

**MBNMS Research Activity Panel  
Meeting Summary  
September 11, 2009**

**Hosts:** Fiorenza Micheli – Marine Conservation Biology (Hopkins Marine Station)  
David Epel – Water Quality (Hopkins Marine Station)

**Location:** Hopkins Marine Station  
Agassiz Building, Room 11  
120 Oceanview Boulevard  
Pacific Grove, CA

**Date:** Friday, September 11<sup>th</sup>, 2009; 9:00 am to 12:00 pm

**MEMBERS:**

	<b>Discipline</b>	<b>Primary/ Alternate</b>	<b>Name</b>	<b>Institution</b>
X	Research Coordinator		DeVogelaere, Andrew	Monterey Bay National Marine Sanctuary
	Biological Oceanography	primary	Chavez, Francisco	Monterey Bay Aquarium Research Institute
	Biological Oceanography	alternate	Kudela, Raphael	University of California, Santa Cruz
X	Deep-Sea Ecology	primary	Cailliet, Greg	Moss Landing Marine Laboratories
	Deep-Sea Ecology	alternate		
	Estuarine Ecology	primary	Wasson, Kerstin	Elkhorn Slough NERR and Foundation
X	Estuarine Ecology	alternate	Van Dyke, Eric	Elkhorn Slough NERR and Foundation
	Fisheries	primary	Grimes, Churchill	NOAA Fisheries Service
	Fisheries	alternate	Vasques, Jason	California Department of Fish & Game
X	Marine & Coastal Geology	primary	Storlazzi, Curt	United States Geological Survey
	Marine & Coastal Geology	alternate	Paull, Charles	Monterey Bay Aquarium Research Institute
X	Marine Conservation Biology	primary	<b>Harrold, Chris*</b>	Monterey Bay Aquarium
X	Marine Conservation Biology	alternate	Micheli, Fiorenza	Hopkins Marine Station
	Marine Policy	primary		
	Marine Policy	alternate	Sharp, Gary	Center for Climate/Ocean Resources Study
X	Nearshore Ecology	primary	Lindholm, James	California State University Monterey Bay
	Nearshore Ecology	alternate	Carr, Mark	University of California, Santa Cruz
	Physical Oceanography	primary	McPhee-Shaw, Erika	Moss Landing Marine Laboratories
	Physical Oceanography	alternate	Ramp, Steve	CeNCOOS/MBARI
X	Shelf & Slope Ecology	primary	Yoklavich, Mary	NOAA Fisheries Service
	Shelf & Slope Ecology	alternate	Starr, Rick	California Sea Grant Extension Program
	Social Sciences	primary	Pomeroy, Caroline	California Sea Grant Extension Program
	Social Sciences	alternate		
X	Water Quality	primary	Epel, David	Hopkins Marine Station
X	Water Quality	alternate	<b>Hunt, John†</b>	University of California, Davis

\*Sanctuary Advisory Council Member: Research (Primary)

†Sanctuary Advisory Council Member: Research (Alternate)

**GUESTS:**

	<b>Name</b>	<b>Institution</b>
X	Burton, Erica	Monterey Bay National Marine Sanctuary
X	Daugherty, Collin	Natural Equity
X	Eng, Mike	Monterey Bay National Marine Sanctuary
X	Faloon, Kristine	California Sea Grant
X	Honey, Kristen	Hopkins Marine Station
X	LaFranchi, Chris	West Coast Regional Office, ONMS; Natural Equity
X	MacCall, Alec	NOAA Fisheries
X	Rittelmeyer, Pam	California Sea Grant
X	Selbie, Hugo	PISCO; University of California, Santa Cruz

**CONSENT ITEMS****Introductions/Modifications to the Agenda (Chris Harrold)**

- Dave Epel retired from Hopkins Marine Station in January, interested in continuing RAP
- Greg Cailliet retired from Moss Landing Marine Laboratories in June, interested in continuing RAP

**HOST PRESENTATION AND DISCUSSION****Overview of Research at the Hopkins Marine Station (Fiorenza Micheli)**

- Fio provided an overview of Hopkins Marine Station faculty and recent research
- Several highlights include:
  - Mapping Human Impacts to Marine Ecosystems (including CA Current)
    - Data sets avail at NCEAS web, including Google Earth KML files: <http://www.nceas.ucsb.edu/GlobalMarine>
    - Applications: setting priorities; condition assessments; spatial planning
  - Hopkins Marine Life Observatory (<http://mlo.stanford.edu/index.htm>)
  - Kelp forest observatory, in development

**PRESENTATION****Project to Use MPAs as Demographic Reference Sites for Assessment and Management of Data Limited Species (Alec MacCall/NOAA Fisheries)**

- Alec gave a brief presentation on how MPAs could be used to assess and manage small local fisheries (using a multi-species approach)
- An open, ad hoc group began discussing this issue at the MPA Science Integration workshops at the NMFS Santa Cruz lab; Recent participants include:
  - Alec MacCall, John Field and Amber Morris (NMFS)
  - Steve Katz (NOS)
  - Meisha Key (CDFG)
  - Jono Wilson and Matt Kay (UCSB)
  - Carey McGilliard (UW)

- Kristen Honey (Stanford)
- Rod Fujita and Jerry Moxley (EDF)
- Beth Babcock (Pew)
- Burr Heneman
- Conventional management approaches for small fisheries are problematic
  - Conventional data needs are the same, large or small, but not affordable for small fisheries (scale of 10 miles; small geographic range of fish and fishery)
  - Local variations
  - Not much management exists for small fisheries
  - Localized resources can be easily depleted
- Basic Scheme:
  - Use fish densities and/or size compositions in MPAs as an index of potential unfished levels
  - Compare with densities/size comps in fished areas
  - Restrict fishing season progressively as fish densities/size comps in the open areas decline relative to protected areas
  - This is an ecosystem approach, there are no explicit species quotas, and this system avoids allocation decisions
- Open vs protected areas
  - Density in each area scaled to unit value ca. time zero
  - Density is estimated annually in pairwise survey design
  - Length composition responds quickest (in one generation, ~20yr, mpa/unfished population will have stable length composition)
- Manage for relative density
- An adaptive management approach
- Multispecies management system
  - Season closures apply to all fishing, and protect all species
  - Density index used to determine season closures would reflect a mix of species
  - This management system works only for “resident” species

## **MBNMS FEDERAL MPAs INITIATIVE AND DISCUSSION**

### **Update (Mike Eng/MBNMS)**

- Mike provided an update on the MBNMS Federal MPA Initiative
- In collaboration, NOAA Fisheries (Northwest and Southwest Fisheries Science Centers) and MBNMS are moving forward with an Integrated Ecosystem Assessment (IEA) for the California Current
- NOAA Fisheries is developing a work plan for FY2010; pilot will include IEA scaled to MBNMS (end of FY2010 deliverable)
- IEA collaboration will be announced at Pacific Fisheries Management Council September meeting

## STAFF/SAC REQUESTS TO RAP

### Suggestions for Sanctuary Currents Symposium Theme 2010 (Erica Burton/MBNMS)

- Multiple stressors on ecosystems and resilience (Micheli)
  - Perhaps include long-term monitoring of parasites in marine ecosystems (Epel)
- Long term monitoring
- Human impacts on MBNMS: Oil spills, plastics, contaminants, nutrients, water quality (Storlazzi)
- Salmon issues (Yoklavich)
- State of the knowledge of the system; an overview of what is known/unknown; link to Integrated Ecosystem Assessment (IEA); could frame by habitat; perhaps link to monitoring, get students involved with monitoring (Lindholm)
- Monitoring programs in the sanctuary (Selbie)
- Institutional Profiles; local research/science is the powerhouse of Monterey Bay area; what each is doing to contribute to the MBNMS; Center for Ocean Solutions is working on a review of institutions (Van Dyke)
- Strengths/Highlights of local institutions, recap of upcoming meeting series (Kristin Honey)
- IEA: brings in stressors, monitoring, different habitats, the unknowns; state problem in a way that will open the door to solutions (Hunt)
  - Societal needs and ecosystem based services; stressors, threats to those; what are trade-offs; what do we want to derive from the marine environment (Mike Eng)
- What are all the uses of the Sanctuary, and what are associated needs of each. What do we want to derive from the MBNMS and the associated stressors from each.
- Innovative cutting edge solutions to marine environment problems; message of hope, different ways of thinking (Harrold)

## DISCUSSION ITEMS

### August 21<sup>st</sup> SAC Meeting Debrief (Chris Harrold)

- Chris provided brief overview of the SAC meeting, topics included:
  - SAC Charter renewed
  - Update on proposal by public to sink a ship for artificial reef
  - “Voices of the Bay” Education/Curriculum Program; program co-created by fishing community
  - Update on the Santa Cruz Exploration Center
  - Update on Federal MPA Initiative
  - For more information, see SAC minutes website:  
[http://montereybay.noaa.gov/intro/advisory/sac\\_min.html#2009](http://montereybay.noaa.gov/intro/advisory/sac_min.html#2009)

### Expiration of 3-yr Terms and Filling Open Seats (Chris Harrold)

- 3-year terms are expiring for 16 RAP members in November
- Memberships are renewable by agreement between the selection committee and the RAP member
- In addition, 3 seats are vacant

- Membership committee was formed according to RAP policies
  - Chris Harrold (RAP and SAC Chair)
  - Andrew DeVogelaere (Research Coordinator)
  - Paul Michel (Superintendent)
  - John Hunt (RAP volunteer)
  - [http://montereybay.noaa.gov/research/RAPhistory/rap\\_policies.html](http://montereybay.noaa.gov/research/RAPhistory/rap_policies.html)
- Members will be contacted to discuss if they are meeting membership criteria and/or interest in renewing membership
- Email nominations for open seats and renewals to [Andrew.DeVogelaere@noaa.gov](mailto:Andrew.DeVogelaere@noaa.gov)

#### **Suggestions for future agenda items:**

- Presentation on IEAs (e.g., Phil Levin, Frank Schwing, John Stein), including IEAs that have been implemented (per Yoklavich)
- Marine Spatial Planning presentation (per Harrold); Fio recently heard Marine Spatial Planning talk from Massachusetts, or speaker from Center for Ocean Solutions (Meg Caldwell)

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#### **Future Agenda Items (running list):**

- Water Quality
  - Critical coastal areas presentation (ASBS, areas water quality impaired, areas in good state; Ross Clark)
- SIMoN
  - SIMoN Special Status Species Project (Jennifer Brown)
  - Linking SIMoN to management (Amber Szoboszlai)
- MPAs
  - State MPA monitoring projects (Jason Vasques)
- Communication Partnership for Science and the Sea (COMPASS)
- Wave Model Development and Implementation (Paul Wittmann/Fleet Numerical)
- Data integration across monitoring programs (e.g., water quality, PISCO, MARINE, IOOS), and availability to the public
- MARS cable (per Kildow, speaker = Marcia or other, schedule when MBARI hosts)
- Recent event: Supreme Court allows Navy Sonar (per John Hunt)
- NOAA Twin Otter plane comes to Monterey
- Predicting sea level rise for the state of California (Larry Breaker, JPL, OPC)
- CeNCOOS update (new website; activities)
- High-res models of CA (Cayan or Dettinger/USGS)
- MBNMS Desal Guidelines (Brad Damitz)
- CeNCOOS (or other OOS group) to inform/update RAP/SAC on current ocean acidification monitoring activities
- National Weather Service Forecast Office (Tom Evans, Warning Coordination Meteorologist)
- Offshore Membrane Enclosures for Growing Algae (OMEGA; Jonathan Trent, NASA-AMES)
- Balanced scientific discussion on ocean acidification/climate change (MBARI?)
- California State Furloughs and RAP Members – reschedule meetings?

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**2009 RAP Meeting Schedule and Locations (Revised 3/27/09)**

<b>Date</b>	<b>Host</b>	<b>Location</b>
January 9	Lindholm	CSU Monterey Bay
March 13	Harrold	Monterey Bay Aquarium
May 8	Grimes/Yoklavich	NOAA Fisheries, Santa Cruz
July 10	Carr	Long Marine Lab, UC Santa Cruz
September 11	Micheli/Epel	Hopkins Marine Station
November 13	Chavez	MBARI

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