NOAA Habitat Conservation

Conserving Habitat for Future Generations

Habitat Protection in the Magnuson-Stevens Act:

Essential Fish Habitat and Deep-Sea Corals

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November 29, 2011

NOAA FISHERIES SERVICE

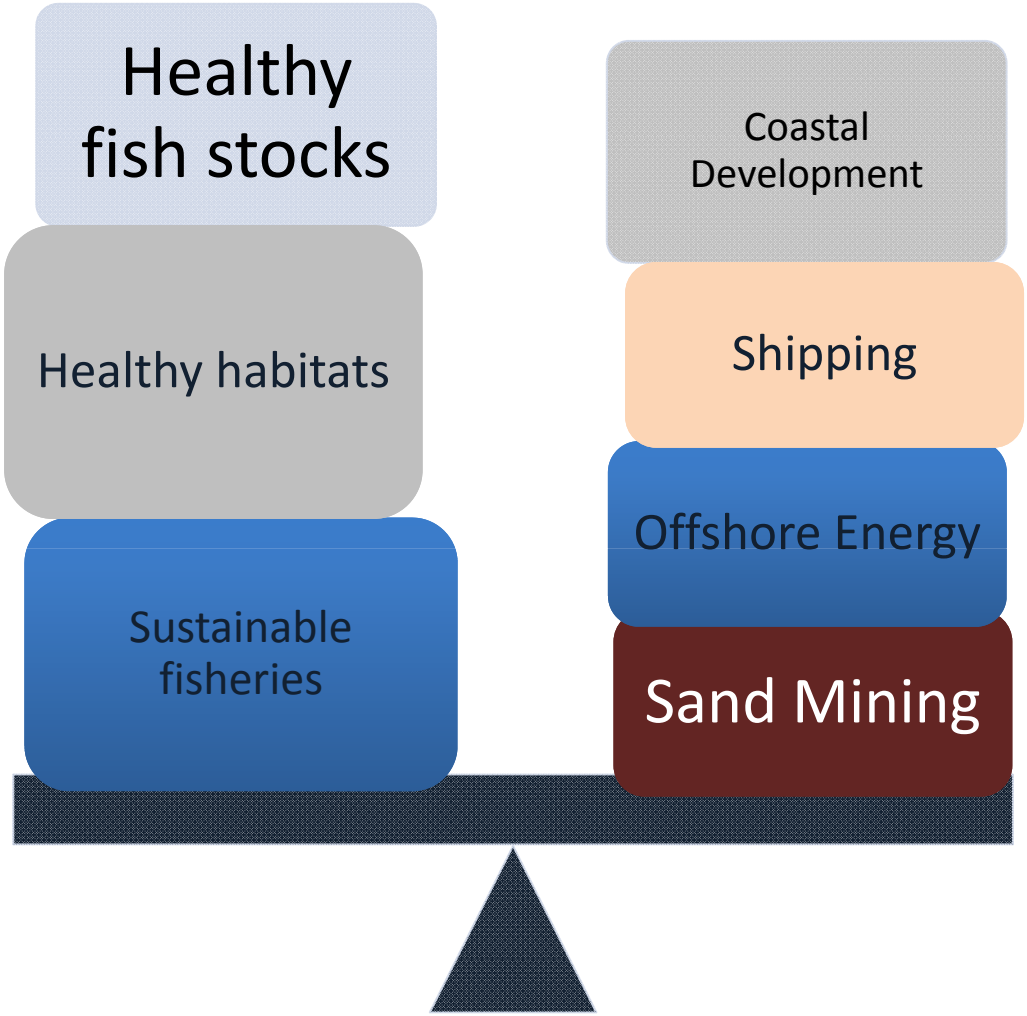
Key learning objectives

1. To describe and convey to others the importance of riverine, coastal, and marine habitat in maintaining healthy fish stocks; it's not all about fishing mortality

2. To explain why healthier stocks translates into more fish to allocate, with benefits to everyone

3. To understand and effectively implement the habitat protection authorities of the Magnuson-Stevens Act

Why should Councils protect habitat?



Why should Councils protect habitat?

Healthy

"…direct and indirect habitat losses… have resulted in a diminished capacity to support existing fishing levels."

- MSA (2)(a)(2)

Essential Fish Habitat

Magnuson-Stevens Act (1996)

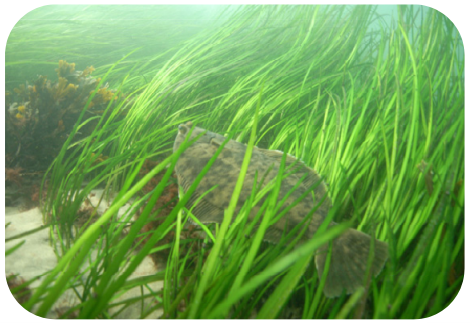
"Congress finds and declares… a national program for the conservation and management of the fishery resources of the United States is necessary to prevent overfishing, to rebuild overfished stocks, to insure conservation, **to facilitate long-term protection of essential fish habitats**, and to realize the full potential of the Nation's fishery resources".

- MSA (2)(a)(6)

Essential Fish Habitat

"*Essential fish habitat* means those **waters** and **substrate** *necessary* to fish for **spawning, breeding, feeding, or growth to maturity**."

- MSA 3 (10)



Joint responsibility to conserve EFH

Council role:

1. Describe and identify EFH by life stage
2. Develop maps to display geographic locations of EFH
3. Designate Habitat Areas of Particular Concern (HAPCs)
4. Minimize adverse effects of fishing on EFH
5. Review and update EFH information every 5 years

NOAA & Council roles:

6. NOAA consults on non-fishing actions that may adversely affect EFH
7. Councils consult on non-fishing actions that may adversely impact habitat, including diadromous fish habitat.

1. Describe & identify EFH by lifestage

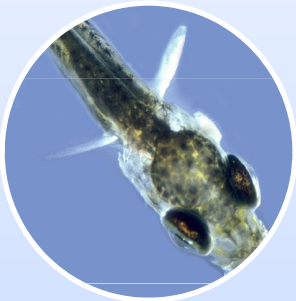
Atlantic cod EFH

Eggs

Surface waters around the perimeter of the Gulf of Maine, Georges Bank, and the eastern portion of the continental shelf off southern New England.

Sea surface temperatures below 12°C, water depths less than 110 meters, and a salinity range from 32-33‰.

Cod eggs are most often observed beginning in the fall, with peaks in the winter and spring.



Larvae

Pelagic waters of the Gulf of Maine, Georges Bank, and the eastern portion of the continental shelf off southern New England.

Sea surface temperatures below 10°C, water depths from 30-70 meters, and a salinity range from 32-33‰.

Cod larvae are most often observed in the spring.

Juveniles

Bottom habitats with a substrate of cobble or gravel in the Gulf of Maine, Georges Bank, and the eastern portion of the continental shelf off southern New England.

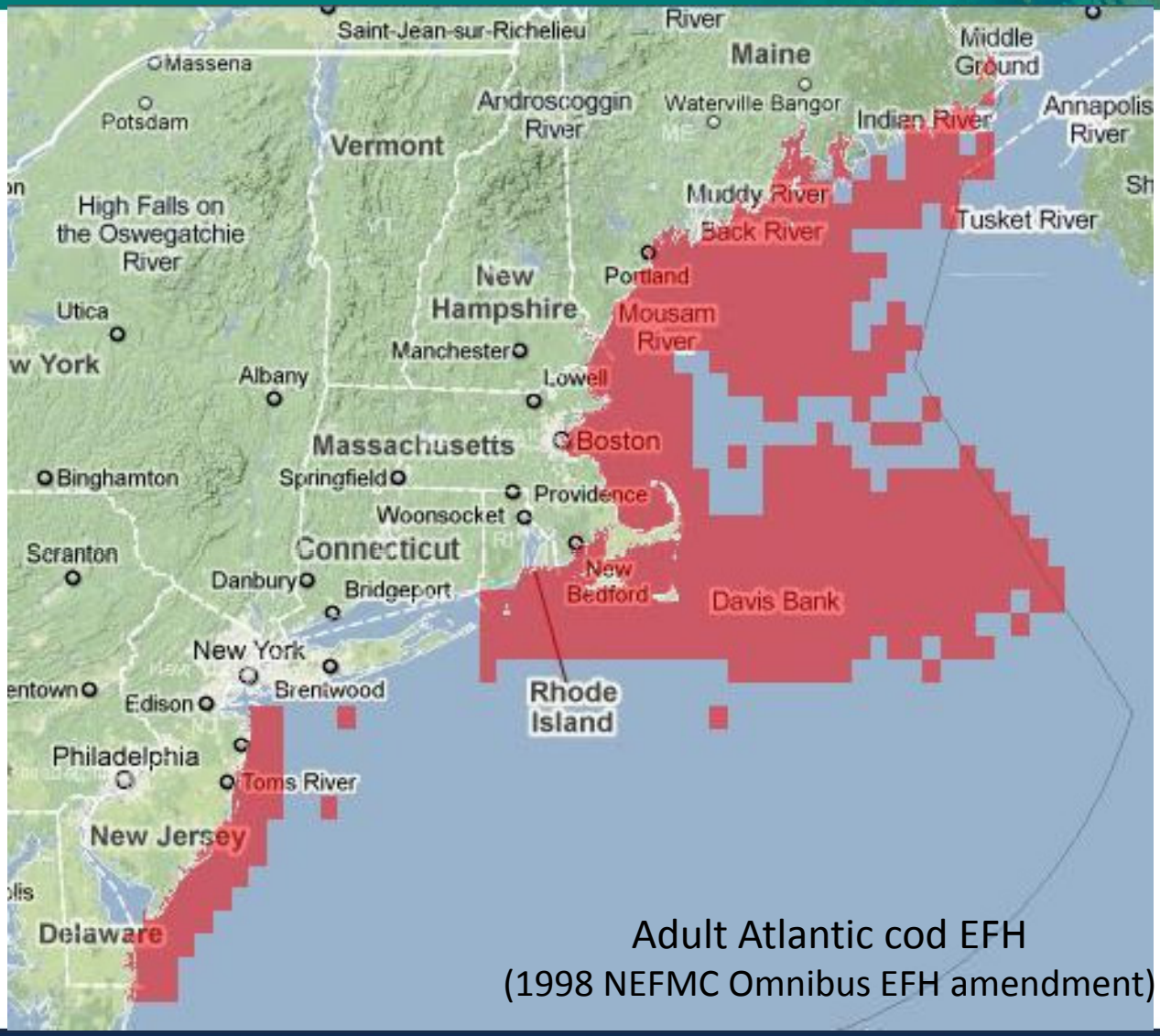
Water temperatures below 20°C, depths from 25 - 75 meters, and a salinity range from 30 - 35‰.

Adults

Bottom habitats with a substrate of rocks, pebbles, or gravel in the Gulf of Maine, Georges Bank, southern New England, and the middle Atlantic south to Delaware Bay.

Water temperatures below 10°C, depths from 10 - 150 meters, and a wide range of oceanic salinities.

2. Map geographic location of EFH

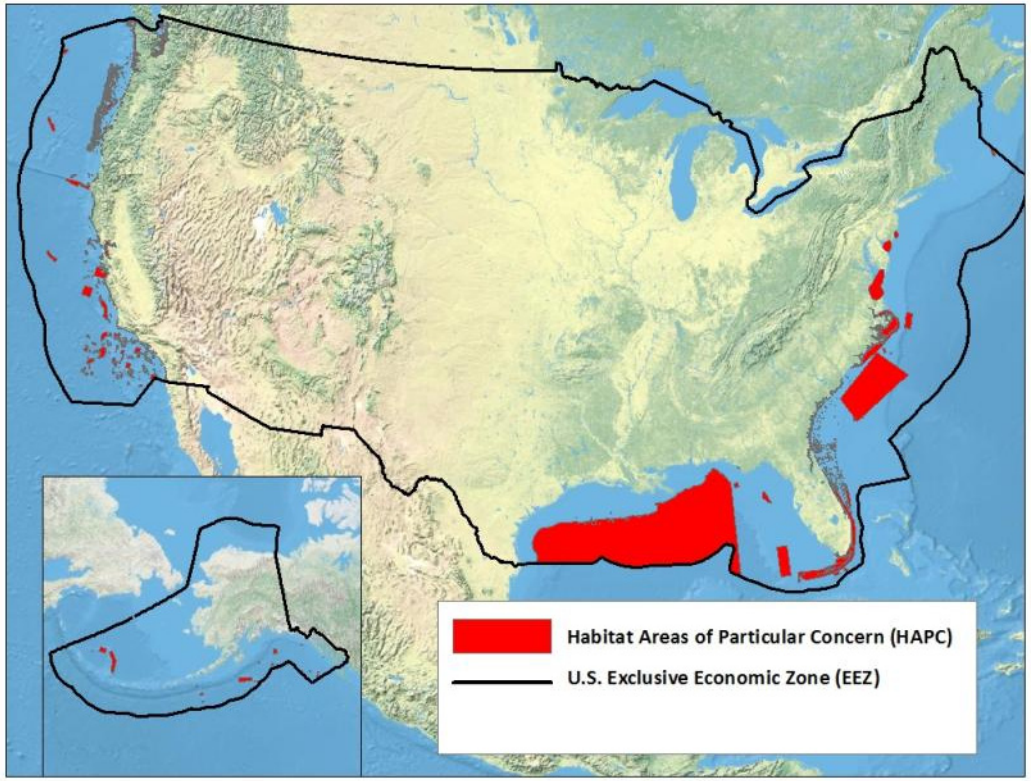


Adult Atlantic cod EFH
(1998 NEFMC Omnibus EFH amendment)

3. Designate HAPCs

Habitat Areas of Particular Concern (HAPCs)

- HAPCs are subsets of EFH
- Purpose is to focus conservation efforts
- HAPC Criteria
  - Ecological functions provided
  - Sensitivity to human-induced degradation
  - Rarity of habitat type
  - Stress from development activities
- Encourage discrete areas with clearly defined geographic boundaries



4. Minimize fishing impacts on EFH

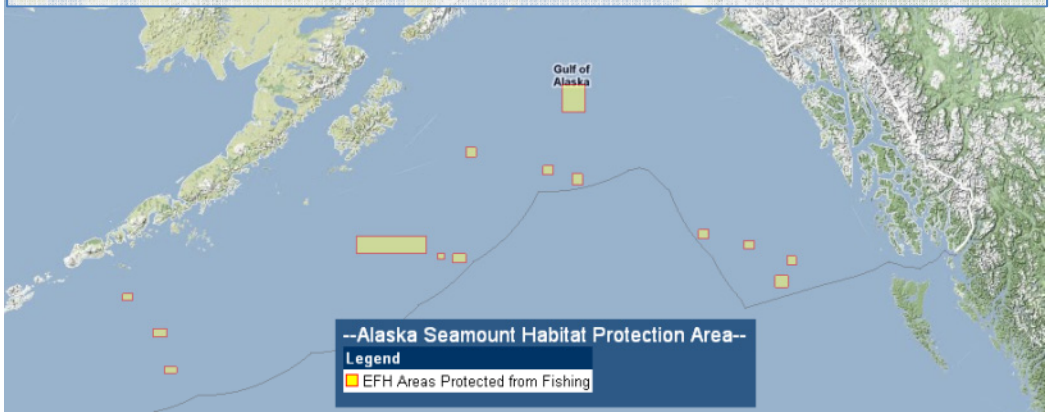
Councils are required to prevent, mitigate, or minimize impacts that reduce quality and/or quantity of EFH.

AOC v. Daley, 1999:

- 5 Councils charged with failure to adequately minimize impacts of fishing on EFH.
- Councils were required to prepare new EIS for each FMP amendment.

Alaska Seamount Habitat Protection Area

Fishing with bottom contact gear prohibited to protect deep-sea corals and EFH for groundfish, king crab, and Pacific salmon

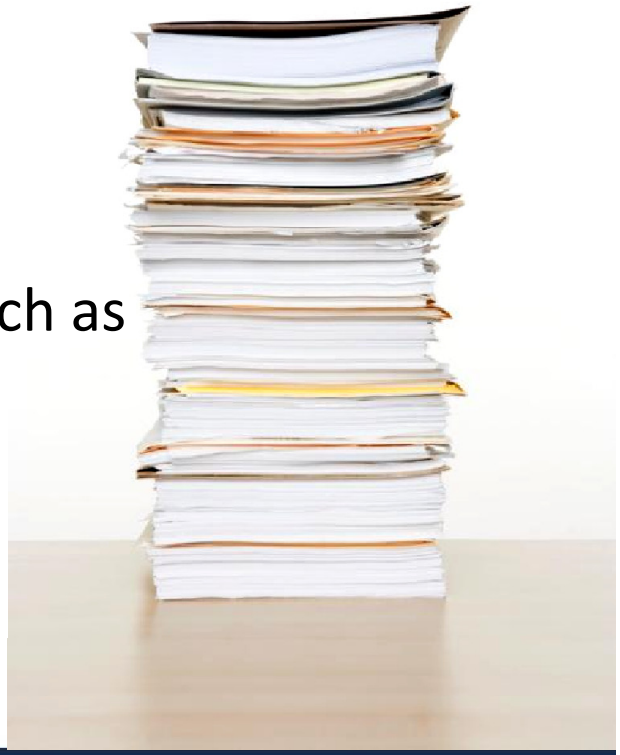


Since 2004, NOAA and the Councils have protected more than 700 million acres of EFH from harmful fishing practices.

5. Review and update every 5 years

- Federal regulations require that EFH information be periodically reviewed and updated if appropriate
  - ✓ EFH descriptions
  - ✓ EFH maps
  - ✓ Impacts of fishing on EFH
  - ✓ Non-fishing related threats to EFH

- Review based on available information, such as
  - Peer-reviewed scientific articles
  - State and federal technical memos
  - Traditional knowledge
  - Etc…



6. NOAA consults on non-fishing activities

NOAA **must** consult on Federal actions that may impact EFH

- Provide non-binding conservation recommendations
- Federal agencies are required to respond to NMFS recommendations
- NOAA consults on over 3,000 Federal actions every year

7. Councils consult on non-fishing activities

Councils **may** consult on actions that may affect the habitat of a fishery resource under its authority - MSA §305 (b)(3)(A)

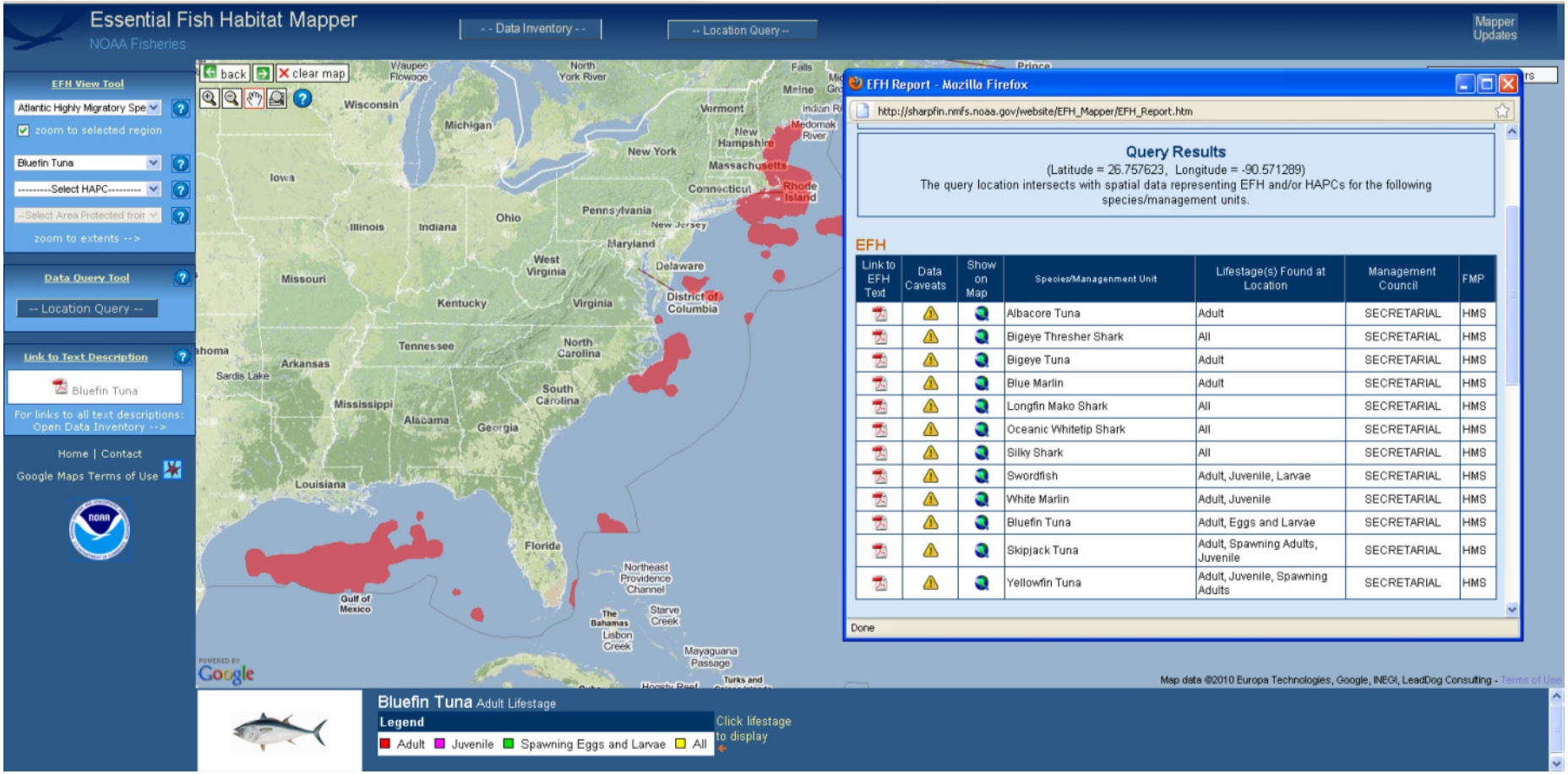
Example: Army Corps Permit for offshore sand and gravel mining to restore Winthrop Beach in Massachusetts

- NEFMC addressed substantial impacts to juvenile cod EFH.
- Result: Corps denied permit ; applicant re-applied for a permit using upland sources.

Councils **must** consult on actions that are likely to substantially affect the habitat of anadromous fish - MSA §305 (b)(3)(B)

EFH Mapper

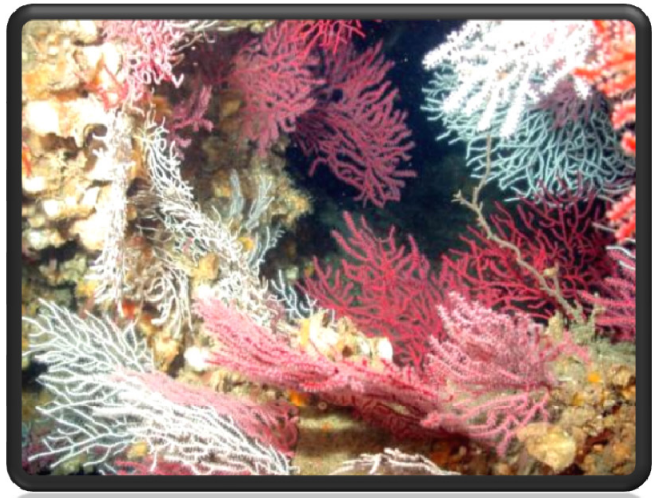
www.habitat.noaa.gov/efhmapper



Deep-Sea Corals

<u>Structure-forming deep-sea corals:</u> coral species with complex branching structure that provide habitat to other species. Unlike shallow corals, deep-sea corals are generally found deeper than 50m and do not require sunlight.

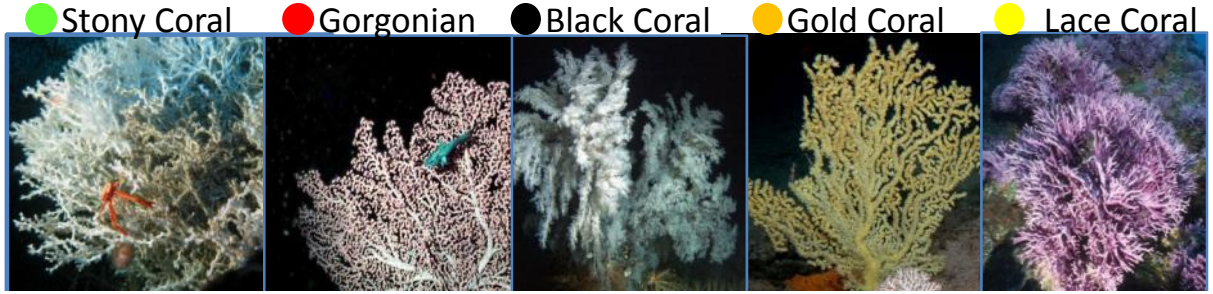
- Hotspots of biological diversity
- May be Essential Fish Habitat
- Targets for biomedical research
- Vulnerable to human impacts

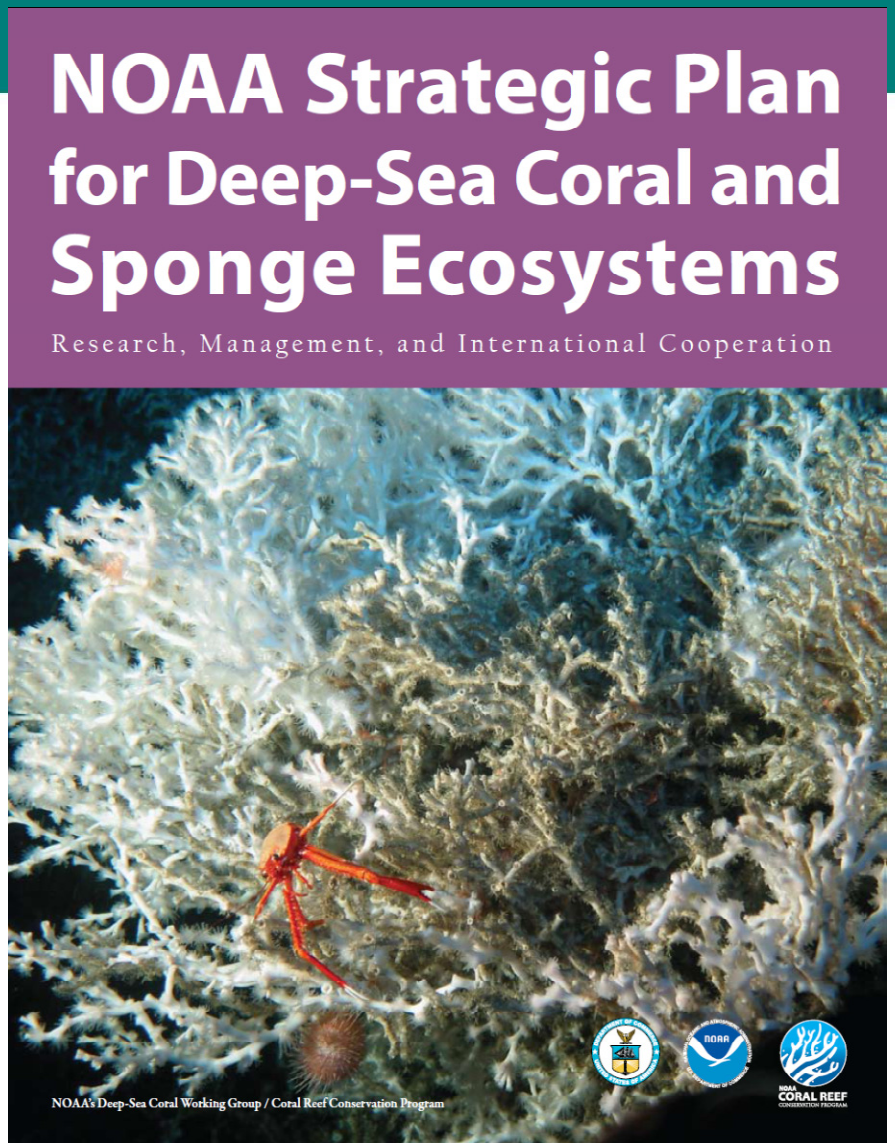


Where are deep-sea corals?

The data represent recorded locations of structure-forming deep corals. Data do not represent density of coral cover and may reflect fishing or research effort. The origin of data varies: e.g., NMFS bottom trawl surveys and observer programs; literature citations; museum collections and research surveys.

Structure-Forming Deep-Sea Corals of the U.S.





- Protect areas containing known deep-sea coral or sponge communities from impacts of bottom-tending fishing gear.
- Protect areas that may support deep-sea coral and sponge communities where mobile bottom-tending fishing gear has not been used recently, as a precautionary measure.

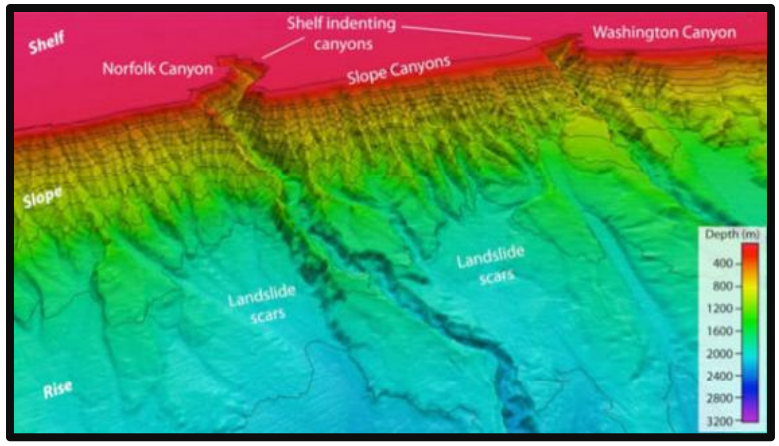
Deep-Sea Coral Research and MSA

Magnuson-Stevens Act (2006) Established Deep Sea Coral Research and Technology Program (DSCRTP)

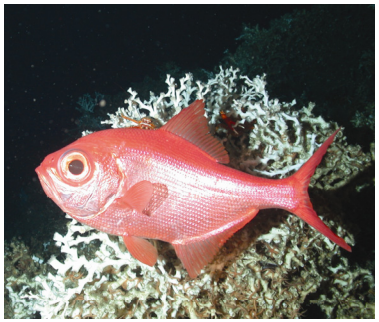
NOAA, in consultation with Councils, established a program to

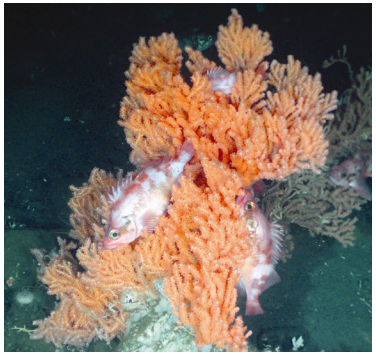
- Identify existing research on, and known locations of, deep-sea corals;
- Monitor activity in deep-sea coral locations; and
- Conduct research on and locate and map locations of deep-sea corals.

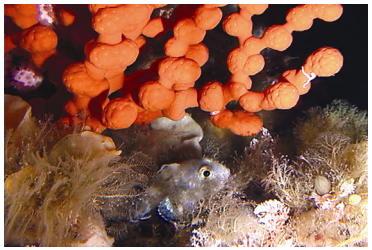
- MSA §408



Magnuson-Stevens Act **requires** Councils to minimize the impacts of fishing to essential fish habitat - MSA §303(a)(7)







If described as EFH, Councils must protect deep-sea corals from fishing

Examples:

- Late juvenile, adult yellow eye rockfish (NPFMC)
- Snapper grouper species (SAFMC)
- Coral species in Coral FMP (SAFMC)

Bycatch

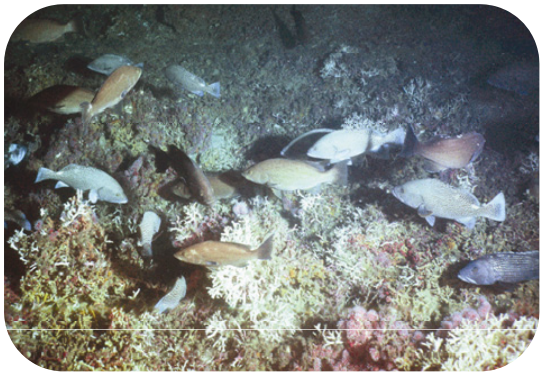
Magnuson-Stevens Act **requires** Councils to minimize bycatch of non-target species, including deep-sea corals and sponges - MSA §301(a)(9)

- 238 tons of sponge bycatch and **54 tons** of corals, bryozoans, and other habitat forming species bycatch are lost each year in Alaska fisheries.
- Best solution = spatial separation between bottom-contact gear and coral areas

Deep-sea coral zones

Magnuson-Stevens Act (2006) gave Councils **discretionary** authority to protect deep-sea corals from fishing - MSA 303(b)(2)(B)

- Councils may designate deep-sea coral zones
- Councils may protect deep-sea corals from physical damage from fishing gear within zones
- Councils may establish measures to limit damage to fishing gear from interactions with deep-sea corals



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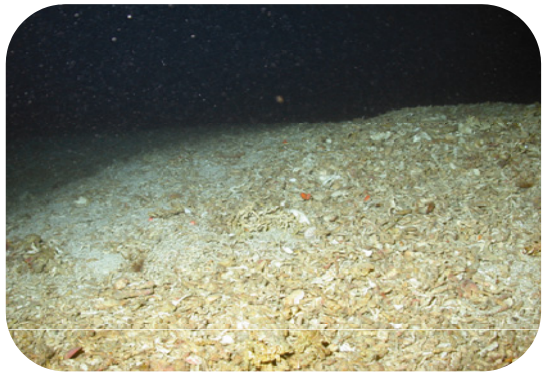

Trawled

Habitat conservation priorities for 2012 and beyond

Healthy habitat for sustainable fisheries

Improve protection of priority habitats

- Identify and develop habitat conservation priorities and objectives with fishery management councils
- Increase protection of deep-sea corals through expanded use of MSA authorities

Improve baseline habitat information

- Increase the area surveyed for deep-sea coral habitat
- Complete EFH 5-year reviews
  44% of FMPs have not been reviewed or updated in the last 5 years.
- Clarify links between managed species and their habitats, including deep-sea corals

Tools and Resources

Essential Fish Habitat

- EFH Website www.habitat.noaa.gov/efh
- EFH Mapper www.habitat.noaa.gov/efhmapper
- EFH Regulations 50 CFR 600
  www.habitat.noaa.gov/pdf/efhregulatoryguidelines.pdf

Deep-sea corals

- NOAA Strategic Plan for DSC and Sponge Ecosystems
  http://coris.noaa.gov/activities/deepsea_coral
- The State of DSC Ecosystems in the U.S.
  http://coris.noaa.gov/activities/deepcoral_rpt