



Technology Tools for Coastal-Marine Ecosystem-Based Management

Coast to Coast Conference '08
August 21, 2008, 2-5:30 pm
Darwin, Australia

Workshop description: Innovative software tools for planning for and implementing coastal-marine ecosystem-based management (EBM) are emerging from regional resource planning and management projects from around the world. For example, software tools can now help predict ecosystem response to human and natural disturbances, select optimal areas for conservation or restoration, visualize the impact of development and resource-use scenarios on an ecosystem, collect local knowledge about a resource, and facilitate stakeholder voting on management alternatives. Using these tools can improve environmental decision making by helping resource managers incorporate science into decisions, address multiple objectives, and build consensus for management actions among stakeholders. This workshop will provide an overview of existing tools that can be used for EBM in coastal and marine environments (including live demonstrations of select tools) and resources for learning more about tools. This workshop is organized by the EBM Tools Network (www.ebmtools.org), an international alliance of government, non-profit, academic, and private tool developers, users, and training providers to promote awareness, development, and effective use of software tools and methods for EBM.

Audience: Natural resource managers and researchers interested in EBM, no technical skills required

Objective: Provide an understanding of how software tools can facilitate EBM and discuss available tools and resources

Workshop Agenda:

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| 2-2:15 pm | Welcome and introductions of workshop presenters and participants |
| 2:15-2:35 pm | Introduction to software tools for coastal-marine EBM and the EBM Tools Network by Sarah Carr, EBM Tools Network Coordinator |
| 2:35-2:50 pm | “Interoperating decision support tools to facilitate integrated planning across ecosystems: Case studies from Puerto Rico and Texas, USA” by Patrick Crist from NatureServe |

Ongoing projects in Puerto Rico and Texas explore and demonstrate how existing tools can be interoperated to support cross sector and cross ecosystem analysis and planning. In these projects, CommunityViz-- a land use planning tool, NatureServe Vista—a conservation planning tool, and N-SPECT, a non-point source pollution modeling tool are being interoperated to increase capability for cross sector/ecosystem planning.

2:50-3:05 pm **“New Developments in Conservation Planning: Prototype Return on Investment Tool” by Bob Pressey and Doug Ward from ARC Centre of Excellence for Coral Reef Studies**

We will be presenting a prototype interactive tool that uses estimated species-area curves for vegetation types to calculate return on investment (e.g. species added to the reserve system per \$100,000). This presentation will address potential future developments, including adaptation to the marine environment and integration of data on multiple biodiversity benefits and downstream benefits of protection and restoration.

3:05-3:20 pm **“Coastal Hydrodynamic Modeling for Determining Dredge Spoil Impacts and Contaminant Dispersal” by Tony Chiffings and Morten Rugdjern of DHI Water & Environment**

We will provide an overview of DHI software for coastal hydrodynamic modeling with a focus on dredge spoil impacts and the dispersion of contaminants. The basics of building and testing a hydrodynamic model will be explained. This will be followed by an explanation of how the dispersion of material such as dredge spoil or other pollutants (dissolved and particulate) can be incorporated and mapped. The assessment of risks to environmental receptors will be discussed.

3:20-3:30 pm **Overview of how upcoming tool demonstrations will work**

3:30-4 pm **Afternoon tea**

4-4:30 pm **First round of live tool demonstrations (workshop participants select one)**

4:30-5 pm **Second round of live tool demonstrations (workshop participants select one)**

5-5:30 pm **Panel discussion with presenters and workshop evaluation**