

## 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](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 Jedele 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.



## Can Offshore Wind Development Have a Net Positive Impact on Biodiversity? Regulatory and Scientific Perspectives and Considerations

April 20-21, Roger Williams University School of Law, Bristol, Rhode Island

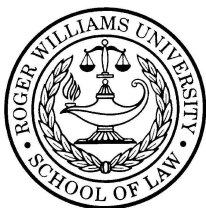
### **Organizers:**

The Nature Conservancy

Roger Williams University School of Law Marine Affairs Institute/Rhode Island Sea Grant Legal Program

The concept of achieving “net positive impact on biodiversity” (NPI) is not new; however, the application of this concept to offshore wind development is relatively new. In the offshore wind context, there is no universal framework, consensus as to definitions, or specific regulatory scheme for integrating biodiversity goals into new projects. This symposium will explore the concept of NPI in the ocean and near coastal environment, and ask whether and how it should be integrated into offshore wind projects in the United States. The symposium will bring together scientific, regulatory, legal, and industry experts from the United States and Europe to discuss: (1) the concept of NPI generally, and specifically in the offshore wind context especially as it relates to a well-established mitigation hierarchy; (2) whether increased biodiversity is the appropriate metric and how success would be measured; (3) the existing status of various drivers—including environmental, governmental, financial, and corporate—for the NPI approach in the offshore wind development context; (4) the existing approaches to incorporating environmental benefit considerations into agency decision-making in the United States and in other countries; and, (5) technological and project specific examples of how nature-inclusive designs and environmental benefits are being applied in the United States and other countries. The symposium is intended to be future oriented, educational, neutral, and high-level. Additional topics the symposium will explore include:

- What is the meaning of NPI in the context of offshore wind development?
- How is NPI connected to the mitigation hierarchy and the regulatory scheme that’s currently in place?
- Is it possible to achieve and measure NPI in the ocean environment in the context of offshore wind development? If yes, is it the best approach to achieving broader environmental benefits?
- What are the challenges to implementing NPI in the context of offshore wind development?
- If NPI could be implemented in the offshore wind context, what are the benefits to nature, species, and habitat? Are there risks associated with relying on NPI goals?
- Are there aspects of existing regulatory schemes or analytic approaches in the United States or abroad that could improve the way we measure and track NPI goals in offshore wind?
- How are offshore wind companies implementing NPI and working toward their biodiversity goals in the U.S. and other countries?
- Are there applications, materials, and technologies that are being developed now that could be incorporated into science plans, frameworks, and best practices for the industry?





**Thursday, April 20**

**11:30 am - 12:15 pm**

Registration, Boxed Lunches Available

**12:30 pm - 12:45 pm**

Welcome and Introductions

- **President Ioannis Miaoulis**, Roger Williams University
- **Julia Wyman**, Director, Marine Affairs Institute at Roger Williams University School of Law, Rhode Island Sea Grant Legal Program
- **Tricia Jedele**, Atlantic Coast Offshore Wind Policy Manager, The Nature Conservancy

**12:45 pm - 2:45 pm**

**Session 1, Part 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.***

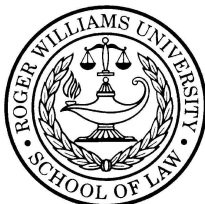
*Questions this panel will address:*

- What is the existing regulatory framework for offshore wind projects in the United States?
- How are impacts and mitigation addressed within this framework?
- Case studies of how the existing framework enables or limits evaluation of environmental impacts and restoration/mitigation.
- Can NPI be connected to the mitigation hierarchy and the regulatory scheme that's currently in place?

*Moderator:* **Jackie Roller**, JD, Deputy Chief, Oceans and Coasts Section, Office of the General Counsel, National Oceanic and Atmospheric Administration.

*Speakers:*

- **Amy Trice**, Senior Program Director, Northeast Regional Ocean Council (NROC), and **Edward (Ted) Boling**, JD, Partner, Perkins Coie (remote participation); The existing regulatory framework for approving an offshore wind project and addressing mitigation through NEPA.
- **Becca Loomis**, JD, Project Attorney, Natural Resources Defense Council (NRDC); Early opportunities for identifying, avoiding, and mitigating impacts: Wind Energy Area development and lease sales.
- **Matthew Eisenson**, JD, Fellow, Renewable Energy Legal Defense Initiative, Sabin Center at Columbia University; How does the NEPA process evaluate impacts to species & habitat? Risks and opportunities.
- **Stephanie Vail-Muse**, Regional Energy Coordinator, United States Fish and Wildlife Service (USFWS); Specific federal agency examples of how the mitigation hierarchy is applied in existing regulatory framework.





- **Grover Fugate**, former RI coastal zone management agency director; How states address their mitigation goals and habitat and species concerns, and role/need for adaptive management through the federal NEPA process.

**2:45 pm - 3:15 pm**

Networking and Refreshment Break

**3:15 pm - 5:15 pm**

**Session 1, Part 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.***

*Questions this panel will address:*

- Is it possible to achieve NPI in the context of offshore wind?
- What are the challenges and obstacles to implementing and demonstrating success?
- Is it appropriate to talk about “net” gain?
- Is biodiversity the right metric?

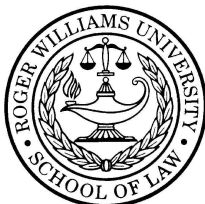
**Moderator:** **Jessica Wilkinson**, Senior Policy Advisor for Energy and Infrastructure, The Nature Conservancy.

*Content experts:*

- **Melanie Austen**, Professor of Ocean and Society at University of Plymouth UK, and **Aisling Lannin**, Head of Evidence and Marine Pioneer Programme Lead at the Marine Management Organisation UK; Co-authors of a 2021 report explaining how concept of marine net gain relates to the mitigation hierarchy.
- **Sarah Cooley**, Director of Climate Science, Ocean Conservancy; Global Biodiversity Framework and how net gain connects to it and the mitigation hierarchy.
- **Neil Cousins**, Founder and Director, Bluedot Associates Ltd (remote participation).
- **Aspen Ellis**, University of California Santa Cruz; Co-author of a 2022 report regarding net gain and birds.
- **Claire Fletcher**, Senior Principal Consultant, The Biodiversity Consultancy (remote participation).
- **Kate Williams**, Director, Center for Research on Offshore Wind and the Environment, Biodiversity Research Institute.

**6:00 pm - 7:30 pm**

Optional dinner offsite. Registration was required—registrants received an email with directions.





## **Friday, April 21**

**8:00 am - 8:30 am**

Coffee & Continental Breakfast

**8:30 am - 9:45 am**

### **Session 2:**

#### ***Why Set NPI Targets in Offshore Wind? Varying Policy and Science Perspectives***

*Questions this panel will address:*

- If we could implement NPI in offshore wind, what are the benefits to nature, species, habitat?
- Are there other policy or science reasons—including financial and corporate drivers—for implementing NPI in offshore wind?

*Moderator:* **Amber Hewett**, Program Director, Offshore Wind Energy, National Wildlife Federation.

*Speakers:*

- **Boze Hancock**, Senior Marine Restoration Scientist, The Nature Conservancy, U.S. and global projects.
- **Laura Harland**, Marine Net Gain Team Leader, U.K. Dept. of Environment, Fisheries and Rural Affairs, Government's perspective on environmental improvement opportunities and Offshore Wind (remote participation).
- **Atma Khalsa**, Environmental Affairs Manager, Avangrid; World Bank requirements.
- **Rennie Meyers**, Senior Public Affairs Advisor for Oceans and Biodiversity, Orsted; Developer perspective.
- **Drew Carey**, Vice President, Americas, Venterra; Consultant perspective.

**9:45 am - 11:15 am**

### **Session 3, Part 1:**

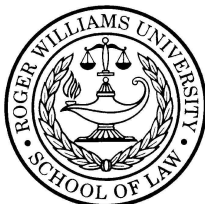
#### ***Regulatory Opportunities: How Can NPI be Advanced in Offshore Wind Projects?***

#### ***An Examination of the Solicitation Process and Other Possible Implementing Mechanisms for NPI.***

*Questions this panel will address:*

- How are non-price criteria for ecological benefits incorporated into solicitations for offshore wind in the US and in the Netherlands?
- How are bids qualitatively evaluated through these processes?
- What are the challenges to using the solicitation process to choose projects that provide ecological benefits and improvements?

*Moderator:* **Mark James**, Visiting Assistant Professor and a Senior Energy Fellow in the Institute for Energy and the Environment, Vermont Law and Graduate School.







*Speakers:*

- **Ruud de Bruijne**, Tendering Manager, Netherlands Enterprise Agency; Netherlands example from the agency empowered to issue offshore leases (remote participation).
- **Egbert Jansen**, Team Manager Contracting, Construction, and Operations, Pondera; Perspective of consultant preparing project bids in the Netherlands (remote participation).
- **Remco van Sliedrecht**, Lead Counsel Legal and Regulatory, USA, Boskalis; Contract attorney perspective on responding to solicitations for offshore wind.
- **Kate McClellan Press**, Senior Project Manager, Environmental Research, New York State Energy Research and Development Authority (NYSERDA); State perspective on solicitation process.
- **Michael Richard**, Commissioner, Maryland Public Service Commission (remote participation).
- **Martin Heinze**, Economist, Bureau of Ocean Energy Management (BOEM); Auction process.

**11:15 am – 11:30 am**

Networking and Refreshment Break

**11:30 am – 12:30 pm**

***Session 3, Part 2:***

***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.***

*Questions this panel will address:*

- Are there aspects of existing analytic approaches or regulatory schemes that could improve the way we measure and track success of NPI goals in offshore wind?
- If so, how can we implement those approaches in any new regulatory scheme for offshore wind?

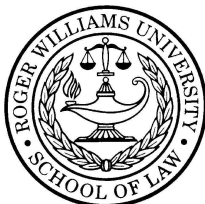
**Moderator: Dr. Di Jin**, Senior Scientist, Marine Policy Center, Woods Hole Oceanographic Institution (WHOI).

*Speakers:*

- **Jason Kinnell**, Principal Economist and President, Veritas Economics Consulting; Natural resource damage assessments (overview of analyses and application examples).
- **Michelle Mattson**, Ecologist, Compensatory Mitigation Subject Matter Expert, Institute for Water Resources, U.S. Army Corps of Engineers (Corps); Corps' compensatory mitigation programs, including mitigation banking.
- **Aisling O'Shea**, In-Lieu Fee Program Administrator, Massachusetts Department of Fish and Game; Overview of the Massachusetts In-Lieu Fee Program and restoration project examples.

**12:30 pm – 1:45 pm**

Lunch (provided)







1:45 pm - 3:00 pm

**Session 4:**

***Application Opportunities and Challenges of NPI in Offshore Wind Industry: U.S. and Beyond—  
Company Perspectives***

*Questions this panel will address:*

- What are the approaches to setting and meeting NPI goals in the offshore wind space?
- What are the challenges to achieving these goals in the U.S.?
- How are offshore wind companies implementing NPI and achieving these goals in Europe and elsewhere?

*Moderator:* **Maija Benitz**, Ph.D., Assistant Professor of Engineering, Roger Williams University.

*Speakers:*

- **Atma Khalsa**, Environmental Affairs Manager, Avangrid.
- **Rick Robins**, Marine Affairs Manager, RWE.
- **Paul Phifer**, Permitting and Developing Director, Attentive Energy.
- **Anthony Dvarskas**, Biodiversity Lead for Offshore North America, Orsted.
- **Jennifer DuPont**, Strategic Permitting Manager, Equinor.

3:00 pm - 3:05 pm

Remarks from **Dean Gregory Bowman**, Roger Williams University School of Law

3:05 pm - 4:35 pm

**Session 5:**

**Technology and Innovation**

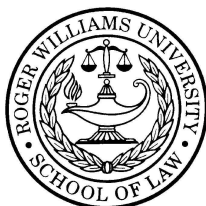
*Questions this panel will address:*

- What are the opportunities to improve habitat and ecosystem functions offshore wind design and material selection?
- What data and monitoring are needed to demonstrate gains or improved function?
- Other challenges and limitations (cost, time, regulations, etc.)?

*Moderator:* **Chris McGuire**, Director of Massachusetts' Ocean Program, The Nature Conservancy.

*Speakers:*

- **Sharon Tatman**, Expert Advisor & Research Coordinator North Sea, Deltares; Dutch perspective on biodiversity enhancement for the North Sea offshore wind transition





- **Annie Murphy**, Senior Scientist, INSPIRE Environmental; Turbine reef project report & potential for CVOW monopiles to support epibenthic communities that facilitate the redistribution of carbon in the ecosystem.
- **Heather Kinney**, Coastal Restoration Scientist, The Nature Conservancy; Reef ball deployment at Sabin Point.
- **Jamie Lescinski**, Boskalis; Marine construction.
- **Adam Baske**, VP of Coastal Markets and Restoration, Running Tide, Ecosystem Service Interventions and Quantification
- **Emily Shumchenia**, Director, Regional Wildlife Science Collaborative for Offshore Wind (RWSC).

4:35 pm - 4:45 pm

**Concluding Remarks**

- Tricia Jedele and Julia Wyman

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