

**Potential Questions
for Marine Protected Area Monitoring
in the Channel Islands National Marine Sanctuary**

- I. Changes within Reserves Compared to Adjacent and Distant Areas
 1. Do species inside MPAs increase in size, numbers, richness/diversity and biomass relative to areas adjacent and distant from reserves?
 2. How do changes in size, numbers and biomass of animals and plants differ among reserves and how long do these changes take to occur?
 3. Does production increase after protection?
 4. Is production correlated to reserve size?

- II. Spillover
 1. Do adults and young move from reserves to non-reserve areas and if so, how far?
 2. Do adults and young move on a daily or seasonal basis or permanently to establish new territory?
 3. Does movement of adult fish and invertebrates from reserves increase catch outside the reserve?
 4. Does larval production in reserves contribute to an increase in populations outside reserves?
 5. If high larval production in reserves contributes to populations outside reserves, is there an increase in the number of fish available for fishing and, if so, which species?

- III. Habitat and Ecosystem Effects
 1. Do changes in fishing effort affect populations and/or habitats within and/or close to reserves?
 2. Does protection from fishing cause changes in ecosystem structure and function including potential trophic impacts?
 3. Does impaired water quality or other outside factors inhibit populations within reserves?