

Oceanographic Data and Information Exchange for Open Science

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For more than 50 years, the International Oceanographic Data and Information Exchange (IODE) of the Intergovernmental Oceanographic Commission (IOC) of UNESCO has promoted and facilitated the exchange of oceanographic data and information between Member States for development and enhancement of marine research. The IODE system consists of 80 and more National Oceanographic Data Centres (NODC), Associated Data Units (ADU; former Designated National Agencies (DNAs)), and those data centres have been responsible for the collection, management, quality control and archive oceanographic data observed in each Member States. The World Ocean Database (WOD), gathering oceanographic data through IODE system, is most useable data product by National Centers for Environmental Information (former US-NODC), NOAA, and is also one of achievements by IODE projects for WOD and Global Oceanographic Data Archeology and Rescue (GODAR). Japan Oceanographic Data Center (JODC) is a representative of Japan for IODE and is the second largest contributor to WOD. The Ocean Biogeographic Information System (OBIS) joined as one of IODE projects in June 2009 after the successful decade-long Census of Marine Life project. The IODE system have many other projects for oceanographic data and information collection, quality control and dissemination managed by steering groups or task teams, and has a role of technical support to the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) by World Meteorological Organization (WMO) and IOC. The IODE joined as one of network members of World Data Systems (WDS) in 2013. At the same time IODE has started the Quality Management Framework project to identify a set of quality management criteria for NODCs taking into account those defined for the WDS, and JODC received NODC accreditation in 2019. In 2003 the IOC Assembly adopted Resolution IOC-XXII-6 entitled “IOC Oceanographic Data Exchange Policy” which is mentioned about the timely, free and unrestricted access to all oceanographic data and associated metadata and products. It is nevertheless known that there are many non-disclosure or non-digitized historical data and needs to progress a data publication and citation system for evaluating data management works.

Keywords: Oceanographic data, Data and information exchange, Quality control