

ROV surveys of soft and rocky deep-water habitats along California's North Central Coast; MPA baseline data collection

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Why monitor MPAs?

Monitoring MPAs tells us if they work.

Monitoring inside and outside of MPAs shows the effects of the MPAs.

Monitoring informs adaptive management.



What are we monitoring?

Species of Interest – fishes and invertebrates including selected exploited and non-exploited species identified as priorities.

Habitat – composition and complexity as they have direct effects on fish and invertebrate diversity.

SPECIES OF INTEREST

Lingcod	<i>Ophiodon elongatus</i>	
Wolf eel	<i>Anarrhichthys ocellatus</i>	
Quillback rockfish	<i>Sebastes maliger</i>	
Red sea urchin	<i>Strongylocentrotus franciscanus</i>	
California cucumber	<i>Parastichopus californicus</i>	

How are we monitoring?

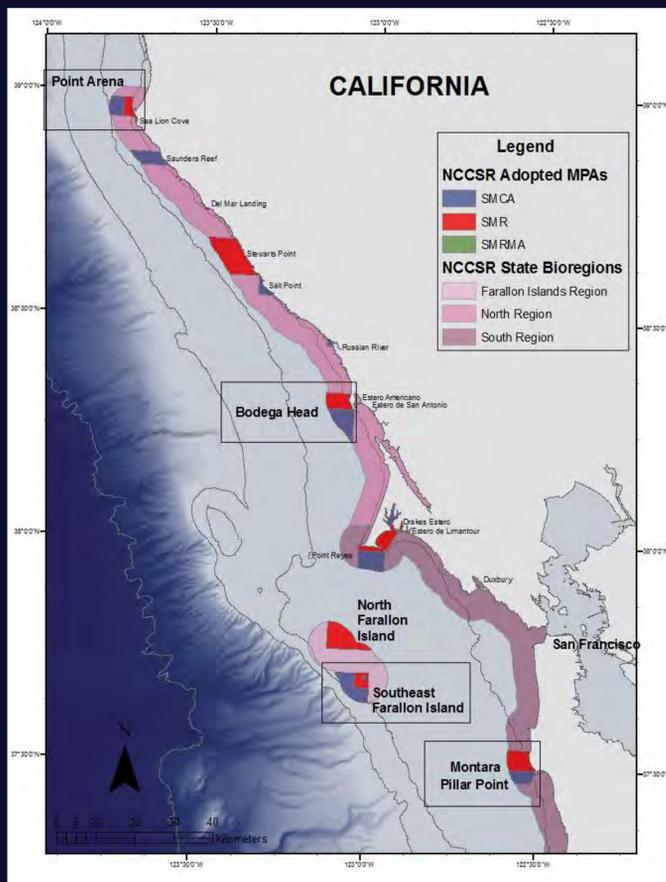


ROV Beagle – owned by TNC operated by MARE.

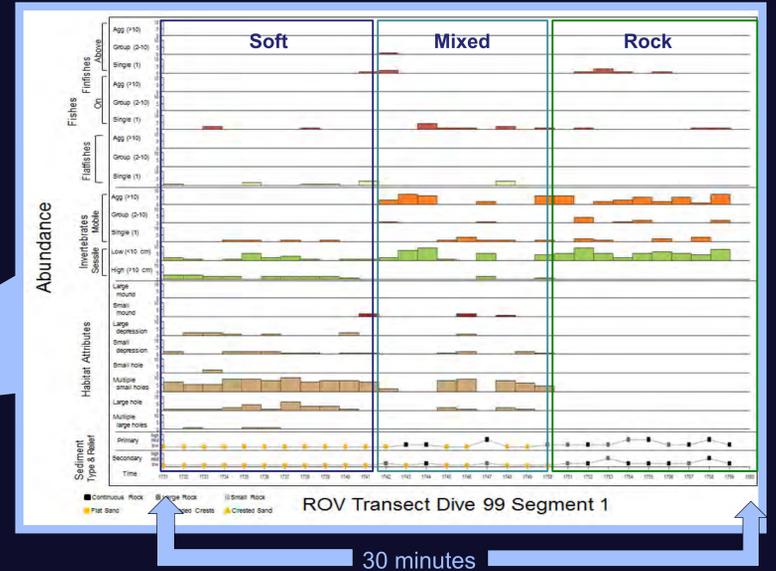
F/V Donna Kathleen – owned and operated by Capt. Tim Maricich and his family Donna and Tyler.

Baseline data collection

Establishing baseline conditions is important to assess changes over time



Rapid Assessment



Taxonomic distribution and abundance plots (TDAPs) plot the geo-referenced occurrence of key species groups and landscape attributes at one-minute intervals over the area surveyed by the ROV. These plots provide managers with a timely snapshot of community structure inside and out of the new MPAs while more intensive frame-by-frame analysis of project imagery is conducted.



Sand habitat, large biogenic mound, single flatfish, flat relief



Mixed habitat, single fish on the bottom, single mobile invertebrate, high relief

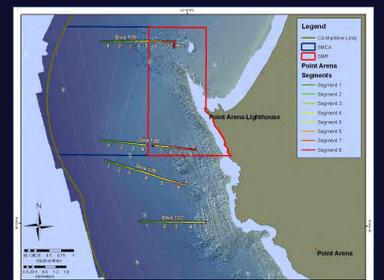


Large rock habitat, low and high biogenic cover, moderate relief



Continuous rock habitat, group of mobile inverts, low biogenic cover, mod relief

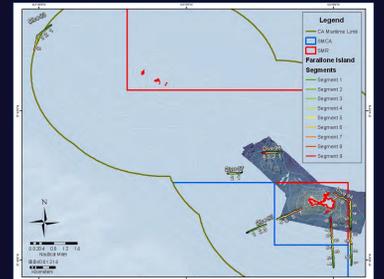
Pt. Arena MPA Cluster



Bodega Head MPA Cluster



Southeast Farallon Island MPA Cluster



Pillar Point SMCA & Montara SMR

