

Ocean Protection Council Science Advisory Team Workshop

Readying California's Fisheries for Climate Change

February 25, 2015

10:00AM – 5:00PM

*Hosted by California Ocean Science Trust
Elihu M. Harris State Building, Room 2, Oakland, CA*

The Ocean Protection Council Science Advisory Team (OPC-SAT) is composed of 26 esteemed interdisciplinary scientists, convened to serve the science needs of California. Ocean Science Trust coordinates and guides the OPC-SAT on behalf of the Ocean Protection Council, including hosting semi-annual workshops that bring together OPC-SAT members and decision-makers to brainstorm ways to advance science in priority ocean issues. The public is welcome to attend these workshops and listen in on the discussion to gain greater insight into how Ocean Science Trust, state decision-makers, and the OPC-SAT work to incorporate science in decision-making.

1. Welcome & Introduction

Skyli McAfee, *Executive Director, California Ocean Science Trust; Science Advisor, Ocean Protection Council, OPC-SAT*
Catherine Kuhlman, *Deputy Secretary of Oceans and Coastal Policy, California Natural Resources Agency Executive Director, California Ocean Protection Council*

2. OPC-SAT Business and Updates

OPC-SAT Executive Committee

- *Skyli McAfee, co-chair, California Ocean Science Trust*
- *Mark Carr, co-chair, Professor, University of California Santa Cruz;*
- *Karina Nielsen, co-chair elect, Professor, Director, Romberg Tiburon Center for Environmental Studies, San Francisco State University; and*
- *Alexandria Boehm, co-chair emeritus, Associate Professor, Stanford University, Co-chair Emeritus*

2a. OPC-SAT Business

Skyli McAfee, Ocean Science Trust

- Welcome new OPC-SAT members
- New executive committee member election: results & announcement of new co-Chair elect
- OPC-SAT Policy on subcommittees

2b. OPC-SAT Related Updates

Mark Carr, UC Santa Cruz, Hayley Carter, Ocean Science Trust, and Skyli McAfee, Ocean Science Trust

- OPC-SAT Task Force on Scientific Collecting Permits in Marine Protected Areas (MPAs)
- Scientific Review of Reference Point Thresholds in California Spiny Lobster Fishery Management Plan
- West Coast Ocean Acidification and Hypoxia Science Panel (OAH Panel)

2c. The Work of the OPC-SAT in Advancing a Healthy Ocean for California

Skyli McAfee, Ocean Science Trust and Catherine Kuhlman, Ocean Protection Council

3. Working Session: Ready California's Fisheries for Climate Change

Today's working session is building upon the conversation initiated among the OPC-SAT, California Department of Fish and Wildlife (CDFW), Fish and Game Commission (FGC), and Ocean Protection Council (OPC) at our September 4, 2013 meeting, 'Advancing Science in California Fisheries.' Out of that important meeting, the OPC-SAT, alongside Ocean Science Trust, and the State have been working together to broaden CDFW's access to independent scientific resources. Such projects as the OPC-SAT Task Force on Scientific Collecting Permits in MPAs, and the Scientific Review of Northern Red Abalone Density Estimates, among others, have played a role in advancing key priorities, deepening the OPC-SAT's understanding of CDFW's science needs, and expanding the range of independent scientists engaged with the State.

CDFW is now preparing to update the Master Plan, CDFW's official guide for the development of Fishery Master Plans, as directed by the Marine Life Management Act (MLMA). The OPC-SAT is well suited and positioned to provide scientific support on this effort. This working session will launch a discussion around the opportunity for the OPC-SAT to offer scientific ideas for how best to approach evaluating the potential risks posed by climate change to California fisheries.

During this working session, we will:

- hear from decision-makers about their priorities and challenges in planning for the potential impacts of climate change;
- share scientific perspectives on the risks posed to fisheries by climate change, and evaluate some potential tools available to meet management needs;
- explore ways to approach the task of contributing to an update of the MLMA Master Plan; and
- brainstorm next steps in launching this important effort.

3a. What does a changing climate mean for fisheries management in California?

California fisheries managers are actively exploring how to meet their mandates in the face of a changing climate and ocean conditions. We will hear from CDFW and the FGC about the fisheries management structures and processes within which they work, and how the scientific community could best support them in the coming years.

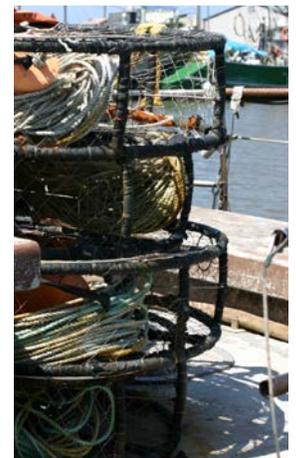
Moderator: Karina Nielsen, San Francisco State University, Romberg Tiburon Center for Environmental Studies

Speakers:

Sonke Mastrup, Executive Director, Fish and Game Commission

Craig Shuman, Marine Region Manager, California Department of Fish and Wildlife

----- LUNCH (1 HOUR) -----



3b. Perspectives from the scientific community

Moderator: Liz Whiteman, Program Director, Ocean Science Trust

Panel 1. Scientific perspectives on Climate Risks to Fisheries

The OPC-SAT serves as a conduit to the broader scientific community. This panel of OPC-SAT members will provide a window into their respective fields: sharing their perspectives on how the academic and research community is exploring the many dimensions of climate-related impacts on our fisheries.

Panelists:

- **William Sydeman**, President & Senior Scientist, Farallon Institute for Advanced Ecosystem Research
- **Chris Costello**, Professor, University of California, Santa Barbara
- **Steve Gaines**, Professor/Dean, Donald Bren School of Environmental Science, University of California, Santa Barbara
- **Madeleine Hall-Arber**, Professor, Massachusetts Institute of Technology
- **Rich Ambrose**, Professor/Director, University of California, Los Angeles/Environmental Science and Engineering

Ocean Science Trust developed a set of questions with input from fisheries managers and others to guide panelists:

- *From your scientific perspective, what does readying California's fisheries for a changing climate mean to you? (How has your answer changed based on the information shared here today by CA state policymakers and managers?)*
- *When discussing risks to fisheries due to climate change, what does risk mean? Risk of what, to whom, and at what level?*
- *What sources of knowledge (e.g., local, traditional) are available to be considered in identifying and evaluating climate risks to California fisheries?*
- *What are some of the unique opportunities or constraints (e.g., MPAs, ecosystems, socioeconomic) within California to consider in addressing climate change and fisheries?*

Panel 2. Exploring tools and frameworks for evaluating climate impacts on fisheries in California

On this panel, experts will share their insights on a range of tools and frameworks that are currently deployed in support of many different types of fisheries across the globe. This discussion will explore if and how these frameworks incorporate climate change impacts to fisheries.

Panelists:

- **Errin Ramanujam**, Associate Scientist, Ocean Science Trust
- **Rod Fujita**, Director of Research and Development, Oceans Program, Environmental Defense Fund
- **Jennifer Dianto Kemmerly**, Director of Seafood Watch, Monterey Bay Aquarium
- **John Field**, Fisheries Scientist, NOAA Southwest Fisheries Science Center
- **Rebecca Martone**, Ecosystem Health Program Lead, Center for Ocean Solutions

Just as with the first panel, Ocean Science Trust co-developed questions with partners to guide this panel:

- *There has been much recent discussion of risk assessment frameworks and tools. What is the value and utility of a risk assessment approach when California fisheries management is faced with the implications of a changing climate?*
- *How can current tools be adapted to explicitly address climate change, if they do not already?*
- *What examples from other jurisdictions/geographies do you think provide useful context, information, and/or lessons-learned for California?*

----- BREAK (15 MINUTES) -----

3c. Concluding Discussion: Mapping our Collective Path Forward

Moderator: Karina Nielsen, San Francisco State University, Romberg Tiburon Center for Environmental Studies

After hearing from the decision-making and scientific communities, workshop participants will discuss which parts of the conversation resonate with California's specific goals and mandates. Specifically, participants will explore the overarching question:

- *How can the OPC-SAT best harness its collective expertise, and that of its colleagues and partners to support California's science needs around this issue?*

The group will collectively define multiple options for supporting development of the scientific components of an update to the MLMA Master Plan focused on climate change and fisheries.

4. Discussion: OPC-SAT in 2015 and Beyond

Moderator: Skyli McAfee, Ocean Science Trust

This session is an opportunity for the Ocean Science Trust to share what we are hearing from the State and other partners about upcoming science needs and issues. OPC-SAT members will share their reactions and thoughts on emerging issues they wish to address based on their knowledge and immersion within the most current and cutting-edge topics in the scientific community.

----- ADJOURN -----

