

An Orange County Ocean Park



August 2008

IMAGINE

Imagine a kayak sliding over a lush kelp forest. Imagine a school of white sea bass gliding through this same forest. Imagine school children touching the magical Pacific waters. Imagine a free diver spotting white abalone. Imagine a mother showing her daughter the thrill of releasing her first fish. Imagine a place where all of this comes together. Imagine an Ocean Park.



Our concept of an Ocean Park marries conservation and participation. It is a multiple use area which embraces conservation and replenishment while providing a wide range of recreational, and where appropriate educational, research or commercial opportunities.

The Ocean Park concept is based on three principles. First and foremost, our ocean is a wonderful treasure which must be treated with respect and care. Second, proximity to millions of people has placed Orange County's nearshore resources at risk, at best, and in need of an active program of replenishment. Finally, the human element is integral to this environment and must be part of "the solution" and not simply considered the problem.

Ask any Californian what comes to mind when they hear the word "park" you will hear responses such as Central Park, Golden Gate Park, Mile Square Park, Griffith Park and Yosemite Park. These special places allow us as humans to interact with nature on nature's terms, where the average person (the city dweller/urban dweller) can feel and hear and taste and smell and enjoy a sense of wilderness and space. Interestingly, until now this "park" concept has been terrestrial in nature. Unfortunately, for a growing segment of Southern Californians, experiencing wilderness and space means watching the Nature Channel with the window open. Richard Louv has called this 'Nature Deficit Disorder.'¹ An Ocean Park might best be described as



¹ Richard Louv, *Last Child in the Woods: Saving Our Children From Nature Deficit Disorder* (Chapel Hill: Algonquin Books, 2005).

a nearby place where access and respect are united with a sense of wilderness: essentially “Yosemite Beyond the Beach.”



The term Ocean Park is not defined in law or regulation. Employing this term frees us to create a vision that blends the high habitat conservation values identified by California’s range of marine protected area designations and existing fisheries regulation, together with the essential part of any park, the human element.

More specifically, this vision of an ocean park is the reality of combining the appropriate elements of habitat protection with traditional fisheries



management and human interaction that can be accurately described as a holistic approach to caring for our resources. More importantly, setting up our ocean park on this grand scale as a discrete geographic area incorporating a range of marine protected areas accomplishes one other goal heretofore unobtainable—by law, all management decisions

(commercial fishing, recreational fishing and habitat protections) within this area are then made under one authority—the California Fish and Game Commission.

An Agenda for Action: Moving Regional Ocean Governance from Theory to Practice² conceded that:

For many decades, scientists, policy makers, and advocates have recognized the need to consider the relationships among all ecosystem components, including humans and nonhuman species and the environment in which they live, when making decisions about ocean and coastal resources and their use, protection, and management. This concept goes by a number of names, but the term “ecosystem-based management” is among the most common.

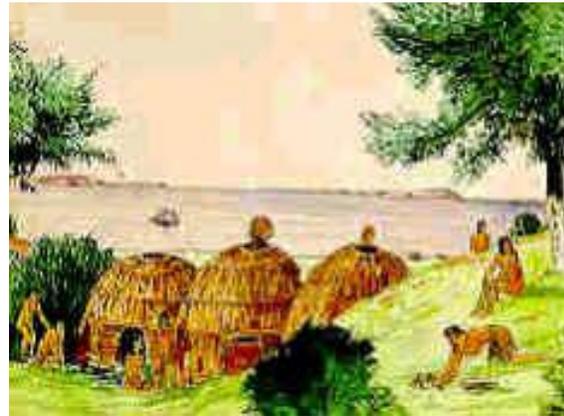
Today, although evolving, the California Department of Fish and Game still takes a species by species approach to fisheries management. While their goal may be ecosystem management, bifurcated authority has stifled this concept. The Marine Life Protection Act takes a valuable step towards ecosystem based

² Joint Ocean Commission Initiative and Monterey Bay Aquarium, “An Agenda for Action: Moving Regional Ocean Governance from Theory to Practice,” (August 2007) page 21.

management, however, until now, consideration of fisheries dynamics has been lacking. It is obvious that one cannot only consider a part of the whole. If one focuses exclusively on fisheries or predominately on habitat or solely on the human element, the impact of each on the other is missed. There is “a growing interest in developing practical approaches to ecosystem-based management of marine resources - managing activities that affect ocean and coastal resource in a way that considers the relationships among all ecosystem components, including humans and nonhuman species and the environment in which they live.”³ At a March 2007 workshop sponsored by the Joint Ocean Commission and the Center for the Future of the Oceans on regional ocean governance the human dimension was given the highest research priority.⁴ By blending an array of marine protected areas and the comprehensive fisheries management that comes statutorily attached, we need only season this with the human element to complete the picture of an ocean park.

Strangely, consideration of the human element is not universally accepted.

Historians concede that homo sapiens have lived on the west coast of the United States for over 10,000 years. During this time they have fished, traded seashells, altered the habitat, and enriched their lives and souls by the experience.⁵ The first marine protected areas occurred when tribal chiefs closed fishing or crabbing for conservation. And yet, “a key question in characterizing environmental ethics is whether or not humans are perceived as part of nature or separate from nature.”⁶



Whether or not humans are part of or separate from nature, the 36.8 million Californians, 80% of whom live within 30 miles of the coast, definitely have an impact on the marine environment. Any ocean plan must include not only what humans do to the ocean, be it overfish, pollute or other seemingly always negative impact, but what the ocean does for humans. The National Research Council⁷ itemizes only a part of this:

³ Ibid., page 4.

⁴ Ibid., page 16.

⁵ R. E. Johannes, “Traditional Marine Conservation Methods in Oceania and Their Demise,” *Annual Reviews of Ecology and Systematics* 9:349-64, 1978.

⁶ M. J. McDonnell and S. T. A. Pickett (eds.), *Humans as Components of Ecosystems* (New York: Springer-Verlag, 1993).

⁷ Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States; Ocean Studies Board; Commission on Geosciences, Environment, and

All marine systems provide a range of benefits to humans, even if their resources are not exploited. These benefits span a spectrum from direct on-site user benefits to indirect benefits accruing to individuals who do not use the marine ecosystem directly. On-site user benefits are generally associated with consumptive uses (recreational and commercial fisheries; seaweed harvesting; shell, coral, and sponge collecting), but important nonconsumptive uses (tourism, diving, bird and whale watching, the aesthetics of natural areas) are also provided by marine ecosystems. Many of these on-site activities generate income directly to participants and indirectly to coastal economies that service the activities. Even more difficult to evaluate, but equally real, are the *heritage or existence values* associated with the public's appreciation of unique and natural systems. In addition, marine ecosystems provide hard-to-quantify off-site benefits as components of regional and global climatological, biological, and chemical systems, including removal of carbon dioxide from the atmosphere, production of oxygen, moderation of coastal temperatures, and powering terrestrial hydrologic cycles (Daily et al., 1997).

Fortunately there are many scientists who do recognize this human element. Ecosystem-based management has been defined as “an integrated approach to management that considers the entire ecosystem, including humans. The goal of ecosystem-based management is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need.”⁸

The Durban Accord which was formulated by the Vth World Parks Congress found that a new paradigm was needed for protected areas. “This approach demands the maintenance and enhancement of our core conservation goals, equitably integrating them with the interests of all affected people.”⁹ The Accord further notes “In this way the synergy between conservation, the maintenance of life support systems and sustainable development is forged.”¹⁰



The Convention of Biological Diversity defines ecosystem approach as:

a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives of the Convention. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among

Resources; National Research Council, *Marine Protected Areas: Tools for Sustaining Ocean Ecosystems*, (Washington D.C.: National Academy Press, 2001).

⁸ COMPASS (Communication Partnership for Science and the Sea), *Scientific Consensus Statement on Marine Ecosystem Based Management*, released by on March 21, 2005. (signed by 220 academic and policy experts), August 18, 2008, <http://compassonline.org/pdf_files/EBM_Concensus_Statement_v12.pdf>.

⁹ Vth World Parks Congress, *The Durban Accord* issued March 2003, August 18, 2008, <<http://cmsdata.iucn.org/downloads/durbanaccorden.pdf>>.

¹⁰ Ibid.

organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems.¹¹

This interrelationship of fishery management, habitat conservation, and the human element is seen as so important by the IUCN, and particularly members of its World Commission on Protected Areas (WCPA) that the Durban Action Plan has two over-arching outcomes, namely:

1. Protected areas fulfill their full role in biodiversity conservation
2. Protected areas make a full contribution to sustainable development¹²

In the United States, the issue of sustainable development has been framed by examining user conflict and economic development. In a Stanford Environment Law Review article¹³ Deborah Sivas and Meg Caldwell identify the “twin goals of resource protection and conflict resolution.” The criteria identified for meeting these goals include coordination among regulating agencies relying on a fundamental set of guiding management principles in order to develop a mechanism and mandate for marine planning which will reduce uncertainty for ocean users. Their article raises interesting questions with regards to the ocean as a source of energy through placement of wind farms, wave farms, desalinization projects.¹⁴

The advantages as noted by Tundi Agardy is “it allows a strategic allocation of uses based on a determination of an area’s suitability for those uses, and reduction of user conflicts by separating incompatible activities.”¹⁵

¹¹ Convention on Biological Diversity, Programmes and Issues, August 18, 2008, <<http://www.cbd.int/programmes/cross-cutting/ecosystem/>>.

¹² Durban Accord and Action Plan Working Group, *The Durban Action Plan, Revised Version, March 2004*, August 18, 2008, <<http://cmsdata.iucn.org/downloads/durbanactionen.pdf>>.

¹³ Deborah A. Sivas and Margaret R. Caldwell, “A New Vision For California Ocean Governance: Comprehensive Ecosystem-Based Marine Zoning,” *Stanford Environmental Law Review*, Vol. 27:208-270, page 245.

¹⁴ *Ibid.*, page 212.

¹⁵ Tundi Agardy, Ph.D., *Ocean Zoning is Coming! Ocean Zoning is Coming!, Music to Some Ears, A Fearsome Sound to Others*, posted September 27, 2007, to World Ocean Observatory, August 18, 2008, <<http://www.thew2o.net/drupal/node/46>>.

Ocean Park Strategy

Implementation of the Ocean Park strategy is challenging. Terrestrial management did not suddenly evolve to a level of protection that was considered adequate. It would be presumptuous of us to assume that we can avoid missteps in the implementation of the strategy the first time out. Any path we choose will likely either overshoot or undershoot, or both, our desired mark. However, if properly designed we can learn about both kinds of errors and through adaptive management implement needed changes moving us closer to the proper mark. Therefore, the Ocean Park strategy attempts to strike a balance between protection, learning about what actually impacts our ecosystems, and economic opportunities.

The National Academy of Science recognizes this lack of knowledge about managing the oceans. It states:

Zoning can be useful as an experimental tool, especially as a component of adaptive management. It can be difficult to determine the relative effects of fishing, environmental degradation, and other human perturbations without large-scale, long-term empirical studies in areas where the suspect activity or most activities have been curtailed. User groups often argue that their activities are not harmful and should not be restricted within MPAs. Recreational users argue that catch-and-release fisheries and diving-related tourism are nonconsumptive and should be allowed to continue in a fully protected area. Yet damage to ecosystems may occur from such activities, and opposition may arise if some users believe that the MPA is being designed to reallocate rather than conserve resources. For example, commercial fishers may argue that their access is being restricted to benefit the recreational fishing industry. By utilizing different sets of restrictions for different areas, experimental zoning schemes can help determine the impacts of different activities and avoid potential conflicts over allocation.¹⁶

Our Ocean Park strategy carefully considers needs of the public to provide access where feasible.

One advantage of designing an ocean park over creating the land based equivalent is that the State of California is the “owner” of the waters from the high tide mark out three miles. “Because coastal waters are a public trust resource, the marine environment is fundamentally and categorically different from the terrestrial environment where regulation



¹⁶ Committee on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States; Ocean Studies Board; Commission on Geosciences, Environment, and Resources; National Research Council, op.cit., p. 119.

must accommodate existing private property rights and ownership patterns. Ocean governance policy starts from the basic premise that regulators must manage marine public trust resources in the best long-term interests of the larger community.”¹⁷

Considering both the fact that ownership of the waters and submerged lands of the state and its resources are held in trust for the citizens of the state combined with the knowledge that the narrow three mile strip adjoining our shores makes up only a fraction of the essential habitats for many species moving through these state waters it’s very tempting to turn all state waters into an Ocean Park. However, to get there some smaller steps need to be taken. The Ocean Park strategy envisioned addresses a wide range of interests within the Ocean Park proposal which will help establish a significant amount of new knowledge about various activities in the ocean and their impacts.

The Monterey Bay Aquarium and Joint Ocean Commission Initiative in their “An Agenda for Action: Moving Regional Ocean Governance from Theory to Practice”¹⁸ notes some of the advantages that may result from an Ocean Park strategy as follows:

- Identify or create jurisdictional boundaries that are large enough to manage resources at the appropriate ecosystem scale;
- Mediate conflicts between and among human uses of a marine area, as well as conflicts between human uses and the protection of essential ecosystem functions;
- Allow for the early identification and resolution of conflicts before damage is done to the environment or investments;
- Give economic interests certainty to engage in long-term planning without interference from incompatible uses;
- Complement existing, single-sector regulatory regimes and mitigate the effects of their fragmentation by addressing multiple, cumulative impacts to a marine ecosystem;
- Enable more effective use of scarce resources for management activities such as monitoring, enforcement, and training; and
- Adapt to the marine environment a practical tool that is already familiar from its extensive application in terrestrial settings.

In many ways the Ocean Park strategy will try to incorporate the UNESCO Biosphere Reserve Programme principles in which “core areas,” “buffer zones,”

¹⁷ Sivas, op. cit., page 227.

¹⁸ Joint Ocean Commission Initiative, op. cit., page 24.

and “transition zones” work together to form a synergy.¹⁹ In the Biosphere Programme, core areas are highly protected, minimally disturbed areas somewhat akin to California’s state marine reserves. In a buffer zone compatible activities such as recreation, ecotourism, and research are allowed. A buffer zone may surround or adjoin the core area. These are combined with transition zones where local communities, non-governmental organizations, business and other interested parties manage and develop the area’s resources. Although these three zones as originally conceived were concentric circles, in practice they have been implemented in many different ways in order to meet the local needs and conditions. Flexibility is seen as the concept’s biggest strengths. Biosphere Reserves are included in many nationally designated protected areas and as World Heritage Sites.



¹⁹ “Visions for a Sea Change, Report of the First International Workshop on Marine Spatial Planning,” Intergovernmental Oceanographic Commission and the Biosphere Programme, (UNESCO Headquarters, Paris, France, 8-10 November 2006), page 11.

Initial Orange County Ocean Park Objectives

While we propose a stakeholder group to actually define what types of activities or marine protected areas that should be considered within the larger Orange County Ocean Park, the initiators of the project have the following objectives.

1. Provide reference areas from which baselines can be established to identify both successes and failures of the Park itself and identify areas where adaptive management can be applied to achieve objectives.
2. Identify activities that on a socio-economic level provide additive value to our marine resources through the more natural abundances and size structure of living resources that might be achieved via a park such as catch and release fishing, tourism, reduced take, education, and study.
3. Provide for restoration and enhancement projects such as reef and kelp restoration compatible with the other objectives.
4. Identify ecosystem keystone species and help determine levels of abundance necessary for ecosystem health.
5. Protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.
6. Operate cohesively as a network both within the Ocean Park and in concert with other MPAs with shared objectives.
7. Help provide an economic base upon which enforcement and monitoring can be enabled.
8. Design a network that operates on sound scientific guidelines.
9. Allow for vertical zoning and provide special gear prohibitions to provide additional harvest opportunities consistent with the other objectives of the park.
10. Provide a buffer for core fully protected areas from activities damaging to natural ecosystems thereby enhancing both enforcement and results.

The above initial goals represent a melding of the objectives outlined in the California Marine Life Protection Act and California Ocean Protection Act as advised by the National Academy of Science. Some specifics within these objectives mirror certain conservation concerns of the authors which may be augmented or modified as the process of designing the Ocean Park proceeds.

Comparison of Ocean Park Objectives with Marine Life Protection Act Goals

The Marine Life Protection Act (MLPA) directs the Fish and Game Commission to adopt a Marine Life Protection Program with the following goals:²⁰

- (1) To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.
- (2) To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.
- (3) To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
- (4) To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.
- (5) To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.
- (6) To ensure that the state's MPAs are designed and managed, to the extent possible, as a network.

The MLPA further specifies that the program include the following elements:²¹

- (1) An improved marine life reserve component consistent with the guidelines in subdivision (c) of Section 2857.
- (2) Specific identified objectives, and management and enforcement measures, for all MPAs in the system.
- (3) Provisions for monitoring, research, and evaluation at selected sites to facilitate adaptive management of MPAs and ensure that the system meets the goals stated in this chapter.
- (4) Provisions for educating the public about MPAs, and for administering and enforcing MPAs in a manner that encourages public participation.
- (5) A process for the establishment, modification, or abolishment of existing MPAs or new MPAs established pursuant to this program, that involves interested parties, consistent with paragraph (7) of subdivision (b) of Section 7050, and that facilitates the designation of MPAs consistent with the master plan adopted pursuant to Section 2855.

²⁰ California Fish and Game Code Section 2853(b)(1)-(6).

²¹ California Fish and Game Code Section 2853(c)(1)-(5).

While approaching the issue with different emphasis, the objectives of the Ocean Park and the goals of the MLPA are quite similar.

- Both envision undisturbed areas, called reserves in the MLPA, to provide a baseline to determine the effects of actions (Ocean Park Objective 1 and MLPA Elements 1 and 3)
- Both envision human interaction with the marine environment, although on different bases (Ocean Park Objective 2 and MLPA Goal 3 and Element 4)
- The Ocean Park focuses on restoration and enhancement while the MLPA focuses simply on protection (Ocean Park Objective 3 and MLPA Goals 1 and 2)
- Both look at ecosystem health, the MLPA noting marine life populations and the Ocean Park looking at ecosystem keynote species (Ocean Park Objective 4 and MLPA Goal 3)
- Marine natural heritage is addressed the same (Ocean Park Objective 5 and MLPA Goal 4)
- Both use the concept of synergy of related protected areas by way of networks (Ocean Park Objective 6 and MLPA Goal 6)
- The MLPA recognizes the need for monitoring and enforcement while the Ocean Park's objective is to provide a means to finance these (Ocean Park Objective 7 and MLPA Goal 5 and Element 3)
- Both are based on sound scientific guidelines (Ocean Park Objective 8 and MLPA Goal 5)
- The MLPA consistently emphasizes the need for objectives and a process for making changes to the program (MLPA Goal 5, Elements 2 and 5)
- The Ocean Park Objectives recognize that the marine ecosystem is three dimensional, unlike terrestrial parks which provides additional flexibility in meeting competing goals (Ocean Park Objective 9)
- The Ocean Park also specifically recognizes the importance of the interrelationship of different regulations (Ocean Park Objective 10)

The language of the MLPA references marine protected areas. But what exactly is a marine protected area? The law²² reads:

(c) "Marine protected area" (MPA) means a named, discrete geographic marine or estuarine area seaward of the mean high tide line or the mouth of a coastal river, including any area of intertidal or subtidal terrain, together with its overlying water and associated flora and fauna that has been designated by law, administrative action, or voter initiative to protect or conserve marine life and habitat. An MPA includes marine life reserves and other areas that allow for specified commercial and recreational activities, including fishing for certain species but not others, fishing with certain practices but not others, and kelp harvesting, provided that these activities are consistent with the objectives of the area and the goals and guidelines of this chapter. MPAs are primarily intended to protect or conserve marine life and habitat, and are therefore a subset of marine managed areas (MMAs), which are

²² California Fish and Game Code Section 2852(c).

broader groups of named, discrete geographic areas along the coast that protect, conserve, or otherwise manage a variety of resources and uses, including living marine resources, cultural and historical resources, and recreational opportunities.

As seen in the definition, an MPA includes marine reserves. Under the Marine Managed Areas Improvement Act,²³ MPAs include the following classifications:

- (1) State marine reserve [which parenthetically is defined slightly differently than in the MLPA],
- (2) State marine park, and
- (3) State marine conservation area.

In the ocean park concept, we talk of “areas.” These “areas” would, if so designated, clearly meet the definition of an MPA.

In principle, the goals of the MLPA and objectives of the Ocean Park are in sufficient alignment that an Ocean Park can be considered a marine protected area, or a collection of MPAs, in the MLPA process.

However, based on the scientific guidelines used in the central and north central regions in the Marine Life Protection Act Initiative (MLPAI) process, the ocean park would receive a very low conservation rating, despite its obvious



benefits to the marine ecosystem. Why? The current guidelines provide that the lowest rating of an area determines the conservation value of the entire complex. [Many MPAs are designed as a combination of different regulations in contiguous areas but would be considered one MPA in the MLPAI process.] Hence,

although the Ocean Park will contain areas where no consumptive activity is allowed, the fact that aquaculture (raising abalone say) or allowing bottom fishing if certain methods are used is considered appropriate in the artificial reef area, would automatically devalue the entire complex.

Additionally, although the MLPA stresses the use of adaptive management, the science guidelines actually preclude the comparison of benefits of different approaches. The importance of the concept of adaptive management was so important to the authors of the legislation that it is one of only four definitions

²³ California Public Resources Code Sections 36600-36620.

found in the act itself.²⁴ Unfortunately the Science Advisory Team guidelines provide that only one design qualifies as meeting the conservation goals. In our Ocean Park we intend to explore different types of MPA design in order to learn what works best under different circumstances. It is intended that the Ocean Park itself be a learning experience and change according to lessons learned.

²⁴ California Fish and Game Code Section 2852(a).

How an Ocean Park Will Function

As envisioned the Ocean Park will be comprised of several areas in which different activities will be permitted. Some areas will be set aside as a baseline and for research. One of the premises which we hope the Park will test is that we can do a better job of managing the ocean than simply leaving it fallow. Other areas may include aquaculture, reestablishment of kelp and white abalone, an artificial reef, fishing and diving areas, and areas for families.

Destructive fishing gear such as bottom trawls and gill nets would be completely banned. Sustainable fishing methods and gears, such as catch and release, hook and line, circle hooks, should be considered. Some commercial fishing may also be appropriate, urchin diving during the reestablishment of kelp comes immediately to mind.

The Monterey Bay Aquarium and Joint Ocean Commission Initiative in their *Agenda for Action: Moving Regional Ocean Governance from Theory to Practice*²⁵ noted one approach to be taken when designing an Ocean Park.

The approach generally includes the following steps, as expressed in recent academic and policy articles:

- Define the place or area to be managed
- Map the living and nonliving resources within that defined area
- Develop a science-based plan that sets priorities for use and conservation of ocean resources within the defined area to achieve measurable ecological, economic, and social objectives
 - Designate geographic zones to site desired human activities in space and time
 - Formulate rules, licenses, and permits governing uses in specific zones to achieve clear regulatory authority and rules for decision making
 - Set timelines and provide accountability
 - Establish programs to monitor uses and enforce requirements
 - Create mechanisms to periodically review and adjust the system
 - Incorporate public and stakeholder participation in all steps
 - Provide dependable funding

A park should provide spatial and temporal compatibility planning consistent with ecological function, protect valuable ecosystem goods and services, accommodate current and future use patterns, and enhance regulatory certainty for coastal ecosystem users.²⁶

In summary, key elements to be considered in locating and designing zones are:

²⁵ Joint Ocean Commission Initiative, *op. cit.*, page 23.

²⁶ Sivas, *op. cit.*, page 226.

- Topography
- Oceanography
- Distribution of biotic communities
- How to design systems of permits, licenses and use rules for each zone
- Establish compliance mechanisms
- Create programs to monitor, to review, to fund and to adapt the zoning system
- Consider human use

These should all be comprehensive, adaptive, and participatory and designed to resolve conflicts among multiple uses and the ecosystem.²⁷

Visions for a Sea Change, Report of the First International Workshop on Marine Spatial Planning²⁸ recognizes that many marine uses are compatible with one another. Some marine uses conflict with one another (use-use conflicts) while others are incompatible with ecosystem functions (use-environment conflicts). However, by managing the location of human activities in space and time and the performance of human activities (e.g. pollutant discharge), many of these conflicts can be avoided. The Ocean Park strategy is to reduce the conflicts. By recognizing the human element within both the planning process and the end result, the Ocean Park can create a more “acceptable solution” for stakeholders.

²⁷ Ibid., page 247.

²⁸ Ibid., page 18.

Stakeholders

As with the MLPA, the development of and planning of the ocean park should include a high level of participation by the stakeholders. Those seen as stakeholders include:

CITIZENS OF THE STATE OF CALIFORNIA



Boaters



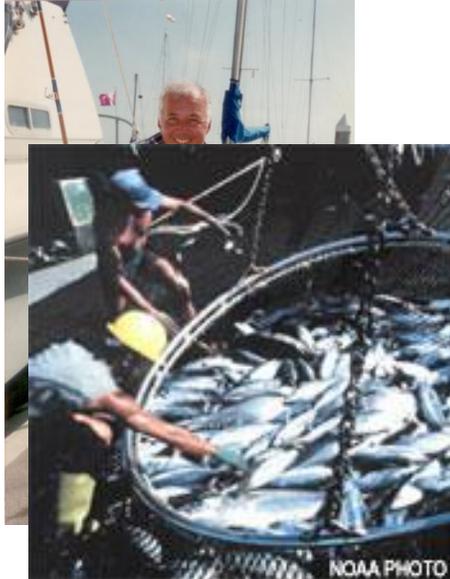
Divers



SURFERS

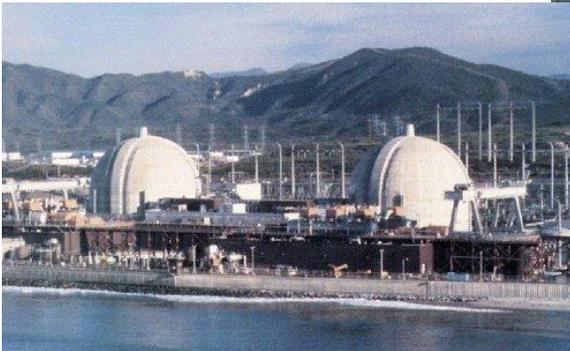


Fishermen





BUSINESSES



Conclusion

The Pacific Ocean off the coast of Orange County is a treasure which needs to be admired, be taken care of, and be used. These are not mutually exclusive objectives. The Orange County Ocean Park is one method to address conflicts among users and ecosystem concerns. All of our lives would be the poorer if not for the ocean, its bounty, and our enjoyment not only of it, but on it, in it and under it.



Bibliography

Agardy, Tundi, Ph.D., "Ocean Zoning is Coming! Ocean Zoning is Coming! Music to Some Ears, A Fearsome Sound to Others," posted September 27, 2007, to World Ocean Observatory which can be found at: <http://www.thew2o.net/drupal/node/46>.

Commission on the Evaluation, Design, and Monitoring of Marine Reserves and Protected Areas in the United States: Ocean Studies Board; Commission on Geosciences, Environment and Resources. Marine Protected Areas: Tools for Sustaining Ocean Ecosystems. Washington D.C.: National Academy Press, 2001.

COMPASS (Communications Partnership for Science and the Sea). Scientific Consensus Statement on Marine Ecosystem Based Management. March 21, 2005. The entire statement can be found at: http://compassonline.org/pdf_files/EBM_Consensus_Statement_v12.pdf.

Convention on Biological Diversity, Programmes and Issues which can be found at: <http://www.cbd.int/programmes/cross-cutting/ecosystem/>

Durban Accord and Action Plan Working Group. The Durban Action Plan, Revised Version, March 2004. Which can be found at: <http://cmsdata.iucn.org/downloads/durbanactionen.pdf>.

Intergovernmental Oceanographic Commission and the Biosphere Programme, Visions for a Sea Change, Report of the First International Workshop on Marine Spatial Planning, 8-10 November, 2006. Can be found at: <http://www.unesco-ioc-marinesp.be/uploads/documentenbank/322a25f624fcb940dc70d0b3b510de24.pdf>

Johannes, R.E. "Traditional Marine Conservation Methods in Oceania and Their Demise," Annual Reviews of Ecology and Systematics, 9:349-64, as reported in NAS.

Joint Ocean Commission Initiative and Monterey Bay Aquarium. An Agenda for Action: Moving Regional Ocean Governance from Theory to Practice. August 2007.

Louv, Richard. Last Child in the Woods: Saving Our Children From Nature Deficit Disorder. Chapel Hill: Algonquin Books, 2005.

McDonnell, M.J. and Pickett, S.T.A. (eds.). Humans as Components of Ecosystems. New York: Springer-Verlag, 1993.

Sivas, Deborah A. and Caldwell, Margaret R. "A New Vision for California Ocean Governance: Comprehensive Ecosystem-Based Marine Zoning," Stanford Environmental Law Review, Vol. 27:208-270.

Vth World Parks Congress. The Durban Accord. Issued March 2003. At: <http://cmsdata.iucn.org/downloads/durbanaccorden.pdf>>.