

MPA Practitioners Face Challenges in Accessing Science

The heightened interest in MPAs among resource managers has spurred a wave of related scientific research and a growing library of academic articles and reports. But how much of this scientific discovery is reaching MPA practitioners -- the people who need this information to plan and manage their MPAs effectively? MPA News asked two practitioners about the availability of scientific information and explored what others are doing to help translate science into action.

Viet Nam: Available science is inadequate

Many obstacles can exist on the route between MPA science and MPA practice, and Nick Cox has experienced several of them first-hand. A British volunteer for Voluntary Services Overseas, or VSO (a UK-based international development charity), Cox advises the director of Viet Nam's coastal Con Dao National Park on management issues. Marine conservation is still a very new concept in Viet Nam, he said, and gathering the information necessary to manage MPAs is difficult.

"Out of more than 100 protected areas [in Viet Nam], only two have officially recognized marine components with protected status," said Cox. "As one might expect, information sharing and networking are pretty much non-existent."

International organizations, including the United Nations Development Programme and the Australian Institute for Marine Science, have organized training courses for managers in the region. Nonetheless, Cox says Viet Nam's overall level of marine conservation training is poor. "The [Vietnamese] government does not have the funds or experience to offer full-time education courses in marine conservation, and so the education system continues to churn out an excess of foresters," he said.

Even something as mundane as language can present a major barrier to science dissemination. "Other than the fact that scientific marine research with the national park is increasing and there is a growing amount of research being undertaken in the country as a whole, generally the amount of scientific information available -- particularly in Vietnamese -- is grossly inadequate," said Cox. Notably, most major international journals that regularly publish MPA-related research are available only in English.

Even for English-speaking practitioners, it can be difficult to stay informed. Money is a factor: the cost of subscribing to the relevant journals is usually prohibitive to anyone but universities and well-funded agencies. In Viet Nam, said Cox, the internet currently offers the best hope for managers needing information, though he still finds it lacking. "We have tried to find a definitive website where we can access up-to-date information, or a good e-mail listserv, but to no avail," he said.

Australia: Lack of socioeconomic data

Grahame Byron manages Jervis Bay Marine Park, a 220-sq. km MPA along the coast of New South Wales, Australia. Unlike Cox in Viet Nam, Byron is reasonably satisfied with the biological and geophysical data available to him. Much of this may relate to where he works: Australia has been a global leader in marine protected areas for decades, establishing some of the world's largest MPAs and generating long-term marine biological research.

Science is more than studying the natural world, however. It also includes sociology, economics, and other social sciences, and Byron says it is in these disciplines that information is still lacking for the MPA manager. Locally for his park and around the world, he says, there is a shortage of socioeconomic data necessary for MPA practitioners to do their job effectively.

"The role of managing a park comes down to managing people, and while generally most people are concerned about the natural environment, they still have a strong commitment to their personal situation," said Byron. "We need to be able to gain information about social and economic issues. Our community support quite often depends upon our ability to maintain social harmony and economic viability."

Byron has conducted MPA training courses for managers in Australia and Asia, and observes that most managers confront similar issues, despite dissimilar environments. He adds, however, that although many managers may believe they hold a broad perspective on MPA management, they in fact work mostly in exile in their parks, due either to geographic or resource

constraints. He'd prefer that there be more networking of managers to share information and data.

"I would like to see mechanisms introduced to bring these managers together, either physically or through technology," he said. Like Cox, Byron recommends the establishment of an internet-based discussion network on MPAs. For a more formal source of scientific information, Byron would like there to be a high-quality journal of marine protected area management to encourage development of management-support mechanisms and further the science of MPA management.

Although such mechanisms are necessary, said Byron, they will encounter their own obstacles. Managers in many locations already have full schedules and lack the time and resources needed to report on their management. Also, he added, managers in developing countries often lack confidence in their techniques, and are therefore sometimes reluctant to provide detailed information to others.

Getting science to practitioners

Several experts and organizations around the world are working to improve the dissemination of MPA science. Here are two efforts:

Sharing regional information: In the Caribbean Sea, fisheries scientists and managers have teamed to share information of regional interest through the Gulf and Caribbean Fisheries Institute (GCFI). Founded in 1947, GCFI holds an annual meeting devoted to technical presentations and workshops on Caribbean marine resource issues. As an independent not-for-profit corporation, GCFI generates its support through member contributions and subscriptions to the conference proceedings, distributed to more than 80 countries.

The institute began holding special workshops on MPAs four years ago, says Leroy Creswell, executive secretary of GCFI. "With MPAs, most of what we talk about is related to fisheries biology, such as spawning aggregations, larval dispersion, and migration into and out of protected areas," said Creswell. "But GCFI is every bit as manager-oriented as science-oriented. In the islands, practitioners often wear both hats." The GCFI website is <http://www.gcfi.org>.

Bridging the gap: Kathy Kohm is dedicated to bridging what she considers a gap between conservation science and practice. As editor of *Conservation Biology in Practice* (CBIP), a new quarterly publication of the US-based Society for Conservation Biology, Kohm wants to serve conservation practitioners and policy makers who are short on time but long on information needs. She describes CBIP as a mix between a magazine and journal.

"Scientists and practitioners speak wholly different languages, with entirely different jargon," said Kohm. "We can't bridge the gap through grand scientific theories, but we can do it by telling good stories, such as through case studies." CBIP features such case studies, along with reviews of tools, notes on resources, and other information. The next issue of CBIP will cover the topic of marine reserve networks. Individual subscriptions range from \$US 30-40. The CBIP website is <http://cbinpractice.com/CBIP>.

For more information:

Nick Cox, 29 Vo Thi Sau, Con Dao District, Ba Ria-Vung Tau, Viet Nam. E-mail: nickcdnp@hcm.vnn.vn.

Grahame Byron, Jervis Bay Marine Park, Marine Parks Authority, New South Wales, Australia. E-mail: grahame.byron@npws.nsw.gov.au.

BOX: Workshop on MPA Science and Management

There will be an international workshop on the role of science in the management of marine protected areas on 14-16 July 2001 in Cleveland, Ohio, USA. The workshop will examine how science contributes to the effective management of various types of MPA, and is designed for MPA and coastal-management practitioners to share their experience and knowledge.

Some limited financial support is available for attendees from developing nations to cover the workshop registration fee. The workshop will be co-sponsored by the US National Oceanic and Atmospheric Administration (NOAA), UNESCO, the University of Rhode Island Coastal Resources Center, and other organizations. The workshop will be concurrent with the Coastal Zone '01 conference.

For more information or to register, visit the workshop website: <http://www.csc.noaa.gov/cz2001/workshops.html>.

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