georgia and AORA U.S. Ambassador
- 17:45 **Short Film**
Ana Noronha, Ciencia Viva
- 18:00 **Adjourn, buses leave for dinner venue**
- 18:15 **Group Dinner**
- THURSDAY, November 14, 2019**
- 9:00 **Welcome and Review**

Ocean Literacy and Ocean Science Education in Support of the Blue Economy

- 9:15 **Plenary V: Ocean Literacy, Knowledge Transfer, and Career Development for a Sustainable Blue Economy**
Mary Kavanagh, Minister-Counselor, Research and Innovation, Delegation of the European Union to the U.S.
- 9:40 **Panel III: Blue Economy, Emerging Marine-Related Technologies, and Education Needs**
Moderator: Peter Tuddenham, College of Exploration
Presenters:



Diz Glithero, University of Ottawa and Canadian Ocean Literacy Coalition
Kelley Brumley, Fugro
Thomas Chase, American Society of Civil Engineers and Steve Balint, Balint Consulting
Steven Ross, University of North Carolina Wilmington and the ATLAS Project
Zacharias Siokouros, Maritime Institute of Eastern Mediterranean

- 10:30 **Coffee Break**
- 10:50 **Breakout Group III: Strategies to Educate the Marine-related Workforce; A Certificate Program for Business and Industry**
Example Discussion Topics:
A. Using national and international networks to engage the blue economy business community during the Decade
B. How can business and industry support ocean science education during the Decade?
C. How can the ocean science education community support the blue economy?
D. What kinds of ocean science education opportunities do businesses need?
- 11:35 **Breakout Group III Reports**
- 11:50 **Large Group Discussion I: Development of Education Opportunities for the Existing Marine-Related Workforce**
- 12:15 **Lunch**
- 13:15 **Breakout Group IV: Regional Groups Develop Outreach Plans for Implementing Education Opportunities for Business and Industry in Their Regions During the Decade**
(or breakout by topic area)
- 14:15 **Breakout Group IV Reports**
- 14:30 **Lightning Round II: Early Career Professional Presentations**
Moderator: Tara Donaghy, Fisheries and Oceans Canada
Presenters:
Katie Geddes, NOAA
Tinah Martin, Lamont Doherty Earth Observatory
Willem De Moor, JPI Oceans
Chris Sivert, Moffatt & Nichol
- 15:00 **Coffee Break**
- 15:20 **Breakout Group V: Regional Groups Develop Collaborative Activities for the Decade**
continued (groups can also breakout by ocean science themes)



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- 15:50 **Breakout Group V Report Out**
- 16:20 **Introduction to Open Space Session**
- 16:35 **Short Film**
 Thomas Chase, American Society of Civil Engineers
- 16:50 **Adjourn**

FRIDAY, November 15, 2019

- 9:00 **Welcome and Review**
- 9:15 **Open Space Session – Furthering the Goals of the Global Ocean Science Community**
 (Examples: one group could focus on the certificate program for business and industry,
 another could focus on activities for the Decade)
- 10:15 **Coffee Break**
- 10:35 **Open Space Continues**
- 11:10 **Open Space Group Reports**
- 11:25 **Large Group Discussion – Reflection on 2019 GOSE Workshop and Ideas for 2020**
- 11:40 **Plenary VII: Importance of Ocean Science Education in Support of the UN Decade of Ocean Science for Sustainable Development**
 Margaret Leinen, Scripps Institution of Oceanography and Executive Planning
 Group UN Decade
- 12:05 **Box Lunch for Travelers**



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