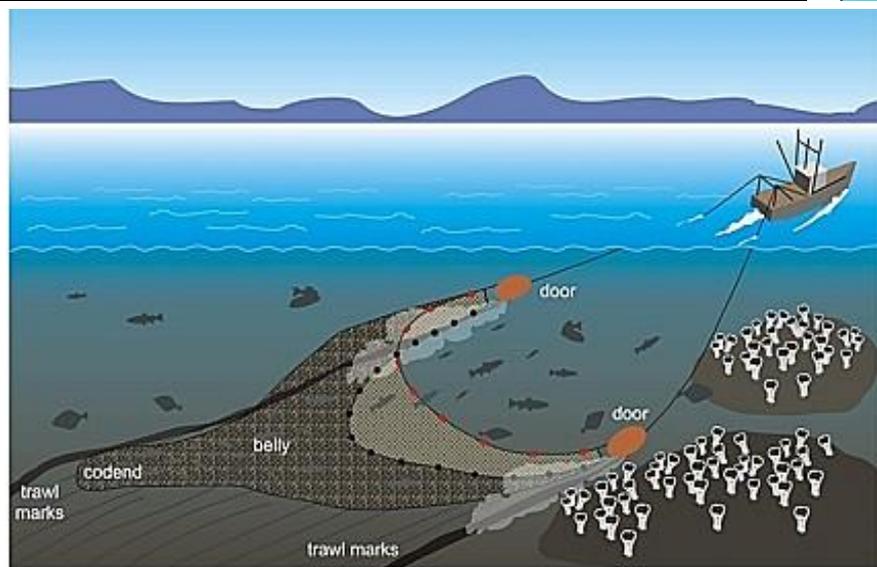


Combining local knowledge and scientific data to reduce bycatch of overfished species in the US West Coast groundfish fishery

Mary Gleason, Lead Scientist



West Coast Groundfish Management Area



(after Christen, 1999)



Gleason et al 2013. A transactional and collaborative approach to reducing the effects of bottom trawling. *Conservation Biology* 27:470-479

The New York Times

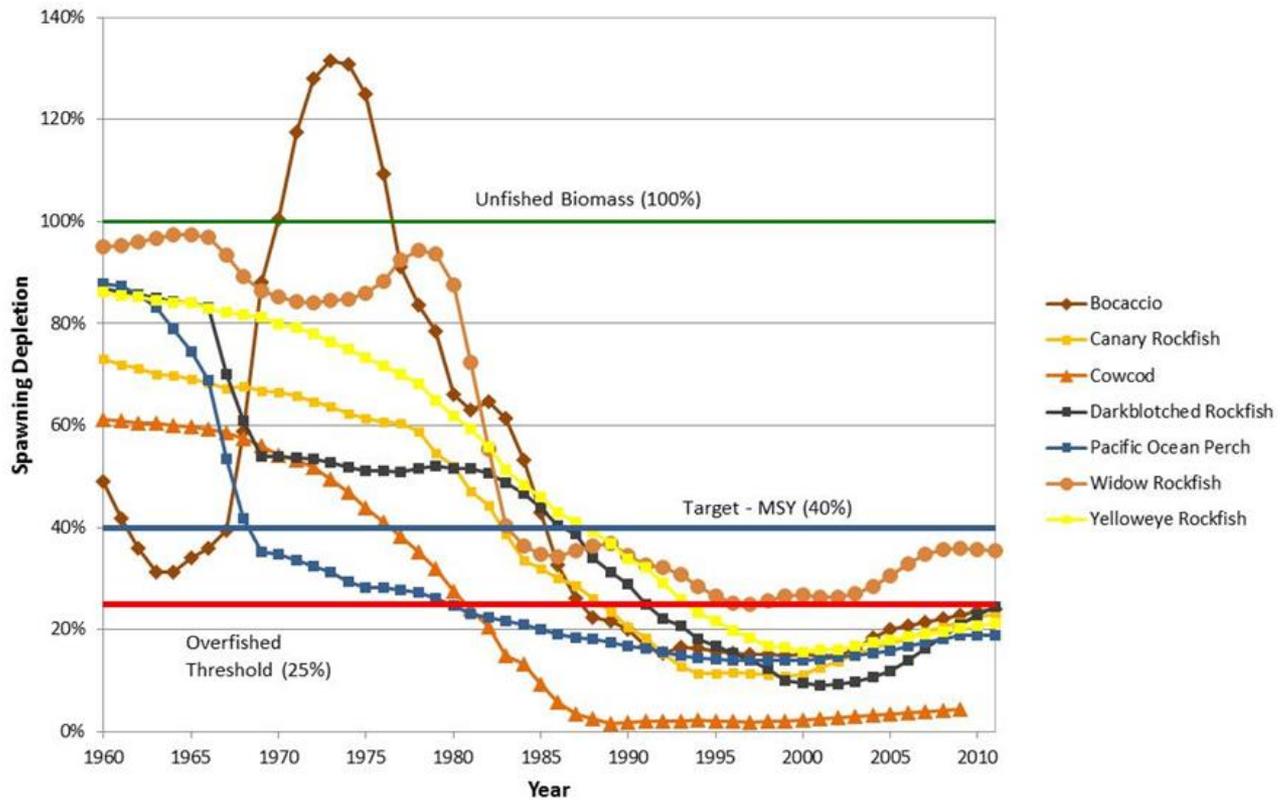
PUBLISHED MONDAY, NOVEMBER 28, 2011

Partnership Preserves Livelihoods and Fish Stocks





Stock Biomass Trends (Rebuilding Species)





A map of the Pacific Northwest coast of the United States, showing the coastline from Seattle in the north to San Francisco in the south. The ocean is depicted in shades of blue, and the land is in shades of brown and tan. A prominent red line follows the coastline, indicating the boundaries of Rockfish Conservation Areas. The text 'Seattle' is located near the top, and 'San Francisco' is located near the bottom. A large red text block is centered on the map.

Seattle

Rockfish Conservation Areas
(in place since 2002, but
temporary)

San Francisco



Seattle

Rockfish Conservation Areas
(in place since 2002, but
temporary)

Strict annual catch limits:
E.g. Yelloweye Rockfish
2073 lbs. coast-wide

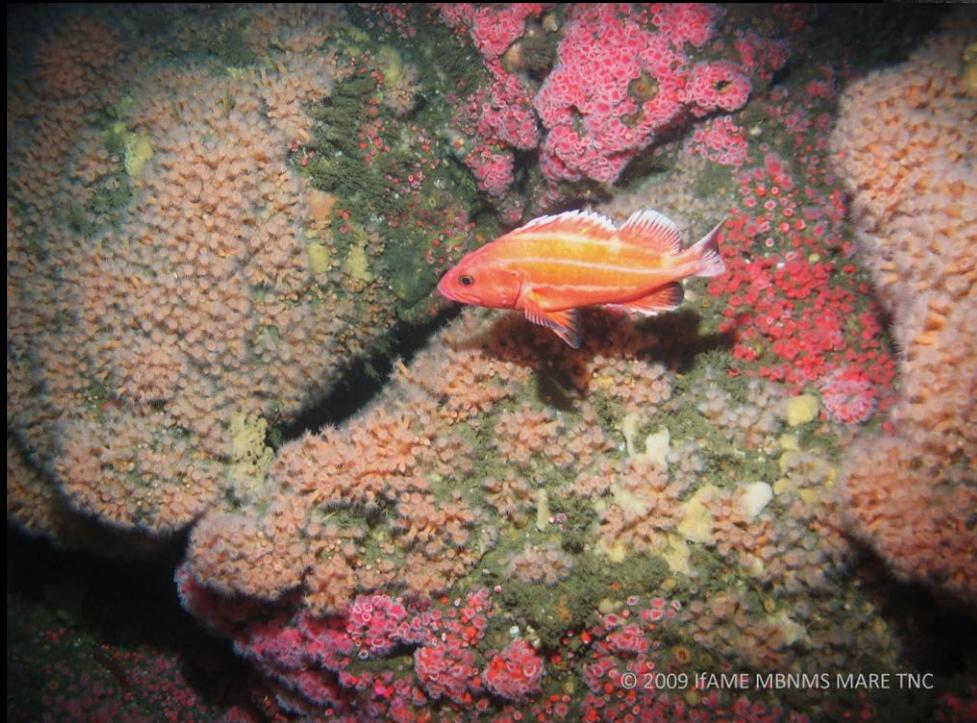
San Francisco



Annual monitoring
soft bottom
habitats like this:



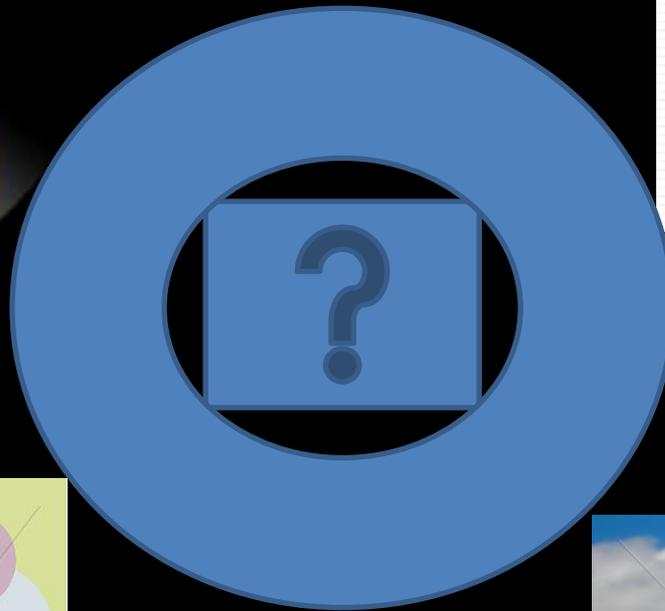
2009 CSUMB-TNC MARE



© 2009 IfAME MBNMS MARE TNC

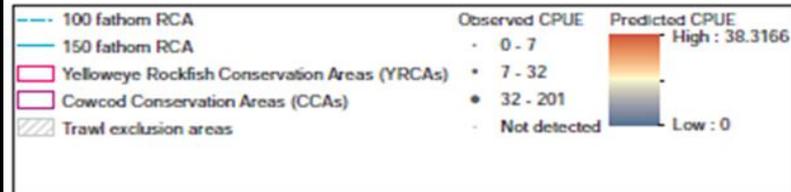
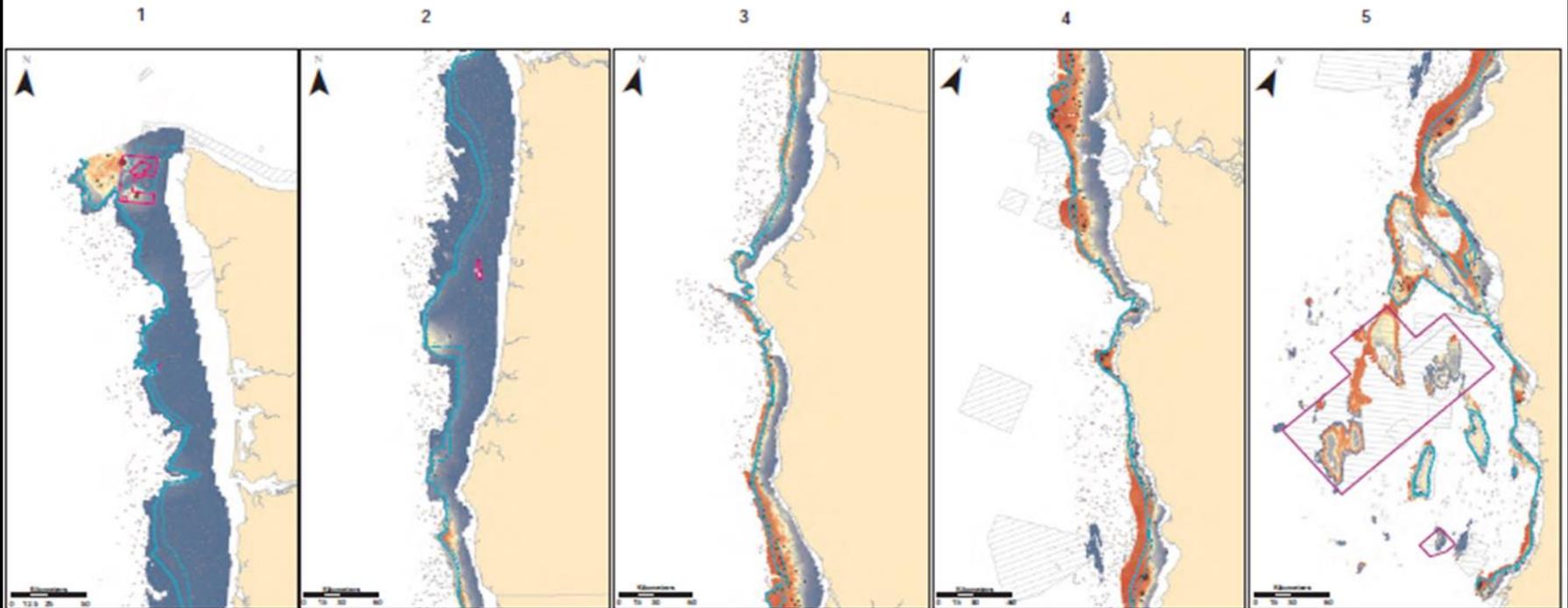
.....Not rocky
habitats where
these species live.

Where are these overfished species?
And how are they doing?

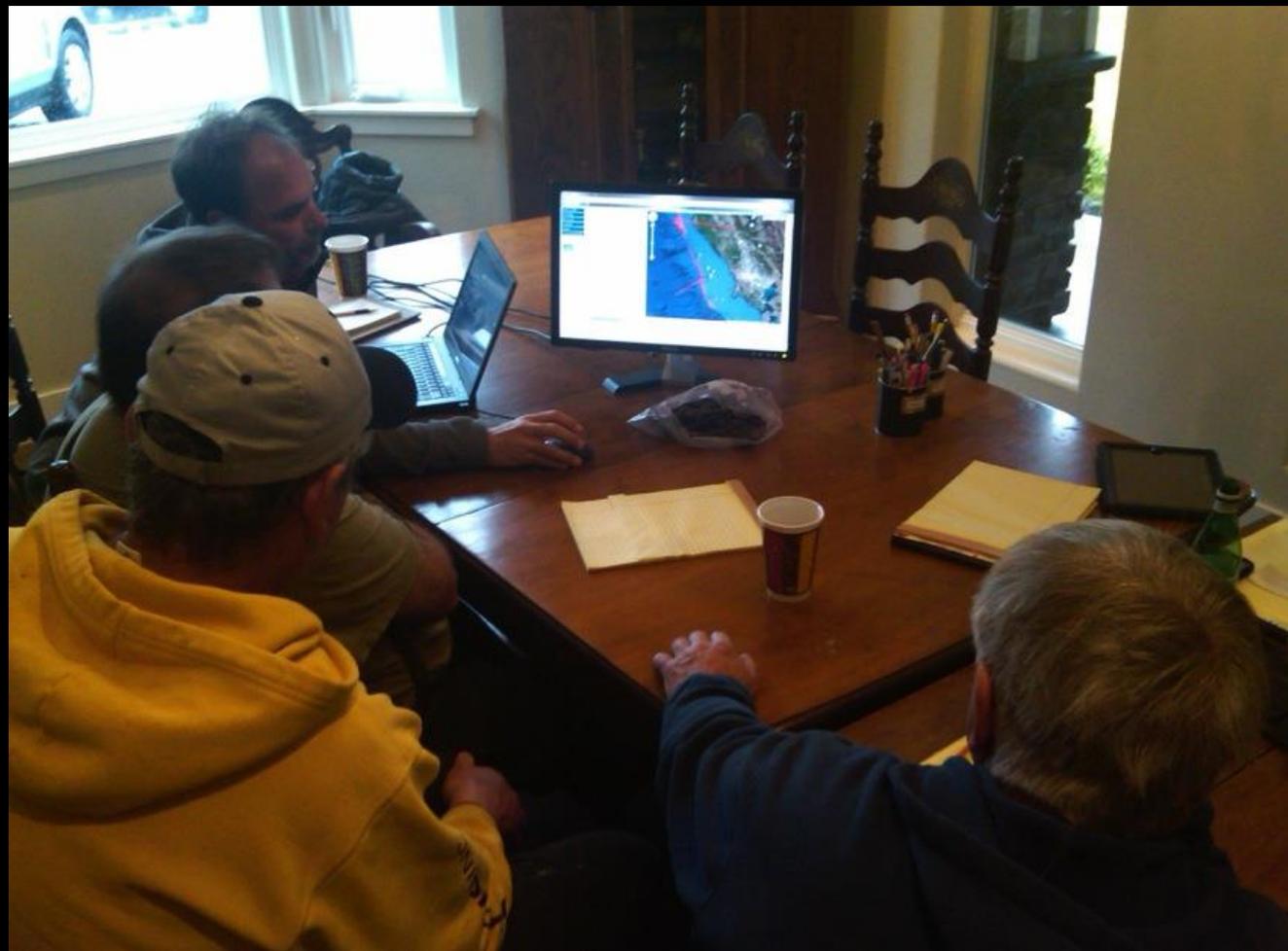
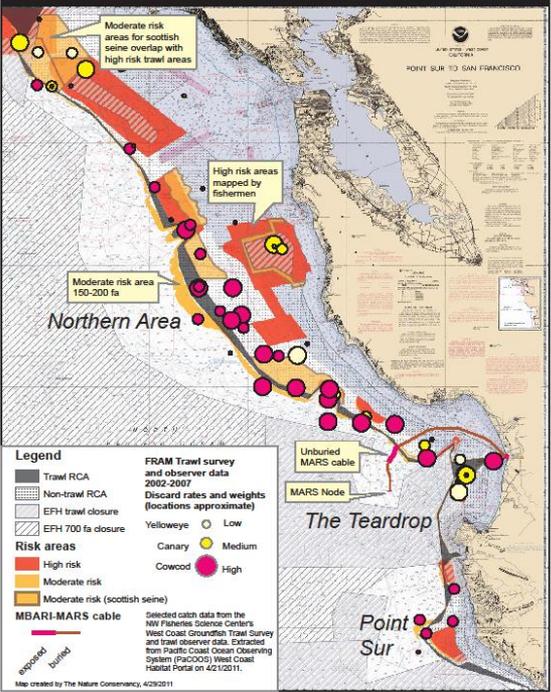


Predictive Modeling of Hotspots

Bocaccio Catch Per Unit Effort Prediction



Overfished Species Risk and Groundfish Management Areas





Web based map for visualizing your catch history and by-catch events

eCatch

Enter Data
Monitor Limits
View Maps
My Account
Admin
Feedback
Logout
Create new account
mmerrifield

Map Layers

- OFS Set locations (1/1/2011- Present)
- EFH Trawl Closures
- Trawl RCA
- Fort Bragg (Trawl)
- North Central Coast (Fixed Gear)
- North Central Coast (Trawl)
- North Central Coast (Scottish Seine)
- South Central Coast (Trawl)
- South Central Coast (Fixed Gear)
- NOAA Chart 18640
- NOAA Chart 18640
- NOAA Chart 18660
- NOAA Chart 18700

Show Legend

View Catch History

Search by any or all of the following.

Species Common Name:
Bocaccio

Vessels:

Users online: 1

The Nature Conservancy
Protecting nature. Preserving life.

esri

Map Layers

Tow Date: Thu Oct 27 2011
Common name: Bocaccio
Amount caught: 300 Pounds
Trip type: CC
Vessel Name: Morning Bay

Imagery ©2011 TerraMetrics, Map data ©2011 Google - Terms of Use



Choose to share your catch history or by-catch with other users of eCatch. This is not a requirement

eCatch

2012 Risk Pool

By-catch Risk

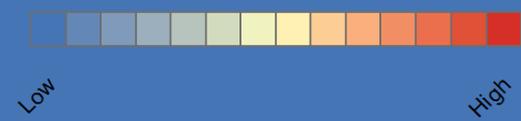
for each set max of:
 $(\text{total ofs} / \text{total catch}) * \text{risk weight}$

OFS includes:
Bocaccio, Widow, Darkblotch,
Canary, Cowcod, Yelloweye

 High risk areas

 Trawl RCA

By-catch risk





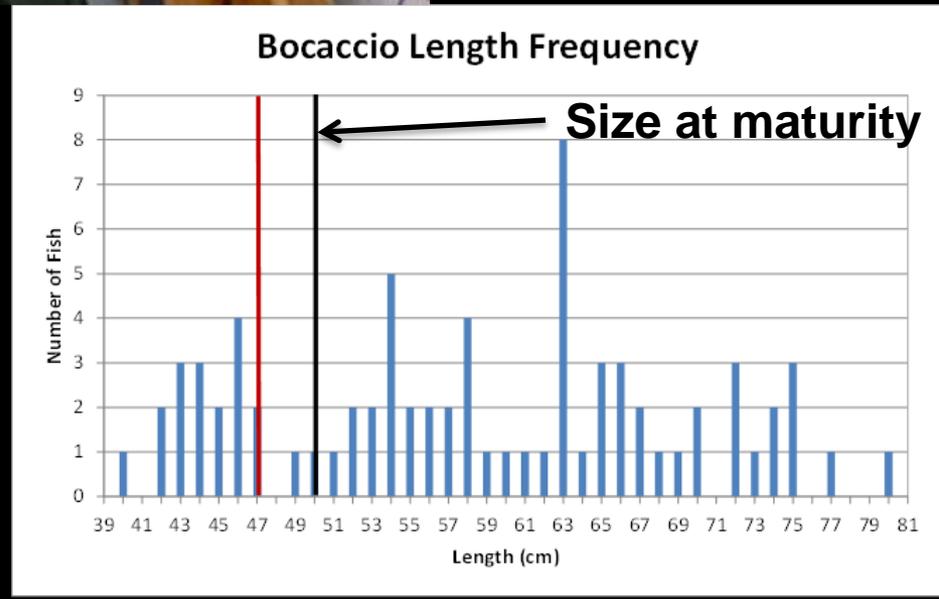
Collaborative
Fisheries
Research

Donna Kathleen

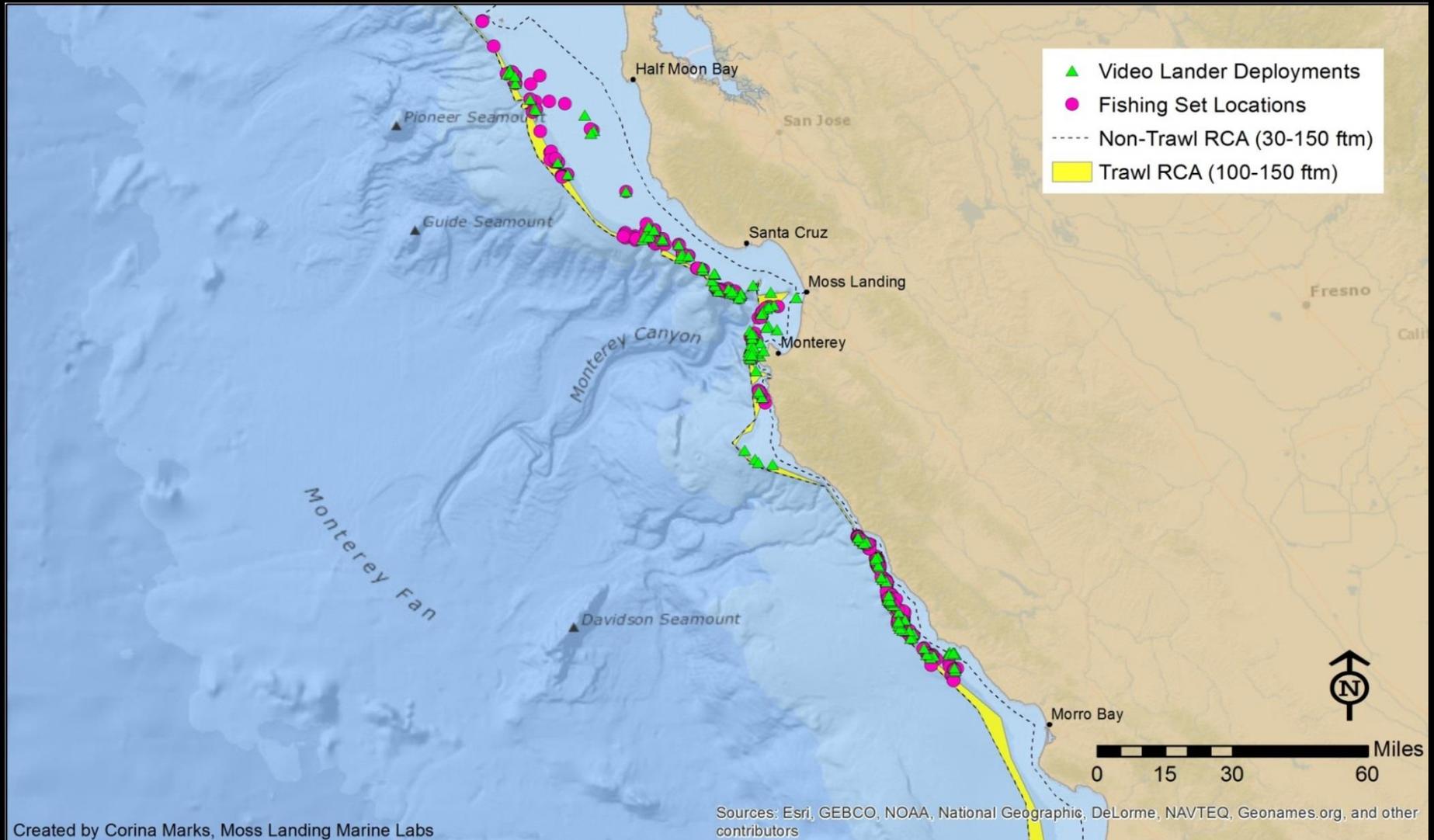


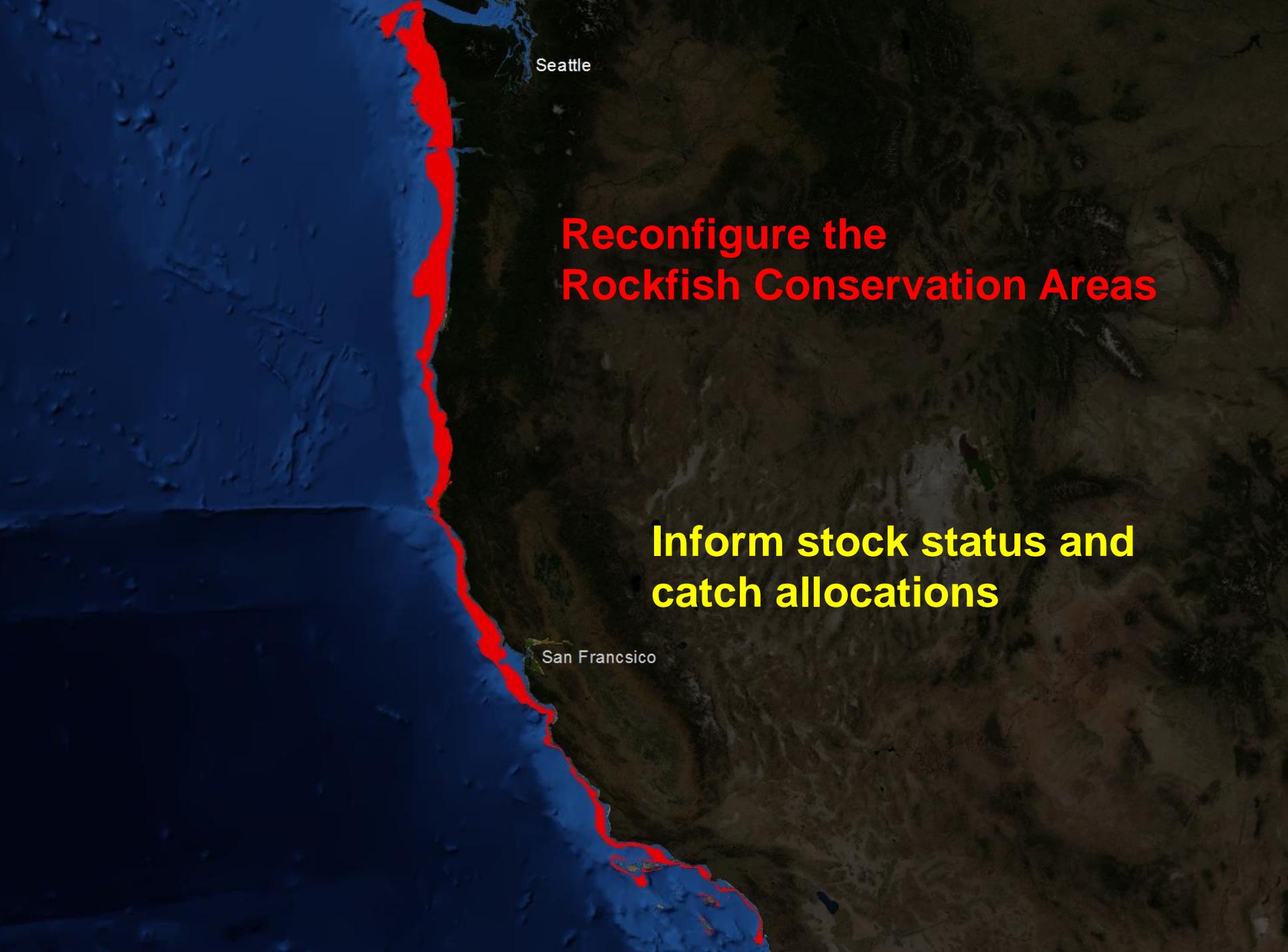
“Video Lander”

- Fish density
- Fish size
- Habitat associations



Visual and Fishing Surveys



A satellite-style map of the Pacific Northwest coast of the United States, from Seattle to San Francisco. A thick red line follows the coastline, highlighting a specific area. The text 'Reconfigure the Rockfish Conservation Areas' is overlaid in red, and 'Inform stock status and catch allocations' is overlaid in yellow. Labels for 'Seattle' and 'San Francisco' are present.

Seattle

**Reconfigure the
Rockfish Conservation Areas**

**Inform stock status and
catch allocations**

San Francisco

