



EBC Climate Change Webinar Exploring Climate Impacts on Natural Systems

Thursday, January 13, 2022

Program Chairs

Samuel Bell, Senior Resiliency Planner, GZA GeoEnvironmental, Inc.
Nasser Brahim, Senior Climate Resiliency Specialist, Woods Hole Group
Katie Kemen, Director of Climate Resilience Sciences, BSC Group, Inc.
Melissa Ocana, Climate Adaptation Coordinator, University of Massachusetts Amherst

AGENDA

- 9:30 a.m. **Welcome:** Ann Gisinger, Executive Director, Environmental Business Council
- Program Introduction**
- Katie Kemen, Program Co-Chair
Director of Climate Resilience Sciences, BSC Group
- 9:45 a.m. **Overview of Climate Impacts on Natural Systems**
- Toni Lyn Morelli, USGS Research Ecologist
Northeast Climate Adaptation Science Center
- 10:00 a.m. **Understanding Changes in Soil and Proactively Designing for the Future**
- Keith Zaltzberg, Designer/Principal, Regenerative Design Group
- 10:15 a.m. **Networking Break**
- 10:30 a.m. **Understanding Climate Impacts and Adaptation in New England Forests**
- Madeline Baroli, Climate Adaptation Specialist
Northern Institute of Applied Climate Science
- 10:45 a.m. **Belle Isle Marsh: Assessing the climate vulnerability of Boston's largest salt marsh**
- Conor Ofsthun, Coastal Scientist, Woods Hole Group

11:00 a.m. Moderated Discussion

Moderator: Melissa Ocana, Program Co-Chair
Climate Adaptation Coordinator
University of Massachusetts Amherst

Panel Members:

- Madeline Baroli, Northern Institute of Applied Climate Science
- Toni Lyn Morelli, Northeast Climate Adaptation Science Center
- Conor Ofsthun, Woods Hole Group
- Keith Zaltzberg, Regenerative Design Group

11:30 a.m. Adjourn

PROGRAM CHAIRS

Samuel Bell, Senior Resiliency Planner
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue, Norwood, MA 02062
781-278-3847 | samuel.bell@gza.com

Sam Bell is a Senior Resiliency Planner who has spent the last 14 years working with local communities and states around the country to prevent natural and climate-related hazards from becoming disasters. He serves as the Planning Group Lead for GZA's Natural Hazard Risk Management practice group. In this role, Sam leads teams in assisting GZA clients with natural hazard and climate adaptation planning, risk assessments, risk communication, community education and outreach, and in preparing actionable hazard mitigation and climate adaptation measures designed to make communities more resilient. Sam is currently leading teams develop a statewide Climate Change Vulnerability Assessment Methodology for the Massachusetts Department of Conservation and Recreation and Climate Adaptation Plans for the Jones River Landing in Kingston, MA and Glen Cove, New York. He also assists public and private entities: 1) conduct flood vulnerability assessments; 2) prepare flood mitigation/climate adaptation solutions; and 3) prepare flood emergency response plans based on FM Global requirements.

Prior to joining GZA, Mr. Bell served as a Hazard Mitigation Grant and Planning Team Lead from 2007 to 2011 for the Federal Emergency Management Agency (FEMA). At FEMA, Sam provided disaster recovery support and natural hazard mitigation assistance to states throughout the Northeast and Midwest. He worked with State Emergency Management Agencies and Departments of Environmental Protection to identify strategies and natural hazard mitigation solutions to protect residences and critical facilities from incurring damages from future natural hazard events. From 2011 to early 2014, Mr. Bell assisted FEMA in revising risk evaluation and program effectiveness tools used to evaluate the effectiveness and eligibility of hazard mitigation assistance (HMA) projects including critical facilities and infrastructure. These tools included the FEMA Benefit-Cost Analysis (BCA) Tool Version 5.0 and a pioneering streamlined riverine flood loss avoidance study methodology used to evaluate the effectiveness of flood mitigation after completion. Sam also served as one of four Senior HMA Trainers providing grants management and BCA trainings throughout the United States.

Sam earned a Master of Arts in Urban and Environmental Policy and Planning from Tufts University and a Bachelor Environmental Design in Planning from the University of Colorado-Boulder.

Nasser Brahim, Senior Climate Resiliency Specialist

Woods Hole Group
107 Waterhouse Road, Bourne, MA 02532
617-498-4774 | nbrahim@woodsholegroup.com

Mr. Brahim is a Senior Climate Resiliency Specialist at Woods Hole Group, an integrated coastal engineering, science, and technology firm. He helps coastal communities build climate resilience through vulnerability assessments, resiliency plans, and design and operational improvements. Mr. Brahim has advised local, State, and non-profit partners on how to integrate climate resiliency considerations in policies and regulations, including Boston, Hingham, Hull, Gloucester, Oak Bluffs, Swampscott, Westport, Massport, and the Conservation Law Foundation. He has also led climate resiliency projects with municipalities, wastewater utilities, non-profit land conservancies, higher education institutions, and real estate property managers. His projects have earned numerous engineering, planning, and design awards and been covered by NPR, The Boston Globe, New York Times, The Washington Post, and PBS NewsHour. Mr. Brahim is the Board Vice-President of the Mystic River Watershed Association and a certified consultant under the Massachusetts Municipal Vulnerability Preparedness (MVP) Program. He holds a Master of Environmental Management from Yale University and Bachelor of Arts from Florida International University.

Katie Kemen, Director of Climate Resilience Services

BSC Group, Inc.
803 Summer Street, Floor 3, Boston, MA 02127
617-896-4494 | kkemen@bscgroup.com

Katie is the Director of Climate Resilience Services with BSC Group, a New England-based multi-disciplinary consulting firm that partners with clients to deliver creative, practical, and climate-resilient transportation, land development, and environmental solutions. Ms. Kemen has worked on public health, emergency preparedness, and resilience planning with a variety of public and private stakeholders for more than 12 years. Much of her work has focused on regional and systems-level projects to understand vulnerabilities and develop mitigation and action plans to address future risk. She holds a Master of Business Administration from Simmons University School of Management and a Bachelor of Science in Public Health from The George Washington University.

Melissa Ocana, Climate Adaptation Coordinator

University of Massachusetts Amherst
160 Holdsworth Way, Holdsworth Hall, Amherst MA 01003
413-541-6167 | mocana@umass.edu

As Climate Adaptation Coordinator at UMass Extension, Melissa focuses on capacity and network building for climate practitioners. She coordinates several communities of practice, including the [Massachusetts Ecosystem Climate Adaptation Network](#), to advance the climate adaptation field through peer-to-peer learning, ecosystems thinking, mainstreaming nature based solutions, and building relationships across networks. While focused on Massachusetts, Melissa also engages in regional and national climate adaptation efforts, such as the National Adaptation Forum Steering Committee and Climate Adaptation Fund Advisory Council. Previously, Melissa ran a capacity building and small grants program for NJ environmental nonprofits. She was also a Congressional Hispanic Caucus Institute Fellow on the House Natural Resources Committee Democratic Staff and Asst. to the National Climate Change Policy Advisor at the US Fish & Wildlife Service. Melissa has a MS in Wildlife Science from Oregon State University and BA from Vassar College.

SPEAKERS

Madeline Baroli, Climate Adaptation Specialist
Northern Institute of Applied Climate Science
Michigan Technical University
mjbaroli@mtu.edu

Maddy Baroli is a climate adaptation specialist with Michigan Technological University and the Northern Institute of Applied Climate Science. She contributes to the development and implementation of various tools and trainings that help natural resource professionals integrate climate change adaptation planning into their work. More specifically, she is focused on supporting partners working in the New England region and urban forests across the United States. Passionate about the intersections between climate adaptation, forest management, and community engagement and equity, Maddy completed her Master's in Forest Conservation at the University of Toronto in 2019. During her graduate studies, she developed and continues to manage a community science initiative for private landowners and community groups in northern Michigan that focuses on the assisted range expansion of climate-adaptive tree species. Maddy received her BA from the University of Michigan and previously worked on community forestry initiatives and climate adaptation planning at the City and County of Honolulu's Office of Climate Change, Sustainability and Resiliency.

Toni Lyn Morelli, USGS Research Ecologist
DOI Northeast Climate Adaptation Science Center
134 Morrill Science Center, Amherst MA 01003
413-545-2515 | tmorelli@usgs.gov

Toni Lyn uses [translational ecology](#), species distribution modeling, occupancy modeling, geospatial analysis, population and landscape genetics techniques, and decision analysis to facilitate natural resource management and habitat and species conservation in the face of climate and land use change. Current projects include studying [the impacts of climate change in boreal ecosystems](#); helping the National Park Service update its taxonomy and [analyze citizen science data](#); organizing a [Regional Effort on Invasive Species and Climate Change \(RISCC\) Management](#); and a continued focus on [operationalizing the concept of climate change refugia](#). Toni Lyn grew up near Detroit and received a B.S. in Zoology from Michigan State University. For her Ph.D. at Stony Brook University, she studied lemur behavior, ecology, and genetics in Madagascar. After her Ph.D., she worked as a postdoctoral fellow at UC Berkeley to understand how climate change had affected small mammals and montane meadows over the last century. She has also worked for the U.S. Forest Service, both as a research ecologist at the Pacific Southwest Research Station and as the Technical Advisor to the Democratic Republic of Congo.

Conor Ofsthun, Coastal Scientist
Woods Hole Group
107 Waterhouse Road, Bourne, MA 02532
508-495-6257 | cofsthun@woodsholegroup.com

Conor Ofsthun serves as a coastal scientist and planner for a variety of projects ranging from local redevelopment projects to regional planning studies. He specializes in the fields of coastal hazards evaluation, coastal engineering analyses, sea level rise adaptation, living shoreline development, beach nourishment, and wetland restoration. His favorite projects revolve around building resilience for both coastal habitats and communities in the face of climate change. Conor grew up on the South Shore of MA, received a BSc from Tufts University, and MSc from University of South Carolina, and has worked professionally on the Atlantic/Gulf/and Pacific coasts of the US.

Keith Zaltberg, Designer, Principal
Regenerative Design Group Cooperative
1 Chevalier Ave, Greenfield, MA
413-325-7968 | keithz@regenerativedesigngroup.com

Keith is a founding partner of Regenerative Design Group. His approach to design is grounded in understanding the ecological and social potential of place, rigorous analysis, and systematic assessment. Keith combines this approach with on-the-ground skills and a strong social justice mission to create landscapes that are rooted in place and community. He is a popular lecturer and instructor on permaculture design, urban agriculture, community resilience planning, and food systems. Keith has taught at The Conway School and Smith College. He is a certified Permaculture Designer, and holds a BS in Environmental Design from UMass-Amherst.