

NOAA
FISHERIES

Office of Habitat Conservation

Deep Sea Coral Research and Technology Program

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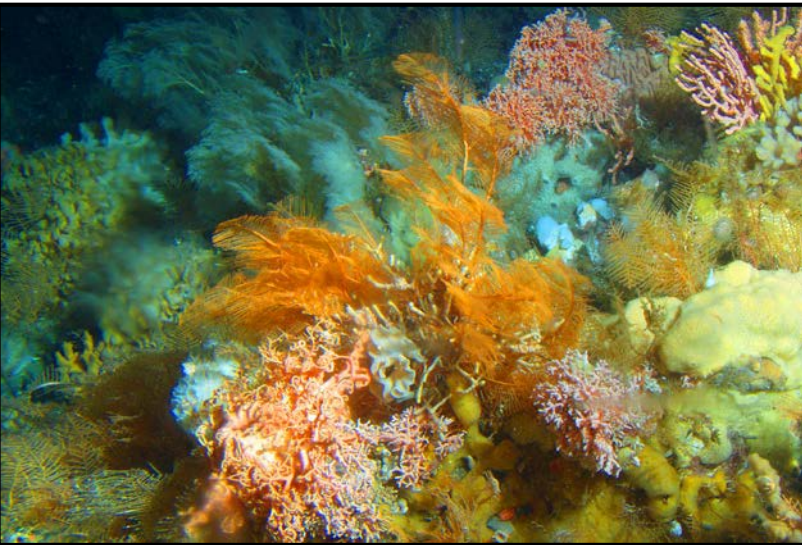
Tom Hourigan

North Pacific Fishery Management Council

October 2017 Council Meeting



In this Presentation

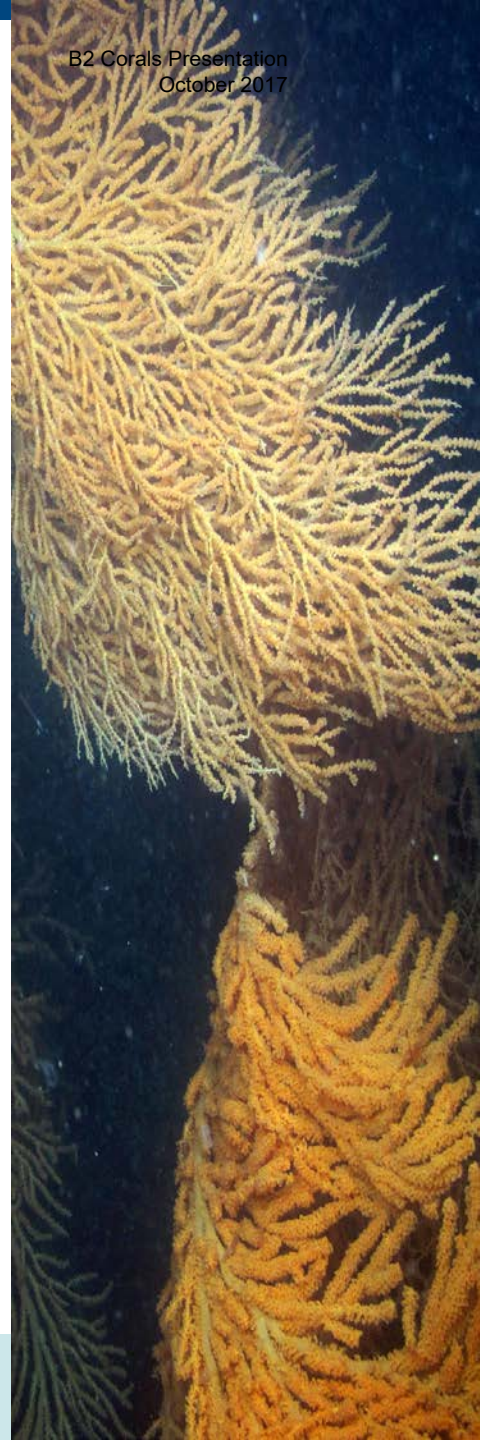


1. MSA DSC mandate
2. Program structure
3. Key components
 - Field research
 - Targeted small projects
 - Data management
 - Recent program review
4. Regional research initiatives & management

Deep Sea Coral Research and Technology Program

Mission: Sound science to conserve and manage vulnerable deep-water ecosystems

- Congressionally mandated program (MSA Sec. 408)
- \$1.5M in 2009, ~\$2.4-2.5M in 2010-2017
- Implemented collaboratively through four NOAA line offices, highly leveraged
- Developed & maintained in consultation with Fishery Management Councils



Congressionally Mandated Program

MSA SEC. 408(a)

- 1) Identify **existing research and known locations** of DSCs
- 2) **Locate and map** DSCs
- 3) **Monitor activity** where DSC are known or likely to occur
- 4) **Conduct research**, including cooperative research, on **DSC and related species**, and on survey methods
- 5) Develop technologies or **methods to reduce interactions** between fishing gear and deep sea corals
- 6) Prioritize areas where DSCs occur, and where **modeling** or other methods predict presence

Submit information to the appropriate Councils

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.



DSC Research & Management

NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems

Research, Management, and International Cooperation



NOAA's Deep-Sea Coral Research and Management Activities

Deep Sea
Coral Research
and Technology
Program

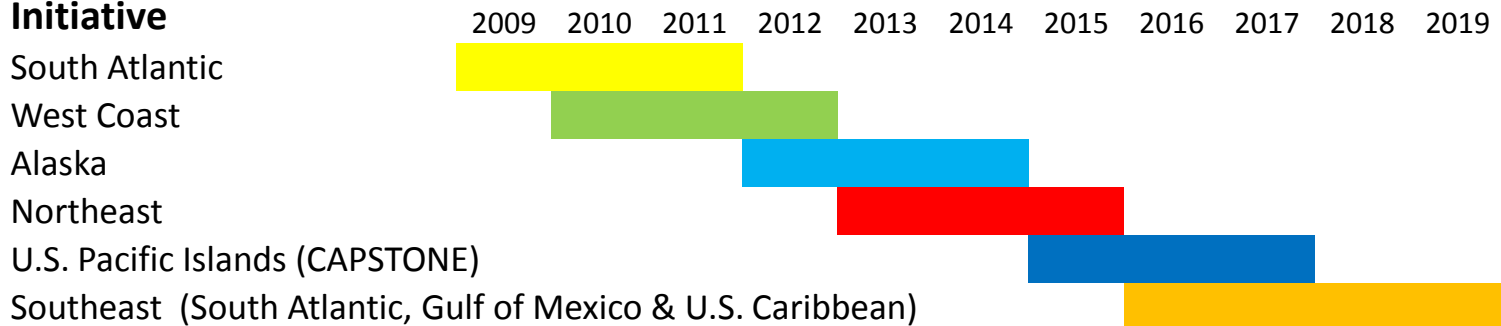
Targeted Projects
& Fieldwork

- EFH and HAPCs
- Precious coral FMP
- Bycatch reduction
- National Ocean Policy
- Deep-sea coral protection zones
- National Marine Sanctuaries
- Monuments
- More...

Major Program Components

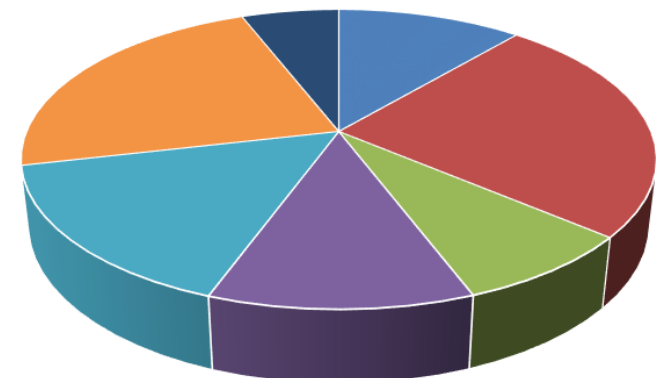
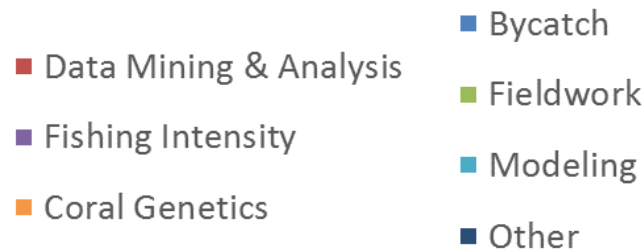
- 3-4 year *regional field research initiatives*

Initiative

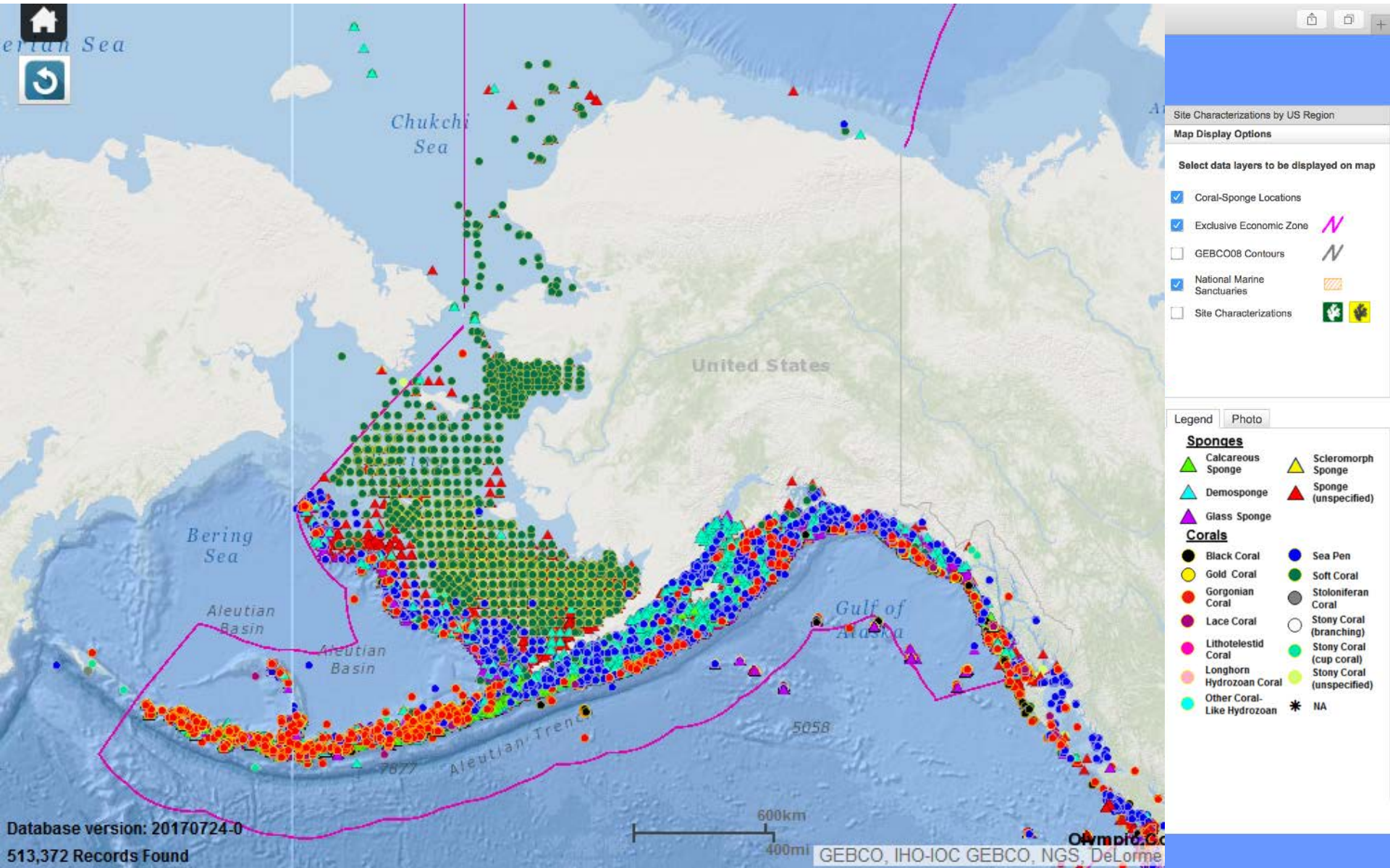


- *Targeted small projects*
- Centralized *data mgmt & dissemination*

Targeted Small Projects 2009-17



Deep-Sea Coral & Sponge Database



DSCRTP Review 2017

Monitoring and experimenting with restoration techniques should gain more prominence once we have more inventories of where DSC are.

"Instead of a 3-4 year effort, make each region a 4-5 year effort. The field work would be constrained to 3-4 years, but limited funds would be available in follow-up years and released when products are delivered."

"Use social media!"

"Partnerships with the fishing industry could be better cultivated."

"The Program emphasizes and encourages addressing the needs of the Regional Fishery Management Councils, and that's good!"

"Establish what products are needed early on. Be clear on what people need to do – a big problem has been asking for work before a plan is finalized."

"The program has focused most on collecting data, and much less on synthesis and communicating to managers who often have very little knowledge of the deep sea."

"The team assembled for the Okeanos Explorer annotation work will likely disband once all CAPSTONE data has been submitted – their experience and talent will be lost instead of continuing to provide data from additional planned cruises."

"Data mining / post-cruise analysis is an important and less expensive activity class – DSCRTP could provide a leadership role within NOAA and the broader community in this area."

"Allowing a small budget for data processing would be very helpful."

"The only way I see the program having success in the future is to link efforts to EBM, stock assessments, or endangered species management."

"NMFS Science Centers typically don't prioritize DSC research funding from their own budget."

- Regional presentations
- Survey & interviews
- 3 day in-person workshop



Major Recommendations

1. Revised field research initiative schedule:

- One region at a time
- Ramp-up funding to enhance planning
- Ramp-down to strengthen post-project data analysis

2. Targeted small projects

- Support planning, data analysis, opportunities

3. Strengthen partnerships & leveraging

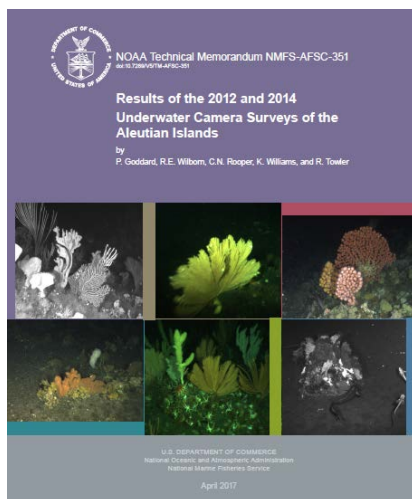
4. Better tell deep-sea coral and sponge story

Regional Research Priority Workshops

- Next Alaska Initiative scheduled for 2020-2023
- Review existing knowledge and current management
- Identify priorities and management information needs
- Identify options and research partners



Research to Guide Management



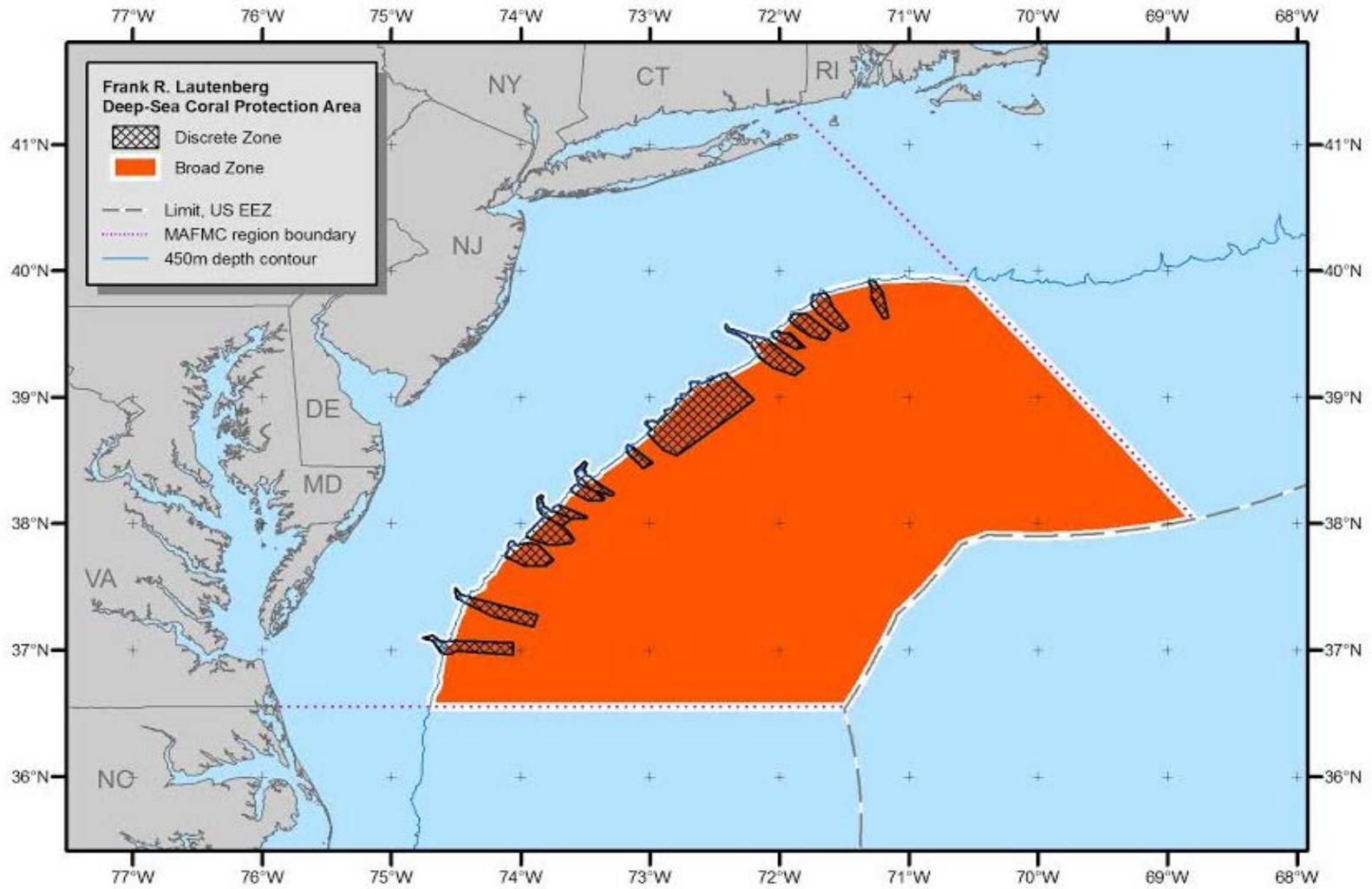
Regional Initiative Outcomes:

- Fieldwork teams brief Councils and committees
- DSCRTP-supported data have been used by every Council
- Data used by National Marine Sanctuaries and Monuments
- Regional ocean planning portals offer DSC information



- Partnerships
- Understanding
- Management & conservation

Mid-Atlantic DSC Protection



Frank R. Lautenberg Deep-Sea Coral Protection Area

Mechanisms of Protecting DSC

1. *FMP*

- WestPac, Caribbean, South Atl. & Gulf of Mexico

2. *EFH*

- FMP must describe & identify EFH, minimize adverse effects, identify conservation actions

3. *Bycatch*

- If a Council has DSC bycatch information, it should address the NS 9 bycatch requirement

4. *DSC Discretionary Authority*

- Does not require showing corals as habitat for fed-managed fish or damage from fishing activities

Mechanisms of Protecting DSC

4. *DSC Discretionary Authority* – Considerations

- DSC areas identified by DSCRTP (& buffer)
- Designated within EEZ & range of FMP fishery (protective measures may apply to any fishing)
- Long-term sustainable uses of fishery resources must be considered
- Protection possible even if no fishing in the area and no current indication of DSC damage
- Does not (yet?) apply to sponges

Mechanisms of Protecting DSC

4. *DSC Discretionary Authority* – Factors

- Size, density of coral aggregation(s)
- Occurrence of rare species
- Importance of ecological function
- Extent of area sensitivity to human activity
- Likelihood of DSC in unsurveyed areas

Mechanisms of Protecting DSC

4. *DSC Discretionary Authority – Options*

- Restrictions on location(s) where fishing may occur (more MSA requirements for full closure)
- Restrictions on fishing by specified types of vessels or types/quantities of gear
- Proactive protection by freezing the footprint of activity to protect known/predicted DSC
- Limits on DSC harvest or bycatch