



# MARINE PROTECTED AREAS TECHNOLOGY NEEDS ASSESSMENT

## EXECUTIVE SUMMARY

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Prepared by the NOAA Coastal Services Center in Cooperation  
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## EXECUTIVE SUMMARY

During the period from March 2003 to July 2003, the National Marine Protected Areas (MPA) Center's Training and Technical Assistance Institute, housed at the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center, conducted a technology needs assessment. The assessment aimed to gather information on MPA-related applications of technology and to gauge technical capacity within the marine management community. The results will guide the National MPA Center, the Coastal Services Center, and other assistance providers as they design services and products to support U.S. marine protected areas.

### Methodology

Although several sources contributed to the overall conclusions of the needs assessment, a series of phone interviews served as the primary source of information. The interviews were conducted with coastal managers, scientists, and technology specialists from federal and state entities involved with MPA management or enforcement activities. Interviewees were asked to identify and discuss three high-priority management issues that could be addressed through the application of technology.

### Results

Priority issues identified by those interviewed fall into three main categories: marine habitats, enforcement and boundaries, and monitoring the marine environment. Respondents specifically noted the need for benthic habitat maps and more useful benthic data (e.g., proper scale, improved spatial coverage); technologies to improve enforcement, such as on-board chart-viewing software, vessel monitoring systems, and basic equipment such as radios and cell phones; and the application of monitoring data to MPAs. The interviews also identified a need for tools that are able to convert critical information and data (both from natural and social science) into formats, such as geographic information system (GIS) maps, that are palatable to core constituencies. In addition to these materials, interactive decision-support tools and visualization technologies were noted as effective mechanisms to communicate potential impacts of a proposed activity and to engage local user groups in the decision-making process.

The assessment also determined that, rather than simply focus on the creation of more training and more data, MPA-related technical assistance must consider methods to increase the utility of existing resources. Respondents indicated that training would be more effective if it were to incorporate time for students to use their own data and if training were coordinated regionally to foster a greater level of consistency in data creation and sharing. Regional coordination related to data standardization and access is also needed.

### Recommendations

The needs assessment has identified a number of technology needs that the National MPA Center, the NOAA Coastal Services Center, and other training and technical assistance providers should begin to address. The process of addressing these needs should begin with

- Expanding technology use in MPAs,
- Communicating the pros and cons of the variety of available benthic mapping technologies,
- Acquiring data that can be used to improve modeling efforts,
- Utilizing technology applications to address social and natural sciences,
- Improving accessibility of data and training,
- Continuing and expanding efforts to utilize historical data sets, and
- Evaluating the utility of existing tools and trainings.