

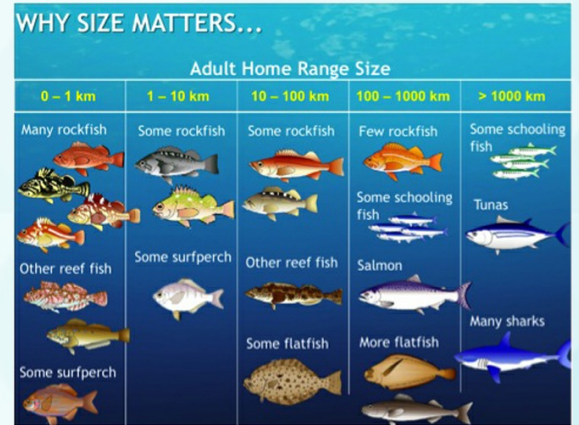
# Scientific Aspects of MPA Design

MPAs are a fairly simple concept, however, designing a MPA involves careful evaluation and critical planning. In California, a team of stakeholders including commercial and recreational anglers, tribal and government representatives, educators/researchers and conservationists created a set of scientific guidelines for the designation of California's MPA network.

## MPA Size

The size of a MPA determines how many different species are protected within the boundaries.

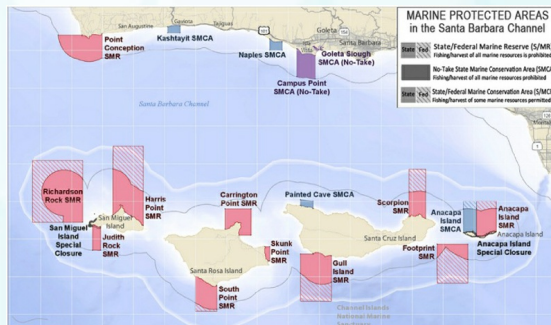
The home range of an individual species, or the distance they travel within a lifetime, needs to be considered. For instance, clownfish who have small home ranges can be protected by a small MPA, but in order to protect highly mobile species, like tuna, MPAs of a greater scale are necessary.



## Distance Between MPAs



California's MPAs were strategically designed as a network with the intention of replenishing populations both inside and outside of protected areas. The placement of any particular MPA considers the location, size and habitats of every other nearby MPA. In this way, MPAs are easily connected within the network and act synergistically rather than functioning as individual units.



For example, each Channel Islands MPA was designed considering the placement of the others. These protected areas are connected by larval dispersal, adult movement or both.

## Habitat Representation and Replication



To protect the vast biodiversity off California's coast, representative habitats were identified, and multiple instances of each habitat were protected.

To achieve the goal of protecting representative habitats and accommodate a suite of species and their different stages of life, multiple examples of the different habitats across the state including rocky reef, sandy bottom, kelp forest, open ocean, and estuaries were included in California's MPA network.

