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naturalcapitalproject.org

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Betsy Nicholson, NOAA and RPB Federal Co-Lead
Grover Fugate, Rhode Island Coastal Resources Management Council and RPB State Co-Lead
Chief Richard Getchell, Aroostook Band of Micmac Indians and RPB Tribal Co-Lead

Dear Northeast Regional Planning Body Co-Leads and members,

First and foremost, thank you for your hard work and perseverance to create the Draft Northeast Ocean Plan, and for the opportunity to comment on the plan. It has been a pleasure to follow the NE RPB's planning process; we are impressed at your science-based, transparent, and engagement-focused effort. These are key tenets for the success of other ocean plans worldwide and in State plans here in New England. We have been informally engaged with the planning process in New England and with members of NROC since the formation of the NE RPB to provide new science and tools that complement the work in the Draft Plan. One of us (Mary Ruckelshaus) also serves on the Ocean Research Advisory Panel (ORAP) of the National Ocean Council, so we are excited to be a small part of and witness your progress. The Natural Capital Project's mission focuses on showcasing the values of ecosystem services for use in decision making, to ensure that multiple benefits from nature can be included into decisions alongside traditional socioeconomic considerations.

We would like to briefly provide comment on the Draft Plan, on two fronts: 1) advancements in assessing habitat vulnerability to human uses using data collected through the NE/Mid-Atlantic regional planning processes, and 2) the notable absence of analysis on potential synergies and tradeoffs between uses in the Draft Plan.

A major advancement from the planning processes in the Northeast and Mid-Atlantic is the collection and collation of many new datasets that characterize the environmental, social, and economic conditions of our coastal and marine areas. It is hard to over-estimate the value of these data in providing a snapshot of current conditions, enabling diverse stakeholders to develop a shared understanding of where ecosystems are distributed, their condition, and how human uses and benefits can flow from them. The potential for synthesizing these data for use in ecosystem based management (EBM), assessing potential tradeoffs and synergies among uses, enhancing interagency coordination on permitting, and for use in developing shared narratives among communities is perhaps even more valuable. The RPB has positioned itself well by setting future research priorities and establishing the EBM working group to leverage these newly created data and science advances for enhanced decision making.

The Natural Capital Project is currently in the final phases of a research project to assess the vulnerability of habitats to dozens of human uses on the U.S. Eastern seaboard. We are conducting this work with a member of the EBM working group, Dr. Mike Fogarty from NEFSC, and we would like to make the broader RPB aware of the details of this project. The assessment employs a spatial, risk-based indicator of habitat susceptibility to human uses ([Arkema et al., 2014](#)), with a particular focus on assessing the role management interventions may play in reducing this risk. This focus on management effectiveness builds on prior formulations of cumulative impacts to provide more targeted information on the kinds of management interventions that could improve benefits from different habitats. This work builds from the cumulative impacts assessment conducted in Massachusetts by Seaplan and UC Santa Barbara –leveraging many of the new datasets housed in the Northeast and Mid-Atlantic data portals, and exploring potential management impacts on habitats at a much larger scale. This project is due to be completed by October 2016, and the results of this work are intended to inform NOAA's Integrated Ecosystem Assessment Program. We would be happy to present this work to members of the RPB and/or the EBM working group as you explore



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other uses of this approach and results, such as informing syntheses of information through the Ocean Health Index and beyond.

Human uses have an effect on the environment, but they also affect one another and thus the benefits humans can derive from ecosystems. The Draft Plan largely dodges this concept, leaving it as a future research direction in chapter 5. Although there is certainly research work remaining, the concepts and methods for assessing synergies and tradeoffs in benefits deriving from a suite of human uses are maturing and becoming more rigorous for use in decision-making. [Polasky et al. \(2008\)](#) introduced a broad scientific audience to efficiency frontiers depicting tradeoffs among multiple uses, and [White et al. \(2012\)](#) did the same in a marine context in Massachusetts. The Natural Capital Project has used data generated through the NE RPB process to produce peer-reviewed [research on the tradeoffs](#) between wind energy siting and infrastructure visibility in Rhode Island, and has conducted [an assessment of the compatibility](#) between offshore wind energy and aquaculture, two emerging uses in the marine areas of the Northeast. Both of these analyses were supported by the open-source and replicable ecosystem service models in the [InVEST software platform](#). There is potential for many more such assessments of multiple uses in the NE RPB region with current data and open source modeling tools.

Potential tradeoffs and synergies among human uses are pressing issues that can be challenging to address for social and political reasons. In our view, it is best to explicitly consider these effects in transparent, stakeholder-engaged processes. Otherwise, decisions are made based on partial criteria and social values that do not reflect the broad interests of the public, in whose trust our marine waters are managed. Such tradeoff assessments are becoming easier and faster to conduct as the state of the science advances, and tradeoff/synergy information is becoming increasingly important as new uses like ocean energy and aquaculture conflict with existing uses. We encourage the NE RPB to build off of the rich history of research on these topics in New England waters and address multi-sector tradeoffs and synergies head on in the Draft Plan and to distinguish itself as a leader on this topic.

We appreciate the opportunity to work with you and your colleagues in the region, and look forward to your continued leadership and inspiration to other regions and nations conducting ocean planning. We are keen to help share the innovative science and management emerging in your planning process with our science and practitioner networks around the US and the world.

Sincerely,

A handwritten signature in black ink that reads "Robert D. Griffin".

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Mary Ruckelshaus, Ph.D.

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