



ASPIRE Campaign

Alan P. Leonardi, Ph.D.
NOAA Office of Ocean Exploration and Research



Two Related Efforts



1. Advance understanding of North Atlantic deep-sea ecosystems and their connectivity, functioning and potential future changes.
2. Focused on waters 200-2000m deep.
3. Developing a scientific knowledge base that can inform policies and management.

- 86 published papers; 75 in preparation
- 44 offshore research expeditions
- 70 researchers, 10 PhD students employed
- 18 workshops spanning all work packages
- Results reached 7K in policy, 20K in industry and 70K+ in scientific community

1. Map, explore, and characterize the North Atlantic to identify the existence of deep-sea living and non-living resources and their interconnectivity.
2. Support Seabed 2030 priorities and the Atlantic Ocean Research Alliance.
3. Focused on waters 200-6000m deep.
4. Inform management needs for sensitive habitats, submarine geohazards, maritime heritage sites, and potential resources.



23 cruises



259,000+ km² mapped



134 vehicle dives

How We Operate: Exploration Campaigns



A series of expeditions over multiple years to a geographic area or theme of **exploration priority** interest



Complementary expeditions using a wide variety of **platforms, technologies,** and strategies



Package of **data and information sharing** across platforms serves as foundation of environmental intelligence

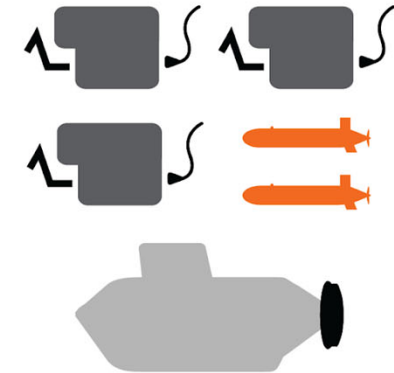
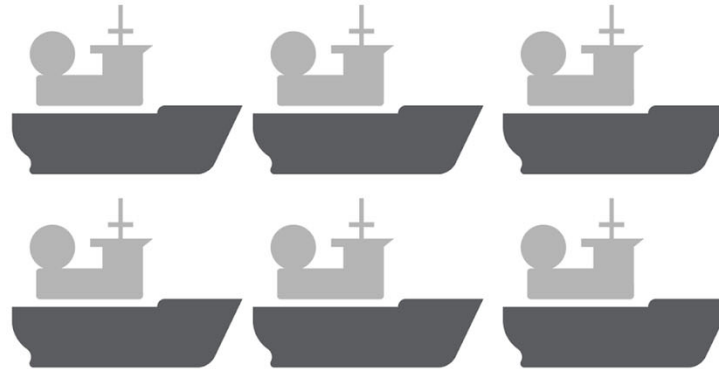


Robust **engagement** in education and outreach efforts are integral activities



Partners focus messaging on the breadth of work

Atlantic Seafloor Partnership for Integrated Research and Exploration



ASPIRE EXPEDITIONS

Northern Neighbors: Transboundary Exploration of Deepwater Communities

June 2017, June 2019

NOAA NMFS/Dalhousie University, NOAA Ship *Henry B. Bigelow*

Northeast US Tech Demonstration

July 2019

NOAA OER, NOAA Ship *Okeanos Explorer*

Carolina Canyons

August 2016, August 2017

NOAA NMFS, NOAA Ship *Pisces*

DEEP SEARCH

2017-2019

BOEM/USGS/NOAA, Multiple Platforms

Blake Plateau Contract Mapping

Fall 2019

NOAA OER contract, *Fugro Brasilis*

Southeast US ROV and Mapping

Summer 2018, Spring 2019

NOAA OER/NMFS/ONMS, NOAA Ship *Okeanos Explorer*

US-Canada ROV and Mapping

Summer 2019

NOAA OER/ONMS, NOAA Ship *Okeanos Explorer*

High Seas Mapping

Summer 2020

NOAA OER, NOAA Ship *Okeanos Explorer*

Mid-Atlantic Ridge ROV and Mapping

Summer 2020

NOAA OER, NOAA Ship *Okeanos Explorer*

Southeast US ROV and Mapping

Fall 2019

NOAA OER/OCS, NOAA Ship *Okeanos Explorer*

US Southeast and Bahama Ridge Mapping

October 2018

NOAA OER/OCS, NOAA Ship *Okeanos Explorer*

ASMIWG Pilot Area Mapping

July 2018

NOAA OER, NOAA Ship *Okeanos Explorer*

US Caribbean ROV and Mapping

Fall 2018

NOAA OER/OCS, NOAA Ship *Okeanos Explorer*

US Caribbean Mapping

Spring 2020

NOAA OER/OCS, NOAA Ship *Okeanos Explorer*

Mid-Atlantic Ridge ROV and Mapping

Summer 2020

NOAA OER, NOAA Ship *Okeanos Explorer*

Mid-Atlantic Ridge Mapping

Summer 2020

NOAA OER, NOAA Ship *Okeanos Explorer*

Last updated: 1/14/20

ASPIRE Outcomes to date

Atlantic Seafloor Partnership for Integrated Research and Exploration

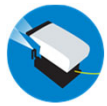
1. Extensive, previously unknown, deep sea coral habitats identified and characterized
2. First U.S. government-led, focused mapping survey in support of the Atlantic Seabed Mapping International Working Group (ASMIWG)
3. Established the first international exploration command center (ECC) in the Atlantic at the Bedford Institute of Oceanography in Dartmouth, Nova Scotia to build connections between Galway countries.



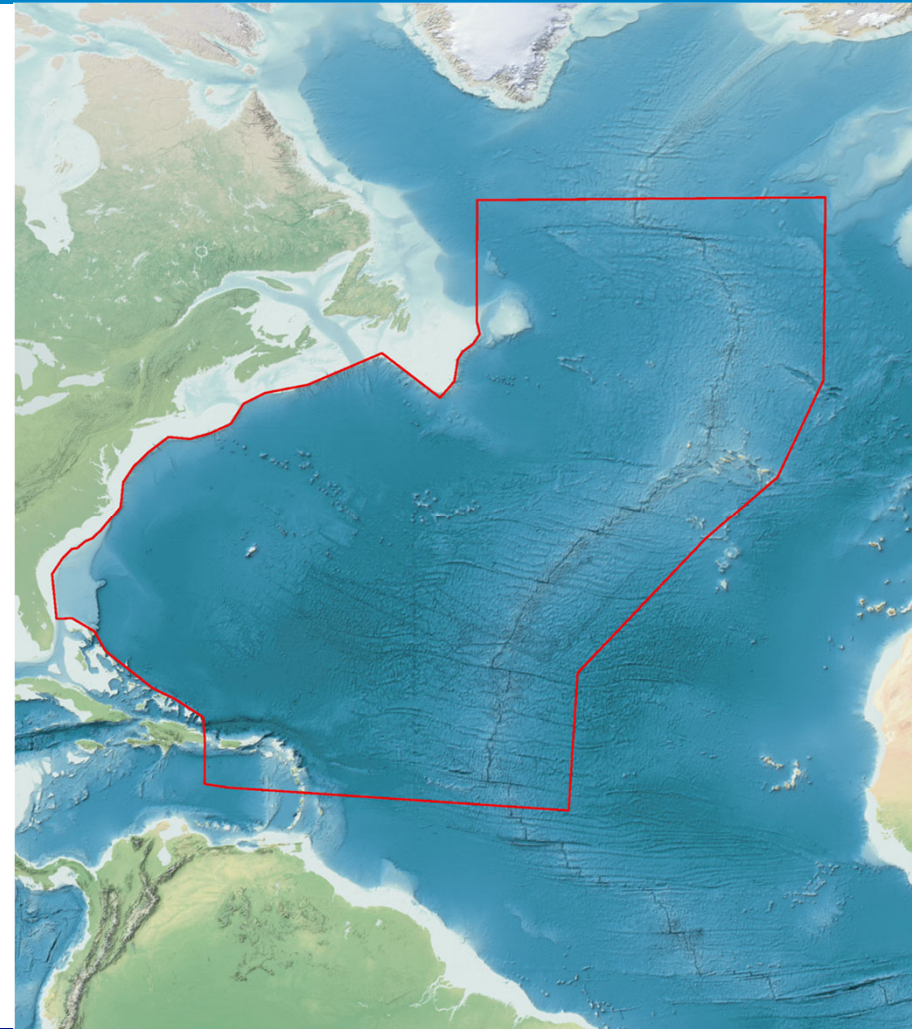
23 cruises



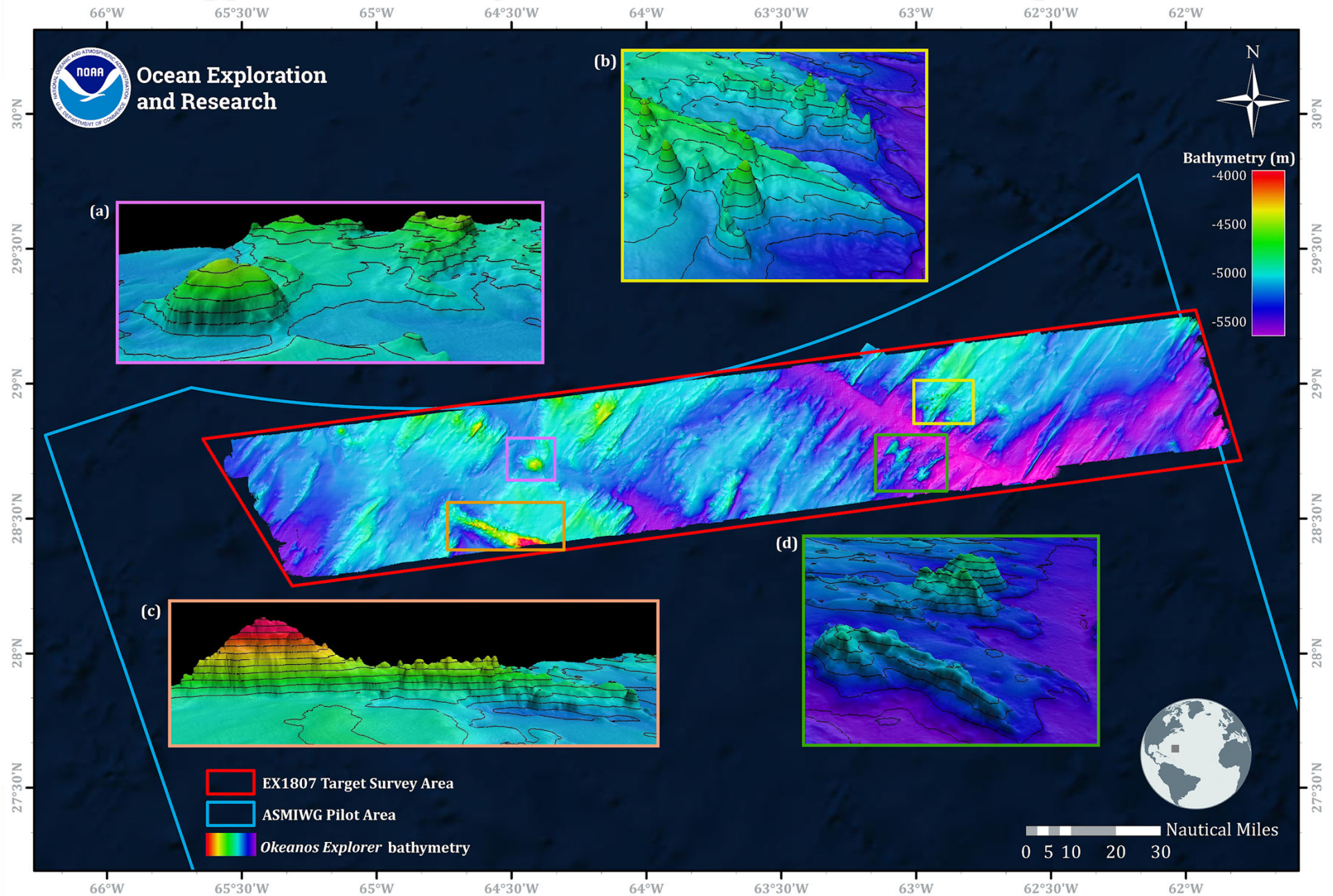
259,000+ km² mapped



134 vehicle dives



EX1807 Mapping Deepwater Areas Southeast of Bermuda in Support of the Galway Statement on Atlantic Ocean Cooperation

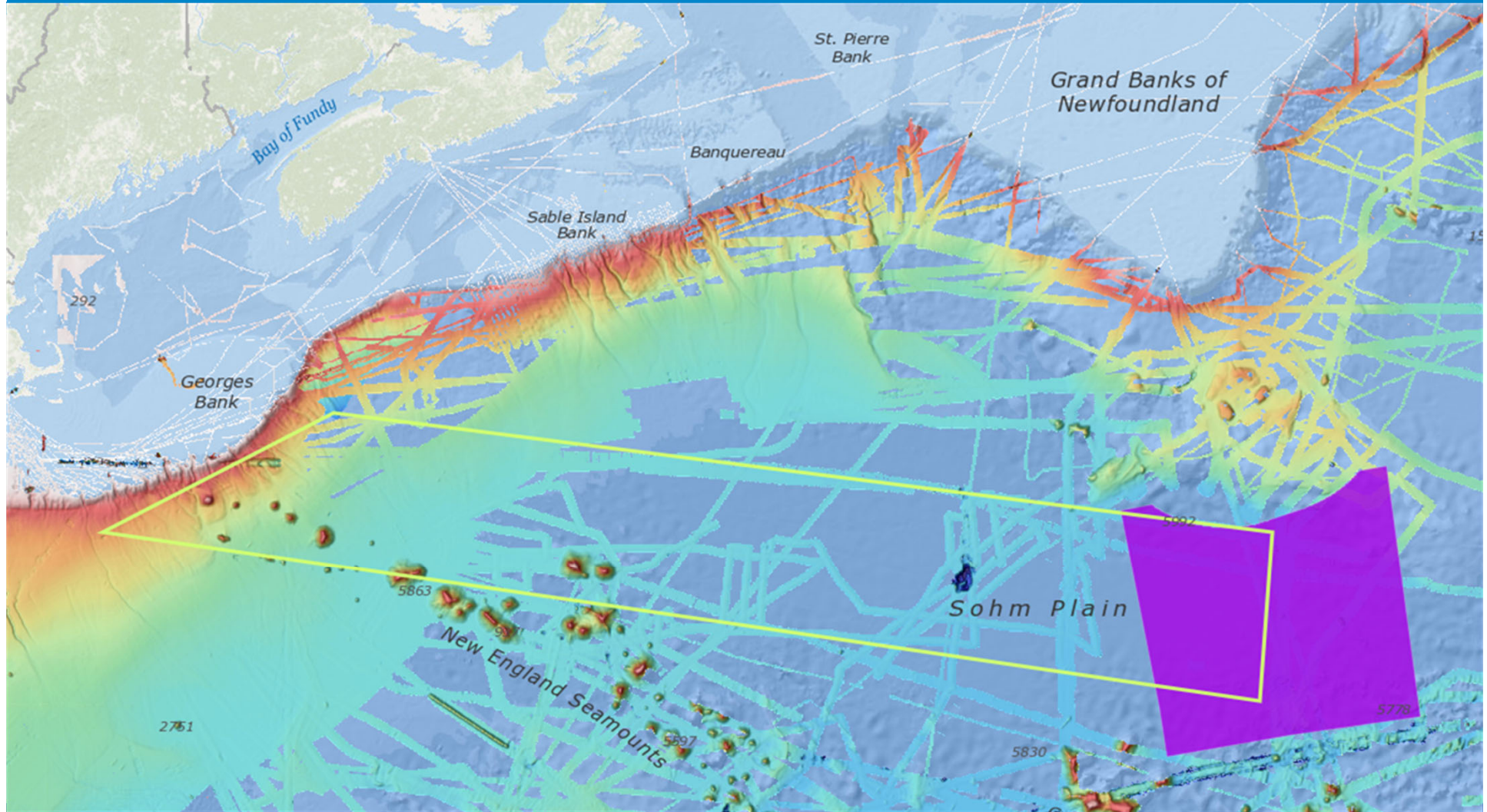


90°W 80°W 70°W 60°W 50°W 40°W 30°W

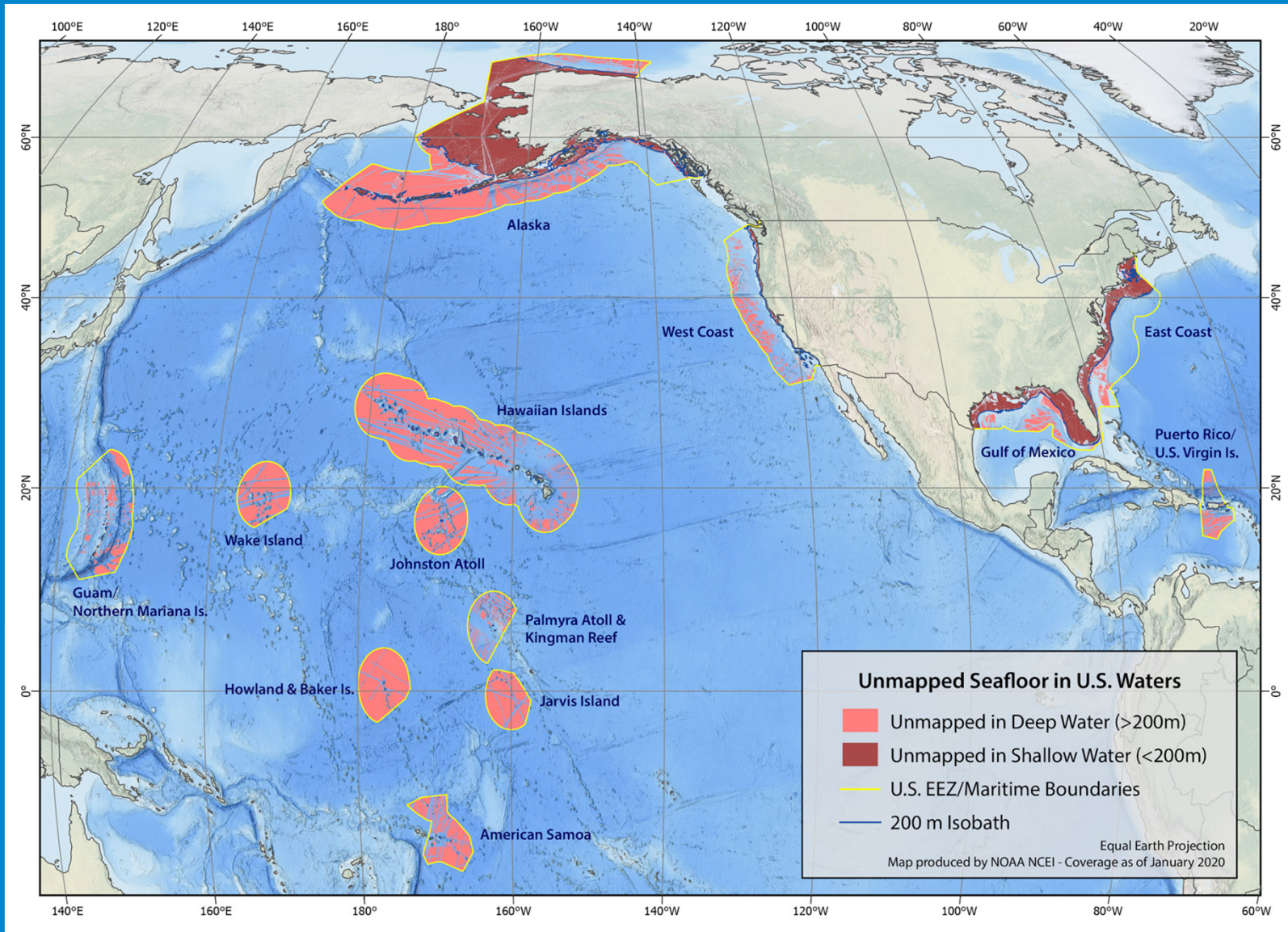


J] 64\$ RSEE\$ Wlt\$ oiersw\$
 I | tpsv\$ Trip\$ Wiewsr

ASMIWG priority area identified



Looking to the Future



Questions?

OceanExplorer.NOAA.gov



Ocean Exploration
and Research