

Framework to Guide MPA Monitoring

Marine protected area (MPA) monitoring is designed to “take the pulse” of marine ecosystems and ocean-based human activities so we can learn how they are changing through time and how MPAs are affecting them. This involves looking at particular species, populations, habitats and human activities for instance, on beaches or within kelp forests. When considered together, the health of all of these ecosystems provides a snapshot of overall ocean conditions, both regionally and statewide, and a measure of how they are changing through time inside and outside MPAs. MPA monitoring also addresses key management questions to provide answers that can inform future adaptive management reviews of the regional and statewide MPA network. For more information, please visit www.OceanSpaces.org.

MPA Monitoring Is Useful Beyond MPA Management

Information from MPA monitoring can facilitate better decision making on a variety of ocean issues, for example, informing fisheries management under the Marine Life Management Act and improving our understanding of how climate change affects marine systems.

New Partnerships

MPA monitoring provides an opportunity for new partnerships and the consideration of multiple forms of science and knowledge. This includes traditional ecological knowledge and local knowledge alongside academic and citizen science.

DATA COLLECTION & ANALYSIS

10
Ecosystem
Features



CONSUMPTIVE USES



NON-CONSUMPTIVE USES



MID-DEPTH ROCKY ECOSYSTEMS



ROCKY INTERTIDAL ECOSYSTEMS



KELP & SHALLOW ROCK ECOSYSTEMS



ESTUARINE & WETLAND ECOSYSTEMS



SOFT BOTTOM INTERTIDAL & BEACH ECOSYSTEMS



SOFT BOTTOM SUBTIDAL ECOSYSTEMS



DEEP ECOSYSTEMS & CANYONS



NEARSHORE PELAGIC ECOSYSTEMS

ASSESSING ECOSYSTEM CONDITION & TRENDS

How is the ecosystem doing?

Ecosystem Feature Checkup

Checkups are conducted by measuring a set of **vital signs** that provide a window into the health or condition of an ecosystem feature.

Examples may include:

Monitoring of the abundance and sizes of sea stars, red urchins, or lingcod.

Ecosystem Feature Assessment

More detailed and technical, **assessments** measure sets of **indicators** that together tell us about the condition of a particular part or **attribute** of an ecosystem feature.

Examples may include:

By monitoring shorebirds, we can draw conclusions about the condition of the plants and forage fish that they depend upon.

EVALUATING MPA DESIGN & MANAGEMENT DECISIONS

How are MPAs affecting the ecosystem?

Short-Term Questions

Short-term questions can be answered within the five year review periods recommended by the MLPA Master Plan.

Examples may include:

Are key habitats (e.g., kelp forests) represented and replicated across the regional MPA network?

How does placing an MPA boundary across a rocky reef affect the fishery in areas outside the MPA?

Long-Term Questions

Long-term questions can take several years to decades to answer and can help inform future adaptive management decisions.

Examples may include:

Are rocky reefs inside MPAs connected by adult movement or larval dispersal of fish species?

Is ‘spillover’ of fishery species affected by MPA size? How can MPAs be sized to balance fisheries benefits with ecosystem protection?