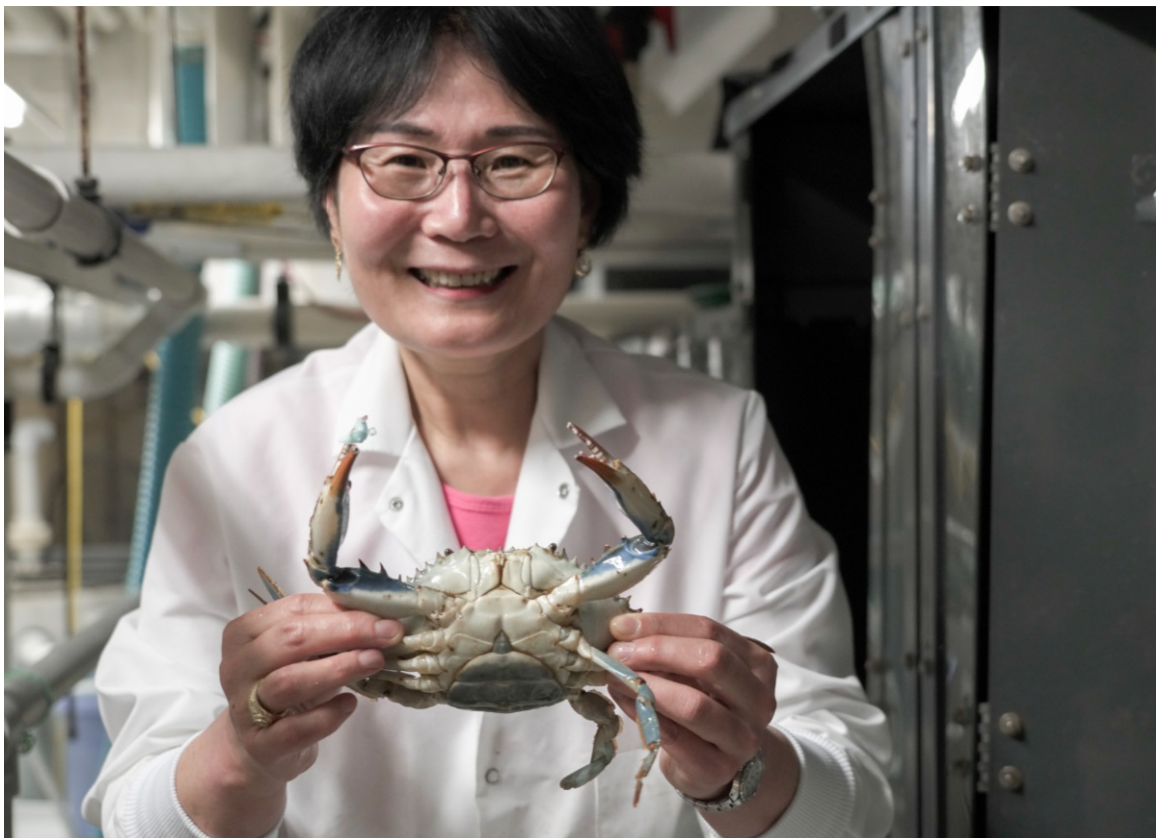


ENVIRONMENTAL INSIGHTS

NEWS FROM THE UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE

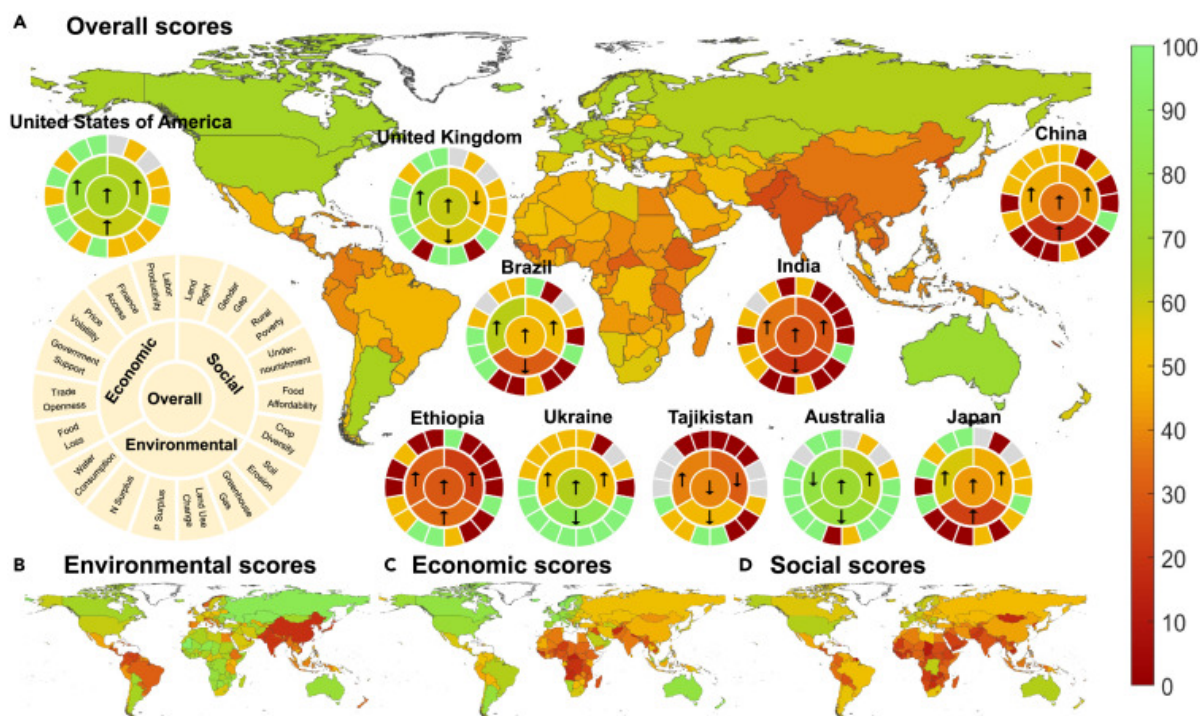


Maryland scientists crack blue crab's genetic code

Scientists from the University of Maryland Center for Environmental Science have published the genome sequence for the blue crab, Maryland's favorite crustacean. The best way to understand an organism is to understand its genetic blueprint, or its genome. Once the code is understood, it reveals many secrets of how the organism works, such as what genetic traits make some crabs particularly successful at reproducing or others more adapted to water temperatures warmed by climate change.

"Marylanders love crabs, and everybody wants to have big, fat crabs in the fall. Understanding what makes them successful is located in the chromosomes," said

Professor [Sook Chung](#), who led the project at the Institute of Marine and Environmental Technology. “Knowing the full genome, we are several steps closer to identifying the genes responsible for growth, reproduction, and susceptibility to disease.” [MORE](#)



New sustainable agriculture framework will help nations gauge progress and pitfalls

For the first time, scientists have assembled a quantitative assessment for agriculture sustainability for countries around the world based not only on environmental impacts, but economic and social impacts, as well. The Sustainable Agriculture Matrix, or SAM, provides measurements of agricultural sustainability at a national level that can help governments and organizations to evaluate progress and inform national policies and actions towards sustainable agriculture around the globe.

“This Sustainable Agriculture Matrix is an effort to promote accountability for nations’ commitments towards sustainable agriculture,” said project leader [Xin Zhang](#). “We hope this can serve as a tool to bring the stakeholders together. Agriculture production is not only about farmers. It’s about everyone.” [MORE](#)

Climate change in focus in online community learning series

UMCES scientists are focused on the challenges climate change is having on our region and the world, from understanding the impact of rising sea levels on Maryland’s coastlines to monitoring changes in the ecosystems in the Arctic. Leading experts will be featured in an online series on climate change and its impacts this fall. The free, online webinars run from 7- 8 p.m. each Tuesday. Following each presentation, there



Climate impacts on golden tilefish: Past and present

Tuesday, October 12, 2021

Presented by Dr. [Genny Nesslage](#), UMCES Chesapeake Biological Laboratory

Golden tilefish is a large, bottom-dwelling marine fish that is particularly susceptible to climate change because it can tolerate only a very narrow range of temperatures. In 1882, millions of golden tilefish died due to an unusually strong influx of Arctic water into the Mid-Atlantic. Dr. Nesslage will describe past and present research on the linkage between climate and trends in the golden tilefish fishery.



Climate warming and the changing Pacific Arctic marine ecosystem

Tuesday, October 19, 2021

Presented by Dr. [Jackie Grebmeier](#), UMCES Chesapeake Biological Laboratory

The Bering and Chukchi Seas in the Arctic are undergoing dramatic sea ice reduction and warming conditions that are shifting the composition of bottom-dwelling prey for marine mammals, seabirds, and commercial fish in the region. Field studies by scientists are tracking ecosystem status and trends. In this webinar, internationally recognized Arctic expert Dr. Grebmeier will share highlights of scientific findings from the rapidly changing Arctic.



Intergovernmental Panel on Climate Change: Ins, outs, & demands of serving as lead author of Working Group II

Tuesday, October 26, 2021

Presented by Dr. [Libby Jewett](#), National Oceanic and Atmospheric Administration

As part of a multi-year global climate change assessment process, Working Group II of the Intergovernmental Panel on Climate Change (IPCC) is assessing the vulnerability of socio-economic and natural systems to climate change and options for adapting to it. As lead author, Dr. Jewett will discuss the rigorous process and extensive scientific review through which the report must pass prior to its expected release in 2022.

Risk assessment in the face of climate change

Tuesday, November 2, 2021

Presented by Dr. [Slava Lyubchich](#), UMCES Chesapeake Biological Laboratory

Traditionally, long-term observations have been a key



component in assessing the risks of weather-induced losses. However, most recent climate trends require the inclusion of future climate projections into the methods and models used to assess the risks. In this seminar, Dr. Lyubchich will discuss how this step has important implications for building codes, pricing agricultural and home insurance.

For a complete list of our seminars, visit
UMCES' online [COMMUNITY LEARNING](#) page.

UMCES-Nature Conservancy team up to advance sustainable agriculture in Chesapeake watershed



Dr. Matthew Houser joined UMCES' Horn Point Laboratory as its first Regenerative Agriculture Fellow. This is a new partnership between The Nature Conservancy (and UMCES to build and execute collaborative projects that will advance goals in regenerative agriculture and sustainable agricultural landscapes in the Chesapeake Bay watershed. [MORE](#)

Maryland Sea Grant kicks off new Chesapeake Quarterly Speaker Series



The first seminar in the series: **Behind the Stories - "Black on the Bay, Then and Now"** highlights Captain George W. Brown and Black maritime legacy. Historian and archivist Philip J. Merrill will discuss the captain's story and share new information he has discovered about Black maritime history in the Baltimore area. Each online seminar will feature a short presentation by the speaker followed by a Q&A session with our communications staff. [REGISTER](#)



UMCES IN THE NEWS

GameChanger: Imani Black (Baltimore Magazine)

Terre Haute's climate may feel like Arkansas by 2080 (Yahoo!)

Nitrogen: The environmental crisis you haven't heard of yet (Mongabay)

A new measurement for sustainable agriculture (Cosmos Magazine)

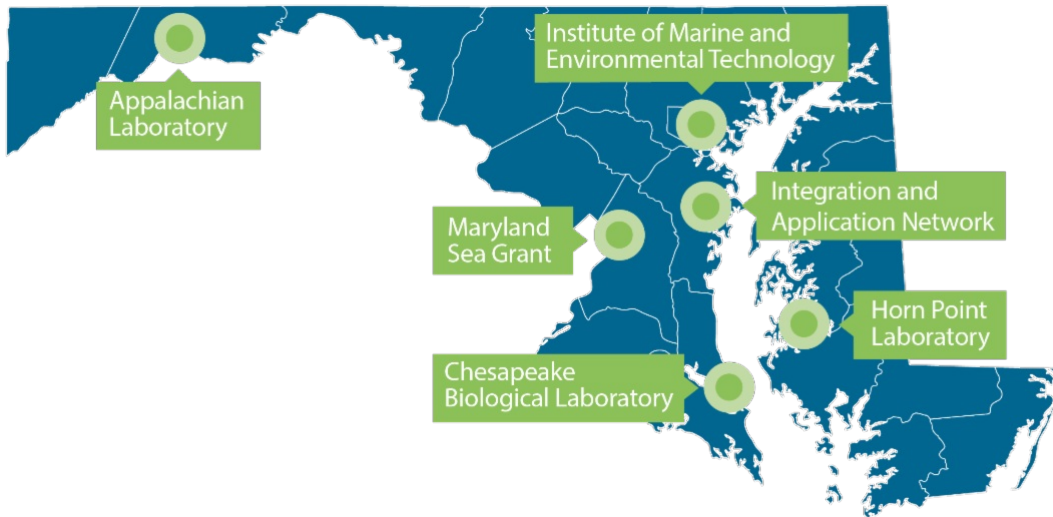
Floating Wetlands Planned for Inner Harbor to Revive Urban Ecosystems, Clean Water (Maryland Matters)

Animals are “shape-shifting” to cope with climate change (Canadian Geographic)

Can the World's Most Polluting Heavy Industries Decarbonize? (Yale Environment 360)

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