

Westpac National Report for France

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In the 2004-2006 period, France contributed to the data collection in the West Pacific, mainly in three sub-regions of interest, which are regularly investigated:

- the New-caledonia region
- the Tahiti region
- the the Southern Ocean near 155 E.

The observations are collected either during Research cruises or via the operational oceanography observing system and archived at Ifremer/Sismer, the French NODC,. The environmental data collected in the water column are exchanged internationally in the frame of IODE and other on going international programmes like Gosud and Argo.

In the meantime, a contribution has been given to the development of standards in the perspective of interoperability between data centres in the frame of EU projects (Sea-Search and SeaDataNet) in collaboration with international organizations like IOC and ICES.

1 Research cruises in the Westpac region

Since 2004, 34 cruises have been operated by France in the Westpac region, mainly by the IRD Institute for Development on board of RV «*Alis*» and “*Astrolabe*”. The RV “*L’Atalante*” (Ifremer flag ship) and “*Marion Dufresne*” (Polar Institute IPEV flag ship) have also carried out cruises in the region.

1.1 ALIS Cruises

IRD, carried out 25 cruises for exploratory fisheries and biological data. Some environmental data (marine physics and biochemistry) have been collected during these cruises.

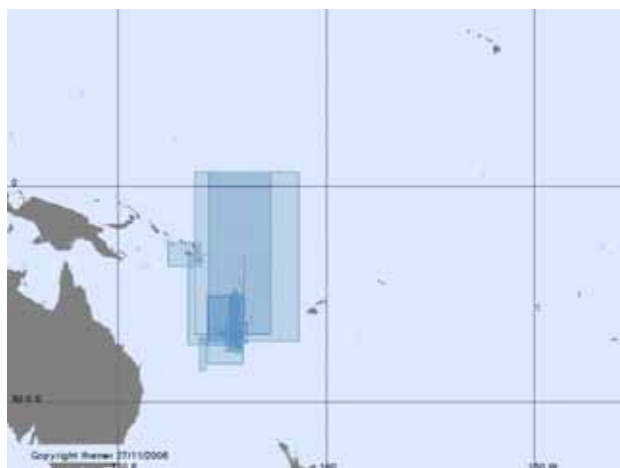


Fig. 1: RV *Alis* working areas

(the areas in the Tahiti region between 138 and 150 W are small, around selected atolls).

Data archived

Only data from CTD and bottle casts are archived (three cruises in the selected period).

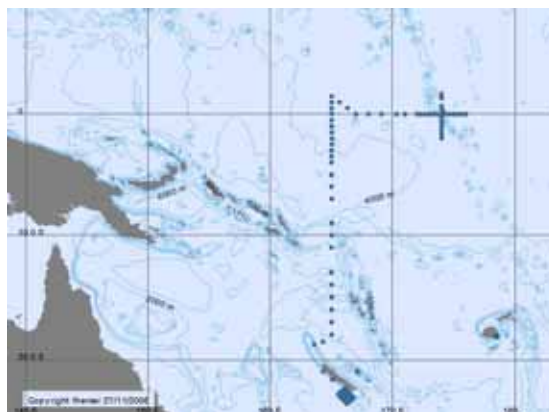


Fig. 2: Archived Data from the BULA5, FRONTALIS 2 (2005) and EMERLIS (2005) cruises.
These data are collected in repeated location integrated in the global database.



Fig. 3: Location of the *Alis* repeated observations from CTD and bottle casts during the 1991-2005 period

1.2 *L'Astrolabe*

Two series of cruises have been carried out along the 145E transect between Tasmania and Terre Adélie since 1992:

- MINERVE cruises : collection of pCO₂ and bio-geochemical data in the frame of PROOF/JGOFS France program. These data are presently in the process to be archived at Sismar but not yet available.
- SURVOSTRAL seasonal cruises related to CLIVAR (temperature, salinity by Xbt, XCTD and Thermosalinograph). These data are available through the operational oceanography data system system.

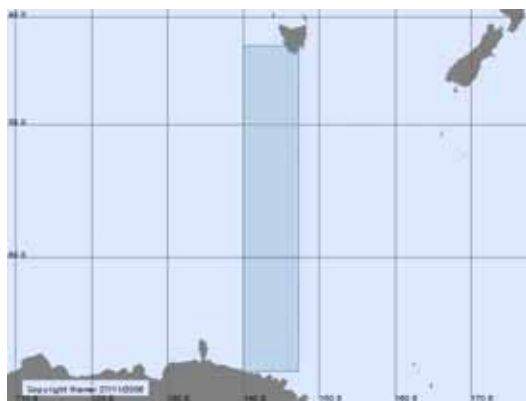


Fig. 4 Region of "*Alis*" repeated sections

1.3 *l'Atalante*

(Ifremer)

5 cruises, one for environmental observations (NODINAUT cruise) for biochemistry and benthic biology and 4 geophysical sciences in the New Caledonia Region and underway transects. For the benthic biology, the data are managed in the **biocean** database and the physical and bio-chemical data still in process of validation. These data still request special conditions to be accessed.



Fig.5: *L'Atalante* Cruises in the Westpac region in the 2004-2006 period

1.4 *Marion-Dufresne*

During the period, laboratories from the French CNRS carried out one geological and one bio-geochemical cruises on board the RV “Marion Dufresne” in cooperation with Chinese, Japanese, USA, German and other French institutes.



Fig.6: *Marion Dufresne* MD147 and MD148 Cruises in the Westpac region in 2005

2 Contribution to Operational Oceanography Data Management in the West-Pac Region

SISMER contributes to the data system of two major international projects in the frame of JCOMM and IODE: Argo and Gosud. If the objective is to provide observations data in near real time to the modellers, the link with GODAR is double: the standards for data processing and formatting should be compatible, and the data have to be integrated with the long time series of data of the same type. In addition, the structure use the results of GODAR (climatological data) to perform the quality checks.

The acces to data can be made by:

<http://www.coriolis.eu.org/cdc/>

2.1 Argo floats

The data collected by drifting profilers are available in real time and in delayed mode, after check and possible correction of the salinity drift according to Argo protocol. The Software Engineering Group Ifremer has developed some web services including data location (fig 7), profiles visualisation, data extraction at NetCDF and ASCII format to facilitate the selection and retrieving of the data that are managed by Sismser.



Fig 7: CTD Vertical profiles sent by Argo floats in November 2006

The database also manages profiles sent by moorings and buoys.

2.2 Contribution to Gosud

The database of the Global Ocean Surface Surface Underway Data, initiated under the frame of IODE, manages and disseminate in real time and delayed mode, data from thermosalinographs from voluntary Observing ships (VOS) repeated sections and research vessels (fig. 8a) and provides tools to merge them with surface data extracted from other sensors like buoys or drifting profilers (fig.8b).

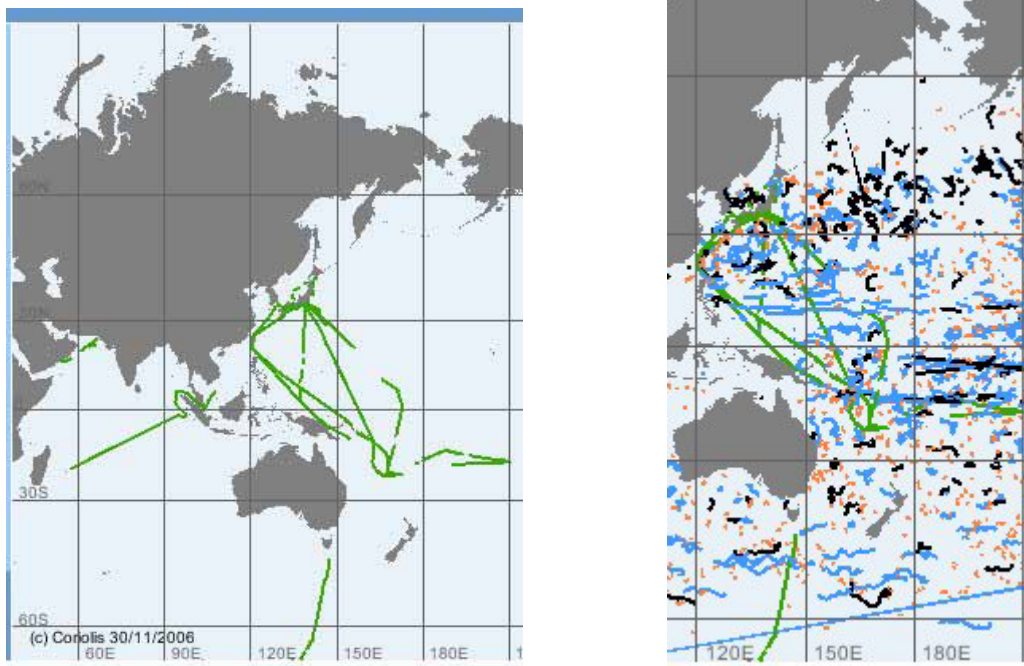


Fig 8: surface data collected in May 2006 a) from thermosalinographs b) from all available sensors in the region (in red the Argo floats, in blue the surface buoys)

3 On-line data and information access

Two major developments have been made or were initiated during the 2004-2005 period:

- The new data portal Nautilus
- Start of the development of the Pan-European Virtual data centre SeaDataNet.

3.1 Nautilus Portal

The Sismer site has been completely renewed and the new Nautilus portal for accessing data from several different Ifremer database has been opened on internet. All the available data and meta-data (cruise summaries, database summaries) can now be selected and downloaded from the new web site:

www.ifremer.fr/sismer

with geographical and other criteria selection tools. As soon as the data are checked for quality and archived in one of the connected Sismer data base, the data can be downloaded (according to the access rights). Presently the portal gives an integrated access to the data collected on board of the research vessels. The next step under development is the connector to the real time operational oceanography data base (Coriolis), and a further step will be the connector to the coastal network database.

3.2 SeaDataNet infrastructure

Following Sea-Search and several regional databases initiatives like Medar (GODAR regional project for the Mediterranean, the SeaDataNet project has been launched by a consortium of 49 partners in April 2006 to develop a Pan-European infrastructure to manage and give an integrated on line access to the data collected.

For the meta-data management , the important work on standardisation started during Sea-Sea-search has been continued and enhanced:

- the different inventories including the can be consulted from:
<http://www.seadatanet.org/inventories.htm>
- The transnational access to data is made through on line or email requests to the participating data centres:
<http://www.seadatanet.org/ta.htm>

During the present development phase, the different inventories and the different data centres should be interrogated successively by different requests, but in the following phase (the Virtual Data Centre) only one request will be necessary and the returned data and/or meta-data sets will be integrated (same standardized format).

A new issue is that it is not anymore necessary for the WODC and RNODC to send requests to each SeaDatNet NODC to retrieve ROSCOP/CSR or EDMED/MEDI information on a region like WestPac. Only one request to each inventory coordinator (respectively BSH, the German NODC and UK BODC) is necessary to get all the to get the updated forms. To enhance the visibility on the marine data management activity and strengthen the international cooperation of the related issues, the SeaDataNet project is announcing the new International Conference IMDIS 2008 that will take place in March 2008 in Athens. Further information will be disseminated with the first announcement in the coming weeks.