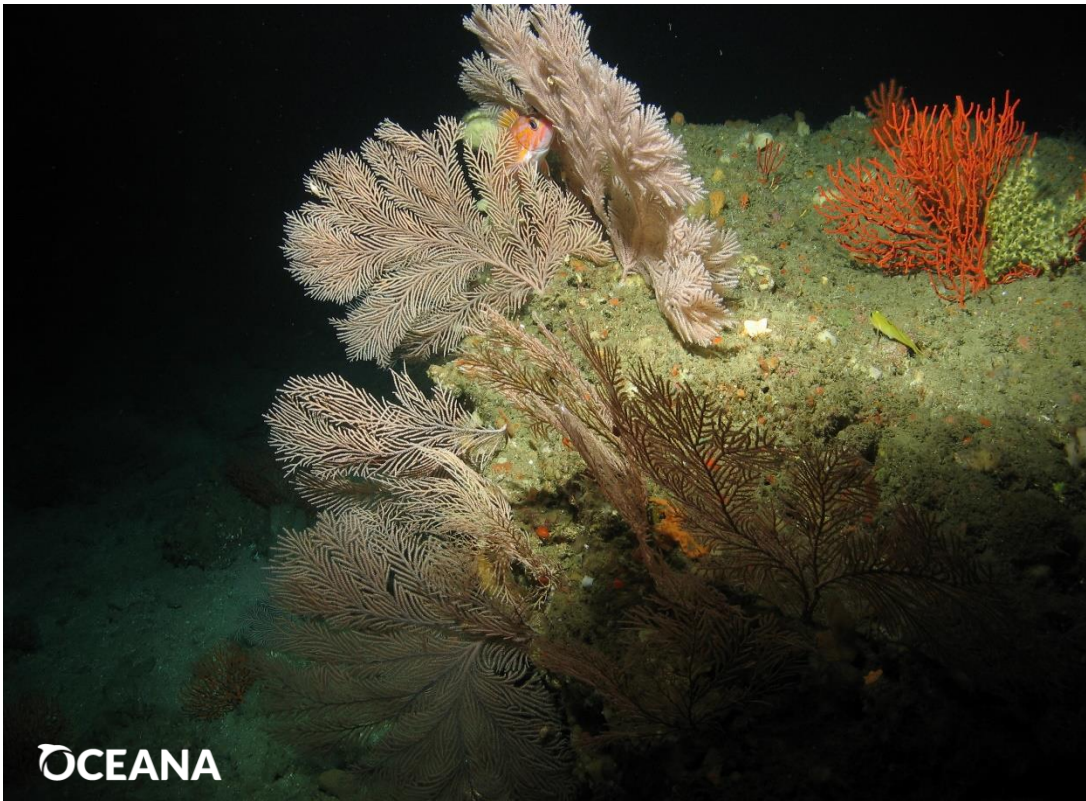


# Groundfish Management: Non-trawl Sector Area Management Measures

Ben Enticknap, Oceana



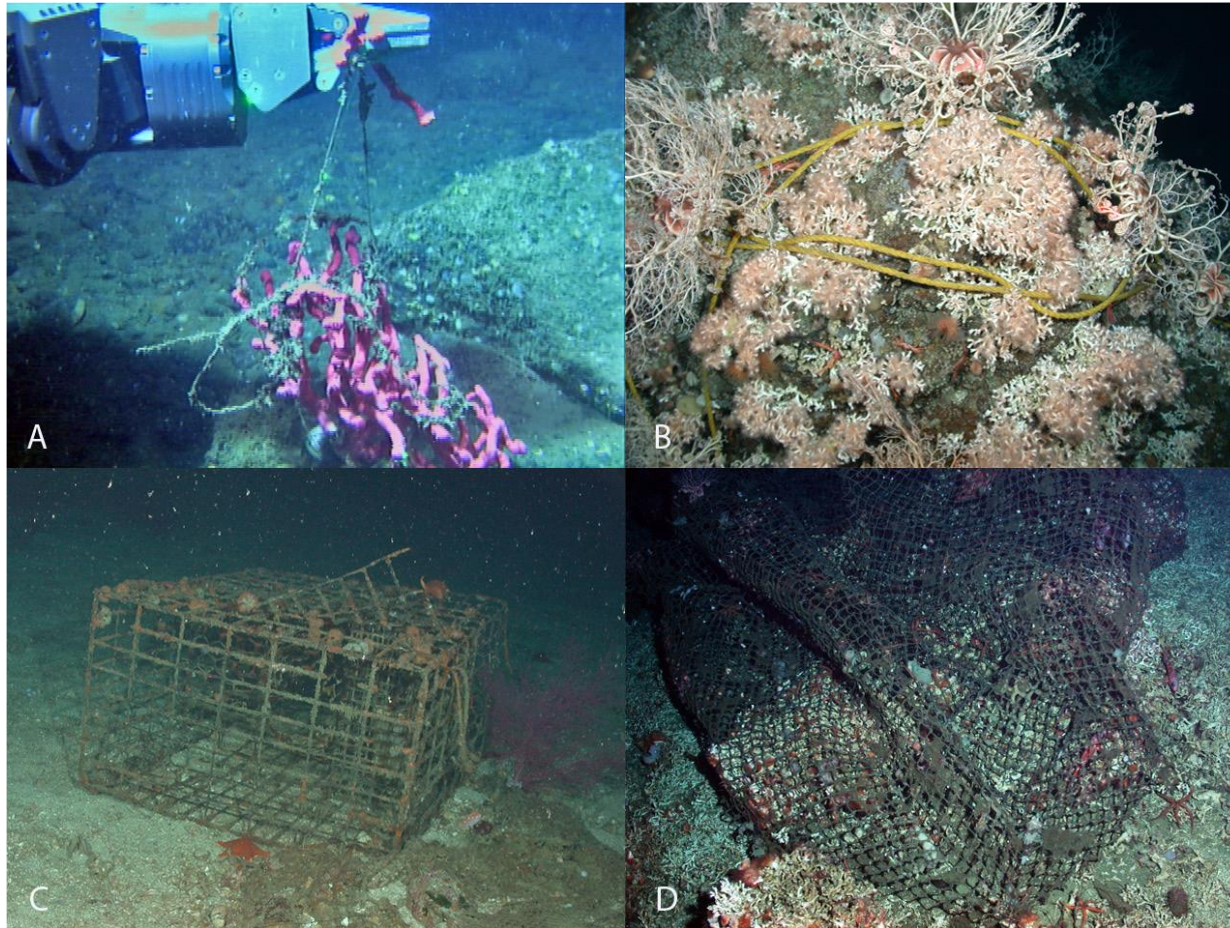
Gray gorgonian corals (*Plumarella* sp.) with rockfish and an orange gorgonian coral (*Adelogorgia phyllosclera*) offshore Santa Rosa Island, California.



Gorgonian corals (*Swiftia pacifica*) at Arago Reef, offshore Southern Oregon



# Effects of Fishing Gear on Deep Sea Coral and Sponge Ecosystems

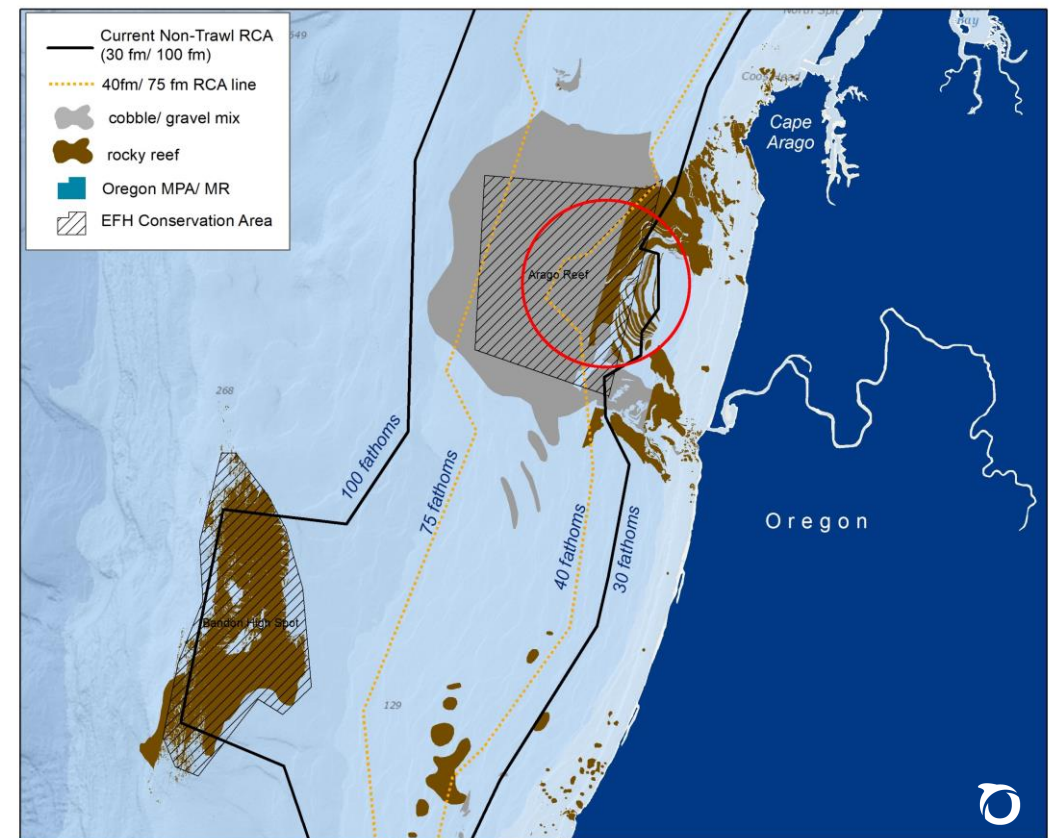
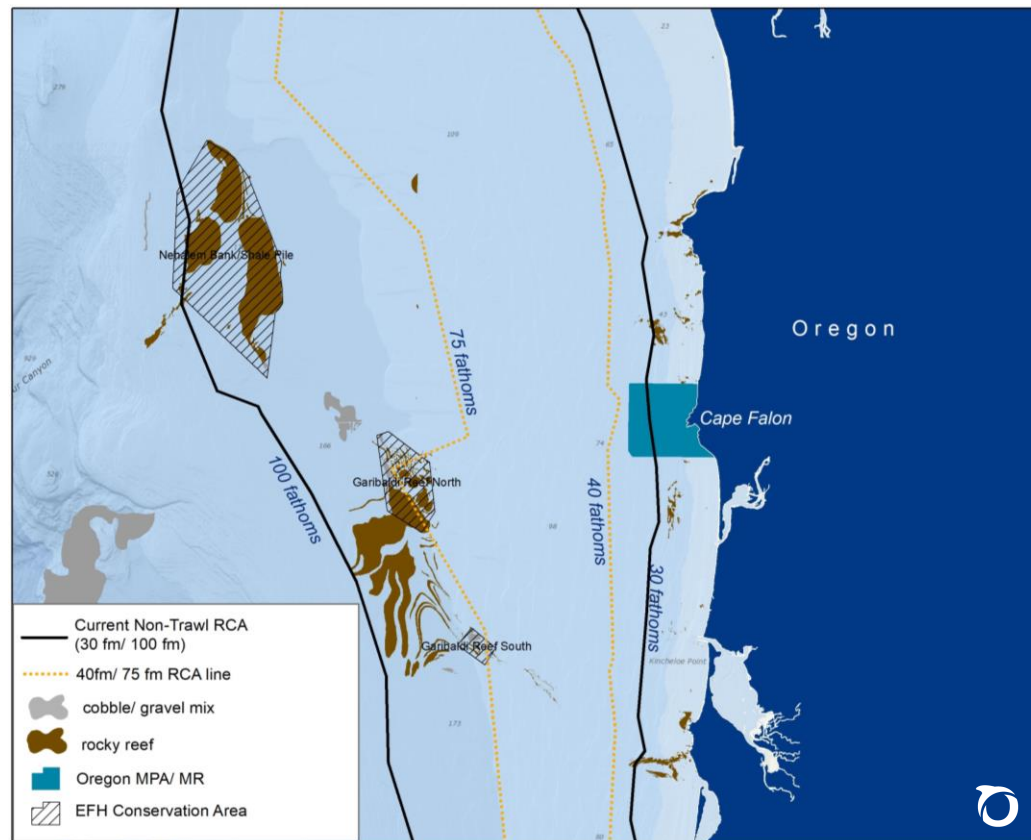


## Images of fishing gear from U.S. West Coast ROV surveys:

- A. Bubblegum coral entangled in longline gear
- B. Scleractinian coral (*Lophelia pertusa*) with yellow polypropylene line, possibly from an anchor line or a buoy line on fixed gear;
- C. Trap gear and netting (adjacent to a purple sea fan; and
- D. A section of a trawl net wrapped around coral rubble.

Source: Rooper et al. (2017) Effects of Fishing Gear on Deep-Sea Corals and Sponges in U.S. Waters. Available online: <http://deepseacoraldata.noaa.gov/library>.

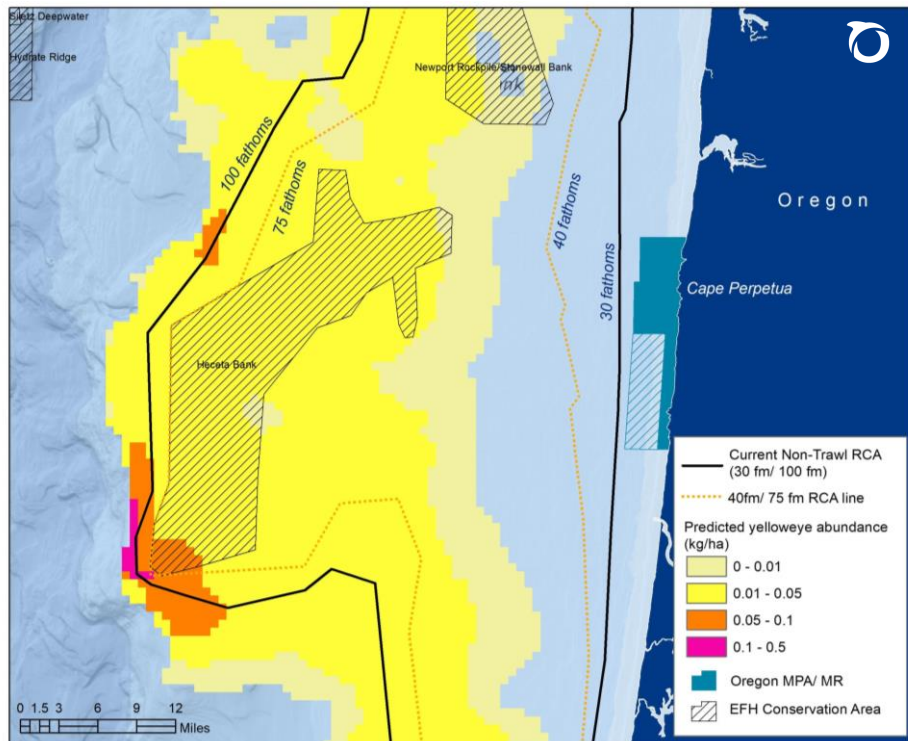
# Non-trawl RCA boundary changes may result in gear impacts to priority habitat features and areas





# Non-trawl RCA changes may increase impacts to long-lived rockfishes

Consider impacts to yelloweye rockfish that are still rebuilding



Yelloweye rockfish predicted mean abundance. NCCOS model projection. PFMC Agenda Item D.6.b NMFS Synthesis. April 2013

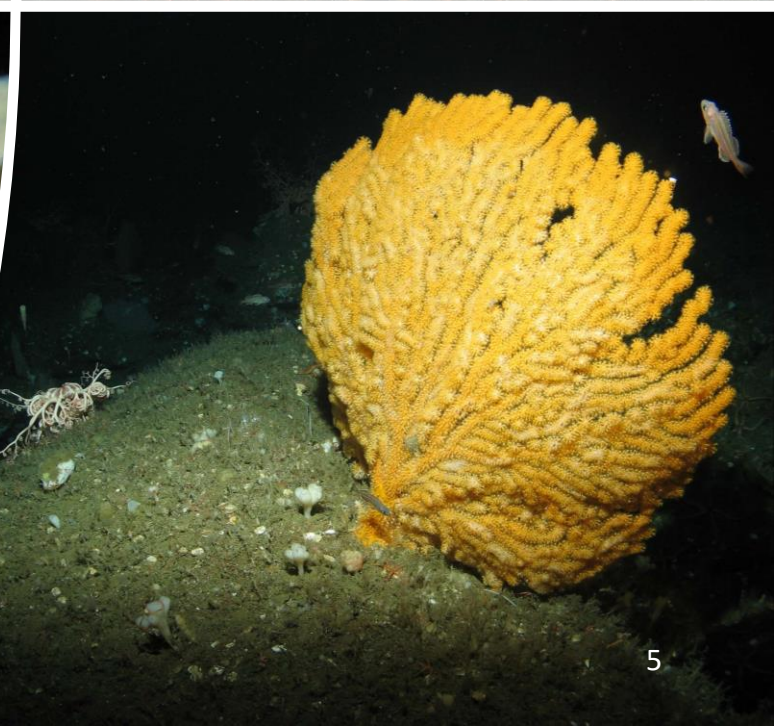
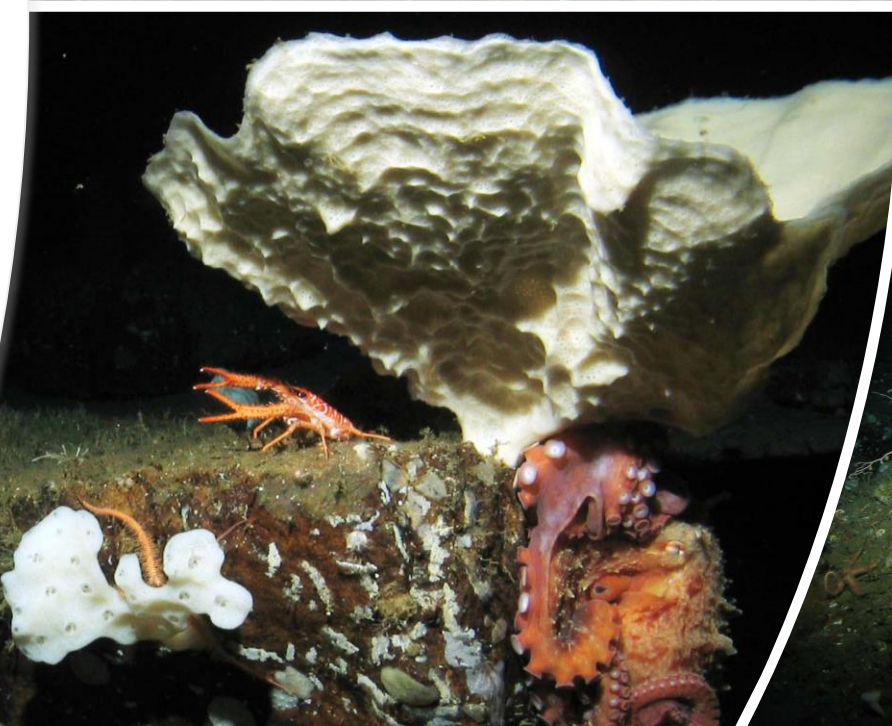
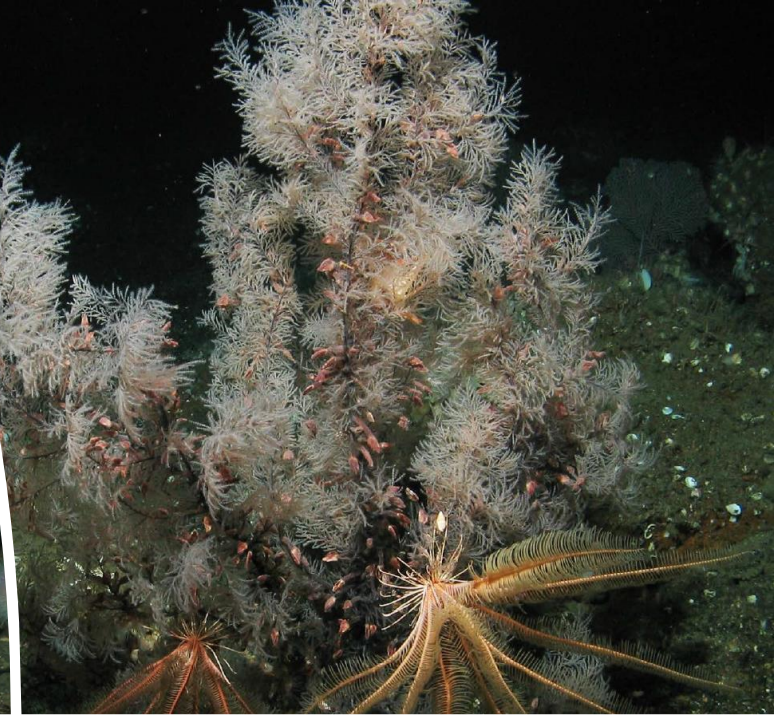
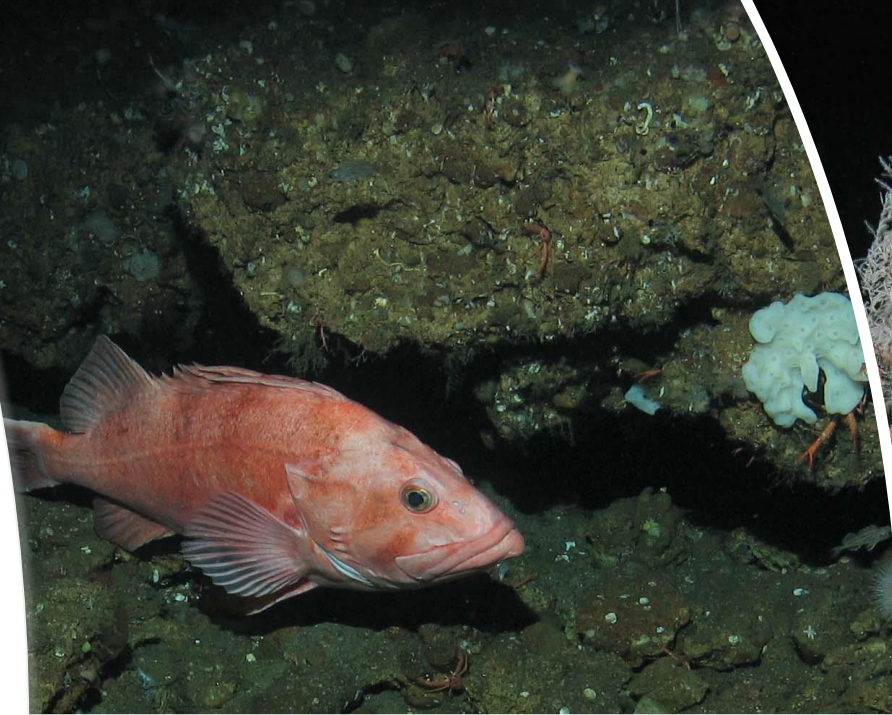


Yelloweye rockfish at Grays Canyon sponge reef. Ocean Exploration Trust

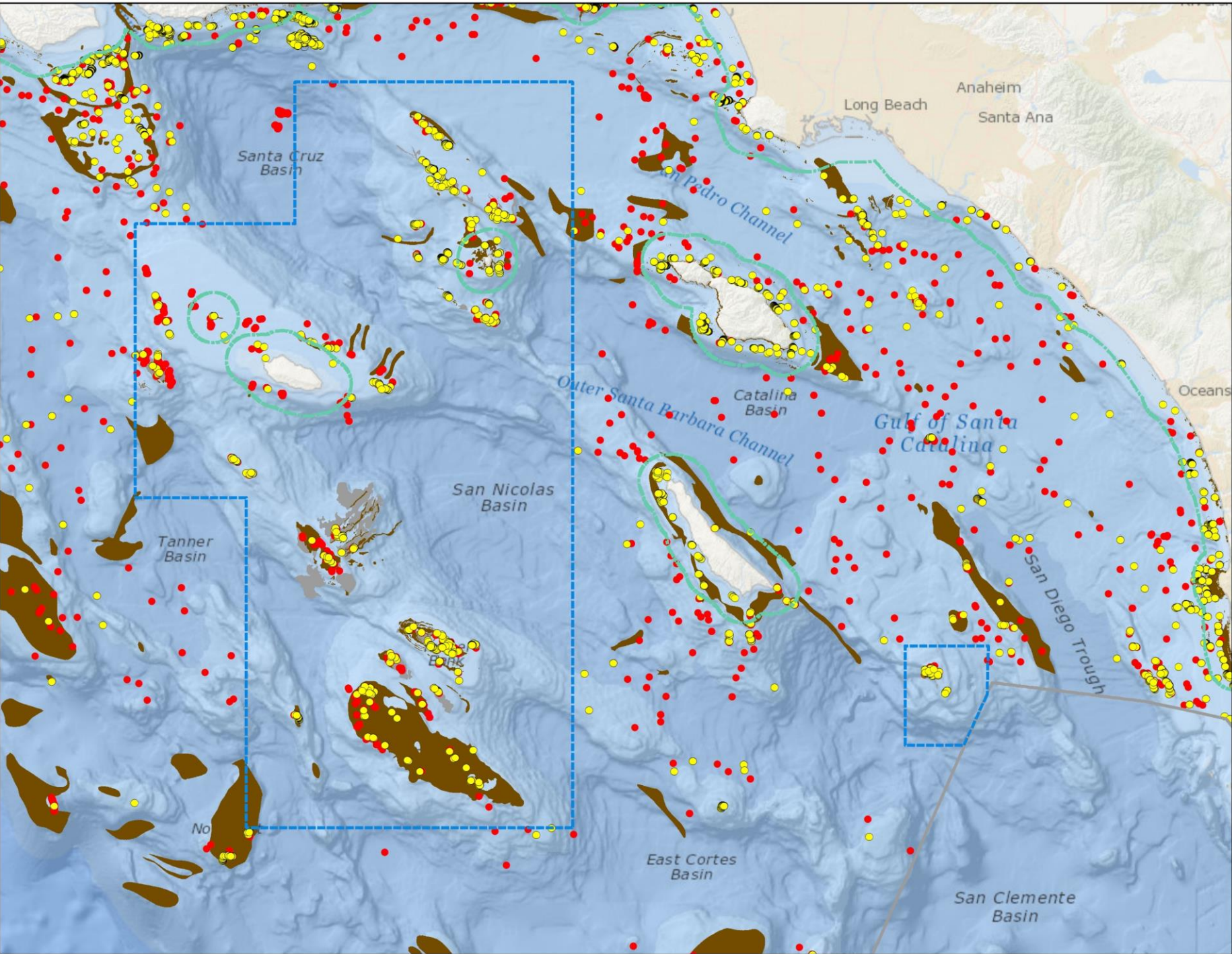


# Cowcod Conservation Areas

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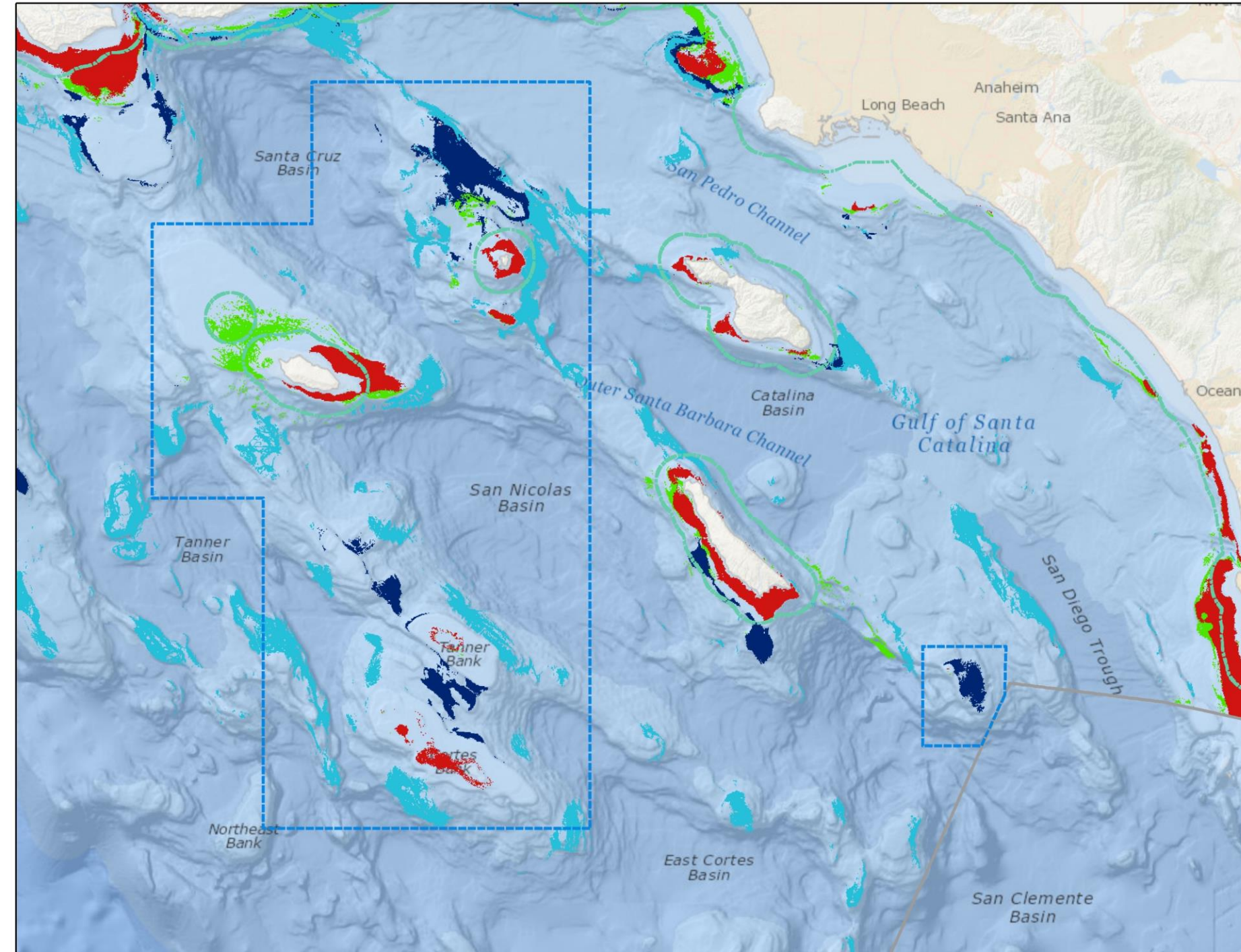




**Habitat Features**





- Corals
- Sponge
- hard
- mixed
- State Waters boundary (3 nmi)
- Cowcod Conservation Areas





## Habitat Features

### High Coral Habitat Suitability

-  *Eugorgia rubens* (gorgonian coral)
-  *Paragorgia* (bubble gum coral)
-  *Adelogorgia* (gorgonian coral)
-  *Antipathes* (black coral)





# Recommendations

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- Support continued analysis and consideration of Alternatives 1 and 2; open the existing non-trawl RCA to hook-and-line gear, and excluding longline, dinglebar, and pot/trap gear.
- Modify Alternative 3 to require EFH conservation areas overlapping the current non-trawl RCA boundaries to remain closed to bottom contact fishing gears as an interim measure until yelloweye are recovered and a comprehensive analysis of corals and sponge in the non-trawl RCA is complete.
- Add an additional alternative to repeal the Cowcod Conservation Areas off Southern California while keeping coral and sponge hotspots within the CCAs closed to groundfish fishing gears that contact the seafloor.