

Recruiting Research That Is Useful to Your MPA: Advice from Experts

For MPAs, scientific research on the effect of management policies is central to measuring overall success. Most managers, however, lack the funding to conduct such studies in-house. As a result, they must rely on external researchers - with their own interests and priorities - to conduct the work.

How can managers find scientists willing and able to do the necessary research? This month, MPA News interviews two practitioners - one from the Caribbean island of Saba, one from the US - about the challenges managers face in recruiting researchers, and how they can find the scientific help they need.

(Editor's note: For the purposes of this article, MPA News has not drawn too fine a line between monitoring of MPAs [i.e., routine observations to track changes over time] and research [i.e., investigating why such changes or other phenomena occur, based on hypotheses]. Although we acknowledge the difference, managers need each of them, and therefore must find funding for both.)

Managers, not scientists, should set agenda

Tom van't Hof, an independent consultant based on Saba in the Netherlands Antilles, helped establish three MPAs in the archipelago and has advised on MPA projects around the world. Managers need to do a better job, he said, of setting the research agenda for their sites. "MPA managers should specify their research needs and subsequently get scientists to conduct that research," he said. "Currently, it is often the other way around, with scientists determining the research agenda."

The scientists are not to blame for this, said van't Hof. "Academic research has been around a lot longer than the MPAs with their practical information needs," he said. "Academic research has its own agendas, determined mostly by purely scientific questions, and it is supposed to be value-free." When MPAs began to appear, he said, they were viewed as good natural laboratories for basic science research. MPA managers, although often recruited from the community of marine biologists, were too busy managing, and could not afford time to develop research agendas. "The managers would welcome almost any research coming their way," he said.

Much of that research consisted of basic, rather than applied, science. In last month's MPA News [3:9](#), a former manager of the Bonaire Marine Park said that although some research conducted there during her nine-year tenure was invaluable to management, these studies comprised only a small part - 5% - of the total research performed. Van't Hof says this is beginning to change, due to financial considerations. Funding for basic science is becoming more limited, he said, while support for applied, management-related research is growing - with government, private foundations, and NGOs contributing. As a result, scientists are increasingly pursuing applied research in MPAs, which may bode well for management.

Managers who lack a scientific background can find it difficult to develop an independent research agenda, said van't Hof. In such cases, managers often turn to scientists for help. But without limits set, the resulting research proposals can quickly grow beyond what a manager needs to know, he said. "That's all fine and useful if you have the means [to oversee and pay for it], but most managers don't," he said. "You need to be restrictive in your research and monitoring programs. Beware of the 'ideal and all-encompassing' monitoring program, because you won't be able to afford it."

Van't Hof said that because most MPAs limit or ban certain activities, the fundamental research and monitoring program for an MPA should address two main issues:

1. Are the restrictions achieving the desired objectives?
2. What is the impact of the permitted activities, and is that impact acceptable?

"These two research questions should be interesting enough in themselves to attract scientists," he said. Managers should not sit back and wait for researchers to come to them, though. "MPA managers should offer incentives to scientists who will conduct management-related research," he said. "Such incentives could include boat and land transportation, accommodation, lab or office space, air fills, etc."

Steady stream of researchers

For nearly two decades, Terry Stevens has been recruiting researchers to study the MPA he oversees. As manager of the Padilla Bay National Estuarine Research Reserve in the state of Washington, USA, Stevens has worked with funders and local academic institutions to draw a steady stream of researchers. (The Padilla Bay site is one of 25 National Estuarine Research Reserves, or NERRs, across the US. The NERR program [<http://www.ocrm.nos.noaa.gov/nerr/>] emphasizes the use of these sites for research, education, and the raising of public awareness on estuaries.)

The 44-km² site consists largely of seagrass meadows. Upon designation of the MPA in 1980, management set a research agenda that focused on this key biological component. Namely, the agenda called for a mix of basic and applied research to examine the biology of the seagrass, its importance to the neighboring human community (e.g., as a nursery for salmon), and impacts on the seagrass from adjacent agricultural activities.

"Once the research agenda was set, the next thing we did was to establish a network of research partners at agencies and universities who shared the same basic and applied research goals," said Stevens. Management formed a research advisory committee for the site in the 1980s, composed of a dozen people from various fields. Now, in addition to setting short-term research priorities, the committee helps steer the site's long-term monitoring program, which relies on students, interns, and staff to perform environmental baseline studies.

In terms of attracting scientists to pursue the research agenda, said Stevens, "Money is the issue." Graduate students - a major source of research labor - are generally cash-strapped, so anything an MPA can do to help lower students' costs can make a difference. Management has built bunk rooms and shower facilities for students to use while conducting research. The cost to the MPA was US \$8,000, a relatively small price to ensure that students could afford to do research there.

Marketing plays a key role in the Padilla Bay research strategy. "Each year, we advertise our major research topics to local graduate programs," said Stevens. Topics range from short-term studies lasting several months to longer ones of up to three years' duration. The MPA offers a competitive funding process whereby master's degree students vie for grants of \$5,000 per year. Funding for the grants comes from private sponsors - including corporations, foundations, and individual donors - and federal sources.

Grant candidates meet with the research advisory committee. Once the process reaches this point, said Stevens, students tend to pursue their research whether or not they receive the funding. Padilla Bay has four master's theses currently ongoing.

To further advertise his site's science needs, Stevens announces the research agenda through newsletters, journals, conferences, and internet bulletin boards. Padilla Bay staffers have also visited with undergraduate students headed to graduate school, inviting them to contact the MPA if they are interested in pursuing research there in the near future. By planting the MPA in the minds of young researchers, said Stevens, "We're sowing seeds in the academic community."

The federal government, through the NERR program, also contributes research support to the site through two annual grants of \$18,000 each; the funds go to support two Ph.D.-level students. In addition, the program has developed a central database to store data collected from all 25 NERRs across the country.

For more information

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