

Director of Research: Data Publication and Citation

The MBLWHOI Library, Biological and Chemical Oceanography Data Management Office (BCO-DMO), and collaborators have put together an Ocean Data Publication Cookbook (2013 UNESCO Manuals and Guides 64). This manual provides an up-to-date set of "best practice" examples for data publication in the ocean sciences. Please visit the [Data Management and Publishing webpage](#) for more information on the Library's involvement in this emerging world of data publishing and citation.

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Publishing and Citing Ocean Data

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 A UNESCO Manual and Guide 64

Introduction

Data collected in the ocean sciences, whether generated from research or operational observations, are not always reported in national or international repositories or data centers in a format that makes them accessible and reusable. Often, there are insufficient incentives for data submission, resulting in low submission rates and even when submitted, a bare minimum of metadata. The problem is in part cultural. Publications of data do not carry the same weight in deciding promotion and tenure as papers that include analyses of the data. Promotion criteria do not take into account the innovation and complexity of data acquisition in challenging environments.

The advent of publisher and funding agency mandates to make data accessible is a requirement that is forcing scientists to make their data available. However, the ability to use the data accurately and to make reuse easier is advantageous to researchers. Scientists are now becoming aware that Digital Object Identifiers (DOIs) offer the means to easily cite their datasets and gain citation metrics.

Data Publication

The Scientific Committee on Oceanic Research (SCOR), the Marine Biological Laboratory/Woods Hole Oceanographic Institution (MBL/WHOI) Library, and the International Oceanographic Data and Information Exchange (IODI) of the Intergovernmental Oceanographic Commission have assembled a team of librarians, data managers, and scientists who are collaborating to identify best practices for faculty data governance and clearly attributing credit to data collectors/providers.

A key element in the data publication process is the assignment of persistent identifiers to enable access to data sets and accurate data citation. The MBL/WHOI Library can assign a DOI to appropriate datasets deposited in the Institutional Repository (IR) Woods Hole Open Access Server (WHOAS) by scientists from the participating institutions. The DOI is clearly assigned before submission of the article in which the data are used, so the DOI can be included in the published paper and readers can link directly to the dataset. However, DOIs are also being assigned to datasets that support papers that have already been published. WHOAS metadata records link the article to the datasets and the datasets to the article.

Data Associated with an Article

1. Deposit Data and Metadata
2. DOI Assigned
3. Dataset can be cited

Data Held by Data Centers

The Woods Hole Oceanographic Institution (WHOI) Library, which is supported by the Digital Oceanographic Data Center, is providing a portfolio of specialty ocean datasets that are archived using rigorous version management. The publisher provides access to these data in a way that they can be updated and referred to over an indefinite period of time. Only metadata standards adopted across IODI's Environmental Data Centres, the repository assigns DOIs obtained from the British Library/DOI.org to appropriate datasets.

Results

The project team has completed a Cookbook available online as IODI Manuals and Guides No. 64 to enable other data centers and libraries to emulate these services. Feedback from those who use the Cookbook will help determine the weaknesses and strengths of the document, and the entire version will be updated as more experience is gained.

WHOAS is now included in the Thomson Reuters Data Cite Index, providing citation metrics and credit for the creation of research data.

Related Websites

Woods Hole Oceanographic Institution Library and Digital Oceanography Data Management Office
<http://www.whoi.edu>
 IODI Publisher Data Library <http://www.iodi.org>
 IODI Manual and Guide 64 <http://www.iodi.org/manuals/guide64>

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