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The EBM Toolbox: Citizen Science for EBM, Part 1

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The data requirements for EBM are vast and can seem overwhelming. One of the most alluring possibilities to address this challenge is to crowdsource at least some of the data collection through citizen science.

Citizen science is the use of nonprofessionals in any part of a scientific process, but most commonly in data collection, validation, and analysis. To date, most citizen science projects in coastal or marine ecosystems have involved groups of nonprofessionals collecting data to:

- Assess or monitor species and habitat condition;
- Describe human use of resources;
- Detect the presence of invasive species; or
- Build the citizen scientists' own awareness and understanding of resources and the environment.

Citizen science has particular interest and appeal for marine data collection because the marine environment is difficult and expensive to survey. Resource managers and conservationists can harness the activities and efforts of boaters, kayakers, divers, surfers, fishers, and other ocean users to monitor and protect the environments these groups love and depend on. In addition, citizen science is growing in appeal and possibilities thanks to the popularity of cell phones: these devices dramatically increase the capability of nonprofessionals to collect data (including high-resolution images and sounds), transmit data, and georeference observations.

Of course, there are many challenges involved in obtaining and using data produced by nonprofessionals, particularly the challenge of avoiding data-quality problems such as sampling bias.

This Toolbox is the first in a series that will explore the use of citizen science in coastal and marine environments. In the next Toolbox, we will profile several successful and innovative coastal-marine citizen science projects and provide links to a summary of additional ones.

Editor's note: *The goal of The EBM Toolbox is to promote awareness of tools for facilitating EBM. It is brought to you by the EBM Tools Network, an alliance of tool users, developers, and training providers. Sarah Carr is coordinator for the EBM Tools Network. Learn more about EBM tools and the EBM Tools Network at www.ebmtools.org.*

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