[EE] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-GI General Geosciences, Information Geosciences & Simulations

# [M-GI23]Open Science as a New Paradigm: Research Data Sharing, Infrastructure, Scientific Communications, and Beyond

convener:Yasuhiro Murayama(Strategic Program Produce Office, National Institute of Information and Communications Technology), Yasuhisa Kondo(Research Institute for Humanity and Nature), Baptiste Cecconi(LESIA, Observatoire de Paris, CNRS, PSL Research University, 共同), Sean Toczko(Japan Agency for Marine-Earth Science and Technology)

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Open Science is growing as a new research paradigm to accelerate scientific innovation. Deployed by ICSU-WDS (2008), G8 Open Data Charter (2013), Research Data Alliance (2013), OECD Global Science Forum's research projects (2016), and G7 Science Ministers' Communique (2017), it commonly refers to the top-down policies to make results of publicly-funded research freely available and accessible. On the other hand, this term also refers to the participatory bottom-up approaches such as citizen science, crowdfunding, and transdisciplinary research (Kitamoto 2016). It is noted that both approaches envision the transformation of research process to more findable, accessible, interoperable, and inclusive one.
As a follow-up of the Great Debate "Role of open data and open science in Geoscience", this session reviews the current broad spectrum of Open Science, by welcoming a wide range of oral presentations and posters covering (but not limited to) open research data, open source licenses, data papers and journals, data repository, data sharing infrastructures and platforms, citizen science, crowdsourcing, crowdfunding, transdisciplinary research, capacity building, international networking, and deployment in earth and planetary sciences.

# [MGI23-P04]Current Open Science Activities for Research Data at JAMSTEC

*Kazuyo Fukuda[1], Hideaki Hase[1], Yasunori Hanafusa[1], Hideaki Saito[1], Hiroki Horikawa[1], Tomoki Sasaki[1]
(1.Japan Agency for Marine-Earth Science and Technology)

JAMSTEC established basic data policies named "Basic Policies on the Handling of Data and Samples [1]" in 2007 and initiated its operation in 2008. Research data that mainly contains observation data and sample information obtained by JAMSTEC research cruises have been published on the Internet on the basis of the data policies. These activities have achieved a certain level of reuses of data and samples for academic and educational purposes, and been in advance of research data sharing. On the other hand, there are still many issues that need to be addressed in the recent movement of open science. This paper will exhibit current two activities to improve findability and interoperability of research data published at JAMSTEC under open science.

-Findability of research data
Minting data Digital Object Identifier (DOI) to research data has been started to improve its findability. Earlier targets for minting data DOI are research cruise and dive information, observation data, cruise report, and dataset created by researchers published in JAMSTEC database for a long period of time. We are developing a Data DOI Management System and considering a sustainable workflow to mint and maintain DOI metadata.

-Interoperability of research data

Automatic linkage between JAMSTEC Data Catalog [2] and GeossPortal [3] has started to promote reuse data in the global geoscience community. About 50 metadata of JAMSTEC Data Catalog are searchable at GeossPortal by metadata harvesting as of February 2018.

The common key points for the both activities are appropriate metadata management, effective use of existing databases, and efficient linkage between data systems inside/outside the organization with limited manpower and system resources. Based on above our experiences, constrains and future prospects toward open science will be discussed.

References

[1] https://www.jamstec.go.jp/e/database/data_policy.html
[2] http://www.godac.jamstec.go.jp/catalog/data_catalog/e/index.html
[3] http://www.geoportal.org/