OCEAN TEACHER: A CAPACITY BUILDING TOOL FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT

G. REED
Consultant, Ocean Services Section
Intergovernmental Oceanographic Commission (IOC) of UNESCO
1 rue Miollis, 75732 Paris Cedex 15, France

Abstract. Within the framework of the International Oceanographic Data and Information Exchange (IODE) program, the IOC is assisting developing countries with the establishment of National Oceanographic Data and Information Centres. Capacity building comprises an important component of the IODE program and includes regional group training courses and workshops to familiarize data center managers in the different aspects of oceanographic data and information management.

Ocean Teacher is an internet-based system designed to provide training tools for oceanographic data and information management. These tools are used during IODE training courses but can also be used for self-training and continuous professional development. The Ocean Teacher site comprises two components: the IODE Resource Kit and the Resource Kit Training Manual. The Resource Kit contains a range of marine data-management and information-management material, including software, quality control and analysis strategies, training manuals, and relevant IOC documents. The Resource Kit Manual is a collection of outlines, notes, examples, and miscellaneous class work documents used in conjunction with the Resource Kit to organize a training program in marine data and information management.

This paper describes the approach that is being taken by IODE in developing capacity building programs and details the development of the Ocean Teacher system and its content.

1. Introduction

The International Oceanographic Data and Information Exchange (IODE) program of the IOC has developed the Ocean Teacher system, a comprehensive internet-based training and self-study tool for ocean data and information management to support its capacity building strategy.

Ocean Teacher contains a range of marine data management and information management material, including software, quality control and analysis strategies, training manuals, and relevant IOC documents. It is a comprehensive self-training and resource tool for newly established Oceanographic Data Centres, designed to assist managers and staff members to acquire the skills to set up and run new IODE centers. It provides a broad spectrum of background information on global data and information archiving activities, specifications for data storage in standard formats, and the software tools needed to perform many quality control, sub-setting, and analysis techniques. In addition, datasets and information relevant to specific geographical regions are provided as a plug-in “custom pack”. While aimed at developing countries, Ocean Teacher will be of considerable value to developed countries and their marine science agencies.
2. IODE Data and Information Management Capacity Building

Capacity building has always been an important component of the IODE program since its inception in 1960. Assisting member states to acquire and build the necessary resources for ocean data and information management is an essential and critical part of all IODE activities. Training courses, mostly hosted by National Oceanographic Data Centres, have been held annually with resource persons from the IODE community providing instruction.

Although these training courses have been successful in training data center staff, the IODE program had never reached the stage where an agreement was made on a ‘standard curriculum’. This meant that courses and their content could vary from course to course and that the course programs were not necessarily in line with the requirements of the participants. As these training courses were mostly one-off activities, the long-term impact was often disappointing, as the participating countries did not have the necessary infrastructure to implement the acquired knowledge. There was little or no follow-up to the courses, so the impact of the course on the participants’ day-to-day work could not be monitored.

2.1. REGIONAL NETWORKS AS A STRUCTURE FOR IODE CAPACITY BUILDING

IOC activities in developing countries are mostly organized using a regional approach. The IOC regions include IOCINCWIO (North and Central Western Indian Ocean - 'Eastern Africa'), IOCEA (Central Eastern Atlantic - 'Western Africa'), IOCARIBE (Caribbean and adjacent region), IOCINDIO (Central Indian Ocean), WESTPAC (Western Pacific region), Black Sea and Southern Oceans regions. The IODE program has recognized the importance of building networks based on this regional structure. This approach has multiple advantages such as:

- promotion of communication between members of the network;
- promotion of south-south cooperation in training and institutional capacity building;
- facilitating collaboration with other programs and projects;
- facilitating follow-up for training activities;
- facilitating exchange of data and information using compatible technologies and formats.

2.2. OCEAN DATA AND INFORMATION NETWORKS

Since 1998, the IOC has been developing and enhancing the new ODIN (Ocean Data and Information Network) capacity building strategy that links training to infrastructure and operations. These networks promote regional cooperation, data exchange and creation of regional data products. The first project to be implemented under this new strategy was the ODINEA project for the seven East African countries in the IOCINCWIO region. In order to support this new capacity building strategy, IODE started the development of a CD-ROM based “NODC- In-A-Box” product. This product