



The GCOOS Spring Board and 20<sup>th</sup> Anniversary Members Meetings were held 13-15 April 2026 at Texas A&M University, College Station, Texas.

### **Board Meeting, Monday, April 13, 2026**

Board Attendees: In Person: Dave Driver, Emily Hall, Pat Hogan, Jim Kendall, Sergio Jaramillo, Suraida Nanez-James, Antonietta Quigg, Rafael Ramos, Brian Roberts, and Kim Yates (Chair). Virtual Participation: Nick Gagliano, Sara Graves, Stephan Howden, Nick Shay and Nan Walker

Other Participants: In Person: Jorge Brenner, Marcus Ogle, Chris Simoniello, Kristen Yarincik and Shari Yvon-Lewis. Virtual Participation: Susan Fox, IOOS Regional Coordinator

Tech Support: Tuomo Saari, Xiao Qi

Dr. Kim Yates, GCOOS Board Chair, welcomed everyone and led participant introductions. Following a welcome to Texas A&M by Dr. Shari Yvon-Lewis, a motion was made by Dave Driver to adopt the agenda, second by Suraida Nanez-James and all in favor. Marcus Ogle, Sergio Jaramillo and Nick Gagliano were thanked for running the Board elections and results were shared: Returning Members: Antonietta Quigg, Suraida Nanez-James and Kim Yates; Retiring Members: Dave Driver, Kirsten Larsen and Sara Graves; Newly Elected Members: Mike Yang (Chevron-Industry), Chrissy Wiederwohl (TAMU-Outreach & Education) and Courtney Bouchard (NCEI-Government).

**Dr. Jorge Brenner, GCOOS Executive Director**, thanked TAMU for hosting and participants for coming then provided a program update. GCOOS is hosted at TAMU and was incorporated as a NGO in TX in 2012. TAMU handles proposal and grant administration, provides staff benefits, business development and legal/insurance support. Funding is on five-year cycles primarily from NOAA via support for Congressionally enacted Regional Observations. Other funding is from a range of opportunities (e.g. executive bills like IRA and BIL, disaster supplements, Ocean Technology Transition, Coastal Ocean Modeling Testbed, BOEM, NMFS, EPA, NSF and Cooperative Institute for Research to Operations in Hydrology).

GCOOS has several in-house specialties including robust DMAC/AI Development, Outreach and Education, and glider missions, including pilot support through GANDALF. We work closely with



energy partners in the OCS through our Notice to Lessees (NTL) project and are working on a new GIS infrastructure and developing strong international partnerships.

Pat Hogan asked if the RAs are having issues using AI technologies like Claude because there are challenges for NOAA employees. The RAs are still waiting to see how the path forward will be defined.

Highlights from IRA-funded activities include deployment of a Sofar buoy by DISL to aid rip current forecasts in the Mississippi Bight; development of a merit badge focused on rip current safety for Girl Scouts of the USA and Scouting America, with a public launch data of May 2027 and support from Alabama State Senator Chris Elliott; interest by the NWS in Tallahassee and Houston to build on the DISL rip current observations; deployment of an OA station in Eagle Point, Galveston Bay, TX, by the USGS; development of the Gulf's Ocean Tracking Network data node via University of Florida-led iTAG activities; and deployment of USF's first ecosystem glider mission, currently available in GANDALF. Upcoming missions for the 2026 season include Navy gliders, AOML-deployed Sairdrones and deployments by new partners at the University of Louisiana-Lafayette and DISL. GCOOS will hold its staff retreat in conjunction with the 2026 GulfCon meeting in May. There will be a session on ocean observing and GCOOS will share several products at the Tools Café. Several staff members will also be attending the UG2 workshop in St. Petersburg, FL.

Project updates included the Rice's Whale Detections with Glider-mounted PAMS, led by USF; Fish Spawning Aggregations Mapping and Conservation, led by the University of Southern California; the current GCOOS five-year award that ends June 30 and awaits NCE approval; and the new GCOOS five-year proposal written at the \$25M level with a planned start date of September 1<sup>st</sup>. The proposal includes funds for 19 subawards for nine renewing and 10 new projects as well as holdback funds for Flower Garden Banks National Marine Sanctuary. Realistically, a descope between \$2.5 and \$3M per year will be required. Using disaster supplement funding, GCOOS will acquire and own its first glider that it will insure but contract to operators. It will be owned and shared by TAMU. The business model will evolve as we learn what is effective and potential users will submit proposals to conduct missions. Ideas for the Ocean Technology Transfer NOFO are also being discussed.

Staff updates included Jorge joining the IOOS Association Board as a strategic advisor; Marcus coordinating DMAC and portal modernization; Xiao Qi's work on the new MHW portal; Megan Howson stepping up to co-chair the IOOS Acoustic Work Group, deployment of two new webcams funded by OTT, and the publishing of a new model handler app and NTL dashboard by Felimon Gayanilo. Chris Simoniello also announced TAMU graduate student Otoniel Palacios as the recipient of the 2026 Matt Howard Fellowship Award. For the remainder of the year, key focus will be on review and updating of the Strategic Plan, setting up the new IOOS award, and planning multiple meetings, including the September IOOS Fall Meeting in New Orleans, a Marine Life workshop, and the GCOOS Fall Board and Outreach and Education Council meetings. Stephan Howden asked if other RAs have



used development plans to secure funding. SECOORA and MARACOOS have but it is a fairly new approach. Chris said that Landry Bernard served as a Development Officer for GCOOS for a brief time and that there might be documentation we can use as a starting point.

**IOOS Association Updates** were provided by Director Kristen Yarincik. The IOOS Association EXCOM includes Gerhard Kuska, Chair; Jan Newton, Vice Chair; Henry Ruhl, Treasurer; Julio Morell, Secretary; and Debra Hernandez, Past Chair. Jorge is not an elected EXCOM member but was invited to serve as a strategic advisor for Congressional outreach. IOOSA communications are currently focused in LinkedIn for professional advocacy. There are 1670 followers and growing by about 100 each month. This past year saw an unprecedented single year loss in federal expertise that disproportionately impacted IOOS office leadership, but the final outcome was strong House and Senate support that resulted in a \$5M increase to the baseline budget—bringing the enacted appropriation plus up to \$47.5M. There are no guarantees for funding. ICOOS Reauthorization at \$56M passed in the House in March and is out of committee in the Senate. There are two pathways for the senate to approve—directly or as an amendment to the Weather Act which passed Commerce Committee March 4<sup>th</sup>.

Unified messaging needs to include that IOOS provides core national operational infrastructure for safety and economic strength, improving forecasts, reducing disaster losses, supporting marine operations, and making America safer, stronger and more self-reliant by improving forecasts and decision-making tools that protect people and power the economy. There are opportunities for two factsheets on how IOOS supports Maritime Dominance (e.g., port resilience, waterway security, emerging technologies) and Seafood Competitiveness (e.g., offshore aquaculture, MARA Act). GCOOS was thanked for strong Congressional outreach, leading to record bipartisan support in the House and Senate. The inaugural 2025 IOOS Bipartisan Congressional Awards were given to Senators Wicker and Cantwell. The 2026 House awards will be announced at Capitol Hill Oceans Week this summer.

### **Questions and Discussion**

Dave Driver asked why GCOOS continues to be at the low end of IOOS funding despite its importance for energy and seafood security. Other regions receive additional funds to maintain models, support regional ATN nodes (e.g. ACT, FACT) and other activities. The funding allocation is rooted in historical aspects related to asset deployments and there has been no effort to balance and make core IOOS awards fair. Some activities for other RAs are supported by other general funds to NOS. Can the \$5M plus up in the new budget be used to right size the under-funded regions rather than split evenly across the 11 RAs? It could be impactful to send the message to NOAA that the \$5M increase is to help raise up regions like GCOOS that are carrying Congressional support. The case could also be made that nearly \$40M has been invested in UGOS and that additional funds could be used to transition elements to GCOOS. The deep ocean profiles and other projects show innovation, new technologies and how



GCOOS is progressively thinking ahead. UGOS sunsets in February 2027. Are any components suitable for OTT funding?

Pat Hogan asked what the role of the Board was in the decision for GCOOS to purchase a glider. Kim Yates said it was made by the EXCOM. Pat suggested it would be useful for the full board to have more of a role in strategic decisions. Kim agreed and apologized stating it was a bandwidth issue with bimonthly EXCOM meetings to keep pace with time-sensitive proposal decisions. Nick Shay suggested a Science Committee might be helpful to review new developments. It would also be helpful for the Strategic Plan process to make sure the science and technology components are properly reviewed.

### **GCOOS Strategic Plan: Process to Write and Move Forward**

Kim Yates reviewed results of the Strategic Plan review as a starting point to discuss the next iteration. Because the timing coincides with the new IOOS NOFO, we can align our actions and metrics more closely with our planned work. Care should be taken to avoid totally aligning with the NOFO so that we retain flexibility. The SP should be updated every three years and ideally fall midway between the five-year funding cycle to achieve a balance between actionable goals with benchmarks and a longer-term vision. Focus on what can realistically be achieved with given resources and use SMART objectives. A challenge will be not limiting content to currently funded projects because there were many excellent proposals submitted that we cannot support this round but that are highly relevant. The current NOFO does not represent all areas of important RA activity and we need a long-term strategy for all elements whether they fit the current NOFO or not. GCOOS has a mission statement but not a vision statement. Is one needed? Do the SP and Build Out Plan need to be better linked? Does the SP align with IOOS programmatic goals and use similar language for things like Communities of Practice, pan-regional collaboration and coordinated data centers? Considerations include the five IOOS Subsystems: Governance & Management, Observing, DMAC, Modeling & Analysis and Engagement. Factors guiding IOOS near-term priorities as of March 2026 include strengthening integration and coordination across IOOS; providing clear direction where efforts should be focused; environmental compliance and permitting, value messaging, and product collaboration. The tentative timeline is to have the SP outline completed by June 30, 2026, with modifications based on the final GCOOS SOW and actual funding received. A near-complete draft is desired by August. Board and staff do not have to be the only contributors to the SP. The writing Task Team should include others throughout the network. Stephan suggested that for outreach, we can do one-pagers outlining what stakeholders need and the technology that can be used to develop. The technology and IOOS priorities are changing—e.g., wave data, web cams, eDNA and acoustics are not represented in our documents but are important. We should also emphasize the many cross-regional collaborations. It remains a big challenge to know who all our stakeholders are and how they use our resources. Google forms, digital surveys and in-person meetings are some ways to capture this. Sergio shared that websites like Windy and Copernicus have free versions



and options to fill out a short form to get customized information. For NOAA-certified websites, requesting information from users could be problematic. Antonietta said that measuring success requires clarification on what success looks like. Is it the number of people attending a meeting, the number of publications, co-developed products, or something else? Could we request that funded PIs provide input on metrics? Often, we have little idea who our funded PIs are sharing product outputs with and who they are engaging. Who is the audience for the SP? Antonietta Quigg said there can be two versions of the plan—a one to two-page summary and a longer version. Kim envisions different sections being used to develop shorter advocacy, technical, outreach and other pieces for different purposes. Jim Kendall agrees that keeping it brief with focused objectives and “writing for all and adapting for different purposes” are key. Questions to consider going forward include: Do existing Focus areas and cross-cutting themes still resonate?; Is the current language aligned with the priorities and vision for the next five years? How do we communicate the value of GCOOS? How much time is saved across organizations because the data are there and verified? IOOS is capturing examples through the Benefits of Ocean Observing Catalog (BOOC) effort. Capturing a dollar amount on someone else’s behalf is difficult. The value of the NTL program can be a powerful example. It was started in 2005 with about 50 stations/year. At approximately \$1M per mooring, industry has contributed over a billion dollars to the observing system. We don’t just want to quantify the dollar value of observations but understand the benefits that pertain to society such as avoided risk. There is growing national and local media interest in Gulf warming, Loop Current changes and the Mississippi River, and next year is the 100<sup>th</sup> Anniversary of the 1927 Mississippi River Flood. How can we position GCOOS’s work to be part of the resilience story?

Closing remarks were made by Kim Yates and a motion to adjourn was made by Brian Roberts, second by Sergio Jaramillo, and all in favor.



## **Members Meeting, Tuesday, April 14, 2026**

**Welcome and Agenda Review:** Dr. Kim Yates, GCOOS Board Chair, welcomed the approximately 90 participants and provided a summary of GCOOS by the numbers. She summarized uncrewed mission deployments in support of hurricane forecasts and marine life observations, webcam deployments and HFR installations. The GCOOS CETACEAN portal has 1.2M views, 141 data sets are currently in the Sea Turtle Atlas, and the offshore energy industry through the NTL project has contributed over 730M ocean current and 13M temperature data points! GCOOS has 1785 ocean sensors, 297 regional stations, 158 federal stations and a newly added MHW framework to track events in the Gulf. A shout out was given to all past, present and future board members. Dr. Antonietta Quigg, Suraida Nanez-James and Dr. Kim Yates are returning board members. Suraida will take over as board chair in the fall. Retiring board members are Dave Driver, Dr. Sara Graves and Kirsten Larsen. New members joining in the fall are Dr. Mike Yang, Chevron/Industry Sector, Dr. Chrissy Wiederwohl, TAMU/Outreach and Education Sector, and Courtney Bouchard, NCEI/Government Sector. Antonietta made a motion to adopt the agenda, second by Suraida and all in favor.

Dr. Shari Yvon-Lewis, who welcomed everyone with a traditional “Howdy”, shared words about the formation of GCOOS by Drs. Worth Nowlin, Matthew Howard and Ann Jochens, and said it is impressive how GCOOS has grown and what it has become. There is excitement for what the next 20 years will bring.

**IOOS Program Office Updates** were provided by Dr. Krisa Arzayus, Acting IOOS Director. She has been with IOOS for eight years. This was her first regional meeting since Jeff Payne retired. There have been many changes this year but everyone has worked hard amidst the staff losses to move the IOOS mission forward. The expertise of long-time staff Carl Gouldman, Derrick Snowden and Dave Easter is greatly missed. Uncertainty remains but everyone continues to focus on the core mission—safety, economic health and stewardship of the ocean. Office staff will be busy reviewing proposals and working on disaster relief funding. Three priorities for IOOS include maintaining viability of the office (streamlining compliance), reinvigorating federal partnerships, and enhancing the national network with pan-regional collaborations. Acting Deputy Martin Yabur will transition from NESDIS and start in the IOOS Office on May 3<sup>rd</sup>. LCDR Aaron Colohan is Chief of Staff, Kelly White is the Business Branch Chief, Becky Baltes is the Products Branch Chief, and Kathy Baily is the Observation and Prediction Branch Chief. The president’s skinny budget released in April had more than \$1B in cuts to research and NOS FY26 budget of \$672M cut to \$332M in FY27. The OTT NOFO published in March closes July 16. ICOOS reauthorization is pending. The Benefits of Ocean Observing Catalog (BOOC) was recently revamped ([booc.middcreate.net/](http://booc.middcreate.net/)) and has 15 peer-reviewed use cases, mostly from the RAs. More use



cases for BOOC are being solicited. AI is being used for initial drafts to then share with potential offers. The site will transition to a new host after June 2026. NOAA priorities include numerical weather prediction, the ocean economy, NWS modernization and modernizing NOAA observing systems.

HAB, OTT and NOPP MBON funding are in development, with the NOFO for the latter expected to be published in FY27. The HFRNet DAC was elevated to production tier as an internal NOAA system. HFR data and HFR assimilating models were used 9295 times by USCG SAROPS in 2025. The 8<sup>th</sup> campaign of coordinated hurricane glider missions in 2025 totaled 79 missions, with 90K plus temperature and salinity profiles transmitted during 3,466 combined days at sea. Thanks to effective advocacy, the IOOS regional line saw a \$5M increase in FY26. The LSU COMT project (coastal hazards forecast system) was very successful. The IOOS Code Sprint will be held in November in Corpus Christi, TX. Felimon Gayanilo will be helping to host the event. The IOOS Fall meeting will be in New Orleans, LA; the UG2 meeting will be in May in St. Petersburg, FL; and the IOOS DMAC meeting will be in June in Maryland.

Kristen Yarincik, IOOS Association Director, said that for the \$5M budget increase in the IOOS regional line, the funder request was for each RA to receive 7.5% of the total budget. Allocation of these funds is not yet finalized.

**Texas Sea Grant College Program Updates:** Laura Picariello, Director, has been with Sea Grant since 2018 and Director since October 2025. The program operates on a four-year cycle and they are currently working on the 2024 to 2027 plan. Work is underway for the 2028 to 2031 Strategic Plan cycle, aligning it with National SG, NOAA and local stakeholder needs. There are four focus areas: healthy ecosystems, sustainable fisheries, resilient communities and economies, and environmental literacy and workforce development. Three prongs of the work are research, education and extension, with about 40% of the budget allocated through competitive research proposals. The next RFP is anticipated to be in Dec 2026. Five selected awards from last year will finally be able to start. The projects include oyster mariculture, coastal flooding and PFAS.

**GCOOS Updates:** Dr. Jorge Brenner, GCOOS Executive Director, provided a summary of GCOOS activities and plans for the new funding cycle. See slides and summary from the Board meeting section above. He welcomed new members Deepak Kumar, John Diedrich, Courtney Bouchard and Paul Arnab, shared the 2026 glider mission plan, and provided updates about the SSH layer rendering and improved Argo float PI attributions for provenance tracking in GANDALF. The new Marine Heat Wave product was launched in February and includes integrated satellite MHW calculations, maps and statistics. AI assistant features for user support and data analysis are in development. Historical oil slick data has been ingested into CETACEAN and a vessel strike lethality geospatial model is available. Five students have been selected as GCAN OA Fellows and will be attending a workshop in Silver Spring, Maryland, in



May. GCOOS continues to work on merit badge criteria and training modules with the Girl Scouts of the US and Scouting America. Otoniel Palacios was named the 2026 Matt Howard Fellowship recipient and MBON collaborations continue, working closely to make long-term data sets from FGBNMS publicly available. New activities include working on Rice’s whale detections and building out the fish spawning aggregations, mapping and conservation tools.

**Panel 1: Industry Partner Updates:** Presentations by Dr. Sergio Jaramillo, Shell, and Dr. Mike Yang, Chevron, were followed by a group discussion moderated by Marcus Ogle. The Notice to Lessees that requires ADCP ocean current data from the surface to about 1,000 m at least every 12 hours has been a BSEE/BOEM requirement since the early 2000’s. Data was previously sent to NOAA NDBC but now goes to GCOOS ([ntl.gcoos.org](http://ntl.gcoos.org)). Forty providers currently send their data. There are now 49 active platforms and 94 inactive platforms, with some of these relocated and/or turned on or off over time. As of April, there are more than 731 million data points, 13 million of these for water temperature.

Before coming to Shell, Dr. Sergio Jaramillo worked with Fugro, the University of Hawaii and the University of Florida. At Shell, there are nine permanent platforms and three or four MODUs/mobile platforms, with Sparta scheduled to be installed next year. All have ADCP sensors from the surface to 1000 m, lidar, met stations and sensors for directional waves. ADCP data goes to GCOOS, other data are kept in house. That data is used in numerous ways: advise operations and design; weather window analysis to assess the probabilities of down time; real-time decision-making; compare how models are behaving; fatigue analysis for risers; route planning for vessels and offshore campaigns; pipeline and seabed survey support; life extension studies for old assets needed to continue operations; comparisons of planned design criteria vs what actually happened; visibility studies; and regulatory/compliance needs. It is difficult to put a dollar value on the service GCOOS provides. The biggest advantage is the spatial view of conditions. The combination of dedicated measurements by point with upstream measurements from other systems saves the industry a tremendous amount of time. Startup of the Magnolia Platform was used as an example of how the freely available regional data via NTL saved up to \$1M in safety/risk reduction observations and reduced uncertainty in situational awareness.

Dr. Mike Yang is a metocean engineer for Chevron, one of the largest lease holders in the Gulf. Assets are in areas likely to be impacted by the Loop Current which poses major operational challenges for offshore activities. He made similar comments about the value of NTL data as Sergio: critical information about currents needed for exploration, drilling and installation campaigns. Data are also integrated with numerical models to validate and improve hindcast and forecast models. It is a great service that GCOOS provides the industry to help reduce current-related downtime, reduce operational risks, improve safety and avoid potentially costly incidents. Mike commented, “We value the important role GCOOS is playing in circulating data that is helping our operations over the entire lifecycle—from early design to full operations.”



Discussion followed the presentations. IOOS Association Board Chair Gerhard Kuska commented about the great value of measuring once and using the information many times. IOOS is appreciative of what industry partners are contributing. What opportunities exist to get more people using the information? Sergio thinks knowledge distribution is a barrier because few people know this information is available. GCOOS has improved data accessibility, now we need to raise awareness. Mike commented that GCOOS is like the NWS for the ocean and a lot of data is only relevant to specific communities, especially when data are collected far offshore. Sometimes, people don't even know the source of the data when they are using it. For example, routing people in the cruise ship industry may use it but cruise ship staff do not know the source. We do an ok job understanding Tier 1 users but have little information about Tier 2 and 3 users—many served by the Tier 1 data users/providers. Rafael Ramos said that industry has already invested close to \$1B in NTL data. GCOOS has funds in IRA TA1 for NTL outreach. Congressional outreach would benefit by showcasing how valuable these data are to industry partners.

SECOORA Executive Director Debra Hernandez asked if the SCINS program/C-star camera work is proprietary. Mike responded that the code for the cameras is but that there are published papers explaining how the system works that can be recreated. The company that developed it no longer supports the program and he is actively looking for other parties to pick up the work.

GCOOS is funding the Woods Hole Group to do the reanalysis/QA of NTL data. The project started with industry money and data sets donated to GCOOS. Now GCOOS is funding the curation for the next five years. Data from 2005 to 2029 will be curated by the project's end. Regarding models, Sergio said he does not do modeling. Some are proprietary (e.g. models by NRL, WHG) and others are not (e.g. HYCOM, Copernicus). Mike stated, "All models are wrong but some are useful!" Regarding in situ measurements, Sergio said 1,000 m is ok but that it would be good to go deeper because pipelines on the seafloor move. The two biggest gaps he sees are measurements in the upper 20 m of the water column and bottom currents which are the least sampled of all. Many phenomena occur deep offshore and there are problematic high-speed currents that we do not yet fully understand. Should the NTL require surface currents? No one wants to be mandated to do this but as metocean engineers, required surface current measurements would make operations safer and easier. It is difficult to fill data gaps in areas where it is perceived that not much happens. Requirements exist near the Sigsby Escarpment because of known currents but is not required in other areas.

Presentations by Ben Williams, Fugro; Keith Kurrus, RPS/Tetra Tech; and Rafael Ramos, Woods Hole Group, followed the first industry panel discussion. Ben started working for Fugro when the NTL was launched around 2005. In 2008, they provided GCOOS with data from their network of buoys. They need the data for model validation for waves, currents and circulation, and current profile criteria confidence. They are both data consumers and providers and believe that the open data has a multiplier



effect, changing the dynamics of inter-company interactions. “The rising tide lifts all ships—everyone contributing data benefits all.” Keith worked for Evans Hamilton until it was acquired by RPS in 2011. RPS acquired Tetra Tech in 2023 and is now a company with about 25 thousand employees. Their work spans multiple areas including ocean current monitoring, integrated oceanographic measurements, deep sea moorings and renewables. Of the 49 stations GCOOS listed for NTL data, RPS supports 31 of these—sharing their current and temperature data. Rafael shared that the WHG was purchased five years ago by a French conglomerate. In addition to what the others are doing, he uses satellite imagery (SST, ocean color, altimetry, OHC) and is contributing to the UGOS work. Where there are gaps in drifter data, information from NTL is used to extrapolate to fill and validate hydrodynamic models. There remains a lot of work to improve the accuracy of LC forecasts and sharing data enables better forecasts and placement in Eddy Watch frontal analysis.

Following are questions and comments arising from the panelist talks. It was reiterated that it is difficult to know who is using NTL data, especially outside the energy industry. How do we identify data users and engage new groups? An area that would benefit from attention is the characterization of Rossby waves. A mechanism is needed to validate other data sets that are collected but not broadly shared or quality controlled. Because acquiring data at depth is exponentially more expensive, it will only be done if required. Ben said you can make a case to justify by linking the dollar value of savings to the data. For example, if you can get a 10 yr life extension out of your design, it makes a strong case for collecting the information. If less steel can be used in lower current regimes, there could be significant savings. As a rule of thumb, Sergio says that riser design engineers use a safety factor of 10 if decisions are based only on models vs a safety factor of 3 if based on real data. Regarding models, Pat suggested we ask “why” models are not doing well with forecasts and suggested that perhaps we are asking the system to resolve features it is not designed to do (e.g. setting up 3 km grids that do not align with model parameters). A better solution is needed. A mesh of small-scale models with adaptive grids might be the way forward. Despite the shortcomings, Sergio said it is amazing that the models still provide useful hindcast and forecast information. Models are good at assimilating satellite and drifter data but not yet so good with current data.

END INDUSTRY PANEL SESSION

**Panel 2: Ecosystem/Environmental Balance:** Presentations were given by Megan Howson, GCOOS, and Ryan Hannum, Flower Garden Banks National Marine Sanctuary. A pre-recorded video by Dr. Philippe Tissot, Conrad Blucher Institute, was also shown. Megan provided an overview of CETACEAN and the Sea Turtle Atlas (STA). The sites collect, curate and consolidate population, anthropogenic and environmental data for cetacean and sea turtle species in the Gulf, provide access to GCOOS models, and increase usability of partner datasets through dashboards and tool development. Education and curriculum materials have been developed for CETACEAN and are in progress for the STA. GUARDIAN is another project in development. It allows for acoustic data to be rapidly processed.



It is trained on Rice's whale with classifiers for sperm whales and black grouper. It utilizes the glider fleet without requiring expertise in acoustics. Ryan's work is primarily focused on water quality. FGBNMS, the only sanctuary in the Gulf, remains a healthy reef system despite other reefs afflicted by bleaching. It was expanded in 2021 and there are several opportunities for public engagement, including providing input into the Management Plan and joining the Sanctuary Advisory Council. The final presentation was a recorded video of Philippe's work using AI methods for the quality control of water level observations, a joint project with GCOOS and NOAA.

Discussion followed the panelist presentations. Following maintenance work on the R/V Manta, it is now back at the TAMU Galveston dock and undergoing fleet inspection. A trip to FGBNMS is planned for early June. NOS is doing an economic impact assessment of the sanctuaries. It is difficult to quantify who is using the resources and how they are being used. There are many direct and indirect economic impacts such as fuel for vessels, boat maintenance, dive equipment, etc. How can collaboration lead to more equitable access to information? The example of knowing when and where to keep cooling stations open for coastal communities during heat waves was provided. There are many stories to tell with the data we collect and they need to be told outside our circle. Reach out to people to capture the historical context we lack—lived knowledge and experiences are needed in our stories.

**Panel 3: Understanding Gulf Ocean Systems (UGOS): Summary and Next Steps:** Panelists Michael Feldman, Gulf Research Program, Tony Knap and Steve DiMarco, GERG, and Rafael Ramos, WHG, provided updates on the UGOS project which is focused on a better understanding and predictive capability of the LC to improve hurricane forecasting, SAR, oil movement, industry safety and efficiency, and fisheries management. There has been a total investment of \$40M by GRP and the project is highly leveraged. The project demonstrated that adaptive sampling is possible in the Gulf and can be assimilated into models. Partnerships between Mexico and the US have been seamless and industry-academic-government collaborations very strong. An early career research network has been built and there is a website with volumes of accessible data. The project ends in early 2027 and the team is now focused on analysis, modeling and documentation, and preparing for their annual meeting in September. A special issue of Oceanography is planned for Fall 2027. Tony shared that stakeholder engagement started in GulfCORES—Consortium for Offshore Risk Reduction Engaging Stakeholders. The Gulf Cores Advisory Board was created and co-chaired by David Williams and Bodley Thorton, senior executives at Noble Oil. This was the in-road to many industry people who became collaborators—BMT Commercial, Chevron, Exxon Mobil, Shell and many others. Steve shared some of the technical difficulty related State Department permissions needed to fly gliders through the EEZ—with Mexico and Cuba as partners. Efforts were focused through the Yucatan area of the Gulf with surface current measurements made hourly to target the inflow region into the Gulf and separation of the LC. Where the gliders captured information, the models are much improved, even several days after gliders passed through an area. The 75 m/sec line for surface current speed is important because that is



the cutoff for oil and gas operations. Steve stated, “Success is measured by data. Remember that data are our gift to the future!” Rafael said the more than 100 people across several countries are working on UGOS. The WHG is also engaged in forecasting eddy shedding and is now deploying drifters through the Yucatan. Post-UGOS, it would be helpful to keep a glider track in the Yucatan. How can the investment made be preserved? The transition to full operations was not a proposal requirement. It will be tough for a group to take on the large program; several smaller parts can be transitioned to others. Tony said a few glider missions each year through the area would be valuable.

The final presentation of the meeting was given by Dr. Worth Nowlin, Distinguished Professor Emeritus, Texas A&M University, and founding member of GCOOS. His talk, **Shaped by Our Story: The History of GCOOS**, told of the people and events that led to the GCOOS-RA as we know it today. GCOOS had its start as a simple concept of one server query to another to extract desired information. In 2001, plus up money from Mississippi State University was divided across the five Gulf states and used for TAMU to contribute to a distributed marine system. Dr. Matt Howard enabled DODS (distributed ocean data servers) at five Gulf institutions and this was the first data sharing effort in the region. Subsequently, the initial concept for GCOOS and DODS was funded by ONR and overseen by Worth. The first organizational meeting of GCOOS took place in 2003 and the first industry IOOS meeting was held in Houston in 2004, with Ralph Rayner, Fugro, openly supporting the concept. Soon after that meeting, the first National Federation of Regional Associations meeting took place and at Margaret Davidson’s insistence, structure to the RAs was introduced. Dr. Ann Jochens, who held a law degree in addition to her science degrees, helped established GCOOS as a non-profit in the state of Texas and became the organization’s first Director. Leaders who laid the path forward and their affiliations at the time included Buzz Martin, Texas General Land Office, Landry Bernard, Naval Oceanographic Office/NDBC, Cort Cooper, Chevron, Mike Spranger and Chris Simoniello, University of Florida, and Ralph Rayburn, Texas Sea Grant. Many of the RA documents were written by this group and used in the formation of the GCOOS corporation.

After a standing ovation acknowledging Worth’s contributions to GCOOS, the winner of the 2026 Matt Howard Fellowship Award, Otoniel Palacios, Texas A&M University, was announced. Closing remarks were made by Dr. Kim Yates and a motion by Dr. Antonietta Quigg, second by David Driver, was made to adjourn.



### **Board Meeting, Monday, April 15, 2026**

The second day of the Board meeting was held at Texas A&M's Geochemical and Environmental Research Group's (GERG) facility. The objective was to continue discussion held on Monday, April 13<sup>th</sup>.

Board Attendees: In-person: Dave Driver, Pat Hogan, Jim Kendall, Sergio Jaramillo, Antonietta Quigg, Rafael Ramos, Kim Yates (Chair). Virtual Participation: Nick Gagliano, Sara Graves, Stephan Howden, Nick Shay

Other Participants: Krisa Arzayus, Jorge Brenner, Courtney Edwards, Susan Fox, Debra Hernandez, Marcus Ogle, Kristen Yarincik and Shari Yvon-Lewis

Following a tour of GERG hosted by Steve DiMarco, Kim Yates provided guidance on the meeting format and expectations after which Krisa Arzayus led a discussion on IOOS Program Office updates. Discussion points included: IPO challenges due to funding shortcomings and losses in staff affecting operations and strategy charting; lack of decision at this time as to how allocation of the additional \$5M to the regions will be made; importance of the different RA board compositions at the IOOS level; and how to better communicate the savings and benefits that come from sharing resources between RAs. There is no specific mechanism to share resources. Is a decision framework needed?

There is concern by the Board that GCOOS funding is at the lower end of all regions despite the Gulf being an economic driver for the country overall. Combined with the intense Congressional engagement and support to IOOS and the level of economic activity in the region, there is a large disparity in the funding allocation. How can this be addressed, especially given the focus of the current administration? The value of GCOOS can be leveraged to sustain and potentially elevate funding across all RAs. The strong relationship between GCOOS and industry should be set as a standard for all regions. A letter to IOOS to express GCOOS concerns is necessary to proactively look for a solution.

Open Meeting remarks were provided by Debra and Gerhard, with feedback from all participants. Discussion points included that the meeting was viewed very positively, highlighting the fact that the GCOOS board is very involved with regional needs. Given the funding vulnerabilities in this political climate, it is critical to communicate how the regions are addressing public needs. IOOS should be proactive in establishing priorities for communicating with Congress. Action is needed to provide easier access to data, branding and marketing to IOOS stakeholders.

Strong member attendance was noted for the open meeting with a balanced mix of industry and academia. Student participation and poster presentations were seen very positively. Consider a career panel for students at the next meeting. Building on industry partnerships is considered key to further



advance GCOOS objectives and a strong case was made for the TAMU Oceanography Department to have a seat on the GCOOS Board. GCOOS members need to actively share the benefits of the RA to stakeholders and society at large and the entire GCOOS board needs to be more involved in decision making to lessen the burden on the Executive Committee. The possibility of creating board subcommittees to discuss work on specific tasks should be explored.

Looking ahead, areas to explore include determining if metocean parameters collected by industry operators and shared with the FAA can also be added to the GCOOS database; how GCOOS members can be used to implement professional development and training for students via seminars and internship programs; engaging students through technical societies such as MTS and SNAME; and if GCOOS should participate in technical meetings like the Offshore Technology Conference to raise awareness with stakeholders. Consulting companies could serve as regional partners to transition data and products to operational status. There are several areas of need that can result in collaborations with the oil and gas industry including enhanced hurricane predictions, current forecasting, squall characterization, winter storm effects on ocean circulation, algae blooms, near surface currents, shelf current dynamics, data accessibility and curation, and workforce development.

Given all the need and limited resources, GCOOS is working on a plan for development of the RA. The NOFO will provide an opportunity to understand what is feasible to achieve under current funding constraints. Jim and Antonietta are working on the GCOOS Strategic Plan and will have a draft available by June.

A motion to adjourn was made by Antonietta, second by Jim and all in favor.