

## California Current Ecosystem-Based Management (CCEBM) initiative: *Advancing the Science for Ecosystem-Based Management on the U.S. West Coast*

January 30-31 2008, Santa Cruz CA

This two day meeting, co-hosted by the University of California Santa Cruz (UCSC) and the Communication Partnership for Science and the Sea (COMPASS), provided an opportunity to assess and advance the science needed for comprehensive ecosystem-based management along the US West Coast. The ninety participants included social and biogeophysical scientists from a variety of academic, government and private institutions and some participants with expertise in management and policy.

### The overall goals of the meeting were to:

- Evaluate a scientific approach for examining tradeoffs among ecosystem services.
- Evaluate and advance the science needed for scientifically-informed comprehensive ecosystem-based management (EBM) along the U.S. West Coast.
- Establish new collaborations among a diverse group of natural and social scientists, managers and policy makers who work at a wide range of institutions.

### Plenary sessions and breakout group discussions highlighted:

- Key science in support of EBM: coupled human and natural systems, cumulative impacts, ecosystem services, ecosystem variability and change, resilience.
- Emerging science relevant to the California Current Large Marine Ecosystem.
- Approaches to organize science relevant to EBM and evaluate tradeoffs among ecosystem services: NOAA's *Integrated Ecosystem Assessment* (IEA) and CCEBM Science Advisory Committee's *Science to Inform Ecosystem Service Tradeoff Analysis* (SIESTA).
- Applications of these approaches to existing management challenges.
- Next steps for advancing the science, practice, and policy of EBM.

### Key themes that were repeated throughout the meeting included:

- **Ecosystem services are a useful concept for advancing EBM implementation.** Focusing on the overarching goal of maintaining the delivery of multiple ecosystem services, both now and in the future, acknowledges connections between humans and nature, and accounts for the interactions among different sectors that will help facilitate more comprehensive management.
- **New approaches to evaluate tradeoffs among ecosystem services are needed to inform management.** The coupling of *Integrated Ecosystem Assessments* (IEA) and *Science to Inform Ecosystem Service Tradeoff Analysis* (SIESTA) may be an effective way to organize what we know scientifically about ecosystem functioning, how social and ecological factors affect the delivery of key services, and potential tradeoffs among these services.
- **Science is not the limiting factor.** There is general consensus among the scientific community that we have the necessary science to improve existing management practices. However, in order to implement EBM, it will be critical to determine and clearly communicate what is known scientifically and to address the institutional, political and legal challenges to implementing EBM.
- **There continue to be rich areas in which to further advance science in support of EBM.** Specifically, there is a need to improve our understanding of the connections and feedbacks between the human and biophysical components of the ecosystem and how to more effectively manage across multiple spatial scales and over longer time scales.