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**IODE NATIONAL REPORT ON OCEANOGRAPHIC
DATA MANAGEMENT AND EXCHANGE
FOR AUSTRALIA**

IODE NATIONAL REPORT ON OCEANOGRAPHIC DATA MANAGEMENT AND EXCHANGE FOR AUSTRALIA

1. Name of Data Centre:

Australian Oceanographic Data Centre (AODC)

2. National IODE Coordinator:

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3. Data Center Address:

Australian Oceanographic Data Centre
Directorate of Oceanography and Meteorology
Building 89/90, Garden Island
POTTS POINT NSW 2011
AUSTRALIA

4. Data Center URL:

www.aodc.gov.au

5. IODE Data Center Designation Date:

AODC was designated a NODC in 1964

6. Description of national data flow:

Australia's national data flow involves six Commonwealth agencies, each having responsibility for Marine data at a National level and for contributing to international Programs and Projects. The agencies and their lead areas of responsibility and international linkages are:

- 1. Commonwealth Bureau of Meteorology (CBM). Operational oceanography, SOOP, GODAE, GOOS, JCOMM, AVOF (Australian Volunteer Observing Fleet) and ABSLM (Australian Baseline Sea Level Monitoring.)*
- 2. CSIRO Division of Marine Research (CMR). Oceanographic research, SOOP, Argo, OBIS*
- 3. Royal Australian Navy (RAN). Hosts AODC, SOOP, military oceanography, acoustics, sediments, shallow water bathymetry*

4. Geoscience Australia (GA). Seismic exploration, bathymetry, acoustics
5. Australian Antarctic Division (AAD). All oceanographic disciplines relating to Antarctica and the Southern Ocean
6. Australian Institute of Marine Science (AIMS). All oceanographic disciplines relating to tropical and reef waters.

Metadata management:

Each of the Commonwealth agencies listed above is responsible for its own metadata management and for contributing discovery metadata to the Australian Spatial Data Directory (ASDD) <http://asdd.ga.gov.au/>, an initiative under the Australian Spatial Data Infrastructure (ASDI) http://www.anzlic.org.au/infrastructure_ASDI.html. Current ASDD requirements are for discovery level metadata only. Individual agencies may also contribute discovery metadata to the relevant international meta-directories or catalogues.

Cruise Summary Reports (ROSCOPs) are not submitted to IOC/IODE. Individual agencies may elect to provide cruise level metadata to the ASDD, or allow searches at a cruise level through their respective data directories and search tools

Metadata management for monitoring/operational systems is the responsibility of the participating agency. CBM has incorporated marine station metadata into its climate station metadata system SitesDB. Marine based metadata reports from CBM now are generated from SitesDB.

Data tracking:

No national level data-tracking infrastructure, able to monitor data from collection to dissemination, is currently employed in Australia. However, as reported by JCOMM at the October 2003 Kuala Lumpur meeting of the Interprogramme Task Team On The Future WMO Information System (Doc 3.4 at <http://www.wmo.int/web/www/FWIS/documents.htm>), CBM has analysed and described various key marine data end to end data flows. These include GLOSS, Sea Surface Temperatures and Sub Surface Temperatures.

7. What is the structure of marine data management in your country?

1. How many organisations are involved?

Six agencies, as listed above, are involved in the collection, archiving, processing and management of oceanographic data. One agency, the National Oceans Office is responsible for implementing Commonwealth government policy related to the Oceans.

2. Who does what?

See above for individual agency participation and responsibilities. Where several agencies jointly participate in an activity, cross agency committees or facilities may be established for improved coordination. The Joint Australian Facility for Ocean Observing Systems (JAFOOS), jointly operated by CBM and CMR, facilitates cooperation on research data management, including the scientific quality control of Indian Ocean data in delayed mode (presently some 4-5 years behind real-time); management of Argo data; and near-real-time scientific quality control of Australian SOOP data.

3. What data goes where?

All data is collected at an agency level and archived, managed and disseminated by that agency. Agencies will then contribute their data to the relevant International Program/Project, and may publish the metadata on the ASDD and make the data available through their agency level data centres. Some data collection and distribution utilises the WMO GTS access to which is via CBM

4. Are there data for which there is no home?

Yes. Data collected by commercial companies, universities and non-Commonwealth agencies are not routinely exposed through the ASDD or other data search engines.

5. What gets passed on to other organisations?

Exchange between Commonwealth Marine Science agencies is subject to individual arrangements between those agencies. Data collected under Australian participation in International Projects/Programs is routinely passed to the Project Office or made available through a local node of the Program/Project. Data is routinely submitted to the World Data Centre for Oceanography. Some operational data model simulated output is also distributed by WMO GTS.

6. What regional links and data centres are there?

Australia, through CBM, participates in PI-GOOS and is helping to support the PI-GOOS Coordinator in Fiji. One of the prime targets of that activity is facilitating data and information systems for the Pacific Island region. Australia also hosts a regional office of the IOC in Perth, Western Australia through a joint partnership of the Western Australia Government, CBM and the IOC. The IOC Regional Office also supports WAGOOS, a GOOS Regional Alliance with responsibility for the NE Indian Ocean.

- 8. What are the strengths and problems of the present arrangements nationally, regionally and internationally?**

The strength of present arrangements under which Australia participates at a national, regional and international level is in the individual marine science agencies and their data centres. Without a National coordination body, each agency has taken on this function for their respective areas of responsibility, effectively giving Australia six thematic or disciplinary Data Centres. The problems with the present national arrangements are the potential lack of coordination and delineation of responsibilities between the agencies, which could lead to inefficiencies at a time of limited resources.

- 9. What improvements could be made nationally, regionally and internationally?**

Greater coordination at a national level could lead to more efficient use of resources without impacting on Australian participation in regional and international activities. The development of an Ocean Portal to allow searches for marine data across all data centres could enhance data discovery and access for all users.

- 10. What future national activities are planned?**

AODCJF

The Australian Ocean Data Centre Joint Facility (AODCJF), a whole-of-government approach to ocean data management, will develop a multi agency data management system to manage the ocean data resources of the six agencies listed at Part 6. The AODCJF will manage data to meet national and international commitments through a distributed network to enable user communities to access and utilize freely and routinely available quality controlled ocean data in Australia. A technical

committee has been established to develop and implement OGC compliant web services to make available key datasets from each agency and to facilitate the development of a marine catalogue. The AODCJF will provide the national focal point for all IODE activities in Australia and is expected to be fully operational by July 2005.

Oceans Portal

The Oceans Portal project is being developed by the National Oceans Office to provide an interface to marine information, data and services. The objective of the Oceans Portal is to provide an internet based, user-focussed view of data and information of interest to the marine environment. The Oceans Portal will be developed as three distinct components: a web based portal, a marine catalogue and a network of interoperable services and content providers. The marine catalogue component will be hosted by the AODCJF.

11. What national, regional or international projects is your NODC involved in (both IODE and non-IODE) . Examples: Argo, GTSP, EDMED, EDIOS, Sea-Search, GODAR,... "

AODC: *SOOP, GODAR*

Other Agencies:

CBM: *The CBM National Tidal Centre is undertaking the South Pacific Sea Level and Climate Monitoring Project. This is a joint initiative of South Pacific Forum member countries to accurately record variation in long-term sea levels in the South Pacific, making this data available for Pacific Island Countries. CBM has representation in JCOMM, including the DBCP, VOS and DMCG. Data management activities have included involvement by CBM staff in the Future WMO information System (FWIS). CBM also participate in WMO CBS/CHY/CIMO/CCL/CAS. Ocean activities include Argo, SOOP, GTSP, GODAE, GLOSS, DBCP, VOS*