U.S. National Science Foundation
Directorate for Geosciences

Advisory Committee for Geosciences (AC-GEO)
2024 Spring Meeting (Hybrid)
March 25-26, 2024, Meeting Summary

AC-GEO Member Attendance

Dr. Kaatje Kraft, Co-Chair	Dr. Vernon Morris (Virtual, March 25)	Dr. Britney Schmidt (Virtual)
Dr. Meredith Nettles, Co-Chair	Dr. Kristin O'Brien (Virtual)	Dr. Mary-Louise Timmermans (Virtual)
Dr. Maria Angela Capello	Dr. Jessica O'Reilly	Dr. Cathy Whitlock (Virtual)
Dr. Robyn Mieko Dahl (Virtual)	Dr. David Parsons	Dr. Kristin Wilson Grimes (Virtual)
Dr. Kusali Gamage (Virtual)	Dr. Tammi Richardson (Virtual)	

Monday, March 25, 2024

Conflicts of Interest and Ethics Briefing

Christopher Street, GEO's Directorate Administrative Coordinator, commenced the AC-GEO 2024 Spring Meeting with a Conflicts of Interest and Ethics briefing.

Call to Order

Dr. Meredith Nettles, AC-GEO Co-Chair, called the meeting to order at 9:00 am. Member introductions followed, along with feedback on the previous meeting's minutes. The motion to approve the prior meeting minutes was seconded and unanimously approved.

GEO Assistant Director Remarks

Dr. Alexandra Isern, GEO's Assistant Director, began her presentation by introducing new GEO leadership, namely Dr. Jean Cottam-Allen as the Acting Office Director for Office of Polar Programs (OPP) and Dr. Daniel Thornhill as the Acting Deputy Division Director for Division of Research, Innovation, Synergies, and Education (RISE). She continued to provide updates on FY 2023 NSF statistics for GEO, including data on proposals evaluated, awards funded, and funded institutions. Additionally, Dr. Isern highlighted noteworthy funding opportunities, key scientific achievements, and emphasized the GEO-wide DCL, seeking candidates for the IPA Program Director position.

In conclusion, Dr. Isern shared updates on the FY 2024 and FY 2025 budgets, discussed guiding principles for decision-making amid constrained budgets, and outlined GEO's key considerations for investments under potential budget constraints.

Follow-up from Fall AC-GEO Meeting: Climate Equity Task Force & EMBRACE

The follow-up session from the Fall AC-GEO meeting began with a presentation on the Climate Equity Task Force, led by Dr. Lina Patino (RISE) and Dr. Greg Anderson (OD/OIA). Dr. Patino introduced the session by outlining the composition of the task force, which includes two AC-GEO members (Kusali Gamage and Dave Parsons) and five representatives from the scientific community. The task force's objective is to assess GEO's climate equity portfolio and explore the unique aspects of proposal submissions that could shape future funding opportunities. Dr. Greg Anderson provided an update on

the project's progress, highlighting preliminary findings such as proposal submission demographics and types of institutions from 2017 to 2022. It was mentioned that the project is expected to conclude in May 2024, with a debrief anticipated for the Fall meeting.

The Advisory Committee explored opportunities to enhance the analysis within the Climate Equity Task Force's final report. This could involve examining additional factors such as funding success rates for diverse research teams, exploring equity-related proposals beyond the broadening participation portfolio, and evaluating the broader societal impacts of funded projects aligning with societal goals and leveraging outcomes effectively.

Subsequently, Dr. Liam Frink (OPP) presented GEO's innovative initiative, EMpowering BRoader Academic Capacity and Education (EMBRACE), designed to enhance capacity among non-R1 institutions and address systemic barriers to research success. Dr. Frink elaborated on the program's philosophy, structure, and assessment, noting the successful inaugural solicitation in Fall 2023 as GEO prepares for EMBRACE merit review panels. He also highlighted the positive response received during the first submission cycle, indicating robust representation across the nation.

Committee members suggested ways for the GEO EMBRACE team to engage more actively in regional conferences, particularly those of two-year institutions, to address challenges faced by faculty and researchers. This involvement could focus on identifying effective community support methods and establishing connections with potential non-R1 applicants. Additionally, they recommended prioritizing outreach to community colleges, including organizing tailored virtual writing retreats to enhance their understanding of proposal writing processes.

EPSCoR and GEO

Dr. Dena Smith-Nufio provided an overview of EPSCoR strategy and engagement during her briefing to the AC-GEO, stemming from the enactment of the CHIPS and Science Act. This strategy entails augmenting award obligations to EPSCoR jurisdictions and prioritizing funding and initiatives aimed at fostering sustainable growth in their competitiveness. Dr. Smith-Nufio emphasized the significant increase in the representation of NSF awards and funding allocated to individuals, institutions, and organizations within the twenty-eight EPSCoR-eligible jurisdictions, a pivotal outcome resulting from the implementation of strategies outlined in NSF's execution of the CHIPS and Science Act. The CHIPS and Science Act mandates NSF to progressively escalate the percentages of specified NSF base resource levels that must be disbursed to EPSCoR jurisdictions, starting from 15.5% in FY 2023 to 20% by FY 2029. This presentation underscored key strategies delineated in the agency's implementation plan and outlined GEO's contributions to EPSCoR investments.

Science Advisory Subcommittee for a New Scientific Ocean Drilling Vessel Discussion

Dr. James (Jim) McManus provided an overview to the AC-GEO regarding the establishment of the subcommittee for a new scientific ocean drilling platform (NSODP). This subcommittee's primary objective is to offer guidance and recommendations aligning with the community-authored "Science Mission Requirements'' (SMRs) report. It aims to delineate the infrastructure prerequisites for a new scientific ocean drilling platform that effectively fulfills the community's identified SMRs while adhering to operational and budgetary constraints for long-term vessel operation. Dr. McManus informed the

committee that Dr. Kusali Gamage has been designated as the AC-GEO representative for the subcommittee and that he intends to finalize subcommittee membership by the end of April 2024.

GEO Division/Office Highlights

During the GEO Division/Office highlights session, GEO Division Directors showcased organizational achievements, which included reorganizations, updates in leadership structures, staffing changes, novel funding opportunities, and other significant programmatic endeavors. The session featured presentations by Dr. Anne Johansen representing the Division of Atmospheric and Geospace Sciences (AGS), Dr. Dena Smith-Nufio representing the Division of Earth Sciences (EAR), Dr. Jim McManus representing the Division of Ocean Sciences (OCE), Dr. Jean Cottam Allen representing the Office of Polar Programs (OPP), and Dr. Wendy Graham representing the Division of Research, Innovation, Synergies, and Education (RISE).

AC-GEO Panel Discussion

Day 1 of panel discussions focused on enhancing transdisciplinary science and innovation in Geosciences. Prior to the meeting, GEO provided questions to the committee to stimulate discussion on various aspects, including programs implemented by universities and colleges to promote transdisciplinary activities at both the graduate and undergraduate levels, actionable strategies to cultivate a culture of transdisciplinary research and innovation, and how NSF could best facilitate and support transdisciplinary research proposals.

AI for Climate

Tess deBlanc-Knowles, Special Assistant to the NSF Director for Artificial Intelligence, and Dr. Raleigh Martin, GEO/EAR Program Director, provided an overview of NSF's approach to AI and its intersection with climate science. Their presentation began by highlighting NSF's longstanding investment in AI research, tracing back to the early 1960s, and underscored the current widespread utilization of AI technologies. The discussion outlined key priorities in AI investments, emphasizing support for enhancing access to research infrastructure and cultivating a skilled AI workforce.

The AI for Climate session delved into various AI infrastructure resources, including the NSF-led pilot of the National AI Research Resource, the NSF-funded CloudBank Project, and the NSF Frontera supercomputer at the Texas Advanced Computing Center. Additionally, the presentation addressed GEO-funded initiatives and funding opportunities in the domain of AI and climate research.

After prepping the committee for Day 2 of the AC-GEO meeting, Dr. Nettles and Dr. Kraft adjourned the committee for Day 1.

Tuesday, March 26, 2024

Opening Remarks & Reflections

Dr. Kaatje Kraft, AC-GEO Co-Chair, convened Day 2 of the AC-GEO meeting. Dr. Nettles then outlined the agenda for the day, which included updates on the Sexual Assault and Harassment Prevention and Response (SAHPR) program, preparations for the meeting with the NSF Director, and the scheduled meeting with the NSF Director.

Sexual Assault and Harassment Prevention and Response (SAHPR) Updates

Ms. Renee Ferranti, Special Assistant to the NSF Director for Sexual Assault and Harassment Prevention and Response implementation, provided the committee with an update on the establishment and evolution of the SAHPR program, its framework approach, and foundation, along with operational updates. She highlighted a pending March 2024 Decision Memo aimed at shifting the SAHPR program functions to the Office of the Director, aligning it with other federal agencies, expanding its enterprise-wide presence, ensuring consistency and standardization, and emphasizing NSF's commitment to safe and inclusive research environments. Ms. Ferranti then elaborated on approaches for handling potential sexual assault/harassment incidents, emphasizing a trauma-informed approach that prioritizes the victim and their trauma throughout the reporting and case management process. Additionally, she shared operational details, including the use of SaferScience@nsf.gov for reporting SAH incidents and NSF's plan for the first USAP SA/SH Climate survey. Finally, Ms. Ferranti outlined the program's next steps, which involve strengthening and expanding the program, improving reporting, notification, and follow-up procedures, and enhancing coordination with NSF's Office of Inspector General in response to sexual assault reports.

Meeting with NSF's Director Dr. Panchanathan

Dr. Panchanathan offered brief remarks on program highlights before inviting the Advisory Committee to share their thoughts and requests on specific topics. He underscored the significance of EMBRACE as an exemplary initiative showcasing invaluable input from the advisory committee. Dr. Panchanathan also emphasized the strength of interagency partnerships, citing examples such as the NOAA Industry-University Cooperative Research Center (IUCRC) focusing on climate events and insurance agencies. He further recognized GEO's substantial efforts in talent training and solution-oriented approaches, including collaborations with the TIP Directorate.

The Advisory Committee members expressed enthusiasm for the discussed topics and echoed appreciation for leadership's comprehensive response through the SAHPR program, which addresses pertinent issues across various scientific disciplines. Additionally, they voiced support for broadening participation as a fundamental activity within the directorate.

Dr. Panchanathan concluded the session by expressing gratitude for the resilience, dedication, and outstanding performance demonstrated within GEO.

AC-GEO Panel Discussion

During the AC-GEO Day 2 panel discussion, the AC-GEO deliberated on increasing accessibility to the diverse science community. This included exploring barriers hindering a broader spectrum of the geoscience research community from seeking and obtaining GEO funding, initiatives undertaken by academic institutions to address challenges in providing access to geosciences education, recommendations for NSF to enhance access to funding opportunities and resources, and potential modifications to GEO's processes to enhance transparency regarding funding acquisition and interaction with NSF.

The advisory committee highlighted an opportunity for Geosciences to promote university-hosted training sessions led by experienced professionals, such as department chairs or directors, to guide effective navigation of NSF resources. This initiative aims to empower faculty and staff within the geosciences community to maximize NSF resource utilization for research endeavors. Additionally, they emphasized the benefits of establishing regular office hours to increase awareness of NSF funding opportunities and resources, providing a dedicated space for community members to seek guidance and enhance engagement with NSF programs and initiatives.

The Advisory Committee also emphasized the scarcity of resources available for career pathways beyond traditional academia and for researchers undergoing significant professional transitions. In response, they stressed the importance of providing support for diverse career transition pathways within the geosciences, extending beyond academia to address critical gaps and replicate successful models, thus offering robust support for researchers during pivotal career shifts.

Partnerships Activities in GEO

Dr. Doug Kowalewski provided an overview of NSF and GEO partnerships, acknowledging NSF's longstanding history of managing collaborations with agencies, industry, and other stakeholders. He emphasized the robust partnerships established by GEO and OPP, particularly in relation to facilities. Dr. Kowalewski outlined current partnerships in GEO, distinguishing between direct agreements for coordinating activities or resource sharing and NSF-catalyzed partnerships where grantees collaborate with non-academic partners, with NSF playing an indirect role. He underscored GEO's objective to broaden partnerships beyond traditional academic realms. Dr. Kowalewski concluded by highlighting GEO's ongoing exploration of partnership opportunities and strategic avenues for expanding collaborations.

After the committee discussed topics for future AC-GEO meetings, Dr. Nettles and Dr. Kraft adjourned the AC-GEO 2024 Spring meeting.