Stakeholder Participation in Coastal and Marine Spatial Planning

Morgan Gopnik, * Clare Fieseler,† and Larry Crowder*

SUMMARY

Beginning in July 2009, the Nicholas Institute for Environmental Policy Solutions, in collaboration with Duke's Center for Marine Conservation and the Meridian Institute, convened a series of meetings to discuss coastal and marine spatial planning (CMSP) with a variety of ocean stakeholders. Four of the meetings included only represen-tatives from ocean industries, two included only environmental nongovernmental organizations (ENGOs), and the final two meetings included stakeholders from all constituencies. The purpose of the meetings was to share per-spectives, discover areas of agreement, and identify potential conflicts; no attempt was made to reach consensus among the participants. To supplement discussions at the meetings, the Nicholas Institute also conducted in-depth phone interviews and administered a web-based survey for the meetings' participants.

Points that attracted broad agreement are summarized below, along with areas where important differences were identified.

Defining CMSP Stakeholders

- Everyone should have some access to the CMSP process, but distinctions can and 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.

Designing a Process for Stakeholder Involvement

- A major communications strategy is needed at both national and regional levels to explain the value of CMSP and how it fits into the larger National Ocean Policy.
- 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.
- 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.

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.

Author Affiliations

* Duke University Marine Lab, Nicholas School of the Environment, Duke University
† Nicholas Institute for Environmental Policy Solutions, Duke University

- Stakeholder Advisory Groups can provide a valuable interface between the public and decision makers. Most participants believed such groups should be established and that their recommendations should be "advisory, but given greater weight than other input."
- Once in place, spatial plans should be revisited and updated within a 3- to 8-year time frame.

Selecting Sources of Data

- CMSP requires a mix of spatial and nonspatial 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.

Ensuring Transparency

- Any interactions between planners and some sub-set 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.
- Clear measures of success (also referred to as performance metrics) must be linked to the stated goals of the CMSP effort. These should be tracked through a carefully designed and well-funded monitoring plan, followed by periodic evaluations and plan revisions.

The Role of the National Ocean Council

The first task of the NOC is to articulate and communicate the value of the new National Ocean Policy and explain why CMSP is needed to fulfill its promise. 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). The 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 an auditing process to ensure that they are consistent with the national goals and framework.

The NOC should consider including the following elements in a national framework for CMSP:

- The general public should have full access to the CMSP process, but distinctions can be made between different kinds of interested parties. 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.
- 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.
- Almost all stages of the CMSP process could benefit from stakeholder input. However, stakeholders are 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 concerning the appropriate membership and appointment procedures for such a body, but most agreed that its advice should be given significant deference.
- Once regional spatial plans are approved, they should be revisited and updated within a 3- to 8-year time frame, to be specified by the NOC.
- Clear measures of success ("performance metrics") should be linked to each CMSP goal to make clear how plans will be evaluated. These metrics should

be accompanied by carefully designed, well funded, and reliably implemented monitoring plans. The monitoring results should then be used as the basis for periodic evaluations and plan revisions.

The success of the U.S. National Ocean Policy generally, and CMSP in particular, will depend on building much broader public awareness, understanding, and support through education and communications campaigns at both national and regional levels. All of the steps described in this report, 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.

INTRODUCTION

Effective coastal and marine spatial planning (CMSP) will require the active engagement of all ocean and coastal stakeholders, including those who depend on ocean and coastal resources for their livelihoods, environmental advocates, and the general public.[1] Since April 2008, Duke University's Nicholas Institute for Environmental Policy Solutions has worked to bring the ocean stakeholder community into the CMSP debate, with a particular focus on informing and listening to the ocean user community.

Beginning in July 2009, the Nicholas Institute, in collaboration with Duke's Center for Marine Conservation and the Meridian Institute,[2] convened a series of professionally facilitated meetings to discuss CMSP with a variety of stakeholders. Four of the meetings included only representatives from ocean industries (including commercial fishing, recreational fishing, shipping, undersea cables, oil and gas extraction, aquaculture, renewable energy, and tourism), two included only environmental NGOs, and the final two meetings included all ocean stakeholders.

Over the course of these gatherings, participants asked many questions, expressed their hopes and concerns about how CMSP might proceed in the U.S., and discussed appropriate roles for stakeholders in the CMSP process. There was no attempt to reach consensus; instead we attempted to air as many views as possible and identify broad areas of agreement and difference. To supplement the meeting discussions, Nicholas Institute staff also reviewed and summarized the significant existing body of literature about stake-holder engagement in decision making, conducted in-depth interviews with 31 individuals, and administered an online survey.[3]

The first product of this effort was based on the three industry-only meetings, conveying their suggestions for appropriate CMSP design principles to the Interagency Ocean Policy Task Force in response to its interim report. That communication, issued on November 11, 2009, is available for download at the Nicholas Institute's website.[4]

This document focuses on the topic of stakeholder participation in CMSP, which was discussed at both of the joint industry-ENGO meetings and served as the sole focus of the final meeting in October 2010 and the web-based survey. Although the views expressed are based on a limited sample of the vast ocean community, we believe they will be of value to the National Ocean Council as it designs a national framework for CMSP. Our aim is to provide insights into the perspectives of a variety of stakeholders and point to ways these groups might best be engaged in the marine planning process.

---

[1] C. Ehler and F. Douvere, "Marine Spatial Planning: A Step-by-Step Approach toward Ecosystem-based Management," Intergovernmental Oceanographic Commission Manual and Guides No. 53, ICAM Dossier No. 6 (Paris: UNESCO, 2009)

[2] In addition to the authors, significant direction and facilitation of the process were provided by Linwood Pendleton, Nicholas Institute for Environmental Policy Solutions; Laura Cantral, Meridian Institute; Kate McClellan, former staff member at the Nicholas Institute for Environmental Policy Solutions; and Michael Harty, Kearns & West. The findings expressed in this report remain the sole responsibility of the authors.

[3] The survey was sent to 38 ocean stakeholders who had attended one or more of the CMSP meetings organized by the Nicholas Institute. The overall response rate was 61%. The survey included 16 questions, with responses on a five-point Likert scale, all of which had to be answered to submit a completed survey. Sixty percent of the respondents represented a marine user group and 40% were affiliated with an ENGO. Additional details about the survey can be provided on request.

[4] Laura Cantral et al., "Principles for Marine Spatial Planning: Outcomes of the Ocean Industries MSP Policy Labs," Nicholas Institute Memo (Durham, NC: Nicholas Institute for Environmental Policy Solutions, Duke University, 2009). http://nicholasinstitute.duke.edu/oceans

1. Defining the Stakeholders

There are many questions to be considered in determining how stakeholders should be represented: Who thinks of themselves as a stakeholder? Who decides which stakeholders need to be consulted? How well are stakeholders represented by selected spokespeople? Do some stakeholders have more power than others? Should all stakeholders be treated equally? These questions and others were debated among meeting participants with the following results.

There was broad agreement that everyone must have access to the CMSP process in some way. Public meetings and comment periods should be well publicized and accessible to anyone who is interested. However, most participants also agreed that distinctions can and should be made between different kinds of interested parties, which they referred to using terms such as "the public," "stakeholders," "affected stakeholders," "government agency stakeholders" (federal, state, and local), and "super stakeholders" (those who stand to gain or lose the most depending on the specifics of the plan). Most survey respondents (71%) believed that 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.

There was also much discussion, but little agreement, about who best represents the interests of the "general public"— those who may not know or care enough to participate directly, but who are in a sense the true owners of the resource. In the end, most agreed that elected officials need to fill this role since they are the only ones who can ultimately be held accountable by the public for decisions made on their behalf.

2. Designing a Process for Stakeholder Involvement

Engagement with stakeholders from the start and throughout the process has been identified as an essential element of any successful participatory undertaking.[5] If stakeholders do not believe there is a problem, or see how planning may improve the situation, they will be less likely to participate. More specifically, research suggests that in order for CMSP to achieve acceptance and success, stakeholders must be included in every stage of the process.[6] As one of our meeting participants stated—with nods from around the room—engaging stakeholders is the only way to build support and buy-in for the outcome, which will be critical for decreasing conflicts and enforcement efforts down the road.

Before busy stakeholders and citizens will even choose to spend time on CMSP, participants felt that a significant communications effort would be needed. As one industry representative summarized, "the public doesn't know or care about MSP." Even informed stakeholders are not yet fully familiar and comfortable with the idea. A communications strategy should begin by explaining the purpose of the new National Ocean Policy and conveying high-level national goals for the ocean, such as food and energy production, recreation, nutrition, healthy marine ecosystems, and more. This should be followed by a clear explanation of how CMSP can be used as a tool to achieve better outcomes in these areas. There was strong agreement, both in person and in the survey (84%), that a major communications strategy is needed at both national and regional levels.

At the final Nicholas Institute meeting, participants learned about a range of marine planning experiences, from Massachusetts, California, and Australia. These case studies illustrated many possibilities for engaging stakeholders, including written comment periods, public meetings, smaller meetings aimed at particular regions or sectors, public polling, stakeholder advisory groups, and employing stakeholders as agency staff. The survey found very strong support for all these methods except the last, which generated mixed responses.

Again, there was wide agreement that the starting point for public participation in CMSP should be wide-open access that allows everyone to be heard and to contribute potentially useful information, knowledge, or data. However, consistent with the discussion about stakeholder heterogeneity, most participants also believed that planners should offer many different approaches to participation, targeted to the needs of different audiences. How that

---

[5] M. Reed, "Stakeholder Participation for Environmental Management: A Literature Review," Biological Conservation vol. 141, no. 10 (2008): 2417–2431

[6] R. Pomeroy and F. Douvere, "The Engagement of Stakeholders in the Marine Spatial Planning Process," Marine Policy vol. 32, no. 5 (2008): 816–822

differentiation should be implemented is more complicated. In response to the survey questions "should participatory mechanisms be the same for stakeholders as for the general public" and "if not, which group should receive greater emphasis," 54% of respondents felt that participation should be emphasized for stakeholders, 5% thought that stakeholders and the general public should be offered the same participation opportunities, and 8% felt that public participation should be emphasized (the remaining 13% rated themselves as "neutral").

Engagement can be particularly useful and rewarding when specific input is needed, for example, when participants are able to indicate their activities on maps, are asked to respond to specific requests for data, or can comment on draft documents or plans. When asked whether the NOC should mandate specific mechanisms for stakeholder participation to be adopted by all regions, 86% of industry respondents were in favor while ENGO respondents were evenly divided.

The mechanisms described above all require substantial commitments of time from stakeholders. For stakeholders to contribute in the ways and at the times most important to them, it will be important to sketch out the stages and timeline of each CMSP process well in advance. At the same time, planners should retain the ability to modify plans along the way in response to changing data and circumstances. This last caveat was reinforced many times by meeting participants, several of whom worried that a disproportionate focus on process might get in the way of achieving planning goals.

3. Linking Stakeholder Input to Decisions

One way a participatory process can falter is if the purpose of stakeholder input is not clearly stated and communicated to everyone involved.[7] It is critical to ensure that participants have the power to actually affect the decision making process.[8] Stakeholders will not commit time to a process if they feel their involvement will not influence the results or if managers do not seem to take the public process seriously.

There are many steps in a model CMSP process, from setting high-level goals and objectives, through design of the process, data gathering, drafting of alternate scenarios and plans, selection of a preferred plan, and implementation and monitoring. There was broad agreement that all stages of the process would benefit from stakeholder input, with one exception. Most industry respondents to the survey (86%) thought stakeholders should provide input into the design of the CMSP process itself, whereas a majority of ENGO respondents (63%) thought the process should be designed solely by agency staff.

Participants agreed that the CMSP stakeholder process should proceed from very broad public input, to smaller groups that provide more focused input, to the ultimate decision makers who must make difficult decisions and be accountable for them. One issue that received a lot of attention was the possibility of creating regional Stakeholder Advisory Groups. These were collectively understood as select bodies that might play a special role in the process. There was strong agreement about the value of Stakeholder Advisory Groups—in fact, 91% of survey respondents thought the NOC framework for CMSP should require every region to establish such a body. However, debates about the appropriate role and composition of a Stakeholder Advisory Group were particularly intense, occupying many hours of meeting time and generating a range of survey responses.

Some of the perceived benefits of a Stakeholder Advisory Group included its ability to filter, consolidate, and forward public input to decision makers, reach out to all sectors and build trust in the process, and provide "cover" for politicians called on to make tough choices. However, thoughts about the appropriate place for the Stakeholder Advisory Group in decision making were mixed, including everything from restricting the Stakeholder Advisory Group to a purely advisory role to assigning it responsibility for selecting among plan options. The survey affirmed this ambivalence, with the most support registered (73% approval) for a Stakeholder Advisory Group's role to be "advisory, but given greater weight than other input."

The membership of the Stakeholder Advisory Group is a critical question. In the meeting discussions and subsequent survey, various options were proposed. Three scenarios received the most attention:

[7] J. Glicken, "Getting Stakeholder Participation 'Right': A Discussion of Participatory Processes and Possible Pitfalls," Environmental Science & Policy 3 (2000): 305–310. 8.
[8] See note 5

1. Appoint a small group of wise, trusted community leaders who are not affiliated with any specific sector. Although many of our meeting participants (and 68% of survey respondents) liked the "above the fray" nature of this option, some worried that it could be politically manipulated and could lead to real or perceived inequities in stakeholder group access.

2. Appoint one member to represent each stakeholder group on a pre-determined list (see section 1). This option guarantees broad representation and was widely supported (including 77% of survey respondents), but opponents pointed out that it would result in a very large Stakeholder Advisory Group whose members might see themselves as advocates rather than consensus builders.

3. Appoint a medium-sized group that includes a variety of individuals from across the region. Some of the members could be associated with certain sectors (although official representatives would be excluded), but all would be expected to act in an open-minded, collegial way. This middle-ground option was seen by many as a reasonable compromise (with 86% approval in the survey) but by others as "the worst of both worlds." One meeting participant asked whether it would be possible for members to put their sectoral perspectives aside in order to integrate all stakeholders' views.

The discussion about Stakeholder Advisory Groups also revealed a variety of opinions about who should appoint its members. Based on survey results, appointment by legislators received very little support (18% of respondents) and views were evenly divided on appointment by governors (50% in favor). However, other options presented in the survey revealed a significant divide between our participants. ENGO respondents strongly favored Stakeholder Advisory Group appointments by the NOC (75% approval), while only 14% of industry respondents shared that view. On the other hand, most participants from ocean industries (86%) felt that each sector should select its own Stakeholder Advisory Group representative, while only 38% of ENGO respondents approved of that option.

Finally, despite concerns about the potentially large investment of time and funds that will be needed to achieve effective CMSP, 92% of survey respondents thought that once plans are in place they should be revisited and updated within a 3- to 8-year time frame based on monitoring results and achievement of project goals. A large majority of survey respondents (79%) believed the NOC should specify such a time frame for updating regional plans, rather than leaving it to regional discretion.

4. Selecting Sources of Data

Stakeholders often have specialized knowledge to contribute to the planning process based on their experiences,[9] and some analysts believe that stakeholder information should be considered equally with information from scientists.[10] Of course it can be difficult to combine experience-based knowledge with research-based knowledge, and some stakeholders may be wary of sharing their information with government officials.[11] Data flows are also more effective when they go in both directions: planners need to provide all stakeholders with the data, materials, and knowledge that will help them contribute meaningfully to decisions.[12]

Discussions at our final meeting made it clear that data collection and verification is viewed as an important component of public involvement. CMSP requires a mix of spatial and nonspatial data on biological, physical, social, economic, and cultural topics, which creates both a need and an opportunity for broad stakeholder outreach. Several participants thought it was important to distinguish between data (specific facts, often quantitative, about the attributes of the region under consideration, such as a map of whale migration paths), information (more generally relevant knowledge, such as the health benefits of seafood or the overall economic contribution of tourism), and policy judgments (tradeoffs and choices that reflect societal goals and values, such as a renewable energy target). Because data and understanding are always being

---

[9] K. Ladell, "Stakeholder, Coastal Community, and Expert Views on Ocean Issues and Marine Use Planning in British Columbia: What Government Needs to Consider when Engaging Stakeholders in the Pacific North Coast Integrated Management Area (PNCIMA) Planning Process," a report by the Living Oceans Society, David Suzuki Foundation, and Sierra Club of British Columbia (Sointula, Canada: Living Oceans Society, 2008)
[10] See note 7.
[11] A. Berghofer et al., "Stakeholder Participation in Ecosystem based Approaches to Fisheries Management: A Synthesis from European Research Projects," Marine Policy 32 (2008): 243–253
[12] See note 5

improved, managers should be cautious about adopting plans that would be very difficult to adapt over time.

Survey results showed unanimous support for the idea that planners should take advantage of as many data sources as possible, including government agencies, universities, and user groups, plus any other source whose data meet some predetermined criteria for quality and accuracy or are approved by a scientific committee. Because data collection is expensive, prioritization will be critical. Although having more data generally improves decisions, not all missing data will be equally critical and action should not be delayed because of a lack of the "perfect data." The participating stakeholders thought that managers should be pragmatic, conduct data gap analyses, and focus data collection on issues or in areas where there is greatest conflict or uncertainty. Furthermore, budgets for data collection should be carefully weighed against other, frequently underfunded priorities such as public education, stakeholder meetings, and post-implementation monitoring.

Finally, participants felt that planners should take full advantage of available software and internet- based tools to make all collected data fully accessible, easily visualized, and open for feedback and improvement.

5. Ensuring Transparency

The willingness of stakeholders to accept an outcome that may not be entirely in their interests depends in part on the perceived level of legitimacy, neutrality, and transparency of the decision-making process.[13] There are several ways to increase transparency, including making meetings accessible to all stakeholders and turning information around quickly to keep the public informed and show stakeholders their contributions are valued.[14] Following up with stakeholders about the effectiveness of management in achieving its goals can also increase trust in the process.[15] However, as one meeting participant commented, transparency is necessary, but not sufficient, to achieve acceptance; the process itself must be designed and perceived to be rational and even-handed.

---

[13] See note 11

[14] Y. deReynier et al., "Bringing Stakeholders, Scientists, and Managers Together through an Integrated Ecosystem Assessment Process," Marine Policy 34 (2010): 534–540

[15] See notes 6 and 7

As discussed in section 2 above, many meeting participants felt that certain constituencies (referred to by some as "super stakeholders") may need and deserve more targeted opportunities for input. However, to maintain trust in the process and avoid even the perception of "back room deals," any selective interactions with a subset of stakeholders should be made known to the public in a transparent manner, presumably through project websites or other means.

Many of our participants believed that anyone who provides input to the CMSP process should receive some feedback about how that input was incorporated into decisions. As a counterpoint, several individuals worried that a requirement for detailed responses could lead to massive, unproductive paperwork and delay real results.

All participants agreed that clear measures of success (also referred to as performance metrics) must be linked to the stated goals of the CMSP effort so that everyone understands how the project will be evaluated. This must be accompanied by a carefully designed and well-funded monitoring plan, followed by periodic evaluations and plan revisions. Although these follow-up steps are frequently under emphasized or neglected in implementing public policy, they are critical to the long-term credibility of CMSP.

6. The Role of the National Ocean Council

The first task of the NOC is to articulate and communicate the value of the new National Ocean Policy and then explain why CMSP is needed to fulfill its promise. It is fair to assume that public awareness of the ocean's value to society and the elements of the National Ocean Policy is low. Significant skepticism remains, particularly within the ocean user community, about the need to embark on a major new ocean management undertaking.

In discussing the CMSP process generally, and stakeholder participation mechanisms specifically, a recurring debate occurred about whether decisions should be made at the national or regional level. Although all participants expressed support for regional variation, there was also agreement that the federal government, through the NOC or legislation, should set a few high-level national goals or standards to guide planning efforts (e.g., sustainable use of ocean resources, energy independence, diverse marine ecosystems, strong coastal communities). There was a

widespread feeling that narrow regional concerns or preferences should not be allowed to override national interests. After all, ocean waters in the United States's exclusive economic zone (EEZ) are a national resource that benefits all U.S. citizens. Based on our meetings, interviews, and survey, the NOC should consider including the following elements in designing a national framework for CMSP:

- Everyone should be guaranteed access to the CMSP process, but distinctions can and should be made between different kinds of interested parties. The general public should be informed and have full access to the planning process, but certain groups that will be directly affected by CMSP outcomes (including both ocean users and conservation advocates) may require more targeted opportunities for input and discussion with planners, as long as such interactions are conducted in an open, transparent manner.
- 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.
- Major public education and communications campaigns regarding the new National Ocean Policy and the role of CMSP within that policy should be undertaken at both national and regional levels.
- Almost all stages of the CMSP process could benefit from stakeholder input. However, when asked whether the NOC should mandate specific mechanisms for stakeholder participation, to be adopted by all regions, 86% of industry respondents were in favor while ENGO respondents were evenly divided.
- To maintain trust in the CMSP process, selective interactions with any subset of stakeholders should

be made known to the public in a transparent manner, presumably through project websites or other means.
- 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 concerning the membership and appointment procedures for such a body (discussed in more detail above), but most agreed that its advice should be given significant deference.
- Once regional CMSP plans are approved, they should be revisited and updated within a 3- to 8-year time frame, to be specified by the NOC, to allow for adjustment and adaptation over time.
- Clear measures of success ("performance metrics") should be linked to specific CMSP goals to determine how plans will be evaluated. These should be accompanied by carefully designed, well-funded, and reliably implemented monitoring plans. The monitoring results should then be used as the basis for periodic evaluations.

One overarching point was expressed repeatedly in all of our CMSP discussions: successful communication campaigns, public outreach, participatory processes, and planning 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 some additional federal funding will be needed for regions to pursue CMSP.

**Nicholas Institute for
Environmental Policy Solutions**
The Nicholas Institute for Environmental Policy Solutions at Duke University is a nonpartisan institute founded in 2005 to help decision makers in government, the private sector, and the nonprofit community address critical environmental challenges. The Nichols Institute responds to the demand for high-quality and timely data and acts as an "honest broker" in policy debates by convening and fostering open, ongoing dialogue between stakeholders on all sides of the issues and providing policy-relevant analysis based on academic research. The Nicholas Institute's leadership and staff leverage the broad expertise of Duke University as well as public and private partners worldwide. Since its inception, the Nicholas Institute has earned a distinguished reputation for its innovative approach to developing multilateral, nonpartisan, and economically viable solutions to pressing environmental challenges.

Contact
Nicholas Institute, Duke University
P.O. Box 90335
Durham, North Carolina 27708
1201 New York Avenue NW
Suite 1110
Washington, D.C. 20005

Duke Marine Lab Road
Beaufort, North Carolina 28516

919.613.8709 phone
919.613.8712 fax
nicholasinstitute@duke.edu
www.nicholasinstitute.duke.edu