

# **The Gulf of Maine Biogeographical Information System project: developing a spatial data management framework in support of OBIS**

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Central to the development of an inventory of marine life and improved conceptual understanding of the mechanisms that dynamically shape species distribution patterns is the implementation of strategies aimed at enhancing assimilation and access to existing biogeographical information. Using the Internet as a medium, the Gulf of Maine Biogeographic Information System (GMBIS) project provides a framework and set of reusable tools for the integration, visualization, analysis and dissemination of diverse types of biogeographical and oceanographic information. End-to-end viability of this approach is demonstrated in the context of a series of scientific storylines and a pilot application for the Gulf of Maine (GoM), a well-studied ecosystem that has been subject to large-scale perturbation due to overfishing. Databases at the core of the information system include those of the DFO Bedford Institution of Oceanography and Atlantic Reference Centre, which are the product of multidisciplinary research efforts over the last several decades. Development of GMBIS may serve not only as a model for OBIS, but it may also provide a tool supporting new international and Canadian directives for integrated marine resource management. This paper summarizes the status of the GMBIS project currently in its final phase, and outlines possible future directions in information system development for the CoML.