



EDUCATION

Maryland Sea Grant receives financial support from Congress through the National Sea Grant College Program within the National Oceanic and Atmospheric Administration, as well as support from the University System of Maryland and other external grants and contracts.

Diversity, Equity, and Inclusion in Workforce Development

Maryland Sea Grant (MDSG) and our coastal partners want to deliver innovative and integrative formal education opportunities to learners from secondary through graduate school. We strive to promote inclusive programs and integrate education into our core areas of research. We create opportunities and deliver programs and products that incorporate all components of coastal science, so we can empower scientists, policymakers, managers, educators, students, communities, and committed citizens as they collectively work to understand issues and act as stewards of the Chesapeake and coastal bays and their watersheds.



K-12 Educational Programs

Our K-12 education team has created numerous teacher professional development programs and provided instructional strategies and resources online. Examples include:



Oysters in the Classroom, one of several free, web-based instructional strategies MDSG has developed based on the 5E Instructional Model, which emphasize inquiry, critical thinking, and the process of science. MDSG-funded teacher fellows collaborated with MDSG staff to write these strategies, improving classroom pedagogical methods and student-driven instruction.

Aquaculture in Action (AinA) is a project-based learning program for K-12 science teachers. Developed by MDSG and University of Maryland Extension, this program lets students learn about and use aquaculture as an interdisciplinary tool to understand complex applied skills in chemistry, biology, and computer science. This 25-year-old program now has 40 schools across Maryland, including Baltimore City, and it has expanded to additional states.



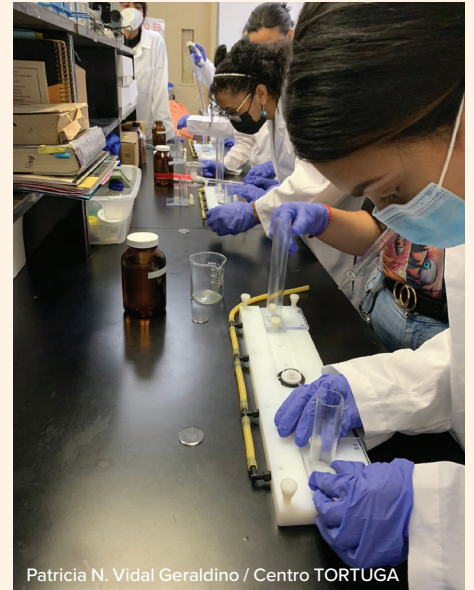
Biofilms and Biodiversity is MDSG's interactive resource that lets students and teachers evaluate online biofilm communities grown on discs suspended in local waters. Students learn species identification and the importance of biodiversity through project-based learning. The program, originally modeled with Swedish partners, has expanded to other EU countries through the VIRTUE-s Project. Additionally, MDSG has expanded it to include cutting-edge science through the isolation and observation of microplastics from biofilm communities.

Undergraduate Opportunities

MDSG provides a variety of undergraduate opportunities to mentor and encourage these students. Through our funding opportunities, we are able to support over 100 undergraduate students each year. For example, we host the Community Engaged Internship (CEI) Program, which is focused on engaging students from underrepresented and indigenous communities. With MDSG support and guidance, CEI interns work on a project over the summer to add to their résumé or portfolio. And, our Research Experiences for Undergraduates (REU) programs have supported more than 500 students who conduct their own research projects.

Research Experiences for Undergraduates

Together with regional partners, MDSG provides research opportunities to a wide-range of undergraduate students through National Science Foundation funded REU programs. Since 1989, the MDSG REU program has provided a diverse group of students hands-on summer research experiences. Our programming in Puerto Rico has been working for over a decade to increase participation of Hispanic students in the marine and ocean sciences through hands-on research opportunities, professional development, and multi-level mentoring.



Graduate and Post-Graduate Fellowships

MDSG offers a number of fellowship opportunities in research, natural resource management, and marine policy that let graduate students explore their interests and broaden their experiences.



MDSG also offers fellowship programs that support graduate students and their research, as well as providing them professional development opportunities to enhance their graduate experience.

The Knauss Marine Policy Fellowship provides a unique educational experience to students interested in ocean, coastal, and Great Lakes resources, and in the national policy decisions affecting those resources. Fellows are placed in offices in the U.S. Congress or executive branch in Washington, DC, for a one-year paid fellowship.



We have three new additions to the MDSG post-graduate fellowship portfolio: State Science Policy, Maryland Law and Policy, and Science Management and Policy fellowships. These let recently graduated students spend one to two years working in the intersection of science and policy, advancing their knowledge, experience, and networking.

Maryland Sea Grant is a federal-state partnership program that is part of the University System of Maryland. Our offices are located in College Park, Maryland, and are administered by the University of Maryland Center for Environmental Science. Our Sea Grant Extension faculty are administered by the University of Maryland, College Park and located in offices around the state. The National Sea Grant Program is a network of 34 university-based programs in coastal and Great Lakes states as well as Puerto Rico and Guam.

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Contact Us

Fredrika Moser, Director
301-405-7500
moser@mdsg.umd.edu