



**Final Project Report: FY21, Task 92.04**

***Connecting Virginia's Ocean Action Plan with Regional Ocean Planning Efforts and Data***

Prepared for the Virginia Coastal Zone Management Program  
December 2022



## Executive Summary

Many states in the Mid-Atlantic Region are at various stages in developing or implementing state ocean plans. Virginia began convening an ocean planning team in 2021 and decided to work with MARCO to better connect the state ocean plan with regional efforts, and to help inform participants in MARCO's activities about Virginia's ocean planning process. MARCO received funding from the Virginia Coastal Zone Management Program for the MARCO Program Director ("Regional Liaison") to coordinate among regional work groups and with the Virginia ocean planning team to help inform the Virginia Ocean Plan about regional activities and data that could be leveraged or elaborated upon at the state level. The results of this effort can also be used to inform regional coordination within other states' ocean planning efforts.

The MARCO Regional Liaison focused on regional work groups on topic areas that include: ocean and coastal acidification, offshore wind energy, and ocean mapping and data. These work groups all have work plans that can be found on the MARCO website, and that build upon the 2016 Mid-Atlantic Regional Ocean Action Plan<sup>1</sup>.

**The MARCO Regional Liaison suggests that states can leverage MARCO's regional collaborations in developing and implementing state ocean plans to accomplish the following goals:**

**Goal 1: Access and contribute to data sharing at the regional scale;**

**Goal 2: Conduct stakeholder outreach and engagement; and**

**Goal 3: Build partnerships with other management entities and/or subject-matter experts.**

This report articulates a summary of the outcomes of the Regional Liaison project that Virginia CZM funded MARCO to complete over the course of October 2021 through September 2022. It then outlines strategies to achieve each goal for each of the three topic-areas listed above (ocean acidification, offshore wind, and ocean mapping and data). It is important to note that, while this report was prepared for the Virginia Ocean Planning Team, the strategies herein will be applicable to any state in the Mid-Atlantic region.

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<sup>1</sup> The 2016 Mid-Atlantic Regional Ocean Action Plan can be viewed by following this link: <https://www.boem.gov/sites/default/files/environmental-stewardship/Mid-Atlantic-Regional-Planning-Body/Mid-Atlantic-Regional-Ocean-Action-Plan.pdf>

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# MARCO Background

The ocean and coastal waters of the Mid-Atlantic region, stretching from Virginia to New York, are host to an abundance of economic and ecological services. Over 34 million people call the Mid-Atlantic coastal region their home. This region generates \$2 trillion annually, which is 14 percent of the U.S. gross domestic product. With the rapid advancement of renewable offshore wind energy development, the Mid-Atlantic is poised to become even more of an economic driver for the nation. In addition to renewable offshore wind energy, commercial and recreational fishing, transportation, telecommunications, science and research, tourism, ecotourism, and recreational interests and industries are just a few of the many ways that people benefit from the region's vibrant ocean environment.

A thriving ocean economy is built upon a thriving ocean ecosystem<sup>2</sup>. From rare deep-sea corals to sprawling estuaries, the Mid-Atlantic's ocean and coastal habitats support numerous fish and seabird species, imperiled marine mammals and sea turtles, and many other types of marine life. However, while individual state actions are important for sustainable ocean management, ocean resources span state and jurisdictional boundaries, making inter-state (regional) coordination of these actions imperative.

The Mid-Atlantic Regional Council on the Ocean (MARCO) provides a platform for this regional coordination around the management of ocean resources to advance ocean health and sustainable ocean use. Through the public Mid-Atlantic Ocean Data Portal and engagement activities conducted by topic-specific and state- or federal-led Work Groups (described below), MARCO also provides essential ocean data and information to local communities and coastal ocean stakeholders. These tools help regulators and stakeholders to understand better how changing ocean conditions and uses can impact the ecological and economic dimensions of resilience at local, state, and regional scales.

MARCO was established in 2009 when the Governors of VA, MD, DE, NJ, and NY signed the [Mid-Atlantic Governors' Agreement on Ocean Conservation](#) ("Governors' Agreement"). The Governors' Agreement created MARCO as a means to protect and improve the health of the Mid-Atlantic ocean and coastal ecosystems and economies through regional ocean planning, data sharing, and collaborative efforts around four shared priorities:

1. Coordinate the protection of important and unique **marine habitats**, and where applicable provide opportunities for conservation of resources across jurisdictional bounds.

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<sup>2</sup> Wenhai, L, et.al. 2019. Successful Blue Economy Examples with an Emphasis on International Perspectives. *Frontiers of Marine Science*. <https://doi.org/10.3389/fmars.2019.00261>

2. Promote a regional approach to support the sustainable development of **offshore renewable energy**, and regulatory frameworks based on an enhanced scientific understanding of energy development on coastal and ocean resources.
3. Increase understanding of, and help coastal communities prepare for, **climate change** impacts like ocean acidification, shifting marine habitats, and coastal hazards where appropriate.
4. Support efforts that improve the region's **ocean and coastal water quality**, including but not limited to addressing the pervasive issue of microplastics and other marine debris.

These priorities and actions need ongoing stewardship, continued regional-scale collaboration, and periodic revisions as new challenges arise. Thus, MARCO's most recent [Work Plan](#), 2022-2024, includes a refined approach to these priorities by placing efforts in the context of:

5. Supporting actions that create a more sustainable and **inclusive blue economy** in the Mid-Atlantic, with healthy ocean ecosystems as a foundation, particularly given ongoing impacts from the COVID-19 global pandemic.
6. Being inclusive of a **broader diversity of people and partners - including Tribal nations and underrepresented or under-resourced communities or interests** - in ocean and coastal issues and fostering a deeper sense of our shared ocean culture and identity among residents of the region.

MARCO convenes several topic-specific Work Groups that are currently addressing the following ocean issues in support of the Governor's Agreement priorities: [ocean acidification](#), [marine debris](#)<sup>3</sup>, [offshore wind including issues related to maritime commerce and navigation](#), and [non-consumptive recreation](#). Additionally, as of fall 2022, a work group has been formed to address issues around ocean conservation. Work Groups allow governmental and nongovernmental actors to collaboratively identify ocean or coastal challenges and solutions, bring heightened focus across the region to important emerging issues, offer opportunities for stakeholder engagement and data interpretation on key regulatory and nonregulatory issues, and disseminate information about ocean issues to the Mid-Atlantic public.



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<sup>3</sup> The Mid-Atlantic Marine Debris work group will not be discussed further in this document, as the Virginia Coastal Zone Management Program addresses marine debris under a separate strategy.

The Commonwealth of Virginia has participated in MARCO since its inception - the Coastal Zone Program Manager sits on the MARCO Board, and VA leads several topic-specific regional collaborative Work Groups (described below). The incorporation of regional efforts, such as those led by MARCO, will be important to advance many of the priorities in VA's state Ocean Action Plan ("Plan").

## Final Project Summary: Virginia CZM Grant to MARCO, Task 92.04

Recognizing how relevant these regional ocean planning Work Groups are to the Virginia Ocean Plan, Virginia CZM funded the MARCO Program Director to be a Regional Liaison to coordinate between these regional efforts and the Virginia Ocean Planning team during the initial stages of Plan development. The Liaison was tasked with providing recommendations for Virginia, and other states that are in various stages of state ocean plan development, to consider.

The MARCO Regional Liaison focused on regional work groups on topic areas that include: ocean and coastal acidification, offshore wind energy, and ocean mapping and data. These work groups all have work plans that can be found on the MARCO website, and that build upon the 2016 Mid-Atlantic Regional Ocean Action Plan<sup>4</sup>.

With funding from Virginia's CZMA FY21 program, MARCO successfully coordinated the Virginia Ocean Planning efforts over the course of October 2021 - September 2022 with ongoing and future regional coordination opportunities. The project team, which included the MARCO Program Director as well as the MARCO Operations Manager, coordinated among three topic-specific work groups to help inform the Virginia Ocean Plan about regional activities and data that could be leveraged or elaborated upon at the state level, and to connect Virginia's priorities to regional resources. The Liaison participated in calls and meetings of the regional ocean planning community and the Virginia Ocean Planning Committee to connect these efforts in light of Virginia's ocean planning needs.

MARCO proposed that this project would result in the following:

1. Deepened coordination between Virginia ocean planning efforts and regional efforts.
2. Presentations and reports that connect Virginia Ocean Plan initiatives with regional efforts and resources.
3. Resources for regional ocean planning groups to better understand Virginia's Ocean Plan priorities.
4. A report that can inform regional engagement processes in the development and implementation of state-level ocean plans.

MARCO Program Director attended all work group meetings in addition to all Virginia Ocean Planning meetings during the project period. Virginia Ocean Planning meetings were held on: October 21, 2021;

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<sup>4</sup> The 2016 Mid-Atlantic Regional Ocean Action Plan can be viewed by following this link: <https://www.boem.gov/sites/default/files/environmental-stewardship/Mid-Atlantic-Regional-Planning-Body/Mid-Atlantic-Regional-Ocean-Action-Plan.pdf>

February 17, 2022; June 14, 2022; and October 18, 2022. The MARCO Project Team attended all regional, collaborative work group meetings for topics that include: ocean acidification, offshore wind energy, and ocean mapping and data. Having one person be able to attend all these various meetings is helpful for communicating regional priorities to the state, and vice versa. The Liaison reflected the work of the regional collaborations into the draft Virginia Plan outline where applicable, and likewise helped make relevant connections within meetings of these collaborations. A key contribution of regional efforts mentioned in the Virginia draft outline is a theme of Diversity, Equity, Inclusion, and Justice. In addition, a representative from the Virginia offshore wind project Virginia Offshore Wind Technology Advancement Project was interviewed as part of the Offshore Wind Regional Collaboration's transmission subcommittee's final product. Finally, recommendations for ocean acidification action items from MACAN will be incorporated into the Virginia Ocean Plan. **(Outcomes 1, 2, and 3)**

Note that the Non-Consumptive Recreation work group is currently not actively meeting, but there are several recreation-related data updates that have been added or scoped for adding to the Mid-Atlantic Ocean Data Portal, including whale watch vessel trips. Additionally, a new collaborative work group around ocean conservation was identified, scoped during the summer of 2022, and approved in September 2022, led by the states of Virginia and New Jersey. The regional meetings that were attended included:

- MARCO addresses ocean acidification through the Mid-Atlantic Coastal Acidification Network (MACAN), coordinated by both MARCO and the Mid-Atlantic Regional Coastal and Ocean Observing System (MARACOOS). The core team for MACAN meets bi-weekly, and the Steering Committee meets quarterly (Dr. Emily Rivest of the Virginia Institute of Marine Sciences sits on the MACAN Steering Committee).
- MARCO convenes monthly calls for state representatives to discuss issues related to offshore wind energy, and coordinate where opportunities arise. Additionally, there is a collaborative ocean planning working group called the Offshore Wind Regional Collaboration, composed of federal and state members, that meets quarterly to coordinate around data and information needs, and updates regarding offshore wind development.
- The Ocean Mapping and Data Team meets quarterly to identify spatial data products and enhancements for the MARCO Ocean Data Portal ([portal.midatlanticocean.org](http://portal.midatlanticocean.org)). All regional work group information can be found on the MARCO website, at <https://www.midatlanticocean.org/ocean-planning/work-groups-collaborative-efforts/>

**Deliverable 1:** Ocean Acidification report for Virginia based on MACAN regional ocean acidification action planning meeting. During the February meeting, the Liaison provided a report on the outcomes from the October Mid-Atlantic Coastal Acidification Monitoring workshop. The workshop recordings and summary can be found at [www.midacan.org/resources](http://www.midacan.org/resources), or you can download the summary directly: <https://www.monmouth.edu/uci/documents/2022/09/finalsummarymacan-oa-alliance-workshop-2021.pdf>

This presentation was done in place of providing a written summary to the ocean planning team to encourage discussion. The Liaison also coordinated with Virginia representatives on the MACAN Steering Committee to determine coordination opportunities between Virginia's Ocean Action Plan and MACAN's Work Plan. As a result of those discussions and the February presentation, coordination was initiated between MACAN and the Virginia Aquarium water quality monitoring staff to discuss the incorporation of acidification metrics into existing community science programs managed by the Aquarium. This work is ongoing and will continue as part of MACAN's focus on encouraging community science activities to both educate the public about ocean acidification, and also collect data from a wide variety of locations. Supporting and scoping community science initiatives is further described in the MACAN 2022 Work

Plan, as well as in the final whitepaper report funded by this grant.

**Deliverable 2:** Semi-annual Reports on Regional Efforts & Data to Inform the VA Ocean Plan. MARCO provided semi-annual summaries of regional activities to the Virginia CZM program. In addition, the Regional Liaison held regular check-ins with the Virginia CZM Program Manager (February 2, 2022, April 1, 2022, October 5, 2022).

**Deliverable 3:** Report: State-Regional Coordination in State-led Ocean Action Planning. MARCO has enclosed this report within this document and provided it to the Virginia CZM Program Manager. This report may be used as a reference for ocean planning staff to understand ongoing regional ocean planning efforts.

## Recommendations for Regional Coordination in State Ocean Planning

### Summary

The MARCO Regional Liaison suggests that states can leverage MARCO's regional collaborations in developing and implementing state ocean plans to accomplish the following goals:

- Goal 1: Access and contribute to data sharing at the regional scale;
- Goal 2: Conduct stakeholder outreach and engagement; and
- Goal 3: Build partnerships with other management entities and/or subject-matter experts.

Specific strategies for each goal under the three topic areas are described below.

### Ocean and Coastal Acidification

MARCO co-coordinates the Mid-Atlantic Coastal Acidification Network (MACAN)<sup>5</sup> in partnership with the Mid-Atlantic Regional Association Coastal and Ocean Observing System (MARACOOS), MARACOOS to address ocean and coastal acidification (OCA) in the region. MACAN brings together scientists, federal agencies, states, resource managers, and affected industry partners to develop a better understanding of the processes associated with estuarine, coastal, and ocean acidification. In addition to conducting stakeholder outreach, MACAN's work plan seeks to build on the NOAA Ocean, Coastal, and Great Lakes

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<sup>5</sup> [www.midacan.org](http://www.midacan.org)



Acidification Research Plan: 2020-2029<sup>6</sup> as well as the work conducted by MACAN work groups in 2019 to recommend monitoring approaches<sup>7</sup> and ecological research needs<sup>8</sup> in the region.

**Continue coordinating with MACAN’s Mid-Atlantic Regional Ocean and Coastal Acidification Monitoring Inventory (“Monitoring Inventory”), the results of which are expected at the end of 2023.**

The Monitoring Inventory will characterize currently deployed monitoring assets and how the data are being used by the research community, stakeholders, and decision-makers. It will be used as a resource to help inform sensor choice based on the measurements and environment they are best suited for, to help create consistency between methods to allow for data comparison; and to identify what, where and how data is being distributed and used. The Monitoring Inventory will improve regional knowledge of assets and gaps and allow for better regional collaboration on research, policy, and educational efforts. The outcome of this effort will be the identification of opportunities where existing water quality monitoring assets could be leveraged for assessing OA metrics. MACAN will use this information to update the existing OA monitoring maps on the Data Portal<sup>9</sup> (which currently shows monitoring efforts as of 2017), and will also make recommendations for future monitoring sites. MACAN will work with participating states, including Virginia, to build an understanding of the results of this effort once they are available. The Virginia Ocean Planning team is encouraged to continue participating in MACAN.

**Work with MACAN’s ongoing stakeholder outreach and engagement efforts.**

MACAN’s work plan includes several actions related to stakeholder outreach and engagement. Its annual, free and public, webinar series<sup>10</sup> highlights ongoing research and data collection efforts related to ocean and coastal acidification, presents information about emerging issues, and more. MACAN also hosts an Outreach Work Group, which is currently determining an approach for MACAN to identify and support citizen (community) science initiatives in the region.

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<sup>6</sup> [Jewett, E. B., E. B. Osborne, K. M. Arzayus, K. Osgood, B. J. DeAngelo, J. M. Mintz. Eds., 2020: NOAA Ocean, Coastal, and Great Lakes Acidification Research Plan: 2020-2029, https://oceanacidification.noaa.gov/ResearchPlan2020](https://oceanacidification.noaa.gov/ResearchPlan2020)

<sup>7</sup> [Goldsmith, K.A., Sherilyn Lau, Matthew E. Poach, Gregg P. Sakowicz, T. Mark Trice, C. Ryan Ono, Janet Nye, Elizabeth H. Shadwick, Kari A. StLaurent, Grace K. Saba, 2019: Scientific considerations for acidification monitoring in the U.S. Mid-Atlantic Region, Estuarine, Coastal and Shelf Science, Volume 225, 2019, 106189, ISSN 0272-7714, https://doi.org/10.1016/j.ecss.2019.04.023](https://doi.org/10.1016/j.ecss.2019.04.023)

<sup>8</sup> [Saba, G., Kaitlin A. Goldsmith, Sarah R. Cooley, Daniel Grosse, Shannon L. Meseck, A. Whitman Miller, Beth Phelan, Matthew Poach, Robert Rheault, Kari St.Laurent, Jeremy M. Testa, Judith S. Weis, Richard Zimmerman, 2019: Recommended priorities for research on ecological impacts of ocean and coastal acidification in the U.S. Mid-Atlantic, Estuarine, Coastal and Shelf Science, Volume 225, 2019, 106188, ISSN 0272-7714, https://doi.org/10.1016/j.ecss.2019.04.022](https://doi.org/10.1016/j.ecss.2019.04.022)

<sup>9</sup> [Acidification monitoring locations map on the Mid-Atlantic Ocean Data Portal](https://www.midacan.org/webinars)

<sup>10</sup> [www.midacan.org/webinars](https://www.midacan.org/webinars)

There are many outreach tools specific to the Mid-Atlantic region on the MACAN website, including recordings of all webinars, a toolkit for the K-12 teacher and student audience, and a repository of relevant peer-reviewed papers. MACAN also conducts outreach to specific stakeholder groups that may be useful for informing state ocean planning efforts.



To illustrate an example of MACAN's stakeholder outreach, below is a case study of the *Hooked on OA* workshop series that MACAN led in partnership with the Virginia Institute of Marine Science. The results of this workshop series indicated potential paths forward for the kinds of ocean acidification action that recreational anglers are willing to take on, namely: individual actions and participating in citizen (community) science initiatives.

**Continue to participate in and/or engage with MACAN's work groups and Steering Committee.**

MACAN is led by a collaborative Steering Committee composed of states, federal agencies, and scientific experts. All states in the Mid-Atlantic region are encouraged to have representation on the Steering Committee to learn about differing approaches for ocean acidification action planning, monitoring efforts, opportunities for collaboration and partnership, and to help develop MACAN's annual work plans.

Further, MACAN's Science Work Group is composed of researchers and other experts that advise MACAN about the state of ocean and coastal acidification in the Mid-Atlantic and guide MACAN's efforts towards filling research and monitoring gaps in the region. Our members help inform the topics for MACAN's workshops and webinars, coordinate with MACAN's industry, policy, and outreach working groups to ensure the most current science is reflected in our outreach resources, and collaborate with other Coastal Acidification Network (CAN) programs to coordinate approaches to cross-regional research priorities. The Science Work Group has discussed a potential role as reviewers for state water quality monitoring programs that are seeking to incorporate acidification metrics.

## Case study

### ***Hooked on OA Workshop Series: MACAN Recreational angler outreach***

MACAN conducted a survey in 2019 to characterize its fishing stakeholder composition and knowledge. Based on the results, MACAN found that recreational fishers had the least amount of pre-existing knowledge about ocean and coastal acidification, but the most willingness to learn and share information about it. With this knowledge in hand, MACAN initiated a webinar series, *Hooked on OA*, specifically aimed at building literacy of recreational fishers in the Mid-Atlantic of ocean and coastal acidification. The webinar series was funded by MARACOOS, and the Virginia Institute of Marine Science was among several project partners that heavily participated in the development and implementation of this workshop series.

Nearly 200 people (n=189) participated, 26 of which were from Virginia. The webinar series was advertised in a news article to VA fishing club chapters and also posted on the Virginia Game Fishing Tagging Program. 28.5% of those registered were recreational fishing stakeholders (includes anglers, charter/party boat operators and owners, and bait and tackle shops). In a post-workshop survey, respondents (n=18) rated the overall program quality and delivery very highly. More than half strongly agreed that they had a better understanding of the causes of OA following the workshop. The majority agreed that they also had a better understanding of the impacts to finfish and shellfish, but the confidence was not quite as strong. About ¾ of participants (15/18) would attend this workshop, or a similar workshop in the future. Following the workshop, nearly all participants felt that individual actions could reduce the impacts of OA. Most participants indicated they would be very likely to participate in individual actions in the future (see figure below). Providing more focused outreach on individual actions to recreational fishing stakeholders could heighten awareness and engagement on OA in the region.

Compared to the enthusiastic response to taking individual actions to reduce OA, workshop participants did not express as strong of an interest in becoming involved in community and policy initiatives. Citizen science (now often termed, Community Science) programs represent a potential opportunity for future engagement, with more than half of workshop attendees indicating they are very likely to participate.

## Offshore wind energy

The Mid-Atlantic states have a shared interest in the development of renewable energy in the region, both to help meet clean energy goals and to avoid conflict with existing ocean users, such as the commercial fishing industry. All five Mid-Atlantic states have set ambitious renewable energy goals, which many of the states seek to meet through the development of offshore wind energy. State-level offshore wind targets have been joined by a federal commitment to double the amount of offshore wind development by 2030. There are currently numerous wind lease areas designated offshore each state in the Mid-Atlantic, with two turbines already in place off of Virginia and many more expected by 2024. Thoughtful, regional-scaled planning and coordination is more necessary than ever in the Mid-Atlantic to ensure responsible development of offshore wind in a way that minimizes impacts not only to wildlife and fisheries, but also to existing uses and industries offshore.

**Participate in the Offshore Wind Regional Collaboration (OWRC) and the Regional Wildlife Science Collaborative for Offshore Wind (RWSC).**

MARCO supports informed public engagement around the development of offshore wind through public workshops and webinars, as well as multi-stakeholder working groups to foster information sharing.

Much of this work is conducted through the Offshore Wind Regional Collaboration (OWRC), which is convened by MARCO's Ocean Planning Committee, the Mid-Atlantic Committee on the Ocean (MACO).<sup>11</sup> The OWRC is a collaborative work group, with members from federal agencies, states, and the Fishery Management Council. The OWRC regularly convenes to facilitate inter-agency information, holds webinar(s) when timely topics arise, and identifies opportunities to expand inter-regional coordination on transmission challenges. The OWRC also works with the Ocean Mapping Data Team (OMDT) and other offshore wind work groups to identify data needs and how to obtain those data, compiles information about best practices, and identifies issues that would benefit from closer collaboration that are not already being addressed by other offshore wind working groups in the region. As a result of these coordinated efforts, MARCO has invested significantly in the development and visualization of robust and up-to-date datasets relevant to planning for offshore wind on the Mid-Atlantic Ocean Data Portal.



Offshore wind development is rapidly progressing, and thus active participation by states in the OWRC can help with receiving timely updates, understanding new or enhanced data on the Portal, and contributing ideas for future outreach and data products.

MARCO, in partnership with the Northeast Regional Ocean Council (NROC), hosts the Regional Wildlife Science Collaborative for Offshore Wind (RWSC). The RWSC was collaboratively developed by four sectors to synthesize and coordinate research related to offshore wind and wildlife off the U.S. Atlantic coast: states, federal agencies, the offshore wind industry, and environmental non-governmental organizations. The RWSC is currently convening experts from those sectors as well as the research community to develop an Integrated Science Plan for Wildlife, Habitat, and Offshore Wind Energy in the U.S. Atlantic ("Science Plan") which will articulate data collection and analysis activities needed for identifying, assessing, and avoiding impacts to the distribution, abundance, and behavior of wildlife due to offshore wind development. The Science Plan will also provide a roadmap for the four Sectors to fund

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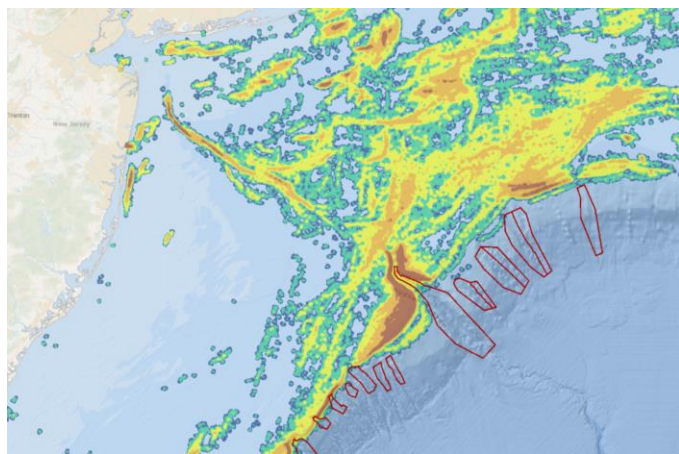
<sup>11</sup> <https://www.midatlanticocean.org/offshore-wind-regional-collaboration/>

those activities. The Regional Liaison encourages states to incorporate coordination with the RWSC into planning related to offshore wind and wildlife research.

## Ocean mapping and data

### **Utilize the Mid-Atlantic Ocean Data Portal to help characterize ocean uses and resources as the Plan continues to be developed.**

The Mid-Atlantic Ocean Data Portal<sup>12</sup> (“Portal”) consolidates the best available ocean and coastal data and enables users to visualize and analyze ocean resources and human use information such as fishing



grounds, recreational areas, shipping lanes, habitat areas, and energy sites, among others. This state-of-the-art resource has become an indispensable tool for public stakeholders, businesses, and government decision-makers. Use of the Portal in state ocean planning processes will ensure that states are using the same best available spatial information within their study areas, thereby enhancing public engagement, reducing user/interest conflict, and supporting more coordinated and informed decision-making.

### **Participate in the Ocean Mapping & Data Team (“OMDT”) to identify opportunities for collaboration with other management entities, and/or new or enhanced data products on the Portal.**

The OMDT is a group of state, federal, and tribal agencies as well as consultants working to promote and develop data products for the MARCO Ocean Data Portal. The 40-member OMDT meets quarterly and advises the MARCO Management Board on data and tools to be added to the Portal.

## Conclusion

Mid-Atlantic Regional Council on the Ocean and its collaborative working groups and other efforts provide important resources for states to consider when developing state ocean plans. MARCO’s topic-specific work groups help states stay abreast of ongoing and emerging ocean issues. They provide a platform for building partnerships with other agencies and jurisdictions, as well as an opportunity to interface with subject-matter experts. Often, the work groups pursue regional strategies to improve understanding of ocean issues that could be incorporated or leveraged within ocean plans, such as the MACAN Regional Monitoring Inventory. Work groups can help plan and conduct meaningful stakeholder

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<sup>12</sup> [portal.midatlanticocean.org](http://portal.midatlanticocean.org)

outreach and engagement that could inform actions within state ocean plans. Finally, the Mid-Atlantic Ocean Data Portal is an invaluable tool that can and should be heavily used as states develop ocean plans to help ensure these plans consider regional ocean uses and resources.