



United Nations Educational, Scientific and Cultural Organization

> Organisation des Nations Unies pour l'éducation la science et la culture

Organización de las Naciones Unidas para la Educación la Ciencia y la Cultura

Организация Объединенных Наций по вопросам образования науки и культуры Intergovernmental Oceanographic
 Commission

Commission océanographique intergouvernementale

Comisión Oceanográfica Intergubernamental

Межправительственная океанографическая комиссия IODE: Overview & Coastal Atlas Development

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ICAN Workshop on Federated Coastal Atlases, Copenhagen, 7-9 July 2008

Overview

- What is IOC
- Roles and functions of IODE
- Data sharing policy
- Data standards
- OceanDataPortal
- Capacity building activities
- Regional Atlas products



Intergovernmental Oceanographic Commission (IOC)

- IOC: body within UNESCO (Science Sector)
- Composed of Member States (136), an Assembly, an Executive Council and a Secretariat (based in Paris)
- Field Offices
 - Colombia, Brazil, Thailand, Kenya, Denmark, Belgium, Australia



IOC Structure

ASSEMBLY EXECUTIVE COUNCIL EXECUTIVE SECRETARY SECRETARIAT

OCEAN SCIENCES

- Oceans and Climate (WCRP, JGOFS, CLIVAR, El Niño, SCOR-IOC Advisory Panel on Ocean CO₂)
- Science for Ocean Ecosystems and Marine Environmental Protection (HAB, Indicators for Ecosystem Health, Nutrient Enrichment, LME, Biosphere-Geosphere Coupling)
- Marine Science for Integrated Coastal Area Management (COASTS, LOICZ-Basins, ICAM Indicators, Global Web Service, Coastal Megacities, ICAM Methodological Manual)
- United Nations Convention on the Law of the Sea (IOC/ ABE-LOS, ABLOS, Special Arbitration)

OCEAN OBSERVATIONS AND SERVICES

- Global Ocean Observing System (GOOS)
- GOOS Modules, Regional Bodies and Pilot Projects (OOPC, COOP, GODAE, Argo)
- Integrated Global Observing Strategy (IGOS)
- Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) (DBCP, SOOP, TIP, GLOSS)
- Global Climate Observing System (GCOS)
- Satellite Remote Sensing
- International Oceanographic Data and Information Exchange (IODE) (GODAR, MIM, GTSPP, MEDI, ASFA, GETADE, GEBCDMEP, GEMIM, Ocean Teacher, OceanPortal, OceanExpert, MarineXML)
- IODE regional projects (ODINAFRICA, ODINCARSA, Regional Ocean Portals, MEDAR/ MEDATLAS)
- IDNDR-Related Activities Pacific Tsunami Warning System (PTWS, former ITSU)
- Ocean Mapping (GEBCO, GAPA, IBCM)
- Public Information (IOC website, newsletters, other publications, posters, brochures and leaflets, public events)

TSUNAMI COORDINATION UNIT

- Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)
- Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS)
- Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS)
- Intergovernmental Coordination Group for Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)

International Oceanographic Data & Information Exchange Programme (IODE)

- Established in 1961 'to enhance marine research, exploitation and development by facilitating the exchange of oceanographic data and information between participating Member States and by meeting the needs of users for data and information products'
- Network of 76 National Oceanographic Data Centres



Role of the IODE NODC

- National Oceanographic Data Centre (NODC) facility for providing ocean data and information in a usable form to a wide user community
 - <u>National</u>: acquire, process, quality control, inventory, archive and disseminate data
 - <u>International</u>: data exchange across IODE network



IOC Data Policy

- IOC Oceanographic Data Policy: adopted in 2003
- Members shall provide timely, free and unrestricted access to all data, associated metadata and products generated under the auspices of IOC programmes



IOC Data Strategy

- 2007: IOC Assembly adopted the "IOC Strategic Plan for Oceanographic Data and Information Management"
- Vision: A comprehensive and integrated ocean data and information system, serving the broad and diverse needs of IOC Member States, for both routine and scientific use.



Strategy Deliverables

- Well documented standards and formats
- Assembled, quality controlled and archived data
- Easy discovery and access to data
- Timely dissemination
- Reliable long-term preservation
- Collaboration with other intergovernmental bodies
- Efficient and equitable access to data



Data Standards

- Data Standards is one of the most critical elements for IODE
- Provide interoperability with other data centres and ability to share data
- IODE is leading an initiative to achieve broad agreement and commitment to adopt a number of standards related to ocean data management and exchange



Data Standards Forum

- IODE/JCOMM Forum on Oceanographic Data Management and Exchange Standards
 - Held at the IOC Project Office for IODE, Oostende, Belgium, 21-25 January, 2008
- The meeting discussed a number of standards related to oceanographic data management and exchange
- The meeting agreed on a "Standards Process" for accepting submissions of proposed standards and following these through to a recommendation

Data Standards

• Further details, including the report of the meeting, are available on the web site

www.oceandatastandards.org







Data Distribution

Ocean Data Portal

- standards-based infrastructure to provide integration of marine data from a network of distributed NODCs
- provide on-line access to the marine data and information resources of the participating data centres including



Capacity building

- Cornerstone of IODE programme
- Ocean Data and Information Networks (ODIN)
- Linking training, equipment, operational support
 - Regional context



Training Tool: Ocean Teacher

- Training resource for marine data and information management
- Audience:
 - data/information managers
 - ocean researchers
 - university students
- Increasing focus on continuous professional development



We welcome experts who can contribute content and/or lecture

during our training courses

Ocean Teacher Alumni

Video Library

Find out more about your fellow students

View courses from the comfort of your chair

News & Events

16 March 2007 The new version of OceanTeacher is officially launched at IODE-XIX in Triest (Italy).

17 April 2007: A new training course on GIS and Remote Sensing is now available in OceanTeacher.

15 May 2007: New video lectures from the E-repository training course are now online.

http://www.oceanteacher.org

Training Centre

- IOC Project Office for IODE
 Based in Ostend, Belgium
- International Training Centre
- International Conference Centre
- Data/information services hub
 - 2005-2008: > 500 students from >100 countries
 - Approx. 15 events per year







ODIN Regional Atlases

African Marine Atlas







IODE and **ICAN**

• IODE Workshop on Coastal Atlas Requirements

- Held February 2008
- Participants from ICAN, IODE Atlas projects
- Discussed atlas development and interoperability and how to further develop the African and Caribbean Marine Atlases
- ICAN can assist to build distributed digital atlases for the IODE community based on the principle of sharing information



