



Top priorities for the science, policy, and practice of Coastal and Marine Spatial Planning

Results from a workshop on Dec. 14-15, 2010 held at the
[National Center for Ecological Analysis & Synthesis](#)

Questions or comments, contact Dr. Ben Halpern (halpern@nceas.ucsb.edu)

BACKGROUND

Coastal and Marine Spatial Planning (CMSP) is a systematic and stepwise process – not an outcome – whereby the spatial and temporal distribution of human activities in marine areas are analyzed and allocated, with input from users and the wider public, to achieve sustainable ecological, economic and social objectives that have been specified through a political or social process.

Experts with backgrounds in the science, policy, and practice of CMSP were convened to identify top priorities for advancing CMSP over the next one to five years (see participant list in Appendix). Particular attention was given to the need and opportunity to inform the U.S. National Ocean Council process to develop a strategic action plan in 2011 for implementing CMSP in the United States. Workshop participants developed, reviewed and then distilled a broad range of potential priorities during a day and a half of deliberations. Identified below are the top ranked issues and questions across four themes that, if addressed, will significantly help advance effective planning of coastal and marine areas. All 20 of these issues can and should be addressed immediately; many are already being addressed at some level and most can be achieved within the 18-24 month timeframe of the U.S. National Ocean Council to complete Phase I and II of their planning and implementation process. Within each theme below, the issues are listed roughly in the order in which we suggest they be addressed, either because of their urgency or the logical order in which issues need to occur. Contact Dr. Ben Halpern for a report detailing the workshop process, including how and why these issues were prioritized and their relevance to MSP processes in developed and developing countries.

PRIORITIES

PROCESS

- ❖ Provide guidance on how Regional Planning Bodies (RPBs) should establish operational, location-specific objectives and boundaries nested within the national goals for CMSP.
- ❖ Develop methods for CMSP processes that are proactive rather than reactive, in particular with respect to locally new or emerging uses of the oceans and climate change.
- ❖ Build coordination in planning, objective setting and governance across nested geographic scales and laterally among existing and emerging local, state and regional plans.
- ❖ Conduct a legal gap, obstacle and opportunity assessment at national, state, regional and international levels that evaluates the potential of existing laws, obligations to aboriginal peoples, and regulatory mechanisms to support CMSP and promote cross-border cooperation.
- ❖ Take advantage of opportunities to learn-by-doing in contexts ripe for moving forward with CMSP (contexts may be particular locations, sets of uses/pressures or services, combinations of agencies/sectors, or motivated communities) and quickly document lessons learned
- ❖ Recommend how RPBs can build transparency and accountability for agencies, industries, and other users into their CMSP processes and outputs.
- ❖ Recognize and include aboriginal rights and other treaties in CMSP processes.

COMMUNICATION & ENGAGEMENT

- ❖ Develop a compelling ‘business case’ that clearly presents why CMSP is needed and is an essential addition to both current sectoral and future integrated management. The business case should identify and describe the potential benefits (to whom), the costs and risks of inaction, and the incentives for engagement, while also indentifying potential challenges with equal clarity.
- ❖ Develop and implement strategic communication plans – initially broadly about CMSP, and more regionally-focused as planning efforts gain momentum – that articulate the business case in easily-understood language. These plans should use a variety of media and incorporate concrete, regionally-pertinent examples where possible.
- ❖ Develop and disseminate guidance on best practices for full engagement of and cooperation among national, state, tribal/indigenous, public, private and other stakeholder interests in the CMSP process.
- ❖ Develop guidance on approaches to balance top-down development of mandates for CMSP with bottom-up engagement within CMSP processes.

TRADEOFFS & VALUATION

- ❖ Provide guidance and science-based approaches for how to evaluate the relative compatibility and incompatibility of existing or proposed uses in CMSP plans under alternative management schemes.
- ❖ Develop or refine models and methods for assessing and optimizing tradeoffs among social, economic, and environmental objectives at multiple spatial and temporal scales.
- ❖ Identify a currency (or currencies) for comparing outcomes of alternative CMSP plans, noting the critical need to include market and non-market benefits from nature in the overall assessment.
- ❖ Recognize and develop methods for addressing diverse value systems within and among human communities that can lead to different core objectives within a single CMSP process.

DECISION SUPPORT

- ❖ Assess which information is necessary to develop different types of CMSP plans, including traditional and local knowledge, and identify the best scale(s) for collecting and reporting data.
- ❖ Compile available data, models and other information and identify gaps relevant to assessing:
 - Cumulative impacts across a range of spatial scales;
 - Potential interactions among human uses;
 - Non-linear responses of systems to increasing human use and natural forces, including social and economic tipping points;
 - Connectivity (of positive and negative impacts) among locations, via ecological or social processes, within and outside the planning area.
- ❖ Develop user-friendly, open-source, efficient and transparent tools for data visualization, integration, and sharing.
- ❖ Advance and refine existing decision support tools to address CMSP-specific needs, including but not limited to:
 - Moving from (past) impact analysis to (predictive) vulnerability assessment;
 - Shifting from cost-benefit analysis to full valuation assessments.
- ❖ Develop clear, reliable and measurable indicators for monitoring effectiveness of CMSP at achieving objectives set during the planning process.

APPENDIX: WORKSHOP PARTICIPANT LIST. * denotes steering committee member

Tundi Agardy Executive Director, Sound Seas
Deerin Babb-Brott Director of Regulatory Affairs, Epsilon Associates
Michael Beck Senior Scientist, Marine Initiative, The Nature Conservancy
Meg Caldwell Director, Environmental & Natural Resources Law & Policy, Stanford University
Larry Crowder Stephen Toth Professor of Marine Biology, Nicholas School of the Environment and Earth Sciences, Duke University
Jon Day Director, Ecosystem Conservation & Sustainable Use, Great Barrier Reef Marine Park Authority
Jordan Diamond Staff Attorney, Environmental Law Institute
Euan Dunn Head of Marine Policy, Royal Society for the Protection of Birds
Guilherme Dutra Marine Program Director, Conservation International
* **Steven Gaines** Dean, Bren School of Environmental Science and Management, University of California, Santa Barbara
Stefan Gelcich Associate Researcher, Centre for Advanced Studies in Ecology & Biodiversity, Pontificia Universidad Católica de Chile
* **Mary Gleason** Lead Marine Scientist, CA Coastal and Marine Program, The Nature Conservancy
* **Benjamin Halpern** Research Biologist, Project Coordinator, National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara
Simon Jennings Principal Scientist, Centre for Environment, Fisheries and Aquaculture Science
Sarah Lester Project Scientist, Marine Science Institute, University of California, Santa Barbara
Kathleen Leyden Director, Marine Coastal Program, Maine Government
Amber Mace Executive Director, California Ocean Protection Council
Laurence McCook Manager, Ecosys. Health & Resilience, Great Barrier Reef Marine Park Authority
* **Karen McLeod** Director of Science, COMPASS, Department of Zoology, Oregon State University
* **Nick Napoli** Science Program Manager, Massachusetts Ocean Partnership
Kit Rawson Conservation Science Program Manager, Treaty Rights Office, Tulalip Tribes
Jake Rice Director of Advice and Assessment, Fisheries and Oceans Canada
* **Andrew Rosenberg** Senior Vice President for Science and Knowledge, Conservation International
* **Mary Ruckelshaus** Managing Director, The Natural Capital Project, Stanford University
Bettina Saier Director, Oceans Program, World Wildlife Fund Canada
Astrid Scholtz Vice President of Knowledge Systems, Ecotrust
Malcolm Williams Center for Maritime Policy and Strategy Studies, US Coast Guard Academy
Anna Zivian Marine Spatial Planning Manager, Ocean Conservancy

Advising on policy context:

Chris Caldwell Acting Branch Chief, National Oceanic and Atmospheric Administration
Paul Doremus Director of Strategic Planning, National Oceanic and Atmospheric Administration
Andrew Lipsky Ocean Policy Advisor, Ocean and Coastal Policy, Council on Environmental Quality
Jennifer Lukens Acting Director, NOAA CMSP Program
* **Paul Sandifer** Senior Science Advisor to the NOAA Administrator, NOAA
Charles Wahle Senior Scientist (acting), NOAA Coastal and Marine Spatial Planning Program

Unable to attend due to last minute travel complications:

Laura Cantral Program Director, Meridian Institute
Sarah Chasis Director, Ocean Initiative, Natural Resources Defense Council
Simon Cripps Chief Executive, Dorset Wildlife Trust
Jane Lubchenco Administrator, National Oceanic and Atmospheric Administration
Kathryn Mengerink Director of Ocean Program, Environmental Law Institute
David Stein Marine Cadastre, Coastal Services Center, NOAA