



SUSTAINABLE FISHERIES & AQUACULTURE

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.

Expanding Maryland's Aquaculture and Fisheries Industries

Maryland Sea Grant has committed significant research, education, and outreach capacity toward sustaining Maryland's seafood industry. We strive to ensure seafood fishers and farmers remain profitable and follow the latest food safety guidelines, and that the state continues to attract entrepreneurs to expand our seafood economy.

To achieve this, Maryland Sea Grant's core sustainable fishing and aquaculture staff include:

- 7** fisheries and aquaculture Extension agents who are dedicated to supporting the industry in Maryland
- 3** educators advancing aquaculture programs in Maryland high schools
- 1** national aquaculture extension coordinator working with coastal ocean stakeholders in aquaculture siting and development

Our Work

Maryland Sea Grant's (MDSG) sustainable fishing and aquaculture portfolio includes a range of research, education, and extension projects. In collaboration with diverse stakeholders—from fishers and farmers to NGO and regulatory partners—we achieve far-reaching impacts:



MDSG-funded researchers successfully mapped the genome of the blue crab, which will provide fisheries managers and researchers with a new tool to better understand the Chesapeake Bay's most iconic and economically important species.



MDSG's Aquaculture in Action program supported aquaponics systems in 11 classrooms and provided a four-day workshop for teachers and administrators on microcomputing needs for aquaculture systems.



MDSG and partners in NOAA hosted a workshop to refine a process for co-production and encourage two-way communication with users of computer-based mapping tools to assist in aquaculture siting and development in the Mid-Atlantic.

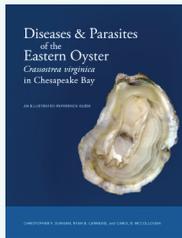


Alongside industry and NGO partners, MDSG trained 25 oyster growers to operate remote setting systems, deploying over 320 million oyster larvae on aquaculture leases in Maryland. Five of these growers are now independently operating their own systems, although MDSG continues to provide technical advice.



MDSG's seafood safety specialist led the Maryland Crabmeat Quality Assurance Program to ensure Maryland crabmeat is food safe, providing 13 companies a benefit of approximately \$520,000.

In collaboration with the Maryland Department of Natural Resources and the Virginia Institute of Marine Science, MDSG



published a book illustrating oyster diseases. This book will help scientists quickly and clearly identify emerging diseases and illnesses in oysters to mitigate impacts on survival and production.

Soft-shell clam research funded by MDSG was highlighted in several tours of Morgan State University's PEARL hatchery. Tour groups included 300 middle schoolers, 40 local undergraduate students, and members of the Rotary Club of Prince Frederick.



MDSG's shellfish hatchery manager provided technical assistance, grant writing support, and advice on diversifying product lines beyond oysters to members of the industry. They initiated the beginnings of disease testing services for Southern Maryland at Morgan State University's Patuxent Environmental and Aquatic Research Lab (PEARL).

MDSG's fisheries economics specialist peer-reviewed models and regulations for the Mid-Atlantic Fishery Management Council and advised the Northeast Fisheries Science Center on regulations around several commercial and recreational fisheries that are key to our region.



MDSG educators and partners developed new curriculum components for pre-service teacher courses at the University of Maryland, College Park, using MDSG education resources.

Funded Research in Aquaculture and Fisheries

In addition to extension and education activities, MDSG funds applied research that has the potential to impact coastal policies and management across the state. MDSG has recently funded more than 14 sustainable fisheries and aquaculture projects, including:

Effects of Oyster Aquaculture on Submersed Aquatic Vegetation Habitat
Cassie Gurbisz, *St. Mary's College of Maryland*

Quantifying Nitrogen Removal Potential in Oyster Reefs Versus Aquaculture in Response to Hydrodynamic Setting and Water Quality
Jeremy Testa, *University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory*

Production of Reproductively Sterile Atlantic Salmon to Maximize Cost-Effective and Environmentally-responsible U.S. Aquaculture
Ten-Tsao Wong, *University of Maryland Baltimore County*

Diversification of Maryland Shellfish Aquaculture: Development and Assessment of a Subtidal Grow-out Method for Culture of Soft-shell Clams (*Mya arenaria*)
Ming Liu, *Morgan State University*

Advancing Monitoring and Management of Mid-Atlantic Alosine Fishes with eDNA Analysis
Louis Plough, *UMCES, Horn Point Laboratory*

For more information, on these and other projects, visit our website: mdsg.umd.edu

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.

www.mdsg.umd.edu

Contact Us

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