Draft RAP Meeting Minutes

Research Activities Panel
September 13, 2004
9 am – 4:30 pm
Bren School of Environmental Science and Management

Participants
Bob Warner, UCSB, SAC Research Seat
John Ugoretz, DFG
Sarah Fangman, CINMS
Dan Brumbaugh, SAC Research Alternate
Dean Wendt, Cal Poly SLO
Kevin Lafferty, USGS
Fred Piltz, MMS
John Dixon, Coastal Commission
Jenn Caselle, MSI PISCO Science Coordinator
Mike Murray, CINMS SAC coordinator
Chris Mobley, CINMS Manager
Christy Pattengill-Semmens, REEF

RAP Members Absent
Dave Siegel, ICESS
Hunter Lenihan, Bren
Dan Richards, NPS
Jack Engle, MSI
Jessie Alstadt, Channel Keeper
Churchill Grimes, SWFSC

Audience
Chris Miller, Commercial Fisherman
Michael Hanrahan, Business Working Group
Carl Gwinn, REEF, UCSB

9 am. Welcome and Introductions (Robert Warner)
Introduction of the RAP
The RAP includes representation chosen from a number of different institutions.
Overview of Agenda

Brief Sanctuary Overview (Chris Mobley)
Welcome and brief description of the role of the RAP in Sanctuary management.
The RAP

- Provides the opportunity to connect research and policy.
- Influences CINMS policy decisions.
- Provides a community service through the Sanctuary Advisory Council.
- Provides an opportunity for information sharing (e.g., MBNMS SiMON project)
- Is needed to ensure that Sanctuary research is rigorous and coordinated.
- Will help fill gaps in research.

Sarah Fangman coordinates the Sanctuary Research Program. A new operations manager will be appointed to the Sanctuary this year to relieve Sarah of some of the many tasks she has assumed. By removing the burden of boat operations from Sarah, she may engage in other tasks, including conducting, coordinating, and seeking funds for research.

The Sanctuary owns two vessels, Shearwater and Xantu, that are available for research, education, and outreach, and an airplane that has been used for aerial monitoring. The Shearwater can be used to deploy remotely operated vehicles. In the future, the west coast sanctuaries may purchase an ROV for research. Next year, the Sanctuary will test an unmanned aerial vehicle. The Sanctuary program will partner with the National Ocean Service to create and Ocean Observing System.

Overview of Sanctuary Advisory Council and Working Groups (Mike Murray)
The Channel Islands National Marine Sanctuary was founded in 1980. The Sanctuary Advisory Council was founded in 1998. The group has 20 seats consisting of half community and half government representatives.

Role of the SAC
- To provide advice on resource management and use.
- To identify research and monitoring objectives
- To assist with education and outreach
- To build better partnerships

SAC Working Groups
- Sanctuary Education Team
- Recreational Fishing Working Group
- Commercial Fishing Working Group
- Conservation Working Group
- Research Activities Panel

Focus of the SAC
- Federal MPA process (top focus)
- MPA Education, Monitoring and Evaluation
- MPA Enforcement
- Management Plan (Fall 2004)
- Water Quality
- Marine Acoustics
- Multicultural Education

Introduction to Sanctuary Research and Monitoring Activities and the role of the Research Activities Panel (Sarah Fangman)

Goals of the Sanctuary research program
- Provide best information for management efforts
- Understand socioeconomic effects of management

- Conduct research and monitoring.
- Partner with other organizations, e.g., ROV program with DFG,
- Provided funding to scientists in community to conduct monitoring
- Make research platforms available for scientists (Shearwater, Xantu, aircraft)
- Issue permits for research

Possible opportunities for the RAP

- Share results from research ongoing in the Sanctuary or related to the Sanctuary
- Prioritize research and monitoring activities
- Plan research activities in the Sanctuary
- Contribute advice on allocation of funds for collaborative research projects
- Contribute advice on allocation of effort for research vessels
- Provide advice on scientific aspects of management problems (e.g. NEPA, MPA monitoring)
- Provide input on scientific questions that affect policy decisions (e.g., review permit requests for scientific research to ensure the least possible impact to Sanctuary)
- Engage students in Sanctuary internships

RAP logistics

- Quarterly meetings (for important questions and more political topics)
- Possible joint meetings with the Channel Islands Research Activities Group
- Email communication through a listserv (for simple problems)

Role of the RAP Chair and RAP Membership (Bob Warner)
RAP members represent research institutions in the region.
Members should help define membership.

John Ugoretz (CA DFG)

John is interested in input about research to agencies from scientists who are working in the region. The DFG cannot fund all of the research that is needed in the region, so DFG is relying on partnerships with private scientists in order to conduct research needed to answer scientific questions that are relevant to policy. John serves on the RAP to facilitate information sharing between scientists and DFG. He would like to make scientists aware of the information needs of the DFG so that scientists may choose to direct their research in such a way that it will assist the DFG to acquire information that is useful for management. John may not be able to serve as the RAP representative, and possible alternates include Mary Bergen, Chuck Vallier, and Ian Tanaguchi. John is helping to develop the research and monitoring programs of the state MPAs in the CINMS.

The DFG utilizes a research vessel, the Garibaldi, which is a 45-foot Maine lobster boat with a large aft deck. The DFG has the funds to install a crane and bow thruster. The Garibaldi is a good platform for diving and is ideal for 2-3 days trips to the islands. The vessel sleeps 4 people in bunks and 2 people on seats. Currently, the vessel resides in Ventura. The Garibaldi is available to research scientists, provided the

scientists are investigating questions that are relevant to the DFG management and policy.

John also is engaged in the ROV surveys, using the Sanctuary vessel, Shearwater. An ROV survey will occur this week. The ROV project is well funded and has been ongoing for 1.5 years. The DFG is reviewing the data collected and trying to figure out how best to quantify the data.

John is working with PISCO at UCSB and other research scientists and institutions to conduct SCUBA surveys of the shallow subtidal region in and around the state MPAs and other sites throughout southern California. Funding is guaranteed for this project only in 2004. John is hopeful the funding will be found to continue the intensive subtidal monitoring.

John serves as a mentor to students from the Bren School of Environmental Science and Management. This year, John is mentoring 5 students on a project related to monitoring lobster in the Channel Islands. The students are using logbook data and possibly lobster tagging to evaluate the status of lobster in and around MPAs. The project lacks funding to do a full tagging study. John is hopeful that the DFG can conduct trapping and long-linging surveys in conjunction with ROV studies.

James Lindholm (Pfleger Institute for Environmental Research)

The Pfleger institute is a research institute in Southern California that is supported by private funding. The staff is approximately 10 people and the institute has several research vessels. Dr. Michael Domeir is the chief scientist for PIER. The research focus of the institute includes Southern California, particularly the Channel Islands. Other locations where research is being conducted include Baja California and Indonesia. The primary focus of research has been white seabass and black seabass, but the topics of research have expanded to other species of recreational interest as well.

PIER has acoustic arrays around Anacapa and Santa Barbara islands that are used to track fish movement. PIER has tagged 49 kelp bass and sheephead for the study. PIER is interested in tagging additional sheephead, kelp bass, cabezon, lingcod and lobster. The objective of the research program is to produce detailed information on movement of a spectrum of priority species for monitoring. The acoustic array can track more animals than PIER can tag, so other scientists could use the array. However, as more people tag marine organisms, more signals are picked up by adjacent arrays. If anyone on the RAP knows people using Vemco Equipment—please contact Chris Lowe, Jenn Caselle, or James Lindholm.

Donna Schroeder (UCSB)

Donna works with Dr. Milton Love and Mary Nishimoto at UCSB. Topics of research in Love Lab include the effects of development of the offshore oil industry and the effects of oil platforms on marine organisms. The Love Lab is focused on rockfishes, which are of commercial and recreational importance. Dr. Love has monitored rockfish and other species in deepwater sites within MPAs. Mary Nishimoto, an oceanographer, has contributed to the growing understanding of the effects of oceanographic patterns on rockfish recruitment and survivorship. Donna Schroeder has participated in intensive study of nearshore kelp communities as part of the state effort to monitor MPAs. Donna serves on the board of directors of the Marine Sanctuary Foundation and she is involved

with the Collaborative Marine Research Group. The Marine Sanctuary Foundation has encouraged scientists to collaborate with local people to get involved with monitor and research the Channel Islands. Donna is working to make the Marine Sanctuary Foundation a catalyst for small-scale research projects that respond to emerging management needs.

Dan Brumbaugh (American Museum of Natural History, Sanctuary Advisory Council)

Dan is not directly connected with the process to establish MPAs in the Channel Islands, but he observed the process for many years. Dan works in the Bahamas on a Large Biocomplexity Project to design and implement a network of MPAs.

Dean Wendt (Cal Poly, San Luis Obispo)

Dean has not conducted active research in the Channel Islands, but he is interested in ocean management. He is an ecologist with particular interest in physiology of larval stages of marine invertebrates. He joined the Marine Interests Group of San Luis Obispo to consider ocean management in the county. The Marine Interest Group is a group of stakeholders with broad representation of the community. The group produced mission statement: to sustain and enhance marine resources of the San Luis Obispo county. As part of the mission, the group is considering possible expansion of the Monterey Bay National Marine Sanctuary. When stakeholders brought information together, it was discovered that little is known about marine resources in San Luis Obispo county. The group developed a collaborative research program, which was initially funded by WWF, to work with commercial and recreational fishers to survey rockfish populations as part of state monitoring. The Resources Legacy Foundation supports tagging and more frequent data collection. Dean also started working with commercial fishers from Morro Bay to study cabezon. He has worked with Jenny Dugan (UCSB) to conduct bird surveys and water quality assessment using sand crabs. By joining the RAP, Dean is seeking a connection to research activities in the Channel Islands National Marine Sanctuary. He also has established similar connections with the Monterey Bay National Marine Sanctuary.

Kevin Lafferty (USGS)

Kevin provides research support for the Department of Interior and other federal and state government agencies. His primary focus is the study of species interactions, particularly parasites. Kevin has continued the decades-long research on kelp forests in the Channel Islands initiated by Gary Davis. He has asked basic ecological questions about species interactions in the presence and absence of fishing. His research has lead to his general interest in the design and management of MPAs. Although some of the general responses to MPAs are well known (e.g., increased size and abundance of targeted species), Kevin is interested in other indirect effects of MPAs. He is interested in the roles of conservation and fisheries in ocean management. Kevin has attempted to formalize the contributions of different priorities for management by using mathematical models to design MPAs. Another aspect of his research has been how to restore nesting shorebirds with a minimum impact to beach users.

Fred Piltz (Minerals Management Service)

Minerals Management Service has an interest in marine research, particularly marine mammal and seabird surveys and habitat mapping. Over the years, MMS has funded research in various disciplines, including physical oceanography, marine biology, and socioeconomic studies. There is a tradition of maintaining long-term monitoring programs, such as MaRINE and MMIRT. For the last 5 years, MMS has sponsored studies of fish and invertebrate populations around platforms and on shell mounds below platforms. MMS is continuing to fund research on rockfish with Milton Love and Chris Lowe (?). For over 10 years, MMS sponsored the Coastal Marine Institute at UCSB.

MMS has worked with USGS to create a multibeam map of eastern end of the Santa Barbara Channel. USGS collected tar samples from seeps and the beach. The samples can be identified as various crude oils that come from tar seeps.

After a long-term study, Scripps will remove arrays from the Santa Barbara Channel and Santa Maria Basin in December 2004.

Future studies may be related to decommissioning oil and gas platforms. It is not clear when the oil platforms will cease production and be removed or modified. MMS would like to predict environmental impacts of removing platforms.

Carter Olmann will evaluate nearshore current patterns in the context of offshore currents.

MMS may help to sponsor another California and the World's Ocean Conference in Spring 2006 and possibly contribute to the next California Islands Symposium.

John Dixon (California Coastal Commission)

The purpose of the California Coastal Commission is to protect marine resources and public access to the coast. The primary tool for achieving these objectives is through constrained development permits. For example, liquid natural gas and oil extraction requires permits that must be approved by the Coastal Commission. The Commission interacts and cooperates with agencies with similar missions. John is participating in the RAP because he is interested in ongoing research. Results from research may affect Coastal Commission decisions (e.g., work by Lafferty on snowy plovers affected decisions by the Commission). For many years, John was a research at the Marine Science Institute at UCSB. He studied kelp forests, particularly the fisheries aspects of sea urchin biology. John and his collaborators, Steve Schroeder and Tom Ebert, documented weekly recruitment of sea urchins for 14 years.

Jenn Caselle (Science Coordinator with PISCO—The Partnership for Interdisciplinary Studies of Coastal Oceans)

PISCO is an academic consortium of 4 universities, including UCSB, UC Santa Cruz, Hopkins Marine Station, and Oregon State University. PISCO was formed to support research on large-scale, long-term dynamics of nearshore ecosystems in California Current Large Marine Ecosystem. The research conducted at UCSB is concentrated around the Channel Islands and on the mainland coast north to Cambria.

One of the primary techniques employed by PISCO campuses is subtidal SCUBA surveys, which are used to evaluate subtidal community dynamics. The effort to monitor subtidal systems expanded in 2004 with support from the California Department of Fish and Game. The Department provided about $300,000 to scientists, including Dave Kushner (at Channel Islands National Park), Jenn Caselle (at PISCO), and Donna

Schroder (at UCSB), to conduct subtidal SCUBA surveys in and around the state MPAs in the Channel Islands. MaRINE conducts parallel surveys in intertidal systems.

PISCO has established a large array of oceanographic instrumentation in the nearshore region. Routine measurements include temperature, nutrients, and salinity. PISCO is studying the role of physical processes in recruitment. Long-term and fine-scale studies have been conducted on fish and invertebrates. These studies are paired with oceanography to reveal interesting patterns in nearshore ecosystems.

Another major research effort at UCSB (lead by Bob Warner) is to study connectivity through larval dispersal. Larval movement is tracked through otolith microchemistry and genetics. Other studies of fish movement are being conducted by Chris Lowe at CSU, Long Beach, and James Lindholm at PIER.

Christy Pattengill Semmens (REEF)

REEF is a non-profit, volunteer organization that works with divers and snorkelers to survey fish. The program is active in 9 National Marine Sanctuaries, including the Channel Islands. Divers and snorkelers use standardized SCUBA surveys to count fish. REEF receives approximately 2000 surveys per month from volunteers. In 1996, the program expanded to California. Volunteers have collected data in Channel Islands National Marine Sanctuary since 1996. Since the beginning of the program, several thousand surveys have been conducted in the Sanctuary. In 2003, REEF surveys began to focus annual monitoring particular sites (e.g., in and around MPAs) in order to address management questions. This year, REEF will conduct 3 different survey trips to 33 different sites throughout the Channel Islands. REEF data are managed electronically and may be requested for use. Data processing is relatively rapid.

Dave Siegel (ICESS—Institute for Computational Earth Systems Science)

Dave is a the director of ICESS and a professor of geography at UCSB. He served on the Science Advisory Panel to the Marine Reserves Working Group. He conducts routine monitoring (Plumes and Blooms) in the Santa Barbara Channel. He is a principal investigator on a biocomplexity grant to study the connections between physical oceanography, populations of marine species, fishing, and economics on the west coast of the United States. The co-principal investigators are studying the processes that underlie the dynamics of fish populations and the distribution and quality of habitat, among other topics.

Jim Allen (SCCWRP—Southern California Coastal Water Research Project)

SCCWRP is a joint powers agency focusing on marine environmental research. The common mission of SCCWRP is to gather the necessary scientific information so that member agencies can effectively, and cost-efficiently, protect the Southern California marine environment. An important part of the mission is to ensure that information gathered by SCCWRP effectively reaches decision-makers, scientists and the public. Strategic goals for the program are

- To develop, participate in, and coordinate programs to understand ecological systems in the coastal waters and to document relationships between these systems and human activities;
- To answer the questions regarding the Southern California coastal waters:

  - Is it safe to swim?
  - Is it safe to eat the fish?
  - Is the ecosystem healthy?
  - Are the natural resources being protected?
- To effectively communicate our research findings and recommendations, through a variety of media, to decision makers and other stakeholders;
- To continuously examine the composition and structure of SCCWRP to enhance the ability of the organization in achieving its mission;
- To serve as a catalyst in forming partnerships and alliances which further these goals; and
- To provide an information management system to archive, retrieve, analyze, and display SCCWRP data in order to achieve the above goals and enhance our understanding of the Southern California Bight.

Dr. Jim Allen is the principal investigator of the Fish Biology group at SCCWRP. He specializes in the ecology and environmental biology of marine fishes. His present research efforts focus on assessing natural and anthropogenic changes in marine fish populations and assemblages. Jim has been the head scientist in several large-scale synoptic studies of Southern and Baja California, Bight 98 and 03.

Jessie Alstadt (Santa Barbara Channel Keeper)
Jessie has been the Program Director and Biologist at Santa Barbara Channel Keeper since 1999. Santa Barbara Channel Keeper's mission is to protect and restore the Santa Barbara Channel and its watersheds through enforcement, citizen action, and education. Her experience includes long-term monitoring of sand beach and rocky intertidal species, kelp beds, eelgrass communities, mantis shrimp, urchin barrens, and warm water/cold water dynamics surveys.

Background on Channel Islands Marine Reserves Issue and Process (Satie Airame)

July 1999	MRWG, Science Advisory Panel, and Socio-economic Team formed. Over 40 alternatives evaluated.
May 2001	MRWG completed review and submitted 2 maps representing the areas of overlap and non-overlap.
August 2001	Sanctuary and DFG develop proposed project based on information from MRWG.
August 2001-October 2002	DFG developed CEQA DEIS/FEIS, proposing 6 alternatives.
October 2002	FGC decision to implement proposed project.
March 2003	Monitoring workshop at UCSB.
April 2003.	State MPAs established, constraining potential federal action.
June 2004	Preliminary draft NEPA DEIS released. Subcommittee of SSC met to discuss preliminary draft and develop comments.
September 2004	RAP meets to discuss preliminary draft and develop comments for SAC. SSC meets to discuss and approve final comments on

	preliminary draft. SSC comments go to the Ad Hoc Marine Reserve Subcommittee.
October 2004	Ad Hoc Marine Reserves Subcommittee will consider all statements and draft a statement for PFMC to consider and finalize at November meeting.
November 2004	PFMC meets in Portland, OR, to develop final comments on preliminary draft and Council finalizes input.
Summer 2005	Sanctuary releases DEIS.

Overview of Preliminary Working Draft Environment Document

See RAPcomments.doc (drafted by Bob Warner and Satie Airame)

Public Comment

Michael Hanrahan (SAC Business Seat)
Michael currently is producing films about the natural history of the Channel Islands region. At this time, he is producing three films about (1) kelp rack and how it nourishes the beach, (2) what lives beneath Stearns Wharf, and (3) commercial fishing within the Santa Barbara Channel. Michael is interested in working with scientists to develop new ideas for films.

Chris Miller (Lobster Fisherman)
Chris brought several maps showing the value distribution estimated for the lobster fishery (from the impact analysis in the CEQA) and the distribution of the lobster fishery from the Ethnographic Data Survey. He noted that the value distribution estimated for the lobster fishery far exceeded the actual distribution of the lobster fishery. Therefore, the impacts to the lobster fishery from nearshore reserves were underestimated by the value distribution. Chris called for a new economic impact analysis to reflect the current fisheries.

Chris said that lobster fishing has little bycatch. The opposite conclusion is asserted on p. 76 and Chris asked that this reference, "catching and killing lobster for months," be removed. He said that the majority of lobsters leave traps when the bait is gone. Three months after being lost at sea, destruct clips on lobster traps will degenerate. During big storms, traps tend to get washed up on the beach and lobsters avoid the traps and stay alive.

Chris also brought maps showing proposed MPAs for the state of California at scales much larger than the CINMS process. The maps included 4-15% of the waters within the EEZ. Chris noted that larger reserves should be included in the CINMS process and suggested a large reserve off the south side of Santa Rosa Island at Gull Island. He argued that large reserves could contribute to stock rebuilding. Chris stated that he did not have support from fishermen nor managers, but that he thinks a larger reserve is in the best interest of all involved.

Chris proposed that all additional federal MPAs should be conservation areas that allow some types of sustainable fishing. He suggested that all alternatives should be a mix of no-take and limited-take MPAs.

Chris suggested that the PFMC provided greater allocation to recreational fishers than commercial fishers. Because recreational fishers tend to be restricted by the distance from port and prevailing winds, they tend to concentrate in one region, within ½ day of port. With additional MPAs, Chris suggested that the recreational fishers would become more concentrated in this area because of displacement of effort from MPAs.

Chris suggested that the cost benefit analysis did not consider the real distribution of fishing effort. He suggested that a higher standard of regional monitoring is needed to make more precise socioeconomic predictions. Any potential displacement of fishers should be compensated with complimentary changes in fishery management (e.g., restrictions on traps, nets, etc.). Chris is concerned that large-scale fishing operations from far offshore have been squeezed by new regulations and these fishers will transfer their effort into the nearshore regions. Chris would like to see an effort to monitor the displacement of fishers and their combined impacts.

Chris suggested that recent harvest control actions, including closing of spot prawn trawling and reduction of TAC in nearshore and deeper nearshore fisheries, should be described as part of the ecological and socioeconomic baseline. Perhaps these should be included in a section on other types of fishery management. Information about harvest controls could be gathered from NOAA Fisheries. The harvest control actions do not need too be analyzed in the NEPA, but the impacts of additional harvest controls should be estimated. Since 1999, the fishery controls have increased and the area that is protected has expanded. A new socioeconomic baseline should be developed to account for these new fishery controls.

Chris emphasized the importance of monitoring MPAs to provide information to fishermen and managers. He was concerned that estimates of population size from fisheries dependent data would no longer accurately reflect stocks because of large populations concentrated within reserves. Chris was concerned that fishery management councils were unable to conduct the fishery independent surveys because money for these programs has been cut back. Chris suggested that estimates of population sizes for fishery purposes would have to come from fishery independent data.

Chris recommended that the RAP engage a scientist with expertise in community based management and social science.

Future RAP Meetings

DFG will provide first annual update on monitoring the Fish and Game Commission in December 2004. John Ugoretz would like some input from the RAP on design and results from MPA monitoring.