

Restricted distribution

IOC/INF-1191  
Paris, 15 July 2003  
Original: English



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
(of UNESCO)**

## **First Session of the Task Team on the Development of an IOC Strategic Plan for Oceanographic Data and Information Management**

UNESCO Headquarters, Paris, France, 23 June 2003

### **Abstract**

The First Session of the Task Team on the Development of an IOC Strategic Plan for Oceanographic Data and Information Management was held at UNESCO Headquarters, Paris on Monday 23 June 2003. The Task Team elected Dr. Neville Smith as its Chairman. The Session identified the rationale, objectives and elements of the future data and information management system, as well as its governance. The Task Team defined 2005 as a target date for the completion of its work.

TABLE OF CONTENTS

1.	OPENING .....	1
2.	ADMINISTRATIVE ARRANGEMENTS .....	1
2.1	ADOPTION OF THE AGENDA .....	1
2.2	DOCUMENTATION .....	1
2.3	ELECTION OF CHAIR .....	1
3.	INTRODUCTION: TERMS OF REFERENCE OF THE TASK TEAM .....	1
4.	DATA MANAGEMENT STRATEGIES OF IOC AND RELATED PROGRAMMES.....	2
5.	THE FUTURE OCEAN DATA AND INFORMATION MANAGEMENT SYSTEM.....	4
5.1	THE RATIONALE .....	4
5.2	OBJECTIVES/PRINCIPLES .....	5
6.	ELEMENTS OF THE STRATEGY .....	5
7.	GOVERNANCE .....	7
8.	DATE AND PLACE OF NEXT SESSION OF THE TASK TEAM.....	8
9.	CLOSURE.....	8

**Annexes**

Annex I:	<a href="#">Agenda</a>
Annex II:	<a href="#">List of Participants</a>
Annex III:	<a href="#">List of Documents</a>
Annex IV:	<a href="#">Resolution EC-XXXV.2 : IOC strategic plan for oceanographic data and information management</a>

## 1. OPENING

The Session was opened by Dr Savi Narayanan, Co-President of JCOMM. In her introduction Dr Narayanan recalled that in order to bring the data management activities of the different IOC programmes together, the JCOMM Management Committee, during its First Session (Geneva, Switzerland, 6-9 February 2002) had recommended that a draft resolution be prepared for the 35th session of the IOC Executive Council (4-14 June 2002) calling for the development of an IOC integrated data management strategy, encompassing all IOC programmes. In order to assist with this task, the Management Committee had further requested IODE to carry out an assessment of data and data product requirements of existing oceanography and marine meteorology programmes/projects, and evaluate whether these were currently met by the various groups of data centres. It had been recommended also to use the experience gathered in the preparation of the GOOS Data Management Plan (1998-1999) and possibly the GCOS Data Management Plan as examples.

The Thirty-Fifth Session of the Executive Council had adopted Resolution EC-XXXV.2 and requested that progress be reported to the Assembly in 2003. The Resolution is added as [Annex IV](#).

The Task Team decided that it should attempt to finish its work by February 2004 as to enable the JCOMM Management Committee to review the draft strategy.

## 2. ADMINISTRATIVE ARRANGEMENTS

### 2.1 ADOPTION OF THE AGENDA

The Session adopted the Agenda as shown in [Annex I](#).

### 2.2 DOCUMENTATION

The Technical Secretary, Mr. Peter Pissierssens introduced the working documents and information documents for the Session. The list is included as [Annex III](#).

### 2.3 ELECTION OF CHAIR

In order to facilitate the proceedings of the Session and for the purpose of reporting to the IOC Assembly (or Executive Council) the Meeting elected Dr. Neville Smith as Chair of the Task Team.

## 3. INTRODUCTION: TERMS OF REFERENCE OF THE TASK TEAM

The IOC Executive Council, at its 35<sup>th</sup> Session, decided to establish a Task Team on the development of a unified, comprehensive IOC Strategic Plan for Oceanographic Data and Information Management. This Task team was requested to:

- (i) Carry out an assessment of data and data-product requirements of existing oceanography and marine meteorology programmes/projects, and evaluate whether these are currently met by the various groups of IODE data centres;
- (ii) Take into consideration existing data management plans such as the GOOS data management plan and relevant WMO data management plans;
- (iii) Draft an IOC Strategic Plan for Oceanographic Data and Information Management, taking into consideration the requirements for such a plan in the framework of JCOMM;
- (iv) Submit a report on progress to the IOC Assembly in 2003.

#### 4. DATA MANAGEMENT STRATEGIES OF IOC AND RELATED PROGRAMMES

Members of the Team presented various background material including Document INF-1168 ([Data and Information Management Strategy and Plan of the Global Ocean Observing System \(GOOS\)](#)). Dr. Colin Summerhayes, Director of the GOOS Project Office noted that, within the framework of GOOS, data are collected from many different observing sub-systems that each involves different expert groups and serves different customers. When creating the initial observing system (IOS) of GOOS it was therefore felt necessary to utilize a common data and information management strategy and this led to the above-mentioned document. It was written by Dr Ron Wilson, a former IODE Chairman and therefore took into consideration the know-how of the IODE community. The strategy enables the different sub-systems to work together in a coordinated fashion. It should be noted however that the strategy was written prior to JCOMM. JCOMM has a Data Management Coordination Group (DMCG) and its Expert Team on Data Management Practices (as well as Expert Team on Marine Climatology). As JCOMM is the implementing mechanism of GOOS it should therefore be assumed that GOOS' strategy would be replaced by a JCOMM strategy. The GOOS presentation highlighted the need for an end-to-end system and a common approach across the different bodies of IOC rather than through a piecemeal and irregular approach (also see the Wilson GOOS Strategy document). The primary implementation mechanism for GOOS DM is through the JCOMM DMPA, but it is recognized that important links into IODE also exist. The Coastal GOOS requirements provide special challenges in terms of new data types and the implementation through GOOS Regional Alliances (GRAs). It was noted that the GRAs do not necessarily align with the Regions defined by IOC or the regional approach of IODE or WMO

The Task Team noted that it was not in a position to do a thorough assessment of the strengths, weaknesses and gaps in current data management arrangements for oceanography. It did note however that a review of IODE activities is being conducted (Document IOC/TT-DMS-I/6: [IODE Overview 1961-2003](#)) and that documents such as [IOC/INF-1187](#) (IODE Project Office Business Plan) contain references to the activities and projects that are currently underway, including those of JCOMM. For the purposes of this meeting the Task Team believed that this material provided sufficient background on which to move forward.

Robert Stanek provided a report on the work of the WMO Task Team on Future WMO Information Systems, a great deal of which is directly relevant to the forward-looking aspects of this review. In particular, the Task Team noted the structure involving National Centres, Data and Product Centres (both regional and specialized) and Global Information System Centres, the "engine room" of the proposed new infrastructure. (This is out of place here. Should be at the beginning of Robert's discussion below, even though he did raise some of these during the initial introductions).

IODE has traditionally focused on archives, standards, formats, etc. and in the past has not addressed the end-to-end aspects nor focused on the "data service" aspects that are now seen as very important. IODE has made many significant contributions, such as within the WOCE Program, though it has tended to be reactive rather than pro-active.

What does IODE want out of the Strategy? It is seeking

- More effective use of our resources
- Centralized focal point for access to data
- Involving scientists in data management, thinking the WOCE interaction was valuable
- Delayed-mode versus real-time: developing a continuum from real-time through to DM??, and fully addressing the multi-disciplinary interests in IOC.

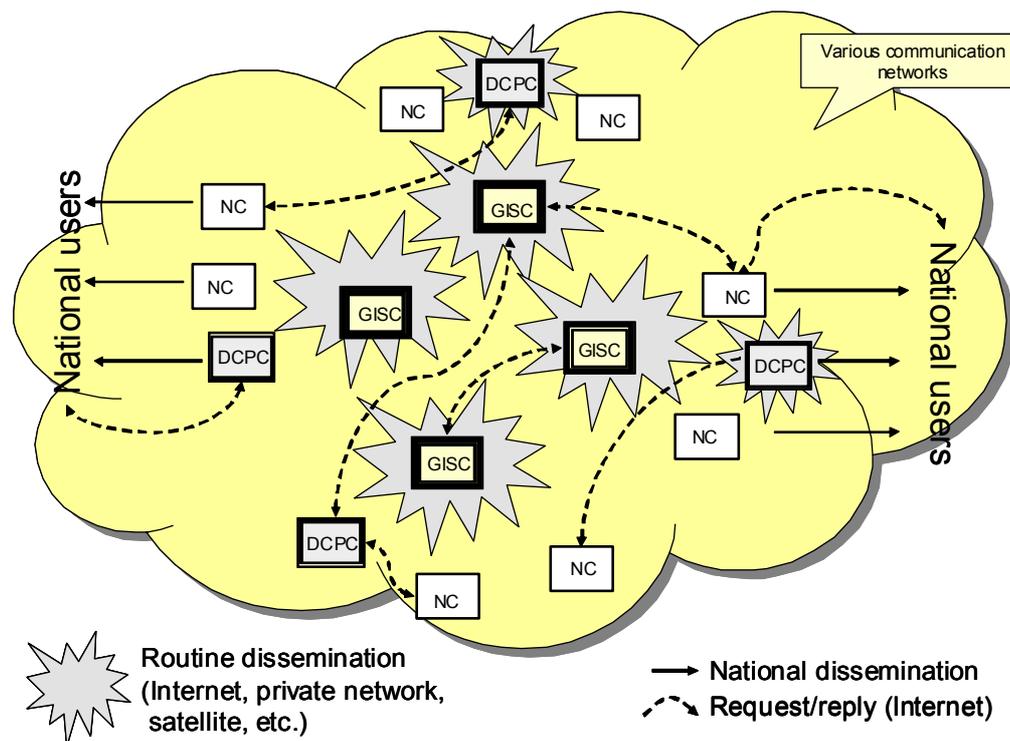
JCOMM is a relatively new player though, through the former IGOSS and Commission for Marine Meteorology, it has direct experience in many of the real-time data issues. JCOMM is reviewing the purpose and structure of its regional and specialist data centres and sees this as an

opportunity to both rationalize and make more effective the approach to data and product centres. JCOMM is also examining the delivery of ocean services from which it seems likely that some form of ocean prediction centres will emerge. The DM Strategy has been evolving slowly. JCOMM is seeking a strategy that avoids unnecessary duplication and provides a road map to products. The responsibilities need to be defined, including specification of the overlaps, and we need to remove the distinction between management of real-time and delayed mode data.

All three pointed out the importance of innovative initiatives such as the Ocean Information Technology (OIT) Pilot Project.

WMO is looking at future information systems, taking account of the needs of all its Commissions, including JCOMM. The current information system includes the Global Observing System (GOS) of the World Weather Watch, the Global Telecommunication System (GTS) and the Global Data Processing System (GDPS). Each component is being stressed due to the volume and complexity of data (e.g., from remote sensing) and products. New technology, based on the internet, offer the opportunity to build a new system, using an enhanced GTS, the internet and other communication options. The opportunity is to take these new technologies and build a logically separate Future WMO Information System (FWIS), using the Internet, which meets the requirements of all WMO programmes for the exchange of meteorological and related data. The future system will need to be:

- Reliable;
- Cost effective and affordable for developing- as well as developed-country Members;
- Technologically sustainable and appropriate to local expertise;
- Modular and scalable;
- Flexible, able to adjust to changing requirements and allow dissemination of products from diverse data sources.
- Cope with different user groups and access policies;
- Handle integration of diverse data sets;
- Have data as well as network security;
- Handle *ad hoc*, as well as routine requests for data and products ("pull" as well as "push");
- Timely delivery of data and products (appropriate to requirements).



**Figure 1.** The new WMO data and information system.

The new system is built around national meteorological centres (NC), data collection and product centres (DCPC; regional and specialized) and a small (6-8) number of Global Information System Centres (GISC). The following table provides the translation between existing entities and the new structure.

NMHS	NCs
RSMC	DCPC, GISC
WMC	DCPC, GISC
RTH	DCPC
RTH or MTN	DCPC or GISC
Other Programme centers	NC and/or DCPC
Research programs	NC and/or DCPC

## 5. THE FUTURE OCEAN DATA AND INFORMATION MANAGEMENT SYSTEM

The Task Team then considered some elements of the strategy for a future data and information management system. The vision is for

*“A comprehensive and integrated ocean data and information system, serving the broad and diverse needs of IOC Member States, for both routine and scientific use.”*

The concept of delivering a data service for the “global ocean commons” (global public good) is central to this vision.

The scope would be comprehensive and across all of the disciplines within the mandate of IOC. There would be no *a priori* separation of functions based on the lead time for data delivery (e.g., real-time versus delayed mode). Different strategies might be employed to satisfy global, regional and local requirements, and to meet timeliness needs.

### 5.1 THE RATIONALE

The system would provide the data and information needed to:

- Provide scientific information and data on ocean, coastal and inland waters and ecosystems in support of integrated resource management and conservation and sustainable use of marine resources;
- Support the information and data requirements for marine services, transportation, and navigation;
- Undertake marine assessments and routinely provide indices on the “health” of the marine environment;
- Detect and forecast climate change and variability;
- Predict and mitigate the impact of natural and man-made hazards;
- Manage risk for operations in the coastal and open ocean, including the oil and gas industry.
- ...

This list is not complete but does send the message that the system should be serving all of the requirements of IOC Programs, from GOOS through to science and assessment (e.g., the GMA).

In terms of the data management system itself (c.f. the broad set of uses listed above), the motivation is provided by the ever-increasing need for efficiency and effectiveness in the way we gather and communicate data; the way we exchange data and information; the way we provide products and services to the community, including those beyond the disciplines of oceanography; and, in general, provide an ocean data service. Just as we have employed new technologies to gather data (e.g., *Argo*) and to develop products (e.g., GODAE), we must exploit appropriate new technologies for data and information management. This drive for efficiency and effectiveness suggests we should develop an integrated and combined strategy for data and information management across all programs of the IOC.

## 5.2 OBJECTIVES/PRINCIPLES

The specific objectives of the data management system that will result from this strategy include:

- Support for scientific research and resource assessments at a national, regional, and global level (both the regional and global aspects have international contexts).
  - We must have active scientific participation in the development and execution of the DM Plan, including in the governance structure.
- Collaborate with other inter-governmental bodies to ensure greater flexibility in timely and cost-effective access to data and information;
- Support IOC's commitment to its member countries and international organizations.
- To provide reliable, cost effective and affordable access for developing- as well as developed-country Members,
  - Technologically sustainable and appropriate to local expertise;
  - Modular and scalable;
  - Flexible, able to adjust to changing requirements and allow dissemination of products from diverse data sources.
- Embrace capacity building activities

The system will also need to support:

- Different user groups and access policies;
- Integration of diverse data sets;
- Data as well as network security
- Long term and reliable data preservation and archiving, and accessibility;
- Ad hoc, as well as routine requests for data and products ("pull" as well as "push");
- Timely delivery of data and products (appropriate to requirements).

In a practical sense, our objective should be to make the future data and information management system the system of choice for all ocean activities, particularly those of research programs.

## 6. ELEMENTS OF THE STRATEGY

As it was only a one-day meeting, the Task Team did not have the time to fully develop the strategy. Several of the background documents list activities that are either underway or in the process of being developed, separately and jointly within JCOMM and IODE. The Task Team recognized the value of these activities and, rather than seeking to dismantle or interrupt the progress of this work, aimed to develop a strategy that in the future would increase the impact and utility of this effort. It is clear we require an enhanced system for data and transport, very similar to that proposed by the WMO. Several methods are being tested, including the use and implementation of OpenDAP technology as proposed by the US Integrated Ocean Observing System in its Data Management and Communications system. Clearly, there are opportunities for collaboration with WMO, perhaps including joint implementation.

The management of metadata is also a prominent activity. JCOMM and IODE have accorded the development of a metadata model for oceanography high priority and have merged their respective expert teams/groups in order to accelerate progress. This decision, like the decision to develop a joint strategy, shows that collectively there is a determination to develop a more integrated and efficient approach.

The IOC Data Policy is also an important instrument for the global aspects. At the national level, it is also clear that there is a merging and blending of the formerly separate activities of ocean data exchange and archiving, as represented by the system of National Oceanographic Data Centres (NODCs), and those associated with operational ocean and climate prediction. The latter are often, but not always, associated with National Meteorological Services. The IOC does not yet have the equivalent of National Ocean (prediction) Centres. As noted elsewhere in the discussions of the Assembly, this lack of a national focal point is an issue in terms of communication and in terms of organising and rationalising the activities of IOC. There is a gap between the technological advances and the products they make available, and the national arrangements to exploit this capability. The Task Team believes this situation may change and, in terms of data management, noted the likely emergence of a framework within JCOMM of operational ocean data and product services. In some cases, nations have already taken steps that would realise more focussed structures.

The regional aspects of data and information management are extremely important. Consistent with the rationale outlined in the previous section, there appears to be a continuing need for regional and specialised centres, for both data collection and assembly and product distribution. The Task Team recognized several different drivers for creating regional and specialised data centres:

- (i) To serve the data and information management requirements of a GOOS Regional Alliance;
- (ii) To satisfy the requirements of an IOC-defined region or Regional Subsidiary Body.
- (iii) To satisfy the D&IM requirements of other regional programs, e.g. an LME or Regional Seas program;
- (iv) To satisfy a specialist requirement, e.g. a science program, a specific data service (e.g., sea level)
- (v) To satisfy capacity building requirements, such as through the Ocean Data and Information Networks (ODIN);
- (vi) Geopolitical, geographic or other forms of regional affinity (as noted in the UNESCO approach);
- (vii) WMO regional associations;
- (viii) ...

It is therefore a challenge for the data and information strategy to determine an approach that is optimal in terms of regional effectiveness and efficiency. It is conceivable that the Commission could use its regional Groups as a way of organising its regional approach, implementing procedures such as those used by WMO. Under such an arrangement, there would be increased responsibility compared with the present circumstances. Under such a scenario, all data management activities would be given a home(s) within this structure.

The regional aspects of data and information management should derive from one of:

- A prominent, organized project or regional programme with a unique need for a specialised regional (or specialised) data service; or
- There are demonstrable gains in efficiency and/or effectiveness in meeting the collective data service needs of region;
- There are strong geographic or geopolitical drivers (needs) for a regional (specialised) ocean data service;

A Regional Oceanographic Data Centre would normally provide routine, long-term functionality in terms of data service. A Specialised Oceanographic Data Centre may be either long-term or finite, meeting a specific one-off need. In the latter case, there must be a clear strategy for transition of the functionality including archived data of a finite-term SODC in to a permanent system.

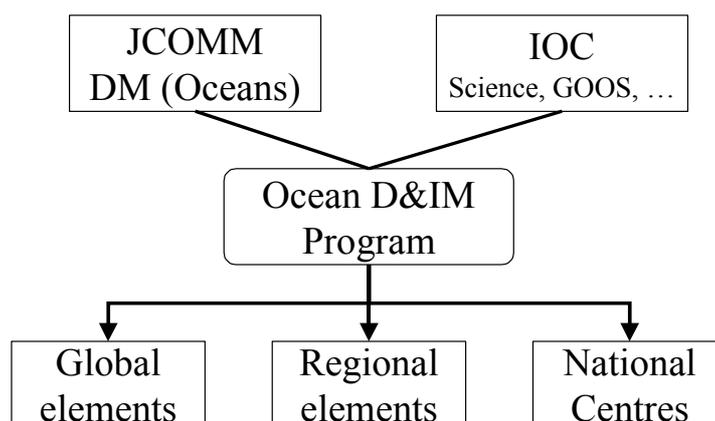
The Task Team noted significant potential for rationalising the system of Data Centres presently supported/recognized by IODE and JCOMM.

## 7. GOVERNANCE

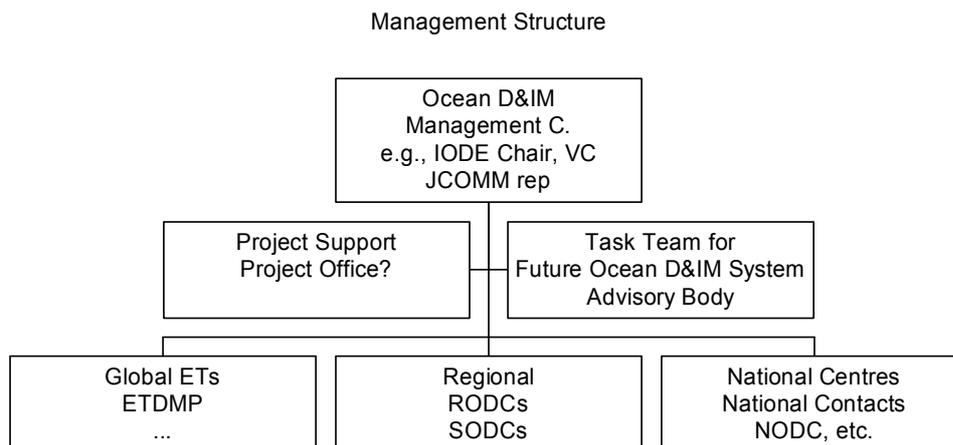
The Task Team recognized the existing governance structures of IODE and JCOMM, noting that JCOMM does have the advantage of being new and thus possessing a fairly “clean” structure. The Strategy presented in this discussion wishes to avoid destructive interference in the present arrangements but, at the same time, wishes to provide a mechanism for an eventual smooth union of the now separate ocean data management activities. The Strategy recognizes a broad set of requirements from the Commission and as such will need careful guidance, both in terms of management and in terms of technical and scientific guidance.

Figure 2 shows the System structure and Figure 3 the proposed management structure. The Task Team stressed that it was important that there be an efficient management committee that could review and endorse the activities of D&IM Program. It needs to be small (10-12) in order to be efficient, and able to draw in expertise as required. The future data and information system is likely to be ambitious and, like WMO, will need access to expert advice. We suggest a finite-term Task Team for this task (this team already exists in part). The MC would “own” the D&IM Strategy and be responsible for both its development and execution.

In the time available, the Task Team could not deal with any of the elements in detail but it was satisfied that the elements needed for a combined strategy are known. The Task Team believes that JCOMM II and IODE XVIII (both in 2005) might provide a convenient target for formal approval of a joint strategy.



**Figure 2.** Arrangement of Program



**Figure 3.** Management structure.

The Task Team noted that although there are substantial similarities between the data management activities of IOC and WMO, cooperation between the two organizations is limited and knowledge about each other's activities related to data management is limited. In this regard it was recommended to investigate the possibility to give certain IOC/IODE data centres WMO designations as well.

## **8. DATE AND PLACE OF NEXT SESSION OF THE TASK TEAM**

The Task Team decided not to set a specific date for its next Session but proposed to organize its next Session back-to-back with either a Session of the JCOMM Management Committee or the IOC Executive Council in 2004. In the interim, the TT agreed to undertake discussions on the various points that were raised at the meeting and further develop the strategy through the assistance of a consultant.

## **9. CLOSURE**

The meeting was closed on Monday 23 June at 17h30.

**ANNEX I**

**AGENDA**

1. OPENING
2. ADMINISTRATIVE ARRANGEMENTS
  - 2.1 ADOPTION OF THE AGENDA
  - 2.2 DOCUMENTATION
  - 2.3 ELECTION OF CHAIR
3. INTRODUCTION: TERMS OF REFERENCE OF THE TASK TEAM
4. DATA MANAGEMENT STRATEGIES OF IOC AND RELATED PROGRAMMES
5. THE FUTURE OCEAN DATA AND INFORMATION MANAGEMENT SYSTEM
  - 5.1 THE RATIONALE
  - 5.2 OBJECTIVES/PRINCIPLES
6. ELEMENTS OF THE STRATEGY
7. GOVERNANCE
8. DATE AND PLACE OF NEXT SESSION OF THE TASK TEAM
9. CLOSURE



## ANNEX II

### LIST OF PARTICIPANTS

#### MEMBERS

Dr. Shaohua LIN  
Chair JCOMM DMPA  
Deputy Director-General  
NMDIS/SOA/ P.R. China  
93, Liuwei Rd., Hedong district  
Tianjin City 300171  
Tel: (86 22) 2401 0803  
Fax: (86 22) 2401 0926  
E-mail: [shlin@mail.nmdis.gov.cn](mailto:shlin@mail.nmdis.gov.cn)

Dr. Savi NARAYANAN  
Director, Marine Environmental Data Services  
Dept. of Fisheries & Oceans  
WO82, 12<sup>th</sup> Floor, 200 Kent St.  
Ottawa, Ontario, K1A OE6  
Tel: (1 613) 990 0265  
Fax: (1 613) 993 4658  
E-mail: [navarayans@dfo-mpo.gc.ca](mailto:navarayans@dfo-mpo.gc.ca)

Dr. Lesley J. RICKARDS  
Deputy-Director, Bidston Observatory  
British Oceanographic Data Centre (BODC)  
Natural Environment Research Council  
Bidston Hill, Prenton  
Merseyside CH43 7RA  
Tel: 44 0 151 653 1514  
Fax: 44 0 151 652 3950  
E-mail: [ljr@bodc.ac.uk](mailto:ljr@bodc.ac.uk)

Dr. Neville SMITH  
(representing Dr. James Baker, Chair GOOS  
Steering Committee)  
Senior Principal Research Scientist  
Bureau of Meteorology, Research Centre  
150 Lonsdale St.  
Melbourne, VIC 3001  
Tel: 61 3 9669 4434  
Fax: 61 3 9669 4660  
E-mail: [nrs@BoM.gov.au](mailto:nrs@BoM.gov.au)

Dr. Robert STANEK  
Ref. TI 17  
Deutscher Wetterdienst  
Kaiserleistr. 42  
D-63067 Offenbach  
Tel: +49 69 8062 2837  
Fax: +49 69 8062 3836  
E-mail : [Robert.Stanek@dwd.de](mailto:Robert.Stanek@dwd.de)

#### IOC SECRETARIAT

Mr. Peter Pissierssens  
Head, Ocean Services Section  
Intergovernmental Oceanographic Commission,  
UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
FRANCE  
Tel: (33 1) 45 68 40 46  
Fax: (33-1) 45 68 58 12  
E-mail : [p.pissierssens@unesco.org](mailto:p.pissierssens@unesco.org)

Dr Colin SUMMERHAYES  
Head, GOOS Project Office  
Intergovernmental Oceanographic Commission,  
UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
FRANCE  
Tel: (33 1) 45 68 40 42  
Fax: (33-1) 45 68 58 12  
E-mail : [c.summerhayes@unesco.org](mailto:c.summerhayes@unesco.org)

#### OBSERVERS

Dr. Angus McEWAN  
Senior Science Adviser Oceanography  
Bureau of Meteorology  
G.P.O. Box 727  
Hobart, Tasmania 7001  
Tel: (61 3) 6221 2090  
Fax: (61 3) 6221 2089  
E-mail: [a.mcewan@bom.gov.au](mailto:a.mcewan@bom.gov.au)

Dr. Geoff L. HOLLAND  
2 WE Associates Consulting Ltd.  
24-295, Lower Ganges Rd.  
Salt Spring Island, B.C. V8K 1T3  
Canada  
Tel: (1 250) 537 4472  
Fax: (1 250) 537 4850  
E-mail: [hollandg@2weassociates.com](mailto:hollandg@2weassociates.com)



## ANNEX III

### LIST OF DOCUMENTS

#### **Working Documents**

Document IOC/TT-DMS-I/1 – Provisional Agenda

Document IOC/TT-DMS-I/5 - Historical overview of the IODE programme between 1961 and 2003

#### **Information Documents**

DMCG-I.3 (JCOMM MR17) - DATA MANAGEMENT PROGRAMME AREA COORDINATION GROUP (DMCG), First Session, Paris, France, 22 to 25 May 2002, SUMMARY REPORT

FWIS-2002 - FOURTH MEETING OF THE INTER-PROGRAMME TASK TEAM ON FUTURE WMO INFORMATION SYSTEMS - FINAL REPORT - JOHANNESBURG, SOUTH AFRICA, 23-27 SEPTEMBER 2002

INF-1168 - Data and Information Management Strategy and Plan of the Global Ocean Observing System (GOOS)

INF-1177 - Informal Session of the JCOMM Expert Team on Data Management Practices (ETDMP). Hosted by Research and Development Department, Scientific Technical and Cultural Affairs (OSTC), Belgium, Brussels, Belgium, 28 November 2002

INF-1178 - Steering Team of the Oceans Information Technology Pilot Project (ST-OIT), First Session, Hosted by Research and Development Department, Scientific Technical and Cultural Affairs (OSTC), Belgium, Brussels, Belgium, 29 November 2002

IOC-WMO/IGOSS-VII/15 - DRAFT IGOSS-IODE DATA MANAGEMENT PLAN

IOC/IODE-XV/11 - IGOSS AND IODE DATA MANAGEMENT GOALS TO SUPPORT GOOS



## ANNEX IV

### **Resolution EC-XXXV.2 : IOC STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT**

The Executive Council,

#### **Recalling:**

- (i) Resolution XX-4 requesting IODE to work in concert with JCOMM and GOOS to develop a comprehensive ocean data management system,
- (ii) Recommendation IODE-XVI.3 on the establishment, maintenance, and strengthening of co-operation between IODE and research and monitoring programmes,
- (iii) Recommendation IODE-XVI.4 on the establishment of a Group of Experts on Biological and Chemical Data Management and Exchange Practices,
- (iv) Resolution 4 of JCOMM-I that, inter alia, invites IODE to participate in the work of the JCOMM Data Management Programme Area,

#### **Considering:**

- (i) the existence of several data management plans, such as those of GOOS and IODE, all providing potential elements of a strategy and implementation plan for oceanographic data management,
- (ii) that IODE has developed national, regional and global infrastructures, expertise, experience and programmes for the management of oceanographic data and information, mostly for delayed-mode data,
- (iii) that IODE and JCOMM have each created data management structures to deliver the products and services required by their own programmes and activities which, although linked and coordinated, are not presently implemented and managed according to a common strategy,
- (iv) that the WMO Commission for Basic Systems has developed data management systems that satisfy part of the identified requirements of JCOMM for real-time data management,
- (v) that the data management systems of many Member States are abandoning strict distinctions between real-time and delayed-mode data management in favour of end-to-end data management,
- (vi) that both IODE and JCOMM are considering broader remits into non-physical ocean data management,

**Recognizing** the need for IOC to develop a Strategic Plan for oceanographic data and information management, embracing the requirements, capabilities and infrastructures of Member States, as well as the needs of their user communities,

**Decides** to establish a Task Team on the development of an unified, comprehensive IOC Strategic Plan for Oceanographic Data and Information Management with terms of reference as detailed in the Annex to this Resolution;

**Urges** Member States of IOC to provide in-kind support and/or financial contributions to the IOC Trust Fund to cover the costs of the meetings of the Task Team.

---

Financial implications: US\$ 30,000 from Extra-budgetary Resources (2002-2003)

## **Annex to Resolution EC-XXXV.2**

### **Terms of Reference for the Task Team on the Development of an IOC Strategic Plan for Oceanographic Data and Information Management**

#### **1. Purpose**

To develop an IOC Strategic Plan with clearly defined roles for each of its observational and data management elements, for oceanographic data and information management, embracing the requirements, capabilities and infrastructures of its Member States, as well as the needs of their user communities.

#### **2. Tasks**

In pursuit of its task the Task Team shall:

- (a) carry out an assessment of data and data product requirements of existing oceanography and marine meteorology programmes/projects, and evaluate whether these are currently met by the various groups of IODE data centres;
- (b) take into consideration existing data management plans such as the GOOS data management plan and relevant WMO data management plans;
- (c) draft an IOC Strategic Plan for oceanographic data and information management, taking into consideration the requirements for such a plan within the framework of JCOMM;
- (d) submit a report on progress to the IOC Assembly in 2003.

#### **3. Composition**

The Task Team shall be composed of:

- (a) the chairperson or vice-chairperson of IODE;
- (b) the chairperson of the GOOS Steering Committee;
- (c) the coordinator of the JCOMM Data Management Programme Area;
- (d) a representative of the WMO Commission for Basic Systems;
- (e) one co-president of JCOMM;
- (f) the chairperson of the IOC Working Group on Data Policy;
- (g) two additional experts nominated respectively by IODE and I-GOOS, taking into account the need for multi-disciplinary expertise.

#### **4. Schedule**

At least two meetings of the Task Team will need to take place during the period 2002-2003.

[end of document]