

Summary of Key Takeaways from the RWU/TNC Organized Symposium 2023

(symposium agenda follows this summary)

Eight members of the MOCEAN community were at the April 20-21 2023 symposium *“Can Offshore Wind Development Have a Net Positive Impact on Biodiversity? Regulatory and Scientific Perspectives and Considerations”*, which was exceptionally well organized by Roger Williams University (RWU) in collaboration with The Nature Conservancy (TNC). The symposium consisted of 7 panel sessions, each beginning with a fairly substantial set of presentations (approx. 10 minutes) by members of the panel. The 7 panel titles are given below, and the last few pages of this document present the agenda, lists the participants on each panel, and identifies key questions being addressed in each of these panels; it was a very impressive lineup that included five persons involved in MOCEAN.

1. Setting the Stage: What does Net Positive Impact on Biodiversity (NPI) in the Ocean Mean as it Relates to the Mitigation Hierarchy for Offshore Wind—Regulatory Perspectives
2. What does Net Positive Impact on Biodiversity (NPI) in the Ocean Mean as it Relates to the Mitigation Hierarchy for Offshore Wind—Science Perspectives
3. Why Set NPI Targets in Offshore Wind? Varying Policy and Science Perspectives
4. Regulatory Opportunities: How Can NPI be Advanced in Offshore Wind Projects? An Examination of the Solicitation Process and Other Possible Implementing Mechanisms for NPI
5. Regulatory Opportunities: How Could NPI be Advanced in Offshore Wind Projects? An Examination of Existing Restoration Analysis and Mitigation Models and Their Possible Applicability to NPI
6. Application Opportunities and Challenges of NPI in Offshore Wind Industry: U.S. and Beyond—Company Perspectives
7. Technology and Innovation

RWU and TNC will be preparing a report on the symposium as well as sharing the full video recording; I am not sure of the timeline for this. This email presents selected key takeaways from the symposium. Those at the symposium from MOCEAN were Drew Carey, Fara Courtney, Anthony Dvarskas, Jamie Lescinski, Annie Murphy, Mike Pol, and Emily Shumchenia.

The three primary ways (in order of importance) that were presented for achieving NPI (Net Positive Impact) were: (i) avoiding impact; (ii) minimizing impact; and (iii) through offsets and/or compensation. The last of these is achieved by ecosystem enhancement in other regions for species that are as directly related to negatively affected species as possible, as well as through direct compensation and new opportunities for affected people and their communities. With this approach, the more avoidance and minimization is achievable the lesser the need for offsetting activities and compensation.

Above the water, the primary impact of concern is to birds and bats. For this, avoidance and minimization are primarily achieved by shutting down selected turbines or farms when birds and bats are present with particular attention being given to when endangered species and migrating flocks are present or soon to be present. Offset is primarily achieved by providing land-based resources for these species.

Below the water (focus of MOCEAN), a Net Positive Impact can be achieved through Nature-Inclusive Design (NID), offsets, and compensation to communities. NID opportunities include nature inclusive scour protection and foundations, as well as co-located aquaculture, kelp farms, seaweed grasses, sanctuaries, and other enhancements in the region of the wind farm. NID does not seem to fit as only

one of (i) avoidance, (ii) minimizing impact, or (iii) offset. There is some debate on what should count as how to look at offsets. For example, consider the creation of coastline and near coastline oyster farms, which is not only important for their own sake but because they support the health of other species in the food chain that eventually lead all the way to mammals. While very important, these offsets can be disconnected from the specific species and communities that are most immediately affected by offshore wind development. Also, attributing the value of this to offshore wind development is questionable because it could have been accomplished with other sources of funding such as from coastal resilience programs.

While metrics are considered critical to assessing and demonstrating impacts (both positive and negative), it is also recognized that metrics can get in the way of better and more holistic approaches. It is also difficult to make an accurate assessment of impact due to the complexity of systems, the number of influencing factors, and the deficiencies in our ability to measure these impacts.

The underwater health of our oceans is already greatly compromised due to climate change and fishing practices. The damage to the North Sea has been enormous which leads some to consider it as an underwater desert and thereby ripe for many types of initiatives.

One of the panels was asked what group's opposition to offshore wind energy development posed the greatest threat to this industry greatly contribution to addressing the climate challenge. There appeared to a consensus that this was the fishing industry.

There was considerable discussion on the importance of having data including baseline data so that the effect of offshore wind and other effects can be better understood. There is also an apparent lack of awareness of what data has and is being collected, and how this data is being made available for advancing science, engineering, and decision making. Drew commented that a tremendous amount of high-quality and broad data has been collected about baseline conditions. As an example, see the report prepared by Inspire Environment for Equinor on Empire Wind

<https://www.equinor.com/content/dam/statoil/documents/usa-country-page-documents/empire-wind-article-vii-document-repository/Empire-Wind-24-Appendix-E-Benthic-Resource-Characterization-Reports.pdf> Marty Heinze from BOEM pointed to the reports stemming from the RODEO project which examined the impact of the Block Island Wind Farm on the environment; see

<https://www.boem.gov/rodeo> The Regional Wildlife Science Collaborative was held up as an important and very successful example of industry collaboration on data sharing; see the North East Data Portal

<https://www.northeastoceandata.org/> There are other data collection efforts in the offshore wind industry including those being coordinated by the UK's Crown Estate (see

<https://www.marinedataexchange.co.uk/content/info/types-of-data>), the German Regulator for Offshore Wind (see https://www.bsh.de/EN/DATA/GeoSeaPortal/geoseaportal_node.html), the International Energy Agency (see <https://www.ieawindtask43.org/>), the Business Network for Offshore Wind, the European Wind Energy Academy, and others. I think that it is fair to say that the breadth, needs, complexity, and value of data is something that we continue to struggle to get a handle on, and that there are many groups in offshore wind and the ocean environment who are contributing to the collection, sharing, and use of data to support the advancement of science, engineering, and decision making. Furthermore, it appears that offshore wind developers and operators are more willing to share data on environmental matters than they are on engineering and operational data.

There was spirit of optimism at the symposium that offshore wind can have a net positive effect on biodiversity and the health of our oceans. Part of this optimism stemmed from the commitment that

developers and authorities are making to deliver Net Positive Impacts (NPI); most developers have now committed to their projects from 2030 onwards having NPIs on biodiversity and the marine environment. It is still recognized that some species and communities will lose because of the direct effects of the development and operation of offshore wind farms, and that we must do our best to minimize negative effects and to strongly offset and compensate for these effects.

A question was who is responsible for achieving NPI, and what should be the mechanisms and activities for achieving this. It was expressed that this responsibility should not solely rest on the developers, and that federal authorities had responsibility for ensuring coordination across current and future projects. One promising funding mechanism for advancing NPI is the bi-partisan RISEE Act “Reinvesting in Shoreline Economies and Ecosystem” which if passed would see 50% of offshore wind lease sales go to activities that support NPI; see <https://citizensclimatelobby.org/blog/blog/what-is-the-risee-act/> ; this could yield a \$1B or more per year. Other mechanisms for achieving NPI include requirements by federal entities (e.g. BOEM, BSEE, NOAA) and state energy procurement authorities.

The opportunities of federal and state organization to advance NPI are strongly influenced by the regulatory frameworks and evaluation criteria used by these entities. The Netherlands was well represented at the symposium with several panel members that presented on how different their framework for development was in comparison to that in the U.S. These include that: (i) their federal authority contract out the site characterization work and they make this collected information publicly available in advance of the tender process, and the cost for this is reimbursed by the developer that wins a project; (ii) their FRPs to developers lead to a permit as opposed to a lease of a region; and (iii) 50% of the merit points in the review of bids from developers is for the effect on the ecology; see <https://english.rvo.nl/news/shell-and-eneco-receive-permit-hollandse-kust-west-site-vi-offshore-wind-farm> A separate document on m-ocean.org presents a comparison of regulatory frameworks in the U.S. and The Netherlands.

In their concluding remarks, the two primary organizers (Tricia Jedelee from RWU and Julia Wyman from TNC) said that they considered the symposium was an important step in advancing NPI and that it was their hope that those who gathered together for this event would work together in the future for advancing NPI.