GCOOS Spring Board and Members Meeting Minutes

May 28, 2025

GCOOS Board Participants
GCOOS Board members in attendance: Dave Driver, Sara Graves, Emily Hall, Pat Hogan, Stephan Howden, Kirsten Larsen, Suraida Nanez-James, Brian Roberts, Antonietta Quigg, Rafael Ramos, Nick Shay, Nan Walker, Tom Wissing and Kim Yates.

Welcome and Introductions: Dr. Kim Yates, GCOOS Board Chair, welcomed participants, extended congratulations to GCOOS on its 20th anniversary and made a motion to adopt the agenda which was unanimously approved. A review of the agenda was provided, including ample time for discussions as requested by participants at the previous meeting. Dave Easter, IOOS Division Chief, was unable to join so Krisa Arzayus, IOOS Deputy Director, provided IOOS program office updates.

IOOS Program Office Updates: Krisa Arzayus, Deputy Director, IOOS: Major changes across all federal agencies, including NOAA, have resulted in many staffing changes and loss of expertise over a short period of time. April 30th saw the loss of more than 1,000 NOAA employees with a collective work span of 27,000 years. IOOS lost approximately 20% of its staff, including Carl Gouldman, Tracey Fanara, Derrick Snowden and Connie Kot. NOS is also experiencing a loss in leadership positions and many people are acting in multiple roles, including Dr. Jeff Payne who is Acting Director of IOOS in addition to his role as Director of the Office of Coastal Management. Dr. Payne was involved in the early days of IOOS with Dr. Margaret Davidson and is coming up to speed with the RAs. He has already participated in meetings with AOOS and SECOORA. Krisa said there has been a FY25 appropriation. IOOS is awaiting the final budget and OMB spend plan approval. The ideal situation is that it will not be zeroed out and that it will be consistent with the 2024 budget. The OMB process is creating a backlog of expenditure and grant approvals. There is a lot of risk associated with the FY25 budget and the 2026 budget to come.

The IOOS enterprise has a high return on investment and the program office is working closely with the IOOS Association to characterize successes. Carl championed the Benefits of Ocean Observing Catalog (BOOC), a product demonstrating use cases around the country and globe. Krisa continues to work on this with Liz Whitney, Sea Grant. The IOOS DMAC meeting held earlier this month was productive, with discussions about how to centralize core services as efficiently as possible. NCEI also lost many employees but recently hired two affiliates to archive RA data with the goal of maintaining long-term data archives. Krisa congratulated LSU for its HFR network at Grand Isle, the result of Congressionally directed funds in the amount of $5M to fill eight HFR gaps. She congratulated GCOOS and GOAA for renewing their MOU to continue collaborating on Gulf issues, and concluded by thanking Dr. Stephan Howden for the testimony he provided at the Congressional hearing for ICOOS reauthorization.

QUESTIONS: There is concern about the vulnerability of pipelines and data services now and in the immediate future. The IOOS office is gathering data on the vulnerability of these systems as a result of

loss of human and fiscal resources. Subawardees are unable to operate at risk and will have to pause or stop work entirely if funding doesn't come through soon. The program office is limiting hours spent on new developments and focusing on essential functions for now. What happens if the Glider DAC goes silent? Is there an alternative to get glider data on the GTS? Krisa says no, there are currently no options but they are exploring contingencies.

IOOS Association Updates & Congressional Outreach: Kristen Yarincik, Executive Director showed the increase in the IOOS enacted budget over time. Typically, a continuing resolution would secure funding but Y5 funds are still uncertain. The president proposed to defund IOOS. It has been an evolving landscape with orders changing daily since January 20th and negative impacts from ongoing reductions in the workforce, grant freezes, and travel and spending freezes within agencies. Three areas where IOOS, especially GCOOS, can make a strong case for the value of the system that will resonate with the administration are Seafood (in support of Restoring American Seafood Competitiveness), the Maritime Industry (in support of Restoring America's Maritime Dominance) and Minerals (in support of Unleashing America's Offshore Critical Minerals and Resources). Typically, by this time of year advocacy for 2026 would be underway but we are still fighting for FY25 funds. IOOS could be defunded this year—a rescission packet only requires a simple majority in Congress. Congress does not have to approve the 2025 spend plan but they can provide feedback. The spend plan has made it from OMB to the Hill but lacks program-level detail. No updated information is available. An additional challenge is that all grants and contracts over $100K are being reviewed, including BIL funds, and this is causing delays. The new IOOS solicitation would normally be out by now but it remains uncertain. Supporters in Congress are aware of the urgency to reauthorize the ICOOS Act. Mike Ezell, MS, has been a champion. There was a record 97 signers in the House of Representatives and 27 in the Senate supporting IOOS with strong support from the Gulf states. During the IOOS 25 yr anniversary celebration in March, IOOS gave its first-ever Congressional awards to Senators Wicker (MS) and Cantwell (WA) for their ongoing leadership.

QUESTIONS: In response to a question about bipartisan support, Kristen replied that Congressman Ezell's office is very supportive but also frustrated by the lack of transparency in communications about IOOS. How can people be proactive? Reach out to elected officials within the GCOOS footprint and let them know this is important. Make them aware of the impacts to data acquisition and service delivery caused by uncertain funding. Tom Wissing emphasized that GCOOS can provide strong support for minerals exploration because there are a lot of commonalties in data needs with the oil and gas industry. Loop current, eddy and deep current data are all needed to safely operate hydraulic pumps, ROVs and other equipment. Brian Zelenke also mentioned the need to track the trajectory and fate of dredge plumes resulting from seafloor mining. GCOOS needs to strategically position itself to demonstrate how we support these three executive orders and think about referring to these EO titles within our website to make it clear. Action: Kristen will work with Tom and Jorge to get the wording right. Mining is a controversial topic and the goal is to stay bipartisan. It might be that language should focus on territorial waters. Pat Hogan mentioned that reorganization conversations are happening across most federal agencies and asked if there has been talk of consolidating RAs. Kristen said that it is premature to talk about RA restructuring. Jeff said that right now, folks are in triage mode, just trying to keep things running. Federal efforts are on how to consolidate offices and less on specific components within offices, but employees are not allowed to discuss outside of the agency.

GCOOS Updates, Status and Changes: Dr. Jorge Brenner, Executive Director thanked Kristen, Krisa and Jeff for their honest updates. He also thanked Stephan for providing testimony to support

reauthorization of the ICOOS Act. Despite all the reasons for concern, there is much for which to be thankful and GCOOS is focusing on what we can control. Updates were provided for several GCOOS-supported projects including Marine Heat Wave work by Dauphin Island Sea Lab PhD student Dev Rao who is developing marine alerts; temperature anomaly product development by Xiao Qi, building on collaborative activities with CARICOOS and SECOORA; and aggregation of literature on thermal thresholds of a variety of Gulf species by GCOOS National Academies intern, Dr. Ren Kamakura. An upcoming webinar series to be held June 12th and 26th and July 10th will highlight impacts of MHWs in the Gulf region. Updates on the Sea Turtle Atlas which now has more than 100 population data layers, and Inflation Reduction Act projects focused on Service Delivery and Communication were also highlighted. Participants were encouraged to review the 2024 GCOOS Annual Report.

GCOOS Project Updates by investigators: These were recorded and will be available on the GCOOS YouTube channel (https://www.youtube.com/channel/UCLIjMeR9opm2f6S7uAJWLlQ).

Dr. Stephan Howden summarized the University of Southern Mississippi's activities to test performance of Hefring's Ocean Scout glider. Strong vertical density gradients along the shelf, plus infrastructure threats from oil and gas platforms, make it challenging to conduct missions. Enhanced buoyancy pumps and thrusters were developed to resolve and compare against performance of Slocum G1 and other gliders. Upgrades enabling longer endurance (currently only about 15 d), better power monitoring during missions, and automated netCDF file generation compatible with IOOS, and a cost that is about 1/4 to 1/3 that of Seagliders or Slocum G3s, might make these a competitive alternative for shallow water missions.

QUESTIONS: Pat Hogan asked about the frequency of mission data to the GDAC. During testing, data were transmitted about half way through the mission but once issues are resolved, data from future deployments will flow in near-real time.

Dr. Brian Dzwonkowski summarized Dauphin Island Sea Lab's wave buoy work to expand the availability of real-time wave data for NWS improvements to rip currents, a significant killer of people in coastal environments. The idea is to test two sites—one in Alabama and one in Florida-with the hope of extending to additional sites.

QUESTIONS: Nan Walker asked if a public-facing rip current forecast exists. The NWS has a Surf Forecast but it does not have a public face--Brian thinks most information is internal to the NWS. Brian Zelenske suggested that it's possible data sources like sea sondes and HFR could match up to wave climate and be used to enhance forecasts. Brian DZ said HFR wave predictions are usually too far offshore—measurements on the order of five to ten meters from shore are needed for rip currents. Stephan added that his team has been analyzing wave data from Spotter drifters during Hurricane Helene and comparing to wave data from USM's CODAR sites but that the information is not yet ready to formally present. A resource from CODAR Ocean Sensors on wave measurements from SeaSondes was shared http://support.codar.com/Technicians_Information_Page_for_SeaSondes/Training_Files/12.Day3_SeaSonde_WavesIntro.pdf. Joe Swaykos asked if Brian had a sense of the quality of the wave data. The first step is getting a sense of the order of magnitude of the data quality by comparing to regional assets. Work needs to be done before GTS distribution can occur. Stephan said that there are good studies between Datawell and Sofar buoy waves and that the latter are very accurate if manufacturer instructions are followed.

GCOOS Investigator Panels: Prior to the meeting, GCOOS investigators provided status reports on their projects. Four panels were created to summarize information from these reports and to encourage discussions. The panels were recorded and will be available on the GCOOS YouTube channel https://www.youtube.com/channel/UCLIjMeR9opm2f6S7uAJWLlQ.

Glider and HFR updates given by Stephan included content from the glider work of USM (Stephan Howden), Mote Marine Laboratory (John Langan) and the University of South Florida (Chad Lembke); and the HFR work of USM (Howden), Research, Applied Technology, Education & Services (RATES, Christopher Fuller), and Fugro (Christopher Jackson). New funds to LSU will help address gaps in Gulf HFR but there are still many to fill. The current funding situation will be challenging from an operational design standpoint because overlapping currents are lacking so there are no redundant measurements. Looking ahead, there might be changes in the way we operate HFR—many small vs. fewer larger operators. A private sector contractor would be challenged because the assets are owned by different universities. It is unclear how to make this more efficient. It is worth discussing with HFR operators in Mexico who have explored ways to increase efficiencies. The IOOS-CODAR loaner program is a great partnership that shares resources to offset down time due to equipment failures. It will likely be jeopardized in the current funding cycle. Rafael Ramos asked about comparing currents from gliders vs HFR but there aren't ADCPs on gliders and only estimates can be made from gross comparisons of intended way points vs where they end up. This is especially difficult on the shelf where reversing currents are common and not reflective of surface conditions. Moored current meters and drifters can be compared with HFR data. For more on the subject, a paper by Ohlmann et al. was recommended (https://journals.ametsoc.org/view/journals/atot/24/4/jtech1998_1.xml).

Buoy and Mooring updates provided by Dr. Brian Dzwonkowski included content from his work on the Alabama Real-Time Coastal Observing System (ARCOS) and the work of USM (Stephan Howden), Sanibel Captiva Conservation Foundation's River, Estuarine and Coastal Observing Network (SCCF RECON, Eric Milbrandt), and LSU's met-ocean stations (Chunyan Li). Retaining a trained workforce is increasingly difficult because university salaries are not competitive with higher paying options. Recent storms have also posed challenges, destroying equipment and facilities. Brian Roberts, LUMCON, conveyed the importance of GCOOS to the region. While highlighting four core locations for the panel, other institutions with individual monitoring contribute volumes of data to the portal. The role of serving aggregated and integrated data is increasingly important to Gulf stakeholders as other systems go offline. Stephan added that integrating the growing number of glider and HFR data sets for hurricane models is very important. Rafael emphasized that it is not only the data supported over the years but acquiring independent data like NTL which provides full column currents since 2005. If we were to fund a program to acquire that level of data, it would have cost hundreds of millions of dollars. A significant contribution like this needs to be highlighted as part of GCOOS and IOOS Congressional outreach. Eric added that one example of a data application that he will highlight in his communications with elected officials is the use of GCOOS data linking property values in southwest FL to widespread HABs in 2018.

Satellite Remote Sensing and Numerical Modeling updates given by Dr. Nan Walker included content from her SST work at the LSU Earth Scan Laboratory, the SSH work of Dr. Bob Leben, Colorado Center for Astrodynamics Research (CCAR), and the numerical modeling work of Zachary Cobell, The Water Institute. Nan's SST data is available on the LSU server (https://www.esl.lsu.edu/). Bob's SSH data is available on the GCOOS website (https://geo.gcoos.org/ssh/), and information about Zachary's work is available at https://thewaterinstitute.org/our-team/zachary-cobell. GCOOS is taking over some of the

processing of Bob Leben's SSH data. LSU and CCAR have a weekly product released every Monday that integrates SSH and SST, showing the 17 cm SSH contours that outline the Loop Current and eddy features. There is interest in doing more of this type of work in the future. Rafael commented that the Woods Hole Group does this type of work as well and that they should discuss. Nan has not used Surface Water and Ocean Topography (SWOT) altimeter mission data but has a student who did, using data from over land. Nan shared that Bob's professor, George Borne, was involved in creating the SWOT sensor. Rafael has plans to use now that the first non-beta imagery is available from NASA and the European Space Agency. Cold core eddy studies by Nan, Bob and Steve Anderson (Horizon Marine) used de-clouded SST and animations because SSH did not help resolve. The information was used in a major MMS report on the climatologies of cold core eddies. Pat said the Navy has done some testing, assimilating into AVISO (Archiving, Validation, and Interpretation of Satellite Oceanographic) models on a test case basis but Rafael said if so, it would be a five-day averaged product and resolution would be diluted. There would need to be a stand-alone product. Nan and Rafael will talk more later.

The Ecosystems update provided by Dr. Xinping Hu summarized the HAB work of Dr. Darren Henrichs, Texas A&M University, and the Sargassum work of Dr. Sharon Herzka, University of Texas at Austin. Darren's work is focused on using HAB cell concentrations and public image data to track blooms, coordinate sampling efforts and aid decision-making for shellfish harvest closures. The information provides coastal managers with early warnings of HAB events and provides long term, high-resolution phytoplankton community data for monitoring environmental change. Sharon's work is using a camera monitoring system for validation and monitoring of Sargassum on beaches along the Texas Coastal Bend. One of the challenges for the Sargassum work is that offshore collection is informed by satellite observations made by Dr. Chaunmin Hu's team at USF. There is a delay in response so that by the time satellite images are received, the floating mats have moved. Boat size is also an issue because UT has small vessels and calm weather is needed to get offshore. This is the first IOOS project focused on Sargassum observations so working out solutions and developing a field monitoring manual are important steps.

Board activities: Dr. Kim Yates provided a summary of Board duties, examples of support provided to the GCOOS Executive Director and staff, leadership roles in building out GCOOS, contributions to GCOOS Strategic Plan development, an overview of GCOOS council, committees and task teams, and plans to celebrate GCOOS's 20th Anniversary. She extended thanks to all of the presenters and participants and said to reach out to the GCOOS team if there are any additional questions, comments or thoughts to share. A motion was made to adjourn, and all were in favor.

GCOOS Spring Board Meeting Minutes

May 30, 2025

GCOOS Board meeting participants
GCOOS Board members in attendance: Dave Driver, Sara Graves, Emily Hall, Pat Hogan, Stephan Howden, Kirsten Larsen, Suraida Nanez-James, Brian Roberts, Antonietta Quigg, Rafael Ramos, Nick Shay, Jan van Smirren, Nan Walker and Kim Yates. GCOOS staff participants included Jorge Brenner, Marcus Ogle and Chris Simoniello.

Welcome, motion to approve agenda, opening remarks: Kim Yates, GCOOS Board Chair, explained that the purpose of the meeting was to debrief following the Members Meeting. The meeting was kept intentionally short knowing additional calls will be needed to provide input on funding decisions. A motion was made by Kim to approve the agenda, it was second by Sara Graves and all were in favor.

Voting on Gulf of America name Change: The GCOOS bylaws need to reflect the Executive Order-required name change from Gulf of Mexico to Gulf of America. Internal documents have been updated but the bylaw changes required a vote to update the name change. Two voting attempts were sent via email in April but both fell short of the 75% board response (13 people) needed for an electronic vote, per the bylaws. Before a motion was made to vote during the board meeting, edits suggested by Rafael Ramos were shared. These included maintaining reference to the Gulf of Mexico to retain the history of GCOOS. Discussion ensued about complying with the EO-directed name change and implications for our international partners. A motion was made by Kim to update all instances in the bylaws from GoM to GoA, second by Emily Hall and all voted in favor.

Treasurer change: Long-time treasurer Jan van Smirren will be retiring from the Board in the fall. Rafael has agreed to be considered for the position. He has consulted with Jan to better understand the position requirements. Brian thanked Rafael for stepping up. A motion was made by Kim to move forward with the transition from Jan to Rafael, effective at the Fall 2025 meeting; second by Suraida Nanez-James and all were in favor. Kim thanked Jan for the many years he has done this job and for helping with the transition.

Open meeting de-brief and discussion: Kim Yates led a discussion about the Members Meeting, asking people what they thought worked and didn't work. Overall, the comments were very positive. There was widespread agreement that the meeting format worked well, the duration was appropriate and the logistics ran smoothly. Round-robin comments about the meeting included the following:

Marcus Ogle: All went smoothly. Keeping time for the speakers was important and including a 15 min buffer in the agenda was very helpful because it takes time transitioning between presenters. The only hiccup was the occasional lag when advancing slides.

Chris Simoniello: Thanked Kim for her attention to detail and thoughtful agenda that encouraged dialogue. Marcus did a great job keeping the talks moving. She agrees with the comment made by Tom Wissing that GCOOS needs to make a strong case for the value of the system by better aligning with three specific Executive Orders: Restoring American Seafood Competitiveness, Restoring America's

Maritime Dominance, and Unleashing America's Offshore Critical Minerals and Resources. For the latter, there is a lot of overlapping information that already benefits the oil and gas industry.

Brian Roberts: There are many people who provide data but are not funded by GCOOS. The PI reports are great but how do we better capture the contributions and give a voice to those who are not funded by GCOOS? In-person meetings allow for more opportunities to hear from members. Three hours is already at the upper end of tolerance for a virtual meeting. Now more than ever, we need to highlight the importance of numerous institutions contributing information to show that IOOS/GCOOS is much greater than who we fund. We need to do a better job of salesmanship and documenting the ROI. Suraida agreed and added that what we do as a whole can't be funded individually. Stephan said Ocean.US used to do a great job working from the bottom up, making important connections with users. The RAs are making regional connections in this fashion, for example, with tidal gauges, GNSS surveys, and getting water level data to charts.

Jorge Brenner: Thought it was a good and productive meeting with great interactions. The only missing item was the opportunity for members to present. He agreed that three hours was not enough time to allow for this and hopes to be able to accommodate in future meetings. He requested board members share their ideas for what they'd like to see in future meetings.

Suraida Nanez-James: Agreed with the comments made by others and said she also liked that the structure was set up to provide discussion opportunities. More time for discussion is always appreciated.

Stephan Howden: Thought the meeting went well and said that one thing missing in virtual meetings is the participation of Congressional representatives. Their participation is important to help build relationships and for the next in-person meeting, we should think strategically about hosting in the most impactful district.

Nick Shay: Applauded Brian's comments to look at the broader picture. He reiterated that there are many folks contributing information to the greater good who are not funded by GCOOS (e.g., NAS GRP) and said we can't exclude them.

Nan Walker: Thought the meeting was great, very well organized. She also agreed with Brian's points and suggested a promotional video summarizing the main components of GCOOS might be needed. What does GCOOS give the public in general? Hurricane resources and specific applications of GANDALF data were suggested. We need more obvious real-world examples showcasing how information is being used for public good on the web pages and in media posts. As a panel presenter, she felt she was missing information. Access to previous PI reports might have helped.

Rafael Ramos: Agrees with the previous comments and said we need to establish metrics to show the utility of data that GCOOS provides across multiple sectors. Examples included web page downloads and citations in publications. We need to discuss what and how we measure impact. This can then lead to video or web content to share the value. We have many people who provide data to GCOOS but also many users—do we know these institutions and how they are integrating data into their Gulf operations? The Investigator Panels made it clear that some people struggle to name all their stakeholders. Regarding metrics, Marcus said this topic was brought up at the IOOS March meeting. He is working with Nadine on a series of user-targeted flyers for a marketing section of GCOOS. Short, 5-20

sec video clips can also be part of the marketing page. He will send flyers for comment to the board as they are created.

Emily Hall: Thought it was a good meeting and that it would be good to bring back the lightning talks which people seem to enjoy. People who spoke before her already hit the major points she was going to make, especially Rafael's thoughts on quantitative measurements. She suggested we should also work with end-users to directly push out information about GCOOS—who is using and how are they using information? She agreed that policy makers were missing from the meeting and especially liked that the Investigator Panels provided opportunities to discuss challenges with equipment and field work that many could relate to and learn about solutions to the problems.

Dave Driver: Agreed with previous comments and said that at one point, there were 65 participants online. He reiterated that we only heard from board members and a handful of contractors and that it would be nice to get more feedback from the members who participated.

Antonietta Quigg: Said that everyone before her summarized the meeting nicely. She enjoyed the updates and panels and suggested it would be helpful to have had a chance to review and digest the investigator panel slides prior to the meeting.

Kirsten Larsen did not have any comments to share.

Jorge concluded the discussion saying the Members Meeting was a special meeting to meet IOOS acting director Jeff Payne and to learn about the status of IOOS from Krisa Arzayus, IOOS Program Office Deputy Director, and Kristen Yarincik, IOOS Association Executive Director. He said that it is often difficult to get elected officials to attend the meetings but that he is encouraged by the great support many offices have demonstrated for IOOS and GCOOS. Assessing how GCOOS data are being used and the wide range of benefits makes for complicated analytics. Chris is developing a curated stakeholder data base to help identify people, organizations and program benefits as we continue reaching out and advocating for GCOOS.

Budget situation and scenarios: Jorge suggested that everyone review the presentation given by Kristen Yarincik. All RAs continue outreach efforts to gain support for IOOS. We are hoping to learn more about the funding status of IOOS next Wednesday and Thursday. Letters of Support continue to be received, including support from CASE/EJIP and pending letters from the presidents of Shell and Chevron. Outreach efforts will continue beyond FY2025 into next year. Jorge is working with TAMU SRS to build funding scenarios. Savings from Y1 will help maintain some operations if no funds are received. The goal is to maximize operations for as long as possible. In addition to core funding from IOOS, GCOOS is waiting to learn about the status of BIL funding. Regional association directors are looking at strengths and weaknesses across all RAs. GCOOS might provide some data services to SECOORA and CARICOOS and they might provide other services to us. Lacking concrete information, it is difficult to plan.

Closing remarks and next steps: Kim reminded everyone to watch for updates and requests for meeting participation. The funding situation is evolving rapidly and people need to be responsive. Members should plan to meet again in a few weeks once additional funding guidance is available. Jorge will continue working on different scenarios. Kim made a motion to adjourn, second by Sara and all in favor.