Marine Policy 36 (2012) 1139–1149

Contents lists available at SciVerse ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

Coming to the table: Early stakeholder engagement in marine spatial planning

Morgan Gopnik [a,*], Clare Fieseler [b,1], Laura Cantral [c], Kate McClellan [b,2], Linwood Pendleton [b], Larry Crowder [d,3]

[a] Duke University Marine Lab, 135 Duke Marine Lab Rd., Beaufort, NC 28516, USA
[b] Nicholas Institute for Environmental Policy Solutions, Duke University, P.O. Box 90335, Durham, NC 27708, USA
[c] Meridian Institute, 1920L Street NW, Suite 500, Washington, DC 20036, USA
[d] Center for Marine Conservation, Nicholas School of the Environment, Duke University, 135 Duke Marine Lab Rd., Beaufort, NC 28516, USA

ARTICLE INFO

Article history:
Received 21 October 2011
Received in revised form
10 February 2012
Accepted 11 February 2012
Available online 25 April 2012

Keywords:
Ocean policy
Stakeholder collaboration
Marine spatial planning

ABSTRACT

From 2009 to 2011, marine spatial planning (MSP) rapidly gained visibility in the United States as a promising ocean management tool. A few small-scale planning efforts were completed in state waters, and the Obama Administration proposed a framework for large-scale regional MSP throughout the U.S. Exclusive Economic Zone. During that same time period, the authors engaged a variety of U.S ocean stakeholders in a series of dialogs with several goals: to share information about what MSP is or could be, to hear stakeholder views and concerns about MSP, and to foster better understanding between those who depend on ocean resources for their livelihood and ocean conservation advocates. The stakeholder meetings were supplemented with several rounds of in-depth interviews and a survey. Despite some predictable areas of conflict, project participants agreed on a number of issues related to stakeholder engagement in MSP: all felt strongly that government planners need to engage outsiders earlier, more often, more meaningfully, and through an open and transparent process. Equally important, the project affirmed the value of bringing unlike parties together at the earliest opportunity to learn, talk, and listen to others with whom they rarely engage.

© 2012 Elsevier Ltd. All rights reserved.

1. The emergence of marine spatial planning in U.S. policy

The idea of managing coastal and marine areas in a more integrated, holistic way has been around for decades, couched in a variety of terms, each with a different genesis and nuance (see Box 1). In recent years, the concept of *marine spatial planning* (MSP, also known as *maritime* spatial planning in Europe) has been widely promoted, although its precise definition is not always agreed upon.

The UNESCO guide to MSP [1] defines it as: "a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process." The U.S. Executive Branch has adopted a variation of that definition (at the same time introducing an even more cumbersome term, with a new acronym): "Coastal and Marine Spatial Planning (CMSP) means a comprehensive, adaptive, integrated, ecosystem-based, and transparent spatial planning process, based on sound science, for analyzing current and anticipated uses of ocean, coastal, and Great Lakes areas. Coastal and marine spatial planning identifies areas most suitable for various types or classes of activities in order to reduce conflicts among uses, reduce environmental impacts, facilitate compatible uses, and preserve critical ecosystem services to meet economic, environmental, security, and social objectives" [2]. However, some U.S.-based initiatives have been described as MSP that do not meet either of these definitions (e.g., the U.S. National Marine Sanctuary Program [3] and California's Marine Life Protection Act process [4]). Even the regional Fisheries Management Councils have declared that they too are engaged in MSP [5].

For the purposes of the Institute project and this paper, the term MSP refers only to those coastal and ocean management approaches that are:

- ***Multi-objective,*** i.e., planning includes ecological, social, economic, and governance objectives.
- ***Spatially oriented,*** i.e., results are expressed in spatial terms within some defined geographic area, typically corresponding to an ecosystem boundary.

* Corresponding author. Tel.: +1 202 294 6810.
E-mail address: morgan.gopnik@duke.edu (M. Gopnik).
[1] Present affiliation: University of North Carolina, Chapel Hill, NC, USA.
[2] Present affiliation: New England Aquarium, Boston, MA, USA.
[3] Present affiliation: Center for Ocean Solutions and Hopkins Marine Station, Stanford University, Monterey, CA, USA.

0308-597X/$ - see front matter © 2012 Elsevier Ltd. All rights reserved.
doi:10.1016/j.marpol.2012.02.012

Box 1–Struggling with terminology

Below are a number of concepts and terms that have been introduced over the last 20 years to promote more integrated, holistic ocean management. They have been promoted at different times by different organizations, and may have different implications for managers.

Integrated coastal zone management (ICZM)

Coined during the 1992 Earth Summit in Rio de Janeiro, ICZM describes an adaptive, integrated approach for achieving sustainable resource management in coastal areas (UNCED, 1993). The European Commission (EC) describes ICZM as a ''dynamic, multi-disciplinary and iterative process … that seeks to balance economic development and use of the coastal region, protection and preservation of coastal areas, minimization of loss of human life and property, and public access to the coastal zone.'' (Recommendation 413/2002/EC of the European Parliament and Council).

Ecosystem-based management (EBM)

EBM aims to protect ecosystem structure, functioning, and processes; recognize the inter-connectedness within and among systems; integrate ecological, social, economic, and institutional perspectives; and be place-based or area-based (McLeod et al., 2005). Some authors refer to ecosystem *approaches* to management or to specific applications such as ecosystem-based *fisheries* management, but neither of these captures the full scope of EBM. The term has been widely embraced in the scientific and ENGO communities but critics say it is not readily understood by the public and remains too vague to help managers carry out their day-to-day responsibilities.

Regional Ocean Governance

The concept of Regional Ocean Governance was embraced by both recent ocean commissions. As described on the Joint Ocean Commission Initiative website (www.jointoceancommission.org), ''regional ocean governance refers to a governance mechanism established by a coalition of state governments, with participation by the federal government, to address ocean and coastal issues that cross political boundaries. While state and federal governments need to play a strong leadership role, regional ocean governance initiatives must engage participation by the full spectrum of governmental and nongovernmental stakeholders in the region.'' Regional governance embraces the principles of EBM, but focuses on the importance of cooperation between adjacent states and corresponding federal authorities to bring it about.

Marine spatial planning (MSP)

See text for definitions and further discussion. Although advocates of MSP see it as a practical approach that embodies the principles of EBM, some scientists think MSP fails to capture the full complexity of true EBM, while some stakeholders have expressed concern that the term implies a new form of government control.

Integrated maritime spatial planning

A term officially adopted by the European Union in its Blue Book on Maritime Policy (Commission of the European Communities, 2007), it combines Marine (or Maritime) Spatial Planning with the older concept of Integrated Coastal Zone Management to deliver a spatial planning approach that includes onshore, nearshore, and offshore areas.

Ocean zoning

Similar to the distinction on land between comprehensive planning and zoning, ocean zoning takes a marine spatial plan to the next step by creating a map for a marine region with areas allocated for different types of uses and corresponding regulations for each use or area. Policy analysts in the U.S. have avoided ''the Z word'' which is sometimes associated with top-down, bureaucratic, centralized planning.

Area-based management, integrated management, integrated multiple use ocean management

These are just a sampling of alternate coinages, in use in different regions or by different organizations. These terms generally imply some combination of MSP and zoning, with the goal of achieving EBM.

- ***Integrated,*** i.e., planners address spatial requirements and interactions among all elements and activities within the management area.

Such efforts may or may not result in maps designating specific areas for different activities, a step often referred to as *ocean zoning*.

Although MSP has been practiced in other countries for some time [6], the term only emerged on the U.S. ocean policy scene over the past few years. In fact, as recently as November 2006, when a handful of Americans (including two of the authors) attended an international meeting on MSP hosted by UNESCO, the term was barely recognized in the U.S.[4] Four months later, when 12 national ocean policy experts were polled in early 2007 about how long they thought it would be until MSP was adopted in U.S waters, their conjectures ranged from 8 to 20 years, with an average of around 12 years. Yet only two years after that, a Presidential memo directed an interagency task force to develop a ''framework for effective coastal and marine spatial planning,'' and the task force recommendations were adopted by Executive Order in July 2010. As of this writing, active steps are being taken in Washington DC and nine regions around the country to launch marine planning efforts throughout U.S. waters. This is a remarkable pace for introducing a significant new management approach.

Although European MSP was motivated in large part by economic goals, such as renewable energy targets that could only be met by including offshore locations, much of the early support for MSP in the U.S. was generated by the academic and environmental advocacy communities that saw it as a way to protect marine ecosystems. The individuals and companies that rely on ocean space and resources for economic gain were generally not engaged in these early conversations, although their support is recognized as being critical to successful planning [8]. Thus, in early 2009, the Nicholas Institute for Environmental Policy

[4] In its 2004 report [7], the U.S. Commission on Ocean Policy did recommend that the U.S. adopt ''a balanced, ecosystem-based offshore management regime that sets forth guiding principles for the coordination of offshore activities,'' but did not embrace MSP more specifically.

Solutions at Duke University set out to broaden the MSP dialog and engage a wider range of stakeholders in this critical policy debate.

2. Background on stakeholder involvement in decision making

A rich and extensive literature has been accumulated on the topic of stakeholder participation in decision making and the role of collaboration in addressing natural resource disputes [9]. Innes and Booher (2004) found that "legally required methods of public participation in government decision making in the U.S. – public hearings, review and comment procedures in particular – do not work. They do not achieve genuine participation in planning or other decisions; they do not satisfy members of the public that they are being heard; they seldom can be said to improve the decisions that agencies and public officials make; and they do not incorporate a broad spectrum of the public" [10]. Traditional forms of public comment have generated low attendance, especially among recreational user groups, ocean-dependent business groups, minorities, youth, and Native Americans [11].

However, over the last few decades, government agencies and affected communities have experimented with more interactive approaches to stakeholder engagement, from basic facilitated dialog through enforceable negotiated planning and rulemaking. When these are done well, they often result in greater satisfaction among participants and more innovative, lasting solutions [12]. Active engagement from the beginning and throughout the decision-making process has been identified as one essential element of any successful participatory process. As articulated by Ritchie and Ellis, "the subjectivity that stakeholders bring to the process needs to be valued for its enrichment of debate, despite the fact that it may give rise to frustrations and awkward questions for those driving the policy process" [13].

Although most research on public participation has been done in the context of public land policy, there has been a growing effort to apply similar principles to ocean management. In their paper on stakeholders and marine spatial planning, Ritchie and Ellis find that "it is essential to begin from a position where the views of all stakeholders are central to the participation process and that none are neglected nor presumed." Pomeroy and Douvere [14] describe the stages of the marine spatial planning process and the ways in which stakeholders should be included at each stage as follows:

- "The Planning Phase – Stakeholders should contribute to the setting of priorities, objectives, and the purpose of spatial management plans. They can help identify, group, and rank management problems, needs, and opportunities in order of priority.
- The Plan Evaluation Phase – Stakeholders should be engaged in the evaluation and choice of plan options.
- The Implementation Phase – Stakeholders can be utilized in a community-based approach to enforcement.
- The Post Implementation Phase – Stakeholders should be consulted about the overall effectiveness in achieving goals and objectives of the plan."

The UNESCO guide to MSP [15] looks at 14 countries that have engaged in some form of marine spatial planning (Australia, Belgium, Canada, China, Ecuador, Finland, Germany, Mexico, New Zealand, Norway, Sweden, The Netherlands, United Kingdom, and the United States), four multinational planning efforts (Baltic Sea Action Plan, European Union Maritime Directive, the OSPAR Commission in the Northeast Atlantic, and the Trilateral Wadden Sea Cooperation Area), and five planning efforts undertaken by individual states within the U.S. (Massachusetts, California, Rhode Island, Oregon, and Florida). Since that report was completed, Washington State has also enacted a marine spatial planning law (WA Senate Bill 6350) and New York has initiated spatial planning efforts for their marine and Great Lake waters. All of these planning efforts call for "extensive engagement of stakeholders" (Territorial Sea Plan, Oregon) and recognize that stakeholders are "vital to effective, legitimate planning" (Rhode Island, SAMP).

3. The Nicholas Institute Policy Lab

The Nicholas Institute's mission is "to help decision makers create timely, effective, and economically practical solutions to the world's critical environmental challenges" and one of its primary tools is to "act as an 'honest broker' by convening and fostering open, ongoing, and often off-the-record dialog among stakeholders from all sides of an issue" [16]. Many Institute projects follow a technique referred to as a Policy Lab, a multi-phase process that

Table 1
Timeline of the Nicholas Institute's MSP Policy Lab.

Date	Institute activities	Key MSP documents
April 2008	MSP experts meeting in Washington, DC	
April 2008–February 2009	Phone interviews with 18 ocean users about MSP	
June 2009		Presidential memo establishing Interagency Ocean Policy Task Force
July 2009	1st mtg. w. 15 ocean users[a]	UNESCO Guide: "MSP: a step-by-step approach"
Early September 2009	2nd mtg. w. 11 ocean users[a]; 1st mtg. w. 20 ENGOs[a]	
Late September 2009	3rd mtg. w. 7 ocean users[a]; 2nd mtg. w. 14 ENGOs[a]	
October 2009	Phone calls to 11 ocean user participants	
November 2009		Nicholas & Meridian Institute Policy Brief: "Ocean User Perspectives on MSP"
January 2010	4th mtg. w. 9 ocean users[a]	
May 2010	1st joint mtg. w. 10 ocean users and 11 ENGOs[a]	
June–July 2010	Phone interviews with 8 ocean user and 6 ENGO participants	IOPTF final recommendations and executive order establishing National Ocean Policy, National Ocean Council, and nine National Priority Objectives
October 2010	2nd joint mtg. w. 7 ocean users and 10 ENGOs	
December 2010	Web-based survey of all Policy Lab participants	
February 2011		Nicholas Institute Policy Brief: "stakeholder participation in CMSP"

[a] The Meridian Institute participated in these activities as a co-host and facilitator.

guides a broad cross-section of stakeholders "from the articulation of an issue to the architecture of a policy" [17]. The typical Institute Policy Lab includes alternating phases of staff research, stakeholder dialog, testing of outcomes, and outreach to policymakers.

The timeline of the Institute's MSP project[5] is shown in Table 1, along with key MSP documents released over the same time period. In keeping with the Institute's Policy Lab approach, a combination of research, stakeholder dialog, and policymaker outreach was employed to identify practical, broadly acceptable principles for moving forward with MSP in the U.S.

Project leaders decided to focus first on the ocean user community – those whose livelihoods depend on the use of ocean space[6] – which had up until then been far less engaged than other sectors in this issue according to the results of a 2006 UNESCO workshop [18], a report prepared in 2008 for the Gordon and Betty Moore Foundation [19], and the outcome of a day-long meeting of MSP experts held in Washington, DC. By giving ocean users time to learn about MSP and explore their individual and collective concerns in a confidential setting, subsequent interactions with environmental groups, ocean managers, and policymakers could occur on a more even footing [20]. This approach is consistent with the call from Ritchie and Ellis [13] for MSP research to develop "a far more sophisticated picture of the range of stakeholders likely to engage in MSP and develop an understanding of how they frame the issues and solutions facing the marine environment." The ultimate goal for the MSP Policy Lab, consistent with the Institute's approach to policy problems, was to foster a dialog about MSP among all U.S. ocean stakeholders.

4. Data gathering

The Institute's MSP project combined policy-oriented convening and consensus-building functions with a mixed-methods research approach. From the start, the goal was to help shape sound policy based on careful observation and analysis. The methods used to achieve these goals included semi-structured interviews, stakeholder meetings, and an online survey.

4.1. Interviews

At the start of the project and at several stages throughout, phone interviews were conducted to gage stakeholders' understanding of and perspectives on MSP and to elicit their thoughts about the Policy Lab process.

The initial project design was based on the results of eighteen semi-structured interviews with ocean users conducted between April 2008 and February 2009. Conversations ranged in length from approximately 40 to 60 min. The sectors included were: commercial fishing, recreational fishing/boating, offshore renewable energy, ocean aquaculture, offshore oil and gas, and researchers proposing ocean observing installations.[7] A topic sheet was used to guide the interviews, including seven questions grouped into three main themes: laws and regulations, perceived conflicts with other ocean sectors, and threats and opportunities. At the start of each interview (and all subsequent interviews), the informant was promised confidentiality and informed that any quotes used would be identified according to their sector, but not their name or organization. This first round of interviews was not recorded, but careful notes were taken, including verbatim quotes when possible. The resulting transcripts were explored both through close readings of the interview notes and by using NVivo qualitative analysis software.

A second set of eleven conversations was conducted in October 2009, after the third ocean user meeting had been held (see description of meetings below) but before any joint meetings with environmental advocacy group representatives (ENGOs). For this round of interviews, only those who had attended meetings were contacted, the calls were shorter (15–30 min), and the intent was primarily to gain rapid feedback on participants' reactions to the project and interest in continued participation.

After the first joint meeting was held between ocean users and ENGO representatives, in Spring 2010, additional 30–60 min, semi-structured phone interviews were conducted with eight participants from ocean user groups and six from ENGOs. The interview guide for this round of calls included 16 questions, grouped into three categories: informants past and current views about MSP, their thoughts about the Policy Lab meetings, and potential next steps. These calls were recorded, transcribed, and analyzed through close reading, NVivo software and, for the more quantitative questions, basic statistical methods.

4.2. Stakeholder meetings

The purpose of the project was to "develop an accurate understanding of the perspectives and concerns of ocean and coastal constituents from both the environmental and user communities" [21]. However, it is difficult for stakeholder dialog to be productive unless all participants have a similar knowledge base and feel comfortable with the issues. Previous experience – reinforced by the first round of interviews – showed that the ocean user community knew very little about MSP in early 2009 and was leery of its potential effects on their activities. Thus the project began by convening representatives of the ocean user community, providing them with neutral information about MSP, and allowing them to ask questions and openly debate their concerns, misgivings, and wishes regarding this new management approach. By contrast, the ENGOs were already well-informed and actively involved in the national debate, with several acting as the primary advocates for MSP. ENGO representatives were holding regular meetings to discuss policy developments and develop joint strategies for influencing the newly-established Interagency Ocean Policy Task Force.

Institute meetings were professionally facilitated and held under the "Chatham House Rule,"[8] which ensures anonymity but allows participants (including meeting organizers) to use what they hear outside the meeting as long as it is not attributed. The meetings were not recorded (as requested by participants), but Institute staff took careful notes which were subsequently reviewed by those present. Although there was no attempt to reach consensus, participants themselves were eager to document the ideas that were emerging and convey them to the Council on

[5] Significant elements of this project, including many of the meetings and the first white paper, were undertaken jointly with Meridian Institute, a not-for-profit organization that works to bring collaborative approaches to complex and controversial public policy issues.

[6] The term "ocean users" (rather than "ocean industry") was used throughout the project to denote those who rely on ocean space or ocean resources, whether living or non-living, for their activities. This includes recreational users, such as surfers and recreational fishers.

[7] Although scientists are not usually thought of as "ocean users," their desire to build fixed platforms in the ocean to carry out their activities makes them valid participants in MSP discussions. However, because early interviews revealed their interests to be quite different, that sector of users was not included in subsequent meetings.

[8] "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed;" accessed 7/13/2011 from http://www.chathamhouse.org.uk/about/chathamhouserule/.

Environmental Quality, the Ocean Policy Task Force, and later the National Ocean Council.

As shown in Table 1, four one to one-and-a-half day meetings were convened for ocean users only (including representatives from aquaculture, boating, commercial fishing, recreational fishing, oil and gas, renewable energy, undersea cables, shipping, and tourism), with attendance ranging from 7 to 15. Meeting agendas included a combination of presentations from experts familiar with MSP implementation in other countries, question and answer periods, and structured dialog among participants. Participants aired many areas of concern but, over time, also began to share thoughts about how MSP might advance their interests.

The two meetings that included only ENGOs had a different focus. In attendance were 14–20 representatives from 9 different organizations, all of whom were already familiar with MSP and actively engaged in national policy developments. After introductory presentations, participants took the lead in discussing what they believed to be desirable implementation details for a national MSP program.

Finally, two joint meetings were held to bring together ocean stakeholders from all sectors. The meetings built on the previous two-year period of data gathering, stakeholder interviews, and sector-specific meetings. Again, the agendas included a combination of expert presentations (discussing international and U.S.-based case studies, as well as the ongoing U.S. ocean policy process) and guided discussions to identify areas of commonality and difference among all participants. Because these joint meetings were necessarily larger than the previous ones, breakout groups were used at times to enable more direct interaction and dialog. At the final project meeting, presentations and discussions focused exclusively on the issue of stakeholder participation in planned regional MSP efforts in the U.S., an issue identified as being of immediate concern to all participants.

4.3. Survey

Our final approach to data gathering involved an online survey, designed, administered, and analyzed using Qualtrics Web-based survey software. The survey link was sent by email to 38 individuals who had participated in one or more of the meetings, with 24 responses posted (a 63% response rate) within the two-week timeframe, from 15 ocean users and 9 ENGOs. The survey included 16 primary questions, with an additional 22 sub-questions, and all answers were on a five-point Likert scale. The questions focused on the issue of stakeholder engagement in U.S. MSP efforts, probing topics such as who should be involved, when and how they should be consulted, how their input should be used, acceptable data sources, and regional flexibility vs. national consistency. The survey results were analyzed for all respondents and within ocean user and ENGO subgroups.

5. Results: what ocean stakeholders want from MSP

It will come as no surprise that ocean stakeholders hold a range of opinions about the value of MSP and appropriate guidelines for its implementation. Even within specific sectors, views are far from monolithic. Considerable changes in attitudes were also observed over time, including convergence on some issues as the dialog progressed.

Two brief written products were produced over the course of the project. In November 2009, a white paper was submitted to the Chair of the President's Council on Environmental Quality (serving ex officio as Chair of the Interagency Ocean Policy Task Force), summarizing outcomes from the initial three ocean user meetings [21]. The second product, issued in February 2011, was a Nicholas Institute Policy Brief submitted to the co-chairs of the new National Ocean Council that summarized some of the "points that attracted broad agreement [among stakeholders] along with areas where important differences were identified" based on Policy Lab meetings, interviews, and survey results [22]. The findings presented in those white papers are incorporated and expanded in this article.

5.1. The ocean user community

5.1.1. Attitudes before the policy lab

The initial round of interviews with ocean users revealed that they knew very little about MSP, but were highly protective of "their" space in the ocean, felt misunderstood by those outside their sector, and mistrusted any attempt to add to existing regulatory structures.

An individual associated with the offshore renewable energy industry feared that, "existing uses like shipping lanes, the military, even fishing, will always get priority over new uses." This may have been confirmed by a commercial fisherman who thought that "it's a bad idea to allow permanent structures in the ocean. [They] will be left around forever getting in the way of other users." A proponent of ocean aquaculture expressed a view, also heard from many others, that "integrated planning might be OK if it helps remove other steps. But to make planning attractive, it needs to replace or consolidate *existing* requirements." Another underlying theme among fishermen was well-expressed by one who said, "if you don't have clout and money, it's hard to participate in public policy. Rural, small-town folks get left out of ocean policy discussions."

However, these early interviews also revealed potential openness to new approaches from all sectors. For example:

> In the future we will need some form of planning for all uses of marine space and submerged lands, including MPAs. (Oil & Gas representative)
>
> We need to think broadly about all users' needs and look for synergies, user compatibilities, and dual-use opportunities. (Commercial fisherman)
>
> [We] need better dialog between different sectors aimed at finding compromises and solving problems (Offshore renewable energy advocate)

Two other, perhaps unsurprising, patterns emerged from a close analysis of the pre-meeting interview transcripts. First, there was a noticeable difference in views between sectors. Newcomers to the ocean user community (such as those advancing offshore renewable energy and ocean aquaculture) were eager for an innovative, more predictable process for them to gain access to ocean space. Powerful, long-established users (such as commercial shippers, oil and gas extractors, and undersea cable managers) felt comfortable with existing regulatory structures and wanted to avoid any new requirements. And fishing interests (both commercial and recreational), whose efforts are widely distributed rather than tied to a specific location, felt under siege from the growing number of claims for ocean space, including the establishment of marine protected areas (MPAs).[9]

[9] Although proponents of MPAs do not think of themselves as ocean "users," their desire to designate certain ocean spaces to advance their goals, while excluding others from those areas, does qualify them as claimants for ocean space. For further discussion on this topic, see: "Should Conservation be Considered a 'Use' of the Environment?" Marine Ecosystems and Management (MEAM) Newsletter Vol. 3, No. 1: August–September 2009 [23].

Second, an analysis of those interview statements that expressed explicit feelings of conflict,[10] showed that virtually all such comments involved either the commercial fishing sector or ENGOs. From 36 interviews with a broad and even mix of ocean stakeholders, 57 comments were coded as expressing conflict with another party. Of those comments, 72% were either made by, or directed at, commercial fishing or the environmental advocacy community. Although it may be tempting to conclude that these groups are simply more combative (by nature, training, or necessity), a more interesting interpretation places the perception of conflict in a spatial context. Whereas a windfarm or oil rig in a fixed location may experience little interaction with a shipping lane or dredging operation elsewhere, commercial fishermen and ENGOs pursue their objectives over wide areas throughout ocean space, creating the possibility of conflict with virtually all other ocean stakeholders.

5.1.2. Attitudes after initiation of the policy lab

In June 2009, shortly before the first scheduled meeting with ocean users, the White House released an order to the heads of all ocean-related agencies establishing an Interagency Ocean Policy Task Force to develop a new "National Ocean Policy" including a "framework for effective coastal and marine spatial planning" – the first time MSP had been called for in official U.S. policy [24]. Overnight, MSP (or CMSP) was on the radar screen of anyone with an interest in ocean management, although its exact meaning remained unclear.

Thus at the first Institute meeting with ocean users in July 2009, participants were on high alert, expressing considerable uneasiness and skepticism about MSP. The questions they raised fell into several categories:

- What is "MSP" and how does it differ from EBM, CZM, etc.? (see Box 1)
- Why is a change in management necessary now and what will it achieve?
- How will the suggested changes relate to existing laws and will they make it easier or harder to conduct business in the ocean?
- How will ocean users' views and needs be incorporated into any new policy?
- How can MSP provide certainty for business investors, while remaining flexible in the face of change and innovation?
- What "facts" (maps, data, etc.) will be used to support decisions?
- How can problems that originate onshore (e.g., nutrient runoff or urban pollution) be addressed through MSP?
- Has MSP produced any measurable positive outcomes where it has been implemented?

Many participants also conveyed a mistrust of the underlying politics, wary that the drive for MSP, visibly supported by many environmental advocates, was really a "back-door approach to site more marine protected areas." As articulated by one fishing representative, "MSP is just a new way to spell MPA."

Subsequent user-only meetings were designed to explore these themes further, through presentations from individuals who had been involved in MSP efforts in the U.S. and around the world and continued roundtable discussion. A significant moment came when a shipping industry representative from Canada, who had participated in that country's MSP program, spoke very positively about how it provided a welcome "opportunity for broad, cross-jurisdiction, multi-sector dialog." Toward the end of that meeting, one participant from the tourism industry suggested that, "MSP could be a real opportunity for ocean industries!" Of course many concerns remained, but the discussions became increasingly focused on how integrated planning might work for the business sector.

One astute, and important, new question came to the forefront during the second and third ocean user meetings, as participants became more knowledgeable about the mechanics of MSP: How will high-level objectives be set to guide the planning process, and who will determine priorities and tradeoffs among them?

The first step in any planning process – and generally accepted as the starting point for MSP – is the definition of a plan's objectives, which will color all subsequent stages in the process [25]. The new National Ocean Policy is intended to:

> uphold our stewardship responsibilities, ensure accountability for our actions, and serve as a model of *balanced*, productive, efficient, sustainable, and informed ocean, coastal, and Great Lakes *use*, *management*, and *conservation* within the global community. (italics added) [26]

Whether this desire for "balance" between use, management, and conservation is to be achieved in every location, or only on average over a large area, and whether any prioritization should be made among the three goals is left unstated. The appropriate balance point is also likely to be defined quite differently at different times and by different observers.

A very similar challenge has been central to the history of U.S. public lands management, where shifting political and cultural values have produced drastically different interpretations of management goals over time. For example, the U.S. Forest Service, despite little change over the last 100 years in its mandate to manage National Forests for multiple uses (including timber, wildlife, grazing land, watershed protection, and recreation), has interpreted the correct balance between those goals in dramatically different ways [27].

With this concern about objectives in mind as they reviewed the draft products released by the President's Ocean Policy Task Force in Fall 2009 [28], participants noted that the proposed National Ocean Council was to be co-led by the White House Council on Environmental Quality and Office of Science and Technology Policy, neither of which represents national *economic* interests and perspectives. Similarly, the two recommended advisory bodies included a Governance Coordinating Committee (representing state, local, and tribal government perspectives) and an Ocean Research Advisory Panel (for scientific input), with no corresponding panel of economic advisors.

As the discussions advanced, there was a strong push from participants to create a document summarizing the issues they had been raising. This was prompted in part by the realization, over the course of three meetings, that ocean-based businesses from different sectors shared many similar concerns about MSP. Participants drafted and revised (with administrative assistance from Nicholas and Meridian Institute staff) a list of concerns, as well as some broad principles and design elements they believed should help guide the development of MSP in the U.S. (see Box 2). The document was reviewed for accuracy by all meeting participants, but did not represent a consensus position.

In a round of follow-up phone calls conducted after the third ocean user meeting, the 11 participants contacted all expressed satisfaction with the Policy Lab process. They felt they had learned a lot and wanted to stay involved, and most felt ready to engage with the ENGO community. The most frequent

[10] Interview statements were coded as expressing "conflict" based on a combination of the informant's words and tone. Typical phrases in this category include: "environmental groups blame everything on fisherman," "[they] just don't want to listen to reason," "moored structures conflict with shipping and other activities," or "ban offshore aquaculture."

Box 2–Guidance for MSP from Ocean Users who Participated in Nicholas/Meridian Institute meetings. (Excerpted from Cantral, et al. [21]. Principles for Marine Spatial Planning: Outcomes of the Ocean Industries MSP Policy Labs. Policy Brief from the Nicholas Institute for Environmental Policy Solutions, Duke University.)

Guiding principles for marine spatial planning

Goals and time horizon

- MSP should be driven by long-term national economic, social, and environmental goals.
- MSP should be forward-looking, incorporating projections of future ocean uses and environmental conditions.

Economics and human uses

- Ecosystem-based management must include humans as both users of ocean resources and beneficiaries of ocean ecosystem services.
- MSP should carefully balance economic, social, and environmental goals.
- MSP should encourage and facilitate compatible or synergistic ocean uses.

Stakeholder participation

- MSP should be conducted in an open, transparent, and participatory fashion that ensures that all stakeholders, including representatives from existing and emerging ocean industries, have an active role in all stages of the MSP process.
- The MSP process should be one in which all participants have confidence.

Adaptation and flexibility

- The MSP process should accommodate change and promote innovation and collaboration, particularly with respect to emerging ocean industries and users.
- A national framework for MSP should allow for regional flexibility in process, planning, and implementation.

Regulation

- MSP should increase ocean investors' certainty about future regulation.
- MSP should not add to the regulatory burden faced by ocean industries.
- MSP needs to work in harmony with international treaties to which the U.S. is a party or which it recognizes (e.g., UNCLOS).

Design elements for marine spatial planning

MSP should

- explicitly recognize and account for the heterogeneity of ocean space, its uses, and the social and political contexts of different regions.
- identify and acknowledge user conflicts upfront, while encouraging the co-location of ocean uses wherever possible.
- include clear plans to obtain, organize, centralize, and make available to the highest degree possible good spatial data, including data on human uses.
- build on existing regional bodies, including multistate regional partnerships.
- be implemented through existing authorities, regulations, and legal frameworks to the greatest extent possible.
- include a process of monitoring, periodic review, and adaptation.

In addition

- The federal government should provide support and incentives to facilitate MSP, including help with pilot projects to begin the planning process.
- Sufficient time should be allotted to guarantee that MSP reflects the concerns, needs, and interests of all stakeholders, including ocean users, and allows for the collection of good data and use of sound science.
- Existing permitting processes should go forward while MSP is under discussion and development.
- Once a spatial plan is approved, a streamlined permitting process should be instituted for uses compatible with the plan and redundant layers of review should be eliminated.

observation, however, articulated in slightly different ways by 10 of the 11 respondents, was special appreciation for the unusual opportunity the meetings had offered to learn from, and caucus with, a cross-section of other ocean users. They described the meetings as "refreshing," "unique," and "unusual."

As one interviewee said, "it's actually very rare for different ocean sectors to speak with each other."[11]

5.2. The environmental advocacy community

As discussed above, by the time the Institute met with ENGO representatives, in September 2009, these individuals were already very well informed about MSP. Moreover, unlike the ocean users, they already knew each other well and had worked together on many previous issues. With substantial funding from the private Gordon and Betty Moore Foundation, ENGO representatives were holding regular meetings to discuss MSP policy developments and develop joint strategies for influencing the newly-established Interagency Ocean Policy Task Force.

As part of their ongoing collaboration, the marine ENGO community was drafting comments on the new National Ocean Policy, which were subsequently delivered to the Task Force [29]. The main emphasis of these comments was to ensure that ecosystem protection would be the *primary* goal of any new policy, stating a concern that "repeated references to the need for 'balance' in the approach to marine ecosystems and resources … could be interpreted to suggest that conservation is just one of many objectives of the policy rather than a central purpose."

During the Institute's two half-day meetings with ENGOs, participants knowledgeably discussed specific elements of the Task Force's draft CMSP framework, envisioned how MSP might play out in different regions, and speculated about how the new National Ocean Policy might interact with existing legal frameworks on which they rely, particularly the National Environmental Policy Act. During these gatherings, ocean users were frequently referred to as "opponents" who needed to be either convinced or overcome.

[11] A new international organization, the World Ocean Council, has recently been formed to attempt to fill this gap.

Table 2
Selected results from 14 participant interviews conducted following the first joint ocean user/ENGO meeting.

(1) How familiar were you with the concept of MSP prior to the Institute meetings? on a scale from 1 (expert) to 5 (never heard of it)

Ave. ENGO response=1.7; Ave. ocean user response=3.1

(2) How do you feel today about the concept of marine spatial planning? on a scale from 1 (very supportive) to 5 (very opposed)

Ave. ENGO response=2.3; Ave. ocean user response=3.0

(3) More specifically, how do you feel about the CMSP framework proposed by the Ocean Policy Task Force? on a scale from 1 (very supportive) to 5 (very opposed)

Ave. ENGO response=2.0; Ave. ocean user response=3.0

(4) Which feature of the proposed marine spatial planning framework do you believe is the most in need of clarification? (note: totals sum to more than the number of interviews because many people mentioned more than one feature)

MSP feature	ENGO selection	Ocean user selection	Total
Definition of authorities	5	8	13
Stakeholder involvement	3	8	11
Funding	3	3	6
Data	1	4	5
Federal schedule	2	2	4
Role of local priorities	0	4	4
Setting objectives	1	1	2
Flexibility	0	2	2

5.3. Bringing ocean user and environmental stakeholders together

Finally, after almost two years of preparatory activities and six ocean user-only or ENGO-only meetings, it was time to bring the full range of ocean stakeholders together. The first joint meeting, in May 2010, included 10 ocean user and 11 ENGO representatives, and offered a relatively unstructured forum to share perspectives on the Ocean Policy Task Force's *Interim Framework for Effective Coastal and Marine Spatial Planning.* Some of the topics covered included: approaches to stakeholder involvement, objective setting, potential funding sources, data collection and integration, state-federal interactions, national standards, and enforceability. The conversation was civil and wide-ranging; staff did not attempt to draw conclusions or seek consensus and ample time was built into the agenda for casual discussions and social interaction. Toward the end of the meeting, one participant suggested that "if a diverse group like this could develop shared principles, that would really have some weight!"

Before embarking on the last phase of the project, another round of phone interviews was undertaken (see section on Data Gathering above) to gage the impact of the Policy Lab to date and select a focus for the last meeting. Careful examination of the resulting 112 typed transcript pages provided rich insights into participants' experiences. As expected, ENGOs knew more than ocean users about MSP going into the meetings and continued to feel more supportive of both the concept in general and the draft framework developed by the Task Force (see Table 2). All participants felt that their *understanding* of the issues had increased, although none of the ENGO interviewees felt that their *views* about MSP had changed. Ocean user responses concerning changes in their views on MSP were very mixed: two said their opinions had gotten better in some ways and worse in others, and four felt unable to provide an answer.

Respondents were also asked to select features of the MSP framework most in need of additional clarification. The topics mentioned most frequently were: (1) Authorities (who would be in charge and what laws would govern); (2) Stakeholder involvement (who, when, and how); (3) Funding sources; and (4) Data (sources and standards). Since there was little that those outside government could do to resolve uncertainties about legal authorities and funding, the last meeting focused on stakeholder involvement, including their role in data acquisition.

The final meeting was the most structured of the series. It began with a synopsis of current research in the field of stakeholder involvement in decisionmaking, followed by three case studies of large-scale ocean planning efforts with significant stakeholder input (Australia's Great Barrier Reef Marine Park Rezoning, California's Marine Life Protection Act process, and the Massachusetts Ocean Management Plan). Subsequent discussions, in plenary and breakout sessions, focused on five key elements in the stakeholder process:

- defining the stakeholders,
- designing the stakeholder process,
- selecting sources of data,
- linking stakeholder input to decisions, and
- ensuring transparency.

All participants agreed that the outcome of the final joint meeting would be an Institute policy brief, to be distributed to members of the National Ocean Council. To supplement detailed notes taken at the meetings, a follow-up internet-based survey (described above under "Data Gathering") was administered to clarify participant views on several of the issues raised. The survey confirmed many of the findings from the meetings and interviews, adding some specificity to general observations. Based on notes from the final meeting, combined with survey findings, Institute staff documented areas of agreement and difference between ocean users and ENGOs (Box 3), as well as their views about the appropriate role for the National Ocean Council in implementing MSP (Box 4). As before, the report was reviewed for accuracy by all participants, but did not purport to represent consensus among the group.

As is evident, many points of agreement emerged between ocean users and ENGOs. Participants supported most of the generally accepted principles for effective stakeholder engagement, such as broad inclusion, meaningful dialog from the earliest stages of planning, and transparency. However, participants struggled, as individuals and as a group, to define the appropriate balance between uniform national standards and regional flexibility. Since the US EEZ is managed by the government on

Box 3–Points of agreement and difference (*in italics*) concerning stakeholder involvement in CMSP, from ocean user and ENGO participants in the Nicholas Institute meetings (Excerpted from Gopnik, et al., [22]. *Stakeholder Participation in Coastal and Marine Spatial Planning*. Policy Brief from the Nicholas Institute for Environmental Policy Solutions, Duke University.)

Defining stakeholders

- Everyone should have access to the CMSP process but distinctions should be made between different kinds of interested parties.
- A list of ''impacted stakeholders'' should be created to ensure that no important parties are omitted from the planning process. *However, there was considerable divergence of opinions about whether that list should be generated at the national or regional level.*

Designing a process for stakeholder involvement

- CMSP should allow everyone to be heard and to contribute potentially useful information, knowledge, or data; however, planners should offer many different approaches to participation, targeted to the needs of different audiences. Certain groups that will be directly affected by CMSP outcomes (including both ocean users and conservation advocates) could benefit from more targeted opportunities for input and discussion with planners, as long as such interactions are conducted in an open, transparent manner.
- Engagement can be particularly useful and rewarding when specific input is needed. For example, participants appreciate being asked to comment on activities shown on maps, respond to specific requests for data, react to draft plans, or participate in other targeted exercises.

Selecting sources of data

- CMSP requires a mix of spatial and non-spatial data on biological, physical, social, economic, and cultural topics; this creates both a need and an opportunity for broad stakeholder outreach. Planners should take advantage of as many data sources as possible, as long as the data meet some pre-determined criteria for quality and accuracy or are approved by a scientific committee.
- Managers should conduct data gap analyses and focus data collection on issues where there is greatest conflict or uncertainty. Action should not be delayed because of a lack of complete information.
- Planners should take full advantage of available software and internet-based tools to make all data accessible, easily visualized, and available for feedback and improvement.

Linking stakeholder input to decisions

- There was broad agreement that all stages of the process would benefit from stakeholder input, with one exception. *Most industry respondents to the survey thought stakeholders should provide input into the design of the CMSP process itself, whereas a majority of ENGO respondents thought the process should be designed solely by agency staff.*
- Stakeholder Advisory Groups should be established as an interface between the public and decisionmakers
- Once in place, spatial plans should be revisited and updated within a three- to eight-year timeframe.

Ensuring transparency

- Any interactions between planners and some subset of stakeholders should be made known to the public in a transparent manner and equivalent opportunities should be offered to other groups that request them.
- Pre-determined measures of success (''performance metrics'') should be linked to each CMSP goal to make clear how plans will be evaluated. These metrics should be tracked through carefully designed, well funded, and reliably implemented monitoring plans. The monitoring results should then be used as the basis for plan revisions.

behalf of all citizens, national standards help ensure that no region ignores important national goals. On the other hand, regional flexibility allows for biological and cultural diversity, increasing a sense of local ownership and acceptance of marine plans. This equilibrium is a perennial problem with natural resource policy, as exemplified by longstanding debates about federal vs. regional, state, or community control of U.S. fisheries, forests, and watersheds. Listening to the discussion during the meetings and reviewing participant interview transcripts, it became clear that stakeholder opinions about national vs. regional control are based more on political reality than on principle: where stakeholders stand on the issue reflects their perception of where they believe they can exert the greatest influence.

6. Conclusions

The information gathered during the course of this two-year project provided significant insights into stakeholder views toward MSP. Equally important, the process itself fostered new relationships and perspectives among all participants, including the project's organizers.

With a few exceptions, ocean users came into the project knowing little or nothing about MSP and had not yet become engaged in this emerging policy arena. They were understandably concerned about the justification for, and impacts of, any new management approach. In particular, they wondered how MSP might affect the overall time, cost, complexity, and uncertainty involved in pursuing their activities. They unanimously proclaimed their support for protection of marine ecosystems, but many said they felt misunderstood and vilified by environmental advocates who seemed to disregard the value of economic activity. However, ocean users also expressed differences. Those from well-established industries were wary of any changes to their familiar regulatory structures, whereas representatives of new or emerging ocean sectors felt the need for government and other stakeholders to acknowledge and make room for them. As ocean users became more knowledgeable and listened to each other, an evolution occurred in the way they talked about MSP and thus their ability to meet on level ground with ENGOs during the next phase.

In contrast, ENGOs were well-informed and had been actively advocating in favor of MSP, which they viewed as a practical approach to begin implementing ecosystem-based management. At the time of this project, they also felt empowered by a supportive White House and Executive Branch. Their central concern about MSP implementation was that ecosystem protection might get bargained away to achieve economic goals.

When ocean users and ENGOs were brought together, they were able to identify many areas of agreement. As expressed in a recent article on collaboration, ''given the right circumstances,

Box 4–Views about the proper role of the National Ocean Council in CMSP, from ocean user and ENGO participants in the Nicholas Institute meetings (with areas of disagreement indicated in italics) (excerpted from Gopnik, et al. [22]. *Stakeholder Participation in Coastal and Marine Spatial Planning*. Policy Brief from the Nicholas Institute for Environmental Policy Solutions, Duke University.)

- The first task of the National Ocean Council (NOC) should be to articulate and make a case for the value of the new National Ocean Policy and why CMSP is needed to fulfill its promise. Success will depend on building much broader public awareness, understanding, and support through education and communications campaigns at both national and regional levels.
- Although all participants expressed support for regional variation in the implementation of CMSP, there was also agreement that the federal government, through the National Ocean Council (NOC) or legislation, should set a few high-level national goals or standards to guide all planning efforts (e.g., sustainable use of ocean resources, energy independence, diverse marine ecosystems, strong coastal communities).
- National goals should be accompanied by a flexible framework to help steer the planning process in each region. As regional plans are completed, they should be reviewed through a certification or auditing process to ensure they are consistent with the national goals and framework.
- Almost all stages of the CMSP process will benefit from stakeholder input. *However, stakeholders were divided as to whether the NOC should mandate specific mechanisms for participation to be used by all regions.*
- Every region should be required by the NOC to establish a Stakeholder Advisory Group as an intermediate step between broad public input and final decision making. *Opinions were divided about membership and appointment procedures for such a body,* but most agreed that its recommendations should be ''given greater weight than other input.''
- The NOC should require periodic revisions of regional plans, with most participants recommending a three- to eight-year timeframe.
- All aspects of MSP, from public outreach, to participatory processes, data collection, planning, and monitoring require adequate funding. Although support from foundations, industry, and innovative public-private partnerships can help, those sources also create potential conflicts. All participants agreed that additional federal funding will be needed for regions to fully implement CMSP.

ordinary people have a substantial capacity to overcome differences and discover common ground.'' [30] The final white paper documented numerous points of consensus that emerged. Many of these echoed the existing literature on stakeholder engagement: all parties want to be meaningfully involved in decision making from the earliest stages and are concerned about others gaining unequal or back door access to the process. Broad agreement was also found on a number of issues involving MSP data needs: data should be drawn from a wide variety of sources, including less traditional non-government sources; all data should be vetted for reliability by an advisory group; and decision makers should not wait for perfect data before moving forward.

All participants also believed there should be a limited set of clear objectives for MSP. However, a tension remained about whether the goal of ecosystem protection should outweigh other social and economic goals. ENGOs argue that human goals can not be met in the long run in the absence of healthy ecosystems while many ocean users argue that environmental goals will never be met in the absence of thriving communities and a vibrant economy. Stakeholders also appear to have mixed opinions about appropriate balance points between *national consistency* and *regional flexibility* and between *predictability* and *adaptability*. Such dilemmas are unlikely to be resolved, but should be acknowledged and accepted as part of the planning process.

As significant as the discovery of specific areas of agreement and disagreement over the course of the project, was the way bringing individuals together (both within the ocean user community and between users and ENGOs) to exchange their thoughts in a non-adversarial environment helped create new connections. During phone interviews, respondents from a variety of backgrounds volunteered that they were particularly pleased to meet, learn from, and get to know the other participants. The project organizers and facilitators also observed an evolution in the dialog, with participants expressing increasingly nuanced ideas over time.

The Nicholas Institute Policy Lab approach, with its combination of alternating phases of background research, facilitated stakeholder dialog, and outreach to policymakers proved valuable in fostering broad thinking, identifying issues and potential roadblocks, and building non-traditional relationships. But to design a flexible, adaptable, effective, and distinctly American version of MSP, this kind of engagement will need to be replicated among a much larger community, with more complete representation, and in a more visible, and accessible setting.

Acknowledgments

Funding for this project was provided by the Gordon and Betty Moore Foundation, Center for Marine Conservation at the Duke Marine Lab, and Nicholas Institute for Environmental Policy Solutions. We are also grateful to Claire Fitz-Gerald for assistance with the NVivo analysis of interview transcripts and to Megan Jungwiattanaporn for help with design and analysis of the survey.

References

[1] Ehler C, Douvere F. Marine spatial planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission (IOC) Manual and Guides 2009; No. 53, ICAM Dossier No. 6.
[2] Executive Order 13547. Stewardship of the Ocean, Our Coasts, and the Great Lakes. Washington, DC 75 FR 43023, July 22, 2010.
[3] e.g., Comments to The White House Council on Environmental Quality from the National Marine Sanctuary Foundation, November 20, 2009 (accessed on 10/21/2011 at 〈http://www.nmsfocean.org/files/NMSF_Comments_to_Task_Force_on_MSP.pdf〉.
[4] e.g., Description of MLPA program accessed 10/21/2011 at 〈http://www.msp.noaa.gov/examples/california.html〉.
[5] Regional Fishery Management Councils. U.S. Regional Fishery Management Councils: Decades of Knowledge and Experience in Coastal and Marine Spatial Planning. NOAA; 2010.
[6] Ehler C., Douvere F. Marine spatial planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission (IOC) Manual and Guides 2009; No. 53, ICAM Dossier No. 6.
[7] U.S. Commission on Ocean Policy. An Ocean Blueprint for the 21st Century: Final Report. Washington, DC.: GPO 2004.
[8] Pomeroy R, Douvere F. The engagement of stakeholders in the marine spatial planning process. Mar. Policy 2008;32(5):816–22;
Gopnik M. Marine Spatial Planning in U.S. Waters: The Path Forward. Gordon and Betty Moore Foundation; 2008.
[9] e.g., Reed MS. Stakeholder participation for environmental management: a literature review. Biol. Conserv. 2008;141:2417–31;
Daniels SE, Walker GB. Working through Environmental Conflict: The Collaborative Learning Approach. Praeger Publishers; 2001;
Depoe S, et al. Communication and Public Participation in Environmental Decision Making. State University of New York Press; 2004;
Wondolleck J, Yaffee S. Making Collaboration Work: Lessons from Innovation in Natural Resource Management. Island Press; 2000. and many others.

[10] Innes JE, Booher DE. Reframing public participation: strategies for the 21st century. Plann. Theory Pract. 2004;5(4):419–36.
[11] Consensus Building Institute and Massachusetts Ocean Partnership. Stakeholder Participation in Massachusetts Ocean Management Planning: Observations on the Plan Development Stage. Massachusetts Ocean Partnership; 2009.
[12] Wondolleck J, Yaffee S. Making Collaboration Work: Lessons from Innovation in Natural Resource Management. Island Press; 2000.
[13] Ritchie H, Ellis G. A system that works for the sea? Exploring stakeholder engagement in marine spatial planning J. Environ. Plan. Manage. 2010;53:701–23.
[14] Pomeroy R, Douvere F. The engagement of stakeholders in the marine spatial planning process. Mar. Policy 2008;32(5):816–22.
[15] Ehler C. , Douvere F. Marine spatial planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission (IOC) Manual and Guides 2009; No. 53, ICAM Dossier No. 6.
[16] Nicholas Institute Mission Statement, accessed on 10/21/2011 at 〈http://nicholasinstitute.duke.edu/about/〉.
[17] Nicholas Institute for Environmental Policy Solutions. Policy Lab Outreach: A Manual. Undated internal document.
[18] Ehler C. and Douvere F. Visions for a sea change: Report of the First International Workshop on Marine Spatial Planning. Intergovernmental Oceanographic Commission (IOC) Manual and Guides 2007;. No. 48, Dossier No. 4.
[19] Gopnik M. Marine Spatial Planning in U.S. Waters: The Path Forward. Gordon and Betty Moore Foundation; 2008.
[20] Daniels SE, Walker GB. Working through Environmental Conflict: The Collaborative Learning Approach. Praeger Publishers; 2001.
[21] Cantral L, et al. Principles for Marine Spatial Planning: Outcomes of the Ocean Industries MSP Policy Labs. Policy Brief from the Nicholas Institute for Environmental Policy Solutions, Duke University; 2009.
[22] Gopnik M, et al. Stakeholder Participation in Coastal and Marine Spatial Planning. Policy Brief from the Nicholas Institute for Environmental Policy Solutions, Duke University; 2011.
[23] Should conservation be considered a 'Use' of the environment? Marine Ecosystems and Management (MEAM) Newsletter Vol. 3, No. 1: August–September 2009.
[24] Memorandum from the White House to The Heads of Executive Departments and Agencies, concerning A National Policy for the Oceans, Our Coasts, and the Great Lakes, June 12, 2009.
[25] Beck MW, Ferdaña Z, et al. Best Practices for Marine Spatial Planning. The Nature Conservancy; 2009;
Ehler C, Douvere F. Marine spatial planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission (IOC) Manual and Guides 2009; No. 53, ICAM Dossier No. 6.
[26] Interagency Ocean Policy Task Force. Final recommendations of the Interagency Ocean Policy Task Force. Washington, DC: Council on Environmental Quality; July 19, 2010.
[27] Davis C, editor. Western Public Lands and Environmental Politics. Westview Press; 2001.
[28] Interagency Ocean Policy Task Force. Interim Framework for Effective Coastal and Marine Spatial Planning. Washington, DC: Council on Environmental Quality; 2009. December.
[29] Comments responding to the Interagency Ocean Policy Task Force's Interim Framework for Effective Coastal and Marine Spatial Planning. Submitted by Ana Zivian, Ocean Conservancy, on behalf of 14 environmental advocacy organizations, December 9, 2009. Archived at 〈http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interim-framework/comments〉.
[30] Kemmis D., McKinney M. Collaboration as an Emerging Form of Democracy. National Civic Review, Summer 2011.