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Good Read Review: Enabling Long-Term Oceanographic Research

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Baker, Karen S. and Cynthia L. Chandler, Enabling long-term oceanographic research: Changing data practices, information management strategies and informatics. *Deep-Sea Research II*. 55 (2008) 2132-2142.

Authors Baker and Chandler have helped to shape the components of information systems within long-term oceanographic research projects and served as data stewards for the Long Term Ecological Research (LTER) Network and US Joint Global Ocean Flux Study, respectively. In this article, they create case studies by discussing their work with multiple institutions and ocean and information scientists, and highlight strategies to building successful information ecosystems. Professionals in their positions disseminate data and information at local and global levels within a world where data are expected to be available for reuse, and there is not always a clear technological answer to provide access and support integration. They illustrate that information systems are complex and interact with human, as well as environmental systems.

These case studies may help others in similar roles to describe components of good data management practices, identify challenges related to reuse of data by a wider and remote audience, and enhance local understanding and communications around information management strategies. The examples from long-term projects include the recognition that it is important to incorporate information management in science planning to facilitate data access and data integration beyond the local study and into the future. Information management systems, such as the ones described in this paper, have grown from providing data organization at the site to manage information exchange electronically. Baker and Chandler explain the importance of communicating local knowledge about the data to support efficient

and effective data reuse. They also report that local data and metadata are now accessible in repositories that contain information from beyond the local site. They discuss the importance of information awareness, flow and federation as a site or project's information is included in larger and broader archives and repositories.

This paper describes different and similar approaches to information management from two long-term projects both focused on ocean science and both part of institutions participating in multi-site interdisciplinary research initiatives. After gaining much experience in developing their own systems, policies, infrastructure, and working environments, Baker and Chandler describe the complexities inherent to managing diverse information for local and global users, within their own systems and across a federated information landscape. They illustrate the concept of an information environment where ocean domain and information scientists can discuss elements comprising their systems; some are data, technology, oceanography, and people, and the ocean informatics that occur where these components interact.