

National Report on Argo-2011

by Republic of Korea

Deployment in 2011 and Future Plan

Korea Meteorological Administration (KMA) and Korea Ocean Research and Development Institute (KORDI) are involved in the International Argo Program since 2001. In 2011, KMA deployed additional 14 floats in the East/Japan Sea (8 floats) and southwestern region of Kamchatka peninsula (6 floats).

KMA has a plan to deploy 15 floats in the Northwestern Pacific Ocean (5 floats) and the East/Japan Sea (10 floats) in July 2012. One float equipped with DO sensor will be deployed in the East/Japan Sea. It is expected that KMA is able to increase float deployment.

KORDI's strategy regarding the Argo program is under revised in terms of contribution toward the global ocean observation.

Status of Argo data management

During Mar. 2011 - Feb. 2011, 2,021 R-files of KMA were sent to GDAC. Last year, KMA data from 2001 to 2009 were included in ANDRO. This is done by Michel Ollitrault and Jean-Philip Rannou.

National Fisheries Research and Development Institute (NFRDI)/Korea Oceanographic Data Center (KODC) is responsible for DMQC. NFRDI/KODC executed new DMQC for 7,369 profiles from 82 floats (~66% of total profiles).

In addition, we plan to carry out CTD observation in Ulleung Basin this April to examine the feasibility of the East/Japan Sea Argo data DMQC.

Research and operational uses of Argo data

KMA is developing an operational ocean forecasting system for the global ocean. Last year, we started co-working with UKMO for the improvement NEMO/NEMOVAR system. Now, KMA is performing a hindcast simulation to examine model and assimilation performance.

Since 2001, four Dacs (KMA, KORDI, JMA, AOML) has deployed 143 Argo floats in the East/Japan Sea. Now, Argo data is the most important hydrographic data in this region. KMA carried out observing system experiment to examine the impacts of Argo data in a data assimilation system, and will submit the result to a journal this year.

Using Regionally Adapted QC (RAQC; developed by KMA) and the OI method, KMA generated monthly temperature gridded fields for the North Pacific Ocean from 2004 to 2010. Currently, the verification of gridded fields is being carried out by a comparison with other gridded data and climatology from WOA09. KMA has the plan to generate global T-S fields in the next year and to distribute the result via web site.