

# CALIFORNIA COASTAL AND MARINE PROGRAM

## PROTECTING FISH STOCKS AND LIVELIHOODS

The California Marine Initiative has pioneered a first-of-its-kind fishery reform approach that aligns community, fishing industry, and conservation interests to drive strategic changes in fishery management and harvest practices. The Project lies within the California Current Large Marine Ecosystem, which is one of the four temperate upwelling systems in the world that support 20% of the world's commercial fish catch. The productivity from upwelling of deep nutrient-rich waters, combined with the highly diverse marine habitats found within deep water canyons, banks, seamounts and expanses of soft bottom areas, support a very high diversity of species. The Central Coast project area, approximately 9.6 million acres, spans the near-shore and offshore waters between Point Reyes and Point Conception, and includes three national marine sanctuaries (Monterey Bay, Cordell Bank, and Gulf of the Farallones). TNC has pursued conservation through private arrangements with fishermen along the Central Coast using a variety of gear types shown below.

### FISHING PRACTICES WITHIN TNC'S PRIVATE CONSERVATION AGREEMENTS

#### No-Go Zones

These are areas delineated by fishermen working with TNC that present a high risk of catching overfished species. Because of that fishermen have agreed to not fish in these areas regardless of the gear they use.

#### Bottom Trawl

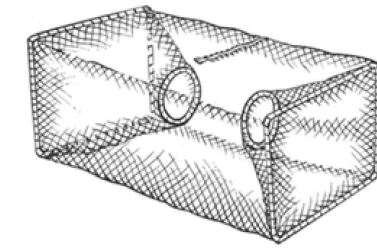
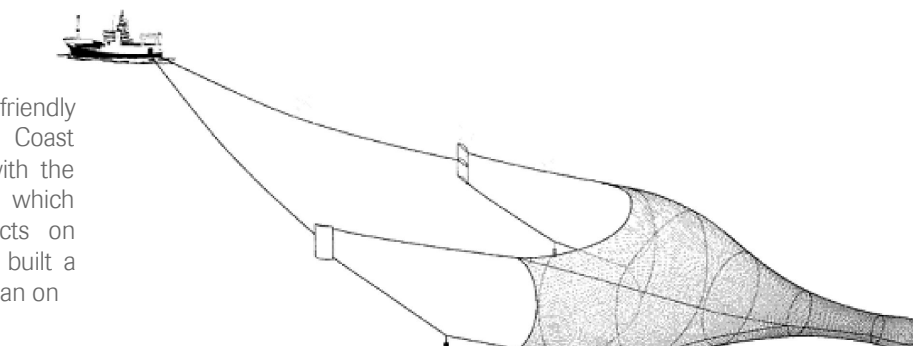
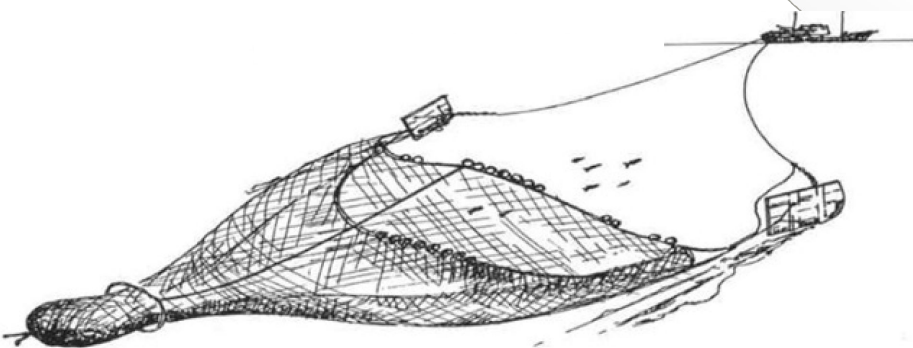
Bottom trawling is trawling (towing a trawl, which is a fishing net) along the sea floor. It is also often referred to as "dragging". Bottom trawling damages seafloor habitat including slow growing species like deep sea corals. Because bottom trawl gear is imprecise and non-selective it results in the depletion of vulnerable slow growing rockfish species. This makes trawl gear particularly risky in a catch share environment.

#### Scottish Seine

Scottish seine is the most environmentally friendly flatfish-harvesting method used in the West Coast trawl industry, particularly when compared with the more widespread traditional bottom trawling, which results in high bycatch and greater impacts on seafloor habitats. Half Moon Bay fisherman Steve Fitz has built a robust business and a reputation to match as the only fisherman on

#### Hook, Line and Traps - "Fixed Gear"

Hook, Line and Trap are considered passive gear and are in general the most ancient type of fishing gears. These gears are most suitable for small scale fishing and are, therefore, often the gear types used in artisanal fisheries. These types of gear are ideal because they only catch a specific type of fish, with minimal impacts to overfished species.



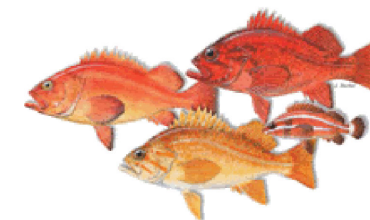
High

Impact to habitat and risk of catching overfished species

Low

### PROTECTING NURSERY HABITAT

Coastal land use (shown here) can impact habitat for commercially important fishes like rockfish and salmon and crab. Estuaries like Elkhorn Slough are the critical linkage between land and sea habitats. Intact estuarine habitats can also provide buffer against sea-level rise and storm surge in the future.



### PROTECTED AREAS

- Marine Protected Areas (MPAs) occur in California's state waters located 3 nautical miles from shore. Not all MPAs are equal in their protection, some are fully protected and do not allow take of any resources while others allow limited take.
- Rockfish Conservation Area (RCA) is a narrow strip of habitat at between 600-900 feet deep that protects critical habitat for overfished rockfish species. These areas restrict certain types of fishing gears – the RCA on this map restricts trawl fishing.
- Essential Fish Habitat (EFH) includes all types of marine habitat where fish spawn, breed, feed or grow to maturity. The EFH areas on the map are for groundfish and restrict the ability to use trawl gear.
- National Marine Sanctuaries are a federally designated area within US waters that protect areas with special conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, or aesthetic qualities.

0 25 Miles

### How it gets done

TNC has used several tactics to achieve conservation outcomes in the coastal and marine program.

### Working with Industry

Together with fishermen, TNC negotiated 3.7M acres of trawl closures in exchange for purchasing trawl permits in Morro Bay, California.



### Science and Research

In order to monitor the conservation impact of our efforts TNC has deployed cutting edge science and technology. Using a remotely operated vehicle (ROV) to monitor areas that have been trawled and those that have not, TNC scientists can quantify the impact of that gear.



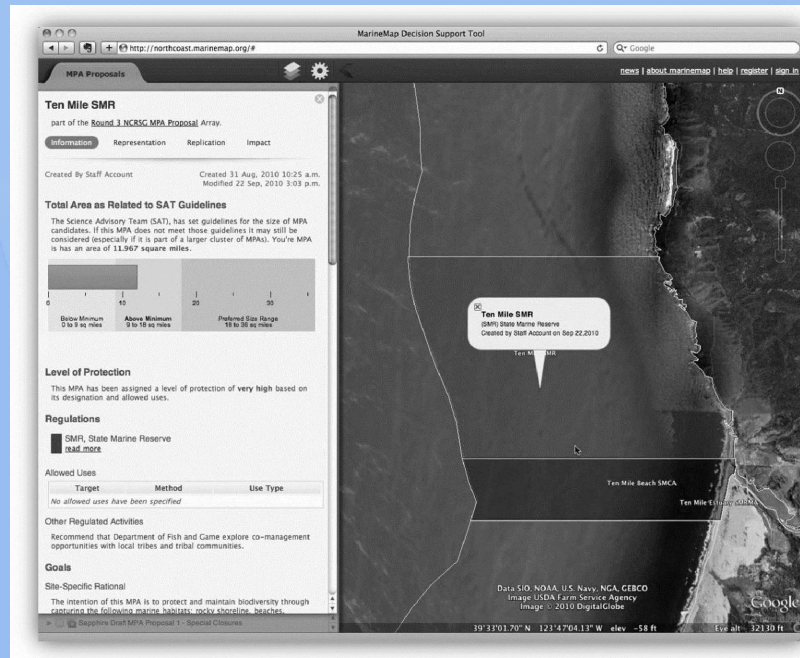
### Innovative Technology

TNC has created a web-based application called eCatch that allows fishermen to digitally record their data using a tablet computer and share that information with other fishermen. This information is critical in minimizing the risk of catching unwanted species (by-catch).



### Collaborative Planning

The Marine Life Protection Act mandated the creation of a network of marine protected areas (MPAs) be created by stakeholders. TNC scientists led the planning effort and in collaboration with UCSB and Ecostrust created MarineMap, a state of the art decision support tool that made it easy for non-technical people to draft MPAs.



### ESSENTIAL FISH HABITAT



TNC is working to protect sensitive habitats, spawning grounds, and old growth rockfish. The EFH area depicted here was designed and negotiated by TNC with fishermen partners. Soft corals like the one in this picture are slow growing and vulnerable to bottom trawl fishing. Seamounts like Davidson are unique in the marine environment and provide critical habitat for corals and rockfish.