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## EBM Toolbox: Yes, There Are Apps for EBM (Part 1)

**Editor's note:** The goal of The EBM Toolbox is to promote awareness of tools for facilitating EBM processes. It is brought to you by the EBM Tools Network, a voluntary alliance of tool users, developers, and training providers.

By Sarah Carr

[A year ago in this column](#), I remarked on a problem for the field of coastal and marine EBM tools. Namely, although the number and functionality of these geospatial tools had grown rapidly, the complexity of the tools often made it difficult for managers to use them.

The column also noted a shift occurring in personal computing in general: from complex, multifunctional desktop tools to "apps" - easier-to-use, limited-functionality tools appropriate for mobile devices. In that context I asked, "Is there an app for EBM?" Having some simple apps could make it easier for managers to conduct geospatial analysis for EBM, assuming the apps' lesser functionality could still accomplish some tasks adequately.

The EBM Tools Network spent the past year polling the EBM community on ways that apps could (and, it turns out, already do) support coastal and marine conservation and management. We found that the characteristics of mobile devices - e.g., their small size; extreme portability; ability to capture high-resolution images and sounds; ability to receive, store, and transmit data; ability to determine location; and ability to communicate with environmental sensors - provide a host of new opportunities for collecting and sharing data and information, particularly between communities/stakeholders and managers. Some specific uses for mobile device apps include:

### Increasing and improving data collection by professionals

Apps can provide forms to speed field data collection, georeference photos and other observations, serve as memory and input-output devices for environmental sensors, read identification tags, rapidly transmit data from the field to centralized databases/analytical tools, and in turn receive data from centralized databases/analytical tools to guide next steps for field data collection (e.g., starting a new transect). Some of these tasks are currently done with relatively expensive handheld devices, but apps for consumer-grade devices will make these capabilities more affordable and widespread. Examples of apps for field data collection include:

- iGeoTrak (<http://gisroam.com/igeotrak>), which helps users develop customizable geospatial collection forms for field data.
- Open Data Kit (<http://opendatakit.org>), which provides tools for building data collection forms and collecting data on mobile devices and uploading to servers.

### Enabling more meaningful and useful "stakeholder science"

Apps can facilitate "stakeholder science" by enabling the public to contribute data, such as through participation in species inventories. Observations can be recorded, georeferenced, and sent to relevant management bodies in a structured manner that facilitates their use. This allows traditional scientific data collection to be supplemented with customary knowledge and observations from community members. Some examples of relevant apps include:

- Mobile field guides for identifying species.
- Apps that harness new technologies such as face recognition software to identify species (e.g., LeafSnap <http://leafsnap.com>).

Part 2 of this column, in the next issue of MEAM, will describe apps that provide stakeholders and communities with greater access to data and information, as well as apps to increase monitoring and enforcement effort.

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[Sarah Carr is coordinator for the EBM Tools Network. Learn more about EBM tools and the EBM Tools Network at [www.ebmtools.org](http://www.ebmtools.org).]

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