

**Intergovernmental Oceanographic Commission**  
*Reports of Meetings of Experts and Equivalent Bodies*

**IODE GROUP OF EXPERTS ON  
MARINE INFORMATION MANAGEMENT**

**First Session**

Rome, 19-23 November 1984

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**UNESCO**

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## **1. OPENING OF THE SESSION**

The Assistant Secretary IOC, Dr. I. Oliounine, opened the First Session of the Group of Experts on Marine Information Management at 10.00 a.m. on 19 November 1984 in Rome at the FAO Headquarters.

In welcoming the Group, on behalf of the Secretary IOC, he pointed out that the main objectives of the Group were to develop a strategy to meet the new requirements of developed and developing countries for marine information management, to review information systems already existing and to determine ways of access to a broad range of expertise, towards which, the IOC Secretariat may need to guide marine information systems. He then extended his thanks to the FAO, and to the Fishery Information Data and Statistics Service in particular, for hosting the meeting and for the facilities provided.

Mr. E.F. Akyuz, speaking on behalf of the hosting Organization, warmly welcomed the participants and stressed the importance of a close co-operation between the different international Organizations in marine information management. He concluded his remarks by wishing the meeting every success.

The list of participants is given in Annex II.

## **2. ADMINISTRATIVE ARRANGEMENTS FOR THE SESSION**

### **2.1 ADOPTION OF THE AGENDA**

The Agenda was adopted by the Group as given in Annex I.

### **2.2 DESIGNATION OF THE RAPPORTEUR**

Mr. A. Varley and Mr. T. Sankey were designated as Co-Rapporteurs of the Session.

### **2.3 CONDUCT OF ARRANGEMENTS FOR THE SESSION**

The Group reviewed the list of documents and discussed the time schedule and arrangements for the preparation of the Summary Report. The Representative of FAO organizing committee informed the meeting on local arrangements.

## **3. ELECTION OF THE CHAIRMAN OF THE GROUP**

The Assistant Secretary IOC explained to the Group the procedure of election. Dr. J. Watson was unanimously elected as Chairman of the Group.

In his opening statement, the Chairman reviewed the major issues concerning the organization and delivery of marine information and highlighted what he regarded as the main objectives of the Group:

- (I) To determine those projects of top priority to international organizations, NGO's and funding agencies;
- (ii) To develop a time phased action plan for improving marine information capabilities, particularly in developing countries;
- (iii) To develop an organizational structure and to identify the various responsibilities for existing international marine information systems;
- (iv) To finalize the planning of a programme development plan for international marine information programmes and to develop a strategy for fund raising to finance these programmes.

#### **4. INFORMATION ACTIVITIES AND THE NEEDS OF DEVELOPING COUNTRIES**

The Representatives of UN agencies and other international Organizations gave overviews of their programmes as they related to marine information and developing countries.

##### **UNITED NATIONS OCEAN ECONOMICS AND TECHNOLOGY BRANCH**

This Office devotes approximately 15 working months per year to marine information activities as a co-sponsor of ASFA and in maintaining an oceans mineral database and responding to user requests. Mr. Gruszka informed the Group that the Office of the Special Representative of the Secretary-General for the Law of the Sea was undertaking a number of information activities related to the Convention on the Law of the Sea, some of which might be relevant to the work of the Group. He suggested that he would obtain further details and the name of a contact staff member in this Office for the Group.

##### **WORLD METEOROLOGICAL ORGANIZATION**

WMO maintains information on data sources related to the marine environment. Their principle service of interest to the Group is INFOCLIMA, an inventory of data sets. Eighty countries have provided information on approximately 600 data sets, and a catalogue is to be issued in 1985. Other WMO information programmes of note relate to the World Climate Research Programme, and to on-going satellite programmes as well as to the Climate System Monitoring Monthly Bulletin issued by WCDP. Additional information is given in Annex III.

##### **WORLD DATA CENTRES "A" AND "B"**

These centres issue catalogues of accessed publications and numerical data, annual reports and other documents.

##### **INTERNATIONAL CENTRE FOR OCEAN DEVELOPMENT**

The plans for this new Canadian centre include a marine information programme. Should these plans come to fruition, funding for relevant projects might be available.

##### **ASSOCIATION OF MARINE SCIENCE LIBRARIES AND INFORMATION CENTRES**

R. Freeman noted that the International Association of Marine Science Libraries and Information Centres (IAMSLIC), most of which were located in North America, were active users of ASFA, the annual meetings and newsletter providing a valuable forum for the exchange of ideas. Several IAMSLIC members were involved in training and had direct links with libraries in developing countries.

A. Varley informed the participants that the U.K. Marine and Aquatic Sciences Librarians Group fulfilled a function similar to that of IAMSLIC and included competent and experienced professionals who had many contacts with libraries in developing countries. The experience and assistance of these groups would be available to the MIM Group. M. Melguen said that she would seek the co-operation of a similar French group.

##### **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The FAO Representative reviewed the information programme of the FAO Fisheries Department and described the services provided. The information and data services range from supplying bibliographies and hard-copy document delivery to tabulation of statistical and biological data on fisheries resources and aquaculture. The FAO information and data services are available on-line through various database suppliers. The Group noted that FAO has carried the main ASFIS workload to date, a fact which should be brought to the attention of IOC and other sponsoring organizations, in the hope of a more equitable distribution of responsibilities.

## UNITED NATIONS ENVIRONMENT PROGRAMME

UNEP operates Regional Seas Action Plans in eleven regions around the world. Each action plan includes data and information activities. In order to determine the capabilities of countries in the region for scientific activities relative to regional action plans, a survey of marine environmental centres is conducted and the result published as a Directory of Marine Environmental Centres. This work is now performed by the FAO in the context of the ASFIS Register of Institutions. The available information and documentation about the region is also surveyed and results published in a Bibliography of the Marine Environment for each region. This may initially be an *ad hoc* bibliography, but the process is now becoming mechanised as (primarily) an extract of ASFA. This work is also done with the active co-operation of FAO/FIDI. Future activities of UNEP will include the compilation of a global inventory of environmental (including marine) data files for use by the proposed Global Resources Information Database (GRID). This may be published as a directory. In all of its work UNEP depends heavily on co-operation from other organizations (FAO, WHO, WMO, UNESCO, IOC, IAEA and IUCN). Every effort is made to keep information and data activities in line with IODE methodologies.

## INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

The IDRC Representative reviewed the activities of the Information Sciences Division which in recent years has become increasingly involved in marine and freshwater information services and products. It was stressed that IDRC must be very selective in the projects it supports and only consider high priority projects which are genuinely needed by developing countries.

The expert from China outlined the current marine information structure in China and gave the Chinese view on the development of MIM group activities. Steps are being taken to formally involve China in ASFIS and in ASFA, by establishing a national input centre.

The Chairman introduced his paper (see Annex IV) and invited the Group to discuss and determine needs and projects on a priority basis. M. Melguen reminded the Group, of French interest, through IFREMER and ORSTOM, in the organization of a workshop and a training course in West Africa on Marine Information Management.

The ensuing wide-ranging discussions covered:

- (i) Training courses, Workshops and the development of regional links and networks;
- (ii) Non-bibliographic information maintained locally in micro- or mini-computers (e.g., coastal information, fishery data);
- (iii) The purchase of ASFA from the publisher at print run-on costs, for distribution to developing country institutes;
- (iv) Assistance with the acquisition of publications through Voluntary Assistance Programmes and other funding, for the purchase of UNESCO coupons, British Library forms, NTIS and other document delivery services;
- (v) The need to locate centres in developing countries with a mandate to manage marine information and to have agreement at an official level before considering development of training and information programmes;
- (v) The specific problems faced by developing countries namely a lack of trained personnel and money, technical/environmental problems (e.g., communications systems that do not work), and concerns with dependency.

**The Group felt** that its work would be considerably enhanced if IOC could prepare a document outlining the relevant resolutions and recommendations on marine information matters that had been submitted to IOC through its Working Committees and regional subsidiary bodies (Annex V, Action I.1.1).

**The Group agreed** that a list of the most useful and relevant publications and reports on the general information needs of developing countries should be prepared. The Chairman was requested to provide a provisional list which would be circulated among the Group for comment, addition and deletion, (Annex V, Action I.4.5).

## **5. STATUS OF THE HANDBOOK ON MARINE SCIENTIFIC AND TECHNOLOGICAL INFORMATION RESOURCES**

The IOC Consultant, D. Turnbull distributed the first draft of the Handbook and presented her progress report. She drew attention to the incomplete institutional section and asked for assistance and comment. The following points were made:

### **(i) Identification of relevant institutions**

The International Directory of Marine Scientists should be used as the principal basis for the selection of institutions, and members of the Group worked through this Directory marking the relevant institutions for inclusion. Only those institutions with significant information, library and documentation capabilities will be included in the Handbook.

### **(ii) Narrative**

The introductory chapters were extremely important and each section should contain a narrative and overview. Interpretive texts should annotate major products.

### **(iii) Production**

The appearance of the final printed product is of major importance. The Group suggested that a text-editing system be selected that has a full range of typographical capabilities. The Editorial Review Group should advise on layout and publication specifications.

### **(iv) Arrangement**

UN and other international organizations should be listed in an international section. The source section would exclude details of commercial publishers addresses though the text would indicate directories and sources of publishers' addresses. A geographic index was needed.

The Group assured the consultant of its fullest co-operation and the following tentative schedule was agreed:

-	Distribution of questionnaire .....	December 1984
-	Replies to be received by .....	end of March 1985
-	Distribution of draft to Group Members for detailed examination and review .....	April 1985
-	Editorial review group meeting (2 days) .....	June 1985
-	Preparation of final draft .....	July 1985
-	Publication and distribution .....	January 1986

It was realized that there could be some slippage in this schedule if there was delay in receiving the questionnaires, (Annex V, Action I.2).



## 6. AN EVALUATION OF ASFIS AND MEDI AS INTERNATIONAL MARINE INFORMATION SYSTEMS

The former Chairman of the IODE Group of Experts on MEDI, presented a brief history of the system and reported on its present status. The computerized database now describes 195 data sets from 82 centres in 29 countries. The second edition of the printed catalogue is being typeset. As external access to the UNESCO computer is still unavailable, work is in progress to mount the database online at IFREMER, Brest. This will provide international access via standard networks and test user satisfaction with the database. A project to produce a catalogue of remotely sensed ocean data in conjunction with the IODE task team on this topic had not been completed.

The Representative of WMD reported on WMO experience with the INFOCLIMA data referral service and highlighted the need for compatibility between INFOCLIMA and MEDI catalogues of data sets.

A number of recommendations for MEDI development were suggested:

- (i) The MEDI system is potentially valuable and should be continued.
- (ii) An interagency panel similar to that of ASFA should be established, possibly under the auspices of the ICSPRO. In the interim, a sub-group of the GE /MIM should be formed to which MEDI issues could be referred during the intersessional period.
- (iii) Now that the requirements for compatibility with INFOTERRA are less stringent, the data entry system should be re-designed. A simplified form would make it easier to attract the large number of data set descriptions (estimated at 2000) needed to form a database of useful size.
- (iv) The operation of MEDI should be handed to an NODC or a similar institution willing to act as RNODC-MEDI. This institution would be involved in the re-design exercise. The effort required for this RNODC was estimated as one person's time in the first year and half of a person's time thereafter.
- (v) In liaison with the Chairman of the Task Team on Remote Sensed Data, the Group should urge the IOC Secretariat to pursue the completion of the Remote Sensed Data Catalogue.

Following these recommendations a lively discussion ensued concerning the usefulness of MEDI and whether it was worthwhile to pursue this project considering the very small use of the database and the low level of effort put into building the database.

M. Melguen emphasized that the MEDI database contained too much duplication and material retrieved from searches was therefore too voluminous. She was opposed to the idea of a RNODC for MEDI and suggested instead that the information on data sets now in MEDI be incorporated into existing databases such as NEDRES (USA) and the BNDO databases. This would allow a rapid testing and evaluation of the usefulness of the MEDI information.

K. Broadbent (IDRC) thought that rational evaluation procedures to assess the value of information systems were needed. He suggested, and the Group agreed, the possibility of applying an end user survey methodology to MEDI, and volunteered together with the Chairman to follow up the matter with an expert so that the Group can make a decision on the further development.

The Group advised that MEDI should continue in its current form pending the Chairman's report on the use of an evaluation procedure. Meanwhile, descriptions of oceanographic data sets, particularly those required by the World Climate Programme should continue to be collected. An *Ad hoc* Panel was set up to deal with MEDI issues, (Annex V, Action II).

## **ASFIS**

The ASFIS tape/slide presentation was used to introduce this agenda item, and the Chairman referred to his report which contains suggestions regarding the further development of ASFIS (see Annex VI).

There was a wide-ranging discussion and examination of the present range of ASFIS services and products, and in considering ASFA **the Group was reminded** that although there were strong economic advantages there were also constraints and compromises resulting from having a commercial publisher.

Mechanisms for the governance of ASFIS, and the provision of advice to FAO regarding ASFIS activities and the development of a long-term strategy for ASFIS were needed. The existing ICSPRO mechanism is considered suitable for the transmission of relevant issues to FAO for information and possible action as required.

## **Products and Services**

### **ASFA**

ASFA had progressed and expanded and was now well-established and widely used. It was particularly noted that of the approximately 1000 subscriptions to ASFA, about 170 were from developing countries. However, more copies were needed in developing countries. It was recommended that the IOC Secretariat and FAO should consult with the publisher, and seek funds if successful, for the provision of 100-200 sets of ASFA at a cheap rate, for distribution to institutions in poorer developing countries where, so far, there is no market, (Annex V, Action I.3.1).

Delivery of documents cited in ASFA and payment for such information continues to be a problem even in developed countries. Information is never likely to be provided without charge, so unless someone has a brainwave that will solve this problem for developed and developing countries alike, then the problem will remain unsolved and maybe unsolvable. Grants to information centres in developing countries should always contain a line budget item for document acquisition.

The Group would investigate the feasibility of a small scale project for making selected portions of the ASFA database, related to particular coastal regions, available using mini-computer facilities being provided in a number of developing countries (Annex 5, Action I.4. 3).

## **Content Pages**

**The Group recommended** that UN/OETB should examine the feasibility of producing and distributing a Marine Technology Contents Tables, complementing MSCT and FACT (Annex V, Action I.4.1).

## **Directories**

The International Directory of Marine Scientists was generally well received but because of the long delays during compilation and production, entries were out-of-date. For maximum value, the next edition should be produced with the minimum delay between distribution of the questionnaires and processing and printing.

## **Workshops and Training**

To increase the capabilities of developing countries to participate in and benefit from marine information systems the Group felt that they should take the initiative in identifying possible regions and developing practical criteria for planning and conducting marine information workshops.

Several possible regions were mentioned where IOC could make a maximum long-term impact. These included West Africa, Latin America and the South Pacific. Plans for an IFREMER/IOC workshop in West Africa were being considered and the Group was informed that a NTIS/IOC sponsored training course for IOCARIBE participants will be held in Washington in 1985.

**The Group decided** that small *ad hoc* panels of the members of the Group should develop documents detailing how workshops could be organized in French-speaking West Africa and South America. The documents would include criteria for the selection of participants, suggestions and broad guidance on the content and conduct of workshops, and include details of appropriate institutes in the region. The documents would be circulated to the entire Group for comment before being delivered to IOC. (Annex V, Action I.1).

There was a need to build up local library collections and capabilities, and training tools were needed, including very basic manuals. The UNESCO General Information Programme (GIP) could perhaps be used, and marine science librarians from IAMSILIC, the U.K. group and elsewhere might be invited to volunteer. Although UNESCO GIP had expressed interest in ASFIS in earlier years, no practical or financial assistance had been forthcoming. Nevertheless, it was recommended that the IOC Secretariat look again into the possibilities of UNESCO GIP support.

The Group received information on the proposed training course developed by the International Centre for Marine Resource Development located at the University of Rhode Island, U.S.A. This course is planned for 1986, if funds can be found.

Although in the past it has been envisaged that ASFIS should maintain and distribute additional registers and directories (e.g., Marine Science Affairs; Research Vessels) resources were limited and no strong demand has been received.

### **Promotion and Publicity**

Many thousands of brochures and leaflets have been distributed and participating centres promoted ASFIS and ASFA at conferences and exhibitions. Nevertheless, there were still many potential users who were not aware of the system or products. R. Gruszka suggested that the possibilities should be explored of routinely including an ASFIS/ASFA fact sheet in the publications of UN Agencies and input centres as appropriate. Continuing promotional and publicity efforts were needed for all ASFIS and MEDI and related information activities (Annex V, Action I.3.2).

### **Wider participation**

The WMO Representative, appreciating the very clear presentation ASFIS had made to the Group at the meeting, suggested that it would help his organization to become more actively involved in ASFIS, if requests for WMO assistance were specified in terms of definite actions required. UNEP was now ready to consider active participation as a co-sponsor of ASFA. It was understood that national centres in China and India were likely to participate formally in ASFIS soon.

Although there was a need for more input to ASFA from developed countries, the way forward, of most potential benefit to developing countries, was through the encouragement of regional groupings and networks. Successful co-operation was only usually possible in areas already linked, and it was strongly recommended that existing groupings and collaborative regional programmes should be used, and no attempt should be made to create new "ASFIS regions". The SEAFDEC model could be followed, by arranging regional workshops which would bring together marine information and library professionals. They would exchange ideas and experiences and begin to develop regional and co-operative library, information and documentation products and services of most use to the local marine scientific community. More active participation in ASFIS would follow as the network grew stronger.

#### 6.1 FUTURE CO-OPERATION WITH INTERNATIONAL AGENCIES INVOLVED WITH MARINE INFORMATION

In view of the importance of co-operation with regional agencies, the Group recommends that the IOC Secretary inform such agencies of the findings of the Group. In return the Group of Experts would like to receive details of any information activities pursued by these agencies. **The Group felt** that close co-operation with the ICSPRO officers would be desirable. The Group recognized that the regular meetings of the ICSPRO information officers play a valuable role in achieving proper co-ordination of the information programmes of participating UN organizations.

### 7. PROGRAMME DEVELOPMENT PLAN FOR MARINE INFORMATION AND RELATED MATTERS

The history of the proposal for a Programme Development Plan was outlined and the Group was referred to Annex VI of the Summary Report of the IODE-XI meeting (January 1984). This plan is to be funded from extra-budgetary sources and as yet no funds have been found. **The Group felt** that any offer should only be accepted if the consultant was totally qualified for the task. Because the plan is wide-ranging, **the Group agreed** that the division of the project between two consultants could be considered. It was also agreed that the progress of the consultant should be monitored and reviewed closely by the Group.

M. Melguen stated that she would actively seek French participation for the proposal. **The Group welcomed this** and would also welcome proposals from other countries.

The Representative of UN(OETB) stated that funds might possibly be available from his Organization if at least two other ICSPRO agencies were also prepared to contribute.

The need to have firm plans to present to donor agencies was stressed. The Group felt that the developed criteria for selection of consultant(s) for the preparation of PDP may assist Member States in making decisions. To this end **the Group agreed** to produce criteria by 1 January 1985, and an expanded version of the project work plan by mid-1985 which would serve as a detailed work statement. This task would be accomplished through correspondence between selected members of the Group, co-ordinated by R. Freeman, (Annex V, Action III).

### 8. ACTION PLAN FOR 1985 AND PRIORITY AREAS

**The Group recognized** the value and importance of an action plan and of the identification of programme priorities. However, it was noted that the great diversity of requirements for marine information management and limited funds available made planning particularly difficult. **The Group agreed** on the Action plan in Annex V.

### 9. REVIEW OF THE PROPOSED TERMS OF REFERENCE

The Group reviewed the proposed terms of reference and agreed to retain them for the next intersessional period.

It was the consensus of the Group that, within the agreed terms of reference, its efforts should be directed to the implementation of the following components of marine information:

- (i) Referral systems to numerical data
- (ii) Bibliographic referral systems
- (iii) Specialized numerical data sets and/or products
- (iv) General reference systems
- (v) Document delivery systems

However, bearing in mind that the delivery and transfer of knowledge takes many forms in the scientific communication system, the Group decided to keep all forms of information transfer under constant review and to be particularly mindful of innovative solutions to satisfy developing country needs.

## **10. OTHER BUSINESS**

### **Proposed Newsletter**

A proposal was introduced to consider establishing a Newsletter. The Group agreed that there was a strong need for the dissemination of news about marine information and related activities as well as to promote and publicize systems such as ASFIS and MEDI. Of equal importance was the exchange of ideas between marine information professionals and feedback from users of ASFA and other products. It was agreed that:

- (i) further consideration should be given to the idea of a newsletter, and produce a draft version, (Annex V, Action I.4.2);
- (ii) mechanisms for obtaining feedback from users of ASFA and other ASFIS and MEDI products should be examined, and ways of involving marine information professionals in a user-group;
- (iii) group members should make efforts to publish in established journals and in existing newsletters;
- (iv) group members should consider producing a regular section in the IMS Newsletter.

### **Membership of the Group of Experts**

Five existing members of the Group of Experts were selected in accordance with the procedures described in the guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission as given in the IOC Manual, Part I of July 1982.

Efforts have been made to obtain suitable nominations for the remaining three places in the Group and these efforts will continue.

**The Group felt** that it was important to fill these places according to the following criteria:

- (i) The experts should represent developing countries from a variety of regions;
- (ii) The experts should have direct interest and experience of marine information;
- (iii) The specialist interest of the experts should reflect the different aspects of Marine Information Management.

It was also necessary that experts could work effectively in English both orally and in writing. However, a candidate with exceptional qualifications but without the necessary expertise in English would be quite acceptable if accompanied by a competent interpreter.

### **Responsibilities during the Intersessional period**

The Group decided to divide its work into three areas and establish three *ad hoc* panels:

- |                           |  |
|---------------------------|--|
| 1. Data and data products | Co-ordinator: Dr. M. Melguen<br>assisted by: Dr. B.N. Shechkov<br>Mr. R. Freeman |
|---------------------------|--|

- |    |                            |   |
|----|----------------------------|---|
| 2. | Information and training   | Co-ordinator: Dr. J. Watson<br>assisted by: Mr. A. Varley<br>Dr. M. Melguen                   |
| 3. | Programme Development Plan | Co-ordinator: Mr. R. Freeman<br>assisted by: Dr. J. Watson<br>Mr. A. Varley<br>Dr. M. Melguen |

These panels will work by correspondence and will keep the Chairman of the Group and the IOC Secretariat informed of their work.

## 11. DATE AND PLACE OF THE NEXT SESSION

On behalf of the Secretary IûC, the Assistant Secretary IOC, invited the Group to hold its next Session in February or March 1986, in Paris, in conjunction with the IODE Officers' meeting. The Group welcomed this invitation.

In view of the role of the Group in promoting Marine Information Management in the developing nations, **the Group recognized** that there were important benefits to be gained from holding the Session in a developing region. This would:

- (i) Increase participation by developing-nation marine information personnel;
- (ii) Demonstrate the strong concern of the Group to fulfil this aspect of its terms of reference;
- (iii) Provide first hand experience of Marine Information Management in a developing region for all participants in the Session.

The Group asked the IOC Secretariat to give serious consideration to this proposal. In the view of the successful marine information work in SEAFDEC, and the availability of support facilities at the institution, the location suggested was Bangkok.

## 12. ADOPTION OF THE SUMMARY REPORT AND RECOMMENDATIONS

**The Group adopted** the draft Summary Report of its First Session. It instructed the Secretary and the Chairman of the Group to undertake the necessary editing and corrections when preparing the final version.

## 13. CLOSURE

In closing, the Chairman thanked the experts, the Rapporteur and the Secretariat for their efforts in ensuring the smooth conduct of the Session and the timely preparation of the draft Summary Report. He extended his thanks to the representatives of the FAO for facilities provided and for their warm hospitality.

The Session was closed at 14.00 on 23 November 1984.

**ANNEX I**

**AGENDA**

- 1. OPENING OF THE SESSION**
- 2. ADMINISTRATIVE ARRANGEMENTS FOR THE SESSION**
  - 2.1 ADOPTION OF THE AGENDA
  - 2.2 DESIGNATION OF THE RAPPORTEUR
  - 2.3 CONDUCT OF AND ARRANGEMENTS FOR THE SESSION
- 3. ELECTION OF THE CHAIRMAN AND VICE-CHAIRMAN OF THE GROUP**
- 4. INFORMATION ACTIVITIES AND THE NEEDS OF DEVELOPING COUNTRIES**
  - 4.1 PRODUCTS AND SERVICES NEEDED TO ACHIEVE IOC OBJECTIVES IN MARINE INFORMATION
- 5. STATUS OF THE HANDBOOK ON MARINE INFORMATION MANAGEMENT**
- 6. AN EVALUATION OF ASFIS AND MEDI AS INTERNATIONAL MARINE INFORMATION SYSTEMS**
  - 6.1 FUTURE CO-OPERATION WITH INTERNATIONAL AGENCIES INVOLVED WITH MARINE INFORMATION
- 7. PROGRAMME DEVELOPMENT PLAN FOR MARINE INFORMATION AND RELATED ACTIVITIES**
- 8. ACTION PLAN FOR 1985 AND PRIORITY AREAS**
- 9. REVIEW OF THE PROPOSED TERMS OF REFERENCE**
- 10. OTHER BUSINESS**
- 11. DATE AND PLACE FOR THE NEXT SESSION**
- 12. ADOPTION OF THE SUMMARY REPORT AND RECOMMENDATIONS**
- 13. CLOSURE OF THE SESSION**

ANNEX II

**LIST OF PARTICIPANTS**

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## ANNEX III

### REPORT OF THE WMO REPRESENTATIVE

WMO is active in three areas of marine information:

#### 1. METEOROLOGICAL SERVICES TO MARINE ACTIVITIES

Information about the types of services provided nationally to high seas, coastal and offshore activities, and activities in ports is publicised by the countries concerned. In addition, WMO issues under the Marine Meteorology Programme several publications, detailing particulars of national services of interest to international marine activities such as shipping, fisheries, ocean exploration and exploitation etc. There are:

- WMO Pub. No. 9 - Weather reporting; Volume D - Information for shipping (annual subscription to supplement service every two months). Contains full information on the issue of meteorological forecasts and warnings to shipping.
- WMO Pub. No. 574 - Sea-ice information services in the world; 1981 - updated regularly. Lists for 17 countries the sea-ice information services, describing organization, data acquisition, output products, forecasts and giving details of publications and postal addresses.
- WMO Pub. No. 471 - Guide to marine meteorological services; 1981 (2nd edition). Provides guidance on the various marine meteorological services available.

#### 2. (MARINE) METEOROLOGICAL AND RELATED OCEANOGRAPHIC DATA SOURCES

Information on the availability of data sets for use in climate studies is contained in the INFOCLIMA Catalogue of Data Sets, organized under the World Climate Data Information Referral Service (acronym INFOCLIMA) of the World Climate Programme. The Catalogue includes descriptions of data sets and the sources where they are available. A wide range of data categories is covered, amongst which data from the marine environment. The catalogue is planned to be published in printed form early in 1985. The marine section of the INFOCLIMA catalogue is being prepared in co-ordination with the development of MEDI.

3. Research activities related to the Oceans, within the framework of the World Climate Research Programme (WCRP)

## ANNEX IV

### **PRODUCTS AND SERVICES NEEDED TO ACHIEVE IOC'S GOALS IN INFORMATION MANAGEMENT** (prepared and submitted by Dr. J. Watson, Chairman of the Group)

#### **IOC'S MANDATE IN MARINE INFORMATION MANAGEMENT**

The mandate to develop and operate scientific and technical information systems for marine information management has evolved over more than 15 years with no single unifying statement on goals, objectives or priorities.

Recommendation IODE-XI.4 is the most recent statement on IOC's role in information management. IOC has a statutory function to provide the publication and dissemination of results of scientific investigations of the oceans. Planning and co-ordination functions have also generated special needs for information exchange.

Other parts of IOC's mandate include:

- reference services covering relevant published information
- information about current and planned research programmes
- information about scientists and institutions
- emphasis on international activities
- information on advanced technology
- information on marine pollution research

Of particular importance IOC's statutory mandate calls for special attention to the needs of developing countries in marine science and technology.

#### **CARRYING OUT THE MANDATE**

IOC's role has been more catalytic than operational in carrying out its mandate. The lack of a critical mass of marine information management professionals in IOC headquarters has caused difficulties in implementing roles and responsibilities recommended in documents such as the Role of IOC Regarding Information Services in the Transfer of Marine Technology (IOC/WG-FUROF-II/21, 1978); Structure and Workplan of the IOC with Special Reference to the Information and Data Services (IOC/INF-520, 1982); and the Task Team on MIM Summary Report (IOC/IODE-XI/28, 1984).

In spite of the lack of human and financial resources much has been achieved by this catalytic role. However, to move ahead and be responsible to the pressing needs of developing countries it is clear that IOC must define its goals and objectives in marine information management, set out clear priorities for future action, and mobilize resources to implement a workplan in the near and long term.

Items for discussion follow. Documents relevant to the discussion are listed at the end of this document and Group members are encouraged to read these documents.

#### **WHAT ARE THE NEEDS OF DEVELOPING COUNTRIES**

Needs of any country or region clearly depend on the level of development in that country or region that will allow receipt, dissemination, understanding, and application of information required.

Any analysis of needs will be carried out in collaboration with the country or region requesting assistance. Needs can vary from the very basic introduction of small libraries to an area and developing the capability to catalog, store and retrieve the publications, all the way through training of information specialists, developing local publication programmes, to research institution building and development of a regional research and information producing capacity.

As a general rule of thumb, however, most developing countries with programmes in marine research will need to participate in the activities of information systems such as ASFIS and IOC must therefore attempt to develop a programme that sets priorities on giving developing countries access to and an understanding of ASFIS products and services so that they can apply the useful information to their own economic and social development.

## **PRODUCTS AND SERVICES TO FULFIL IOC OBJECTIVES**

- 1. Promotional materials.** In many areas of the world ASFIS, MEDI and other marine information products and services are poorly known. This applies even in some developed countries. A major effort is requested to develop promotional products that motivate people to use the information products and services that will be of benefit to them.
- 2. Regional bibliographies.** These can often be produced as spin-offs from a computerized database and, in fact, any spin-off product that can be developed simply and cheaply to provide basic start-up material for a developing area should be considered a top priority.
- 3. Supply of core publications.** Through exchange services or aid programmes, the creation of a library of publications considered basic to the operation of a developing area information service must be a priority. IOC may wish to use existing depository libraries, if such exists in a region targetted for assistance in upgrading capabilities in marine information management.
- 4. Regional workshops.** After IOC has decided which area or areas it wishes to target for development of marine information capabilities then a regional workshop along the lines of that funded by IDRC for SEAFDEC in 1982 should be developed. Such workshops allow the people in the region to define their needs more clearly and to assign their own priorities and action plans. Such workshops should include individuals from all parts of the scientific communication chain i.e. researchers, administrators, editors, librarians, and technicians.
- 5. Project proposals.** These need to be developed to secure external funding for the many projects that will be needed to develop an information management capability in an area, such as:
  - training of information specialists;
  - training researchers to use libraries and information centres effectively and how to communicate effectively for publication or oral presentation;
  - developing the basic infrastructure for an information centre;
  - to develop technical co-operation among developing countries in regions of similar linguistic, social and cultural backgrounds.
- 6. Delivery of ASFIS and MEDI products and services.** Those products and services that are free can continue to be disseminated through participating UN agencies as is now the case. However, through the ICSPRO mechanism, some redistribution of the workload might be considered.

Delivery of the major product of ASFA continues to be a problem since it is unaffordable or difficult to purchase for many countries. A mechanism needs to be found to sponsor the broader dissemination of ASFA to developing country institutions engaged in marine research.

On-line retrieval of information in the ASFA database would be an useful database for IOC to perform and would complement that of the other international agencies.

Special products from the ASFA database could be of benefit to developing regions if targetted to a specific research area. Perhaps the developments of such products could be developed on an "as needed" basis by ASFIS input centres or through various aid programmes.

#### **READINGS RELEVANT TO THIS DOCUMENT**

1. FAO-IOC/ASFIS-II/10 Requirements for Information Services by IOC Subsidiary Bodies. 1976.
2. IOC/IODE-XI/10.8 Report of the *Ad hoc* Group on Marine Information Management. 1977.
3. IOC/WG-FUROF-II/21 The role of IOC regarding Information Services in the Transfer of Marine Technology. 1978.
4. FAO/IOC/UN(OETB)/ASFIS-III/3 Summary Report. 1980.
5. FAO/IOC/UN(OETB)/ASFIS-III/8 How Developing Countries Can Participate in the Activities of ASFIS and Make Use of its Products. 1980.
6. IOC/IODE-XI/8 Annex 12 - Perspectives in Marine Information Management. 1981.
7. IOC/INF-520 Structure and Workshop of the IOC with Special Reference to Information and Data Services. 1982.
8. IOC/INF-537 *Ad hoc* ASFIS Planning, Summary Report. 1983.
9. IOC/IODE-XI/28 TT/MIM Summary Report. 1984.

ANNEX V

**PROPOSED ACTION PLAN**

<b>Action Item</b>	<b>Responsibility</b>	<b>Date Due</b>
<b>I. PRODUCTS, SERVICES AND ACTIVITIES NEEDED TO ACHIEVE IOC OBJECTIVES IN MARINE INFORMATION FOR DEVELOPING COUNTRIES</b>		
<b>I.1 WORKSHOPS ON MARINE INFORMATION</b>		
I.1.1 Preparation of a document that synthesizes relevant resolutions and recommendations on marine information matters related to developing countries and which have come to the attention of IOC through its working committees, regional bodies and other channels.	IOC	July 1985
I.1.2 Preparation of selection criteria for workshop participants and guidelines for the conduct of regional workshops.	<i>Ad hoc</i> Panel 2	April 1985
I.1.3 Study the feasibility for France to organize a workshop on Marine Information for Western Africa in 85/86 .	IOC and M. Melguen	April 1985
I.1.4 Study the feasibility of organizing a workshop on Marine Information for South America.	IOC J. Watson & A. Varley	July 1985
<b>I.2 HANDBOOK</b>		
I.2.1 Completion of first draft of handbook on marine scientific and technological information resources (MASTIR)	Consultant/IOC	March 1985
I.2.2 Review and comment of first MASTIR draft	GE/MIM	April 1985
I.2.3 Editing and review of final draft and setting publication production specifications	GE, Editorial Panel, Consultant/IOC & IOC	June 1985
I.2.4 Publication and distribution of MASTIR	IOC	January 1986
<b>I.3 INFORMATION ON EXISTING DATA AND INFORMATION INVENTORIES</b>		
I.3.1 Consultations with ASFA publisher to provide copies of ASFA at reduced price for free distribution to selected developing countries	ICSPRO	February 1985

<b>Action Item</b>	<b>Responsibility</b>	<b>Date Due</b>
I.3.2 Development of a proposal for wider distribution of Information (i.e. brochures, newsletters...) dealing with existing marine information data bases (i.e. MEDI, NEDRES, ASFA, ROSCOPS...)	<i>Ad hoc</i> Panel 1	July 1985
<b>I.4 DEVELOPMENT OF NEW MARINE INFORMATION SERVICES</b>		
I.4.1 Determine feasibility of publishing Marine Technology Contents Tables	UN(OETB)	July 1985
I.4.2 Prepare detailed proposal on preparation and delivery of "Newsletter" material on marine information	A. Varley	March 1985
I.4.3 Study feasibility of micro-computer based coastal information systems for use in developing countries	<i>Ad hoc</i> Panel 1	July 1985
I.4.4 Collect information on national and international projects of developing documentation and information centres for developing countries	IOC & the Groups	continuous
I.4.5 Prepare a list of the most useful and relevant publications and reports on the general information needs of developing countries	Chairman	
<b>II. EVALUATION OF MEDI SYSTEM</b>		
II.1 DETERMINE FEASIBILITY OF USING AN END USER SURVEY TO EVALUATE MEDI	GE Chairman	February 1985
II.2 TESTING ON-LINE ACCESS TO MEDI DATABASE BY INTERNATIONAL USERS AND PREPARATION OF A PROGRESS REPORT	<i>Ad hoc</i> Panel 1/ M. Melguen	March 1985
II.3 PROPOSE A NEW FORMAT FOR MEDI DATABASE ADAPTED TO USER NEEDS	<i>Ad hoc</i> Panel 1	July 1985
II.4 PUBLICATION OF REMOTE SENSED DATA INVENTORY	IOC	July 1985
<b>III. PROGRAMME DEVELOPMENT PLAN (PDP)</b>		
III.1 DEVELOPMENT OF STATEMENT OF QUALIFICATION OF PDP CONSULTANT	<i>Ad hoc</i> Panel 3	January 1985
III.2 EXPANSION OF PDP OUTLINE INTO A WORK STATEMENT FOR CONSULTANT(S)	<i>Ad hoc</i> Panel 3	August 1985

## A N N E X VI

### **REPORT OF IOC ON ITS MARINE INFORMATION ACTIVITIES WITH PROPOSALS FOR FUTURE DEVELOPMENT OF ASFIS AND MEDI**

(prepared and submitted by Dr. J. Watson, Chairman of the Group)

#### **INTRODUCTION**

This brief sets the stage for discussion of IOC's contribution to the future development of ASFIS, MEDI and other activities in marine information management. The brief will synthesize rather than regurgitate reports of previous meetings on marine information. A list of relevant documents is attached and members of the Group are encouraged to read these documents.

#### **ACTIVITIES**

Since 1980 there have been the following major activities:

1. Third Session of the Joint FAO/IOC/UN(OETB) Panel of Experts on ASFIS - Paris. 8-12 April 1980. FAO/IOC/UN(OETB)/ASFIS-III/3.
2. Third meeting of MEDI Group of Experts - Paris, 26-29 January 1981. IOC/MEDI-III/3.
3. *Ad hoc* Informal Planning Meeting on Future ASFIS Development and Support - Paris, 31 May - 3 June 1983. IOC/INF-537.
4. Task Team on IODE's Role in Marine Information Management (MIM) - New York, 5-7 January 1984. IOC/IODE-XI/28.
5. Working Committee on International Oceanographic Data Exchange, Eleventh Session, New York, 9-18 January 1984. IOC/IODE-XI/3 rev.

In addition, the following discussions have taken place:

- an *ad hoc* meeting of ICSPRO Information Management Officers in January 1982 led to an inter-agency consultation at IODE-XI 1984 and was partly responsible for the thinking leading to the strengthening of IOC's marine information groups.
- several meetings of the IODE's Executive contributed many of the ideas that were discussed at IODE-X and XI resulting in acceptance of information management as an integral part of IODE's work plan and budget.

#### **RESULTS**

Much of the information in the Summary Reports of MEDI-III, *Ad hoc* ASFIS and TT/MIM was discussed at IODE-XI and resulted in:

- streamlining IOC's approaches to marine information management by disbanding three consultative groups - GE/MEDI; ASFIS Panel of Experts; TT(MIM) and creating one Group of Experts on Marine Information Management with terms of reference as listed in Annex II p. 11-12 of IOC/IODE-XI/3 rev. Summary Report.



- Resolution IODE-XI.8 on Training in Marine Data and Information Management. IOC/IODE-XI/3, Annex 11, p. 7-8.
- Recommendation IODE-XI.2 on MEDI Enhancement IOC/IODE-XI/3 Annex II, p. 9.
- Recommendation IODE-XI.4 on IODE's Role in Marine Information Management IOC/IODE-XI/3 Annex II, p. 10-12.

Present in all these documents is the conclusion that IOC's role remains a catalytic one and the need is still present for provision of staff and funding to create a permanent critical mass in IOC Headquarters for marine information management. In addition, the urgent need was continually emphasized for extra budgetary funds to finance the delivery of products and services to developing regions and the creation of adequately trained and equipped regional information centres in areas of IOC's stated priorities and responsibilities through a carefully planned programme of workshops, technical training, provision of bibliographic tools and access, regional collaboration, and co-operation between international agencies.

### **SUGGESTIONS FOR FURTHER DEVELOPMENT OF MEDI AND ASFIS**

**1. MEDI.** The future plan of action has already been stated most succinctly in IOC/INF-537 p. 7 and I repeat it here for convenience, without addition:

In order to ensure full utilization of the MEDI Referral System and bearing in mind priorities for future development of MEDI, a number of actions must be taken as follows:

- (i) strengthen inter-agency participation by institutionalizing the current IOC MEDI/GE and the Agency "points of Contact" into a Joint Advisory Panel for MEDI similar to that of ASFA to ensure that the management advice on the system's operation will be received on a continuing basis;
- (ii) continue to maintain and add to the database by using MEDI concepts described in the MEDI-III report;
- (iii) make special efforts to add descriptions of data files for specialized areas such as fishery, pollution and climate;
- (iv) continue IOC staff support including data entry personnel so that MEDI will be an up-to-date useful system;
- (v) seek funds for a consultant to investigate a re-design of the MEDI system in the light of recent developments in INFOTERRA, INFOCLIMA and other referral systems.

In order to carry out the above, financial support in the form of IOC staff and consultants will be required. An IODE expert for the proposed Advisory Panel will be required as well as an IODE expert participation in related referral systems such as INFOCLIMA.

**2. ASFIS.** The major thrust for future development of ASFIS should be institution-building and training programmes in developing countries.

Close collaboration is needed between UN and other international agencies to reduce duplication of effort and scarce resources.

Parallel to this thrust will be the need to create special bibliographies and other information products of direct relevance to the regional or national centres being developed.

Support of basic library collections in these regional centres goes hand in hand with training of information specialists who will facilitate provision and comprehension of the available information thereby aiding information transfer.

A more minor thrust will be to enhance the current products and services of the ASFIS system so that spin off products can be provided to, or created by, all partners of the system.

Entirely new products and services should be developed as the need is expressed by ASFIS partners.

These developments should not wait for the creation of a Programme Development Plan.

### **3. PROGRAMME DEVELOPMENT AND MANAGEMENT PLANS**

Clearly this is a major priority for IOC. The outline of such a plan has now been thoroughly discussed in several meetings and urgent steps are needed to secure the funding for an appropriate consultant to develop this plan which is crucial to secure long-term financing for future development of a programme of marine information and related activities.

#### **RELEVANT DOCUMENTS TO READ**

1. FAO/IOC/UN(OETB)/ASFIS-III/3 - Summary Report 1980.
2. IOC/MEDI-III/3 - Summary Report 1981.
3. IOC/IODE-X/8 Annex 12 - Perspectives in Marine Information Management - 1981.
4. IOC/INF-520 Structure and workplan of the IOC with special reference to the information data services - 1982.
5. IOC/INF-528 *Ad hoc* meeting of ICSPRO Information Management Offices 1982 .
6. IOC/INF-537 *Ad hoc* ASFIS Planning, Summary Report - 1983
7. IOC/IODE-XI/28 TT/MIM Summary Report 1984
8. IOC/INF-548 Summary report of the Inter-agency Consultation in the field of Oceanographic Data and Information Management 1984
9. IOC/IODE-XI/3 Summary Report 1984