



Science Advisory Team

California Ocean Protection Council – Science Advisory Team (OPC-SAT) Position Statement on Climate Change

Introduction to OPC-SAT Position Statements

The mission of the California Ocean Protection Council (OPC) is to ensure that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations. The OPC was established by the California Ocean Protection Act of 2004, and is chaired by the Secretary of the Natural Resources Agency. Central to the OPC is a commitment to science informing policy. To that end, the OPC established a Science Advisory Team (OPC-SAT) consisting of 24 respected scientists from across a range of ocean and coastal disciplines and research institutions. The mission of the OPC-SAT is to ensure that the best available science supports OPC policy and funding decisions. The goal of the following statement is emphasize that 1) climate change is one of the most significant issues facing California and the nation, and that in particular, the impacts on the marine and coastal environment will create great challenges for California's environment, economy and infrastructure; and 2) effective mitigation of these changes will require ongoing, proactive collaboration between scientists, policy makers and other stakeholders.

Climate Change is Happening

Based on a large body of evidence, scientific consensus by the United Nation's Intergovernmental Panel on Climate Change (IPCC), the U.S. National Academy of Sciences, and a large number of scientific organizations is that global climate is changing due in large part to human activities, and that the world and U.S. will experience increasingly serious and damaging physical, ecological, social and economic effects in the decades ahead. We agree with this assessment. Climate changes are already underway within California and are likely to intensify in the decades ahead. Expected changes in the coastal environment include: 1] overall higher atmospheric temperatures, 2] more variable precipitation and runoff, 3] long-term sea level rise, shoreline retreat and inundation, 4] changing coastal storm climate, and 5] decreasing ocean pH (acidification). These changes will affect our shoreline and coastal ocean through an increasing risk to our coastal communities and economy, including fisheries, marine mammals and seabirds, beaches and recreation, shoreline development and infrastructure, and ports and harbors.

Need for Action on Climate Change

It has become clear in California that, while uncertainties remain in the details of how climate change will unfold, the potential for far reaching consequences cannot be ignored. For the California coastline and marine ecosystems in the coming decades, incorporating climate change impacts into planning and decision-making will reduce uncertainties and risks and can be accomplished using science to provide projections or scenarios of potential consequences. In order to better understand and cope with the climate changes that are likely to occur, an ongoing dialogue between policy makers and scientists will be necessary. This process must be informed by an ongoing set of observations to monitor climate change variables, which can reduce future uncertainties and allow California to make better-informed decisions regarding potential impacts of climate change to the coastal environment and the economy it supports.

Adapting to Climate Change

The greenhouse gases that have been released, and that will be released before we gain control of emissions, will continue to affect our climate for decades into the future. Adapting to changes and managing risks along California's coastal areas will require a significant commitment to research, monitoring, and assessment. Managing the risks of climate change must involve using the best available science to gauge the likelihood of future events and anticipate their consequences.

California is the most populous state and supports the largest coastal ocean economy in the U.S. We applaud the ambitious and proactive measures that California's policy-makers have made to reduce future emissions of greenhouse gases and to mitigate and prepare for the present and impending consequences of climate change.

Co-Chairs of the OPC-SAT Climate Change Working Group



Gary Griggs
Professor/Director
UC Santa Cruz



William J. Sydeman
President
Farallon Institute

On behalf of the following Ocean Protection Council Science Advisory Team members

Richard F. Ambrose
Professor/Director
UC Los Angeles

John Field
Fisheries Scientist
NOAA Southwest Fisheries

Steven N. Murray
Professor/Dean
CSU Fullerton

Alexandria B. Boehm
Associate Professor
Stanford University

Steve Gaines
Professor/Dean
UC Santa Barbara

Karina J. Nielsen
Associate Professor
Sonoma State University

Mark Carr
Professor
UC Santa Cruz

Frances Gulland
Director of Vet. Science
Marine Mammal Center

Jeffrey D. Paduan
Associate Professor
Naval Postgraduate School

Daniel R. Cayan
Researcher
Scripps Institution

Madeleine Hall-Arber
Professor
MIT

Harry N. Scheiber
Professor
UC Berkeley

Francisco Chavez
Senior Scientist
MBARI

Sam Johnson
Research Geologist
U.S. Geological Survey

Jerry Schubel
President/CEO
Aquarium of the Pacific

Kenneth Coale
Director
Moss Landing Laboratories

Karen McLeod
Science Director
COMPASS/Oregon State

John J. Stachowicz
Associate Professor
UC Davis

Christopher Costello
Associate Professor
UC Santa Barbara

Mark Moline
Associate Professor
Cal Poly San Luis Obispo

Stephen Weisberg
Executive Director
SCCWRP