1. Introduction

The Marine Environmental Data Inventory (MEDI) is a directory system for datasets, data catalogues and data inventories within the framework of the IOC's International Oceanographic Data and Information Exchange (IODE) programme. It has been set up to ensure the widest possible coverage of data holdings and included a review of existing national and international data directory systems as well as implications of inter-operability with similar systems within other international organizations.

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 MEDI Catalogue was published in 1979 (1st Edition, IOC Manuals and Guides No. 10), 1985 (2nd Edition, IOC Manuals and Guides No. 16) and 1993 (3rd Edition, IOC Manuals and Guides No. 16). The IODE Committee, during its Fifteenth Session recommended (Recommendation IODE-XV.1) that a Pilot Project be undertaken to: ‘Test the ways and means of applying modern methodology to the further development of the MEDI system and, on the basis of these investigations, to draft a specification for a revised MEDI’. 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.

2. Objectives and Benefits

The objectives of MEDI are to develop a global database of information on data holdings held in the IOC Member States and agencies 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 directory has been developed to provide a reference point for locating marine and coastal datasets and will be populated with metadata descriptions of marine datasets from IOC member states.

3. Past Activities

During the intersessional period, the SG-MEDI has met twice and the MEDI authoring tool has been developed and released.

3.1 IODE Steering Group for the MEDI Project

The IODE Committee, during its 16th Session decided to establish the ‘IODE Steering Group for the MEDI Project’ as Recommendation IODE-XVI.1: “

(ii) Steering Group will be responsible for the further development and enhancement of the MEDI software tool, in response to user feedback and additional requirements;

(iii) MEDI Programme be supported by a Steering Group, established as a subsidiary body of IODE, initially composed of AODC (Australia), NASA-GCMD (USA), KODC (Republic of Korea), BODC (UK), Russian NODC (Russian Federation) and US NODC (USA). The activities of the Steering Group shall be co-ordinated by Mr. G. Reed, AODC;”

The First Session of the Steering Group was held in Oostende, Belgium from 23-27 April 2001. During its First Session the Steering Group reviewed the current status of the MEDI software tool and previewed the next release of the software (version 2.2) that will be an internet-based system. The Group discussed the changes required to the new version of the software before its release and drafted a list of recommended software changes. The Summary Report for the meeting is available on the IODE home page at http://ioc.unesco.org/iode/files.php?action=viewfile&fid=81&fcat_id=25.

The Second Session of the Steering Group was held in Honolulu, USA from 2-4 April 2002. During its Second Session the Steering Group reviewed the current status of the MEDI metadata authoring tool (version 3.0b). The Group discussed the changes required to the current version of the software and drafted a list of recommended software modifications. The Summary Report for the meeting is available on the IODE home page at http://ioc.unesco.org/iode/files.php?action=viewfile&fid=82&fcat_id=25.

3.2 MEDI Authoring Tool

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

- Operates as a service under Apache Tomcat 4.0.4 using HTML;
- Uses standard HTTP protocol, hence can be accessed via internet or intranet;
- Metadata records are stored as DIF-XML files;
- Spatial functionality is delivered using Scalable Vector Graphics (Adobe SVG plug-in 3.0);
- Data can be imported and exported using standard ZIP formats.
There are two ways to submit metadata descriptions to MEDI:

- **Describe the data on a local server:** Install MEDI on a local server then create metadata records using the MEDI authoring tool. These metadata descriptions can be exported as DIF-XML files using the MEDI Export function and then forwarded to IOC for inclusion into MEDI directory.

- **Describe the data on the IOC MEDI server:** Enter data descriptions directly to the MEDI server.


### 3.3 Capacity Building

The MEDI authoring tool is used in IODE training activities and capacity building products. MEDI has been used during the ODINAFRICA project as the tool to describe marine data holdings in the participating countries. The MEDI authoring tool is also included in OceanTeacher.

### 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. The Technical Committee 211 Secretariat has approved the standard ISO 19115, Geographic information – Metadata, for publication as a Draft International Standard (DIS). This standard provides a procedure for describing digital geographic datasets using a comprehensive set of metadata elements. These elements support four major uses: discovery of data, determining data fitness for use, data access and use of data.

It is envisaged that in the future all existing spatial metadata standards will converge through the ISO initiative. MEDI already has a great deal in common with the ISO standard, however some modification work will be required to ensure full compatibility.

#### 4.2 Capacity Building

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

#### 4.3 Steering Group

One meeting of the SG-MEDI is planned for the intersessional period.

### 5. Budgetary Requirements

Budget requirements for the project are for the hiring of a contractor to complete software development to ensure ISO compatibility and to hold the planned session of the Steering Group for the MEDI Project.

Funding required for period 2003-2005: $15,000
6. **Source of Funding**

Funds of $10,000 will come from IODE Regular Programme, additional funds of $5,000 will come from Extra Budgetary source.

7. **Requested Actions from the Committee**

The Committee is requested to:

- Adopt the summary report of the First and Second Sessions of the IODE Steering Group for MEDI, and
- Provide funding for the concerned actions: US$ 15,000 for the period 2003-2005.

Member States are encouraged to use the MEDI authoring tool to the maximum extent and to promote its use to the widest possible audience.