

ECOSYSTEM-BASED MARINE PROTECTION

By Chad Nelsen

Ocean ecosystems are complicated. Ocean ecosystems are different than terrestrial ecosystems not only because they are more three-dimensional, but also because the “landscape” is in constant motion via currents, temperature fronts, and other dynamic physical, chemical and biological processes. A good analogy is the comparison of snowboarding to surfing. When snowboarding the snow conditions tend to be pretty static on a given day and the mountain doesn’t move. In comparison, when surfing the waves are changing constantly in pitch, speed and shape. The complexity of the ocean has made it a challenge to manage. As the ocean reports (Pew and US Commission on Ocean Policy) make clear, many of our ocean management efforts are failing. One means of improving our management of the ocean is to take an ecosystem-based approach. One way of doing that is through the establishment of Marine Protected Areas (MPAs). Instead of trying to manage a single species of fish or a specific activity in this complex and changing system, MPAs attempt to manage the complexity by protecting a chunk of an ecosystem. A networked set of MPAs attempts to protect a representative portion of a larger ecosystem. MPAs are being established around the world as an important step to protecting ocean ecosystems.

Reserva Marina Tres Palmas:

When the Surfrider Foundation first got involved with coastal issues in Rincón, Puerto Rico it was to stop some inappropriate coastal development. Once the projects were stopped, the campaign changed gears and began to think proactively about future protection. That is when a sea-to-summit strategy was hatched. The plan included protecting the wave and coral rich coastal waters and the watershed they were connected with. The first phase was to work on protecting the nearshore ocean ecosystem via a marine protected area. After years of community action, outreach and support from local fisherman, and communication with resource agencies, the Reserva Marina Tres Palmas was established in 2004. Since that time, thanks to support from NOAA and others, an intensive community-based process to create a management plan has been under way. Led by Dr. Manuel “Manolo” Valdes-Pizzini and his team at the Centro Interdisciplinario de Estudios del Litoral the plan is nearing

completion. The Reserva Marina Tres Palmas and community-supported management plan sets the stage for future protection of one of the world’s truly magical marine ecosystems.

Learn more at: www.surfrider.org/rincon

Marine Life Protect Act:

In response to the decline of ocean health all along the California Current that runs from Alaska to Baja, the California legislature passed the Marine Life Protection Act (MLPA) in 1999. The Act states, *Coastal development, water pollution, and other human activities threaten the health of marine habitat and the biological diversity found in California’s ocean waters. New technologies and demands have encouraged the expansion of fishing and other activities to formerly inaccessible marine areas that once recharged nearby fisheries. As a result, ecosystems throughout the state’s ocean waters are being altered, often at a rapid rate.*

To remedy these problems the MLPA calls for the establishment of a network of marine protected areas along the California coast. The MLPA calls for three types of protected areas: marine reserves, marine parks and marine conservation areas. Marine reserves are no-take areas and the others allow different degrees of fishing.

The MLPA and two associated acts provide for a comprehensively planned network of marine protected areas from Oregon to Mexico that are designed using the best available science to achieve clear conservation-based goals and that are enforced, monitored and adaptively managed.

Although this process faltered for several years, it is now moving along effectively through a public/private partnership called the MLPA Initiative. The Initiative is approaching the establishment of MPAs region by region. The Central Coast has been completed, the North Central Coast is near completion and the process is now focused on Southern California (Point Conception to Mexico).

Surfrider Foundation Chapters are playing an important role in supporting the MLPA process, working cooperatively with fishers, and developing community support for local MPA sites.

Learn more at: www.surfrider.org/mlpa
Chad Nelsen is Surfrider Foundation’s Environmental Director.



Before route elkhorn way.

WESLEY MERTEN



Some fish lie motionless on the sea floor.

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A lobster scurries for shelter.

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Amongst the curves and currents.

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Puerto Rico’s threatened elkhorn coral.

DREAMSTIME