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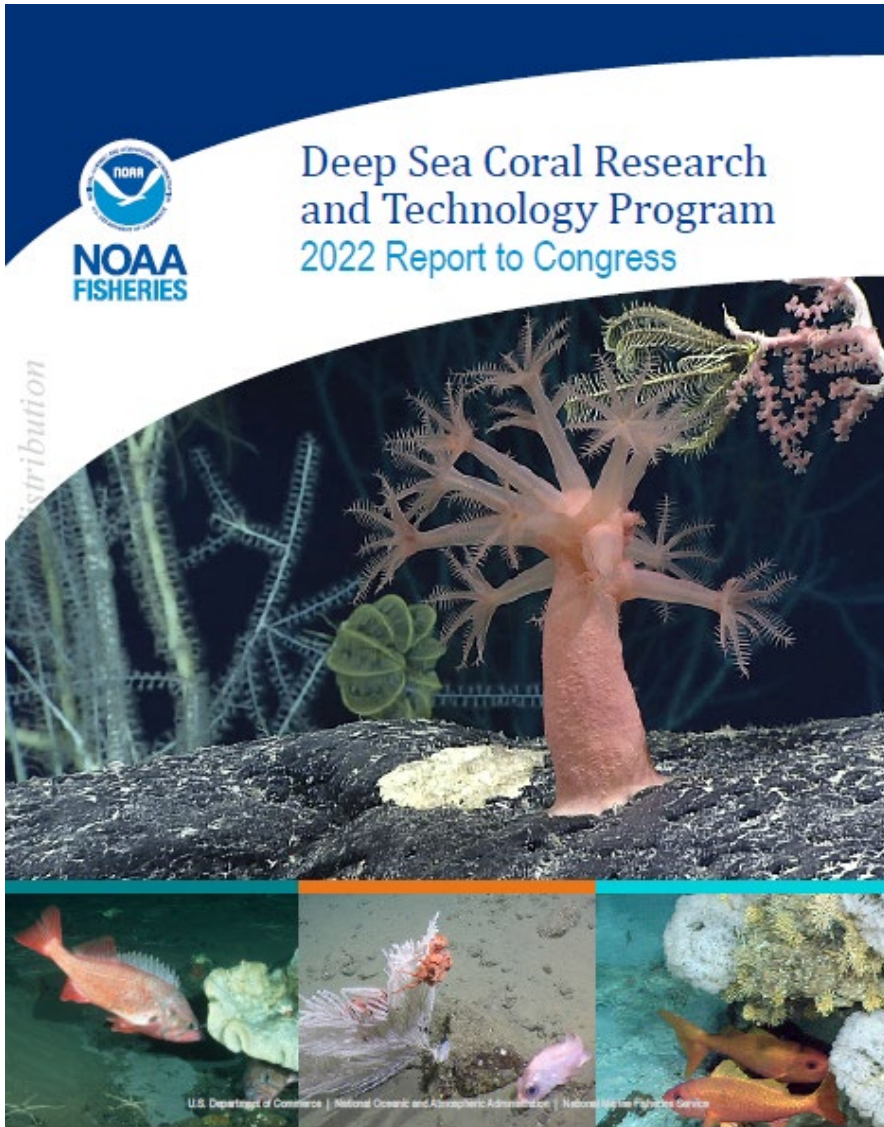
NOAA Deep Sea Coral Research & Technology Program Alaska Deep-Sea Coral & Sponge Initiative 2020-2024



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Program Manager

NOAA Fisheries
Office of Habitat Conservation

A National Perspective



- NOAA's Deep Sea Coral Research & Technology Program
- Alaska Initiative (2020-2024) – Brief Update:
 - Unique, valuable, and vulnerable ecosystems
 - Research Highlights - 2022
- Looking forward

NOAA's Deep Sea Coral Research & Technology Program

Authorized under MSA Section 408:

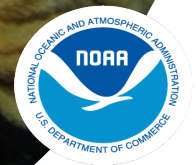
- Identify **existing research and known locations** of deep-sea corals (DSC)
- **Locate and map** DSCs
- **Monitor activity** in locations where DSCs are known or likely to occur
- **Conduct research**, including cooperative research, on **DSC and related species**, and on survey methods
- Develop technologies or **methods to reduce interactions** between fishing gear and DSCs
- **Prioritize areas where DSCs occur**, and where their **presence is predicted**

→ *Submit information to the appropriate Council(s)*



MSA Sec. 303(b)(2) Discretionary Authority

Designate zones where fishing is limited...
in areas **where deep-sea corals are identified under Sec. 408**, to protect deep-sea corals from physical damage from fishing gear, or to prevent loss or damage to such fishing gear from interactions with deep-sea corals



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NOAA's Strategic Approach

NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems

Research, Management, and International Cooperation



Improve understanding, conservation, and management of deep-sea coral & sponge ecosystems

1. Protect areas containing known deep-sea coral or sponge (DSC&S) communities from impacts of bottom-tending fishing gear
2. Protect areas that may support DSC&S communities where mobile bottom-tending fishing gear has not been used recently, as a precautionary measure
3. Develop regional approaches to further reduce interactions between fishing gear and DSC&S



U.S. Mechanisms to Protect Deep-Sea Coral from Fishing Impacts

Fishery Management Plan (FMP)

- 4 of 8 U.S. regional fishery management councils have coral-related FMPs

Essential Fish Habitat (EFH)

- FMPs must describe EFH, minimize adverse fishing effects, identify conservation actions
- Can establish Habitat Areas of Particular Concern (HAPCs)

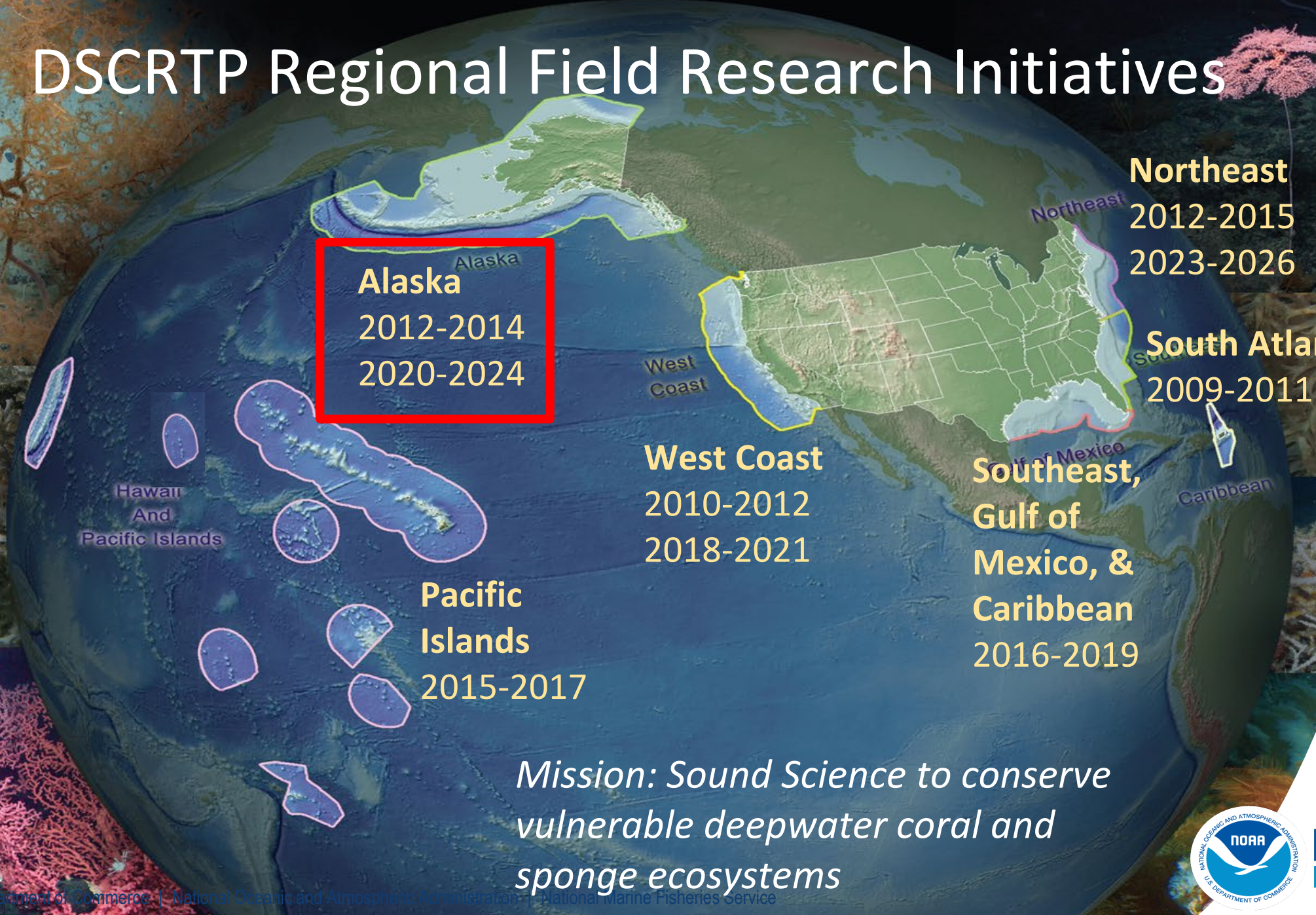
Bycatch Provision

- Fisheries are required to minimize bycatch, including deep-sea corals & sponges

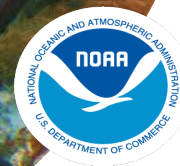
Deep Sea Coral Discretionary Authority

- Councils can protect corals for their own sake from fishing activities

DSCRTP Regional Field Research Initiatives



Mission: Sound Science to conserve vulnerable deepwater coral and sponge ecosystems



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Alaskan Coral and Sponge Communities

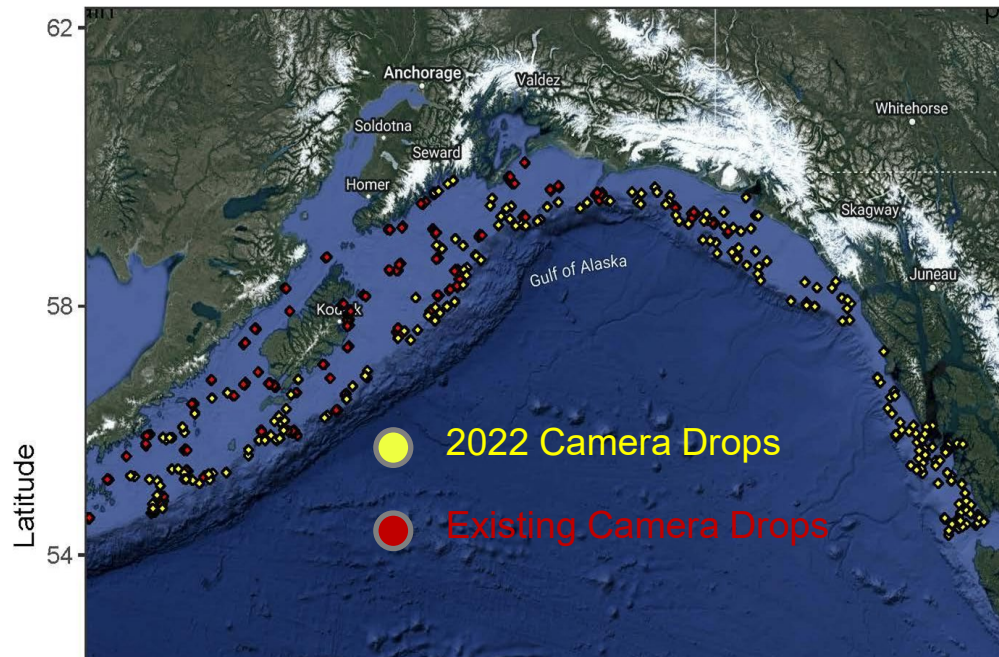
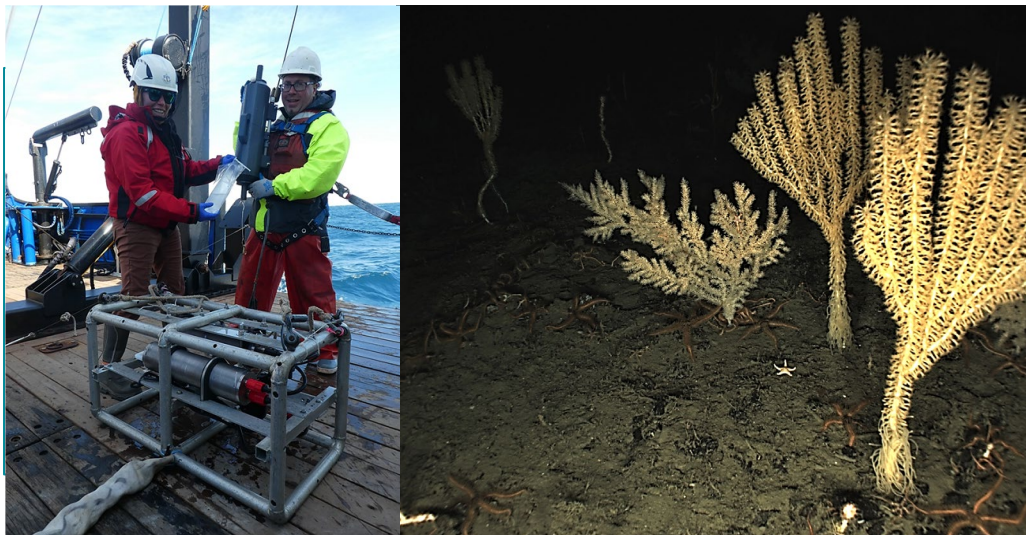
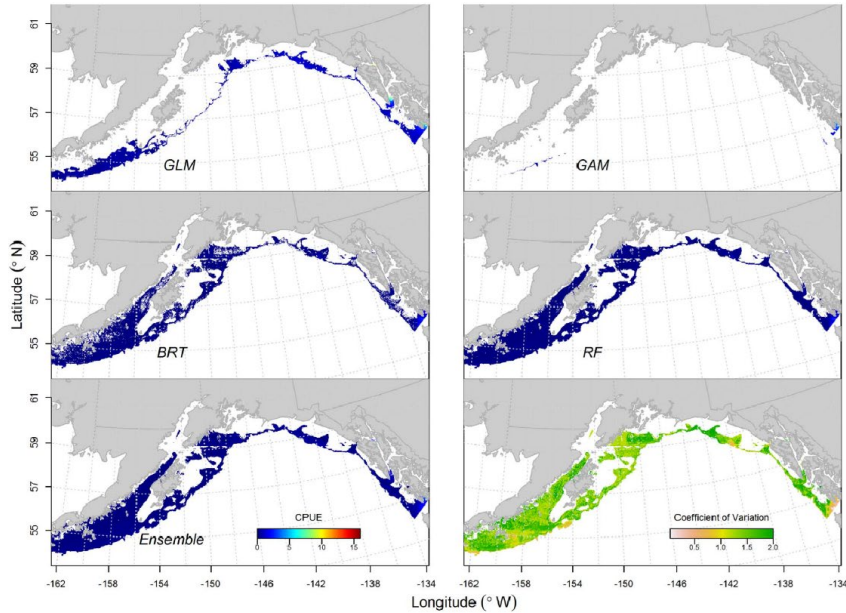
Alaska Initiative Research Team and Partners

Team Member	Role
Christina Conrath (NMFS/AFSC)	Initiative Lead; DSCS & Fish productivity; Aleutian Closures
Pat Malecha (NMFS/AFSC)	Initiative Lead; GoA Surveys; Longline and Pot Footprints
Jerry Hoff (NMFS/AFSC)	Steering Committee;
Pam Goddard (NMFS/AFSC)	Initiative Coordinator
Vanessa Lowe (NMFS/AFSC)	Initiative Coordinator
Seanbob Kelly (NMFS/ARO)	Steering Committee
Chris Rooper (DFO/Canada)	Steering Committee; International Seamount Cruise
Heather Coleman (NMFS/DSCRTP)	Steering Committee; DSCRTP Program Manager
Bryan Costa (NOS/NCCOS)	Steering Committee
Caitlin Adams (OAR/Ocean Exploration)	Steering Committee; NOAA Ship <i>Okeanos Explorer</i> Planning
Cal Mordy (OAR/PMEL)	Steering Committee
Sean Rooney (NMFS/AFSC)	Sponge habitats
Meredith Everett (NMFS/NWFSC)	eDNA, species ID
Wes Larson (NMFS/AFSC)	Fish eDNA



Gulf of Alaska Model Validation

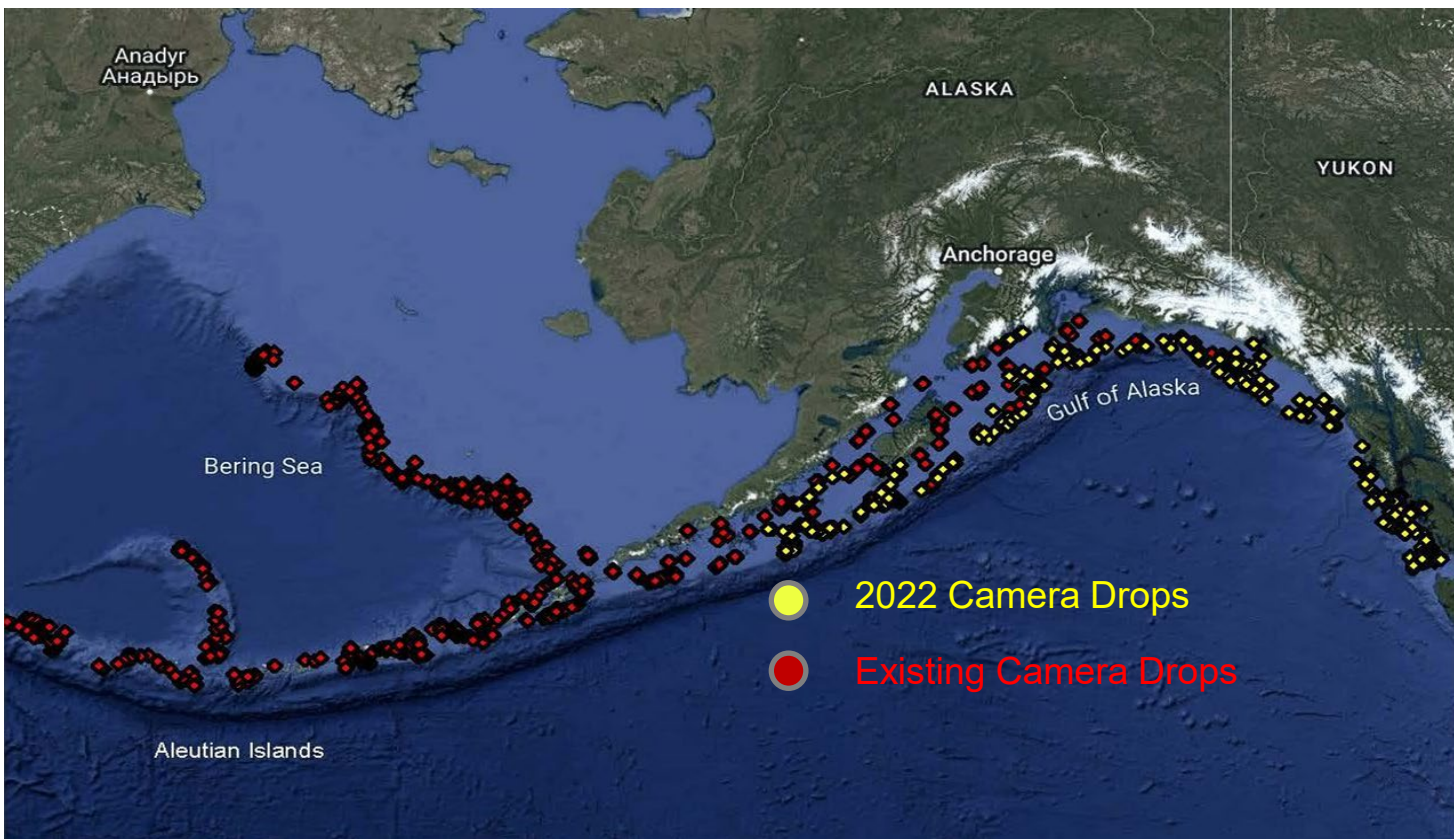
- GoA coral and sponge models
- 228 camera transects
- 223 paired fish/coral & sponge eDNA samples



Informing Conservation

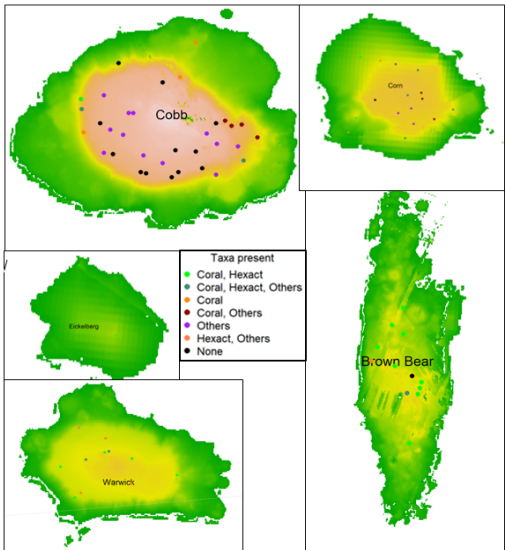
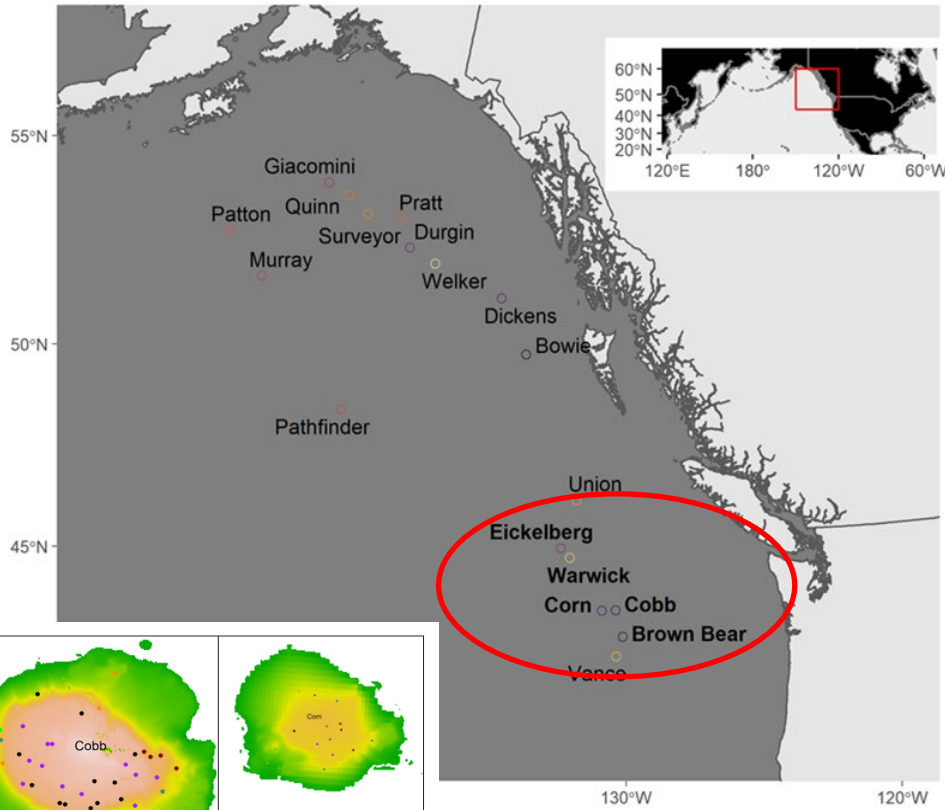


- Completes camera observations and models of presence and abundance for Alaska
- Basis for NPFMC spatial and gear management
- Characterization of relationship between habitat and managed species

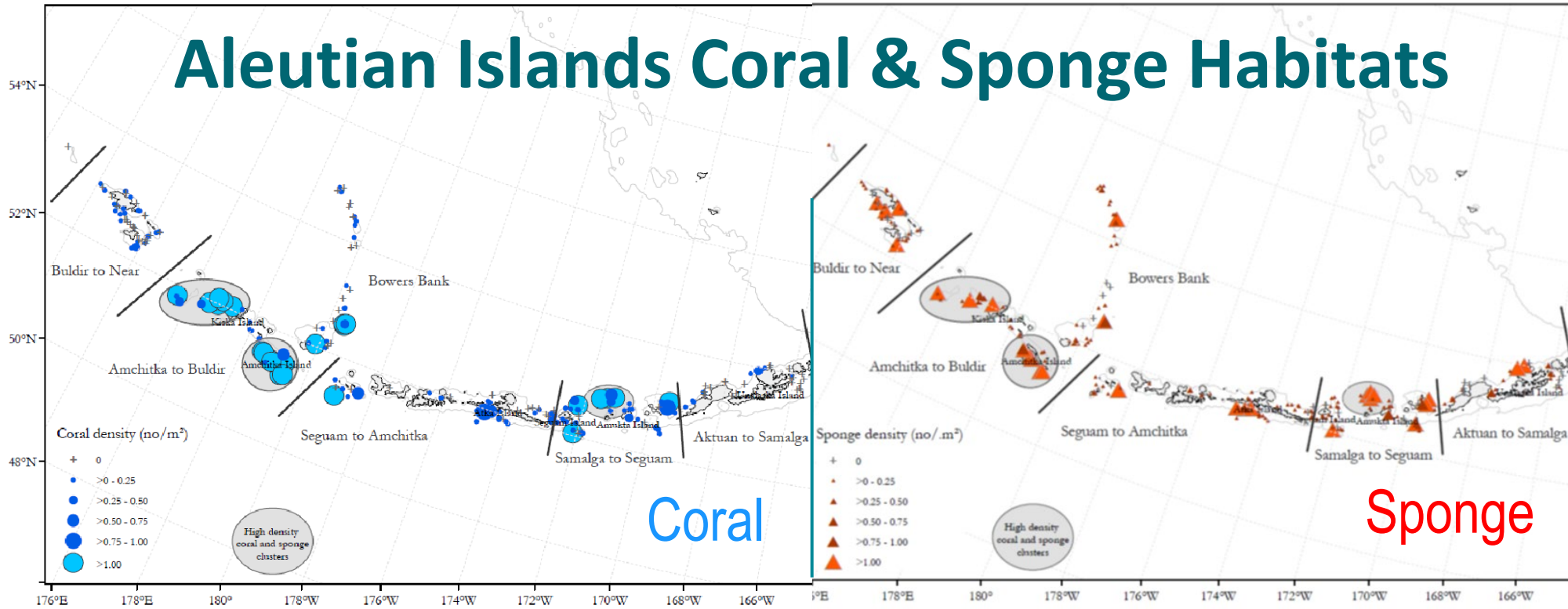


Joint Canada-USA International Seamount Survey

- Survey of 5 NE Pacific Seamounts - 3 previously unexplored
- Habitats likely comparable to those in Alaskan waters
- Models will guide RFMO management of VMEs
- Report to NPFC (December 2023)



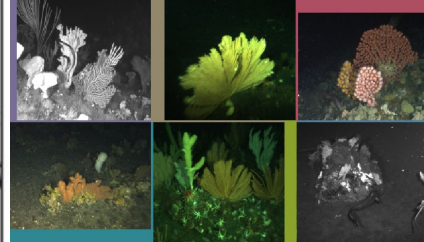
Aleutian Islands Coral & Sponge Habitats



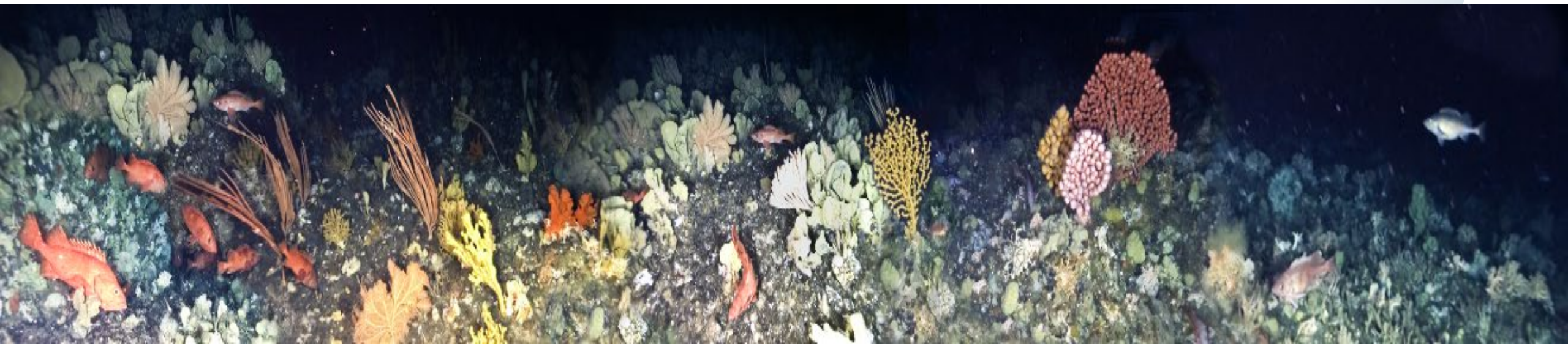
NOAA Technical Memorandum NMFS-AFSC-351
doi:10.7289/57M-AFSC-351

Results of the 2012 and 2014
Underwater Camera Surveys of the
Aleutian Islands

by
P. Goddard, R.E. Wilson, C.N. Rooper, K. Williams, and R. Towler

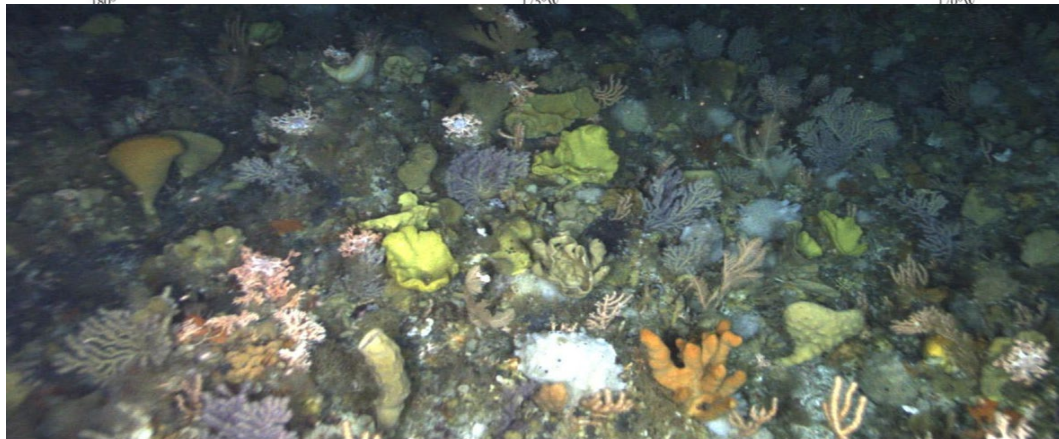
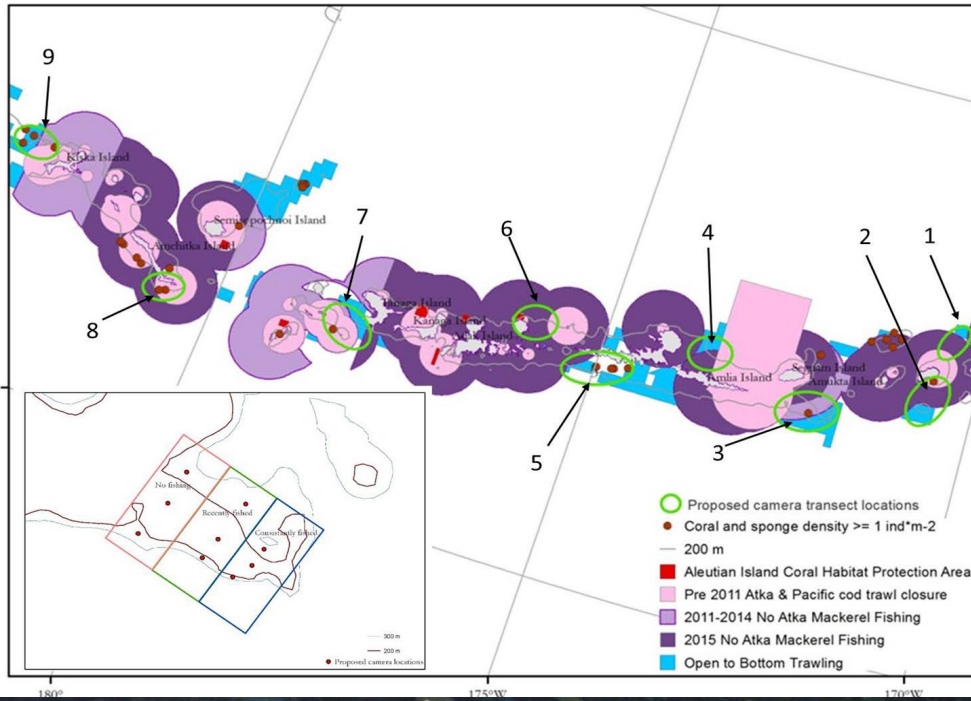


Goddard et al. 2017



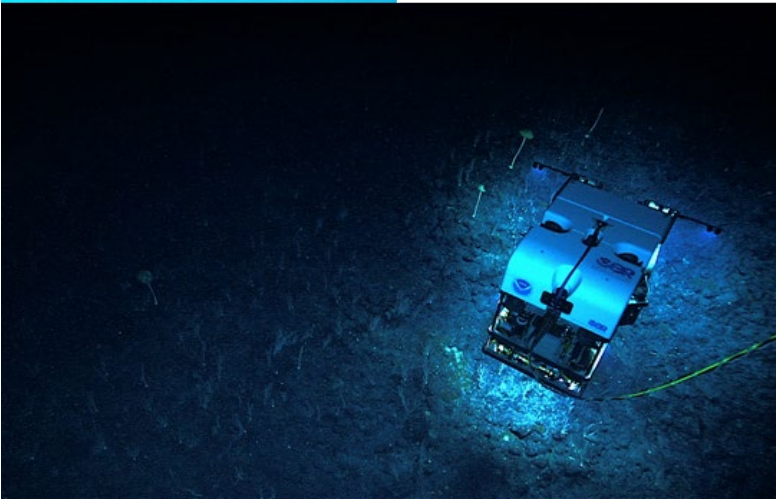
Looking Forward – 2023 Focus on Aleutians

- Assess the effectiveness of area closures for maintaining healthy deep-sea coral and sponge communities
- How is fishing impacting coral and sponge habitat in the Aleutians?
- Information about recovery potential of coral and sponge habitat
- Estimating sustainable harvest rates for coral and sponge habitat

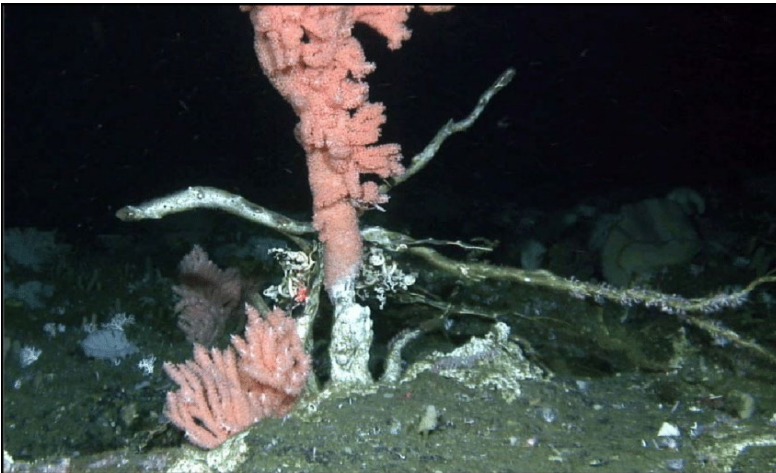


Other Projects

- Partnering with NOAA Ocean Exploration – 2023 *Okeanos Explorer* ROV Aleutians expedition
- Refining longline and pot footprints and interactions with coral/sponge habitats
- Influence of coral/sponge ecosystems on the life history of FMP species
- Recruitment, reproduction and larval supply in Alaskan sea corals



NOAA Deep Discoverer ROV).



Coral damaged by groundline (Rooper et al. 2017).



Rockfish productivity determined from coral/sponge and non-coral habitats.

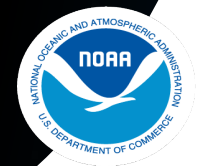
Summary



- Alaska has unique and valuable coral and sponge habitats
- Fishing gear impacts are currently the major threat
- The Council has several mechanisms to protect Alaskan deep-sea coral and sponge habitats in a targeted manner
- NOAA's Deep Sea Coral Research & Technology Program's work can help inform future conservation measures

Questions?

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<https://deepseacoraldata.noaa.gov>



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