

# Coastal Futures: Exploring Nature Based Solutions

Workshop at Texas A&M University Galveston, October 6-7, 2025

The German-American Nature-Based Solutions Exchange (GANBASE) provides stakeholders in the fields of nature conservation and environmental protection with the opportunity to exchange ideas on nature-based solutions (NbS) across the Atlantic.

GANBASE aims to exchange approaches and experiences; to present excellent research and lighthouse projects from Germany; to demonstrate the integration of NbS into local, regional, and national policy in Germany, as well as ideas on how these can be anchored in the USA; and to draw attention to the economic and socio-political aspects of NbS.

This takes place in the form of semi-annual visit programs, one per year in the USA and one in Germany, with individuals from each country invited as part of the core group. They travel together, and additional researchers and practitioners join the workshops.

This upcoming GANBASE workshop focuses on nature-based solutions in coastal environments. It is co-hosted by Texas A&M University and POCACITO and takes place at the .

The workshop starts Monday afternoon and finishes on Tuesday with lunch. Participants may join field trips Monday morning and Tuesday afternoon and are invited to a dinner on Monday.

The workshop is free to attend and open to all students, researchers, practitioners, and decision makers. The purpose is to compare research and practice from the United States and Germany and beyond.

Please contact POCACITO with any questions regarding the workshop: [max@pocacito.org](mailto:max@pocacito.org)

The project is supported by the Transatlantic Program of the Federal Republic of Germany, funded by the European Recovery Program (ERP) of the Federal Ministry for Economic Affairs and Energy (BMWE).

More about POCACITO and GANBASE can be found at: <https://www.pocacito.org/> and <https://www.pocacito.org/german-american-nature-based-solutions-exchange-ganbase/>

Please RSVP here by Friday, October 3, 2025: [TX.AG/T0DZTCP](https://www.tx.ag/t0dztcp)

## Monday, October 6, 2025

8:00	meet at TAMU pavilion and drive in vans or car-pool			
9:00	Coral Lab (Sea Life Facility) and Moody Gardens Coral Lab (sign-up required)			
12:00	self-drive or car-pool			
12:30	University of Houston Coastal Center visit with lunch (sign-up required)			
3:00	drive to TAMU Galveston Campus			
3:30	Coffee break			
4:00	Opening	Max Gruenig	Introduction to GANBASE	POCACITO
4:15	Welcome	Marcus Hatzelmann	Transatlantic cooperation on research and beyond	Consulate General of Germany in Houston
4:30	Session 1: Nature-based solutions for coastal biodiversity and nature protection	Gerrit Meiners	Nature Based Solutions in the Deepsea	Ines Solutions
		Zhixuan Song and Prof. Hui Liu	Modeling Studies Providing Science-based Solutions for Sustainable Fisheries	Texas A&M University at Galveston
		Evelyn Merz	Prairie restoration and resilience	University of Houston
5:30	Q&A			
5:50	wrap-up day 1			
6:00	end workshop day 1			
6:15	drive to MARMO			
6:30	dinner at Marmo (sign-up required) with a special presentation by Gangbing Song, Ph.D., John and Rebecca Moores Professor University of Houston			
8:30	end of day 1			

## Tuesday, October 7, 2025

8:30	Networking coffee			
9:00	Opening	Max Gruenig	Welcome back and recap day 1	POCACITO
9:10	Keynote	Karla Klay		Artist Boat
9:30	Session 2: Nature-based solutions for coastal protection and resilience	Kelly Burks-Copes		Army Corps of Engineers
		Oliver Lojek	Dune restoration	Technical University Braunschweig
		Elizabeth Stoehr		Jamaica Bay Rockaway Parks Conservancy
10:30	Comments	Dr. Debbie Thomas	Dean, College of Marine Sciences & Maritime Studies, Executive Associate Vice President for Academic Affairs, Texas A&M University at Galveston Associate Provost, Texas A&M University	
10:40	Q&A			
10:55	Coffee break			
11:10	Session 3: Nature-based solutions in participation, governance and planning	Wendy Chavez	Work with local communities or power dynamics in coastal governance	University of Bonn
		Brandi Keller	Texas Sea Grant and Master Naturalist Volunteers	Texas A&M University
		Scott Jones	Clean Coast Texas	Texas A&M AgriLife Extension Service
		Anna Weiss	Vision Galveston	Vision Galveston
12:30	Q&A			
12:50	Closing the workshop			
1:00	Lunch			
1:45	Drive to field visits (sign-up required)			
2:15	Dune restoration with Jens Figlus, TAMU			
3:00	Drive			

3:30	Living shoreline at Galveston Island State Park
4:30	Drive
4:45	Artist Boat
6:00	Dinner

## Speakers

Dr. Kelly A Burks-Copes, PhD., PMP, Chief, Program Support Branch, Mega Projects Division (MPD), USACE – Galveston District (SWG)



Dr. Kelly Burks-Copes is now the Support Programs Branch Chief in the US Army Corps of Engineer’s Galveston District Mega Project Division with over 32 years of experience working on both civil works and military projects that have involved hybridized engineering and environmental strategies to tackle coastal storm risk management, flood damage reduction, navigation, and ecosystem restoration problems across the country. Early in her career, she worked for the Corps’ Engineer Research and Development Center where she concentrated on developing practical ways to transfer research and technology to the field offices - most notably providing R&D support for post-Sandy recovery initiatives in the northeast for the North Atlantic Coastal Comprehensive Study (NACCS). In 2015, she earned her PhD in the field of interdisciplinary ecology from the University of Florida, which allowed her to serve as a subject matter expert on several national and international studies where she championed nature-based solutions to reduce coastal storm risks and climate change impacts to critical coastal ecosystems for the Corps, its partners, and its stakeholders. In 2016, she joined the Galveston District’s Project Management staff and continues as the Project Manager on the Corps’ largest ever coastal storm risk management and ecosystem restoration study, commonly referred to as the Coastal TX study.

Wendy Chávez-Páez, University of Bonn



Wendy Chávez-Páez is an economist (Polytechnic School of Guayaquil, Ecuador) and holds a master's degree in public administration (New York, USA) and a master's degree in human settlements (KU Leuven, Belgium). She is a junior researcher and PhD student in Cultural and Political Change at the Center for Development Research of the University of Bonn. She has worked in the Ecuadorian academia, government sector, and civil society organizations. She is a founder member of the Observatory of Public Policy of

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Guayaquil. She also performs voluntarily as the Academic Coordinator of the local organization Fundación Cerro Verde, which works actively with ancestral communities of the Gulf of Guayaquil to conserve the mangrove ecosystem.

### Madgellen Cleary, Coastal Resilience Specialist, Texas Sea Grant at Texas A&M University



Madgellen Cleary is a Coastal Resilience Specialist for Texas Sea Grant, based in Galveston, where she works on a broad range of issues across many sectors to strengthen community resilience to disasters such as hurricanes and floods by disseminating research-backed information to stakeholders and guiding university and agency researchers on coastal sustainability. She has led Texas Engineering Extension classes in Port Lavaca, chaired the Tools Committee, and serves as lead organizer for the Gulf Resilience Community of Practice, a multi-state collaboration advancing climate resilience. Currently a graduate student at Texas A&M University with a thesis on offshore wind farms, she brings a diverse professional background that includes work as an instructor for Sea Camp, a divemaster, a laboratory administrator for Viswa Lab, a protected species observer for RPS Group, and a Natural Resource Specialist for the U.S. Army Corps of Engineers, and she holds a bachelor's degree in marine biology from Texas A&M University at Galveston.

### Scott Jones, Community Outreach Specialist, Green Infrastructure for Texas, Disaster Assessment and Recovery, Texas A&M AgriLife Extension Service



Scott Jones serves as the Community Outreach Specialist for the Green Infrastructure for Texas Program with Texas A&M AgriLife Extension Service's Disaster Assessment and Recovery Unit. In this capacity, Scott seeks to collaborate with local government communities in the upper Texas coastal zone from Orange to Calhoun counties to find solutions to water quality and flooding issues by using green infrastructure. Scott previously worked for thirteen years for the Galveston Bay Foundation and eight years for the Galveston Bay Estuary Program on a variety of environmental advocacy and outreach issues, including storm surge mitigation, toxic waste sites, freshwater inflows, and wetland protection. Scott has also worked on water quality and quantity issues with the Texas Commission on Environmental Quality in Austin and at the Galveston County Health District.

## Hui Liu, Associate Professor, Texas A&M University



Dr. Hui Liu is an Associate Professor in the Department of Marine Biology, College of Marine Sciences and Maritime Studies of Texas A&M University. He also serves as an Associate Editor for Canadian Journal of Fisheries and Aquatic Sciences and a U.S. representative on working groups of North Pacific Marine Science Organization (PICES). Dr. Liu holds a Ph.D. in Oceanography and a MS in Statistics granted by the University of Alaska Fairbanks. His research is focused on quantitative marine ecosystem studies aiming to gain a predictive understanding of mechanisms and processes underlying interactions and dynamics of marine

organisms through integrating modeling and observation to answer fundamental questions for better management and conservation of marine ecosystems in estuaries and coastal waters. Dr. Liu has published 50+ peer-reviewed articles in high-profile journals regarding zooplankton, jellyfish, oysters, and fishes over seven large marine ecosystems in the Northern Hemisphere including the Gulf of Mexico, Georges Bank, California Current, the Gulf of Alaska, the Yellow Sea, the South China Sea, and the Arabian Gulf.

## Gerrit Meiners, INES-Solutions/Senckenberg



Gerrit is a deep-sea biologist with the INDEX project, using image-based methods to study hydrothermal-vent ecosystems along the Central Indian Ridge. His work assesses the diversity, distribution, and ecology of benthic megafauna to inform management of polymetallic sulfide resources. He develops photogrammetry workflows that convert video transects into georeferenced habitat maps and explores machine-learning tools to accelerate image classification. Passionate about improving cost-effective monitoring across marine systems, he aims to enhance

global marine conservation through accessible imaging and AI tools.

Evelyn L. Merz, B.S. (Biological Science), M.B.A., Program Director UH Coastal Center, The Texas Institute for Coastal Prairie Research and Education



Evelyn L. Merz has been the Program Director of the University of Houston Coastal Center in La Marque, TX since October 2019. Evelyn initiated the concept of designating the UHCC as the Texas Institute for Coastal Prairie Research and Education (TICPRE) and was an active participant in the successful effort for the Texas Legislature to do so in 2017. She is responsible for planning and coordinating restoration activities, community outreach, volunteer coordination, and assisting with grantmaking and development activities that will further the mission of UHCC and TICPRE.

Maureen Nolan-Wilde, Texas Master Naturalists



Maureen Nolan-Wilde is a dedicated member of the Galveston Bay Area Chapter of Texas Master Naturalists, contributing over 12,000 volunteer hours to conservation efforts in the Galveston community. With 38 years in the energy sector, where she specialized in global project management and communications, Maureen now channels her expertise into environmental stewardship. A past president of her local chapter, she focuses her volunteer work at the Gulf Center for Sea Turtle Research's rehabilitation hospital, Galveston Bay Foundation oyster restoration program and serves as Program Director of the Beach Hero program—an educational initiative that has engaged more than 1,200 elementary students in combating plastic pollution.

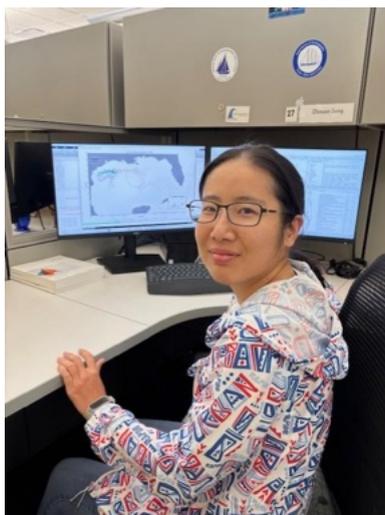
Gangbing Song, Ph.D., John and Rebecca Moores Professor, Director, Smart Materials and Structures Laboratory, Director, Artificial Intelligence Laboratory for Monitoring & Inspection, Professor, Department of Mechanical and Aerospace Engineering, University of Houston



Dr. G. Song is a Professor of Mechanical Engineering, Civil and Environmental Engineering (joint), and Electrical & Computer Engineering (joint) at the University of Houston. He is the founding Director of both the Smart Materials and Structures Laboratory and Artificial Intelligence Laboratory for Monitoring & Inspection. Dr. Song is a recipient of the NSF CAREER award in 2001. Dr. Song received his Ph.D. and MS degrees from the Department of Mechanical Engineering at Columbia University in the City of New York in 1995 and 1991, respectively. Dr. Song received his B.S. degree in 1989 from Zhejiang University, China. He has expertise in upcycling of decommissioned wind turbine blades, structural vibration control, structural health monitoring and damage detection, signal processing, data analysis, machine learning, smart materials and structures, piezoceramics, and ultrasonic

transducers. He is the instructor of Intelligent Structural System, Control System Analysis and Control, and Machine Learning in the Department of Mechanical and Aerospace Engineering at UH.

Zhixuan Song, Ph.D. student in Marine Biology at Texas A&M University at Galveston



Zhixuan Song is a second-year Ph.D. student in Marine Biology at Texas A&M University at Galveston. She has a B.S. in Marine Biology from the University of California, Santa Cruz, and a Master of Professional Science in Marine Biology from the University of Miami. In her master's thesis, she examined the spatial distribution patterns of estuarine plankton and fish communities, identified regional biodiversity hotspots, and evaluated the conservation needs of coastal-estuarine habitats. Zhixuan's current research focuses on developing and applying ecological modeling approaches to address questions about key fishery species and provide science-based solutions to inform sustainable marine resource management decisions. She uses a biophysical model to simulate the dispersal of larval

amberjack and to quantify the larval connectivity between release and settlement habitats. In addition, she applies time-series modeling to determine the abiotic and biotic factors

influencing blue crab population declines in Texas estuaries and forecast potential population trends.

Elizabeth Stoehr, Deputy Director, Jamaica Bay-Rockaway Parks Conservancy



Elizabeth Stoehr is the Deputy Director of the Jamaica Bay-Rockaway Parks Conservancy in New York City, where she leads initiatives at the intersection of ecological restoration, climate resilience, and community engagement. Her work focuses on advancing nature-based solutions through hands-on implementation, long-term stewardship, and adaptive management of coastal systems. Elizabeth also supports the development and deployment of emerging nature technologies, working with researchers, startups, and innovation partners to pilot scalable, tech-enabled

approaches to urban resilience.

Dr. Debbie Thomas, Dean, College of Marine Sciences & Maritime Studies, Executive Associate Vice President for Academic Affairs, Texas A&M University at Galveston, Associate Provost, Texas A&M University



Dr. Debbie Thomas is Founding Dean of the College of Marine Sciences & Maritime Studies and has served as Chief Academic Officer for the Galveston Campus of Texas A&M University since August 2022. She joined Texas A&M in 2004 as an assistant professor and holds the rank of professor in the Department of Oceanography. Previously, Dr. Thomas served as the Dean of the College of Geosciences and head of the Department of Oceanography at Texas A&M University.

Dr. Thomas received her master's degree in Marine Sciences and her doctoral degree in Geological Sciences from the University of North Carolina. She earned her undergraduate degree in Geological Sciences from Brown University while also fulfilling her dream of competing as a four-year Division I scholar-athlete.

Dr. Thomas, who specializes in the field of paleoceanography, studies the chemical composition of marine sediments to reconstruct past climate with a particular interest in the climate dynamics of globally warm periods of time in Earth's history. Her work relies on seafloor samples collected through the International Ocean Discovery Program (IODP). She has led international research teams through IODP and successfully proposed and led IODP Expedition 378 to recover cores from the South Pacific to contribute to our understanding of past climate (January- February 2020).

Dr. Thomas' honors include being named a Fellow of the Geological Society of America, a Center for Teaching Excellence Montague Scholar, and a college-level Distinguished Achievement Award for Teaching from the Texas A&M Association of Former Students.

*"The College of Marine Sciences and Maritime Studies truly is a destination of choice for learners, scholars and professionals who seek to become leaders in coastal, marine and maritime fields. Aggies by the Sea have the best of both worlds-the unparalleled, world-class experience of Texas A&M University combined with the family-like atmosphere of the Galveston Campus"-Dr. Debbie Thomas, Founding Dean*

Dr. Anna Weiss, Director of Green Galveston Initiatives at Vision Galveston



Anna is a coastal scientist and community engagement specialist with a decade of experience conducting environmental research and connecting people with their coasts. Although initially trained as an academic scientist, she joined the world of nonprofits to have a more hands-on role working with communities. Anna earned a B.A. in Anthropology from Stony Brook University, a Ph.D. in Geosciences from the University of Texas at Austin, and subsequently completed a post-doctoral fellowship in reef ecology at the Environmental Research Institute of the University of Belize. Prior to joining Vision Galveston, Anna worked as the Community Science Program Manager at the Billion Oyster Project in New York City, and was Assistant Professor of Geosciences at Midwestern State University in Wichita Falls, TX.

## Other GANBASE Participants

Ryan Bare, Sr. Research Scientist, Program Director, Houston Advanced Research Center (HARC)



Dr. Ryan Bare is the Program Director of Water and Nature-Based Solutions at HARC. Dr. Bare applies his expertise in hydrology, ecology, and natural and water resource management to conduct applied research on social and environmental challenges across coastal and inland watersheds. Dr. Bare leads multi-disciplinary projects, bringing effective research, actionable outreach, and equitable approaches for the design, planning, and implementation of nature-based practices to the forefront. Dr. Bare earned a Doctorate in Water Management and Hydrological Science from Texas A&M University's. He obtained a Master of Science in Marine Resource Management from Texas A&M University at Galveston, and a Bachelor of Science in Environmental Science with a concentration in Marine and Coastal Resources from Texas A&M University – Corpus Christi.

Erika Boerr, Senior Project Manager, City of New Orleans, Stormwater and Green Infrastructure



Erika Boerr is currently employed as a Senior Project Manager in the Stormwater and Green Infrastructure Department of the City of New Orleans, and for the past 6 years has been focused on Stormwater Management projects. She has recently launched the construction of the largest flood mitigation project, both geographically and financially, in New Orleans.

Erika started her interest in Disaster Recovery work at Dillard University, where she worked as the FEMA/Capital Funding Analyst, managing their Hurricane Katrina Recovery Programs.

Erika's passion is to advocate for Project Management in all business disciplines. She strives to continue to work on Green Infrastructure, Nature-based Solutions, and Resilient projects for Climate Action worldwide.

## Andrew Ferris, Native Plants Program Coordinator, Coalition to Restore Coastal Louisiana



Andrew Ferris lives in New Orleans, Louisiana, where he works as the Native Plants Program Coordinator at the Coalition to Restore Coastal Louisiana.

## Sierra Hildebrandt, Old Dominion University



Sierra Hildebrandt is a Ph.D. candidate in the Ecological Sciences Program at Old Dominion University. As a member of Dr. Taylor Sloey's Wetland Plant and Restoration Lab, her research focuses on evaluating the efficacy of living shorelines as a shoreline management technique and restoration strategy. Her research combines field- and remote-sensing data to understanding how living shoreline designs can reduce erosion and sustain intertidal habitat. Before starting her Ph.D., Sierra received her M.S. in Biology with a concentration in Marine and Environmental Sciences from Hampton University in 2021. Her M.S. research focused on evaluating the efficacy of an alternative oyster production method for restoration and aquaculture. Sierra received her B.S. in Biology with a concentration in Marine Science from Old Dominion University in 2018. Sierra is a recipient of the prestigious Virginia Sea Grant Graduate Research Fellowship (2022-2024) and a former Marine Scientist with NOAA's National Centers for Coastal Ocean Sciences (2024-2025).

Ganbaatar Khurelbaatar, Systemic Environmental Biotechnology (SUBT),  
Helmholtz-Zentrum für Umweltforschung - UFZ



Ganbaatar Khurelbaatar studied civil engineering at Mongolian University of Science and Technology in Darkhan. Shortly after graduation, he received a DAAD scholarship for his doctoral thesis at the Bauhaus University Weimar, in Germany. During his PhD, he worked on a technology that could withstand Mongolia's extremely harsh winters and would provide economic benefits. After he completed his PhD, he joined a team of researchers working on water-sensitive infrastructure planning (WASP) at the Helmholtz Center for Environmental Research in Leipzig, Germany. Within the WASP, he worked on the development of GIS-based decision support tool for wastewater management scenarios to determine the most cost-efficient solution. In the wake of climate change and ever-increasing urbanization, he is also working on planning methods for so-called blue-green infrastructure or nature-based solutions for urban water management. Overall, he has worked on a number of international projects in Germany, Spain, Denmark, Jordan, Oman, India, China and Mongolia.

Corey Miller, Community Engagement Director, Pontchartrain  
Conservancy



Corey Miller is the Community Engagement Director for Pontchartrain Conservancy (PC). A third-generation New Orleanian, he received his MA in Sociology at the University of New Orleans through an assistantship with their Center for Hazards Assessment, Response and Technology. He joins PC with more than a dozen years of experience working to improve coastal community resilience in the face of land loss, climate change, hurricanes, flooding, and a constantly changing environment. Throughout, he has focused on increased awareness through community outreach and improving ways that local knowledge and

public input can be garnered and incorporated into plans for coastal restoration, flood protection, and community adaptation.

## Blaise Pezold, Coastal Program Director, The Meraux Foundation



Blaise Pezold is the Coastal and Environmental Program Director for the Arlene and Joseph Meraux Charitable Foundation. To advance the Foundation's mission to improve the quality of life in St. Bernard Parish, Blaise helps plan and execute the nonprofit's work to preserve, protect, and restore the area's natural environment, especially its vulnerable coast. His work includes field projects, strategic partnerships, community engagement, and public awareness. He liaises on coastal matters between nonprofit, government, and strategic partners. Blaise is a St. Bernard Coastal Zone Board member and the Crescent Soil Water Conservation District

Vice Chairman. Notably, he designed the \$29 million Bayou La Loutre Ridge and Marsh restoration, assisted in the design of the \$46 million Reggio Marsh Creation and Hydrological restoration, and designed the \$35 million Woodlake Marsh Creation and Terraces CWPPRA projects. Blaise was also instrumental in founding and partnering the Central Wetlands Reforestation collective, which will plant 30,000 trees and 33,000 plugs of marsh grass to restore wetland ecosystems in his community. He was the recipient of the Louisiana Association of Conservation District's Guy Caire award in 2022 and the Coalition to Restore Coastal Louisiana's Coastal Stewardship Award in 2024. Learn more at [www.merauxfoundation.org](http://www.merauxfoundation.org).

## Luisa Rieth, LKN.SH



I'm the full-time project manager of the pilot project ECOHAL, which is part of the Interreg project MANABAS COAST. Since October 2023, I work as a project engineer at the Schleswig-Holstein State Agency for Coastal Defence, National Park and Marine Conservation (LKN.SH) and am responsible for the conceptual planning of possible nature-based solutions for the Halligen, as well as morphological and hydrological data analysis. I hold a Master of Science in Hydrology and have additional experience in conflict- and working groups mediation and moderation in citizen participation processes.

Amy E. Scaroni, Ph.D., Assistant Professor, Extension Specialist, Department of Forestry and Environmental Conservation, Baruch Institute of Coastal Ecology and Forest Science, Clemson University



Amy Scaroni is an Assistant Professor of Watershed Management at Clemson University in South Carolina. She holds a dual appointment as a Water Resources Extension Specialist with Clemson Extension. Dr. Scaroni works in collaboration with coastal communities to identify and address sources of water pollution through research and education. She is particularly interested in the development and implementation of watershed plans, and the use of nature-based solutions to address water quality challenges.

John Supino, PhD Candidate, Boston College



I am a chemical oceanographer and wetland scientist interested in fundamental ecosystem processes and land-ocean-atmosphere dynamics at the coastal interface. My doctoral research uses marine carbon and oxygen biogeochemical cycling in tidal wetlands as a way to assess ecosystem metabolisms. I use autonomous biogeochemical sensors to measure a variety of parameters to assess how anthropogenic disturbance and climate change have altered tidal marshes, how they might change in the future, and how effective current climate mitigation and restoration techniques are in keeping blue carbon in place.

Alicia Wach, Kiel University



Having a background in environmental sciences, my focus shifted from natural sciences towards questions of responsibility and justice in my two masters programs on Environmental Ethics and Sustainability Science. Having studied in Lima, Lisbon, and Kiel, I am passionate about coastal regions and inter- as well as transdisciplinary knowledge transfer.

During my time at Potsdam Institute for Climate Impact Research, I was able to broaden my view, connecting climate issues with migration, agriculture, and biodiversity with partner countries from three continents.

## Shri Verrill, Owner, Principal, Sunrise Ecologic



Shri Verrill works at the intersection of ecological restoration, nature-based solutions, and economic democracy, advancing projects that strengthen both ecosystems and communities. With a background in salt marsh biology and coastal infrastructure adaptation, Shri brings scientific expertise and collaborative leadership to initiatives that address climate resilience while fostering equitable, community-driven decision-making.