

Ocean Data Publication for Broad Utilization in JAMSTEC

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The Japan Agency for Marine-Earth Science and Technology (JAMSTEC) publicizes large amounts of observation data obtained by research cruises and deep-sea submersible surveys on “Data and Sample Research System for Whole Cruise Information in JAMSTEC (DARWIN)” [1] via the Internet. The main aim of this site is cyclopedic publication of the observation data obtained by research vessels and deep-sea submersibles in JAMSTEC. The observation data is publicized by each observation on DARWIN. Users can search for target data by data type, research vessel/submersible, observation period and so on, and directly download data files from this site.

In addition, we publicize the database site similar to DARWIN in Tohoku Ecosystem-Associated Marine Sciences (TEAMS) project JAMSTEC participates. TEAMS project aims to support the restoration of fisheries based on scientific data on the impact of the Great East Japan Earthquake on coastal marine ecosystems, environmental changes and their recovery processes. Integrated management, publication and quick sharing inside project of the observation data are important mission in TEAMS project. Besides, the building of ecosystem space model using observation data is one of the important research themes in TEAMS project. The observation data obtained by TEAMS project is publicized on “Research Information and Data Access Site of TEAMS (RIAS)” [2]. As with DARWIN, users can search for target data by the additional information, and directly download data files from this site.

However, users need to download the data files individually by each observation if users want to get the data obtained by a number of observations because data is publicized by each observation on these database sites. Furthermore, users need to convert the data because data format and unit are not standardized.

In order to address these issues, we constructed “TEAMS Environment and Biogeochemistry Data Information System (TEAMS-EBIS)” [3]. Users can download the unified data file including the data obtained by a number of observations from TEAMS-EBIS. Data format and unit are standardized in the downloaded data files. In addition, downloading of netCDF format file became possible by functional enhancement in this year. As the result of these efforts, it is expected that the utilization of data obtained by TEAMS project is promoted for broader purpose including a computer simulation.

This data publication function developed for TEAMS-EBIS can be applied to various observation data. Although TEAMS project terminates at 2021, we consider utilizing this function on the other database systems in order to make knowledge generated by TEAMS project useful. If this data publication function developed for TEAMS-EBIS is utilized on many other database sites, it is expected that the utilization of large amounts of data is promoted for broader purpose.

References

[1] <http://www.godac.jamstec.go.jp/darwin/e>

[2] <http://www.i-teams.jp/rias/e/>

[3] <http://www.i-teams.jp/ebis/e/>

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