



IOC/IODE-XIX/3s
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INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

**NINETEENTH SESSION OF THE IOC COMMITTEE ON INTERNATIONAL
OCEANOGRAPHIC DATA AND INFORMATION EXCHANGE**

Trieste, Italy, 12–16 March 2007

EXECUTIVE SUMMARY REPORT

This document contains all decisions adopted by the Committee on International Oceanographic Data and Information Exchange at its nineteenth session. The decisions, one resolution and fourteen recommendations are organized under 33 subjects. References to the relevant paragraphs in the full summary report are indicated in brackets.

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 23rd session in June 2005 for endorsement.

DETAILED DECISIONS, REQUESTS AND RECOMMENDATIONS OF IODE-XIX

1. Reporting on national activities

(51) **The Committee established** an inter-sessional working group that will review and improve the National Report format. The group will comprise Australia, the United States, the ODINCARSA Secretary, IODE Officers, and the JCOMM DMPA Chair. The sessional working group will work by email and will report to the next IODE Officers meeting in 2008.

2. Cooperation with Other Programmes

2.1 COOPERATION WITH GOOS

(190) **The IODE Committee strongly welcomed** closer collaboration with GOOS.

(191) **The Committee recommended** the organization of joint meetings of the IODE Officers and GOOS Scientific Steering Committee as a mechanism (i) to enable GOOS to benefit from IODE data and information management and exchange services; and (ii) for IODE to better respond to operational oceanography user needs.

(192) **The Committee stated** that the internal organization of the IOC Secretariat is of no concern of the Committee but it **expressed its concern** about the internal distribution of resources within the new OOS (Ocean Observation and Services) section which was currently unclear with regard to resources available to IODE.

(32) **The Committee recommended** holding the 2008 meeting of the Officers jointly with the GSSC and suggested holding the meeting at the IOC Project Office for IODE in March or April 2008.

(193) **The Committee instructed** the Secretariat to share its views with the 10th Meeting of the GSSC currently ongoing in Seoul, Republic of Korea. The Secretariat transmitted the video recording of the presentation by Mr Robert Keeley, in his capacity as Chair of the sessional working group on IODE-GOOS cooperation, to Korea for presentation during the GSSC meeting taking place there at that time.

(194) **The Committee further instructed** the IODE Co-Chairs to report its recommendation to the upcoming IOC Assembly in June 2007.

2.2 COOPERATION WITH WMO

(207) **The Committee agreed** with the recommendations by the WMO Representative regarding (i) developing interoperability between the different data management systems being developed in both oceanographic and meteorological communities, and with the WMO Information System (WIS) in particular, (ii) cooperating through JCOMM with the WMO Quality Management Framework, for documenting and updating IODE publications that are of interest to JCOMM, (iii) updating the draft IOC Strategic Plan for Oceanographic Data and Information Exchange in such a way that it is compatible with the JCOMM Data Management Strategy, (iv) collaboration of IODE Members with the META-T Pilot Project if appropriate

(210) While concerns were expressed about the weaknesses of JCOMM in certain regions, or its lack of visibility, **the Committee reminded** its Members that an efficient way to enhance JCOMM activities at the national level was through the establishment of a JCOMM National Committee. **The Committee therefore encouraged** its Members to work nationally in order to seek establishment of such Committees in cooperation with oceanographic institutes and National Meteorological and Hydrological Services (NMHS).

(211) **The Committee invited** WMO to make recommendations for a representative from the ETDMP to participate in the Inter Programme Expert Team on Metadata implementation (IPET-MI) in order to discuss and define common standards with the OceanDataPortal and other IODE data management systems

2.3 COOPERATION WITH IOC/HAB

(234) **The Committee strongly supported** the proposed cooperation with the Harmful Algal Bloom Programme and **adopted** [Recommendation IODE-XIX.1](#). **The Committee decided** to include the provision of seed funds in the 2007 and 2008–2009 work plan, although the source is yet to be defined, and **invited** Member States to identify extra-budgetary funds to enable the full implementation of the Project.

Endorses the IOC Harmful Algal Event Information System as a joint IPHAB-IODE activity.

Financial implications:

2007: US\$15,000 (extra-budgetary funds, not identified)

2008–2009: US\$30,000 (extra-budgetary funds, not identified)

2.4 COOPERATION WITH CDIAC (OCEAN CARBON)

(242) **The Committee noted with appreciation** that there were already many ongoing activities with CDIAC. These include rescue and recovery of historical CO₂ measurements. **The Committee recommended** that further joint activities could include CO₂ data and metadata available through the IODE OceanDataPortal.

2.5 COOPERATION WITH IPY

(250) **The Committee welcomed** the invitation of the IPY Subcommittee on Data Policy and Management and **strongly urged** IODE National Oceanographic Data Centres to actively participate in, and contribute to the IPY activities as proposed.

2.6 COOPERATION WITH OBIS

(265) **The Committee recommended** that ODIN programmes include OBIS activities in their mandate as support to OBIS.

(266) **The Committee recommended** that the Project Office continues training activities related to biodiversity.

(267) **The Committee recommended** that the possibility of creating a multidisciplinary data system including physical, chemical, and biodiversity data will be investigated by the ETDMP jointly with OBIS.

(268) **The Committee further recommended** support for the organization of the OBI 2007 conference.

2.7 COOPERATION WITH WCRP

(50) **The Committee strongly endorsed** cooperation between WCRP and IODE, stating that the science and data managers need to be better connected.

(271) **The Committee noted with appreciation** the great interest of the WCRP programme for the IODE data management experience and recourses.

(272) **The Committee welcomed** cooperation between WCRP and IODE and **instructed** the Officers to investigate ways to collaborate with WCRP.

2.8 COOPERATION WITH SOLAS

(276) **The Committee noted with appreciation** the great interest of the SOLAS project to the IODE data management experience.

3. The IOC Project Office for IODE

(61) **The Committee noted with appreciation** the diversity of the training events provided and planned by the Project Office, and **recommended** to put more attention on specialized training courses (GIS, etc.).

(66) **The Committee, while expressing** great appreciation for his management of the Project Office during the start up phase, **stressed** the need for identifying extra-budgetary support to continue the position of Dr Vladymyrov and **called** on Member States to assist in this regard.

(67) **The Committee strongly encouraged** Member States to second relevant experts on short or long-term basis to the Project Office, following the examples of Australia and United States.

4. Follow-up to the abolishment of the IODE RNODCs (Responsible National Oceanographic Data Centres)

(92) the **IODE Committee decided** to establish an inter-sessional working group to propose concrete ways to implement the decision of IODE-XVIII on RNODCs while bearing in mind the IOC strategic plan for oceanographic data and information management. **The Committee tasked** the group to report to the next meeting of the IODE Officers (March/April 2008). The membership will include Canada, Japan, Russia and the IODE Co-Chairs.

5. IODE Manuals and Guides

(99) **the Committee noted** that the “Guide for Establishing a National Oceanographic Data Centre” (IOC Manuals and Guides No. 5), published in 1997 was now out of date and needed urgent updating. **The Committee tasked** Dr Lesley Rickards, Mr Nickolay Michailov and Mr Greg Reed with reviewing “IOC Manuals and Guides No. 5” and start the updating process. With regard to the publishing of the revised Manual **the Committee noted** that, rather than publishing a printed version of the Manual, it would be more cost-effective to include the Manual in electronic format as part of OceanTeacher.

6. The ICSU World Data Centres

(102) **The Committee noted** that the different WDCs as well as other programmes or projects hold complementary parts of a “global” data set, and **recommended** that these entities should consider ways and means to build a “global data set”. **The Committee noted further** that the “OceanDataPortal” would provide the technological solution to make available these holdings.

7. The IODE network of data centres

(105) **The Committee noted** that further expansion of the IODE network should be promoted through the ODIN networks as this would enable assisting the new data and information management centres to acquire the necessary skills as part of a long-term integrated framework.

8. IODE data flow monitoring: Cruise Summary Reports (CSR) and National Oceanographic Programmes (NOP)

(119) **The Committee welcomed** the initiative of POGO to continue and strengthen the system of NOPs and CSRs and the leading role of the United Kingdom (BODC) and German (DOD) NODCs (as members of SeaDataNet) in this endeavour. **The Committee invited** POGO and the project leaders to report on progress to IODE-XX with the view of expanding the system to include smaller vessels.

(120) **The Committee stressed** the need for close cooperation with ICES which, together with the US-NODC, is responsible for maintaining the ship code list.

(121) **The Committee**, being informed about activities of several marine libraries in linking cruise metadata, data and research publications, **called** on the project to consider including “information linking” in future phases of the project by using the expertise available in marine libraries .

9. Quality control/ Quality assessment

(138) **The Committee decided** to continue the inter-sessional working group for one more inter-sessional period and charged it with the following tasks:

- i. compile a bibliography of all quality control publications (including both quality control procedures and software), building on what is currently available from OceanTeacher DM 209;
- ii. compile information on quality control issues of historical, real-time, delayed-mode and modern ocean profile data;
- iii. prepare a revised QC manual linking with other QC activities (such as SeaDataNet, DMAC and QARTOD) and building on the results of (i) and (ii) above.
- iv. this QC working group should work in collaboration with the JCOMM/IODE Expert Team on Data Management Practices (ETDMP).

(139) **The Committee instructed** the inter-sessional working group to submit its work to the March/April 2008 session of the IODE Officers for review, and to the twentieth Session of the IODE Committee for adoption in 2009.

(140) **The Committee further decided** that the inter-sessional working group membership will include Belgium, Canada, Chile, China, France, India, Italy, Republic of Korea, Russian Federation, Senegal, the United States of America, and WMO, and that the group lead will be the United Kingdom. It was further decided that the group will work by correspondence (email).

(141) **The Committee instructed** the Co-Chairs and Secretariat to investigate the possibility of organizing a QC session as well as plenary presentation during IMDIS-2008.

10. Restructuring of the IOC and its impact on IODE

(143) **The Committee requested** the IODE national coordinators to discuss this matter with their IOC action addressees (and Delegates to the forthcoming 24th Session of the IOC Assembly) with the view of ensuring the continuation of the IODE programme as a programme within IOC, and to express the Member States’ strong support for the IODE programme.

11. Strategy and Structure of IODE Groups of Experts

(159) **The Committee adopted** [Recommendation IODE-XIX.2](#) (Strategy and Structure of IODE Groups of Experts).

Recommends that the Terms of Reference of the IODE Groups of Experts be revised as follows:

(i) **Objectives:**

- a. IODE Groups of Experts will undertake detailed scientific and technical studies and/or co-ordination tasks, by subject or region, as identified by the IODE Committee;
- b. IODE Groups of Experts, including the JCOMM/IODE ETDMP, will monitor scientific and technical developments, and identify needs to be addressed by IODE, as pertaining to their IODE subject area and propose a work programme with clear priorities, for consideration by the IODE Committee;
- c. To facilitate implementation of the Groups of Experts work programme, the Groups of Experts will (i) seek cooperation from IODE national coordinators; (ii) develop and implement projects with clear objectives and deliverables, and take responsibility for the coordination and management of such projects.

(ii) **Membership:**

- a. the total number of Members of IODE Groups of Experts should not exceed 8;
- b. the Groups should be composed of not more than 4 long-term members; and not more than 4 short-term members;
- c. The long-term members will be selected by the Executive Secretary, based upon nominations from Member States and further based upon individual expertise as relevant to the concerned IODE Group of Expert. Long-term members can remain a member of the Group during not more than 4 inter-sessional periods;
- d. The short-term members shall be selected by the long-term members of the Group, based upon their specific expertise, documented in the OceanExpert system, related to specific tasks or projects and will remain a member during, preferably, not more than two inter-sessional periods;

Encourages IOC Member States to nominate experts with expertise relevant to the subject areas of the IODE groups of Experts;

Invites IOC Member States to submit information on relevant national experts to OceanExpert, as a further source of expertise for the Groups of Experts;

Urges IOC Member States to support the work of the IODE Groups of Experts by financially supporting the participation of their national experts in Sessions of the IODE Groups of Experts.

12. **Follow-up to the IODE Review: IODE Groups of Experts**

(285) **The Committee** adopted the Summary Report of the third Session of the IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices, and recommendations included therein.

(286) **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 its work.

(287) **The Committee adopted** [Recommendation IODE-XIX.3](#)

Recommends the extension 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;
- (vi) creating and keeping updated GE-BICH web “portal” making all results from the GE’s work available to a wider community of data managers and data users;
- (vii) contribute results of GE-BICH activity to OceanTeacher making results from the GE and from other programmes available to education of data managers and data users.

Encourages IOC Member States to support the GE-BICH work through nomination of experts having expertise in biological and chemical data management to participate in work of the GE-BICH.

13. Role of NODCs at the national level (towards distributed data facilities)

(176) **The Committee welcomed** the development of national distributed systems including distributed data access systems, but **called** for close coordination between member states, through IODE, to avoid the development of widely diverging and incompatible systems at the regional and global level.

14. Projects: Aquatic Sciences and Fisheries Abstracts (ASFA)

(308) **The Committee noted** with satisfaction the continued participation of IOC in the ASFA partnership, through the IODE programme, and **stressed** the importance of improved coverage of the ASFA database, expansion of the ASFA partnership and the expanded dissemination and use of ASFA products. **The Committee welcomed** the efforts being made to develop an integrated solution to library cataloguing, ASFA input and repositories.

(309) **The Committee strongly supported** the continued participation of IOC in the ASFA Advisory Board, and its activities.

15. Projects: Global Oceanographic Data Archaeology and Rescue (GODAR)

(316) **The Committee strongly commended** WDC Oceanography, Silver Spring with the work accomplished within GODAR and the WOD and **recommended** the continuation of these projects.

16. Projects: Global Temperature and Salinity Profile Programme (GTSP)

(323) **The Committee encouraged** additional organizations to participate in the Programme.

(324) **The Committee requested** Member States to consider a replacement for Robert Keeley as the GTSP chair according to his request to step down from this position.

(325) **The Committee requested** the Member States to help the Programme in identification of candidates for Science centres that will take over scientific QC of the collected data

17. Projects: Global Ocean Surface Underway Data Pilot Project (GOSUD)

(334) **The Committee strongly encouraged** other organizations to participate in the pilot project.

(335) **The Committee endorsed** Mr Loic Petit de la Villeon as new Co-Chair of GOSUD and **welcomed** him to this position.

(336) **The Committee requested** Member States to consider identifying a replacement for Robert Keeley as the GOSUD Co-Chair after he steps down from this position in 2008.

18. Projects: Development of a marine XML (marineXML)

(344) **The Committee stated** that the US MMI (Marine Metadata Interoperability Initiative) is crucial to the development of standardised vocabularies.

(345) **The Committee instructed** the Secretariat to create a section on best practices, recommended by IODE, on the IODE web site, **while noting with appreciation** that the ISO19135-compliant registry, planned to be hosted by the IODE Project Office, will provide a robust environment for sharing such information.

(346) **The Committee invited** JCOMM and WMO to continue participating in the deliberations of the SG-MEDI.

19. Projects: Marine Environmental Data Inventory (MEDI)

(352) **The Committee thanked** Canada for its kind offer and **instructed** the SG-MEDI to investigate this matter further. [Its data centre had developed a metadata authoring tool (in English and French) that can be provided to the SG-MEDI. The tool can also be modified if needed].

(353) **The Committee decided** to continue the IODE Steering Group for MEDI during the next inter-sessional period.

(354) **The Committee reviewed and adopted** the work plan submitted by the Third Session of the IODE Steering Group for MEDI and **allocated** funds for the implementation of the work plan within the available budget.

20. Projects: Global Directory of Marine and Freshwater Professionals (OceanExpert)

(369) **The Committee invited** cooperation between the International Polar Year (IPY) and OceanExpert for management of experts information. **The Committee requested** Mr Taco De Bruin to pass on this invitation to the IPY Programme Office.

(370) **The Committee** congratulated the Project Office with the continued developments related to OceanExpert.

(371) **The Committee** reviewed and adopted the 2008–2009 work plan and allocated funds in the 2007–2009 work plan and budget.

(372) **The Committee invited** Member States to actively promote OceanExpert at the national and regional level.

21. Projects: Development of e-repositories (OceanDocs)

(380) **The Committee congratulated** the team that developed the OceanDocs Africa repository for their excellent work, and **welcomed** the initiative to extend the coverage of the repository to other regions.

(381) **The Committee noted** the close collaboration that has been established between IOC and IAMSLIC and **requested** the Secretariat to work closely with the IAMSLIC working group that has been set up to explore avenues for further collaboration.

(382) **The Committee stressed** the importance of ensuring that OceanDocs and the Aquatic Commons complement each other to ensure that resources are utilized optimally.

(383) **The Committee adopted** [Recommendation IODE-XIX.11](#) (Establishment of the OceanDocs Project).

Encourages the IODE Secretariat to actively participate in the activities of the Working Group, **Notes the** collaboration between IODE, IAMSLIC, ASFA and other partners in developing the “Aquatic Commons” and the experience that has been gained through the ODINPubAfrica project with the establishment of an electronic repository;

Expresses its appreciation for the support by the Government of Flanders, Belgium through the Flanders UNESCO Science Trust Fund (FUST) for the ODINPubAfrica Project;

Recommends implementation of the proposal for the establishment of the OceanDocs project.

Welcomes ASFA, IAMSLIC, and other interested programmes and organizations to collaborate in implementation of OceanDocs

Urges Member States and donors to support the development of OceanDocs

Financial Implications:

2007 US\$33,000 (US\$ 33,000 from extra-budgetary sources – Flanders FUST)

2008–2009 US\$155,000 (US\$ 155,000 from extra-budgetary sources – not identified)

22. Projects: The IODE Regional OceanPortals (<http://www.portaloceanico.net> and <http://www.africanoceans.net>)

(397) **The Committee welcomed** the success of the regional OceanPortals as information tools to disseminate information on ocean and coastal research to a wide audience. Taking into consideration the termination of the current funding source for these initiatives but bearing in mind the objective of these products, **the Committee called** on the Chief Editors of the regional OceanPortals to discuss continued funding with relevant national, regional or international organizations with an interest in public information related to coastal and marine environment

23. Projects: SeaDataNet

(405) **The Committee noted with satisfaction** the SeaDataNet Project plans and the wide variety of useful standards and procedures that will be available to the IODE community as the SeaDataNet Project progresses.

(406) **The Committee welcomed** the joint SeaDataNet/IODE organization of the IMDIS-2008 conference.

24. Projects: System of Industry Metocean data for the Offshore and Research Communities (SIMORC)

(411) **The Committee welcomed** the SIMORC system as a valuable initiative and **invited** Member States to use this new source of data.

(412) **The Committee called** for more oil and gas companies to make their data available to SIMORC.

25. Projects: New initiatives: The Ocean Data Portal

(416) **The Committee stressed** that the OceanDataPortal Project will focus on interoperability and interconnecting of existing national and regional data systems, and not on building a separate top level IODE system.

(417) **The Committee instructed** the IODE Steering Group for the OceanDataPortal Project to investigate the issue of the name of this new initiative as IODE has developed several other “Portals” (OceanPortal, regional OceanPortals) which could cause confusion for the users.

(418) **The Committee adopted** [Recommendation IODE-XIX.4](#) (The IODE Ocean Data Portal Project)

Recommends the establishment of the IODE Ocean Data Portal Project with the Terms of Reference as attached in the Annex of this recommendation;
Invites the IOC Executive Secretary, in consultation with the Co-Chairs of IODE and the Chair of the JCOMM-DMCG, to establish a Steering Group (SG-ODP) to implement and monitor the progress of the Project;
Invites IODE Member States and other interested countries and organizations, to participate in, and support the activities of the Project

Terms of Reference of the IODE Ocean Data Portal Project

Objectives of the Project:

- (i) facilitate and promote the exchange and dissemination of marine data and services hosted by NODCs;
- (ii) provide seamless access to marine data to NODCs across the IODE network through the discovery, evaluation and access to data via web services;
- (iii) identify and recommend standards to provide interoperability with IODE data centres to allow shared use of metadata, data and products.

The Participants in the Pilot Project:

The Project will be carried out by a Steering Group composed of, *inter alia*, representatives of IODE/JCOMM ETDMP, SG-MEDI, SG-MarineXML, WMO ICG-WIS, and other appropriate experts as required for each work package.

Work Plan and Timing:

The Project Steering group will implement 3 work packages (Project coordination and management; Standards and development package; Portal implementation package) during the inter-sessional period (2007-2009) and submit a detailed report on the work achieved at the Twentieth Session of IODE (2009).

Financial implications:

2007 US\$ 20,000 (extra-budgetary sources (obtained from USA))
 2008–2009 US\$ 100,000 (extra-budgetary sources (to be identified))

26. Capacity Building: ODIN

26.1 Ocean Data and Information Network for Africa (ODINAFRICA)

(426) **The Committee noted** with satisfaction the progress that has been made in implementation of the ODINAFRICA activities and the impact that these have had on ocean data and information management in Africa.

(427) **The Committee called for** the preparation of a proposal for the next phase of the project which will cement ODINAFRICA as a sustainable network of African NODC's addressing the increased demands for data and information products and services required by ocean-based industry and coastal populations in Africa. The proposal should focus on development and

dissemination of data and information products to assist in the sustainable management of marine and coastal areas, and include further development of the African Marine Atlas, as well as specialized skills necessary for trend analysis and scenario development.

(428) **The Committee welcomed** the close collaboration that ODINAFRICA has developed with other organizations such as WIOMSA, UNEP Regional Seas programme, NEPAD/COSMAR, African LME projects, GOOS Africa, OBIS, ACEP and other organizations and programmes, and **called** on these organizations and programmes to collaborate in the preparation of the proposal for ODINAFRICA-IV.

(429) **The Committee thanked** the Government of Flanders, Belgium for their continued support for the ODINAFRICA project **and requested** that they continue support for the next phase of ODINAFRICA. **The Committee also urged** other Member States to extend their support to the project.

(430) **The Committee adopted** [Recommendation IODE-XIX.5](#) (Ocean Data and Information Network for Africa (ODINAFRICA))

Recommends that a fourth phase of ODINAFRICA be developed to cement ODINAFRICA as a sustainable network of African NODCs, addressing the increased demand for data and information products and services required by ocean based industry and coastal populations in Africa. This proposed phase would focus on development of data and information products that address the requirements for Integrated Coastal Area Management. This includes improvement of the coastal observations network, further development of the African Marine Atlas and specialized databases, as well as skills for trend analysis and scenario development.

Invites African Member States to prepare a proposal for submission to relevant donors,

Invites all IOC Programmes and other relevant organizations to collaborate with ODINAFRICA;

Requests the Secretariat to assist with the development of the proposal and its submission to potential donors for funding,

Urges Member States and donor organizations to provide funding for the preparation and implementation of the next phase of ODINAFRICA.

Financial Implications:

2007 fully covered by Flanders FUST project

2008–2009 to be identified (to be covered from extra-budgetary sources – not identified)

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

(437) **The Committee noted with appreciation** the success of ODINCARSA and the positive impact of the project in Latin American countries.

(438) **The Committee adopted** the ODINCARSA work plan for 2007 and 2008-2009.

(439) **The Committee adopted** [Recommendation IODE-XIX.6](#)

Invites all IOC Programmes and other relevant organizations to collaborate with ODINCARSA, **Urges** Member States to support ODINCARSA to enable all ODINCARSA participating countries to benefit from ODINCARSA's capacity building and networking activities,

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

- i) To establish, with IOCARIBE, a short-term financial strategy to fund the implementation of the ODINCARSA work plan for the Caribbean Region.
- ii) To set up the necessary coordination mechanisms to complement efforts with GOOS and ICAM in ODINCARSA regions.
- iii) To provide financial support to implement the ODINCARSA work plan for 2007–2009.

Financial Implications:

2007	US\$ 11,000 (US\$ 4,000 from UNESCO RP; US\$ 7000 from extra-budgetary sources – not identified)
2008–2009	US\$ 22,000 (US\$ 10,000 from UNESCO RP; US\$ 12,000 from extra-budgetary sources – not identified)

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

(445) **Noting the significant** progress made in implementation of the ODINCINDIO activities since the IODE-XVIII, **the Committee commended** Dr Zaker for his efforts in ensuring the implementation of activities, **and welcomed** the collaboration that has been established with IOGOOS, IOTWS, and ROPME.

(446) **The Committee endorsed** the ODINCINDIO work plan for 2007-2009 **and urged** Member States from the region to play an active and supportive role in order to ensure the establishment of a reliable network.

(447) **The Committee adopted** [Recommendation IODE-XIX.7](#) (Ocean Data and Information Network for the Central Indian Ocean (ODINCINDIO)).

Requests the IOC Executive Secretary to:

- (i) provide funding for the implementation of the ODINCINDIO work plan for the period 2007–2009
- (ii) coordinate the necessary actions with IOCINDIO, IOGOOS, ROPME and other interested organizations to obtain funding for further development and implementation of ODINCINDIO

Invites all IOC Programmes and other relevant organizations to collaborate with ODINCINDIO;

Urges all the Member States of the region to play an active and supportive role with regards to ODINCINDIO in order to establish a reliable working network building;

Further urges Member States and donors agencies to provide support to enable implementation of the work plan.

Financial Implications:

2007	US\$ 5,000 (US\$ 4,000 from UNESCO RP. US\$ 1,000 from extra-budgetary sources, not identified)
2008–2009	US\$ 10,000 (US\$ 10,000 from UNESCO RP)

26.4 Ocean Data and Information Network for European Countries in Economic Transition (ODINECET)

(453) **The Committee welcomed with satisfaction** the fast development of the ODINECET project and its achievements.

(454) **The Committee adopted** the ODINECET work plan for 2007 and 2008-2009.

(455) **The Committee adopted** [Recommendation IODE-XIX.8](#) (Establishment of the Ocean Data and Information Network for European Countries in Economic Transition (ODINECET)).

Recommends that an Ocean Data and Information Network Pilot Project for the ECET countries (ODINECET) be established,

Urges the information centres and marine libraries from ECET countries to join and to support the project,

Encourages the ECET member states and donors to support the ODINECET project financially or in-kind towards the successful implementation of the project.

Financial implications:

2007	US\$ 5,300 (US\$ 4,500 from UNESCO-RP, US\$ 800 from extra-budgetary sources – not identified)
2008–2009	US\$ 8,100 (US\$ 8,100 from UNESCO-RP)

26.5 Ocean Data and Information Network for the Western Pacific region (ODIN-WESTPAC)

(464) **The Committee welcomed** the proposal to establish the ODINWESTPAC Pilot Project and **endorsed** it.

(465) **The Committee adopted** [Recommendation IODE-XIX.9](#) (Establishment of the ODINWESTPAC Pilot Project).

Recommends the pilot project proposal for ODINWESTPAC to be adopted with aims to develop a number of products that will promote communication and collaboration between WESTPAC member states, and between WESTPAC member states and other partners in the fields of ocean observations, data and information management, and product/service delivery; implement relevant capacity building activities, specifically related to ocean data and information management; and prepare a proposal for the Seventh Session of IOC/WESTPAC including objectives, deliverables, work plan, time table, budget and draft recommendation to establish an Ocean and Data information Network for the WESTPAC region (ODINWESTPAC) in accordance with the decision of the Sixth Session of IOC/WESTPAC;

Confirms the nominations, by the preparatory meeting toward the establishment of ODINWESTPAC, Tokyo, 5–6 December 2006, of the Director of JODC to be the Coordinator, and IOC/WESTPAC Secretariat to assume the secretariat function for this pilot project;

Requests member states of the IOC/WESTPAC to actively participate in the pilot project;

Invites all IOC Programmes and other relevant organizations to collaborate with ODINWESTPAC;

Encourages member states of the IOC/WESTPAC and donors to support this pilot project by providing financial and/or in-kind support towards the implementation of this pilot project.

Financial implications:

2007 US\$ 30,000 (US\$ 30,000 from extra-budgetary sources, identified)

2008 US\$ 20,000 (US\$ 20,000 from UNESCO RP)

(466) **The Committee decided** to allocate funds in the 2007 and 2008–2009 work plan and budget.

26.6 Black Sea Region

(474) **The Committee welcomed with satisfaction** the development of the ODINBLACKSEA project and its fast start.

(475) **The Committee adopted** the ODINBLACKSEA work plan for 2007 and for 2008-2009.

(476) **The Committee adopted** [Recommendation IODE-XIX.10](#) on the establishment of Ocean Data and Information Network for the Black Sea (ODINBLACKSEA).

Recommends that an Ocean Data and Information Network Pilot Project for the Black Sea region be established;

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

- (i) to coordinate the necessary actions with the Black Sea GOOS Secretariat, and Black Sea Commission to obtain donor support for ODIN Black Sea;
- (ii) to provide funding for the implementation of the ODIN Black Sea work plan (2008-2009);
- (iii) to strengthen links with JCOMM and GOOS in terms of capacity building and oceanographic data and information management in the Black Sea participating Member States

Invites all IOC Programmes and other relevant organizations to collaborate with ODINBLACKSEA;

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

Financial implications:

2008 US\$ 5000 (UNESCO RP)

26.7 Pacific Islands

(480) **The Committee agreed** on the need to provide practical support to develop standards and build sharing mechanisms between regional and country-based agencies.

(481) **The Committee instructed** GE-MIM to continue its efforts to assist the Pacific Islands region to develop a proposal for a region-based ODIN which builds on existing networks (e.g. PIMRIS, PEIN). In this regard, the GE-MIM Chair should approach relevant agencies such as SOPAC, PIMRIS and SPC to form a working group to jointly develop the proposal. GE-MIM should also investigate the possible opportunities for the ODIN to be associated with the Pacific Islands Regional Ocean Framework for Integrated Strategic Action (PIROF-ISA).

26.8 Caspian Sea

(483) **The Committee welcomed the** proposal to establish the Distributed Marine Data Management System for the Caspian Sea, and **noted** the need to take the capacity building needs of the Caspian Sea region into account while developing the work plan for the coming intersessional period.

27. Capacity Building: Training

27.1 Training activities at the Project Office

(501) **The Committee expressed its gratitude** to the Government of Flanders, Belgium for its support to the Project Office as well as for the generous support to the ODINAFRICA network. ODINAFRICA advanced substantially due to the participation of ODINAFRICA trainees in the training activities organized at the Project Office.

(502) **The Committee adopted [Recommendation IODE-XIX.13](#)** (Support for the IOC Project for IODE for Capacity Building)

Calls on IOC member states and other organizations to provide additional support to promote, facilitate and strengthen the capacity building activities of the IOC Project Office for IODE to ensure the long-term sustainability of the IOC Project Office for IODE in general, and its capacity building activities in particular.

Invites other programmes and organizations to organize joint capacity building activities at the IOC Project Office for IODE.

Financial Implications:

2007 US\$ 15,000 (running costs, to be covered by extra-budgetary activities overhead)

2008–2009 US\$ 60,000 (running costs, to be covered by extra-budgetary activities overhead)

Note: staff cost is not included in financial implications. In 2008–2009 one professional position will be needed to replace V. Vladymyrov (departs 2007)

27.2 OceanTeacher

(292) **The Committee requested** the Officers to investigate ways to address the need for translation of training and reference materials into languages other than English

(514) **The Committee welcomed** the success of OceanTeacher and **invited** member states to contribute to OceanTeacher by making available resource persons as lecturers or content providers.

(515) **The Committee adopted [Recommendation IODE-XIX.12](#)** (OceanTeacher)

Expresses its concern about long-term sustainability and development of OceanTeacher after 2007.

Instructs the Steering Group on OceanTeacher to develop a strategy to guarantee the long term sustainability of OceanTeacher and to find additional financial resources and/or in kind support to enable the continuation of OceanTeacher after 2007.

Invites other programmes, projects and organizations to cooperate jointly with IODE to develop OceanTeacher further as a training tool for their marine related capacity building activities.

Financial Implications:

2007 fully covered by Flanders FUST project

2008–2009 to be identified (to be covered from extra-budgetary sources – not identified)

27.3 New requirements for regional capacity building

(518) **The Committee thanked the** sessional working group for the good work it had done in compiling the regional capacity building requirements and **endorsed** them.

(520) The Representative of IOI drew the attention of the Committee to the training course on Remote Sensing and GIS Applications that was organized jointly with IODE in 2006. This course had proved popular and complements the other courses on Ocean Governance organized by IOI. In this regard IOI would be ready to co-organise another similar course with IODE and would provide resource persons as well as support some participants.

(521) **The Committee endorsed the** capacity building work plan and **welcomed** the offers of IOI and ICTP to collaborate in the implementation of the work plan

27.4 IODE Capacity Building Strategy

(527) **The Committee strongly recommended** for IODE to publish its Capacity Building strategy.

(528) **The Committee noted** that IODE's ODINAFRICA and ODINCARSA projects had not only developed national capacity in oceanographic data and information management and promoted regional cooperation and exchange, but had assisted member states to participate in several ocean science, observation and management programmes at the regional and international level.

(529) **The Committee noted further** that it was essential to showcase the achievements of the ODIN projects at the regional as well as national level and recommended the publication of brochures or specialized audio/visual products. In this regard the Committee was informed that ODINAFRICA will publish such a brochure in 2007 and **the Committee recommended** that other ODINs follow this example.

(530) **The Committee further invited** Member States participating in ODIN projects to promote these important IODE initiatives on all occasions, and especially to donors to mobilize resources for sustained support to these networks. In this regard **the Committee strongly urged** Member States to show strong commitment to the data and information centres that have been established through ODIN projects by committing resources to these facilities.

(531) **The Committee**, while **welcoming** expressions of success, **noted** that it would be more productive to identify indicators of impact and thus to assess the success of IODE capacity building through objective performance assessment methods. In this regard the Committee was informed that the ODINAFRICA project was preparing a set of indicators.

(532) The UNESCO Consultant charged with the Review of the IODE programme, Dr Juan Carlos Villagran de Léon, stressed the importance of demonstrating concrete outputs of capacity building. In terms of IODE capacity building it was essential to demonstrate how IODE's capacity

building efforts had resulted in increased exchange of data and whether data (and what volumes) were reaching long-term archives such as the World Data Centres.

(533) **The Committee tasked** the Training Coordinator of the IOC Project Office for IODE, Dr Wouter Rommens, with the preparation of the identified documents (Strategy) and products (brochures, audio/visual products), to be submitted to IODE-XX.

28. IODE Public Awareness

(536) **The Committee congratulated** the IODE Secretariat and IOC Project Office for IODE with the new web site, which it described as a user friendly communication tool. While **the Committee expressed its appreciation** especially for the event management system that was used for the preparations of IODE-XIX, it **requested** the Secretariat to investigate the possibility to make working documents available as one downloadable (zip) file.

(537) **The Committee requested** further to move the section “Popular IODE Sites” up higher on the home page and to consider adding links to all important IODE sub-sites and projects.

(539) **The Committee requested** the Secretariat to allow submission of any ocean related event in the IODE web site calendar but enable a filtering option to select only IOC, GOOS and/or JCOMM events .

(546) **The Committee welcomed** the brochures prepared by the IOC Project Office for IODE and **requested** that electronic templates be made available to enable Member States to customize the brochures or to provide versions in other languages.

29. IOC Oceanographic Data Exchange Policy: Implementation by Member States

(557) **The Committee encouraged** each Member State to review the 'IOC Oceanographic Data Exchange Policy and enact it as part of their Oceanographic Data Policy .

30. IOC Strategic Plan For Oceanographic Data And Information Exchange

(564) **The Committee, while expressing its great appreciation** to the Chair for drafting the Strategy, and taking into consideration that the Strategic document was commissioned by an IOC Governing Body, **recommended** the following:

- to add a section on the relationships between IODE and GEOSS;
- to balance the different sections in terms of their level of detail;
- to focus more on policy matters and less on technical issues;
- to sub-divide the document in a strategy section and implementation section or annex;
- to add sections on marine information management;
- to add sections demonstrating the linkages between IODE and ocean science programmes;
- to add a section emphasizing the role of IODE as a data dissemination coordination mechanism (to avoid Internet data provision chaos);
- to add sections that deal with new observation technologies and how IODE can deal with the data and products of these;
- to add more content on biological data management.

(565) **The Committee invited** Dr Rickards, Mr Michailov, Mr Reed and Mr Keeley to continue the drafting of the Strategic document during the next few days in Trieste and then forward the revised version to the IODE Officers for finalization and approval.

(566) **The Committee tasked** the IODE past Chair, Dr Lesley Rickards, with the formal submission of the Document, on behalf of the IODE Committee, to the 24th Session of the IOC Assembly. The Committee was informed that the deadline for submission of working documents to the Assembly was end of April 2007.

31. Required Resources And Plan Of Action For 2007 (Current UNESCO Biennium) And 2008–2009 (Next UNESCO Biennium)

(575) **The Committee instructed** the Officers to prepare a table indicating:

- Activities that are of strategic importance (as relevant to the strategic plan) but will need to be shut down due to shortage of funds;
- Activities that are of strategic importance but will be covered by the UNESCO regular programme (and indicating whether these funds suffice for effective implementation);
- Activities that are of strategic importance and are covered by extra-budgetary contributions.

(576) **The Committee instructed** the Co-Chairs to bring the above-mentioned table to the attention of the IOC Assembly at its twenty-fourth session, requesting Member States to consider funding activities that are of strategic importance but cannot be covered by the UNESCO regular programme.

(577) **The Committee adopted** [Recommendation IODE-XIX.14](#) (Programme and Budget for 2007 and 2008-2009)

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 to the IODE Co-Chairs to bring to the attention of the next Session of the IOC assembly, the IODE Programme of work and budget for the period 2007–2009, as attached in the Annex to this Recommendation. (*see end of document*)

32. Elections Of Chair And Vice-Chair (The IODE Chairs)

(584) **The Committee elected** Dr Malika Bel-Hassen Abid (Tunisia) and Mr Gregory Reed (Australia) as Co-Chairs of the IOC Committee on International Oceanographic Data and Information Exchange (IODE).

The Committee adopted [Resolution IODE-XIX.1](#)

Decides that:

- (i) the position of IODE Vice-Chair will be abolished;
- (ii) the IODE will henceforth have two Co-Chairs;
- (iii) the work load will be shared equitably between the two Co-Chairs.

33. Date and Place of IODE-XX

(593) **The Committee thanked** the People's Republic of China for the kind offer to host the twentieth Session of the IODE Committee and **accepted** it. **The Committee instructed** the Secretariat, in consultation with the Co-Chairs, to follow-up on the offer.

(596) **The Committee considered** the presented options [*regarding Options for the organization of future Sessions of the IODE Committee*] as well as some other such as running parallel

sessions (e.g. one for data management and one for information management), grouping activities into the four groups utilized for the work plan and budget (data management, information management, ODIN and governance), grouping all ODIN activities into one presentation and discussion, and use of posters as alternative to plenary presentations.

(597) **The Committee instructed** the Officers to further consider this issue and propose a small number of suitable options to the Committee, by email, not later than June 2008.

(598) **The Committee commended** the Secretariat with the production of the Action Paper and **instructed** the Secretariat to continue preparing such a document for future Sessions. **The Committee further instructed** the Secretariat to further improve the Action Paper through a more concise summary of the issues that require decisions or action by the Committee.

(599) **The Committee requested** that for future meetings the meeting report introductory text should be limited to approximately one page, allowing more room to report on discussions and without inflating the size of the summary report.

(600) **The Committee instructed** the Co-Chairs to include in their report a brief review (preferably as a diagram) of the relationship of IODE with other organizations, as well as the relationships of the various IODE subsidiary bodies, projects and activities.

Agenda Item	Activity	2007			2008				2009			
		RP	EB exp	Unfunded	RP	EB exp	EB req	Unfunded	RP	EB exp	EB req	Unfunded
6.2.4	PROJECT: GOSUD (DM)											
	GOSUD meeting support			10,000								
6.2.5	PROJECT: MARINE XML (DM)											
	MarineXML meeting (estimate secretariat)						5,000					
6.2.6	PROJECT: MEDI (DM)											
	SG-MEDI meeting						10,000					
6.2.13	PROJECT: OCEAN DATA PORTAL		20,000			50,000				50,000		
	Data Management sub total	12,500	26,000	33,500	45,000	10,000	65,000	15,000	10,000	0	65,000	0
	Information Management											
6.1.2	GEMIM Sessions	5,000	10,000	10,000					10,000			
	GEMIM projects: see agenda 6.2 and 6.3											
6.2.1	PROJECT: ASFA (IM)			3,000	2,000				3,000			
6.2.7	PROJECT: OceanExpert											
	software and maintenance [2007 already committed]				6,000				6,000			
	promotional materials				2,000							
	QC/data entry [2007 already committed]				4,000				4,000			
6.2.8	PROJECT: OceanDocs											
	work plan		33,000			65,000				90,000		
6.2.9.1	PROJECT: IODE OceanPortal				11,000				11,000			
	Information Management sub total	5,000	43,000	13,000	25,000	0	65,000	0	34,000	0	90,000	0
	ODIN											
6.2.9.2	PROJECT: African Ocean Portal				5,000			6,500	5,000			6,500
6.2.9.3	PROJECT: Portal Oceanico				5,000			7,000	5,000			7,000
6.3.1.2	ODIN: ODINCARSA	4,000		7,000	5,000			6,000	5,000			6,000
6.3.1.3	ODIN:ODINCINDIO	4,000		1,000	5,000				5,000			
6.3.1.4	ODIN:ODINECET	4,500		800	6,800				1,300			
6.3.1.5	ODIN:ODINWESTPAC		30,000		20,000							
6.3.1.6	ODIN:ODINBLACKSEA				5,000							
	ODIN sub total	12,500	30,000	8,800	51,800	0	0	19,500	21,300	0	0	19,500
	TOTAL	35,000	125,000	90,300	156,800	58,000	130,000	59,500	80,300	30,000	195,000	74,500
	available UNESCO RP (2008-2009: estimate)	33,000			100,000				100,000			