

How Long Will It Take to See Effects of Reserves?

Marine reserves protect ecosystems, simultaneously impacting different species, their physical habitats and their ecological interactions.

In 2003, ten fully protected marine reserves and two conservation areas were established in the Channel Islands region to protect representative marine habitats and species. Scientists expect to see many ecological changes in the reserves. However, marine species will respond differently, depending on their rates of growth and reproduction, historical impacts of fisheries, and their roles within the ecosystem.

- In general, species that grow quickly and produce many young are likely to show rapid increases in abundance and size following the establishment of reserves, whereas species with low productivity may take longer to realize these effects.
- Species that are targeted by fisheries, like the California spiny lobster, are likely to respond quickly to protection.
- Some species, like sea urchins, are expected to decline in response to increases in their predators (or other ecological interactions) in marine reserves.

Selected Species and Their Potential Responses to Marine Reserves

Species	Potential Response Time	Reason
CA sheephead CA spiny lobster	Fast	Removal of strong fishing pressure will allow increases in abundance and size.
Kelp bass Lingcod Bocaccio Cowcod	Moderate	Removal of strong fishing pressure will allow increases in abundance and size, but slower rates of growth and reproduction will prevent populations from responding quickly.
Garibaldi Rock wrasse Kelp rockfish	Slow	Species respond slowly to protection in marine reserves if their growth and reproduction are slow. In addition, species that are not targeted by fishing, such as garibaldi and rock wrasse, may not show differences inside and outside of marine reserves unless they are impacted by indirect ecological interactions (e.g., with predators or prey that are targeted by fisheries).