

Caribbean Basin EBM Tools Training

April 19-22, 2016
San Juan, Puerto Rico

Overview

This training event is sponsored by the [EBM Tools Network](#), a global network of thousands of coastal-marine EBM practitioners, researchers, and tool developers. The training was designed in partnership with many organizations (see logos below) and with input from discussions, interviews, and surveys of practitioner needs in the Caribbean Basin. This training is intended for all coastal-marine conservation and management practitioners in the region and will complement the many other training offerings consistently provided by our partners. The event is being held in conjunction with NatureServe's [Biodiversity without Boundaries \(BwB\) conference](#) that begins on April 18. Combined registration for both events is available at substantial savings.

Instructions for Pre-Registration

Below you will find details on the structure of the training event and options available for participants. There are limited numbers of participant spaces open for each of the four training themes, so please sign up early to secure your spot. Pre-registration is only open to practitioners within the region and will close on February 8, 2016. After that, the event will be open to the global EBM Tools community. **To pre-register, please take [this online survey](#). This is the only way to pre-register.** Once you pre-register, we will hold your spot until the official BwB early bird registration deadline of March 18. Instructions for registering will be provided in a subsequent e-mail.

Contact us

If you have any questions, please email samantha_coccia@natureserve.org.

Our partners



	- Optional <u>BwB</u> attendance
	- Tools Training events

Tentative Calendar

Monday 04/18	Tuesday 04/19	Wednesday 04/20	Thursday 04/21	Friday 04/22	
<p>8:30AM – 5:00PM <i>BwB – Plenary and Breakout Sessions</i></p>	<p>8:30AM – 5:00PM <i>BwB – Plenary and Breakout Sessions</i></p>	<p><u>8:30AM – 10:30AM</u> Introduction, EBM framework, Caribbean climate change</p>	<p><u>8:30AM – 1:00PM</u> Technical Training in the 4 themes – Choose 1.</p> <ul style="list-style-type: none"> • Integrated Land-Sea Planning • Marine Spatial Planning/MPA Planning • MPA Management • Climate Adaptation 	<p><u>8:30AM – 1:00PM</u> Continuation of Technical Training in the 4 themes - (same as previous day).</p>	
		<p><u>10:30 – 11:00AM</u> Break</p>			<p><u>11:00AM – 1:00PM</u> Theme Introductions Breakout Session #1 – Choose 1 theme to attend</p>
		<p><u>1:00PM – 2:30PM</u> Thematic Group Lunches – choose any to attend</p>			<p><u>1:00PM – 2:30PM</u> Thematic Group Lunches – choose any to attend</p>
	<p><u>4:00PM – 6:00PM</u> EBM Tools Café</p>	<p><u>2:30PM – 4:30PM</u> Theme Introductions Breakout Session #2 – Choose 1 theme to attend</p>	<p><u>2:30PM-5PM</u> Continuation of Technical Training in the 4 themes</p>	<p><u>2:30PM-5PM</u> Continuation of Technical Training in the 4 themes</p>	
<p>5:30PM – 7:00PM <i>BwB – Welcome Reception</i></p>	<p><u>6:00PM – 9:00PM</u> NatureServe Conservation Award Dinner</p>	<p><u>5:00PM – 6:30PM</u> Social hour</p>	<p><u>5:30PM – 7:00PM</u> Social Hour and BwB Network Awards Social</p>	<p><u>5PM</u> Event concludes</p>	
		<p><u>6:30PM</u> Thematic Dinner Groups meet</p>	<p><u>7:00PM on</u> Thematic Dinners and Trainers Office Hours</p>		

Detailed Agenda

Tuesday, April 19 (optional attendance)

Tool Café (4-6 pm, Miramar Foyer, joint event with BwB)

Come join trainers and other participants for tool introductions at the Tools Café. Participants can circulate among trainer stations for informal discussion of their training themes and tool demonstrations. Optionally, afterwards join the BwB Conference Awards Dinner (see registration options).

Wednesday, April 20

Introduction- All Participants (8:30-10:30 am, Miramar Ballroom 1-3)

- 8:30-9 am- Welcome and introductions of organizers and trainers
- 9-10 am- Coastal-marine EBM and the role of tools (UNEP representative and Patrick Crist of the EBM Tools Network)
- 10-10:30 am- Overview of Caribbean climate data and trends (US Southeast Climate Science Center)

Break (10:30-11 am)

Theme Introductions: Breakouts Session #1- Participants select one to attend (11 am-1 pm)

Note: Introductions are offered twice so participants can participate in their main theme of interest plus a secondary theme. Sessions will focus on the major concepts, objectives, and workflows of processes and how tools fit into the workflows. These are introductions to the technical sessions that follow on Days 2 and 3.

Theme 1: Integrated land-sea planning/Ridge to reef planning (includes climate change planning and adaptation) (Location TBA)

Description: This theme addresses the technical process for coordinating assessment and planning across linked terrestrial and marine domains. It includes the ability to assess land-based stressor impacts on the marine environment, threats to terrestrial resources and development from flooding from storm surge and sea level rise, and coordinating planning to maximize effectiveness and efficiency across the linked domains. An initial two hour overview session on the first day will describe the case for integrated land-sea planning; an overview of the key concepts, methods, and steps; necessary data and technical team composition; and illustration of projects applying these

concepts and illustrating some key tools. A two-day technical training will follow that will present in-depth the methods and steps, hands-on engagement with [NatureServe Vista](#) and [OpenNSPECT](#), and discussion of alternative methods in lower data or capacity situations.

Theme Trainers: Dr. Patrick J. Crist, NatureServe; Dr. David Eslinger, NOAA. Please see biographies in Appendix.

Theme 2: Marine spatial planning and marine protected area (MPA) planning (Location TBA)

Description: Marine Spatial Planning (MSP) is a participatory public process for the science-based design of EBM plans. At each step of the MSP process, decisions must be made about how to engage with relevant stakeholders and bring the best-available science to the table. This is true for designing multi-sector zoning plans as well as networks of marine reserves. A variety of tools, ranging from process frameworks, modelling tools, mapping platforms, and plain old well-designed web pages, can be employed to facilitate each of these steps. In this 'theme', we will dive into each of the key steps of MSP, the various types of tools that can support those steps, and how to determine the best tool for your process needs. We will provide hands-on exercises to explore case studies of the implementation of two software tools used to support this type of work in varied contexts around the world: SeaSketch and Marxan. SeaSketch (seasketch.org) is a web-based mapping platform to support diverse participation in data collection, plan design, and evaluation of those plans based on the best available science. Marxan is a spatial network scenario planning tool that allows visualization and prioritization of a variety of conservation (or other types of management) network schemes that each meet user-defined targets based on local datasets and preferences. Seasketch and Marxan can be used together to greatly enhance each tools' contributions to a spatial planning process.

Theme Trainers: Dr. Will McClintock, University of California Santa Barbara; Grace Goldberg, University of California at Santa Barbara; Dr. Heather Coleman, PacMARA. Please see biographies in appendix.

Theme 3: Marine Protected Area Management (Location TBA)

Description: The use of MPAs has become increasingly popular in the wider Caribbean region as a tool to conserve marine biodiversity, address overfishing impacts, decrease user conflicts, and provide economic alternatives to local coastal communities. This has resulted in substantial knowledge gained on MPA management – issues such as optimal site selection and design, successful outreach approaches, effective management strategies, and appropriate methods to evaluate their effectiveness. Difficulties in exchanging information on lessons learned continue to constrain informed decision-making due to the geographic, socioeconomic, and cultural complexities of the Caribbean region. At the same time, communication among professionals has become progressively more vital given the increasing scientific interest in the examination of biophysical connectivity across the region. The Caribbean Marine Protected Areas Managers (CaMPAM) was created in 1997 to help to reduce this gap. It brings together MPA researchers, administrators, managers, and educators from governmental entities and non-governmental

organizations as well as the private sector in an inclusive network to exchange ideas and lessons learned through a variety of mechanisms.

The course will be aimed at providing an introduction into the longer 11-day training sessions that CaMPAM leads for MPA managers. It will in addition (i) provide working experience on the management and governance of MPAs from CaMPAM MPA mentors who have done the training and have hands-on experience; (ii) provide and demonstrate some of the critical tools MPA managers have found useful in their operations; (iii) introduce key management strategies for MPA management.

Theme Trainer: Dr. Georgina Bustamante, CaMPAM. Please see biographies in Appendix.

Theme 4: Tools for coastal climate adaptation and risk reduction (Location TBA)

Description: This theme gives participants the opportunity to explore various resources and decision support tools focused on coastal resilience and climate adaptation. During the two hour overview session, trainers will outline key concepts like data needs, challenges, and how to identify the appropriate tools to support community-based adaptation, coordinate risk assessments, identify nature-based solutions, and guide adaptive planning and management from local to regional scales. The comprehensive half day training (4 hrs) will be offered on Thursday to be repeated on Friday to allow flexibility for participants schedules. During this in-depth training session, participants will dig deeper into several climate adaptation and decision support tools including a) An overview of the Local Early Action Planning (LEAP) tool, b) The Nature Conservancy's (TNC) Reef Resilience Network, and c) TNC's Coastal Resilience online mapping decision support system. Through tool demonstrations, hands-on training, and case studies from around the globe, attendees will explore adaptation and resilience strategies that can be applied to management and development plans as well as specific policies and planning processes. The training will also examine the integral relationship between field monitoring, modeling/analysis, and tools for communication and decision support. Participants will walk away with an understanding of community-based adaptation planning processes, knowledge of a suite online tools that address climate resilience, and opportunities to identify nature-based adaptation solutions. Collectively, the tools presented in this theme provide a path to incorporating resilience into management plans and actions.

Theme Trainers: Dr. Lizzie McLeod, Laura Flessner, and Cherie Wagner. Please see bios in Appendix.

Thematic Group Lunches (1-2:30 pm)

The learning will continue over lunch. Trainers and participants in the thematic groups are encouraged to attend lunch together to continue conversations to share knowledge and form partnerships. Lunch cost is not included.

Theme Introduction Session #2- Participants select a different session to attend (2:30-4:30 pm)

Theme 1: Integrated land-sea planning/Ridge to reef planning (includes climate change planning and adaptation) (Location TBA)

Theme 2: Marine spatial planning including marine protected area (MPA) planning (Location TBA)

Theme 3: Marine protected area (MPA) management (Location TBA)

Theme 4: Engaging communities in planning and management (Location TBA)

Social Hour (and a Half) (5-6:30 pm, Location TBA)

Enjoy a social time with the trainers and other participants. This social hour will give participants an opportunity to informally discuss their particular situations with the trainers and other participants.

Thematic Group Dinners (Meet at 6:30 pm)

Network with trainers and other participants to share knowledge and form partnerships. Four separate dinner groups will be formed, one for each of the themes (dinner cost not included):

- Theme 1: Integrated land-sea planning/Ridge to reef planning- meet at Location TBA
- Theme 2: Marine spatial planning including marine protected area planning- meet at Location TBA
- Theme 3: Marine protected area management- meet at Location TBA
- Theme 4: Engaging communities in planning and management- meet at Location TBA

Thursday and Friday, April 21-22

Technical Training Sessions

Each theme will conduct a detailed, two-day training session that will explore the theme in-depth and may include hands-on training with tools (computer tools will require participants to bring their own laptops, pre-loaded with the software and training data sets—further details will be provided).

Theme 1: Integrated land-sea planning /Ridge to reef planning (Location TBA)

- Description: **See full description above (under Wednesday, April 20th)**

Theme 2: Marine spatial planning including marine protected area (MPA) planning (Location TBA)

- Description: **See full description above (under Wednesday, April 20th)**

Theme 3: Marine protected area (MPA) management (Location TBA)

- Description: **See full description above (under Wednesday, April 20th)**

Theme 4: Tools for coastal climate adaptation and risk reduction (Location TBA)

Full two-day technical training pending, at a minimum this will be a half day training

- Description: **See full description above (under Wednesday, April 20th)**

Thematic Group Lunches (Thursday and Friday, 1-2:30 pm)

The learning will continue over lunch. Trainers and participants in the thematic groups are encouraged to attend lunch together to continue conversations to share knowledge and form partnerships. Lunch cost is not included.

Social Hour (and a Half) (Thursday, 5:30-7 pm in conjunction with the BwB Network Awards Social)

Enjoy social time with the trainers and other participants. This social hour will give participants an opportunity to informally discuss their particular situations with the trainers and other participants or network with the broader conservation community of the BwB conference.

Thank you to our sponsors:



And for contribution of meeting space:



Theme 1: Integrated land-sea / Ridge-to-reef planning

Trainers and Bios

Theme Lead/Trainer: Dr. Patrick J. Crist, Director of Conservation Planning and Ecosystem Management, and PI for the EBM Tools Network. Dr. Crist is an originator of integrated land-sea methods and toolkits, having led projects in the Caribbean and all main U.S. coasts. He led development of the free NatureServe Vista decision support system which will be used in the training.

Co-Trainer: Dr. Dave Eslinger is an oceanographer with the NOAA Office for Coastal Management. At NOAA, Dr. Eslinger does a variety of activities, all, in general, aimed at making technical information more accessible and usable by coastal managers. These include leading the design and development of, and training on, GIS tools for examining impacts of land use change on imperviousness, water quality, and erosion; and displaying historical tropical storm information with the Historical Hurricane Track tool. He has been the driving force behind the NSPECT software since 2004, when it was first released as an Esri Extension.

Theme 2: Marine spatial planning including marine protected area planning

Trainers and Bios

Theme Lead/Trainer: Dr. Will McClintock leads the creative team at the McClintock Lab in the University of California's Marine Science Institute, and is a member of the [Center for Marine Assessment and Planning](#). Dr. McClintock received his B.A. in Biology from Earlham College, M.S. in Behavioral Ecology from the University of Cincinnati, M.A. in Counseling Psychology from Pacifica Graduate Institute, and Ph.D. in Ecology, Evolution and Marine Biology from the University of California Santa Barbara. His lab develops SeaSketch and other software tools to support data-driven marine resource management, and works closely with government and non-profit entities to implement those tools around the world.

Co-Trainers:

Dr. Heather Coleman has a background in marine ecology, oceanography, ecotoxicology, and environmental economics. As the Science Advisor for PacMARA, Heather provides scientific advice on marine spatial planning and ecosystem-based management issues for the Canadian government and internationally. She also co-leads the development and delivery of training programs in marine spatial planning, especially Marxan, and communicating best practices for sound integrated marine planning. She has organized and taught Marxan courses since 2010.

Grace Goldberg is Projects Manager in the McClintock Lab at the University of California Santa Barbara's Marine Science Institute. She is trained as a scientist, interested in research questions that include human users in marine ecosystems, with relevance to spatial management and real conservation goals. Grace received her M.S. in Marine Systems and Conservation from Stanford University, where she spent time at Hopkins Marine Station as a scientific diver, and in the Earth Systems Program, which focuses on interdisciplinary environmental problem solving, systems thinking, and communication.

Theme 3: MPA Management

Trainers and Bios

Dr. Georgina Bustamante ([bio](#)) has served as the CaMPAM coordinator since 2008, served as Executive Team lead, and has contributed to several of the training and communication activities. She is an independent consultant on marine conservation science and management and the coordinator of CEP the Caribbean Marine Protected Areas Management Network and Forum (CaMPAM) the UNEP-CEP MPA network and capacity building program which includes training, small grants, technical assistance and a social network. She has authored over 30 scientific papers and books and has worked in site-based, regional and international conservation projects for The Nature Conservancy, UNESCO's World Heritage Program, UNEP's Caribbean Environment Program (CEP), and the Food and Agriculture Organisation (FAO).

Co-Trainers: CaMPAM MPA mentors -TBA

Theme 4: Coastal Resilience and Climate Adaptation

Trainers and Bios

Co-Trainer: Dr. Lizzie McLeod is the Nature Conservancy's Climate Adaptation Scientist for the Asia Pacific region and the Science Lead for the Reef Resilience Network which provides the latest scientific guidance and resources to help coral reef managers globally to address the impacts of climate change and local threats. Her research focuses on building the resilience of coastal communities and ecosystems to climate change. She has over a decade of experience developing new strategies to reduce the impacts of climate change on tropical marine ecosystems and developing tools and guidance to help managers and communities to respond. Lizzie received her PhD in climate vulnerability and adaptation in tropical systems from the University of Hawaii.

Co-Trainer: Laura Flessner received her undergraduate degree from Virginia Tech and a Master's Degree in Coastal Management and GIS certification from the University of North Carolina Wilmington. She is currently a Spatial Analyst with The Nature Conservancy's Global Oceans Team where she provides spatial analysis, database management, and web mapping capacity that supports the Coastal Risk and Resilience strategy. This strategy includes programs such as Coastal Resilience, Mapping Ocean Wealth, Floodplains by Design, and the post-storm Recover, Rebuild, and Restore project.

Co-Trainer: Cherie Wagner is the Reef Resilience Program Associate for the Global Oceans Team. She supports the development of the Reef Resilience Toolkit, webinars, newsletters, and training resources. She also works to coordinate the NOAA-Coral Reef Conservation Program/TNC partnership to support the efforts of coral reef managers and conservation partners in Florida, the U.S. Virgin Islands, Puerto Rico, Hawai'i, American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam. She has a Master's degree in Marine Affairs from the University of Washington where she focused on marine resource use and community-based marine protected area management in the Philippines.

