1. Name of Data Centre: Marine Environmental Data Services

2. National IODE Co-ordinator:
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3. Data Centre Address (if different from 1)


5. IODE Data Centre Designation Date:
   1472.

6. Data Centre Description:

   The Marine Environmental Data Service (MEDS) is a branch of Canada's federal Department of Fisheries and Oceans (DFO). MEDS' mandate is to manage and archive ocean data collected by DFO, or acquired through national and international programmes conducted in ocean areas adjacent to Canada, and to disseminate data, data products, and services to the marine community in accordance with the policies of the Department.

7. Brief History:

   The Marine Environmental Data Services was established in 1968 to coordinate the processing and archival of physical oceanographic data, with the amalgamation of three organizational units: the Canadian Oceanographic Data Centre, the Tides and Water Levels Section of the Canadian Hydrographic Service, and the Canadian Wave Climate Study. Data management, archival and dissemination of physical oceanographic data and data products on national and international scales is still a key component of MEDS mandate, however it has since been broadened to include chemical and biological oceanography.

   The Canadian primary area of interest is 35 to 90 degrees North latitude and 40 to 180 degrees West longitude but for some specialized data types and
programmes the area of interest is global. Real-time, near real-time or historical data are made available as appropriate.

8. **Roles and Responsibilities of the Data Centre:**

   a) National

MEDS provides the leadership to the management of physical, chemical and biological data collected by the Department of Fisheries and Oceans as well as acting as the archival and distribution centre for DFO data. This is achieved through a distributed system of archive centres within DFO. Policy, standards, and responsibilities are developed by a National Data Management Committee (NDM) chaired by MEDS with members from all DFO regions that collect the data. The NDM was formed in 1997 to provide advice on the scientific data management issues, and to develop and implement short and long-term goals for data management for the Science Sector of DFO. The working group was also mandated to coordinate and standardize processing, archival, and access procedures and policies for these data. MEDS and the regional centres thus provide coordinated data, data products and services to the marine community in Canada.

b) International

MEDS acts as the designated Canadian focal point for international oceanographic data and expertise in oceanographic data management. Participation by MEDS allows Canada not only to share its data, but also to obtain copies of data collected by member countries for use by Canadian researchers and engineers. For some data bases the data obtained by exchange is equal or greater than that collected by Canadian sources, and is of course very inexpensive in comparison to collecting it internally. Programmes MEDS involved in include GLOSS, GOOS, ARGO, GTSP, J-COMM, DBCP (RNODC for drifting buoy data), SOOPIP, ICES, NAFO (designated data centre), JGOFS, WOCE (SVP, UOT).

9. **Data Centre Projects and Activities during the Intersessional Period:**

   - **Science Data Management.** 5 Yr project to build/enhance the infrastructure to facilitate migration to, management of and access to all marine science data through a set of distributed, easy-access (web) and ‘managed’ data bases. For each group of data there will be a designated Canadian data centre and a data model that is consistent across the country.

   - **Atlantic Zone Ocean Monitoring Program,** established to detect the climate change and variability in the coastal region and on the continental shelf of the NW Atlantic, particularly the primary productivity. MEDS coordinates the data management under this project and has set-up a web access http://www.meds-sdmm.dfo-mpo.gc.ca/zmp/main_zmp.html to all relevant data which include tides and water level, temperature, salinity, nutrients, etc.

   - **ARGO.** MEDS is part of the task team that will develop the data formats and protocols for the acquisition, QC and distribution of profiling float data from ARGO. In Canada, MEDS is the designated data centre for the ARGO.
• **BIOCHEM**, a project aimed at developing a distributed data base for water column biology, particularly, phyto-, zoo-plankton, and related environmental data.

• **Canadian data Centre Activities.** MEDS continues to provide bilingual data centre services nationally and to international organizations, and is continuously enhancing its capability to provide better and faster service.

• MEDS continues to process, quality control and archive *high resolution* physical and chemical oceanographic sub-surface profiles collected around Canada. For the world oceans, temperature and salinity *low resolution* profiles reported on a daily basis through the GTSPP also continues to be processed, quality controlled and archived. A more recent addition to the volume of profiles reported on a daily basis has come from the global fixed and drifting buoy, and the profiling float programmes.

• As the RNODC for drifting buoys, MEDS continues to process drifting buoy as well as surface temperature and salinity observations data reported globally on a daily basis on the GTS.

• MEDS continues to process and archive operational surface wave data, tides and water level data reported on a daily basis collected around Canada. An Ocean Monitoring Workstation maintained by MEDS continued to automatically process all beam modes of RADARSAT collected over the ocean.

• MEDS has worked with its partners in the WOCE DPC in the production of version 1 and 2 of CDs of data, information and products for the UOT and SVP DACs. Version 1 was issued in May 1998 and version 2 is scheduled for release in the fall of 2000.

• MEDS continues to develop its contaminants data holdings. The present archive contains over 1 million measurements.

• MEDS continues to work with its partners in GTSPP to maintain and extend this programme to meet new requirements.

### 10. Data Centre Products and Services Developed and/or Made Available during the Intersessional Period:

- WOCE CDs
- JGOFS CDs
- IABP CDs
- DBCP brochure
- SOOPIP brochure
- Tidal constituent data base for Canada was updated and enhanced, and the benchmark data and site history are being migrated to an ORACLE data base.
- The contaminants data base and ZMP data are now accessible on the web.
- Bi-monthly data exchanges with World Data Center A in Washington and regular exchanges with ICES were initiated.
- Over 300 requests for data, data products and services were completed annually. MEDS’ upgraded web site was used extensively to inform clients of our ongoing capabilities.

### 11. Comments

Since the last IODE meeting, MEDS has undergone considerable transformation, particularly because of the budget cuts in the Canadian government, and also because our eminent Director, Dr. Ron Wilson retired. However, the limited funds that were made available were used to rejuvenate
MEDS with the result that a number of new graduates proficient in informatics and knowledge in one or the other of marine sciences have joined the team. MEDS staff participates in many scientific programs across the country including research cruises and provide data management services, thus facilitating transfer of data to ‘managed’ archives in near-real time.