



IOC/IODE-XVIII/3s  
Paris, 9 May 2005  
Original: English

**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**EIGHTEENTH SESSION OF THE IOC COMMITTEE ON INTERNATIONAL  
OCEANOGRAPHIC DATA AND INFORMATION EXCHANGE (IODE-XVII)**

Ostend, Belgium, 26–30 April 2005

**EXECUTIVE SUMMARY REPORT**

After an introductory paragraph this document contains all decisions adopted by the Committee on International Oceanographic Data and Information Exchange at its eighteenth session as follows:

**Section 1:** decisions made by the IODE Committee under each agenda items; and

**Section 2:** Four Resolutions and eight Recommendations adopted by the IODE Committee.

This Executive Summary is available in English, French, Russian and Spanish. The full summary Report of the session is published in English only. In accordance with IOC Rule of Procedure No.48.3, the report of this major subsidiary body is submitted to the IOC Assembly at its 23<sup>rd</sup> session in June 2005 for endorsement.

## **Highlights**

This Executive Summary includes all decisions, requests and recommendations formulated by the IOC Committee on International Oceanographic Data and Information Exchange during its Eighteenth Session (IODE-XVIII), held at the Kursaal, Ostend, Belgium between 26 and 30 April 2005. The Session was attended by 59 delegates from 31 Member States, 15 representatives of organizations, programmes and projects, and five observers.

The Session was preceded by the official inauguration on 25 April 2005, of the IOC Project for IODE, based in Ostend, Belgium which was attended by Mr Jean Vandecasteele, Mayor of the City of Ostend, Mrs Fientje Moerman (Vice-Minister-President of the Flemish Government and Flemish Minister for Economy, Enterprise, Science, Innovation and Foreign Trade), Dr Patricio Bernal (on behalf of Mr Koichiro Matsuura, Director-General of UNESCO), Mr. Johan Vande Lanotte, Deputy Prime Minister, Minister for the Budget and Public Enterprise and Minister of the North Sea, Mr Paul Breyne, Governor of West-Flanders and President of the Board of Directors of the Flanders Marine Institute (VLIZ), Dr Lesley Rickards, Chair of the IOC Committee on International Oceanographic Data and Information Exchange (IODE), and Mr Yves Leterme, Minister-president of the Flemish Government and Flemish Minister for Institutional Reform, Agriculture, Sea Fisheries and Rural Policy.

The IODE Committee, during its five-day Session, reviewed the work of the past inter-sessional period. Considerable attention was given to the IODE Review that had taken place during the inter-sessional period. The Committee reviewed all recommendations by the Review Team and made several fundamental and structural change decisions in response to the Review. These included the re-composition of the IODE Officers, the abolishment of the Responsible National Oceanographic Data Centre (RNODC) and IODE Regional Co-ordinator systems, and further review of the IODE Groups of Experts during the next inter-sessional period. The Committee established an inter-sessional working group on ocean data quality control, thereby re-emphasizing the important role of IODE in this area. The Committee further welcomed the increased collaboration with other organizations, programmes and projects such as JCOMM, GOOS, ICES, SCAR, CDIAC, GCMD, CEP, OBIS, IAMSLIC, EURASLIC and others. The Committee noted the success of the ODINAFRICA and ODINCARSA projects, established the ODINCINDIO project and recommended the establishment of an Oceanographic Data and Information Network (ODIN) for the WESTPAC region. The Committee further endorsed an outline and timeline for the development of the IOC Data Management Strategy. The Committee prepared four Resolutions and eight Recommendations.

## **SECTION 1**

### **DECISIONS, REQUESTS AND RECOMMENDATIONS OF IODE-XVIII**

#### **3. STATUS OF IODE**

##### **3.2 IOC PROJECT OFFICE FOR IODE**

- 60 **The Committee expressed** its gratitude to the Government of Flanders and to the City of Oostend for hosting the Project Office and financial support of its work.
- 61 **The Committee welcomed** the establishment of the Project Office and **noted** its future role in fostering close cooperation between Member States on matters related to IODE as well as between IODE and other IOC programmes.
- 62 **The Committee recommended** maintaining a calendar of events at the Project Office and making this available through the planned Project Office web site.
- 63 **The Committee welcomed** the diversity of the training events planned by the Project Office and **noted with appreciation** the planned trainings for young scientists.
- 64 **The Committee expressed its gratitude** to the Flanders Marine Institute (VLIZ) for the excellent technical and administrative support provided to the Project Office.
- 65 **Noting** the importance of promoting the IOC Project Office for IODE, **the Committee encouraged** Member States to promote the Project office and to second relevant experts on short or long-term basis to the Project Office.

##### **3.3 ACTIVITIES OF WORLD DATA CENTRES**

###### **3.3.1 World Data Center for Oceanography, Silver Spring, USA**

- 80 **The Committee requested** all IODE data centres, and other institutions in IOC Member States that manage oceanographic data, to perform more thorough quality control on data before they are submitted.
- 81 Reference is made to Resolution IODE-XVIII.4, adopted under Agenda Item 5.1.
- 82 **The Committee requested** all IODE data centres, and other institutions in IOC Member States that manage oceanographic data, to check their national ocean-profile holdings against those contained in the “World Ocean Database,” which is maintained by WDC for Oceanography, Silver Spring.

###### **3.3.2 World Data Centre for Oceanography, Obninsk, Russian Federation**

- 93 **The Committee noted** that the WDCs exchange data in a complementary fashion but, over the years, have developed a different range of products and services.
- 94 **Considering** that this varied offering of the WDCs may not be clear to end users, **the Committee recommended** the development of an information page on the IODE web site that will guide users to the relevant products and services available from the WDCs.

### 3.3.5 World Data Center for Marine Environmental Sciences (WDC-MARE)

112 **The Committee recommended** that all data centres consider making their metadata-databases OAI compliant.

### 3.6 REPORTS OF NODCS AND DNAS

167 **The Committee welcomed** the nomination of 29 IODE National Coordinators for marine information management and **called** on Member States that have not yet nominated such an expert, to do so as soon as possible. In this regard **the Committee requested** the Secretariat to issue a circular letter to all IOC Member States.

168 **The Committee noted** that ten Marine Information Management expert participated in the IODE-XVIII Session which was a considerable improvement to previous Sessions.

175 **The Committee complemented** the Chair with her report and **noted** that this was the first time such a concise and analytic report had been provided based upon the national reports.

176 **The Committee noted with appreciation** the increased coverage of real-time data by the NODCs but also **stressed** the need to assist all NODCs to acquire this capability.

177 **The Committee requested** Member States to provide separate reports for data management and information management as from the next Session of the Committee.

178 **The Committee noted** that the IODE capacity-building strategy implemented through the ODINAFRICA and ODINCARSA projects had substantially increased the capacity of the participating country as reflected in the national reports. **The Committee noted further** that, especially in developing countries, the NODCs provided a bridge between the IOC programmes and national institutions.

179 **The Committee noted with appreciation** that the rapid technological evolution, as expected by GETADE and its successor ETDMP a few years ago, has taken place and distributed data management systems, and web services are now commonly used.

180 **The Committee instructed** the Chair and Secretariat to prepare various levels of summary versions of the national reports for presentation during the IOC Assembly, to demonstrate the considerable advances made by, and changes occurring in the NODCs.

### 3.7 IODE DATA FLOW

187 **The Committee noted with appreciation** the US-NODC/NOAA Library Joint project that combined the expertise of the NOAA Library in metadata management and the US-NODC data management, a system that connects the library and archive metadata records, so that either catalogues discover holdings from both catalogues.

188 **The Committee stressed** the need to develop controlled vocabularies but noted the need to take into consideration the efforts made, and expertise available from marine information management experts.

### 3.8 IOC OCEANOGRAPHIC DATA EXCHANGE POLICY: IMPLEMENTATION BY MEMBER STATES

- 195 **The Committee noted** that a substantial number of IOC Member States had not adopted a national policy.
- 196 **The Committee welcomed** the adoption of the IOC Oceanographic Data Exchange Policy by the IOC Assembly and **called** on Member States to use the policy as a basis for national policies on oceanographic data exchange.

## 4. COOPERATION WITH OTHER PROGRAMMES

### 4.1 COOPERATION WITH JCOMM

- 212 **The Committee recognized** that any merger between IODE and JCOMM DMPA activities must be considered with great care.
- 213 **The Committee stated** that this is a matter that needs careful study and consideration and **recommended** that this be included in the preparations of the IOC Data Management Strategy.
- 217 **The Committee welcomed** the organization of this first joint IODE/JCOMM training event and **recommended** its support by IODE, JCOMM and IOC Member States.

### 4.2 COOPERATION WITH GOOS

- 222 **The Committee noted with appreciation** that at the regional level, in particular through the ODINAFRICA, ODINCARSA and the starting ODINCINDIO projects, cooperation between regional GOOS alliances and IODE ODIN projects have been initiated and well received, and **called** for the further strengthening of such cooperation.

### 4.3 COOPERATION WITH SCIENCE AND MONITORING PROGRAMMES

- 225 **The Committee welcomed** the initiatives of the IODE Chair that fostered closer cooperation between IODE and scientific programmes.
- 231 **The Committee noted with appreciation** that excellent opportunities now exist to connect the OBIS system with the prototype of the E2EDM system combining the data providers.
- 232 **The Committee welcomed** the extended contacts of the IODE with the science and monitoring programmes and noted with appreciation the good contacts established recently with OBIS.
- 233 **The Committee instructed** the IODE Chair to discuss closer collaboration with the OBIS Chair.

### 4.4 OTHERS

#### 4.4.1 ICES

- 244 **The Committee noted with satisfaction** the growing collaboration between the IODE and ICES.

#### 4.4.2 SCAR

- 251 **The Committee welcomed** the collaborative efforts towards the establishment of the united metadata and data exchange systems.
- 252 **The Committee instructed** the Chair to continue to seek close collaboration with JCADM and to find ways, together with the Chief Officers of JCADM, to expand the existing collaboration.

#### 4.4.3 Carbon Dioxide Information Analysis Center (CDIAC)

- 258 **The Committee welcomed** the participation of CDIAC in IODE-XVIII and instructed the Chair and IODE Secretariat to seek closer collaboration with this centre.

#### 4.4.4 Caspian Environment Programme (CEP)

- 264 **The Committee expressed** the strong support to the Caspian Environment Programme data and information management activity and welcomed the cooperation between CEP and IODE.
- 265 **The Committee noted with appreciation** the increasing number of programmes and projects collaborating with IODE and called to extend their number.

### 5. FUTURE OF IODE

#### 5.1 IODE REVIEW (PROGRESS REPORT)

- 276 **The Committee expressed** its high appreciation for the work of the review team and accepted its report.
- 277 **The Committee expressed** its special gratitude to the Chair of the Team, Mr Dieter Kohnke.
- 278 **The Committee noted** that the review included a considerable amount of valuable information and suggestions for improvement of the IODE system. **The Committee noted further** that the results of the 3 surveys need further detailed analysis as the collected information provided valuable information on the appreciation and criticism of the various communities that interact, or should interact, with IODE at the national, regional and international level.
- 279 **The Committee instructed** the Chair and IODE Secretariat to compile the surveys results into an information document for distribution to the IODE National Coordinators (for data management and for information management).

#### *1. Objectives of IODE*

- 281 **The Committee noted** the changes proposed by the Review and established a sessional working group to draft revised objectives of the IODE programme.
- 282 **The Committee adopted** Recommendation IODE-XVIII.1

#### *2. Number of IODE Officers*

- 283 **The Committee agreed** with the recommendation of the review team and decided that the IODE Officers should include:
- (i) the IODE Chair;
  - (ii) the IODE Vice-Chair;

- (iii) Chairs of groups established jointly with other organizations;
- (iv) Chairs of Group of Experts.

284 **The Committee agreed** that in addition, the WDC Directors and selected regional, scientific or technical experts may be invited to Officers' Meetings, if the agenda calls for them.

285 Taking into account that the IODE Committee meets approximately every two years, **the Committee decided** that one Officers Meeting should follow immediately future Committee Sessions to finalize the inter-sessional Work Plan, and a second meeting should be held during the inter-sessional period to review progress and prepare for the coming Committee Session.

### 3. IODE Groups of Experts

286 **The Committee noted** the concerns expressed by the Review Team related to the IODE Groups of Experts. **The Committee felt** that the achievements of the IODE Group of Experts on Marine Information Management (GE-MIM) were not sufficiently recognized in the report of the review team.

288 **The Committee noted** that there had not been sufficient guidance to the Groups of Experts in terms of issues to deal with and in terms of follow-up, and **tasked** the IODE Officers to closely monitor and guide the Groups.

289 **The Committee stated** that the current rules that define the establishment, membership and modus operandi of the Groups of Experts needed revision and **established** a sessional working group to address this matter.

290 **The Committee adopted** Resolution IODE-XVIII.3

### 4. Distributed national data management systems

291 **The Committee stressed** that the architecture of national data and information management systems should be decided upon by the concerned Member State.

292 **The Committee welcomed** the initiatives of several Member States to develop distributed systems and **invited** these countries to share relevant expertise with other Member States who wish to develop similar systems.

293 **The Committee re-iterated** the need for national central focal points for data and information functions traditionally assumed by NODCs and marine libraries and **called** on Member States not to lose sight of this requirement.

### 5. Responsible National Oceanographic Data Centres (RNODCs)

294 **The Committee decided** to abolish the system of RNODCs. However, to ensure that the resources and expertise acquired in the regional RNODCs will not be lost, **the Committee instructed** the ODIN projects to incorporate the resources of existing regional RNODCs. Similarly, **the Committee instructed** the Chair to discuss with host centres of other RNODCs how their operations, if considered essential for the international (science) community, could be maintained and properly acknowledged.

295 **The Committee adopted** Resolution IODE-XVIII.2

6. Multi-national oceanographic data centres

- 296 **The Committee welcomed** the proposal to establish multi-national oceanographic data centres in those cases where insufficient national resources or data exist to justify a fully-fledged national data facility.
- 297 **The Committee noted** however that the establishment of such centres might not be easy, taking into consideration such issues as data ownership and national sovereignty.

7. Quality Control

- 298 **The Committee re-iterated** the high importance of quality control as one of the core priority issues for the IODE programmes.
- 299 **The Committee noted** that a Pilot Project on Quality Control was included in the work plan of the JCOMM/IODE ETDMP but that no action had been taken so far in this regard.
- 300 **The Committee adopted** Resolution IODE-XVIII.4.

11. IODE Regional Coordinators

- 304 **The Committee noted** that the function of IODE regional coordinator has been assumed successfully by project coordinators of ODIN projects (examples ODINAFRICA, ODINCARSA).
- 305 **The Committee decided** to abolish the system of IODE Regional Coordinators.
- 306 **The Committee instructed** the coordinators of ODIN projects to assume the responsibilities formerly assumed by the IODE Regional Coordinators.
- 307 **The Committee adopted** Resolution IODE-XVIII.1.

12. IODE National Coordinators

- 309 **The Committee urged** IOC Member States, who not have done so, to urgently identify IODE National Coordinators for Oceanographic Data Management and IODE National Coordinators for Marine Information Management.

13. IOC Oceanographic Data Exchange Policy

- 310 **The Committee welcomed** the adoption of the IOC Oceanographic Data Exchange Policy by the IOC Assembly during its twenty-third Session and urged Member States to apply the policy nationally.

14. The IODE unit at the IOC Secretariat

- 311 **The Committee urged** the Executive Secretary to ensure that the IODE programme's visibility and position in the IOC and UNESCO programme and secretariat structure is maintained in order to affirm the importance of oceanographic data and information dissemination and exchange.



15. IODE operational activity maintenance

- 312 The Committee was informed that OceanTeacher is now a project funded by extra-budgetary resources and no Secretariat resources are used to further build OceanTeacher.
- 313 **The Committee re-iterated** that IOC funds are being used for pilot projects only and that projects should, subsequent to the pilot phase be supported by extra-budgetary support or adopted by Member States.

16. IOC web sites

- 314 **The Committee urged** the IOC Secretariat to harmonize the IOC web sites.

17. Role of IODE in ETDMP

- 316 Referring to the review team recommendation 3, **the Committee noted** that the IODE/JCOMM ETDMP will require close monitoring and guidance.

5.2 FUTURE ROLE OF THE WDCS, RNODCS AND NODCS

- 319 As the role of WDCs, RNODCs and NODCs had already been discussed extensively during the current Session, **the Committee decided** to dissolve the inter-sessional working group.
- 320 **The Committee instructed** the IODE Officers to discuss how IODE will deliver its services to users, in particular through the WDCs. **The Committee further instructed** the Officers to investigate how the institutions that currently host RNODCs that are operational, can continue to provide services, taking into consideration the decision by the Committee to abolish the RNODC system.

5.3 EVOLUTION OF IODE AT THE NATIONAL LEVEL

- 323 **The Committee urged** NODCs to take into consideration the global move towards distributed systems which would also be reflected in GEOSS. However **the Committee cautioned** countries that distributed systems would still require a focal point for national data acquisition and liaison with international programmes.

5.4. IOC STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION  
MANAGEMENT

- 335 **The Committee noted** that the proposed strategy did not refer to technological issues and does not have a plan for the implementation of the strategy.
- 336 **The Committee thanked** the sessional working group and the Task Team for its work.
- 337 **The Committee requested** the IODE Chair to report the findings of the First Session of the Task Team and the meeting of the sessional working group to the 23rd Session of the IOC Assembly in June 2005.
- 338 **The Committee requested** the Executive Secretary IOC to identify the necessary funding for the proposed Consultant in 2005 and early 2006, to ensure timely delivery of the strategy document.

- 339 **The Committee endorsed** the outline and time lines proposed by the sessional group, and **requested** the IODE Secretariat to avail the document well ahead of the next IODE-XIX and the 24th Session of the IOC Assembly.

## **6. PROGRAMME PROGRESS REPORTS**

### **6.1 GROUPS OF EXPERTS**

#### **6.1.1 Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BICH)**

- 349 **The Committee**, recognizing the importance of maintaining the momentum of the work being done by the GE-BICH and during the COD and OBI Conferences, **strongly welcomed** the proposal for a second OBI Conference.
- 350 The JCOMM Co-President, Dr Savi Narayanan, suggested that JCOMM Secretariat consider supporting financially, the activities of GE-BICH Pilot Projects as JCOMM's mandate related to non-physical variables is consistent with GE-BICH's Terms of Reference.
- 351 **The Committee welcomed with satisfaction** the achievements of the Group of Experts on Biological and Chemical Data Management and Exchange Practices and **stressed** the importance of the pilot projects.
- 352 **The Committee adopted** the summary report of the Second Session of the IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BICH), and recommendations included therein.
- 353 **The Committee adopted** Recommendation IODE-XVIII.2.

#### **6.1.2 Group of Experts on Marine Information Management (GE-MIM)**

- 381 **The Committee adopted** the Summary Report of the Eighth Session of the Group and all recommendations contained therein, taking into consideration the decisions made by the Committee regarding the Groups of Experts.

#### **6.1.3 JCOMM/IODE Expert Team On Data Management Practices (ETDMP)**

- 391 **The Committee expressed** its strong satisfaction with the great progress made by the ETDMP and the enthusiasm of its participants, and **adopted** the JCOMM/IODE ETDMP work plan for 2006–2007. **The Committee further urged** the JCOMM Co-President to endorse the work plan on behalf of JCOMM.
- 392 **The Committee recommended** to have on the web the manuals and guidelines available for new organizations wishing to join the E2EDM prototype and to expand the number of data providing Member States.
- 393 **The Committee noted with satisfaction** that ETDMP Pilot Project 3 is a good example of cooperation of the IODE and JCOMM.
- 394 **The Committee noted** that there are great possibilities for cooperation of the JCOMM/IODE ETDMP and OBIS and **recommended** to establish the common terminology and vocabulary.

## 6.2 GLOBAL PROJECTS

### 6.2.2 Global Ocean Surface Underway Data Pilot Project (GOSUD)

402 **The Committee noted with satisfaction** the great progress achieved by the Global Ocean Surface Underway Data Project.

403 **The Committee strongly encouraged** other organizations to participate in the project.

### 6.2.3 Global Oceanographic Data Archaeology and Rescue (GODAR)

414 **The Committee congratulated** Mr Levitus as GODAR Project Leader with the continued success of the GODAR Project and its products.

415 **The Committee endorsed** the continued support for the GODAR Project.

### 6.2.4 Global Temperature and Salinity Profile Programme (GTSP)

425 **The Committee noted** that the interest for the project results was high and **requested** that results should be reported to future IODE Committee Sessions along with the results of other projects.

426 **The Committee noted with appreciation** the great results of the GTSP project.

427 **The Committee noted** the agreement with BODC to link to their data dictionary and **recommended** to implement this as soon as possible.

### 6.2.5 Development of a marine XML (marineXML)

436 Noting the importance of MarineXML to the IODE community, **the Committee stressed** the need to continue work on MarineXML.

437 **The Committee adopted** Recommendation IODE-XVIII.7

### 6.2.6 Marine Environmental Data Inventory (MEDI)

446 **The Committee instructed** the SG-MEDI to work with other national and international initiatives to develop a marine profile of ISO 19115 and seek collaboration with other communities to develop an ISO 19115 compliant metadata tool.

447 **The Committee noted** that it would be difficult for IODE to maintain software applications on a long-term basis and **instructed** the Chair of the SG-MEDI and IODE Chair to work closely with other communities who are developing similar tools.

449 **The Committee decided** to include a session of the SG-MEDI in the 2005–2007 work plan.

450 **The Committee urged** Member States to utilize MEDI as appropriate, and to promote its use at the national level in relevant academic and ocean research facilities.

451 **The Committee further invited** Member States that use other systems, to ensure their ISO 19115 compliance so they can easily exchange records with MEDI.

452 **The Committee decided** to revise the Terms of reference of the MEDI Steering Group.

453 **The Committee adopted** Recommendation IODE-XVIII.3.

#### **6.2.7 Global Directory of Marine and Freshwater Professionals (OceanExpert)**

467 **The Committee expressed its appreciation** for OceanExpert but **instructed** the inter-sessional working group to urgently resolve the remaining technical issues.

468 **The Committee called** on the newly nominated IODE National Coordinators for Marine Information Management to actively participate in the population, maintenance and promotion of OceanExpert at their national level.

469 **The Committee endorsed** the continued support for OceanExpert.

#### **6.2.8 OceanPortal**

477 **The Committee expressed its appreciation** for the success of OceanPortal and thanked in particular the OceanPortal Editor, Dr Murray Brown.

478 **The Committee agreed** that OceanPortal needs to be continued and **decided** to set aside funding in the inter-sessional work plan for the continued maintenance of OceanPortal.

#### **6.2.9 OceanTeacher/ODIMex**

489 **The Committee congratulated** the OceanTeacher development team with the results achieved and with obtaining extra-budgetary funds for the development and maintenance of OceanTeacher.

490 **The Committee thanked** the Government of Flanders for providing financial support to the ODIMeX/OceanTeacher project.

491 **The Committee**, while acknowledging the huge content of OceanTeacher, **called** on the project to consider translation into French and Spanish and requested Member States to assist with this task.

492 **The Committee called** on Member States to ensure that students, nominated for training courses are selected carefully on the basis of the course programme and their skill level that should be appropriate for the course.

#### **6.2.10 Ocean Information Technology Pilot Project**

495 **The Committee noted with regret** that the only activities of the OIT project implemented during the inter-sessional period were the pilot projects of the JCOMM/IODE ETDMP and that these did not cover all elements of the initial OIT work plan.

496 **The Committee recommended** to the IODE Officers and the JCOMM DMCG to reconsider the project action items in view of the recent activities of the JCOMM/IODE ETDMP and bring forward a revised work plan for implementation.

497 **The Committee further recommended** to find a sponsor for the project activity.

### 6.3 IODE CAPACITY BUILDING

#### 6.3.1 Ocean Data and Information Network for Africa (ODINAFRICA)

- 503 **The Committee acknowledged** the good progress that ODINAFRICA network has continued to make in developing capacity for data management in the participating countries.
- 508 **The Committee expressed its gratitude** to the Government of Flanders for their continued support to the ODINAFRICA project through funding the project for a third phase of ODINAFRICA-III amounting to USD2.5million for the period 2004–2007.
- 509 **The Committee noted with appreciation** that the data and information centres established with assistance from the ODINAFRICA project are well entrenched in national networks and **welcomed** in particular their core position in the National Oceanographic Committees.
- 510 **The Committee further welcomed** the efforts of the new centres to ensure their long-term sustainability through a demand driven and stakeholder focused approach.
- 511 **The Committee noted with appreciation** that the additional support provided by the Government of Flanders (€500,000/year) could be utilized to fund training courses on remote sensing and GIS of which the need had been identified by the ODINAFRICA participating countries.

#### 6.3.2 Ocean Data and Information Network for the Caribbean and South America regions (ODINCARSA)

- 517 **The Committee commended** the work done by ODINCARSA in building capacity and networks in the region.
- 518 **The Committee adopted** Recommendation IODE-XVIII.5

#### 6.3.3 Ocean Data and Information Network for the Central Indian Ocean Region (ODINCINDIO)

- 525 **The Committee congratulated** Dr Zaker on his achievement in identifying interested Member States in the IOCINDIO region to participate in the ODINCINDIO project.
- 526 **The Committee expressed its gratitude** to ROPME, IOGOOS and INCO for co-sponsoring the First ODINCINDIO Planning meeting which was held in Tehran, Iran in December 2003.
- 527 **The Committee welcomed** with enthusiasm the fact that IOGOOS has identified ODINCINDIO and ODINAFRICA as the data management capacity building instrument of IOGOOS.
- 528 **The Committee pointed** out the need to strengthen the ODIN projects as a mechanism for coordination of activities at the regional level in view of the abolition of the RNODCs and the position of Regional coordinator.
- 529 **The Committee adopted** Recommendation IODE-XVIII.4.
- 531 **The Committee** instructed ODIN project coordinators to liaise with the regional OBIS node managers to promote collaboration.

### 6.3.4 Other Regions

#### 6.3.4.1 Polar Regions

535 **The Committee noted** that IODE-XIX will be held during the International Polar Year. In view of this, **the Committee recommended** that IODE should direct its attention to focus on the polar data during IODE-XIX **and instructed** data centres to include information on related activities in their reports to IODE-XIX. The list of data types required for IPY should be sent to appropriate centres so that they can do data mining. WDC for Oceanography, Silver Spring offered to start the process moving as soon as possible.

#### 6.3.4.2 Eastern Europe

537 **The Committee endorsed** the proposal that EURASLIC should work with GE-MIM to develop the proposal for an ODIN for ECET.

#### 6.3.4.3 WESTPAC

538 **The Committee recognized** the excellent work done by JODC in WESTPAC during the last 20 years, especially in capacity building related to data management and GODAR. JODC has been organizing two-week training courses initially annually and recently biannually in its capacity as an RNODC. JODC would like to continue with these services, possibly under an alternative mechanism in view of the abolition of RNODCs.

539 **The Committee emphasized** the need to continue this work and invited the upcoming WESTPAC Session to consider the establishment of an ODIN network for the region.

#### 6.3.4.4 Pacific Islands

541 **The Committee agreed** that GE-MIM should continue with its activities in the region and the progress reviewed at IODE-XIX.

### 6.3.5 E-repository for Africa (OdinPubAfrica)

545 **The Committee noted** the worldwide movement towards repositories, and especially the linking of repositories to metadata and datasets.

546 **The Committee considered** the possibility of setting up an e-journal for the data management community but **noted** that it may be better to work with existing e-journals which already have recognition and wide reach rather than starting something new. Concerning the development of a repository for IODE working documents, **the Committee noted** that most of the documents would need to be reviewed before publication. It may be advisable to identify working papers of publishable quality after the IODE sessions and request the authors to further develop them for publication.

### 6.3.6 New Requirements in regional capacity building

549 **The Committee requested** that the JCOMM/IODE secretariat to maintain an up-to-date web page of upcoming training events. This will help the member countries to plan their participation in such activities or influence the content of such activities

## 7. IODE PUBLIC AWARENESS

### 7.1 IODE WEB SITES

553 **The Committee expressed its general satisfaction** with the new web site and **requested** the Secretariat to continue developing the site, taking into account the comments from the Members of the Committee.

### 7.2. IODE BROCHURES, POSTERS AND PUBLICATIONS

557 **The Committee concluded** that the production of a brochure would be useful for publicizing the activities of IODE and instructed the IODE Secretariat to further study this issue.

558 **The Committee instructed** the IODE Secretariat to make the IODE posters available in an electronic and layered version so that they can be printed and customized locally.

559 **The Committee noted** the need to translate the posters to other languages so as to reach a wider community, and **recommended** that a composite poster covering all the IODE activities be produced as some institutions have limited space for posters.

## 8. REQUIRED RESOURCES AND PLAN OF ACTION

562 **The Committee adopted** Recommendation IODE-XVIII.8.

## 10. DATE AND PLACE OF IODE-XIX

567 **The Committee recalled** that Italy had offered to host the Eighteenth Session of IODE-XVIII but this had been relocated to Ostend, Belgium to enable delegates to attend the official opening of the IODE Project Office. The delegate of Italy re-iterated their offer to host the Nineteenth Session of IODE in Rome in April 2007.

568 **The Committee noted** the offer of Italy to host next session in Rome in 2007, and **instructed** the Secretariat in consultation with the Chairman to follow-up on the offer.

## 11. ADOPTION OF THE SUMMARY REPORT

569 **The Committee adopted** the draft Summary Report of the Sessions, the Resolutions and Recommendations as they are presented in Annex II (of the summary report and section 2 of this document).

570 **The Committee requested** the IOC Secretariat and its Chairman to make editorial corrections as necessary, taking into account the discussions held during the Session.

571 **The Committee requested** the IODE Chair to present the Executive Summary with all Resolutions and Recommendations therein to the Twenty-Third Session of the IOC Assembly that will take place in June 2005 at the UNESCO Headquarters in Paris, France.

## **SECTION 2**

### **RESOLUTIONS AND RECOMMENDATIONS**

#### **RESOLUTIONS**

Resolution IODE-XVIII.1	IODE REGIONAL CO-ORDINATORS
Resolution IODE-XVIII.2	RESPONSIBLE NATIONAL OCEANOGRAPHIC DATA CENTRES (RNODCs)
Resolution IODE-XVIII.3	IODE GROUPS OF EXPERTS
Resolution IODE-XVIII.4	ESTABLISHMENT OF AN INTER-SESSIONAL WORKING GROUP ON OCEAN DATA QUALITY CONTROL

#### **RECOMMENDATIONS**

Recommendation IODE-XVIII.1	THE IODE OBJECTIVES
Recommendation IODE-XVIII.2:	REVISION OF THE TERMS OF REFERENCE OF THE IODE GROUP OF EXPERTS ON BIOLOGICAL AND CHEMICAL DATA MANAGEMENT AND EXCHANGE PRACTICES (GE-BICH)
Recommendation IODE-XVIII.3:	MARINE ENVIRONMENTAL DATA INVENTORY (MEDI) PROGRAMME
Recommendation IODE-XVIII.4:	OCEAN DATA AND INFORMATION NETWORK FOR THE CENTRAL INDIAN OCEAN REGION (ODINCINDIO)
Recommendation IODE-XVIII.5:	OCEAN DATA AND INFORMATION NETWORK FOR THE CARIBBEAN AND SOUTH AMERICA REGIONS (ODINCARSA)
Recommendation IODE-XVIII.6:	THE IODE PROJECT OFFICE
Recommendation IODE-XVIII.7:	ESTABLISHMENT OF THE IODE XML STEERING GROUP
Recommendation IODE-XVIII.8:	PROGRAMME AND BUDGET FOR 2005–2007



## **RESOLUTIONS**

### **Resolution IODE-XVIII.1**

#### **IODE REGIONAL CO-ORDINATORS**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Recalling** Resolution-XV.4 (IODE Regional Co-ordinators) that appointed IODE Regional Co-ordinators for each of the IOC regional programmes,

**Further recalling** Recommendation IODE-XVI.2 (Strengthening of the Regional Co-ordinators Mechanism) that amended the Terms of Reference for Regional Co-ordinators,

**Noting** that the IODE Review considered that the terms of reference for an IODE Regional Co-ordinator are too demanding to be executed by a single person who has full-time national duties,

**Considering** that the function of the IODE Regional Co-ordinator in many cases has been assumed successfully by project coordinators of ODIN projects (e.g. ODINAFRICA, ODINCARSA),

**Agrees** to abolish the system of IODE Regional Co-ordinators;

**Decides** that the functions of the former IODE Regional Co-ordinators be included in the Terms of Reference of the relevant IODE Ocean Data and Information Networks (ODIN).

### **Resolution IODE-XVIII.2**

#### **RESPONSIBLE NATIONAL OCEANOGRAPHIC DATA CENTRES (RNODCs)**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Noting that** the IODE Review reported that the various surveys had revealed that most RNODCs were not well known and little used,

**Noting further** that the IODE Review had questioned the relevance of RNODCs and recommended to abolish the RNODC system,

**Recognizing however** that some RNODCs perform well and provide useful products and services,

**Agrees** to abolish the system of IODE Responsible National Oceanographic Data Centres;

**Requests** that, where available, NODCs participating in Ocean Data and Information Networks (ODIN) assume the functions of former RNODCs;

**Instructs** the IODE Chair to discuss with host institutions of other RNODCs how their operations, if considered essential for the international community, could be maintained and properly acknowledged, or transferred to other Centres of the IODE network.

Resolution IODE-XVIII.3

**IODE GROUPS OF EXPERTS**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Noting** that the IODE Review had questioned the need for, and effectiveness of the IODE Groups of Experts,

**Considering** that:

- (i) the GE-MIM has been an extremely active Group of Experts that has been instrumental in generating many IODE Marine Information Management projects, products and services during its twenty years of existence,
- (ii) the GE-BICH deals with biological and chemical data which have been identified as important new areas for IODE,
- (iii) the GE-TADE was merged with the JCOMM ETDMP into the JCOMM/IODE ETDMP and as such has a joint ownership,

**Acknowledging** that the IODE Groups of Experts need improved guidance to focus its activities,

**Instructs** the Chairs of the IODE Groups of Experts to jointly develop a strategy for the future, addressing issues such as:

- (i) recommending a new structure and membership format for IODE Groups of Experts, which offers more flexibility, increased access to expanded pool of experts, and stronger focus on the completion of tasks, whilst also maintaining a wider coordination role;
- (ii) suggesting mechanisms for improving communication and reporting between IODE Groups of Experts and National Co-ordinators for both data management and information management;
- (iii) including in the new mechanism, the potential for establishing steering groups based on specific projects, and gaining appropriate external expert advice when required;
- (iv) suggesting mechanisms for improving communication amongst IODE Groups of Experts, and for offering direction to IODE Groups of Experts from the IODE Officer Group;

**Instructs** the Chairs of the IODE Groups of Experts to submit the strategy to the next Session of the IODE Officers for their consideration, and to the Nineteenth Session of the IODE Committee, for adoption.

Resolution IODE-XVIII.4

**ESTABLISHMENT OF AN INTER-SESSIONAL WORKING GROUP ON  
QUALITY CONTROL OF OCEAN PROFILE DATA**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Noting** that the IODE Review stated that agreeing upon minimum quality control procedures for oceanographic data should be a core activity of the IODE programme,

**Considering** that the Manual of quality control procedures for validation of oceanographic data (IOC Manuals and Guides 26) dates from 1993,

**Noting** that the work of this Group contributes to the activities of the JCOMM/IODE ETDMP Pilot Project 2,

**Decides** to establish an inter-sessional working group that will:

- (i) review existing quality control procedures and software;
- (ii) discuss quality control issues of historical, real-time, delayed-mode and modern ocean profile data;
- (iii) prepare a report on (i) and (ii) above.

**Decides** that the Group will be composed of Sydney Levitus (USA), Nikolay Mikhailov (Russia), Loic Petit de la Villeon (France), Candida Seta (Mozambique), Hae-Seok Kang (Korea), Ruguang Yin (China), Joon-Yong Yang (Korea), Scot Tomlinson (Canada), Ricardo Rojas (Chile), Catherine Maillard (France) and Edward Vanden Berghe (Belgium), Anis Diallo (Senegal) and Murray Brown (Chief Editor OceanTeacher);

**Instructs** that the Group will work by email;

**Instructs** the Group to submit its report to the next JCOMM/IODE ETDMP Session for its consideration and use, and its final report to the Nineteenth Session of the IODE Committee for adoption.

## RECOMMENDATIONS

### Recommendation IODE XVIII.1

## THE IODE OBJECTIVES

The IOC Committee on International Oceanographic Data and Information Exchange,

**Noting** that the mandate of the Committee has remained largely unchanged since its establishment 42 years ago,

**Recognizing** that the scope of data that can be usefully exchanged internationally has changed enormously, and that requirements on timeliness, data quality, volume, and type of variables make examination of the remit and activities of IODE essential if it is to be a significant contribution to international oceanographic data management,

**Taking into consideration** the report of the IODE Review group which covered extensively the operations and implementation of IODE, and in particular its mandate, missions, structure, data centre network(s) and its (their) operation, mode of operation, activities of its subsidiary groups

and projects, national development of its activities, and the extent to which IODE activities benefit Member States,

**Recommends** that the Objectives of the IODE Programme be modified as follows:

- (i) to facilitate and promote the exchange of all marine data and information including metadata, products and information in real-time, near real time and delayed mode;
- (ii) to ensure the long term archival, management and services of all marine data and information;
- (iii) to promote the use of international standards, and develop or help in the development of standards and methods for the global exchange of marine data and information, using the most appropriate information management and information technology;
- (iv) to assist Member States to acquire the necessary capacity to manage marine data and information and become partners in the IODE network; and
- (v) to support international scientific and operational marine programmes of IOC and WMO and their sponsor organisations with advice and data management services.

Recommendation IODE-XVIII.2

**REVISION OF THE TERMS OF REFERENCE OF THE  
IODE GROUP OF EXPERTS ON BIOLOGICAL AND CHEMICAL DATA  
MANAGEMENT AND EXCHANGE PRACTICES (GE-BICH)**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Recognizing** the increasing importance of managing and archiving biological and chemical data,

**Noting** the continued development of global research, monitoring and observing programmes, that are relevant to issues such as climate change, ecosystem dynamics and biodiversity, and which rely heavily on biological and chemical data sets,

**Further noting** the need for integrated databases that combine physical, chemical and biological oceanographic data,

**Recommends** the revision of the Terms of Reference of the Group of Experts on Biological and Chemical Data Management and Exchange Practices to include:

- (i) documenting the systems and taxonomic databases and inventories currently in use in various data centres;
- (ii) documenting the advantages and disadvantages of different methods and practices of compiling, managing and archiving biological and chemical data;
- (iii) developing standards and recommended practices for the management and exchange of biological and chemical data, including practices for operational biological data;
- (iv) encouraging data centres to compile inventories of past and present biological and chemical data holdings;
- (v) encouraging data holders to contribute data to data centres for the creation of regional and global integrated oceanographic databases incorporating physical, chemical and biological data.

**Encourages** IOC Member States to nominate experts having expertise in biological and chemical data management and exchange practices to the Group of Experts;

**Requests** that the Group of Experts maintains close relations with GOOS, COOP, JCOMM and other relevant programmes of IOC and other organizations.

### Recommendation IODE-XVIII.3

#### **MARINE ENVIRONMENTAL DATA INVENTORY (MEDI) PROGRAMME**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Recognizing** the value of a metadata directory system for databases, data catalogues and data inventories to a broad user community, including IOC programmes such as GOOS and related activities within other global and regional programmes,

**Recalling** Recommendation IODE-XVI.1 that established the MEDI Steering Group,

**Further recalling** that IODE-XVII recommended that MEDI should be ISO compliant,

**Recommends** that the MEDI Steering Group collaborate with national and international metadata initiatives to ensure a metadata system, that meets international standards, is available to the IODE member states and that the MEDI Steering Group be reconstituted with the following terms of reference:

- (i) identify and document current metadata management best practice;
- (ii) in collaboration with national and international initiatives, as well as the IODE Groups of Experts, recommend a marine profile of ISO 19115 and develop relevant vocabularies to describe marine datasets;
- (iii) make available an ISO 19115 compliant metadata entry tool to the IODE community to ensure metadata is uniformly collected;

**Recommends** that the membership of the Steering Group shall include Australia (AODCJF), Belgium (VLIZ), China (NODC), Tunisia (INSTM), UK (BODC) and USA (NODC) and other experts as appropriate, and shall be coordinated by Mr G. Reed (Australia);

**Further recommends** the continued incorporation of MEDI as a training module in all IODE training activities and capacity building products;

**Urges** Member States to use the MEDI system as appropriate and promote its use to the widest possible audience.

### Recommendation IODE-XVIII.4

#### **OCEAN DATA AND INFORMATION NETWORK FOR THE IOCINDIO REGION (ODINCINDIO)**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Noting with satisfaction** the completion of actions as requested by IODE-XVII regarding the proposal to establish and ODIN network for the IOCINDIO region,

**Noting further** the recognition by IOGOOS of ODINCINDIO as the data management capacity building tool for IOGOOS,

**Further noting** the interest of IOCINDIO Member States to join ODINCINDIO,

**Welcoming** the support of ROPME, IOGOOS and INCO for the First ODINCINDIO Planning meeting, held between 2 and 5 October 2004 in Tehran, Iran,

**Taking into account** the report of the First ODINCINDIO Planning meeting,

**Recognising** the role of ocean data and information management capacity building in the effective implementation of Indian Ocean Tsunami Warning System,

**Recommends** that an Ocean Data and Information Network for the IOCINDIO region be established;

**Requests** the IOC Executive Secretary to implement, as a priority, the following actions:

- (i) to coordinate the necessary actions with the IOGOOS Secretariat, ROPME and ODINCINDIO participating Member States to obtain donor support for ODINCINDIO;
- (ii) to provide funding for the implementation of the ODINCINDIO work plan (2005–2007);
- (iii) to strengthen links with JCOMM and GOOS in terms of capacity building and oceanographic data and information management in the ODINCINDIO participating Member States;

**Urges** Member States and donors to support this project by providing financial resources and/or in-kind support to enable the implementation of ODINCINDIO.

#### Recommendation IODE XVIII.5

### **OCEAN DATA AND INFORMATION NETWORK FOR THE CARIBBEAN AND SOUTH AMERICA REGIONS (ODINCARSA)**

The IOC Committee of International Oceanographic Data and Information Exchange,

**Expresses** its appreciation of the recent progress of ODINCARSA activities, products and services, as described in the second report of ODINCARSA, presented to IODE XVIII;

**Notes with satisfaction** that ODINCARSA operations have enhanced the capacity of a number of ODINCARSA Member States for oceanographic data and information management;

**Stresses** the usefulness, in particular, of ODINCARSA's work so as to make available the Spanish version of OceanTeacher, and the regional contributions to OceanExpert;

**Recommends** the establishment of close links between the ODINCARSA, GOOS and JCOMM initiatives, especially to contribute to the establishment of warning and mitigation systems against ocean based natural disasters;

**Invites** all IOC Member States and interested organizations and Foundations to further support ODINCARSA by providing monetary and/or in kind contribution resources and technology transfer arrangements, to enable the full implementation of the ODINCARSA Project;

**Requests** the IOC Executive Secretary to implement the following actions:

- (i) to coordinate the necessary actions with the IOCARIBE Secretariat, IOCARIBE Member States and other interested organizations in the IOCARIBE region to obtain donor support for ODINCARSA;
- (ii) to provide funding for the implementation of the ODINCARSA work plan (2005–2007);
- (iii) to strengthen links with JCOMM and GOOS in terms of capacity building and oceanographic data and information management in the ODINCARSA participating Member States

#### Recommendation IODE-XVIII.6

### **THE IODE PROJECT OFFICE**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Recalling** the acceptance by the IOC Assembly at its 22<sup>nd</sup> Session of the offer made by the Government of Flanders and the City of Oostend to host the IODE Project Office,

**Noting with satisfaction** the official opening of IOC Project Office for IODE on 25 April 2004,

**Expressing its appreciation** for the substantial additional support of €500,000/year pledged by the Government of Flanders to support capacity building activities at the IOC Project Office for IODE related to Africa, the Indian Ocean, Caribbean and Latin America regions,

**Further noting** that the main objectives of the Project Office are:

- (i) to provide a creative environment facilitating the further development and maintenance of IODE Projects, services and products with emphasis on improving the efficiency and effectiveness of the data and product/service stream between the stage of sampling and the user, and
- (ii) to assist in strengthening the capacity of Member States to manage oceanographic data and information (with special attention to the developing countries) and to provide ocean data and information products and services required by users,

**Recognizing** that, to achieve these objectives the IODE Project Office will:

- (i) further develop, strengthen and maintain IOC/IODE ocean data and information management training programmes and training tools;
- (ii) provide an environment ('think-tank') where ocean data and information experts and students can work, meet and discuss;

- (iii) develop, host and maintain IOC/IODE's ocean information systems and related public awareness tools;
- (iv) promote collaboration between all expert levels active in ocean data (and data product) and information management, including scientists, data managers and users;
- (v) host specialized short-term training courses in ocean data and information management; and
- (vi) provide a laboratory environment for the development and beta testing of ocean data and information management technology,

**Calls on** IOC Member States to provide additional support to promote, facilitate and strengthen the activities of the IOC Project Office for IODE and to consider secondment of national experts to the Office for short to long term assignments.

#### Recommendation IODE-XVIII.7

#### **ESTABLISHMENT OF THE IODE XML STEERING GROUP**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Recognizing** the advantage of using the eXtensible Markup Language (XML) for the exchange of oceanographic data within the IODE system and the importance of XML as a standard for data interchange on the Internet,

**Noting** the activities of the ICES/IOC Study Group on the Development of Marine Data Exchange Systems Using XML (SGXML) and the EU MarineXML project have concluded,

**Considering**, the desirability of the development of a single marine XML framework,

**Recommends** the establishment of a MarineXML Steering Group with the following terms of reference:

- (i) establish a Pilot Project to set up an ISO 19100 series of standards compliant standards register, with possible collaboration with IHO, to be hosted by the IODE Project Office;
- (ii) monitor and assist with XML development activities in other IODE/JCOMM groups, such as ETDMP, GEBICH and SGMEDI;

**Recommends** that the membership of the Steering Group shall include Belgium (VLIZ), China (NODC), The Netherlands (NODC), Russian Federation (NODC), United Kingdom (BODC), the IODE Project Office and other relevant experts, and shall be coordinated by Mr Roy Lowry (UK);

**Further recommends** the MarineXML web site (MarineXML.net) be hosted by the IODE Project Office as a focal point for MarineXML activities;

**Invites** Member States to promote the use of XML, at the national level, as a mechanism for the efficient exchange of oceanographic data.



Recommendation IODE-XVIII.8

**PROGRAMME AND BUDGET FOR 2005-2007**

The IOC Committee on International Oceanographic Data and Information Exchange,

**Having reviewed** its programme implementation requirements for the period 2005–2007,

**Having been informed** about the resources allocated to the IODE Programme from the UNESCO Regular Programme for the 2004–2005 and 2006–2007 biennia,

**Being aware** of the continuing severe financial constraints faced by UNESCO and its IOC,

**Re-emphasizing** the importance of high-quality oceanographic data and information, products and services for scientific, observation and ocean based disaster warning and mitigation programmes of the Commission, for member States, the private sector and other users,

**Noting** the increasing role of IODE in JCOMM and the growing collaboration with, and contribution to GOOS,

**Calling attention** to the continued process of reform of the IODE programme that takes into consideration the recommendations made by the IODE Review,

**Expressing great appreciation** to the Government of Flanders for hosting and supporting the IOC project Office for IODE and for its continuing and increasing financial support to IODE, as well as to other donors and Member States who are providing financial and in-kind support for IODE,

**Appreciating** the in-kind support for the IODE Programme provided by Member States through establishing and maintaining IODE Data Centres, provision of experts and through the provision of valuable ocean data and information products and services,

**Calls** on Member States to provide financial support to the IOC Trust Fund, earmarked for IODE, or in-kind support through the secondment of experts to the IOC Project Office for IODE or to the IODE secretariat;

**Invites** the IOC Executive Secretary to ensure stable and long-term staffing arrangements for the IODE Secretariat and for the IOC Project Office for IODE;

**Requests** the IODE Chair to bring to the attention of the 23rd Session of the IOC assembly, the IODE Programme of work and budget for the period 2005–2007, as attached in the Annex to this Recommendation.

## ANNEX to Recommendation IODE-XVIII.8

	2005				2006				2007			
	RP	EB exp	EB req	TOTAL	RP	EB exp	EB req	TOTAL	RP	EB exp	EB req	TOTAL
<b>IODE subsidiary bodies</b>												
GE-MIM projects: see products & services				0				0				0
GE-MIM-IX Session				0	10,000			10,000				0
ETDMP pilot projects				0	10,000		90,000	100,000	5,000		75,000	80,000
ETDMP meeting				0	10,000			10,000				0
GE-BICH pilot projects		4,500		4,500		4,500		4,500				0
GE-BICH-III meeting				0	10,000			10,000				0
<b>Capacity Building (training &amp; related)</b>								0				
ODINAFRICA		39,000		39,000		39,000		39,000		39,000		39,000
ODINCINDIO		91,000		91,000		91,000		91,000		91,000		91,000
ODINCARSA		91,000		91,000		91,000		91,000		91,000		91,000
JCOMM/IODE/GOOS Modeling Training		65,000		65,000		65,000		65,000		65,000		65,000
Young scientists DM training		39,000		39,000		39,000		39,000		39,000		39,000
GIS Training		39,000		39,000		39,000		39,000		39,000		39,000
MIM Travel grants	5,000			5,000	5,000			5,000	5,000			5,000
ASFA participation	2,000			2,000	2,000			2,000	2,000			2,000
Regional OceanPortal AFR				0		11,700		11,700		11,600		11,600
Regional OceanPortal LAC				0		23,400		23,400		23,300		23,300
Remote sensing training			40,000	40,000			40,000				40,000	40,000
<b>Products and Services</b>												
MARXML				0				0	5,000			5,000
MEDI				0	5,000			5,000	5,000			5,000
OCEANPORTAL				0	2,000			2,000	3,000			3,000
OCEANEXPERT				0	2,000			2,000	3,000			3,000
								0				
<b>Projects</b>								0				
GODAR - WORLD				0	5,000			5,000	5,000			5,000



	2005				2006				2007			
	RP	EB exp	EB req	TOTAL	RP	EB exp	EB req	TOTAL	RP	EB exp	EB req	TOTAL
<b>TOTALS</b>	<b>43,000</b>	<b>738,600</b>	<b>70,700</b>	<b>852,300</b>	<b>110,000</b>	<b>692,000</b>	<b>155,800</b>	<b>957,800</b>	<b>111,000</b>	<b>569,800</b>	<b>155,800</b>	<b>836,600</b>
Available	35,000	738,600	0	773,600	95,000	692,000	0	787,000	95,000	569,800	0	664,800
Difference	-8,000	0	-70,700	-78,700	-15,000	0	155,800	170,800	-16,000	0	155,800	171,800

**RP:** UNESCO regular Programme; **EB req:** Extra-budgetary requested from Member States or other donors;

**EB exp:** Extra-budgetary expected (confirmed) from Member States or other donors (includes also funds from cross-cutting themes UNESCO RP).

(\*) this activity concerns all IOC sections. Costing represents 20% of total cost (based upon sharing among 5 sections)

ANNEX

**AGENDA**

**1. OPENING**

**2. ADMINISTRATIVE ARRANGEMENTS**

2.1. ADOPTION OF AGENDA

2.2. DESIGNATION OF RAPPORTEUR

2.3. SESSION TIME TABLE AND DOCUMENTATION

2.4. LOCAL ARRANGEMENTS

**3. STATUS OF IODE**

3.1. CHAIRMAN'S REPORT

3.2. IOC PROJECT OFFICE FOR IODE

3.3. ACTIVITIES OF WORLD DATA CENTRES

3.3.1. World Data Center for Oceanography, Silver Spring, USA

3.3.2. World Data Centre for Oceanography, Obninsk, Russian Federation

3.3.3. World Data Center for Oceanography, Tianjin, China

3.3.4. World Data Center for Marine Geology and Geophysics, Moscow, Russian Federation

3.3.5. World Data Center for Marine Environmental Sciences (WDC-MARE)

3.4. ACTIVITIES OF RNODCs

3.4.1. RNODC for Drifting Buoy Data

3.4.2. RNODC for the Indian Ocean

3.4.3. RNODCs in Japan (which covers WESTPAC, MARPOLMON, IGOSS, ADCP)

3.4.4. RNODC for JASIN

3.4.5. RNODC for the Persian Gulf

3.5. REGIONAL CO-ORDINATORS REPORTS

3.5.1. IODE Regional Coordinator WESTPAC

3.5.2. IODE Regional Coordinator IOCINDIO

3.5.3. IODE Regional Coordinator IOCSOC

3.5.4. IODE Regional Coordinator for the Mediterranean region

3.5.5. IODE Regional Coordinator for the Eastern Pacific (El Niño)

3.5.6. Black Sea region

3.6. REPORTS OF NODCs AND DNAs

3.7. IODE DATA FLOW

3.8. IOC OCEANOGRAPHIC DATA EXCHANGE POLICY: IMPLEMENTATION BY MEMBER STATES

#### **4. COOPERATION WITH OTHER PROGRAMMES**

- 4.1. COOPERATION WITH JCOMM
- 4.2. COOPERATION WITH GOOS
- 4.3. COOPERATION WITH SCIENCE AND MONITORING PROGRAMMES
- 4.4. OTHERS
  - 4.4.1. ICES
  - 4.4.2. SCAR
  - 4.4.3. CDIAC
  - 4.4.4. Caspian Environment Programme (CEP)

#### **5. FUTURE OF IODE**

- 5.1. IODE REVIEW (PROGRESS REPORT)
- 5.2. FUTURE ROLE OF THE WDCs, RNODCs AND NODCs
- 5.3. EVOLUTION OF IODE AT THE NATIONAL LEVEL
- 5.4. IOC STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT

#### **6. PROGRAMME PROGRESS REPORTS**

##### **6.1. GROUPS OF EXPERTS**

- 6.1.1. Group of Experts on Biological and Chemical Data Management and Exchange Practises (GE-BICH)
- 6.1.2. Group of Experts on Marine Information Management (GE-MIM)
- 6.1.3. JCOMM/IODE Expert Team On Data Management Practises (ETDMP)

##### **6.2. GLOBAL PROJECTS**

- 6.2.1. Aquatic Sciences and Fisheries Abstracts (ASFA)
- 6.2.2. Global Ocean Surface Underway Data Pilot Project (GOSUD)
- 6.2.3. Global Oceanographic Data Archaeology and Rescue (GODAR)
- 6.2.4. Global Temperature and Salinity Profile Programme (GTSP)
- 6.2.5. Development of a marine XML (marineXML)
- 6.2.6. Marine Environmental Data Inventory (MEDI)
- 6.2.7. Global Directory of Marine and Freshwater Professionals (OceanExpert)
- 6.2.8. OceanPortal
- 6.2.9. OceanTeacher/ODIMex
- 6.2.10. Ocean information Technology Pilot Project

##### **6.3. IODE CAPACITY BUILDING**

- 6.3.1. Ocean Data and Information Network for Africa (ODINAFRICA)
- 6.3.2. Ocean Data and Information Network for the Caribbean and South America regions (ODINCARSA)

- 6.3.3. Ocean Data and Information Network for the Central Indian Ocean Region (ODINCINDIO)
- 6.3.4. Other Regions
- 6.3.5. E-repository for Africa (OdinPubAfrica)
- 6.3.6. New Requirements in regional capacity building

**7. IODE PUBLIC AWARENESS**

7.1. IODE WEB SITES

7.2. IODE BROCHURES, POSTERS AND PUBLICATIONS

**8. REQUIRED RESOURCES AND PLAN OF ACTION**

**9. ELECTIONS OF CHAIR AND VICE-CHAIR**

**10. DATE AND PLACE OF IODE-XIX**

**11. ADOPTION OF THE SUMMARY REPORT**

**12. CLOSURE**