

Reaching Outward and Looking Inward

Building Sea Grant Resilience from the lens of Diversity, Equity, Inclusion, and Justice

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List of Abbreviations

DEIJ: Diversity, Equity, Inclusion, and Justice

DEI: Diversity, Equity, and Inclusion

SG: Sea Grant

NSGO: National Sea Grant Office

SGA: Sea Grant Association

NSGAB: National Sea Grant Advisory Board

MSI: Minority Serving Institution

HBCU: Historically Black Colleges and Universities

HSI: Hispanic Serving Institute

TCU: Tribal Colleges and Universities

UU: Underrepresented/Underserved

CoP: Community of Practice

SGEN: Sea Grant Education Network

NOAA: National Oceanic and Atmospheric Administration

Sea Grant DEIJ Vision

Sea Grant cultivates a culture of belonging wherein every Sea Grant professional and state program is committed to promoting diversity, equity, inclusion and justice (DEIJ). This vision is achieved by proactively recruiting, retaining, advancing and preparing a diverse workforce; removing barriers that have historically limited access to Sea Grant opportunities in research, extension and education; progressing equitable access to resources and decision-making processes; and engaging and serving communities, partners and stakeholders that are representative of the demographics of the places where our programs operate. DEIJ are defined¹ as core values for Sea Grant.

Diversity: The full representation of and collaboration between people with different identities, knowledge sets, experiences, and perspectives.

Equity: The allocation and accessibility of resources for fair distribution of services, benefits, and burdens.

Inclusion: The creation of an open and welcoming environment that recognizes and affirms the value and dignity of all people.

Justice: The systematic removal of barriers that result in equitable opportunities and outcomes for every individual in a diverse society.

¹ Definitions adopted from Georgia Sea Grant.

Background²

A leader in research, extension, and education for more than fifty years, Sea Grant fosters the practical use and conservation of coastal, marine and Great Lakes resources in order to create a sustainable economy and environment. Achieving this mission requires talented and committed teams working together to build innovative solutions that can be disseminated to a wide-range of communities, partners and stakeholders. An essential component of these teams is the full inclusion and participation of individuals from varied backgrounds and circumstances, who bring a range of perspectives, needs, values, tools and ways of thinking to bear on major social, environmental, and economic issues.

A plethora of research shows the power of diverse groups in tackling complex problems. Groups with diverse membership find solutions that are more innovative, creative, and responsive to complex problems, promote higher-order thinking, and outperform homogeneous groups comprised of the highest performing individuals (Antonio et al., 2004; Page, 2007; Sommers, 2007; Phillips, 2014). Page (2007) notes that not only does casting a wider recruitment net increase the chances of finding exceptional candidates, it also helps us leverage the enormous power brought by a diverse team: *“In choosing a team, admitting a class, or hiring employees, our concern should not be the average ability of the people hired, chosen, or admitted. Our concern should be the collective performance, which depends as much on collective diversity as it does on individual ability. The belief that the best group consists of the best individual people rests on faulty logic. Instead, the best collections contain people who are both diverse and capable.”* This measured power of diverse teams carries over into scientific publications. Diverse author groups publish in higher quality journals and receive higher citation rates than scientists in homogeneous teams (Freeman & Huang, 2014). Put simply, diversity in our workforce is a scientific imperative if we are to continue to lead the nation in research, extension and education.

Results from Sea Grant’s 2017 survey on demographics and workplace environment indicate that Sea Grant is a predominately white organization, with 89.2% of respondents identifying as white and 68.9% identifying as female (Appendix I). The racial diversity of Sea Grant is below the “green ceiling” an average cap of 16% people of color within environmental organizations in the United States (Taylor, 2014). With a population of about 40% non-white residents across the US, and less than 11% non-white staff within Sea Grant, the national network recognizes the need to dismantle systemic barriers and promote DEI, both internally (i.e., programmatic leadership and administration) and externally (i.e., research, extension and education programs).

From a business perspective, Sea Grant has many reasons to embrace diversity as an institutional imperative. In studies of industry, companies with greater workforce diversity and inclusion are more profitable, and innovative compared to those with a homogeneous workforce (Herring, 2009; Forbes, 2011; McKinsey, 2015). Employees who feel that they work in a fully inclusive and culturally competent environment, where their diverse identities and contributions are valued, are happier, more productive, and suffer fewer physical and mental health issues (Goffee & Jones, 2013; Hitlan et al., 2006; Nadal, 2011). They are also less likely to leave the organization for another job (McKay et al. 2007), which also creates financial and intellectual savings by decreasing hiring searches, reducing time spent training new employees, and increasing the retention of institutional knowledge. While recruiting diverse talent requires an upfront time and financial investment, in the long term, it pays for itself as recruitment and

² Research described in the Background section is adapted with permission from University Corporation for Atmospheric Research (UCAR, 2018).

retention becomes easier as an institution becomes known for a welcoming and inclusive workplace environment (Dalbotten et al., 2014). In the non-profit sector, the alignment between employees' values and organizational mission is referred to as mission valence and it has been shown to improve performance, recruitment, and satisfaction, especially, when linked to identities whether collective or individual (Wright et al, 2012). The public, private and academic sectors are pouring huge resources into increasing diversity and inclusion because they understand that it brings enormous business and educational benefits, not just because they believe it is the right thing to do.

Equity is paramount to the societal impacts of Sea Grant's work. Environmental *injustice* occurs when there is an inequitable distribution of environmental hazards, or conversely, ecosystem services. For example, polluting industries tend to locate in low-income communities and communities of color, whereas wealthy and white communities frequently have more park amenities and green space. Some coastal communities limit public access to beaches, restricting who can enjoy and benefit from the coastal environment. Injustice occurs when there is an unequal division of political power over land use and natural resource decisions. Environmental *justice*, alternatively, is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (EPA, 2020). Outcomes of justice include fair and equitable distribution of environmental resources.

Those who have been marginalized in American society – people of color, LGBTQ people, people with disabilities, and those from low-income communities, among others, are also more likely to experience environmental and climate injustices (Derman, B. 2020; Wilson et. al, 2020). There is a history of exploitation of these communities by government and institutional entities that have constructed unhealthy environments (Hochschild, 2018; Rothstein, 2017). The environmental justice movement began with the civil rights movement and has been led by communities of color (Bullard, 2001; Wilson et al., 2020). In order to build trust with historically marginalized groups, Sea Grant must acknowledge these realities and create teams of scientists, extension professionals, educators, communicators, and others from a broad range of backgrounds who identify with, share and acknowledge the history and lived experiences of these people (Conner, 2016).

Sea Grant programs must engage those underserved and underrepresented (UU) individuals and communities in order to sustain relevance, broaden participation, and actively dismantle hierarchies of power. Underserved communities are those that have experienced low levels of access to and participation in Sea Grant programming, while underrepresented communities refer to persons for whom representation in Sea Grant programs is smaller than that of the general population.

A DEI (without the J) community of practice has been active across the Sea Grant network since 2016. However, it was only in 2020 that Sea Grant began more deliberate discussions on the meaning of justice and the role that Sea Grant plays in promoting it. The rest of this document describes a 10-year DEI vision plan that was developed in 2018. Although this document reflects the new objectives, terminology, and outcomes achieved, it is important to note that originally the vision was developed without the justice framework. In addition to serving as a DEIJ roadmap for the Sea Grant network, this vision document serves as a starting point for state programs to develop their own DEIJ goals and values. We hope that state programs will continue to innovate operations and share DEIJ-centered practices across the network.

Development of the 10-year DEI Vision

In 2018, the Sea Grant network developed a strategic DEI 10-year vision plan, entitled “*Reaching Outward and Looking Inward: Building Resilience through the lens of DEI.*” This document resulted from a year-long visioning effort that was funded by the National Sea Grant Office through a federal funding opportunity called “resilience visioning and development projects.” The theme signifies the goal to extend Sea Grant's solid foundation of "science serving America's coasts", share its 50-year success, anticipate, prepare and respond to future changes, and model the way as a visionary program that embraces and nurtures all aspects of DEI.

In 2018, Sea Grant’s DEI vision team led a number of initiatives to draft this vision. The vision team examined DEI from both internal and external perspectives. Internally, the team explored ways in which Sea Grant could address DEI in its administration and management. Externally, the team examined ways in which Sea Grant can incorporate DEI into its research, extension, education, and communication programming to serve diverse coastal communities.

The DEI vision team undertook the following initiatives:

1. ***Collection of baseline data and information*** to examine all aspects of DEI in the Sea Grant network and document ways in which different Sea Grant programs incorporate DEI into its operations (i.e., administration, research, extension, education, and communication). Case studies of DEI best practices were collected across the network, and a paper was written, which is available on the NSGO website: (<https://seagrant.noaa.gov/Portals/1/DEI%20Best%20Practices%20Paper.pdf>). The DEI survey subcommittee conducted two comprehensive surveys to collect baseline data on various aspects of DEI in the administration and programming of Sea Grant. Results from these surveys are summarized in Appendix II.
2. ***Initiation of a professional development series*** on DEI topics. The vision team, with key support from the professional development subcommittee, organized in-person and virtual dialogues on topics like institutional cultural change, implicit bias, and broadening participation in research. The series relies on in-house Sea Grant expertise and leverages the expertise of DEI experts from NOAA and non-profit conservation groups, and university scientists and administrators. All virtual sessions are recorded and available on the NSGO website.
3. ***Broadening Participation in research and education*** is critical to Sea Grant’s mission. To ensure that our science is relevant and responsive, it is important to create opportunities and develop innovative strategies to broaden participation among diverse individuals, institutions, and communities. This includes engaging individuals from historically marginalized and/or underserved communities in solving questions in ocean, coastal, and marine science; stimulating research and scholarship on issues of underrepresentation (for example, NSF INCLUDES program), broadening the pool of investigators who compete for Sea Grant funding, and developing reporting mechanisms that track broadening participation in Sea Grant activities. A DEI broadening participation subcommittee was recently created to integrate broadening participation into Sea Grant’s research and education programs. To develop Sea Grant’s broadening participation strategic plan, the subcommittee is reviewing similar frameworks

developed by other funding agencies like NSF that integrate broadening participation in its merit review and award oversight process:

(https://www.nsf.gov/od/broadeningparticipation/nsf_frameworkforaction_0808.pdf).

4. ***Coordination with other visioning efforts*** to facilitate incorporation of DEI concepts in other vision plans. The Sea Grant DEI vision team coordinated with other visioning efforts to identify synergies and share DEI principles for use in other vision statements.
5. ***Identification of Sea Grant's DEI goals, strategies, outputs, and outcomes*** for the next 10 years. A DEI vision meeting took place in February 2018 in Charleston, South Carolina. Representatives from various Sea Grant programs participated in this day-long meeting to engage with external DEI experts and draft Sea Grant's desired DEI goals and associated strategies, outputs, and outcomes over the next 10 years. Thereafter, a subcommittee refined the draft, and finalized logic models to distill all information. Four logic models were created that pertain to (i) administration, (ii) research, (iii) extension, and (iv) education. Communication is considered cross-cutting. Where appropriate, goals in each realm were cross-referenced with case studies from the DEI best practices paper. What follows are the summary results from the logic model effort, i.e., Sea Grant's 10-year DEI roadmap, again lightly updated as of 2021.

Major Outcomes of Sea Grant's DEI Visioning since 2018

- Creation of Sea Grant's Community Engaged Internship (CEI) program in collaboration with Sea Grant's Traditional and Local Knowledge (TLK) visioning team, with support from NSGO. More information about the CEI program can be found on this webpage -- <https://seagrant.noaa.gov/Students/Undergraduate-Fellowships>.
- A national webpage that features recordings of professional development webinars and DEIJ resources -- <https://seagrant.noaa.gov/insideseagrant/Implementation/Network-Visioning/DiversityInclusion>.
- Increase in number of Sea Grant professionals who participate in DEIJ community of practice (CoP).
- Creation of state-level DEIJ committees.
- Increase in participation of individuals from UU groups in Sea Grant research, extension and education programs.
- Greater awareness of Sea Grant's leadership on DEIJ within NOAA.
- Inclusion of DEI language in NSGO-led federal funding opportunities as well as in the biennial request for proposals led by several Sea Grant programs.
- Inclusion of Sea Grant's DEIJ efforts in National Sea Grant Advisory Board's biennial report to the Congress.
- NSF INCLUDES planning award to address barriers that prevent students from historically marginalized and underrepresented communities from pursuing careers in coastal, ocean, and marine (COM) science fields.
- National recognition of Sea Grant's DEI efforts through the SGA President's Award.

DEIJ 10-year Roadmap

10-year DEIJ Goals At-A-Glance			
Administration			
Recruit, retain and sustain a diverse workforce.	Sustain focus on DEIJ with broad Sea Grant Network involvement.	Collect, analyze, and utilize data related to DEIJ climate.	Provide regular training and professional development on DEIJ.
Research			
Address issues of diversity and underrepresentation of research reviewers, panelists and awardees.		Stimulate research and scholarship to address topics of value to diverse communities.	
Extension			
Possess capacity and skills, including knowledge of best practices and demographic data to effectively serve diverse communities.		Communities have equal access to relevant scientific information via extension programming that facilitates sound, science-based decision-making.	
Education			
Train a coastal and marine workforce that is representative of the demographics of SG locations.	Educators and fellowship administrators have the capacity, skills, and knowledge of best practices and demographic data to effectively serve diverse communities.	Prepare an environmentally literate and informed citizenry that is reflective of diverse populations.	

Administration

Goal 1: Sea Grant recruits, retains, and sustains a diverse workforce.³

Strategies

1. NSGO and state Sea Grant programs develop strategies to recruit and retain a diverse staff at all levels, particularly from UU communities including Minority Serving Institutions (MSIs), Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs) and Tribal Colleges and Universities (TCIs).
2. NSGO and SG programs build and sustain relationships with national networks and state organizations that represent UU communities including MSIs, HBCUs, HSIs and TCIs.
3. NSGO and SG programs recruit advisory committees and boards from UU communities including MSIs, HBCUs, HSIs and TCIs.

Outputs

1. Summary of job announcements reflecting DEIJ emphasis.
2. Summary of SG program recruitment strategies for UU communities including communication products that raise awareness of SG employment opportunities to UU communities.
3. Summary of UU community networks reached through job announcements by SG programs and

³ Refer to case study 15 in DEI best practices paper.

NSGO.

4. Summary of number and percent of UU applicants and placements for SG jobs.

Outcomes

1. NSGO and SG program hiring managers are aware of how to reach UU groups, including MSIs, HBCUs, HSIs and TCIs, in job searches. (short-term)
2. Increase in number of applicants from UU groups for SG employment opportunities. (mid-term)
3. Increase in number of individuals from UU groups working for SG. (long-term)
4. Increase in number of individuals from UU groups in leadership roles working for SG. (long-term)

Goal 2: Sea Grant maintains a sustained focus on DEIJ with broad involvement across the Network.

Strategies

1. SG programs and NSGO dedicate staffing and funding to support and sustain SG capacity to do DEIJ related-work.
2. SG programs identify at least one “DEIJ champion or advocate” who will coordinate with the community of practice (CoP) and provide DEIJ leadership to their respective state SG program.
3. In coordination with SG programs, NSGO identifies performance metrics and other evaluation criteria to incentivize DEIJ activities.
4. The vision for DEIJ is integrated into the strategies for implementing other priorities across the SG network.

Outputs

1. Listserv of SG DEIJ CoP members, which includes a “DEIJ champion” for each SG program.
2. Best practices paper that documents DEIJ-related best practice case studies throughout the SG network.
3. A 10-year DEIJ vision document that examines SG’s current DEIJ climate and outlines goals and strategies to advance SG’s DEIJ commitment.
4. Agendas and minutes from regular network-wide DEIJ meetings and webinar recordings of professional development sessions.
5. Summary of performance metrics and evaluation criteria the NSGO uses to evaluate programs’ implementation of DEIJ initiatives.

Outcomes

1. NSGO makes financial investments to implement DEIJ priorities identified in various network-wide vision plans. (short-term)
2. SG programs are aware of the importance of having targeted focus on DEIJ initiatives. (short-term)
3. SG programs demonstrate the importance of incorporating DEIJ principles into all aspects of programming and operations by designating DEIJ champion(s) for each program. (short-term)
4. SG programs sustain existing best practices and develop new strategies that advance DEIJ within their programs and the national network. (mid-term)
5. SG mission and strategic plans reflect DEIJ as a core value and philosophy. (mid-term)
6. SG professionals who are involved in DEIJ initiatives receive recognition for their commitment to DEIJ during their performance review and promotion processes; supervisors encourage personnel to pursue DEIJ activities and include it in their work plans. (mid-term)
7. SG programs that implement sustained DEIJ initiatives are recognized by the NSGO through development of new metrics that capture these contributions and/or additional resources for DEIJ activities. (long-term)

Goal 3: Sea Grant consistently collects, analyses, and utilizes data related to its DEI climate.

Strategies

1. SG CoP forms a DEI survey subcommittee to investigate the DEI climate and catalog DEI accomplishments of various SG programs.
2. DEI survey subcommittee develops, and every two years, administers, analyzes, summarizes and broadly shares results of surveys on DEI climate and SG program efforts to achieve DEI goals.
3. SG CoP creates communication products (e.g., infographic one-pagers) explaining the importance of DEI to SG network.

Outputs

1. DEI survey instruments.
2. Summaries of SG survey data.
3. A report on longitudinal analysis of DEI climate surveys.
4. DEI communication products.

Outcomes

1. SGA, NSGO, and NSGAB are aware of DEI climate surveys and understand the importance of participating in them. (short-term)
2. Results from DEI surveys are highlighted in publications, reports and presentations to the SGA, NSGO and NSGAB. (short-term)
3. All SG programs and at least 70% of individuals complete DEI surveys. (mid-term)
4. DEI climate data inform SG policies and procedures. (mid-term)
5. SGA, NSGO, and NSGAB support long-term assessment of SG's efforts to advance DEI. (long-term)

Goal 4: Sea Grant provides regular training and professional development on various aspects of DEI.⁴

Strategies

1. SG CoP facilitates the creation of a DEI professional development subcommittee that coordinates learning opportunities and shares experiences regarding DEI best practices via in-person and virtual dialogues.
2. NSGO and SG program directors promote DEI professional development and dialogue with their staff.
3. SG staff participate in DEI learning opportunities sponsored by the SG CoP and host universities.

Outputs

1. SG-led DEI professional development training agendas and/or minutes or recordings.
2. Summaries of the number of SG staff and faculty who participate in DEI professional development trainings (both those offered by SG and other institutions).
3. Summary of SG-led DEI professional development training evaluations.

Outcomes

1. SG staff are aware of DEI professional development programs offered by SG CoP. (short-term)
2. SG staff who participate in DEI professional development opportunities demonstrate increased DEI awareness. (short-term)

⁴ Refer to case study 14 in DEI best practices paper.

3. Increase in number of SG staff, including directors, who participate in DEIJ professional development opportunities. (mid-term)
4. SG staff are able to articulate why DEIJ is important and share best practices. (mid-term)

Research

Goal 1: Sea Grant addresses issues of diversity and underrepresentation of its research reviewers, panelists and awardees. ⁵

Strategies

1. SG research coordinators network (RCN) develops a framework for improving DEIJ language in research and education solicitations.
2. SG programs recruit diverse reviewers and panelists with particular emphasis on UU individuals and early-career scientists.
3. In coordination with SG programs, NSGO clearly communicates broadening participation practices within SG.

Outputs

1. Updated NSGO guidance and policies to increase engagement of PIs and research partners from UU communities, particularly MSIs, HBCUs, HSIs and TCIs.
2. Communication products that raise awareness of SG research opportunities to UU communities.
3. Summary of SG notice of funding opportunities (NOFOs) and request for proposals (RFPs) with language that encourages diversity of awardees and communities served.
4. Analysis of data highlighting diversity of SG applicants, awardees, reviewers, and panelists, with summary results made available through NSGO and state SG program websites, presentations, and other communication products.

Outcomes

1. SG directors and research coordinators are aware of strategies aimed at broadening participation strategies. (short-term)
2. NSGO guidelines and policies are consistently updated with content focused on broadening participation. (short-term)
3. SG NOFOs and RFPs include language that encourages diversity among applicants and communities served. (short-term)
4. Diverse institutions, faculty, and students including those that have been underrepresented in prior research portfolios, are aware of and apply for SG research opportunities. (mid-term)
5. Increased participation of diverse institutions, faculty, and students in SG funded research. (long-term)

Goal 2: Sea Grant takes a leadership role in stimulating research and scholarship to address topics of value to diverse communities. ⁶

Strategies

1. SG programs leverage their extension and education programs to identify emerging topic areas that can help to develop targeted RFPs and NOFOs to engage diverse stakeholder groups, including UU communities.

⁵ Refer to case study 1 in DEI best practices paper.

⁶ Refer to case study 2 in DEI best practices paper.

2. SG funded investigators conduct research on topics that address diverse communities' needs.
3. In coordination with NSGO, SG programs develop reporting metrics to track ways in which SG-funded research addresses diverse communities' needs by encouraging SG awardees to report outcomes of broadening participation activities as part of the reporting process for grants.
4. In coordination with SG programs, NSGO initiates the development of SG-wide classification codes in PIER for all broadening participation funding activities. Classification codes can be found on this website:
https://seagrant.noaa.gov/Portals/0/Documents/funding_fellowship/forms_templates/Classification%20Codes/sg_classification_codes_2013.pdf
5. NSGO develops a publicly accessible webpage on its website that highlights SG's broadening participation efforts, and facilitates broad dissemination of information. For example, see NSF's broadening participation portfolio:
https://www.nsf.gov/od/broadeningparticipation/bp_portfolio_dynamic.jsp

Outputs

1. Targeted NOFOs and RFPs encourage research that serves diverse stakeholder groups.
2. Communication products that raise awareness of SG research to UU communities.
3. Summary of evaluation data that demonstrate ways in which SG addresses diverse communities' needs.

Outcomes

1. NOFOs and RFPs are developed to engage diverse stakeholder groups. (short-term)
2. Stakeholders participate in pre-proposal stage evaluation of the relevance of proposed research projects. (mid-term)
3. Diverse stakeholders are engaged in SG research, including participatory or use-inspired research. (long-term)
4. Enhanced accountability and tracing of SG-supported broadening participation efforts through several mechanisms. (long-term)

Extension

Goal 1: Sea Grant extension staff have the capacity and skills, including knowledge of best practices and demographic data to effectively serve diverse communities.

Strategies

1. SG programs analyze the demographics of those served to identify gaps in extension and outreach services.
2. SG extension programs assess advisor and partner representation.
3. SG DEIJ CoP sponsors DEIJ professional development opportunities for extension staff.
4. NSGO and SG programs develop evaluation protocols to assess demographics of audiences served and cultural relevance of extension programming.

Outputs

1. SG program summary of state (or program area) demographics compared to demographics of extension audiences reached.
2. SG program summary of state demographics compared to demographics of extension advisors and program partners.
3. Summary of number of SG extension staff who participate in DEIJ professional development opportunities.
4. Summary of case studies that describe how traditional knowledge and cultural relevance is

included in programming.

5. SG extension program evaluation summaries that assess demographics of audiences served.

Outcomes

1. SG extension staff are aware of how to access demographic data for the population in their area of operation. (short-term)
2. SG extension staff are aware of best practices for engaging UU groups. (short-term)
3. SG extension staff have the knowledge to undertake programming that is inclusive of traditional knowledge and is culturally relevant. (short-term)
4. NSGO and SG programs routinely use standardized collection and analysis of demographic data for planning and decision-making. (mid-term)
5. SG extension staff use best DEIJ practices to engage UU groups. (mid-term)
6. SG extension staff share best practices and improve their extension programming based on lessons learned from engagement with UU communities. (mid-term)
7. SG extension staff undertake programming that is inclusive of traditional knowledge and culturally relevant; they engage audiences and address coastal challenges with socioeconomic and historic lens. (long-term)

Goal 2: Communities have equal access to relevant scientific information via extension programming that facilitates sound, science-based decision-making.⁷

Strategies

1. SG extension staff develop and sustain partnerships with organizations that represent UU communities.
2. SG extension staff work with UU communities and stakeholders to develop relationships that serve to identify programming needs and to create and expand mutually beneficial programming that serves UU communities and stakeholders.
3. SG extension staff develop programs in partnerships with UU communities that are inclusive of traditional knowledge, locally relevant, and culturally reflective.
4. SG extension staff engage UU groups in program planning.
5. SG extension staff develop program evaluations to assess how needs of diverse audiences are met.

Outputs

1. Summary of organizations with which SG programs partner, with UU groups specifically identified.
2. Summary of SG programming designed to serve UU groups.
3. Summary of evaluation data that demonstrate SG programs met audience needs.

Outcomes

1. SG extension staff work in partnership with UU communities to identify programming needs that are well-suited to Sea Grant's mission. (short-term)
2. Increase in the number of UU groups that are aware of SG extension resources relevant to them. (short-term)
3. Increase in the number of SG extension programs that have been co-created with UU groups and reflect their needs. (mid-term)
4. SG extension program participants are more reflective of population demographics. (long-term)

⁷ Refer to case studies 3, 4, 5, 7, 8, 12 and 13 in DEI best practices paper.

Education

Goal 1: Sea Grant educators and fellowship administrators have the capacity, skills, and knowledge of best practices and demographic data to effectively serve diverse communities.⁸

Strategies:

1. SG educators, in coordination with the DEIJ CoP, survey current SG practices and programs that build capacity for education efforts that incorporate DEIJ considerations.
2. SG educators and fellowship administrators participate in DEIJ professional development opportunities.
3. SG programs annually identify administrators/faculty at K-12 institutions, homeschool groups, technical schools, community colleges, HBCUs, MSIs, HSIs, TCUs, community-based organizations, and other UU-serving organization to communicate and work with administrators to identify programming needs and share existing SG teacher trainings and student programming, internship, research, and fellowship opportunities.

Outputs

1. Summary of number and proportion of SG education staff and fellowship administrators who participate in DEIJ professional development opportunities.
2. Summary of SG program outreach tools and plans to reach administrators and faculty at K-12 institutions, homeschool groups, technical schools, community colleges, HBCUs, MSIs, HSIs, TCUs, Asian American and Pacific Islander Serving Institutions (AAPISIs), community-based organizations (including homeschoolers), and other UU-serving organizations.

Outcomes

1. Increase in number of SG educators and fellowship administrators that have participated in education- and fellowship-related DEIJ programs. (short-term)
2. Administrators/ faculty at K-12 institutions, homeschool groups, technical schools, community colleges, HBCUs, MSIs, HSIs, TCUs, AAPISI, community-based organizations, and other UU-serving organizations are aware of SG teacher training and student programming, internship, research, and fellowship programs. (short-term)
3. SG educators and fellowship administrators are aware of DEIJ best practices to build capacity for education efforts and fellowship programs that incorporate DEIJ considerations. (mid-term)
4. SG educators and fellowship administrators have strong relationships and partnerships with organizations serving UU communities. (mid-term)
5. Models of best practices for environmental education that reflect DEIJ considerations are widely available to SG educators. (long-term)

Goal 2: Sea Grant trains a coastal and marine workforce that represents the demographics of the locations where Sea Grant programs operate.⁹

Strategies

1. SG programs collect demographic and institution data for student applicants to fellowship, internship, and research assistantship programs.
2. SG programs in coordination with NSGO identify and develop strategies to alleviate barriers to participation in SG fellowship programs.

⁸ Refer to case study 11 in DEI best practices paper.

⁹ Refer to case studies 6, 9 and 10 in DEI best practices paper.

3. SG programs and NSGO initiate fellowship opportunities (undergraduate and/or graduate) that encourage participation by students from diverse backgrounds.
4. SG programs and NSGO sponsor efforts that encourage students from UU communities to participate in research, extension, and education.
5. SG programs develop communication products to raise awareness of coastal and marine STEM career pathways to UU communities.

Outputs

1. Summary of demographic and institutional data on students participating in SG programming, fellowships, internships, and research assistantships.
2. Summary of strategies that can be undertaken to alleviate barriers to participation in SG fellowship and internship programs.
3. SG programs and NSGO initiate efforts to recruit UU undergraduate students into coastal, ocean and marine fields.
4. Summary of SG-funded programming, fellowships, internships, and research assistantships that specifically encourage UU student participation.
5. Communication products that raise awareness of coastal and marine STEM career pathways to UU communities.

Outcomes

1. K-16 and informal educators who serve UU communities are aware of coastal and marine STEM career pathways. (short-term)
2. Fellowship administrators understand best DEIJ practices and barriers that limit UU students in fellowship programs. (short-term)
3. Students from UU groups are aware of SG fellowship, internship, and research assistantship programs, and have access to resources to be competitive applicants. (mid-term)
4. Fellowship cohorts represent the diversity of students enrolled in coastal, ocean, and marine fields. (long-term)

Goal 3: Sea Grant prepares an environmentally literate and informed public that is reflective of diverse populations.

Strategies

1. In partnership with advisory boards and committees, SG programs and NSGO identify additional UU community partner organizations.
2. SG programs conduct needs assessment of community partner organizations to identify educational resources needed to better serve UU communities.
3. SG programs develop accessible education resources in partnerships with UU communities that are inclusive of traditional knowledge, locally relevant, and culturally reflective.
4. SG educators provide connections for all audiences to engage in community science efforts and to build collaborative monitoring opportunities to build a greater understanding of coasts, oceans and great lakes that reflect community concerns and knowledge.

Outputs

1. Education resources need assessment of UU community partner organizations.
2. Accessible education resources developed and provided in partnership with UU communities.
3. List (by each SG program) of administrators/faculty at technical schools, community colleges, HBCUs, MSIs, HSIs, TCUs, AAPISIs, community-based organizations, and other UU-serving organizations that should be made aware of SG education programs.

Outcomes

1. SG educators are aware of the needs of UU partner organizations as related to SG focus areas. (short-term)
2. SG programming reflects education needs and priorities of UU communities. (long-term)

Priorities for Investment

The DEIJ 10-year roadmap is designed to be comprehensive, detailing goals and strategies that are already being implemented, as well as those that could be undertaken. Some state SG programs have made great strides to reach various goals and implement strategies that are already identified in this vision document. The SG network and NSGO can examine the DEIJ 10-year roadmap, and tailor goals and strategies to the priorities identified in their strategic plans. Whereas no single program can achieve all goals without the investment of substantial resources (e.g., funding, staff time), we have highlighted four priorities that are especially ripe for investment.

Recommendation 1: Network Building

We recommend that NSGO and SG programs develop and build relationships with national networks and state organizations, respectively, that represent UU communities. Relationship-building requires physical presence at UU-led meetings and events like the annual conference of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), Emerging Researchers National Conference in STEM, and National Society for Black Engineers, among others. SG programs should develop and sustain relationships with administrators/faculty at technical schools, community colleges, HBCUs, MSIs, HSIs, TCUs, AAPISIs, and community-based organizations that serve UU communities.

Funding for staff time and travel is needed to prioritize network building.

Recommendation 2: Targeted Research Calls

We recommend that SG programs and NSGO develop targeted research calls aimed at addressing research needs of UU communities identified by SG extension and education programs. SG network and NSGO should consider collaborating on updating guidelines and policies with content focused on broadening participation. Lastly, in coordination with NSGO, SG programs should consider developing reporting metrics to track ways in which SG-funded research addresses diverse communities' needs by encouraging SG awardees to report outcomes of broadening participation activities as part of the reporting process for grants. Some representative examples include:

NSF INCLUDES: https://www.nsf.gov/news/special_reports/nsfincludes/index.jsp

NOAA EPP: <http://www.noaa.gov/office-education/epp-msi>

US Department of Education: <https://www2.ed.gov/programs/hsistem/index.html>

Funding for staff time and financial investments in research are required to establish targeted research calls.

Recommendation 3: Undergraduate and/or Graduate Student Fellowships¹⁰

We recommend that in coordination with SG programs, NSGO should initiate an undergraduate and/or graduate student fellowship program that encourages participation of students from diverse backgrounds,

¹⁰ The Sea Grant Community Engaged Internship for Undergraduate Students was developed in response to this recommendation: <https://seagrant.noaa.gov/Community-Engaged-Internship>. The first cohort of student interns began in the summer of 2020.

especially students from UU communities. Students would work under the supervision of state SG programs and obtain on-the-ground learning experience by directly supporting SG-led research, extension, education, and/or communications programs. SG can instigate cohort-building by providing peer-mentoring and professional development opportunities for student fellows. Some representative examples include:

UCAR SOARS: <https://www.soars.ucar.edu/>

NSF INTERN: <https://www.nsf.gov/pubs/2018/nsf18102/nsf18102.jsp>

NASA MUREP: <https://www.nasa.gov/offices/education/programs/national/murep/about/index.html>

Funding for staff time and financial investments in education are needed to support student fellowships.

Recommendation 4: Performance Metrics to Evaluate Success

We recommend that in coordination with SG programs, the NSGO develop performance metrics for reporting to evaluate DEIJ success and indicate opportunities for improvement. For example, many university extension programs gather data on race, ethnicity, and gender of people who participate in their programming. These data allow programs to reflect on who they are reaching and who they are not.

Funding for staff time is needed to develop DEIJ performance metrics.

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Appendix I: Survey Responses

Survey I – Sea Grant Demographics and Workplace Climate

Information was collected from individual Sea Grant personnel on their demographics and perceptions of workplace climate. This first survey effort was intended to collect baseline data. The intent is to deploy the same survey instrument every two years and evaluate results over time. An online survey was conducted to collect this information in fall 2017. The total population of Sea Grant program employees, approximately 850 individuals, were contacted by email with a response rate of 33%. It should be noted that respondents from Gulf of Mexico Sea Grant programs made up only 6% of the total survey sample (compared to 20% for other regions) and hence may be underrepresented in the survey results.

Key findings:

- 68.9% respondents identified themselves as female; 29.3% as male, 0.4% transgender/gender non-conforming; and 1.5% indicated that they preferred not to respond.
- Majority of Sea Grant professionals identified themselves as white (89.2%); 4.8% of Sea Grant professionals were Asian American; 1.5% African-American; 1.1% Native American/Alaska Native; 0.4% Middle Eastern; and 5.6% indicated other. None of the respondents identified themselves as Hawaiian/Pacific Islander.
- Majority of the respondents identified as non-Hispanic (94%); 6% identified themselves as Hispanic or Latino.
- On average, respondents indicated agreement with positive DEI workplace climate statements that were personal in nature. For example, statements like, “At work, my opinions seem to count.” However, there was some spread in the data and differences based on demographics and employment characteristics. For example, female respondents were less likely to strongly agree with positive workplace climate statements as compared to male respondents.
- In comparison with positive DEI climate personal statements, respondents had lower levels of agreement with statements about (i) awareness of the difficulties that underrepresented or underserved populations face in pursuing employment in coastal/marine STEM careers, (ii) satisfaction with their state Sea Grant program’s efforts to hire staff of diverse backgrounds, and (iii) inclusion of people from diverse backgrounds as a stakeholder audience.
- Just over one-third, or 36% of respondents indicated that they “always” feel they belong at work; 43% of respondents said they “usually” feel they belong, and 16% said they “sometimes wonder whether” or “rarely feel” they belong.
- By gender:
 - 30% of females, 48% of males, 0% of transgender/gender non-conforming, and 50% who preferred not to respond said they “always” feel they belong;
 - 47% of females, 38% of males, 100% of transgender/gender non-conforming, 0% who preferred not to respond said they “usually” feel they belong, and
 - 15% of females, 9% of males, 0% of transgender/gender non-conforming, and 0% who preferred not to respond said they “sometimes wonder whether” they belong,
 - Finally, 4% of females, 3% of males, 0% of transgender/gender non-conforming, and 50% who preferred not to respond “rarely feel” they belong.

- About 30% of respondents indicated that they had witnessed/experienced: (i) employees being unfairly treated, (ii) microaggressions, and (iii) credit not always given when due.
- About 15% of respondents stated that they had witnessed/experienced: (i) biased recruitment decisions, (ii) unfair hiring processes/decisions, and (iii) inequitable opportunities for professional growth.

Representative Examples of Positive Comments from Survey Respondents

- “Generally I feel very supported in my position. I feel my co-workers and supervisors are invested in my personal well being and professional success.”
- “I think the academy helped create a broader sense of belonging to not only my program but to the national program.”
- “Our program has created a Spanish-speaking working group to address this issue.”
- “I feel we are learning more about our blind spots and trying to do better in hiring and inclusion/target populations.”

Representatives Examples of Room for Improvement Comments

- “I do not feel like our staff is diverse at all. I would estimate 95% of our staff would classify themselves as White.”
- “I have control over hiring as people leave their positions, but I struggle with how to get a truly diverse pool of candidates.”
- “We try to recruit broadly, but the positions are specific, and we get what we get. The system is not perfect, but putting effort into training the next generation, so that there is a diverse workforce with the appropriate background and skills -- my SG program is getting better that at.”
- “I do think though that our staff care about inclusion but don't always have the funds or flexibility to make it happen...We have people who write grants to cover the educational fees for low income or underserved populations but we can't always provide transportation.”
- “I accept a significant share of responsibility for the status quo in my workplace that led me to answer 'Disagree' to both questions. I should have pressed my organization to do better.”
- “We are an all-white organization, so racial tension doesn't arise.”
- “We have some colleagues who make disparaging and hurtful remarks about women and about our work.”
- “Our SG leadership allows us to do DEI training and push the DEI envelope, though I wish they would engage in DEI training so they could have the same background.”
- “Saying that we do, and then actually ACTING on intent are two different things. We could do better on implementing.”
- “Some of our stakeholders are very inclusive, while others will show up with things like vehicles and clothing with big confederate flags on it.”
- “I think that the intentions are there...However, everyone is already working at their maximum capacity so learning tactics and strategies to improve DEI efficiently would be helpful...I'm happy to see that this is topic that is gaining momentum but lots of work still needs to be done. Thanks for your work on this important issue.”

As a result of survey I, several research questions and future needs analysis emerged. Here are a few of them.

- Is the gender split of the sample reflective of the total Sea Grant network population? Are we over representing female respondents due to self-selection bias or another reason?

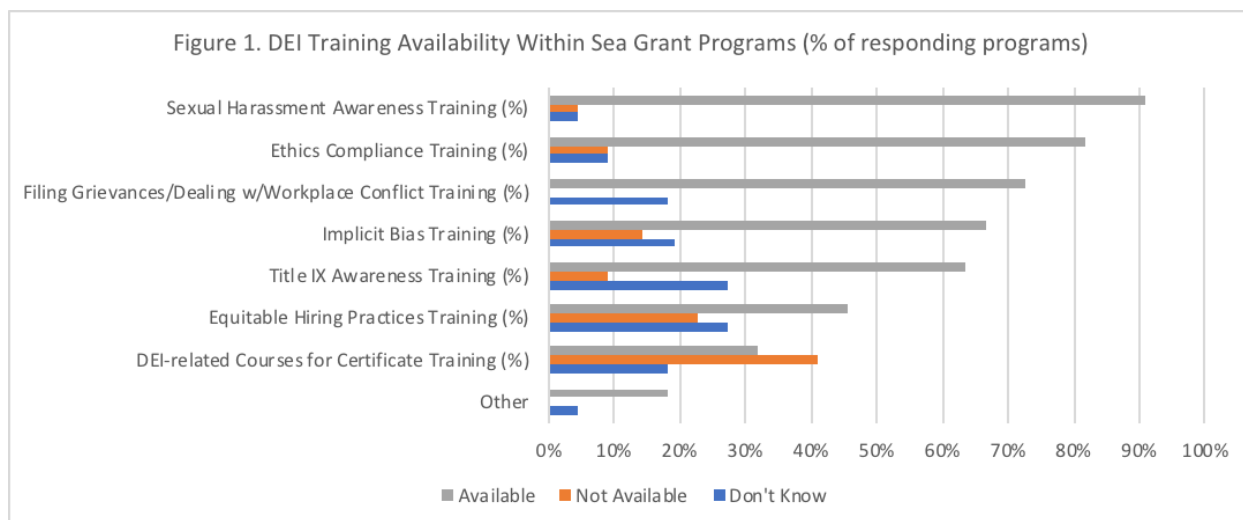
- Is the underrepresentation of Gulf state Sea Grant personnel due to that region having fewer staff members, challenges in survey distribution, self-selection bias, other?
- Responses to DEI climate questions show significant differences between female and male respondents. However male respondents are also more likely to be in management positions, older in age, and have more years with Sea Grant. It is difficult to tease out these multiple factors.
- Other patterns to explore include: differences in responses by income level, by race/ethnicity, by Sea Grant region, by length of time on the job, by position type, and by age.
- What is the range of responses and standard deviations as well as averages/summarized data?

Survey II – DEI Efforts and Challenges for Sea Grant Programs

A second survey was deployed to collect information about professional development opportunities, efforts, priorities, and challenges of each state Sea Grant program with respect to DEI. A representative from each state program was asked to answer a questionnaire with input from program leadership. The representatives completed the online survey in spring 2018. Representatives from the total population of 33 Sea Grant programs, the National Sea Grant Law Center, and the National Sea Grant Office were contacted by email with a response rate of 66%; 22 out of 35 programs responded. In four of six Sea Grant regions at least 67% of programs responded. However, one region had a response rate of only 25%.

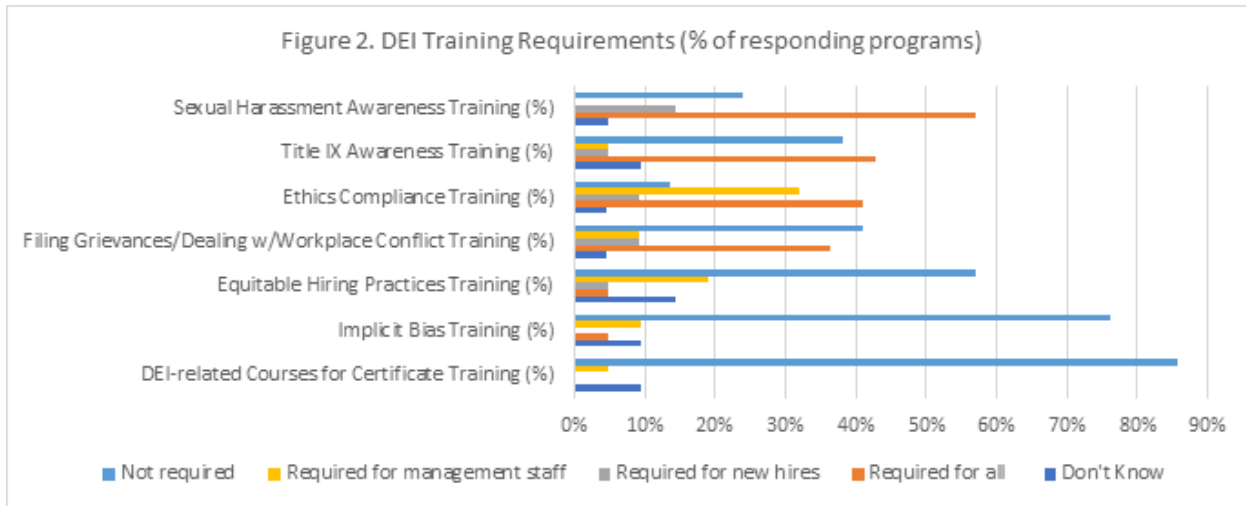
DEI Trainings Available:

Program representatives were asked about DEI trainings available to their staff. Sexual harassment awareness training was most commonly available; over 90 percent of programs had access to this training (Figure 1¹¹). A majority of programs also had access to ethics compliance training (82%), training to file grievances or deal with workplace conflicts (73%), implicit bias training (67%), and Title IX awareness training (64%). Less than half of the programs had access to equitable hiring practices training (45%) and DEI-related courses for a certificate (32%).



¹¹ Each figure is derived from 20 to 22 responses.

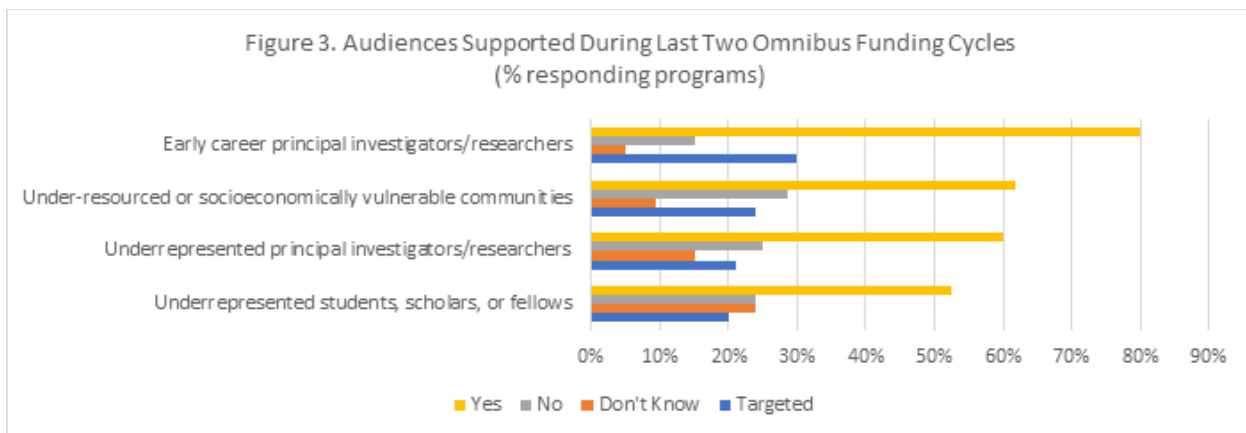
Of trainings available, only sexual harassment awareness training was required for all staff in more than half of programs (57%; Figure 2). This training was also most commonly required for new hires (14%). For management staff, ethics compliance training was the most commonly required (32%). Universities overwhelmingly provided these trainings (75%), with outside consultants (13%) and Sea Grant programs (8%) offering them occasionally.



DEI Efforts:

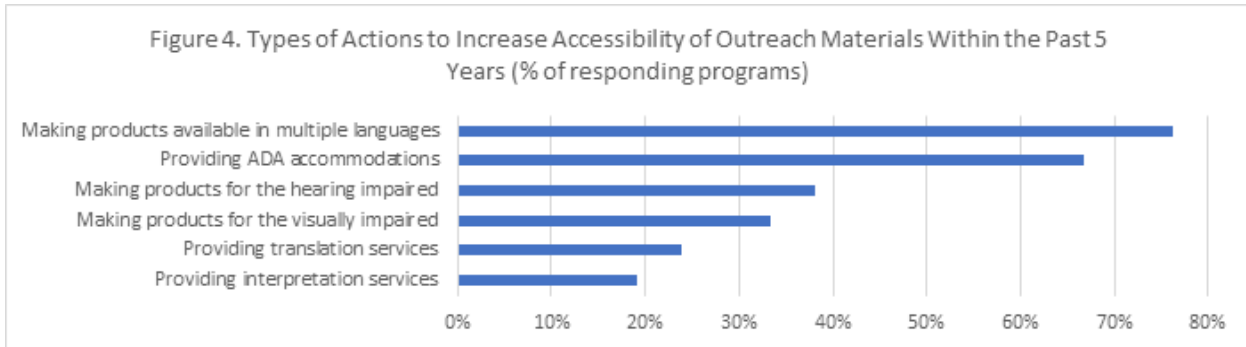
Advisory board composition, research funding decisions, and outreach activities all have the potential to consider DEI principles. All programs (n=20) indicated that disciplinary expertise and occupational sector diversity were considered when forming Program Advisory Boards, and 80% considered geographic distribution. Fewer considered gender (65%), race (50%), ethnicity (35%), or age (30%) when forming these boards.

During the past two omnibus cycles, 80% of programs funded early career principal investigators (PI) (Figure 3). In the same period, 62% funded research, fellowships, or scholarships to benefit under-resourced or socioeconomically vulnerable communities. Sixty percent funded underrepresented PIs. However, less than a third targeted these audiences in RFPs to broaden access to resources.

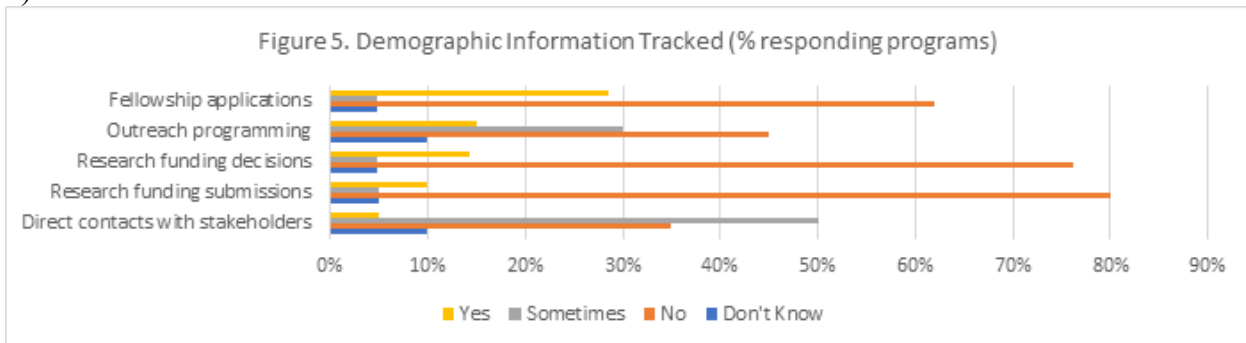


Seventy-one percent of programs (15) have historically black, tribal or other minority serving colleges or universities in their state. Of those, 53% (8 programs) tracked applicants from those institutions for Knauss or other fellowships, half of which (4 programs) had targeted recruitment efforts for these institutions.

The most common way programs have increased accessibility of outreach materials during the past five years was to make outreach products available in multiple languages (76%) (Figure 4).



Less than a third of programs tracked demographic information related to research or outreach (Figure 5).



DEI Priorities:

Respondents were asked what DEI-focused efforts should be prioritized by the Sea Grant Network over the next five to 10 years. Four options could be ranked and respondents could also select and identify up to three additional priorities. The highest ranked priority was “actively recruiting staff and students to broaden DEI across the network.” The second highest priority was “developing and offering DEI-focused training for all staff.” The third priority was “providing new colleague orientation on DEI issues.” The lowest priority was “developing recommended DEI-focused hiring practices that all managers are requested to follow.”

Fifteen respondents added other priorities. The additional priorities, listed in order of prevalence, generally reflected variations of the other four:

1. Develop trainings and best practices for working with underserved and vulnerable populations and communities;
2. Diversify Sea Grant staff, interns, advisory boards as well as the communities served;
3. Increase resources aimed at DEI efforts including funding, information, and organizational support;

4. Change NSGO metrics to recognize DEI efforts and help tell success stories;
5. Target RFPs and fellowships to encompass greater diversity;
6. Work with external partners such as HBCUs, agencies and communities.

When asked what individual programs might try to implement over the next several years, many program efforts aligned with the priorities listed above that the Network should tackle as a whole (Table 1). For example, many would like to increase outreach to underrepresented communities, institutions, and individuals for RFPs and fellowships as well as outreach, education, and extension programming in the next 5 to 10 years. The nature of that outreach inherently will vary by state. Some states would focus on tribal or Minority Serving Institutions (MSI) connections while others would be more focused on topical issues (e.g. frequently flooding communities). Other areas of proposed expansion include efforts to increase diversity of new hires, advisory boards, and partner organizations; expanding and institutionalizing DEI training for staff and advisory boards (e.g. recurrent as opposed to one off programs); and developing targeted multilingual outreach materials.

Table 1. How Sea Grant programs wish to expand DEI external programming in the next decade

Areas of broad interest	<p>Targeted outreach to expand outreach/extension/education participation</p> <p>Targeted outreach to expand RFP and Fellowship applications</p> <p>Modification of RFPs to target underrepresented students or faculty</p> <p>Expansion of staff and advisory board programs to build DEI issue awareness</p>
Areas mentioned by a few programs	<p>Expansion of extension/education programming to increase relevance</p> <p>Use of DEI as a new criterion in program planning and decision making</p> <p>Diversification of advisory boards</p> <p>Development of multilingual extension/outreach materials</p> <p>Program assessments focused on DEI issues</p> <p>Recruitment and development of more diverse staff</p>
Areas mentioned by one or two programs	<p>Development of stronger partnerships with outside organizations</p> <p>Tracking of demographic data within programs</p> <p>Creation of an award for DEI programming</p>

DEI Challenges:

Respondents listed a number of structural and organizational challenges that may slow our ability to incorporate DEI principles into Sea Grant programs. Structural barriers, originating from outside of Sea Grant programs, included:

- Limited candidate pools and the need to develop interest in our fields from a young age
- Limited external funds to expand programs
- Lower quality or limited proposals from MSIs

Organizational barriers, emerging within Sea Grant programs, included:

- Programmatic and institutional inertia and sometimes resistance

- Lack of capacity and knowledge
- Difficulties recruiting diverse applicants
- Time constraints
- Limited cultural awareness and language barriers
- Existing network demographics and the (lack of) diversity
- Partnership challenges
- Staff training, retention, and slow turnover.