



Completion of the 2nd Phase Development of the KOOS Data Management System

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KIOST started to establish Korea Operational Oceanography System (KOOS) in 2009 and a data management system was developed simultaneously. During the 1st phase of KOOS development (2009-2013), a data archiving system to collect all available ocean data around Korean peninsula and a data service system using OPeNDAP and LAS were set up for the ocean experts. The 2nd phase development of data management system (2014-2017) was focused on extending the area of data archiving and automation of data processing. The area of data collection was extended from the Korean area (20°N - 55°N, 110°E - 150°E) to the Northwestern Pacific area (0°N - 65°N, 95°E - 175°E). We began to download data from 4 new data sources at the 2nd phase and finally physical ocean data were being retrieved from 10 data sources (ARGO, GTSP, WOD, IQUAM, NCDC, OSTIA, AVISO, NIFS, KHOA, KMA) periodically. Automated data processing programs were coded to download data, retrieve data of NWP area, check duplication, inspect data quality, and produce data sets which can be used by data assimilation system in near real-time mode. We also made automation programs to download satellite data, subsample data of NWP area, and prepare data sets for ocean prediction models. The data service system of the 1st phase could provide output files of numerical models operated by KOOS and data files were updated manually. During the 2nd phase development, automated procedure and program was developed to update new data files on OPeNDAP server and manipulate XML files for deploying new data files to LAS server periodically. The 3rd phase of KOOS development will be started in 2019 and the data management system will be upgraded together. The detail implementation plan of data system will be prepared in 2018.