

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(of UNESCO)

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**Marine Environmental Data Inventory (MEDI)**

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## **1. Introduction**

The Marine Environmental Data Inventory (MEDI) is a catalogue system for marine datasets within the framework of the IOC's International Oceanographic Data and Information Exchange (IODE) programme.

The development of MEDI was recommended in 1971 by the Joint Task Team on Interdisciplinary and Inter-organizational Data and Information Management and Referral (IMAR). The Sixteenth Session of the IODE Committee recommended (Recommendation IODE-XVI.1) MEDI becomes a permanent program of IODE. A Steering Group was established tasked with the responsibility for the further development and enhancement of the MEDI software tool, in response to user feedback and additional requirements. The MEDI metadata directory is a global inventory of data holdings held in the IOC Member States and agencies.

## **2. Objectives and Benefits**

The objectives of MEDI are to develop a global metadata inventory with the following specifications:

- The inventory is a compilation of input assembled by IOC Member States and relevant agencies;
- The inventory will allow the end-user to search, as a minimum, on location, data type, temporal resolution and organizational parameters;
- The inventory will provide the end-user with information describing the selected data holdings and their sources;
- The system will ensure the widest possible coverage of data holdings in Member States.

The MEDI catalogue has been developed to provide a reference point for locating marine and coastal datasets and has been populated with metadata descriptions of marine datasets from IOC member states.

## **3. Intersessional Activities**

### **3.1 MEDI Authoring Tool**

The MEDI authoring tool is browser-enabled and operates in a client-server configuration and has been developed to encourage data collectors and scientists to produce metadata descriptions for their datasets. Clients can access MEDI on a local network or over

the internet. The MEDI authoring tool records metadata records in DIF format. No development work on the authoring tool was undertaken during the intersessional period. The MEDI authoring tool can be downloaded from the IODE website at <http://ioc.unesco.org/medi>.

During the intersessional period, a total of 177 dataset descriptions were submitted by member states to the MEDI metadata repository. This figure does not include new metadata records collected by the MEDI Africa project (see below).

The MEDI Africa project (see below) has identified a number of technical problems with the authoring tool. These include:

1. Duplicate organization names can be added.
2. Problems when adding new holding organization and personnel information.
3. The update of the organization list is not automatic.
4. Cannot handle French letters and some symbols, such as &, µ.
5. The GCMD export format does not work.
6. Some fields cannot be updated.
7. New formats could not be added from the authoring tool, but need to be added to the `distibution_format.txt` file.

These issues must be addressed if the MEDI authoring tool is to provide a useful means of collecting metadata for member states.

## 3.2 Capacity Building

The MEDI authoring tool is used in all IODE training activities and capacity building products. Training in the use and installation of the MEDI metadata authoring tool was provided to data centres participating in the ODINAFRICA project, the ODINCARSA project and for the Black Sea and Caspian Sea countries. The MEDI software has been installed in data centres in Africa, South and Central America, Australia and Caspian Sea region. The MEDI authoring tool is also included in OceanTeacher.

## 3.3 MEDI Africa

MEDI Africa is an inventory of marine related datasets in Africa that has been developed within the framework of the ODINAFRICA project and has been populated with metadata descriptions of marine datasets collected by ODINAFRICA member states. MEDI Africa uses the MEDI metadata authoring tool. A recent ODINAFRICA project to review, reformat and quality control metadata from 18 African member states has resulted in a 55% increase in the number of metadata records recorded in MEDI. These new records will be added to the MEDI repository.

## 3.4 IODE Steering Group for the MEDI Project

The IODE Committee, during its 16<sup>th</sup> Session decided to establish the IODE Steering Group for the MEDI Project. The Steering Group has not met during the intersessional period.

# 4. Proposed Activities

## 4.1 ISO 19115 Compatibility

The ISO 19100 series is a multi-part International Standard for Geographic Information that is being developed by Technical Committee 211 Geographic information/Geomatics of the International Organisation for Standardisation (ISO). ISO 19115, Geographic information – Metadata is part of the ISO 19100 series. This standard provides a procedure for describing digital geographic datasets using a comprehensive set of metadata elements. ISO 19115 is being adopted by many spatial data agencies and the WMO has published a working draft of the WMO Core Profile of the ISO 19115.

MEDI closely follows the ISO standard, however some modification work will be required to ensure full compatibility. The MEDI Steering Group should work with other national and international initiatives to develop a marine profile of ISO 19115.

#### 4.2 MEDI Authoring Tool

The MEDI authoring tool has proved to be a useful means of collecting metadata and is currently used by more than thirty member states. MEDI has also raised the awareness in the IODE community to the importance of metadata.

The MEDI authoring tool is not maintained and users have identified a number of technical problems with the tool. It is important that a metadata tool be made available to the IODE community to ensure metadata is uniformly collected and made available. The cost of developing and maintaining a new metadata tool, compliant with ISO 19115, will be high. It may be more cost-effective for IODE to work with other communities who are developing similar tools.

#### 4.3 Capacity Building

The MEDI metadata authoring tool will continue to be used in IODE capacity building activities. Student will be encouraged to use MEDI to describe their metadata and submit these to the MEDI server at IOC.

#### 4.4 Steering Group

The Steering Group should be reconvened to discuss the way forward for MEDI.

### 5. Budgetary Requirements

Budget requirements for the project are to hold a session of the Steering Group for the MEDI Project. Funding required for period 2005-2007 is \$15,000

### 6. Source of Funding

Funds to come from IODE Regular Programme.

### 7. Requested Actions from the Committee

The Committee is requested to:

- Provide funding for the concerned actions: US\$ 15,000 for the period 2005-2007.

Member states are encouraged to promote the use of MEDI within the marine data community.