ID28 - HARMONISATION AND DISSEMINATION OF TSG DATA FROM IEO RESEARCH VESSELS

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Abstract
Advances in the harmonisation and dissemination of underway data from research vessels in the Spanish Institute of Oceanography (IEO) fleets will be presented.

Keywords - TSG, research vessels

I. UNDERWAY MEASUREMENTS ON THE IEO FLEET

The Instituto Español de Oceanografía (IEO) has implemented a subsurface water sampling network on its RV fleet like part of its observing system: IEOOS (1). This ship-based network is composed of two local vessels (B/O Navaz, B/O Lura), three regional ones (B/O Ramon Margalef, B/O Angeles Alvariño and B/O Francisco de Paula Navarro) and an oceanic one (B/O Miguel Oliver), operated by Secretaría General de Pesca. Each of them has been instrumented with a SeaBird 21 thermosalinograph (TSG) and most of them with a Turner 10 Fluorometer. The vessels navigate all around the Spanish seawaters: the Iberian Peninsula, Balearic and Canary Islands. The TSG data are daily sent to a processing center, where an automatic data processing system has been developed to manage all the information generated in quasi-real time by this subsurface sampling network.

II. QUALITY CONTROL AND DISSEMINATION

The daily quality control is performed in order to detect geopositioning errors, spikes, etc. This quality control includes the assignment of quality flags based on international criteria established in the frame of SeaDataNet European projects (2) and adds information about the data reliability. Delayed mode quality control and permanent data archive at IEO datacenter, includes a monthly validation and their incorporation to the SeaDataNet infrastructure, from where they are also accessible under the agreed data policy in MEDAR/MEDATLAS + ODV + NetCDFpoint formats including a GEONETWORK Catalogue. Daily controlled data are disseminated. Some TSG data are stored in a Thematic Realtime Environmental Distributed Data Services server (THREDDS, http://centolo.co.ieo.es:8080/thredds/) for operational oceanography purposes. This infrastructure facilitates the data access by scientific community and its visualization by means of Open Geospatial Consortium (OGC) standard services. Nowadays an automatic data storage system based on Postgres/PostGIS database is being developed in order to make easier the implementation of a user-friendly web service to visualize them. The metadata generation is carried out following INSPIRE (2007/2/EC) directive, allowing the interoperability of the database and making easier the development of end-user services based on it. In the framework of Interreg projects POCTEP Marrisk (0262_MARRISK_1_E) and Atlantic Area Mycoast (EAPA_285/2016), further effort in TSG data harmonisation and dissemination is in progress.

III. APPLICATIONS

This effort in TSG data gathering and their efficient distribution is helping to use these TSG data for the evaluation of the ocean models that routinely run in the Atlantic area. As examples of the scientific interest of these routinely acquired data, the system has given information on the exchange of water between the Galician Rias Baixas (seawater inlets on the NW Spain) and the shelf [2], the variability in the position of river plume fronts or the spatial variability of chlorophyll concentration.

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