

Improving the Reusability of Data and Sample Obtained JAMSTEC's Research Vessels and Submersibles

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Takayuki Tomiyama¹, Makoto Ito¹, Yasumi Toyoda¹, Hideaki Saito¹, and Chizuru Saito¹

¹JAMSTEC

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Abstract

Japan Agency for Marine-Earth Science and Technology (JAMSTEC) has been disseminated information of data and samples obtained by JAMSTEC's research vessels and submersibles via some databases. The core database is the Data and Sample Research System for Whole Cruise Information (DARWIN, <http://www.godac.jamstec.go.jp/darwin/e>). DARWIN provides information of more than 2000 cruises and 6500 dives, and its related observation data and geological sample. Each cruise or dive information page of DARWIN has links to related contents such as biological sample, deep-sea image, cruise report and data book provided by another databases. In this poster, we will introduce some examples of efforts to improve the reusability of data and sample described above. - Assignment of Digital Object Identifier (DOI): DOIs have been assigned to more than 2000 research cruises information from the early 1980s onward to promote data citation. A granularity of DOI is a research cruise information page defined as a cruise ID at this time. - Specification of Data Policy: DARWIN has been treated data and samples based on only JAMSTEC data policy until FY2018's research cruises. Currently, the applicable policy is dependent on type of cruise because the cooperative research cruises have been started since FY2019. DARWIN has been updated to display of an applicable policy on each information page clearly. The function is also available to add to another policy in the future. - Data Rescue: A cruise report is a prompt report that includes the purpose of the cruise, information about what kind of observation was done, how it was done and the results. Cruise reports for past research cruises have been found when moving laboratory and submitted to the Data Management Group. The reports have been scanned and saved as individual PDF to store for long-term and prepare for publication. A part of them with Principle Investigators' consent have been disseminated step by step.

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1 Introduction

Japan Agency for Marine-Earth Science and Technology (JAMSTEC) has been disseminated information of data and samples obtained by JAMSTEC's research vessels and submersibles via some databases. The core database is the Data and Sample Research System for Remote Cruise Information (DARWIN) [1]. DARWIN provides information of more than 2000 cruises and 4000 dives.

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2 a) Assignment of Digital Object Identifier (DOI)

In order to improve reusability of research data, JAMSTEC has minted DOIs to research data that will be available to the public for a long period of time [2].

DOIs have been assigned to more than 2000 research cruises information from the early 1980s onward to promote data citation. A granularity of DOI is a research cruise information page defined as a cruise ID at this time.

2 b) Specification of Data Policy

DARWIN has been treated data and samples based on only JAMSTEC data policy from FY2008's until FY2018's research cruises.

Currently, the applicable policy is dependent on type of cruise because the cooperative research cruises have been started since FY2019. DARWIN has been updated to display of an applicable policy on each information page clearly. The function is also available to add to another policy in the future.




Figure 1. Display of data policies on DARWIN. The link of data policies in the red frame.

2 c) Data Rescue

A cruise report is a prompt report that includes the purpose of the cruise, information about what kind of observation was done, how it was done and the results. Cruise reports for past research cruises have been found when moving laboratory and submitted to the Data Management Group (Figure 2).




Figure 2. A part of cruise reports for past research cruises.

The reports have been scanned and saved as individual PDF to store for long-term and prepare for publication. A part of them with Principle Investigators' consent have been disseminated step by step (Figure 3).

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3 Summary

Improving research data reuse requires repeated efforts, and the practices described above are part of that.

In recent years, appropriate data citation has been encouraged in research activities, and we believe that these efforts will help in this regard.

In the future, we will consider the level of granularity of DOI assignment based on user needs and publish cruise reports and metadata for past research cruises on international cooperation.

URLs

[1] <http://www.godac.jamstec.go.jp/darwin/>
 [2] <http://www.jamstec.go.jp/database/doi/17396/whatdoi.html>
 [3] http://www.godac.jamstec.go.jp/catalog/remote_catalog/

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For a Borderless World of Geoscience

Japan Geoscience Union, American Geophysical Union

1 INTRODUCTION

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In this poster, we will introduce some examples of efforts to improve the reusability of data and sample described above.

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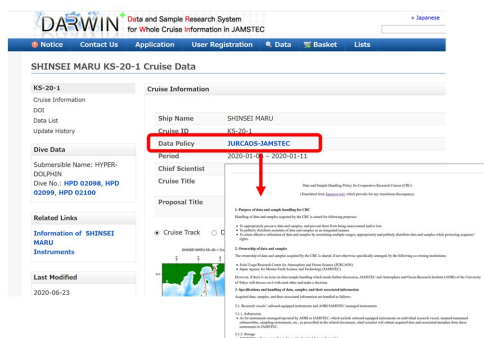


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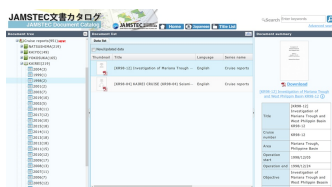


Figure 3. Publication of cruise reports via JAMSTEC Document Catalog [3]. These PDF files are available from cruise information pages on DARWIN.

3 SUMMARY

Improving research data reuse requires repeated efforts, and the practices described above are part of that.

In recent years, appropriate data citation has been encouraged in research activities, and we believe that these efforts will help in this regard.

In the future, we will consider the level of granularity of DOI assignment based on user needs and publish cruise reports and metadata for past research cruises whenever possible.

URLS

- [1] <http://www.godac.jamstec.go.jp/darwin/e> (<http://www.godac.jamstec.go.jp/darwin/e>)
- [2] <http://www.jamstec.go.jp/datadoi/doi/10.17596/e/about.html>
(<http://www.jamstec.go.jp/datadoi/doi/10.17596/e/about.html>)
- [3] http://www.godac.jamstec.go.jp/catalog/doc_catalog/e/
(http://www.godac.jamstec.go.jp/catalog/doc_catalog/e/)

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