

SUMMARY REPORT
CeNCOOS Governing Council Meeting – Winter 2022

December 14

Summary: On December 14, the CeNCOOS Governing Council convened its annual winter meeting. The half-day, virtual meeting included a programmatic update, presentations from key regional and national partners, an Offshore Wind roundtable discussion, and a number of key internal decision points. The spring 2023 GC meeting will take place in-person with a potential focus on coastal resilience.

Key takeaways / Action items:

- CeNCOOS now serves a statewide kelp satellite product through the Cal OOS Portal. Managers still need finer and longer temporal scale observations to augment the satellite product such as from drones or divers.
- An aquaculture inventory is a priority for CASG and WCOA. Consensus and understanding of what is included in the inventory can be improved. What currently exists and what is proposed by WCOA? Sea grant has supported a West Coast aquaculture hub.
 - Do the inventories include information on shellfish operations? Does it inventory both coastal and offshore aquaculture activities?
 - We need more information around kelp and seagrass aquaculture to understand what is happening that might feed into Marine CDR?
- Gliders in OSW areas can help to constrain upwelling and other dynamics and determine natural vs. OSW activity induced impacts and to document potential changes to upwelling/downwell due to altered wind field (expected to be minimal).
- OSW permitting and assessment needs more granular whale and sea turtle migration data. Not specific migration routes laid out. Entanglement is an issue, but there is not yet sufficient data. Integrating satellite and acoustics for monitoring animals and species distributions and impacts could inform multiple issues. ATN can contribute data sets.
- BOEM should be reengaged regarding OSW industry data sharing policy / requirement. And corridor access for research and sustained observations.

CeNCOOS Update - CeNCOOS is embarking on a new era of strengthened partnerships and investment to infuse the observing system with advanced technologies and deliver critical information for a healthy and prosperous coastal ocean. New initiatives include planning offshore wind ocean observing concepts, provisionally termed “West Wind OOS,” acoustic

telemetry and importantly a new technology lab to develop observing technologies for industry.

Partner Update - Each year, CeNCOOS reaches out to key observing partners to receive updates on new or priority initiatives, revised strategies, additional funding streams and opportunities for enhanced collaborations. This year the CeNCOOS Council was joined by NOAA PMEL, West Coast Ocean Alliance, and California Sea Grant to learn about emerging priorities and areas for potential strategic positioning.

OSW Roundtable Discussion - State partners from the California Department of Fish and Wildlife, Ocean Protection Council, and Schatz Energy Lab met to discuss current happenings and a path forward to ocean observing to support sustainable offshore wind energy. The momentous lease auction of five offshore wind energy areas off California's coast was unprecedented and it is certain that additional OSW development will follow. That is why CeNCOOS is teaming up with state and federal partners to support the monitoring and management planning process. While CeNCOOS continues to communicate with partners from BOEM and other federal and state entities, it was suggested that additional lines of communication be advanced to ensure open and FAIR data sharing requirements for OSW developers and continued access to OSW areas for research and sustained observations.

Baseline and routine monitoring, modeling and upwelling. There are some important considerations on the part of the observing systems related to the location of existing stations and whether they need to be moved or reconfigured based upon construction once it has begun. Concerns have been raised about the potential for offshore windfarms to impact ocean physics, particularly upwelling. Upwelling piece is common ecosystem structuring feature, with a modest negative impact expected from some modeling re absorbing wind energy. Other priorities around biology and ecosystem health must be viewed within the existing array in order to understand the optimal configuration to satisfy industry and regulatory needs.

Continuous glider operations are a relatively unique OOS asset that will be important in constraining natural versus industry induced upwelling variability and/or change. Currently this is not the focus of a lot of research in the regions. However, offshore winds have midwater suspended cables for gliders to avoid these. There is also a potential impact of the mooring and transmission lines on research, fisheries, and hydrographic sampling. Most wind will be on the North coast, more of the work on the North coast. Access for routine scientific monitoring would be a major concern built in corridors for sampling transects is a field design concern. Research corridors would provide space for them to operate gliders and ships. Access to these areas for research vessels and vehicles needs to be front and center. OPC has supported

modeling exercises in gateway that analyzed dataset that would be used to assess OSW areas. Justine shared a link (<https://osw.eemsonline.org/>), Currently in Phase 1 of the project. 180 different taxa in models.

The ongoing ocean observing work in Humboldt can be readily leveraged to support the two northern OSW areas. There is a longstanding sampling line to which a glider and other priority assets can be added to achieve the build out including marine acoustics, imaging and eDNA. Morro Bay and the central coast will require additional investment which will likely include a new glider line and autonomous systems will be a key aspect considering the area extent of operations and current/future research vessel availability.

Whale and sea turtle migration data. Regulators and managers of offshore wind development sites recognize that they need more granular whale migration data. Recent assessments have *not* included specific migration routes and there is recognition that there is not a lot of data on marine mammal entanglements. OSW cables are large in diameter and therefore not so much an issue, but secondary entanglement is still a concern.

Tracking migrations are possible with animal telemetry data. CeNCOOS, in partnership with the Animal Telemetry Network (ATN) can leverage existing datasets and look to integrate satellite and acoustic data for monitoring animals and species distributions and potential impacts. We have an example with the white shark tagging and partnering with place-based managers from NMS to understand impacts and migrations of white shark. Sea turtles are also a priority. Relatedly, CeNCOOS can contribute to quantifying the impacts on the soundscape of the area from platforms, service, etc. Indeed, sound could be important to measure and interesting but unclear how to integrate sound data and classification into the observing system and baseline assessments. There is a national scale effort to do this and technology to monitor sound is improving. Advancements on how to save, store and display the large volume of acoustic data is continuing and can be leveraged.

Data access and stakeholders. The fishing industry is rightfully concerned about the potential loss of fishing grounds. But it remains unclear how much area they will have to give up— that depends upon what the OSW developers design. Fisheries that are fixed gear, trap and hook and line may experience different losses and effects from the mooring and transmission lines. Loss of derelict gear on the cables. Mobile fishing gear will certainly encounter issues as big nets on the lines could be a problem for wildlife. Adaptive management will incorporate input from the fishing community. The coastal commission plans to form a working group with the fishermen before the construction is done with the intent of mitigating and minimizing

OSWarea impacts. Another working group was set up to minimize impact on fishing groups with lessees.

Open data is best for everyone. Data management and the coordination of data formats, standardization of sampling and collection information among leasees has not been well explored. Some companies are reluctant to provide their data for legal reasons and business sensitivities about which areas are best to operate. Understanding the legal constraints and liability concerns could be important in improving data access. CeNCOOS serves to develop and implement metadata standards and interoperability best practices. The hope is that BOEM or other regulatory entities will mandate open access to data, unless there are fundamental reasons not to do so. CeNCOOS can serve to flag BOEM to make lessee reports and findings publicly available but raw data due to legal constraints.

Attendees: Henry Ruhl (CeNCOOS / MBARI); Francisco Chavez (MBARI); Laura Rogers-Bennett (CDFW); Alex Parker (Cal Maritime); John Largier (UC Davis); Andrew Devogelaere (NOAA MBNMS); Eric Bjorkstedt (NOAA SWFSC / Cal Poly Humboldt); Liz Whiteman (Cal OST); Justine Kimball (OPC); Fred Bahr (CeNCOOS); Megan McKinzie (ATN); Nick Rome (NANOOS / UCAR); Clarissa Anderson (SCCOOS / Scripps); Megan Medina (SCCOOS / Scripps); Brian Owens (CDFW); Holly Wyer (California Coastal Commission); Yi-Hui Wang (OPC); Arne Jacobson (Schatz Energy Lab); Jeremy Potter (BOEM); Jessica Cross (NOAA PMEL); Shauna Oh (CASG); Mary Miller (Exploratorium); John Hansen (WCOA); Lynn Dewitt (NOAA SWFSC); Carl Gouldman (IOOS); Kristin Yarincik (IOOS-A), Jaime Jahncke (Point Blue)

Apologies: ; Dean Wendt (Cal Poly SLO); Lynn Korwatch (SF Marine Exchange); ; Eric Lindstrom (Saildrone);

Agenda	
9:00 am	Call to Order, Welcome and Agenda, U.S. IOOS Remarks - Mary Miller, Henry Ruhl, and Carl Gouldman
9:10 am	CeNCOOS Program Office Update - Henry Ruhl (15 min, 5 min questions)
9:30 am	NOAA Update - Marine CDR (Carbon Dioxide Reduction) Strategy - Jessica Cross (NOAA PMEL)

9:45 am	Regional Update - West Coast Ocean Alliance / Ocean Data Portal - John Hansen
10:00 am	State Update - California Sea Grant new strategic plan - Shauna Oh
10:15 am	Break
10:30 am	<p>Offshore Wind Roundtable Discussion - Ruhl moderator</p> <p>Participants:</p> <ul style="list-style-type: none"> - Brian Owens (CDFW) - Holly Wyer (Coastal Commission) - Yi-Hui Wang (OPC) - Greyson Adams (Schatz Energy Lab) <p>Discussion questions:</p> <ol style="list-style-type: none"> 1. Are we missing anything or off track in thinking about how CeNCOOS (and IOOS) should be considered in terms of contribution to offshore wind energy industry information needs? 2. What concerns are emerging as we consider increased activity in this area? 3. How can we work together to improve strategic clarity in potential partnering and building upon existing investments and structures? 4. How do we prioritize time and partnering?
11:30 am	Discussion
CLOSED SESSION - GC Members ONLY	
11:45	<p>Nomination Committee Updates and Actions</p> <p>Action 1: Approve 'Community Seat' description for Bylaws</p> <ul style="list-style-type: none"> ➤ Community seat description for Bylaws <p>Action 2: Confirm Corey Garza as 'Research' representative</p> <ul style="list-style-type: none"> ➤ Nominations roster

	<p>Action 3: Confirm Rosa Lopez as ‘Community Seat’ representative (pending TDN Council approval)</p> <ul style="list-style-type: none"> ➤ Nominations roster <p>Action 4: Budget approval delegated to Executive Council in case of continuing resolution, i.e. no substantive change in funding.</p> <p>Action 5: Confirm Eric Bjorkstedt as Chair Elect</p> <ul style="list-style-type: none"> ➤ Nominations roster
12:00 pm	Adjourn

Read-aheads:

California Sea Grant: [Draft Strategic Plan 2024-2027](#)

Marine Carbon Dioxide Removal:

- NOAA CDR Research Strategy in external review: [Press Release](#). [Read the strategy online](#). [Read a short 2-pager](#). Public listening sessions on Dec 12 and 14 ([pre-register here](#)).
- CDR \$30M NOFO released: Webinar on Dec 7 ([pre-register here](#)) and proposals due on February 28. Read the full NOFO [here](#).

Offshore Wind Energy:

- West Wind OOS - [Briefing document](#) on context for West Coast IOOS Regional Associations and related efforts.
- [PRESS RELEASE: Biden-Harris Administration Announces Winners of California Wind Energy Auction](#)
- Federal information: <https://www.boem.gov/renewable-energy/state-activities/california>
- State of California information: <https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/offshore-renewable-energy>
- <https://tethys.pnnl.gov/>