

**Intergovernmental Oceanographic Commission**  
*Reports of Governing and Major Subsidiary Bodies*



**Nineteenth Session of  
the Executive Council**

Paris, 6-12 March 1986

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**In this Series**

**Reports of Governing and Major Subsidiary Bodies**, which was initiated at the beginning of 1984, the reports of the following meetings have already been issued:

- Eleventh Session of the Working Committee on International Oceanographic Data Exchange
- Seventeenth Session of the Executive Council
- Fourth Session of the Working Committee for Training, Education and Mutual Assistance
- Fifth Session of the Working Committee for the Global Investigation of Pollution in the Marine Environment
- First Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions
- Third Session of the *ad hoc* Task Team to Study the Implications, for the Commission, of the UN Convention on the Law of the Sea and the New Ocean Regime
- First Session of the Programme Group on Ocean Processes and Climate
- Eighteenth Session of the Executive Council
- Thirteenth Session of the Assembly
- Tenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific

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With reference to the procedure adopted by the Executive Council to incorporate those of its decisions and actions internal to the Commission into the body of the Summary Report, the relevant paragraphs have been marked by the symbols.



for decisions on policy, and



for calls for action (e.g., by the Member States, the governing and subsidiary bodies, the Secretary, Unesco etc.) required to give effect to policy. Obviously, the distinction is not always clear-cut.

Expressions of general approval or of appreciation are not marked, except that all the positions taken by the Council are indicated by underlining in the text of the Report.

1. OPENING

The First Vice-Chairman, Mile Marie-Annic Martin-Sane, called the Executive Council to order at 10.00 on 6 March 1986, explaining that the Chairman, Prof. Inocencio Ronquillo, because of the present situation in his country, had just arrived but could not join the Council until later.

She then informed the Council that the Director General was unfortunately indisposed, and welcomed his representative, Mr. Jean Knapp, the Deputy Director-General.

The First Vice-Chairman reminded the participants (1) of the tragic death of Mr. Olof Palme, the Prime Minister of Sweden. Mr. Palme, she said, had won the world-wide respect of all nations, whatever their political regime or level of development, and will go down in history as one of the most notable personalities of our time; he had also understood the significance of a better understanding of the oceans and of the role the Commission could play. In him, the Commission had lost a sincere and influential friend. The First Vice-Chairman asked the participants to observe one minute of silence in his honour.

The First Vice-Chairman called on the Deputy Director-General to address the Council.

The Deputy Director-General noted that the presence of numerous Representatives, and Observers of Member States and of the many organizations that co-operate with the Commission testified to the importance attached to its work and to the role it plays in international co-operation, particularly as a joint specialized mechanism of ICSPRO (2). He recalled the many favourable statements made at the 23rd General Conference of Unesco about the Commission's programmes, and about the importance of the availability of adequate means for the Commission, as well as the Division of Marine Sciences, to meet their responsibilities. He evoked the idea of seeking complementary support to amplify the activities under the regular programme of work and budget. Mr. Knapp recalled the efforts of the Director-General to find supplementary support from the Member States, and the need to consider the special situation of IOC Member States that are not Member States of Unesco.

He stressed Unesco's fundamental role in the promotion of multilateral international co-operation on the basis of equality for all Member States. Oceanography is, par excellence, a domain in which international co-operation is necessary, and he looked forward to a continuation and an expansion of the fruitful co-operation between Unesco and the Commission.

The full text of the Deputy Director-General's statement is given in Annex III B.

The First Vice-Chairman then read the speech of the Chairman, the highlights of which are summarized below.

The Chairman thanked the Director General for his understanding of the difficulties of IOC due, in particular, to the increasing demands on the Secretariat for adequate servicing of the Commission's programmes and the maintenance of common supporting services. He welcomed the consideration, during the Preparatory Meeting just prior to the Council Session, of the three in-depth studies on possible revisions of the Guidelines on the Structure and Responsibilities of the Subsidiary Bodies of the Commission, on the Statutes, and on the study of the Stability and Continuity in the Commission's Resources. He thanked the Past Chairman, Dr. Agustín Ayala Castañares and others who had contributed to their preparation.

The Chairman believed that these various issues could, if necessary, be studied further in the forthcoming intersessional period so that firm recommendations could be submitted to the Assembly.

(1) The List of Participants is given in Annex VI

(2) The List of Acronyms is given in Annex VII

11 Nevertheless, a solution had to be found to the short-term problem of maintaining the Commission's work in the present biennium (1986-87) at an acceptable level, and of matching resources to the important long-term ocean studies and to ensuring the stability of those resources so that certain long-term activities, once started, could be completed. Commitments and resources must be matched at all stages of the programme, particularly through an increased commitment of Member States, so that earlier investment of national resources in IOC would not have been in vain.

12 The Chairman noted that the Commission, in its first twenty-five years, has helped substantially to increase our knowledge of the oceans, but, if the Member States, and particularly the developing countries, are to benefit from such knowledge, it must be expressed in the form of precise prediction of the effects of ocean processes on human activities. This requires detailed knowledge of variation in the oceans, for which long time-series of key data are required. Such long-term commitments - which are vital to the well-being of the Member States - cannot be undertaken through short-term programming and budgetting. A way must be found to avoid the severe adverse short-term effects of the sort of circumstances Unesco, in particular, finds itself in, on the Commission's necessarily long-term commitments. The Chairman regretted the need, felt by the 23rd General Conference of Unesco, to place in reserve many important, even vital, activities. He reminded participants that, when addressing Commission III of the 23rd General Conference, he had pointed out that every cent spent by Unesco, in IOC affairs at least, is considerably multiplied by the counterpart action of IOC Member States, in a ratio of perhaps a thousand times as much, if not more. He also emphasized that, if Unesco and the IOC do not respond to this fundamental need, some of the present opportunities may well be lost forever. Some Member States will see their national goals in marine affairs set back once more. He recognized the constraints upon Unesco's support for the Commission, and the general limits of ensuring that Member State support be commensurate with the commitments; there is no magic short-cut.

13 He stressed also the importance that the IOC attaches to the Inter-secretariat Committee on Scientific Programmes Relating to Oceanography (ICSPRO), and invited the Director-General to study the possibility of formally inviting UNEP and IAEA to join this Committee. He recalled the view expressed in the recent session of ICSPRO that, unless greater stability in resources is found, there is a risk that the gap between proposed and planned IOC programmes and their actual implementation would affect the counterpart planning of Member States and organizations Members of ICSPRO and others co-operating with the Commission.

14 He thanked the Director General for his continuing support and his efforts to safeguard the Commission's programmes, and his fellow Officers for their support.

15 The full text of the Chairman's statement is given in Annex III A.

## 2. ADMINISTRATIVE ARRANGEMENTS

### 2.1 ADOPTION OF THE AGENDA

16 The First Vice-Chairman called the attention of the Executive Council to the fact that the First Session of the Programme Group for the Central Eastern Atlantic had not yet taken place, so that no issue was before the Council. She proposed that Agenda Item 6.2 be dropped. She then invited the comments of the participants on the Provisional Agenda (1).

17 The Delegate of Japan proposed that the title of Agenda item 6.4 be changed to: Marine Science Co-operation in the Western Pacific, with two Sub-items: 6.4.1 Intersessional Activities of the Programme Group for the Western Pacific; and 6.4.2 Co-operation with CCOP and CCOP(SOPAC).

18 Both these proposals met with widespread support. The Executive Council therefore accepted these proposals and amended the Provisional Agenda accordingly. It adopted the Agenda as amended, which is attached as Annex I hereto.

(1) The List of Working Documents for the Session is given in Annex IV, hereto; no stocks of these documents are maintained and the list is for reference only.

## 2.2 DESIGNATION OF THE RAPPORTEUR

The First Vice-Chairman invited proposals.

The Delegate of Peru proposed Professor El-Refai Bayoumi, of Egypt, as Rapporteur. This proposal was widely supported, and Prof. Bayoumi was designated Rapporteur for the Session.

## 2.3 CONDUCT OF THE SESSION

The Secretary briefly introduced the Timetable and the basic documentation for the Session (see Annex IV, hereto). He reminded the Executive Council that it was expected to form a Resolutions Committee.

Several Delegations proposed that Agenda Items 7.1, 7.2 and 7.3 should be postponed till Monday 10 March to allow translation of the Report of the Preparatory Meeting (attached as Annex V, hereto) into all other working language versions of the Commission, since, without all language versions, they would not be able effectively to consider these Agenda Items.

Other Delegates pointed out that the key element of the Summary Report of the Preparatory Meeting was Annex III which, since it dealt with proposed amendments to Articles of the IOC Statutes, consisted virtually of the relevant parts of Document IOC/EC-XIX/12 with only a few small changes. Since this Document is available in all four working languages, these Delegates felt that it would be feasible to proceed.

The First Vice-Chairman advised the Executive Council that the Bureau would study the matter and propose essential modifications, but she warned that rearrangement of the timetable could well provide new difficulties of scheduling.

One Delegate pointed out the adverse effects of late receipt of documents on his Delegation's preparation for the Session and requested that the Secretary make further efforts to get key documentation to the Member States well in advance of an IOC Session.

The First Vice-Chairman then proposed the composition of the Resolutions Committee: Algeria, Brazil, China, Costa Rica, Denmark, France, Japan, Nigeria, UK (Chairman), USA and USSR.

The Executive Council accepted this proposal.

## 3. SECRETARY'S REPORT ON INTERSESSIONAL ACTIVITIES

The Secretary briefly summarized his Report on Intersessional Activities which covers the period since the Thirteenth Session of the Assembly up to the end of 1985. He stressed that the 1984-1985 biennium coincided with a critical period in the development of the IOC programme which is growing, expanding and taking firm roots in the Member States as they participate more and more actively in its implementation. Being aware of the rapid evolution in international ocean affairs, Member States also depend upon the Commission to play a leading role at the intergovernmental level in furthering the scientific understanding of the ocean and its resources.

He felt obliged, however, to refer to the paradoxical situation in which the IOC now finds itself. Many IOC programmes and activities have undergone considerable development during the last twelve months, through increased involvement and participation by Member States and their scientific communities. This has occurred at a time when there has been a severe reduction in funds and staff made available to the Commission through Unesco, which has had a negative impact on the required Secretariat servicing of the programme. Thus, at a time when the resources of IOC are declining, many activities are gaining momentum. This trend may lead to serious difficulties in the implementation of the programme, unless adequate corrective measures are rapidly found.

- 30 Within this context, the IOC, nevertheless, has carried out a programme of work which encompasses the major fields of marine scientific endeavour, with associated ocean services and training activities in the various ocean regions covered by the Commission's subsidiary bodies, as well as in other regions in co-operation with relevant bodies. The programme of the Commission is thus a coherent and comprehensive ensemble of elements based on the programmes approved by IOC Member States. However, the strengths of such an inter-linked programme also make it vulnerable to disruption of any given element. Thus, the slowing down or postponement of a planned activity may produce a chain reaction which has a negative impact on other related activities within the programme.
- 31 The Secretary gave some examples of progress made in implementing the programme during 1985, as well as of difficulties encountered.
- 32 IOC, in partnership with the Scientific Committee on Oceanic Research (SCOR), through the Joint SCOR-IOC Committee on Climatic Changes and the Ocean, is actively contributing to the planning of the oceanographic component of the WMO-ICSU World Climate Research Programme. Implementation of two large-scale research projects - the World Ocean Circulation Experiment, and the Study of the Tropical Oceans and Global Atmosphere - commenced in 1985 and will continue over the next decade.
- 33 The recommendations and guidance received from the IOC Programme Group on Ocean Processes and Climate on the co-ordination of the intergovernmental aspects of the ocean component of WCRP and promotion of the required Ocean Observing Systems are being implemented. A good example of this is the Global Sea-level Observing System (GLOSS) which is being progressively established, with initial emphasis on the development of regional tide-gauge network components. A Draft Implementation Plan for GLOSS was prepared with the assistance of a Task Team of experts and substantial progress has been made in development and implementation of GLOSS since the Thirteenth Session of the Assembly. It should be noted, however, that a professional post established to respond to certain of these tasks, especially the use of new technology, has not been filled and has been placed in reserve.
- 34 Following a period of project design by the Joint IOC-FAO Guiding Group of Experts on Ocean Science in relation to Living Resources (OSLR), the initial stages of an International Recruitment Programme (IREP) were launched in 1985. Within a carefully balanced approach to the need to provide adequate scientific guidance, as well as the required training and infrastructure support, the Commission can point to substantial progress in the Sardine-Anchovy Recruitment Project (SARP), within IREP.
- 35 Concerns of Member States about non-living resources of the ocean are being responded to in a similar way, but are at an earlier stage of development. With the UN(OETB), the IOC has identified scientific and subject areas to be studied through the Guiding Group of Experts on Ocean Science in relation to Non-Living Resources (OSNLR), and pilot projects in Latin America (south-west Atlantic) and the IOCARIBE region are being developed for implementation in 1986, provided that the required means are made available. Vigorous pursuit of the OSNLR programme will require not only additional funding from extra-budgetary sources, but also corrective measures to compensate for the placing in reserve of an approved (22 C/5) post for a marine geologist, the incumbent of which would have assumed certain responsibilities for OSNLR as well as for Ocean Mapping.
- 36 Based on a decade of steady growth, the IOC programme of marine pollution research and monitoring has now reached the stage where assessment of the health of the oceans will benefit from the gradual establishment of regional monitoring components of MARPOLMON. These activities, which are of high priority to a large number of Member States, were pursued in co-operation with the United Nations Environment Programme (UNEP) and have been particularly successful in the south-east Asian, the Caribbean and the east Atlantic regions, where the results of intercalibration exercises, and scientific and technical advice provided through GEMSI, have been applied with positive results. Due to the departure of the staff member seconded by IMO, and the resignation of another staff member, whose post has now been placed in reserve, this programme is being manned by a single professional, a situation that causes grave concern.
- 37 Strengthening of oceanographic services provided through national and regional centres is a prime objective of IOC, with a view to ensuring that they are responsive to new requirements of the scientific community and other users.



Within the IOC-WMO Integrated Global Ocean Services System (IGOSS), new data products have been developed to better serve the needs of the marine scientific community. In a similar vein, the Working Committee on International Oceanographic Data Exchange (IODE) has taken steps to ensure that the GF-3 standard format is made more easily available to institutions participating in the IODE system, through development of portable software. This will eventually facilitate increased participation of developing countries in the system. At the same time, the Working Committee on IODE, through its Group of Experts on Marine Information Management (MIM), has made considerable efforts to expand its training programme in information management and, in collaboration with the other partners of the Joint FAO-IOC-UN(OETB) Aquatic Sciences and Fisheries Information System (ASFIS), is involved in a pilot study on the use of laser-disk technology to access the Aquatic Sciences and Fisheries Abstracts (ASFA). Although progress in this respect is quite satisfactory, it has not been possible to move towards fulfilling the long-standing commitment of IOC to assume responsibilities for the maintenance of certain information registers currently operated by FAO within ASFIS.

Several aspects of the International Tsunami Warning System in the Pacific (ITSU) are of particular interest to participating countries in their efforts to improve and expand their predictive capabilities. The draft Master Plan for the Tsunami Warning System has been presented for critical review by experts and institutions and, when in final form, will provide valuable guidance to institutions and governments in this respect. Likewise, prior to the Tenth Session of the International Co-ordination Group for ITSU, a Workshop on the Technical Aspects of Tsunami Analyses, Prediction and Communications was arranged to assist Member States in their efforts to arrive at practical solutions to their tsunami-warning problems.

Fundamental to the wishes of IOC Member States, as recommended by the Working Committee for TEMA and the IOC governing bodies, is the development, with the Unesco Division of Marine Sciences, of a coherent programme of training, education and mutual assistance. The Commission has made every effort, within the limitations of available funding, to facilitate the participation of its Member States in IOC programmes and to assist countries, through activities under the Regular Programme and with extra-budgetary funding, to strengthen their capabilities in marine sciences and thus achieve their national goals in marine affairs. Through the organization of group training courses and the provision of individual study grants, about 60 specialists from 39 countries were provided the opportunity to improve their skills in a wide range of marine scientific fields and ocean services. Progress has also been made in providing assistance and advanced training through the IOC Voluntary Co-operation Programme (VCP) and the International Research Fellowship Scheme.

The Division of Marine Sciences has continued to collaborate in the implementation of the Unesco-IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries.

Nevertheless, it must be noted that the current budgetary restrictions have had a severe negative impact on IOC plans which has resulted in a considerable slowdown, so far as the Commission is concerned, in the implementation of the Unesco-IOC Comprehensive Plan. This has been particularly true of the plans to undertake preparatory missions for the formulation of project proposals for submission to extrabudgetary funding sources, as well as the preparation of related Marine Science Country Profiles. The same applies to the projected assistance to Member States in the improved use of oceanographic research vessels. It was not possible to include a professional post within the 23 C/5 for this important component of the TEMA programme, and the compensatory measures to enable the Secretariat to benefit from short-term consultancies have recently been cut from the 1985 budget.

Under the vigorous guidance of their respective Officers, the regional subsidiary bodies of the Commission are undertaking a wide and varied programme of activities, according to the specific interests of participating Member States. The IOC Programme Group for WESTPAC has been especially active in this respect, as has the IOC Sub-Commission for the Caribbean and Adjacent Regions. Delineation of planned activities in marine science and ocean services for the IOCINDIO region was accomplished by the IOC-Unesco Workshop on Regional Co-operation in Marine Science in the Central Indian Ocean and Adjacent Seas and Gulfs, held in Colombo, Sri Lanka, in July 1985. On the other hand, plans to convene Sessions of the Programme Groups for IOCEA and IOCINCWIO have been delayed, owing, to a certain extent, to organizational problems, but largely to uncertainty in funding.

- 44 Co-operation between the Commission and the Organizations Members of ICSPRO, as well as with other Organizations that collaborate in IOC programmes, has continued to be broadened and strengthened. Intersessional discussions were held during visits of the Secretary to the Headquarters of collaborating organizations, or of their staff to IOC. The development of co-operation with UNEP, especially in the marine pollution field, was advanced. Future collaboration with the UN on law-of-the-sea matters was discussed with the Special Representative of the Secretary-General for the Law of the Sea and with the Chairman of the UN Preparatory Commission for the International Sea-bed Authority and the Tribunal on the Law of the Sea. Increased co-operation between the IOC and IMO was discussed in London.
- 45 Likewise, in order to increase awareness of the IOC at the national level and to better understand the current situation in Member States, the Secretary carried out the following missions during which he had consultations at the governmental and technical levels: Indonesia, 21-24 April 1985; Malaysia, 25-29 April 1985; Philippines, 30 April- 4 May 1985; Thailand, 4-9 May 1985; USSR, 21-23 June 1985; People's Democratic Republic of Korea, 24 June - 2 July 1985; China, 2-6 July 1985; Sri Lanka, 8-16 July 1985; Turkey, 29 September - 5 October 1985; France, 8-11 October 1985; Bulgaria, 21 October - 2 November 1985; Sweden, 19-22 November 1985; Portugal, 16-19 December 1985; United Kingdom, 16 January 1986 and Malta, 8-13 February 1986.
- 46 Numerous Delegates expressed their appreciation of the quality and comprehensiveness of the Report and congratulated the Secretary on the work undertaken during the intersessional period, despite the financial difficulties with which the IOC had been faced. Several Delegates referred to the value of the Report as a vehicle for public information and suggested that it be more widely disseminated to increase awareness of the depth and breadth of the Commission's programme.
- 47 Several Delegates commented on particular aspects of the 1985 programme of work described in the Report, and expressed concern over the postponement and apparent slowdown of certain regional activities, especially regarding the Programme Group for the Central Eastern Atlantic (IOCEA). Others pointed to the invaluable catalytic action of the IOC as an intergovernmental marine scientific body which fostered not only international and regional co-operation, but also mobilization of bilateral programmes within the framework of the Commission's subsidiary bodies.
- 48 The Representative of UNEP, referring to relevant sections of the Secretary's Report, informed the Council that substantive progress had been made in reinforcing co-operation between IOC and UNEP, especially in the context of MARPOLMON and the UNEP Regional Seas Programme. Noting that the latter was governed by decisions taken through the regional grouping of States for each region, he pointed out that the major remaining discordance between the two programmes lies in the fact that the regions covered by such groups do not always coincide with those of the IOC regional subsidiary bodies. He also referred to the valuable work undertaken by the joint IOC-UNEP Group of Experts on Methods, Standards and Intercalibration (GEMSI), and to that of the Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), the major scientific advisory mechanism for the marine aspects of the Environment Programme.
- 49 The Secretary, responding to the observations made on his Report, stated that many of the difficulties encountered during 1985 in the implementation of the programme stemmed from the unstable financial and staff situation. Certain postponed activities, such as the First Session of IOCEA and the filling of a post for the IOC Senior Assistant Secretary for IOCARIBE, could, he hoped, be moved forward during 1986 should additional extrabudgetary resources be made available, including special contributions to the IOC Trust Fund by interested countries or groups of countries. Regarding the need for public information material on the IOC programme, he appealed to Member States to assist the Secretariat in its endeavours to produce updated and new brochures on all aspects of the Commission's work. Material was not lacking, but in-kind support from Member States in the form of editing and printing assistance would be most appreciated.
- 50 The Executive Council expressed its appreciation of the work of the Secretary and staff in such a wide range of activities and accepted the Report of the Secretary.

4. OCEAN SCIENCES

4.1 CLIMATIC CHANGES AND THE OCEAN

The Chairman of the Joint SCOR-IOC Committee on Climatic Changes and the Ocean (CCCO), Dr. Robert Stewart, informed the Executive Council of the state of development of the ocean components of the World Climate Research Programme and their implementation, by the IOC and jointly with WMO. Most items were considered at the Seventh Session of the Joint Committee (CCCO-VII).

Considerable progress has been made during the past year on a number of fronts within the oceanographic components of the WCRP. The TOGA Study officially commenced at the beginning of 1985, and some activities, notably in the Pacific, are proceeding reasonably well, and arrangements are being made for appropriate data centres. The International TOGA Project Office (ITPO) in the United States has been in full operation, although it has recently been depleted because of the resignation of its Director. The WOCE International Planning Office (WOCE-IPD) is now functioning in the United Kingdom, with a full-time Director, Dr. George Needler (Canada). Substantial advances have been made in the WOCE planning, and prospects of the presence, in the 1990s, of satellites capable of generating the data required for WOCE appear high with the planning for the TOPEX/POSEIDON mission advancing.

At a joint meeting of the Officers of the Joint SCOR-IOC Committee (CCCO) and the Joint Scientific Committee (JSC) for the WCRP, it was agreed that special efforts should be made with respect to the coupled atmosphere-ocean system. The question is now being examined to see whether these efforts should be conducted within TOGA and WOCE, or whether some separate structure is needed.

Technology now permits measurements of inorganic carbon in the ocean with sufficient precision to detect the change in the concentration associated with increased carbon dioxide in the atmosphere. The design of an appropriate cost-effective measurement programme is being examined.

In addition to the major international programmes of TOGA and WOCE, the CCCO has been kept informed of other programmes, notably SECTIONS, PATHS and POEM.

A thin but hard-working international staff is in place to deal with these programmes. Close collaboration is maintained among the Joint Planning Staff at WMO in Geneva, the CCCO Secretariat at IOC in Paris, the ITPO in Boulder, USA, and the WOCE-IPD, Wormley, U.K. These function with very small direct cost to the IOC.

As a matter of policy, the CCCO has attempted to use the existing intergovernmental systems for data handling - specifically IGOSS and IODE - to the fullest extent possible. However, it remains unclear whether these systems will be able to handle the extra load that would have to be placed on them. It is not evident that they have been given the resources to do so. IGOSS and IODE were put in place, probably prematurely, explicitly to handle the kind of observational data collecting, analysis and archival functions that are now required for the WCRP. However, only very few countries have committed the necessary resources and shown the necessary will to make these systems work.

The international scientific community has made great progress in developing relatively inexpensive observing techniques, such as experimental instrumentation that can be used on ships of opportunity, and coastal tide gauges, which can provide invaluable oceanographic information. However, the internal arrangements made on a national basis seem not able to attract even the comparatively limited funds required to operate these inexpensive systems. If the oceanographic components of the World Climate Research Programme cannot be made to operate in a truly international fashion using these inexpensive systems, the whole planning philosophy will have to be re-thought, perhaps at the expense of the particular concerns of smaller, and less wealthy, nations.

The Technical Secretary for Ocean Observing Systems, Dr. Albert Tolkachev, informed the Executive Council of the activities initiated by IOC in support of the WCRP.

The attention of the Secretary General of WMO was brought to Resolution XIII-4 which invited WMO to accept IOC's offer to co-sponsor the intergovernmental Informal Planning Meeting (IPM) on the Implementation of the WCRP, in 1986, and, with SCOR, the International Conference on the World Ocean Circulation Experiment (WOCE) in 1987-1988. It also invited WMO to define,

jointly with IOC, the arrangements and procedures for co-ordination of intergovernmental aspects of the implementation of TOGA and WOCE, and identify specific contact points in both organizations. The Secretary General of WMO concurred with these views, and designated the Director WCRP, Prof. P. Morel, to act on behalf of WMO as the contact point for communications with the IOC concerning intergovernmental matters arising in the implementation of oceanographic activities within the WCRP.

61 The First Informal Planning Meeting on the WCRP will be held in Geneva, 12-16 May 1986, under the co-sponsorship of WMO, ICSU and IOC, to review the First Implementation Plan for the WCRP and national plans for activities contributing to the implementation of the WCRP, including TOGA and WOCE. A special item will be devoted to a Joint WMO-IOC Intergovernmental Mechanism for Co-ordination and Monitoring of the Implementation of the WCRP.

62 Regarding the co-ordination of the implementation of TOGA, Member States of WMO and IOC have been informed of the establishment and major functions of the International TOGA Project Office and have been requested to designate one person to act as a common WMO-IOC Focal Point for matters concerning TOGA, or to designate one expert for meteorology/climatology and one expert for oceanography, to act jointly in that capacity.

63 Pursuant to Resolution XIII-4, discussions are being held between the UK, IOC and SCOR, on the arrangements for dealing with matters concerning the WOCE International Planning Office that require intergovernmental action through the IOC.

64 The WMO Executive Council, at its Thirty-seventh Session, noting the establishment of the IOC Programme Group on Ocean Processes and Climate, as a mechanism for intergovernmental co-ordination of the oceanographic aspects of the WCRP, decided to establish within WMO an Intergovernmental Panel on TOGA to act as a focal point for the implementation of TOGA. It decided also that the Panel should invite the co-operation of the IOC on those aspects of the implementation of oceanographic research activities in support of the WCRP requiring intergovernmental co-ordination.

65 The President of SCOR, Dr. Gerold Siedler, indicated that SCOR considered that the work of CCCO and its various Panels had been very successful and that SCOR fully intends to continue its support to CCCO. He attributed CCCO's success in part to the fact that first-rate scientists were involved at all levels of CCCO's activities. Professor Siedler emphasized two points: first, the results of the WCRP, and particularly those of WOCE, will only lead to major advances in our understanding of the climate system if the programme holds the interest of the best scientists for a period of many years. Secondly, the WCRP provides the means for combining the efforts of oceanographic groups in the developed and developing countries in a unique way which offers many opportunities for the effective transfer of knowledge. SCOR is aware of the governmental requirements and is participating in discussions with the IOC Secretary on the arrangements for the WOCE International Planning Office, as requested by the Assembly. SCOR's annual contribution to the activities of the Joint Committee include \$50 000 (project funds) and \$70 000 for the CCCO staff located in the IOC.

66 The Delegates of Brazil, the United Kingdom, Australia, the Federal Republic of Germany and Mexico informed the Executive Council of their national structures to co-ordinate national WOCE and/or TOGA activities and their preparations for the First IPM on the WCRP.

67 Some Delegates stressed the need for close co-operation to be maintained between the Joint SCOR-IOC Committee on Climatic Changes and the Ocean (CCCO), the IOC Programme Group on Ocean Processes and Climates, and the Working Committees for IGOSS and IODE.

68 The Delegate of Mexico reaffirmed the great importance for mankind that his country attaches to ocean climate research, which requires the participation of the international community (developing countries as well as industrialized ones) and which provides an excellent example of international co-operation. He stressed the need to improve co-ordination and communication between CCCO and the IOC Programme Group on Ocean Processes and Climate, including the possibility of joint meetings to facilitate an exchange of views. He pointed out that the lack of co-operation of many countries in the submission of data through the IGOSS and IODE systems is a major difficulty that cannot be overlooked.

The Delegate of the USSR informed the Executive Council of his country's support to WCRP, considering its implementation as being one of the most important priorities in the work of IOC. His country also takes a favourable view of the mutual work of WMO and IOC in the organization and implementation of ocean components of the WCRP. The Delegate stressed the view that the role of intergovernmental co-ordination of participating countries becomes more important at the planning stage, and in this sense the role of IOC, being one of the intergovernmental organizations most concerned, must be strengthened, particularly the IOC Programme Group on Ocean Processes and Climate. The Delegate also stressed the need for better co-ordination of the activities of CCCO and those of the Working Committee on IODE and the Working Committee for IGOSS, as well as other bodies of IOC, with a view to achieving a well balanced approach to the solution of climatic problems, from the point of view of the scientific community and from that of the IOC Member States. The Delegate stressed his view that, in this context, it is necessary that the IOC should be an equal partner to WMO in the Informal Planning Meeting on the WCRP in May 1986, and that the existing structure of the international mechanism of the WCRP ought to be simplified; this matter should be discussed at the Informal Planning Meeting in 1986 and at the Second Session of the IOC Programme Group on Ocean processes and Climate, in 1987. The Delegate also stated that national and multinational programmes directly connected with the aims of the WCRP should also be used to complement WCRP activities.

69

The Delegate of the USSR also informed the Executive Council that the Multi-national (USSR, German Democratic Republic, Poland, Bulgaria, Cuba) Programme "SECTIONS" had collected large amounts of data over the past five years from 160 cruises conducted by 40 vessels. Consideration is now being given to prolonging these programmes to the year 2000. Extensions would be made to the full width of the tropical Atlantic and the Indian Ocean as a direct contribution to TOGA.

70

The Delegate of the United Kingdom briefly described his country's support for the WOCE International Planning Office. He indicated that, in the view of the UK, the present exchange of letters between the UK Natural Environment Research Council (NERC) and CCCO for the operation of the Office were sufficient. The Delegate noted that the WOCE International Planning Office looks forward to the secondment of research scientists to the Office from Member States, as the programme develops. The UK gives great importance to data management and looks forward to supporting the development of effective data-management tools for WOCE and TOGA. The Delegate noted that much of the ocean data withheld from IGOSS and IODE were held by the military, and he suggested that agreement should be sought whereby data that have been given a security classification by the military be processed to an extent that hides the reason for which the data were originally classified, thus precluding the need for such classification. Such processed thermal structure data would still be of considerable value to the TOGA and WOCE projects. He also suggested that the feasibility of making a direct approach to NATO and the Warsaw Pact Organization concerning release of classified data might be considered.

71

The Delegate of China informed the Executive Council of his country's recent air/sea interaction cruise in support of TOGA and the forthcoming Kuroshio cruise which would contribute to WOCE.

72

The Delegate of Venezuela informed the Executive Council that his country has a permanent research station on Isla de Aves in the eastern Caribbean, and will install tide gauges on this island and elsewhere on the coast of Venezuela, as a contribution to GLOSS (see Agenda Item 5.2.1).

73

The Delegate of Japan informed the Executive Council of its Ocean Mixed Layer Experiment (OMLET) which is associated with Boundary Layer Studies, PATHS (Pacific Transport of Heat and Salt) which is related to WOCE and can be considered a northern extension of TOGA. The USA and Japan will hold a WOCE workshop in March 1986.

74

The Delegate of the USA informed the Executive Council that his country places very high priority on the WCRP, and he recalled some of its support, as follows: 28 sea-level stations; operation of the TOGA Mean-Sea-Level Center in Hawaii, the IGOSS Sea-level Pilot Project; funding the drifting-buoy co-ordinator (see Section 5.2.2 below); 9000 XBTs per year for 5 years; 10 Shipboard Environmental Data Acquisition Systems (SEAS) per year for 5 years; operation of the International TOGA Project Office; support to World

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Data Centre A (Oceanography); and provision of seconded staff for CCCO and IOC. The Delegate of the USA also wished to place on record his opinion that, whatever mechanisms were put into effect regarding the operation of the WOCE International Planning Office, they should be satisfactory to the UK and to the Joint SCOR-IOC Committee on Climatic Changes and the Ocean.

76 The Delegate of Brazil informed the Executive Council of his country's strong interest in TOGA and WOCE and his appreciation of the contribution of the IOC and SCOR to the implementation of the WCRP. This was shown by the fact that Brazil was forming a National Committee for the Co-ordination of Activities under TOGA and WOCE, within the Brazilian Interministerial Commission for Marine Resources, and that Brazil had hosted the Fourth Session of the CCCO Tropical Atlantic Ocean Climate Studies Panel, in Rio in September 1985. He also applauded the proposal in the WCRP Implementation Plan to blend the TOGA and WOCE data requirements in an Ocean Circulation Data Project.

77 The Delegate of Chile informed the Executive Council that his country is making every effort to support the WCRP through the collection of oceanographic and meteorological data. It collaborated with the USA in the installation and operation of an oceanographic/meteorological buoy 800 miles off the coast of Chile at a depth of 4000 m. His country also participates, with Colombia, Ecuador and Peru, in a regional study of El Nino phenomenon, under the co-ordination of the Comisión Permanente del Pacifico Sur (CPPS); this regional study (ERFEN) is part of the South Pacific observing system within the WCRP.

78 The Delegate of India, noting the major climatic events, such as monsoons and droughts in the Indian Ocean region, outlined several of his country's new capabilities to support the WCRP. These included a Tropical Meteorological Laboratory; the Research Vessel SAGAR KANYA and meteorological buoys. Eight cruises were conducted in the Indian Ocean in the 1984/85 period.

79 The Delegate of Canada informed the Executive Council that it had provided staff support for the WOCE International Planning Office (Dr. Needler, 4 years) and the International TOGA Project Office (Dr. Boston, 6 months). The Canadian Atlantic Storm Project (CASP) would provide valuable data, using 28 moorings for the study of air/sea interaction. A major first step of CASP is to determine efficient means for handling the data, a task that would certainly be of benefit to those planning the data management for the WCRP.

80 The Delegate of France informed the Executive Council that his country has agreed to operate the TOGA Sub-surface Data Centre, in Brest, which would collect all tropical ocean temperature and salinity data for a 10-year period starting 1 January 1985.

81 The Delegate of the Federal Republic of Germany informed the Executive Council that his country was concentrating on global circulation models in support of WOCE, observational programmes to determine the North Atlantic circulation and water-mass formation, and the study of the Southern Ocean. The Federal Republic of Germany will conduct ocean-wide sections and participate in the satellite (ERS-1) data evaluations.

82 The Delegate of Australia explained that his country is deeply committed to research programmes aligned with the scientific objectives of the TOGA Study within the WCRP. This interest extends to a number of government laboratories and universities. Co-ordination of Australia's interest is being undertaken by a WCRP Committee established by the Australian Academy of Science. Australia is most pleased with the excellent progress that is being made, and believes that the IOC should take an active role in the preparation for the Informal Planning Meeting scheduled for May in Geneva.

83 The Executive Council welcomed the development in the implementation of the oceanographic components of the World Climate Research Programme, and thanked the Chairman of CCCO and the Technical Secretary for Ocean Processes and Climate for their detailed information thereon.

84 The Executive Council accepted the Summary Report of the Seventh Session of the Joint SCOR-IOC Committee on Climatic Changes and the Ocean.

85 The Executive Council stressed the importance to the Commission of the first Joint WMO-IOC Informal Planning Meeting to be held at WMO Headquarters in May 1986. It particularly urged that the Meeting pay special attention to collaboration between IOC and WMO in the inter-governmental co-ordination of TOGA and WOCE, including the mechanism for such co-ordination.

The Executive Council expressed some concern over the present complex arrangements for planning, promoting and co-ordinating the various components of the WCRP, involving WMO, IOC, ICSU and SCOR. It believed that the Informal Planning Meeting should give attention to the simplification of such arrangements.

The Executive Council instructed the Secretary to place this subject on the Provisional Agenda of the Second Session of the IOC Programme Group for Ocean Processes and Climate, planned for March 1987.

The Executive Council urged the Member States of the Commission to increase their efforts to develop effective co-ordination between their meteorological and oceanographic communities, and to facilitate relevant research in maritime zones under national jurisdiction.

The Executive Council called on the Working Committees for IGOS and IOOE to increase their efforts to strengthen the two systems for which they are responsible to meet the recognized and emerging needs of the WCRP, bearing also in mind the need to increase availability of data, particularly for the tropics and the Southern Ocean.

It called on the Working Committee for TEMA to develop relevant TEMA actions in support of the WCRP.

The Executive Council adopted Resolution EC-XIX.1.

#### 4.2 OCEAN MAPPING

The Permanent Secretary for the General Bathymetric Chart of the Oceans (GEBCO), Mr. Desmond P.D. Scott, who is also the Chairman of the IOC Consultative Group on Ocean Mapping, introduced this Agenda Item. He drew the attention of the Council to the relevant Documents that require to be approved by the Council: (i) the Summary Report of the Tenth Session of the Guiding Committee for GEBCO which was held at the International Hydrographic Bureau (IHB), Monaco, from 23 to 25 April 1985; and (ii) the Summary Report of the First Session of the IOC Consultative Group on Ocean Mapping (CGOM) which was held at IHB, Monaco, on 26 April 1985. He summarized the important decisions and recommendations of the two above-mentioned meetings, as well as the intersessional activities of each of the ocean-mapping projects of the Commission.

Referring to the Recommendations of the above-mentioned meetings on which the Council should give guidance, Mr. Scott informed the Council that:

- (i) based on the report of a meeting of the GEBCO Sub-Committee on Digital Bathymetry which preceded the Tenth Session of the Guiding Committee for GEBCO, at the International Gravimetric Bureau (IGB), Toulouse, concern had been expressed by the Guiding Committee over the lack of clearly defined mechanisms and procedures for the international exchange and management of digital sounding data, and that the Guiding Committee had felt that the possibility of an IOC Member State operating an IHO World Data Centre for Digital Bathymetric Data on IHO's behalf should be investigated; the Guiding Committee had also welcomed the information that the US National Geological and Geophysical Data Centre (Boulder, Colorado, USA) is considering the possibility of acting as the RNODC for Sea Beam data.
- (ii) the CGOM, at its First Session, reviewed and accepted the tasks assigned to it in its Terms of Reference as set forth in Resolution EC-XVII.3. It placed on record, however, that, for the work of the Group to become effective, it would be useful to have a general directive from an IOC governing body to all editorial boards on the use they should make of the CGOM.

The Secretary IOC reminded the Council that preparations are underway to convene in 1986 the relevant meetings of experts for the purpose of launching regional bathymetric projects in the Caribbean, central eastern Atlantic and western Indian Ocean regions, subject to extra-budgetary funds becoming available.

The Representative of the IHO remarked that, when considering the role that the US National Geological and Geophysical Data Centre, in Boulder, Colorado, might play in any future arrangement for the international exchange and management of digital sounding data, IOC should note that digitization of bathymetric data and computer cartography have already been adopted by some

hydrographic offices, and there is a general trend to exchange bathymetric data in digitized form. Therefore, the IHO is exploring the feasibility of an agreement which would allow an IHO Member State to operate an IHO World Data Centre on IHO's behalf. He also requested the Permanent Secretary GEBCO to comment on possible restrictions that might be placed on some Sea Beam data to be provided by or through the Boulder Data Centre.

96 Referring to the preparation of a sixth edition of GEBCO, the Delegate of Greece felt that there was a need for a full-scale revision of the GEBCO rules. New techniques are now available and advantage should be taken of them. He also felt that there was need to determine who is responsible for doing what, particularly with regard to IOC and IHO, so as to avoid duplication of effort.

97 Expressing his appreciation to the IOC for its efforts in the promotion of international co-operation, the Delegate of the USSR reaffirmed his country's continued support to all IOC's activities in ocean mapping. He stressed that the decision to create the Joint IOC-IHO Guiding Committee for GEBCO was a decision in the right direction. He confirmed that the GAPA Atlases will be published in 1988, and that the Sixth Session of the Central Editorial Board for GAPA will be held in Leningrad, USSR, in May 1986. He further confirmed that the USSR has seconded a scientist to the IOC Secretariat, who will be responsible for the IOC activities in ocean mapping.

98 Referring to references in the Summary Report of the First Session of the CGOM to IOC regional ocean-mapping activities, including liaison with CCOP(SOPAC) in the western Pacific, the Delegate of Australia stated that, in this regard, it is worth noting that such regional activities do provide an opportunity for training. For example, under the CCOP(SOPAC) programme on ocean mapping, Australia has been able, in 1985, to support two trainees from the island state of Tuvalu to receive instruction in bathymetric map compilation and production.

99 The Delegate of Brazil stated his country's view was that it would be better and more cost-effective to upgrade the existing IHO system of bathymetric data exchange, in order to make it capable of handling digital data, and thus avoid duplication of activities. It also favours regionalization of this system, as has been done with other programmes of IOC. Because of the complexity and the importance of the subject, he proposed that it be studied by IOC and IHO under the auspices of the Joint IOC-IHO Guiding Committee for GEBCO, and that the results be submitted to the IOC Assembly and the Conference of IHO.

100 The Delegate of Indonesia informed the Council that his country has a national bathymetric project aimed at the production of bathymetric charts to the scale of 1:250 000, several of which have already been published and distributed to interested institutes. However, he regretted to have to point out that, although a number of countries have collected bathymetric data in Indonesian waters during the course of oceanographic observations, these countries, with the exception of the USA, have not made their data available to the Indonesian Hydrographic Institutes concerned. He appealed to these other countries to release these data so as to facilitate the progress of the Indonesian project.

101 The Delegate of the USA indicated that indeed an offer had been made to the IOC Secretariat to use the US National Geological and Geophysical Data Centre as a Responsible National Oceanographic Data Centre (RNODC) for Sea Beam Data. He noted, however, that questions have been raised by the Group of Experts on RNODCs which have not been resolved. He suggested that, since the Director of the National Geological and Geophysical Data Centre in Boulder will be attending upcoming GEBCO meetings (17-20 March 1986), to be held in Paris, further discussions could be held.

102 The Executive Council expressed its appreciation to Mr. Desmond P. D. Scott and to the IOC-IHO Guiding Committee for GEBCO, the Central Editorial Board for GAPA, and the IOC Consultative Group on Ocean Mapping, for the excellent work done during the intersessional period.



The Executive Council instructed the Secretary to bring to the attention of the Editorial Boards of the IOC regional ocean-mapping projects, the purpose for which the IOC Consultative Group on Ocean Mapping (CGOM) was established (Resolution EC-XVII.3), and to urge them to make use of it accordingly.

The Executive Council approved the Summary Reports of the Tenth Session of GEBCO and the First Session of the CGOM.

#### 4.3 MARINE POLLUTION RESEARCH AND MONITORING

The Chairman of the Working Committee for GIPME, Dr. Neil Andersen, informed the Executive Council that intensive work is being conducted in the GIPME Programme, in spite of limited resources and manpower available in the Secretariat. Priorities are clearly defined within the Programme on the basis of the scientific framework laid down in the Comprehensive Plan for GIPME. Co-operation with other organizations, UNEP, ICES, IMO and FAO, in particular, is extensive and increasing. Several publications under this Programme are appearing in the open reviewed scientific literature. Considerable progress has been made in organizing work to determine an open-ocean baseline for trace metals. Expressions of interest in participating in this project have been sought from laboratories; responses to date are very positive. Methodological studies of the analysis of polychlorinated biphenyls and petroleum have continued and if sufficient advances are made in the near future these parameters may be included in this project which is tentatively scheduled for 1987. It is not yet known what platforms will be available, although several IOC Member States, specifically the USSR, Poland, Canada and the Federal Republic of Germany, have indicated that such platforms might be available. The situation needs to be clarified as soon as possible if the suggested timetable is to be met.

Pursuant to Resolution XIII-5, a meeting was convened at NOAA in Washington, October 1985, to discuss the need for, and the availability and co-ordination of, standard reference material. A number of organizations actively engaged in the production and distribution of standard reference material participated in the meeting; they were: NBS, EPA, USGS and MMS, in the USA; the NRC of Canada; IAEA (ILMR) and ICES. The NIES of Japan and the European Community Bureau of References, in Belgium, sent material for display at the meeting and expressed a strong interest in the initiative. Strong interest was shown by all participants in developing and making available to the marine chemistry community, in general, and participants in the GIPME Programme and UNEP's Regional Seas Programme, in particular, standard reference materials, in many cases free of charge. A catalogue of Standard Reference Materials for Use in Marine Science has been prepared under the US NOAA's Status and Trends Programme and will be available about May 1986. Details are in the Summary Report of the GEMSI *ad hoc* Group on Standards and Reference Materials, especially in regard to a response to the instruction from the IOC Assembly, at its Thirteenth Session, to propose an international mechanism to co-ordinate the preparation and distribution of standard reference materials.

The GIPME Group of Experts on the Effects of Pollutants (GEEP), in response to Resolution XIII-5, has developed the details of a Practical Workshop on Biological Effects Measurements. A host institution, the University of Oslo, has been identified and plans are being made to convene the Workshop in August of 1986. Participants will be invited from a wide range of geographical regions. Additional resources, beyond what was available in the IOC regular budget, will be provided to IOC by Norway, the UK and the USA for this activity. Additionally, a member of GEEP travelled to Venezuela, at the kind invitation of the Venezuelan authorities, to explore the possibility of using a National Park Programme as an environmental laboratory for addressing the problem of defining the scientific basis for identifying vulnerable or particularly sensitive areas.

The work of GEEP is becoming an increasingly important aspect of the implementation of the Comprehensive Plan for GIPME. The Working Committee for GIPME is therefore requesting that the present limited number of experts permitted to participate in any one session of GEEP be increased to permit this body to meet its responsibilities in the Programme.

- 109 The Sixth Session of the Working Committee for GIPME is to be convened from 25 September to 1 October 1986 in Paris. A three-day Symposium on State and Trends in the Development of the GIPME Programme is planned just prior to the Session. The Symposium will have three themes: biological effects measurements and their feasibility in monitoring systems; development of methods, reference materials and analytical capabilities for MARPOLMON; and the state of implementation on a regional basis in relation to needs. Suggestions and contributions to the Symposium are solicited.
- 110 Following a Symposium at the University of Puerto Rico under the joint sponsorship of IOC, UNEP, and the USA, the Steering Committee for the IOCARIBE Marine Pollution Programme (CARIPOL) concluded that there was a need for an overall assessment of CARIPOL, particularly regarding developments that have taken place since the IOC-FAO Workshop on Marine Pollution in the Caribbean and Adjacent Regions (Trinidad and Tobago, 1976). The Steering Committee recommended the convening of such a Workshop, under the auspices of the Sub-Commission for IOCARIBE, in 1987 or 1988, and requested the Executive Council to provide guidance on this matter.
- 111 The WESTPAC Task Team on Marine Pollution Research and Monitoring met in 1985 to formulate plans for future activities. In the WESTPAC Region, an intercalibration exercise for trace metals in biota is underway, as well as the final preparation for two Workshops, one on river inputs of pollutants, to be held in Thailand, April-May 1986, and the other, with the co-sponsorship of UNEP, COBSEA and SPREP, a Workshop on the Analysis of Organochlorines, scheduled for June-July 1986 in Papua, New Guinea. This later Workshop builds on the previous intercalibrations and training activities aimed at establishing a "Mussel-watch" component in the Pacific.
- 112 The major issues before the Council were:
- the establishment of an international co-ordinating body for the preparation and distribution of standard and reference materials for marine pollution monitoring;
  - the increase of the number of experts permissible for any one Session of GEEP from a maximum of 5 to a maximum of 10, and the co-sponsorship of GEEP by IMO and ICES;
  - the implementation of an open-ocean baseline study in 1987;
  - the convening of an IOCARIBE Workshop on the Assessment of CARIPOL, and the formation of a Task Team on Marine Pollution Research and Monitoring in the Caribbean.
- 113 The Observer from ICES expressed support for the aims of the Working Committee for GIPME and invited the Commission to engage in consultations with the aim of strengthening the interaction between his organization and IOC.
- 114 The Delegates of Japan and the USSR offered services in the form of Responsible National Oceanographic Data Centres for marine pollution monitoring data.
- 115 The Delegate of the USA announced support for the Practical Workshop on Biological Effects Measurements in the amount of US \$ 50 000, emphasizing that the USA continues to regard the Marine Pollution Research and Monitoring Programme as a priority activity of the IOC.
- 116 Several Delegates emphasized the need for strong support to on-going regional activities as well as for further development of regional activities in Africa and in the Mediterranean.
- 117 The Executive Council expressed its satisfaction with the progress made and the strong momentum of the Marine Pollution Research and Monitoring Programme.
- 118 The Executive Council endorsed the idea of convening a Practical Workshop on Biological Effects Measurements, but stressed the need for the organizers to involve experts in this field from several different ocean regions.

The Executive Council endorsed the need for an international co-ordinating body for the preparation and distribution of standard reference materials for marine pollution monitoring, stressing that this body should be distinct from the existing subsidiary bodies of the Working Committee for GIPME, should report to the Working Committee and should advise whether the proposed title (Resolution EC-XIX.2) would give rise to any confusion with the present subsidiary bodies of the Working Committee.

119



The Executive Council invited the Sub-Commission for IOCARIBE to consider the convening of a Workshop on the Review and Further Development and Implementation of the Marine Pollution Research and Monitoring Programme in the Caribbean.

120



The Executive Council approved the implementation of an open-ocean baseline study in 1987, if the Secretary could arrange the necessary financial support.

121



The Executive Council noted that the considerable progress in GIPME had been achieved in spite of the reduction of the number of professionals in the IOC's Marine Pollution Unit from four (in 1984) to one now. It instructed the Secretary to pursue his efforts to arrange for an increase in the staff of this Unit.

122



The Executive Council appealed to Member States to make every effort to maintain the momentum of this leading IOC programme and to consider seconding staff to serve in the Marine Pollution Unit.

123



The Executive Council adopted Resolutions EC-XIX.2 and EC-XIX.3.

124



#### 4.4 APPLICATION OF THE INTERNATIONAL SYSTEM OF UNITS IN OCEANOGRAPHY

The Representative of the Division of Marine Sciences, Dr. Selim Morcos, gave a brief history of the efforts made over the last eight years by the IAPSO Working Group on Symbols, Units and Nomenclature (SUN), since its constitution, under the Chairmanship of Prof. Maurice Menache, by the XVI General Assembly of IAPSO in Grenoble, France, in August 1975, until the adoption of the SUN Report at the XVIII General Assembly of IAPSO in Hamburg, Federal Republic of Germany, in August 1983.

125

\* He referred to two related major developments in oceanography: the Practical Salinity Scale (1978) and the International Equation of State of Seawater (1980) by the Unesco-ICES-SCOR-IAPSO Joint Panel on Oceanographic Tables and Standards (JPOTS). These two developments were considered and endorsed by the IOC Executive Council, at its Fourteenth Session, and at the Twelfth Session of the IOC Assembly in November 1982. The adoption of these two major international standards led to the redrafting of parts of the SUN Report before its adoption in 1983.

126

The Representative of the Division of Marine Sciences paid tribute to Prof. Maurice Menache who had worked for eight years as a scientist committed to the introduction of the SI units into oceanography. After Prof. Menache's retirement, IAPSO asked Mr. Georges Girard to undertake the work of finalizing the document and preparing it for publication by Unesco.

127

Mr. Girard was invited to introduce the SUN Report which is now published as Unesco Technical Papers in Marine Science No. 45/IAPSO Publication Scientifique No. 32. He explained the contents of the report, and its importance to the application of the SI units in oceanography. He informed the Executive Council of IAPSO Resolution 6 - 1983, and requested the IOC Executive Council to endorse the SUN Report for universal use by its Member States and subsidiary bodies. He concluded by expressing his appreciation of the co-operation he had received from the Unesco Division of Marine Sciences during the period of preparation of the final version of the report for publication.

128

The Chairman of the Joint SCOR-IOC Committee on Climatic Changes and the Ocean stressed the importance of standardizing physical units in all branches of oceanography and welcomed the publication of the Report.

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130 The Executive Secretary of SCOR supported the views of the Chairman of  
CCCC.

131 The Chairman of the IOC Working Committee on IODE informed the Council  
that all IODE data centres were instructed in 1982 to use the new SI units.  
Replies of several oceanographic data centres showed that they follow the  
instructions.

132 The Delegate of the USSR (Dr. Oleg Mamayev, who is also a member of  
JPOTS) likewise welcomed the SUN Report, and informed the Executive Council  
that his country had invited Unesco to hold the First Meeting of the Joint  
Editorial Panel on the Oceanographic Manual in Moscow, in June 1986.

133 The Executive Council expressed its appreciation to IAPSO for the  
excellent work it had done in producing the SUN Report, and paid tribute to  
Prof. Maurice Menache for his leadership of the IAPSO Working Group on  
Symbols, Units and Nomenclature. It also thanked the Unesco Division of Marine  
Sciences for its long-term support to the IAPSO Working Group and Dr. Girard  
for his assistance in bringing this endeavour to a successful conclusion.

134 The Executive Council urged the Member States to call upon the  
relevant national institutions, particularly academic and governmental marine  
research and technical laboratories, individual marine scientists, editors and  
publishers of scientific and technical journals in the field of oceanography,  
to use and apply the International System of Units in the manner recommended in  
the SUN Report.

135 The Executive Council adopted Resolution EC-XIX.4.

## 5. OCEAN SERVICES

### 5.1 INTEGRATED GLOBAL OCEAN SERVICES SYSTEM

136 The Chairman of the Joint IOC-WMO Working Committee for the Integrated  
Global Ocean Services System (IGOSS), Dr. Y. Tourre, introduced this item.  
He reported that the Committee had held its Fourth Session (IGOSS-IV) at the  
WMO Headquarters in Geneva from 11 to 20 November 1985. The Executive Summary  
of the Session, which was before the Executive Council, described the main  
outcomes of the Session and contained the nine Resolutions and six  
Recommendations adopted thereat.

137 A dominant theme of the Session was the search for ways and means to  
accelerate the implementation of the System in order to meet users'  
requirements, including those expressed by the World Climate Programme (WCP)  
and, in particular, the World Climate Research Programme (WCRP).

138 The Joint Working Committee felt that the conception and principles of  
the General Plan and Implementation Programme of IGOSS 1982-1985 were still  
valid and therefore decided to recommend to its governing bodies that this plan  
be extended to cover the next intersessional period while the next General Plan  
and Implementation Programme was being prepared. The new plan is expected to  
take into account developments during the acceleration phase for IGOSS and the  
actions being taken by the Joint Working Committee.

139 The Joint Working Committee recognized that the IGOSS system was  
entering a new phase in which operational ocean data will be more generally  
accepted and used. There would be a greater emphasis in the future on the  
IGOSS Data Processing and Services System (IDPSS) and the dissemination of  
operational data products to users. The Joint Working Committee was pleased to  
see the publication of regular monthly reports by the Specialized Oceanographic  
Centre (SOC) for the IGOSS Sea Level Pilot Project (ISLPP) and welcomed  
planned reports from other centres distributing data analyses and data  
information products. One of the tasks undertaken by the Joint Working  
Committee is to develop these products further.

140 Data quality has been steadily improving over the past five years as  
has the standardization of formats and codes. The work of the IGOSS Group of  
Experts on Operations and Technical Applications will continue in this regard.

141 The Ship-of-opportunity Programme (SOP) has presently reached a  
plateau and the further development of the system will require new resources.  
These resources may take the form of release of data presently being collected  
but not being made available for international exchange through IGOSS. They  
may also take the form of expansion of present national research programmes.

It is hoped that the amount of data entering the IGOSS system will increase with the initiation of experiments, such as TOGA and WOCE, under the WCRP.

\* The collection of sea-level data in the Pacific in conjunction with the IGOSS Sea Level Pilot Project (ISLPP) and the publication of the monthly sea-level-anomaly maps has been very well received. The Pilot Project is presently expanding into the Indian Ocean and the feasibility of a project in the North Atlantic Ocean is being investigated.

The development of automated data acquisition systems reported to previous sessions of the Executive Council has fulfilled the promise of usefulness to IGOSS, and such systems are being implemented by many countries. Other technological advances in sensor development and computer techniques are also improving the capability of IGOSS data-collection and data-handling systems.

Efforts to increase participation in IGOSS are expected to become more successful as the quality and quantity of data improve and the benefit from the analysis of these data becomes more obvious. The Joint Working Committee is undertaking several initiatives during the intersessional period aimed at recruiting all available data sources into IGOSS.

Finally, with a view to streamlining the Joint Working Committee, the Task Team of Governmental Experts on the Further Development of the IGOSS Observing System (IOS) has been dissolved and the IGOSS Group of Experts on Scientific Matters has been reformulated with more specific duties.

The Executive Council expressed its thanks and appreciation to the Chairman of the Joint Working Committee for IGOSS, Dr. Y. Tourre and to the past Chairman, Mr. G. Holland.

Several Delegates informed the Executive Council of their national plans with regard to IGOSS and expressed particular interest in different parts of the programme. Their main concern was the recognition that the amount of data exchanged through IGOSS remained at a more or less constant level despite the efforts deployed and expressions of willingness voiced to increase this amount.

The Delegate of Mexico requested information on the action taken by the Joint Working Committee for IGOSS with respect to the last paragraph of Resolution XIII-6, which called on the Joint Working Committee to study in depth the reasons hampering participation by developing countries in the system; to suggest measures to correct this situation, particularly through TEMA actions, and to report to the Nineteenth Session of the Executive Council.

The Secretary explained that steps aimed at involving developing countries in IGOSS had been taken, particularly through training activities and missions to selected countries to evaluate, jointly with local officers and experts concerned, needs and possible means to attenuate existing limitations.

The Delegate of Mexico, while recognizing the value of the work of the Secretariat, expressed his dissatisfaction with the fact that the Executive Summary of the Joint Working Committee's Fourth Session made no reference at all to the above-mentioned Resolution, and requested that the matter be given the required attention at the next Session of the Joint Working Committee for IGOSS which should report to the Assembly or the Executive Council.

The Executive Council welcomed the accomplishments of the Joint Working Committee and accepted the conclusions it has reached, particularly as reflected in the Resolutions and Recommendations adopted at the Joint Working Committee's Fourth Session.

The Executive Council strongly encouraged the implementation of the system at the regional level, with the support and active participation of IOC regional subsidiary bodies, on the grounds that, for most of the countries of the world, funds were in general more easily mobilized when used within a regional framework. It considered that specific missions to selected countries

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should be organized to seek the willingness of these countries to participate effectively in the system and/or to determine the reasons hampering their participation. Such missions might in part answer the question raised by the Assembly at its Thirteenth Session, put to the Joint Working Committee and not yet answered.

153        The Executive Council expressed its particular appreciation of the development of the ISLPP in the Pacific, which appeared to be a truly operational project for the study of the ocean and its relation to climate. It encouraged efforts to expand this pilot project to other ocean basins, while recognizing that the situation with regard to sea-level data availability was not as good in other oceanic regions as in the Pacific Ocean, thanks largely to Prof. K. Wyrtki and his team at the University of Hawaii.

154        The Executive Council supported the efforts undertaken to develop further a ship-of-opportunity programme. It considered that such an undertaking needs long-standing efforts by the Member States. It placed particular emphasis on the use of Shipboard Environmental Data Acquisition Systems (SEAS) which, through the total or partial automation of data gathering and transmission, had proved to be most reliable and efficient. Such a technological development would help considerably to solve the problem of the unchanging amount of data collected through IGOSS, together with the other measures suggested by the Joint Working Committee. The Executive Council agreed that a careful search for data already gathered by scientific cruises or by navies on the high seas or within areas under national jurisdiction and not yet transmitted through IGOSS channels, appeared to be most promising.

155        The Executive Council considered the Sub-surface Thermal Structure Pilot Project as a good contribution to the WCRP-Oceanography and an excellent means of demonstrating IGOSS capabilities.

156        The Executive Council stressed the need for Member States to volunteer to establish more Specialized Oceanographic Centres. It considered essential that the Guide to SOCs be prepared and forwarded as soon as possible, in order that tentative volunteers might know exactly what they were expected to do.

157        The Executive Council considered it necessary that a closer relationship be established between the somewhat different communities that deal with IGOSS, IODE and climate research. Experts in these diverse fields should work together to solve the numerous problems already identified through the preceding assessment exercises, in particular the Meeting of Experts on IGOSS-IODE Data Flow (Tokyo, November 1984).

158        The Executive Council considered that IGOSS requires specific training efforts. Training and education generally provided in the field of marine sciences and related services were necessary as a background, but did not allow the trainees to become efficient enough in such a specialized field.

159        The Executive Council urged Member States to consider increasing their participation in IGOSS and to study, if necessary with the assistance of experts, ways and means of solving problems encountered in such an attempt. It stressed that no progress in IGOSS implementation could be expected if Member States themselves did not take the initiative in this undertaking, and that such progress might prove critical in dealing with natural hazards.

160        The Executive Council adopted Resolution EC-XIX.5.

## 5.2 OCEAN OBSERVING SYSTEMS

### 5.2.1 Global Sea-Level Observing System

161        The Chairman of the Task Team of Experts on the Global Sea-Level Observing System (GLOSS), Dr. David Pugh, presented a Draft GLOSS Implementation Plan and a Progress Report on, and Proposed Actions for, the Draft Implementation Plan for the Global Sea-Level Observing System, both of which were before the Executive Council.

162        The Draft GLOSS Implementation Plan was prepared by an IOC Task Team of Experts in Paris from 6 to 8 December 1985, pursuant to Resolution XIII-7 of the Thirteenth Session of the IOC Assembly. This Plan includes the description of objectives and tasks of GLOSS, the proposed GLOSS network, sea-level-data management and product preparation; and participation of Member States in GLOSS.

The Global Sea-Level Observing System is based on an international network of sea-level measuring stations, co-ordinated by IOC. It provides high-quality standardized data from which valuable sea-level data products are prepared for international and regional research programmes as well as for national applications. The objective is to have, within five years, an operational global network of permanent sea-level stations reporting monthly mean averages to the Permanent Service for Mean Sea Level (PSMSL). This network will support other regional and scientific programmes such as the Study of the Tropical Oceans and Global Atmosphere (TOGA) and the World Ocean Circulation Experiment (WOCE). As programmes are developed and implemented, certain GLOSS Stations will be up-graded to provide near-real-time transmission of data to be used by national and regional centres for analysis and prediction of oceanographic and atmospheric phenomena.

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The Technical Secretary for Ocean Observing Systems, Dr. A. Tolkachev, then provided information on major GLOSS developments since the approval of GLOSS by the Assembly, at its Thirteenth Session. Twenty-six Member States have confirmed their participation in GLOSS and have provided requested information on their sea-level stations; eighteen countries have expressed their needs for assistance (tide-gauges spare-parts, installation and training) to enable them to participate actively in the GLOSS. France, India, Portugal, China, Sweden, UK and USA have expressed a willingness to assist other countries in setting up national tide-gauges.

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The Technical Secretary reminded the Executive Council that more than twenty countries continue to participate in the IGOSS Sea-Level Pilot Project in the Pacific (ISLPP) by providing data to a Specialized Oceanographic Centre in Honolulu, USA. Data from more than fifty Pacific sea-level stations are used for the preparation and wide distribution of monthly mean-sea-level anomaly charts. The Working Committee for IGOSS, at its Fourth Session, proposed the initiation of a similar ISLPP in the North Atlantic.

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The SCOR-IOC Committee on Climatic Changes and the Ocean (CCCCO) at its Seventh Session (Paris, January 1986), expressed concern over the low level of participation of Member States in the development of GLOSS. The Committee was also concerned about the decrease of the IOC capability to promote GLOSS because of its present financial difficulties. On the recommendation of the CCCC, the priorities for GLOSS stations required for TOGA have been specified by the Scientific Steering Group (SSG) for TOGA.

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The Representative of IHO, Adm. Amara Affonso, provided some information on IHO activities relevant to sea-level observations. He said that marine scientists should know that many IHO Member States, through their Hydrographic Offices, are responsible for the collection of tidal data in their countries. Very soon, all IHO Member States will be requested to co-operate in the GLOSS project. In addition, he noted that the IHO Tide Data Bank, which is operated by the Canadian Hydrographic Service on IHO's behalf, will presumably be available in support of the GLOSS activities.

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Eight Delegates expressed their support for the development and implementation of GLOSS and provided information on their participation in, and contribution to, GLOSS. One stressed the importance of the preparation of sea-level products within the GLOSS, as demonstrated within the ISLPP project, and of a strong TEMA component of GLOSS as the basis for its successful development.

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Two Delegates pointed out the need for attention to be given to fixing the formal responsibilities, within the IOC, for co-ordination and monitoring of GLOSS implementation. The Delegate of the USA thought that this should be the Working Committee for IGOSS. He also stressed the importance of performing a system analysis to determine the optimum locations for the tide-gauges; this, he believed, needs to be discussed in the Plan, as does the need to co-ordinate closely with the geodetic community to ensure that the gauges will be geodetically correlated.

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The Delegate of Japan suggested that the Programme Group for WESTPAC should consider the implementation of the regional component of GLOSS and the importance of timely exchange of sea-level data.

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The Delegate of Australia expressed his country's support for GLOSS. He pointed out that the establishment of a network of permanent stations and standardized observations provide an impetus at the national and international levels. He noted that TOGA and WOCE provide an immediate driving force for the establishment of GLOSS, even though GLOSS will persist long after TOGA and WOCE have been completed. Because GLOSS is not only about real-time or

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near-real-time data transmission required for TOGA and WOCE, participation in GLOSS should be more readily acceptable and available to developing countries which do not yet possess the facilities to produce or use near-real-time data or products.

172 Some Delegates felt that the WOCE requirements for sea-level data should be identified, and welcomed the information that this matter will be discussed at the next meeting of the Scientific Steering Group for WOCE (Wormley, UK, April 1986).

173 Many Delegates supported close co-ordination between IOC and IHO in GLOSS development.

174 The Executive Council thanked the Task Team on GLOSS for the preparation of the GLOSS Implementation Plan.

175 The Executive Council instructed the Secretary of IOC to circulate the GLOSS Plan in its present form to all Member States of IOC requesting them to submit comments to the Secretary and to pledge contributions called for by the Plan. Upon receipt of such pledges from Member States, this Plan should be published in the IOC Technical Series.

176 The Executive Council urged Member States to consider this Plan from the point of view of its implementation and provide the Secretary, without delay, information on national commitments and participation.

177 The Executive Council instructed the Secretary to study the possibility of establishing an international mechanism for review and monitoring of GLOSS implementation and prepare proposals on this matter for consideration by the Programme Group on Ocean Processes and Climate, at its Second Session, and for subsequent submission to the Fourteenth Session of the Assembly.

178 The Executive Council adopted Resolution EC-XIX.6 .

#### 5.2.2 Drifting Buoys

179 The IOC Assistant Secretary, Mr. Y. Treglos, recalled that, at its Thirteenth Session, the Assembly was presented with a proposal to establish, in principle, jointly with WMO, an international consortium for the co-operative implementation of drifting-buoy programmes, and was informed that, at the kind invitation of WMO, the WMO and IOC Secretariats were organizing a Joint WMO-IOC Preparatory Meeting for the Establishment of a Drifting-Buoy Consortium (Geneva, 15-19 April 1985). After an in-depth discussion, the Assembly concluded that it needed more information to be able to take a definite decision on the proposal and that the Preparatory Meeting would provide a forum for clarification of various problems, such as the concept of "consortium", its membership, tasks and functions, its relationship with IOC and WMO and their Secretariats, etc. The Secretary was therefore instructed to arrange for the Representative of IOC at the Preparatory Meeting to explain the position of the Commission on this matter and submit his findings to the next Session of the Executive Council.

180 The Joint WMO-IOC Preparatory Meeting reviewed relevant aspects of past, on-going and planned international drifting-buoy programmes, and listed all aspects of drifting-buoy programmes that might be amenable to co-operative actions, keeping in mind that one of its tasks was to select those aspects of drifting-buoy activities that were most likely to require being taken care of by a workable international co-operative group.

181 In addressing the question of what form a proposed international co-ordinating mechanism should take, the Preparatory Meeting was faced with a series of partially conflicting requirements and issues:

- (1) whenever international co-operation in the field of drifting buoys has been successfully achieved, it has resulted in an increase in the data available to the major programmes of IOC and WMO, and in generating buoy deployment which would have been impossible without co-operation;



- (ii) however, some activities of the major programmes of IOC and WMO, as many national activities, are organized on programme lines and already have an element of international co-operation within them;
- (iii) opportunities are nevertheless being lost to optimize the availability and use of existing buoy data and to exploit the existing potential to generate additional data from buoys being deployed and to deploy more buoys;
- (iv) if it is therefore essential to generate a form of international and interdisciplinary co-operation in the field of drifting-buoy activities, it is clear that a centralized, executive mechanism charged with implementing drifting-buoy programmes would be costly, probably unworkable and unable to exploit the potential referred to in (iii) above;
- (v) the body to be created, while initially of minimal size, complexity and cost, should be able to evolve and to accommodate the foreseeable growth in drifting-buoy activities;
- (vi) such a body should allow Member States of IOC and Members of WMO to deal with overall co-ordination problems, and provide parentage for future groups needed for the co-operative implementation of drifting-buoy programmes at the regional level;
- (vii) whenever successful international co-ordination in this field has been achieved, the co-ordinating mechanism responsible has had the services of a dedicated Technical Co-ordinator to ensure that on-going intersessional tasks are prosecuted vigorously and to act as a well publicized and active focal point for activities that need to be linked between national and international programmes.

The Joint WMO-IOC Preparatory Meeting concluded that, to meet the foregoing needs, a Drifting-Buoy Co-operation Panel (DBCP) should be established, with a full-time Technical Co-ordinator to serve its purposes. It felt that the name "consortium" had, for many countries and organizations, formal connotations which were not appropriate to the type of co-operative activities proposed.

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At the Joint WMO-IOC Preparatory Meeting, out of thirteen countries present, nine gave immediate indication of their interest in participating in the Panel; one, although reserving its position, expressed its intention to continue contributing to drifting-buoy activities. The Preparatory Meeting requested the WMO and IOC Secretariats to bring this fact to the attention of their governing bodies.

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At its Thirty-seventh Session (Geneva, 5-21 June 1985), the WMO Executive Council accepted the recommendation of the Joint Preparatory Meeting to establish a Drifting-Buoy Co-operation Panel and embodied its substance in Resolution 10 (EC-XXXVII). It requested the Secretary-General to arrange for the early establishment of the Panel.

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The WMO Executive Council, recalling that the Thirteenth Session of the IOC Assembly had re-affirmed its belief in the value of drifting-buoy data to many operational and research programmes and had restated its desire for an effective co-operative programme with WMO, hoped that its decision to establish a Drifting-Buoy Co-operation Panel would be acceptable to IOC and that a positive decision would be taken by IOC with a view to establishing the panel jointly with WMO.

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On these grounds, the Chairman of IOC, having studied the Report of the Preparatory Meeting and in order to speed up procedures, approved the proposals put forward by the Preparatory Meeting, and decided provisionally to associate the Commission with the preparation for, and organization of, the First Session of the Panel.

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The Drifting-Buoy Co-operation Panel, at its First Session (Toulouse, France, 14-16 October 1985), mainly considered its own operating procedures, the establishment of a Technical Co-ordinator's position, and its future action plan. Regarding the Technical Co-ordinator's position, the Panel agreed that, subject to the negotiation of a suitable contract, the offer of Service Argos to provide accommodation and local logistic support for the Technical

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Co-ordinator should be accepted. It was also agreed that the most appropriate arrangement would be for the funds provided for the Technical Co-ordinator to be administered by the Intergovernmental Oceanographic Commission on behalf of WMO and IOC. To achieve this, funds should be deposited in the IOC Trust Fund, earmarked for that project and accounted for separately. Subject to the agreement of the IOC Executive Council, the Secretary-General of WMO and the Secretary of IOC were requested to: (i) advise Member States as to how to deposit the funds in such a way that they were properly earmarked; (ii) establish a contract with the Technical Co-ordinator selected by the Panel, whereby he is employed as a Consultant based in Toulouse; (iii) set up a procedure whereby costs for travel approved by the Panel Chairman can be reimbursed, using the earmarked funds; (iv) negotiate a contract with Service Argos to provide the secretarial, communications and computer support required by the Technical Co-ordinator, subject to the assistance and agreement of the Panel Chairman.

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With regard to its operating procedures, the Panel concluded, inter alia, the following:

- (i) To the extent that the Panel is a formally established body of the WMO and IOC, Panel members will be the representatives of Members of WMO or Member States of IOC that have expressed a willingness to participate in Panel activities;
- (ii) The Panel will meet annually. Representatives of any institution or programme actively involved in the use, development or deployment of drifting-buoys, or which specifically require drifting-buoy data, may participate in the meetings;
- (iii) The Panel will elect a Chairman from among Panel members, to carry out the work of the panel between sessions. The Chairman will prepare reports for the WMO and IOC as required, and act as a focal point for the Panel;
- (iv) The Panel requires support from the Secretariats of WMO and IOC in the dissemination of invitations to Panel meetings and the preparation of documents and reports related to such meetings;
- (v) The Terms of Reference for the Panel are those given in WMO Executive Council Resolution 10 (EC-XXXVII). The Panel also adopts as Terms of Reference for its Technical Co-ordinator those suggested by the WMO Executive Council in Resolution 10 (EC-XXXVII) pending endorsement by the IOC Executive Council.

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In order to move ahead with the actual implementation of activities of the Drifting Buoy Co-operation Panel, the Secretary had to take practical steps, in particular with regard to the position of Technical Co-ordinator for the Drifting Buoy Co-operative Panel. He therefore requested National Focal Points for Drifting Buoy Programmes to seek possible nominations for the Technical Co-ordinator's position, and informed the Secretary-General of WMO of the procedures for deposition of funds earmarked for the Drifting Buoy Co-operation Panel in the IOC Trust Fund, so that this information could be forwarded to National Meteorological Services that had already committed themselves to provide funds for this purpose.

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The Delegate of Canada expressed his concern that such action went much ahead of the Assembly's instructions and might have significant financial implications for the Commission.

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The Assistant Secretary informed the Executive Council that, strictly speaking, the Commission incurred no financial obligation in this undertaking, inasmuch as any contribution to the work of the Drifting Buoy Co-operation Panel and its Technical Co-ordinator will be made by Member States on a voluntary basis.

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The Delegate of Australia expressed his general acceptance of the proposals put forward and announced that his country was contributing to the funding of the position of Technical Co-ordinator. He endorsed proposals for continuing meteorological and oceanographic drifting-buoy activities, but pointed out that there may be some degree of incompatibility between meteorological and oceanographic uses of drifting buoys.

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The Delegates of Canada, France and the USA also announced their countries' support to the Technical Co-ordinator position.

The Delegates of Brazil and Greece, while strongly supporting the proposed mechanism, expressed concern that the important question of the legal status of drifting buoys, and more generally of Ocean Data Acquisition Systems (ODAS), was still pending since the Unesco-IMO Preparatory Conference on the Legal Status of ODAS, in 1972. They felt that it was widely recognized that the use of drifting buoys has substantially increased since that time, so that the findings of a Conference in 1972 cannot be regarded as being up to date. Consequently, they proposed that the legal aspects of the question be examined.

Regarding the proposal of the Brazilian and Greek Delegates, the Executive Council, recognizing that the legal status of ODAS, including the legal aspects of drifting-buoy operation, had not been reviewed since 1972, instructed the Secretary to explore the question with IMO and WMO and to submit his findings to the IOC Assembly at its Fourteenth Session.

The Executive Council expressed its appreciation of the action taken pursuant to the Assembly's decision on international co-ordination of drifting buoy activities, and endorsed the action taken by the Chairman to ensure that WMO could be given a timely response.

The Executive Council adopted Resolution EC-XIX.7.

### 5.3 INTERNATIONAL OCEANOGRAPHIC DATA EXCHANGE AND MARINE INFORMATION MANAGEMENT

The Chairman of the Working Committee on International Oceanographic Data Exchange, Mr. Dieter Kohnke, reported on some of the developments in the IODE system. Forty Member States have now established National Oceanographic Data Centres (NODC) or Designated National Agencies (DNA). Although the volume of data assimilated in the World Data Centres A and B represents about 800 000 hydrographic stations and 350 000 BT/XBT observations, the fact remains that a considerable amount of data has been withheld from international exchange. Efforts have been made to improve this situation, but more will have to be done. He mentioned the survey made among NODCs and DNAs on the availability of data that have not been submitted to the WDCs and have not been exchanged through the IODE system; the revision of DNP/NOP submission procedures, and the monitoring of data flow are other examples of actions that will be taken. Already, special attention has been paid to the improvement of the RNODC system.

Two centres have been newly accredited as Responsible National Oceanographic Data Centres (RNODCs). The Marine Information and Advisory Service (MIAS) of the United Kingdom has accepted the function of an RNODC for data collected in the Joint Air-Sea Interaction Project (JASIN). The Marine Environmental Data Services (MEDS) in Canada is responsible for the processing and archiving of drifting-buoy data. The World Data Centre A (Marine Geology and Geophysics) is considering the possibility of acting as the RNODC for Sea Beam Data.

Japan and the USSR responded favourably to a request from the Secretary to provide an RNODC-MARPOLMON.

Joint IGOSS-IODE meetings were arranged to improve the flow of data from IGOSS Centres to RNODCs-IGOSS (Tokyo, 1984) and for climatic oceanographic data management (Beijing, 1985). IODE and IGOSS Working Committees are represented in the CCCO Group on Oceanographic Data Management Aspects of the WCRP.

Mechanisms for the exchange of sub-surface current data include a standard subset of IOC's General Format (GF3) and a comprehensive software package (GF3-Proc) for reading and writing GF3 formatted magnetic tapes. The Chairman of the Working Committee paid special tribute to MIAS (UK) for the development of GF3-Proc, which is now being tested on computers of various manufacturers prior to full-scale international distribution.

The Chairman of the Working Committee then introduced a Report on Meeting, Effectively and Efficiently, New Data Requirements Arising from Technology Development, Remote Sensing Observations, and the World Climate Research Programme, which was prepared in response to a request of the Assembly at its Thirteenth Session. The major future tasks to support the big international programmes, particularly of the WCRP, include a more complete accessioning of data, the acceleration of the data flow, the inclusion of data generated by the use of new technologies, the adaptation of the IODE system to new computer and communication systems, and an increased transparency of the whole system to its users.

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- 204        Regarding the development of marine information management (MIM), the Second Edition of the Marine Environmental Data Information and Referral Catalogue (MEDI) has been published. On-line experiments on the use of MEDI are in progress in France and the USA with a view to making MEDI publicly available. The draft of the Handbook on Marine Scientific and Technological Information Resources (MASTIR) has been produced by a consultant with financial support from the International Development Research Centre (IDRC) in Canada. The Executive Council was also informed that China has formally joined ASFA (Aquatic Sciences and Fisheries Abstracts) as a national input centre.
- 205        Several Delegates reported on national IODE activities and their support to the system.
- 206        Special attention has been paid to the importance of accommodating new technological developments to meet the needs of global programmes like the WCRP.
- 207        The Delegate of Iraq noted that, within the framework of the Regional Organization for the Protection of the Marine Environment (ROPME), many oceanographic data have been collected in that region, and the need for data management has been recognized. He expressed the hope that IOC and ROPME would co-operate in meeting this need. He also requested the IOC to consider the possibility of providing consultant services for the preparation of a feasibility study on the future NODC and the required personnel training.
- 208        The Executive Council expressed its satisfaction with the results achieved by the Working Committee in developing the IODE system. It endorsed the Report on Meeting, Effectively and Efficiently, New Data Requirements Arising from Technology Development, Remote Sensing Observations, and the World Climate Research Programme.
- 209        The Executive Council recognized that, to cope with the increasing volume of data being collected by the application of new observational techniques, including remote-sensing, and to meet the needs of the WCRP, there is a need for a matching development in the technology employed by the data centres within the IODE system.
- 210        It also recognized that investment in relatively inexpensive data-management capabilities is needed to make the large investments in ocean-data collection from satellite and in situ systems pay off.
- 211        The Executive Council stressed the view that the development of the IODE system must consolidate the progress already made over many years, and take account of the different levels of technological development in Member States.
- 212        The Executive Council called on the Working Committee on IODE to give particular attention to these topics at its Twelfth Session.
- 213        The Executive Council expressed concern over the fact that, in recent years, there had been a decline in data submission to the data centres of the IODE system and a trend to increasing delay in data submission has become apparent. It noted with satisfaction that the Working Committee on IODE is now revising the DNP/NOP procedures and restated its request to the Working Committee on IODE to speed up this revision and to report on the results to the Fourteenth Session of the Assembly.
- 214        The Executive Council called on Member States to assume fully their responsibility in promoting the submission of data to the IODE system.
- 215        The Executive Council recognized that data collected for fishery and military purposes can only be obtained by negotiations at a national level.
- 216        Regarding the increased flow of data from the IOC Regional Programmes, the Executive Council called on the IOC regional subsidiary bodies to assume responsibility accordingly.
- 217        The Executive Council called on the Joint SCOR-IOC Committee on Climatic Changes and the Ocean (CCCCO) to request data originators of the scientific community to submit data more promptly to the appropriate Data Centres.
- 218        In that regard, the Executive Council noted the practice of one

country to give grants for follow-on research from the national funding agency subject to submission of previous data, and recommended that the possibility of using this method or any other method of stimulating data submission be studied elsewhere.

The Executive Council warmly thanked the Soviet Union for its offer to host the Twelfth Session of the Working Committee on IODE and the preceding consultation on marine information management.

#### 5.4 INTERNATIONAL TSUNAMI WARNING SYSTEM IN THE PACIFIC

The IOC Senior Assistant Secretary in charge of Ocean Services, Dr. I. Ollivine, introduced the Summary Report of the Tenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific (ITSU) (Sidney, B.C., Canada, 1-3 August 1985). He emphasized that now, twenty years after the initiation of international co-operation in the tsunami warning field, we can look back with satisfaction to the continuous work and effort put into the system by the IOC Member States of the Pacific, the total number of which reached twenty-four when Australia joined the Group at the end of 1985. Regional warning centres were established; stations were designated by the Member States as forming part of the International Warning System, and training and assistance programmes were set up and executed. The Group evaluated the final draft of the Master Plan for International Tsunami Warning Operations. Owing to the importance of the document for the future of the Tsunami Warning System in the Pacific, the International Co-ordination Group agreed to postpone the final adoption of the Plan until its next Session. Additional tsunami travel-time charts for twenty-three locations are being prepared by the Soviet Union and the first few will be submitted for comment to the editorial group meeting to be held in Honolulu, USA, 28-31 March 1986. The revision of the wave reporting manual will be made by the USA and a revised version will be directed to the Member States for comment prior to the Eleventh Session of ITSU. Special efforts have been made by the Secretary IOC to provide direct financial support to the International Tsunami Information Centre to help it carry out its role of providing technical advice and assistance to Member States. The implementation of the visiting experts programme continued successfully and missions have been arranged to Colombia, Ecuador and Mexico to advise national authorities on the preparation of the national tsunami warning plan and on the selection of stations, equipment and communication systems. The Senior Assistant Secretary reported on the results of the Workshop on the Technical Aspects of Tsunami Analyses, Prediction and Communication, which was held in conjunction with ITSU-X.

He informed the Council of the efforts made by the Secretary IOC to seek candidates for the post of ITIC Associate Director. In spite of these efforts, none of the IOC Member States responded positively to the request of the Assembly, at its Thirteenth Session, to forward to the Secretary of IOC the names of candidates. He then reminded the Executive Council of the IOC mission in January 1984 to the countries of the south-western Pacific which resulted in a project proposal for a Regional Tsunami Warning System in South-east Asia which was submitted to UNDP for financial assistance.

A number of Delegates (Chile, China, Japan, Indonesia, Philippines, USSR) informed the Executive Council of their national activities and expressed their full support for the International Tsunami Warning System in the Pacific. They stressed the need for reducing the time for tsunami warning and, in that regard, the preparation of additional tsunami travel-time charts and the implementation of projects like THRUST.

The Delegate of China extended the offer of his country to host the Eleventh Session of the International Co-ordination Group in 1987.

The Executive Council endorsed the Summary Report and Recommendations of the Tenth Session of the International Co-ordination Group.

The Executive Council noted with satisfaction that, in spite of a short intersessional period, all Recommendations and Resolutions of the Ninth Session have been successfully implemented.

The Executive Council expressed strong concern about the effect of a reduction in Unesco funding on the activities of the International Co-ordination Group, which influenced primarily the support to the ITIC and the visiting experts programme. It called on the International Co-ordination Group to use appropriate channels for obtaining support by Member States to this programme, and requested the Secretary IOC to give high priority to the programme.

227        The Executive Council recognized that the Workshop on the Technical Aspects of Tsunami Analysis, Prediction and Communication had been a most successful and valuable exercise which had helped experts from developing and developed Member States in the region to gain more detailed knowledge of the developments in tsunami research, monitoring and preparedness, and of each other's needs, for improving the Tsunami Warning System in the Pacific.

228        The Executive Council called on the Member States concerned with the project proposal for a Regional Tsunami Warning System in South-east Asia to approach the government authorities that would represent them at the Third Meeting of Aid Co-ordinators (MAC-III) and convince the Aid Co-ordinators of the necessity of such a system in the region, and to keep the Secretary informed of the results. It also called on the Member States interested in the project to consider making a contribution to the project in cash or in kind.

229        The Executive Council thanked the Government of China for its generous offer to host the Eleventh Session of the International Co-ordination Group for ITSU.

## 6.        REGIONAL SUBSIDIARY BODIES AND REGIONAL CO-OPERATION

### 6.1        IOC-UNESCO WORKSHOP ON REGIONAL CO-OPERATION IN MARINE SCIENCE IN THE CENTRAL INDIAN OCEAN AND ADJACENT SEAS AND GULFS

230        The Senior Assistant Secretary, Mr. R. C. Griffiths, informed the Executive Council of the main outcomes of the Workshop held in Colombo from 8 to 13 July 1985, at the kind invitation of the Government of Sri Lanka. The Workshop recommended to the IOC the implementation, in the region, of three regional projects in the field of Ocean Dynamics and Climate: coastal water dynamics; water-mass movements and storm-surge prediction. It recommended seven projects in the field of Ocean Science in Relation to Living Resources: distribution of oceanic pelagic resources in relation to the environment; bioproductivity of the northern Arabian Sea; investigations of exploitable demersal living resources of the deep shelf and bathyal zones; environment and living resources of the Red Sea; survey of coral-reef resources; red tides; and taxonomic research. The Workshop also recommended five main activities in the field of Ocean Science in Relation to Non-Living Resources: survey of continental shelves; coastal processes; effects of damming rivers; deep-water sediments; and crustal structure, tectonics and geological evolution. The implementation of GIPME and MARPOLMON in the Indian Ocean was also recommended. The Workshop supported IOC's efforts to establish a regional tide-gauge network, the use of drifting buoys and a ships-of-opportunity project to determine subsurface thermal structure in the region.

231        The Workshop also made some recommendations regarding the eventual Terms of Reference of the IOC Programme Group for the Central Indian Ocean, and its geographical coverage, stressing the importance of taking into account the main scientific problems in the region.

232        The Report of the Workshop has been published as IOC Workshop Report No. 37 and will have a Supplement containing the scientific papers and reviews present at the Workshop.

233        The Delegate of the Federal Republic of Germany informed the Executive Council that his Government was supporting an IOC Training Course in Marine Geology, to be held in Colombo, in 1986, through a contribution to the IOC Trust Fund. He also announced an expedition, of one year's duration, by the newly constructed MV METEOR to the eastern Mediterranean, the Red Sea, the Arabian sea and the eastern Indian Ocean. The expedition takes into account the plans for POEM (Physical Oceanography of the Eastern Mediterranean) and the proposed research projects for the IOC Programme Group for the Central Indian Ocean (IOCINDIO); it is also expected to make a major contribution to efforts to meet the TEMA needs of the region concerned. On each of the nine cruise legs a substantial number of places on-board will be available to foreign scientists, particularly from coastal States of the region. The ship-board training will be supplemented by a training course in bathymetry planned for mid-1987 in Mauritius. Scientists and trainees for the METEOR Expedition and for the training course will be selected and invited by the sponsoring organizations of the Federal Republic of Germany, in close co-operation with the Secretary IOC.

234        The Executive Council expressed its appreciation of this important contribution of the Federal Republic of Germany to the regional research programmes of IOC in the Indian Ocean and its adjacent seas and gulfs (as well

as in the eastern Mediterranean - see Section 6.2 below). In particular, it welcomed the opportunities for scientists of the region to participate actively in the research to be conducted during the expedition. It also welcomed the training facilities offered in conjunction with the METEOR Expedition.

The Delegate of the United Kingdom informed the Executive Council of the proposed expedition of the RRS CHARLES DARWIN to the Red Sea and Indian Ocean in 1986-87; on this expedition, the side-scan deep-water sonar system, known as GLORIA, will be used extensively. He stated that participation in the cruise, by scientists from the region, will be welcomed. However, he stressed that applications for support to take part in the follow-up work in UK laboratories must be made by Member States in the region through the British Council.

The Executive Council welcomed the offer of the United Kingdom to provide training and participation opportunities for scientists from the region during the RRS CHARLES DARWIN Expedition.

The Delegate of India expressed his country's great interest in the outcome of the Workshop, since the proposed projects and activities coincided in many respects with the views of the Indian scientific community. He stressed the scant knowledge of the deep Indian Ocean in spite of reports of high abundance of demersal resources. Also, there is a need greatly to improve monsoon prediction for a number of reasons, particularly to improve water-resource planning. India must also look to the sea bed for certain minerals otherwise in short supply. The Delegate also stressed the importance to his country of research and monitoring of pollution from tar balls on its west coast, coastline stability, oceanographic instrumentation and data exchange. He offered shipboard and other forms of training in these various fields, to marine scientists and technicians from the region.

The Executive Council welcomed the offer of training made by the Delegate of India on-board Indian research vessels working in the Indian Ocean.

The Executive Council thanked the scientists that had participated in, or contributed to, the Workshop for their numerous proposals and their recommendations on the eventual Terms of Reference and geographical coverage of the IOC Programme Group for the Central Indian Ocean.

It instructed the Secretary to bring the Report of the Workshop to the attention of the Programme Group, and to arrange, with the assistance of key experts, for the development of a set of detailed projects along the lines of the Workshop proposals, for the consideration of the Programme Group, identifying as far as possible potential participating institutions from the region and other interested Member States, and the related TEMA requirements.

The Executive Council urged the Member States of the region, and other interested Member States, to participate actively in the preparation of the draft programme of work and budget of the Programme Group and in the implementation thereof.

## 6.2 MARINE SCIENCE CO-OPERATION IN THE MEDITERRANEAN

Dr. Makram A. Gerges, IOC Consultant, who is also acting as the Executive Scientist for the Programme on the Physical Oceanography of the Eastern Mediterranean (POEM) reminded the Executive Council that scientists from the eastern Mediterranean, several of whom have worked together and with scientists from outside the region, have developed a co-operative programme for the study of the Physical Oceanography of the Eastern Mediterranean. He also outlined the scientific objectives of the programme which is endorsed and supported by Unesco's Division of Marine Sciences and the IOC.

Dr. Gerges also informed the Council of the results of the POEM Steering Committee meeting which took place in Paris in June 1985, during which the operational plans of the programme were developed, with particular emphasis on the first co-operative multi-ship cruise. This cruise was successfully implemented during October-December 1985, and there are plans to carry out the second POEM Cruise during March-April 1986.


Several Delegates expressed their satisfaction with the progress made in the implementation of POEM, and further stressed the importance of co-operation amongst the Member States of the region in this Study.

245 The Delegate of the USA expressed his country's strong support for the POEM Programme in terms of funding of certain POEM activities. The Delegate noted with satisfaction the effective staff support given to the Programme by the IOC Secretariat and the Unesco Division of Marine Sciences, and referred to the good co-ordination between the two Secretariats in this respect.

246 The Delegates of Egypt, Turkey and Greece, as representatives of eastern Mediterranean countries directly concerned with, and actively participating in, or contributing to, POEM, reaffirmed their interest in the Programme and welcomed the support given to it from various sources, particularly from Unesco and IOC. The Delegate of Greece requested IOC to assist in developing his country's National Oceanographic Data Centre to enhance their effective participation in POEM and other programmes.

247 The Delegate of the USSR noted the satisfactory development of POEM and the vital importance of the Programme to the advancement of our knowledge of this region. He referred to the Soviet contribution to the training of scientists of the region and expressed the interest of Soviet scientists in the study of the Mediterranean Sea, and their desire to participate in the forthcoming POEM Workshop.

248 The Executive Council expressed its appreciation of the collective effort made by the POEM Programme's two Co-chairmen, by the Steering Committee and associated scientists in the good preparation of the Programme, its scientific basis and operational plan, and congratulated them on the successful implementation of the first co-ordinated POEM cruise.

249  The Executive Council urged the Member States to provide all possible support to the Programme in the context of, inter alia, the IOC's Ocean Services, TEMA, and IOC-VCP, and in particular to assist the eastern Mediterranean countries in the establishment of a tide-gauge network and in the training of specialists in the field of current measurements, in co-operation with the Unesco Division of Marine Sciences. It also instructed the Secretary to seek, as appropriate, extrabudgetary support for the Programme whenever possible.

250 The Assistant Secretary, Mr. Yves Treglos, introduced the question of future oceanographic programmes in the western Mediterranean. He recalled that the IOC Workshop on the Scientific Results of MEDALPEX (Mediterranean Alpine Experiment, the oceanographic counterpart of the Alpine Experiment, a sub-programme of the Global Atmospheric Research Programme of WMO and ICSU) and Future Oceanographic Programmes in the Western Mediterranean (Venice, 23-25 October 1985) was attended by thirty-one scientists from eight countries. Some nineteen presentations (including those made at the Meeting on the Preliminary Results of MEDALPEX, Santa Teresa, 9 September 1983) were made and, thanks to Prof. C.J. Nihoul, of the University of Liege, will be published in a special issue of Annales Geophysicae, the official organ of the European Geophysical Society.

251 The Workshop concluded that MEDALPEX would have been more successful if more national contributions to the experiment had reflected a community of purpose to reach a common goal, rather than the scientific interests of several groups of oceanographers. It was nevertheless recognized that the great variety of results did contribute to a better knowledge of several mechanisms that drive the complex water movements in the western Mediterranean and the Adriatic Sea, and that this variety, by itself, allowed for an in-depth reflection on what could be the grounds for future co-operative oceanographic programmes to be undertaken in this part of the world ocean.

252 When looking to the future, the Workshop first highlighted a prerequisite for any co-operative study that might be proposed: the interest and personal involvement of the scientific community expected to undertake the study. It then considered as a reasonably good scientific objective a better understanding of the circulation of the water masses in the western Mediterranean and of the roles played by the diverse forces that drive them. In order to work out this idea, the Workshop recommended that a Steering Group of Experts be established with the following Terms of Reference:

- (i) to develop a scientific programme aiming at a better knowledge of the structure of the western Mediterranean, of its dynamics and of the processes that drive them;
- (ii) to specify the observational, data handling and computational facilities needed to achieve that aim;
- (iii) to assess the extent to which the needs are being met by existing national and international programmes;



- (iv) to identify the need for additional activities;
- (v) to consider and recommend an organizational structure by which such activities could be provided through a co-operative international project.

Although the Group was mainly expected to work by correspondence, the Workshop considered that it would need to meet at least yearly, and called on IOC Member States to contribute to the IOC Trust Fund to that effect, at least as long as the IOC Regular Programme proved unable to bear these costs.

Some Delegates pointed out that paragraph 5 of Document IOC/EC-XIX/8 Add. 1 seemed to imply that the governments concerned would have only to endorse, through an intergovernmental body, the proposals developed by the scientific community. They pointed out that it was up to the governments to take the final decision on the programmes proposed by the scientific community to the intergovernmental body.

The Executive Council nevertheless agreed that the concept of "interest and personal involvement of the scientific community" should be kept in mind when addressing any question relating to oceanographic programmes to be developed in the western Mediterranean, in view of: (i) the longstanding history of scientific research on this sea; (ii) the fact that future co-operative programmes in the region were, as far as IOC was concerned, at the pre-planning stage, needing therefore a great deal of scientific input; and (iii) this small, almost enclosed sea, might be considered as a "reduced-scale ocean", thus allowing for the development, at a relatively low cost, of models that might apply later on to the world ocean.

The Executive Council supported the idea that a group of experts should work out proposals for co-operative studies of the western Mediterranean Sea, to be submitted to a forthcoming Session of the Council or Assembly.

### 6.3 MARINE SCIENCE CO-OPERATION IN THE WESTERN PACIFIC

#### 6.3.1 Intersessional Activities of the Programme Group for the Western Pacific

The Chairman of the Programme Group for the Western Pacific (WESTPAC), Dr. John Bunt, summarized the intersessional activities of the Group, covering: (i) a meeting of the Task Team on Marine Pollution Research and Monitoring in the Western Pacific; (ii) Training Workshop on Red Tides (Bangkok, 1985), and preparations for a second Training Workshop on Red Tides. He also informed the Council that, taking into account the endorsement of the IOC Assembly, at its Thirteenth Session, he had, in consultation with the Secretary IOC, taken the initiative to organize a Symposium on the Marine Science in the WESTPAC region, with particular reference to the Indo-Pacific Convergence; this Symposium would be held in Townsville (Australia) from 1 to 6 December 1986. He informed the Council that he had sought advice from a large number of contacts within the Member States of the Programme Group, and realized that, in doing so, he might not always have used formal IOC channels, in which case he apologized if any inconvenience had been caused. He stressed the fact that his inquiries had yielded widespread expressions of support. It is expected that the Symposium will provide a productive forum for discussion among the scientists of the region, including the Chairmen of the Task Teams of WESTPAC, and that it will stimulate interactions and lead directly to collaborative research in marine sciences of real value to the region, one of the ideas being to take advantage of the Symposium to facilitate discussion amongst the scientists and the Task Team Chairmen to draw up research project proposals for consideration by the Programme Group.

Several Delegates (Japan, Indonesia, USSR, Thailand, China, USA and France) expressed their appreciation of the strong leadership of the Chairman in the development of the WESTPAC programme and his efforts to organize a symposium. Continuous support to the WESTPAC programmes offered by the Governments of Australia and Japan was also appreciated. The Delegate of Japan particularly supported the programme of shipboard studies and training, and oceanographic data-management training.

The Delegate of the USSR supported the idea of the WESTPAC Symposium. However, he expressed some concern over the slow development of the WESTPAC Programme, particularly the irregularity in the actions of the Programme Group.

260 Several Delegates urged the Secretariat to hold the Fourth Session of the Programme Group for the Western Pacific (WESTPAC-IV) as soon as possible, preferably in 1986, and the Delegate of Thailand informed the Council that his Government intends to invite the Secretary to hold the Session in late 1986.

261 The Delegate of Japan informed the Council that his Government will contribute US\$30 000 in the fiscal year of 1986 (subject to approval of the Japanese parliament) to IOC, through Unesco, in the form of Funds-in-Trust, to implement activities in support of the WESTPAC Programme.

262 The Delegate of Indonesia announced that his Government would be in a position to offer opportunities of ship-board training, and of joint on-board research for scientists from countries in the region, when a new Indonesian research vessel becomes available for marine scientific research in 1987.

263 The Delegate of China considered that the modalities of the future functioning of the Programme Group for WESTPAC should be discussed at its forthcoming Session. The Delegate of Australia supported this idea.

264 The Executive Council thanked the Government of Australia for the strong backing provided to the Chairman of the IOC Programme Group for the Western Pacific, including support for the proposed Symposium on marine scientific research in the Western Pacific with special reference to the Indo-Pacific Convergence.

265 It also thanked the Government of Japan for its generous contribution to the Trust Fund in support of WESTPAC activities, and for its many offers of training opportunities on-board Japanese research vessels and at the Japan Oceanographic Data Centre.

266 The Executive Council welcomed the offer by the Delegate of Indonesia of joint research and shipboard training on its newly acquired research vessel in 1987.

267 The Executive Council agreed that project proposals for future research projects of the Programme Group should be based on discussion at the proposed Symposium in December 1986, and submitted to the Programme Group at its Fourth Session.

268 The Executive Council recognized the difficulty facing the Secretary, under current budgetary circumstances, to hold the Fourth Session of the Programme Group in 1986, but instructed him to hold it as soon as possible and, in any case, not later than April 1987.

#### 6.3.2 Co-operation with CCOP and CCOP(SOPAC)

269 The Assistant Secretary, Dr. K. Kitazawa, introduced the Summary Report of the Second Session of the Joint CCOP(SOPAC)-IOC Working Group on South Pacific Tectonics and Resources (STAR-II) held in Honiara (Solomon Islands), 10-12 September 1985. Having reviewed on-going research projects, the Joint Working Group endorsed several newly proposed research projects in the region, and recommended their early implementation. The Joint Working Group expressed its strong interest in the planned WESTPAC projects related to OSNLR, and requested IOC to consider adequate representation of marine geo-scientists involved in research in the South Pacific region in any experts' group related to OSNLR studies in WESTPAC that might be formed. The Joint Working Group requested the IOC to consider ways and means of providing a coastal-processes specialist to the SOPAC region who would advise governmental organizations of STAR Member Countries on coastal-zone management problems and who would arrange a series of on-the-job training programmes on shore-line management.

270 The Assistant Secretary then reported on the CCOP(SOPAC)-IOC Workshop on the Use of Manned Submersibles and Remotely Operated Vehicles in the South Pacific, held in Suva (Fiji) from 24 to 29 September 1985, with co-sponsorship of IFREMER and ORSTOM. The Workshop approached its task through lectures first. Forty-five papers were presented at the Workshop on different topics; the in-depth studies on problem areas were made through four ad hoc Sessional Working Groups who prepared 25 research proposals. Although they are briefly presented (in IOC Workshop Report No. 39), each of them includes background, current available data, expected results, and recommendations for implementation. There are eight sub-regional projects based on important geological/geophysical features in the South Pacific, four projects on potentially interesting areas in respect of hydrocarbons, six projects on sites of volcanic action and tsunami generation and seven on sea-bed processes and environments; the potential for using submersibles and remotely operated vehicles is identified, together with TEMA requirements and opportunities.

The Executive Council accepted the Report of the Second Session of the Joint Working Group on South Pacific Tectonics and Resources, and thanked the Technical Secretariat of CCOP(SOPAC) for having organized the Session. It welcomed the indications in the Report of vigorous activity of the Study Groups established by STAR to advance its programme.

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The Executive Council welcomed the Report on the Workshop, and thanked the co-sponsors, CCOP(SOPAC), IFREMER and ORSTOM for their effort in organizing this Workshop with IOC. It believed that the use of submersibles and remotely operated vehicles would continue to be a very important tool in a variety of marine scientific contexts, and called on the Joint Working Group to continue to study these developments and advise the Commission on training needs and opportunities in the application of these devices.

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Regarding the Eleventh Session of the Joint CCOP-IOC Working Group on Post-IODE Studies of South-East Asian Tectonics and Resources (SEATAR-XI) held in Guangzhou, China, on 12 November 1985, the Assistant Secretary highlighted the fact that the SEATAR Transect Studies are now reaching their conclusion and the Joint Working Group is seeking support to publish the results of these Studies in an integrated form. The Joint Working Group proposed that a SEATAR review/planning meeting be held during the Circum-Pacific Energy and Mineral Conference in Singapore in 1986.

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The Delegate of Japan expressed his concern over any increase in the IOC budget, beyond what has been approved, due to SEATAR and STAR activities.

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Several Delegates expressed a wish to continue the SEATAR programme in co-operation with CCOP.

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The Executive Council instructed the Secretary to maintain and develop co-operative programmes with CCOP and CCOP(SOPAC) related to scientific and technical matters, particularly studies of non-living resources, and the use of manned submersibles and remotely operated vehicles.

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7. ENHANCING THE EFFECTIVENESS OF THE COMMISSION TO MEET THE NEEDS OF MEMBER STATES AND THE WORLD COMMUNITY

7.1 THE STRUCTURE OF THE COMMISSION AND THE ORGANIZATION AND CONDUCT OF MEETINGS

Mr. Desmond P.D. Scott (UK) reported to the Executive Council the outcome of the Preparatory Meeting with respect to the structure of the Commission. The Preparatory Meeting had considered carefully Document IOC/EC-XIX/9 (The Structure and Responsibilities of the Subsidiary Bodies of the Commission) and had recommended a certain number of amendments. He stressed that the discussion was about categories of IOC subsidiary bodies, not about specific subsidiary bodies or their present or future titles.

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The Executive Council noted the following main proposals submitted by the Preparatory Meeting:

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- (i) all Working Committees should be global scientific and technical subsidiary bodies; hence, the present Programme Group on Ocean Processes and Climate would be considered as belonging to the category "Scientific and Technical Committees", with all the present Working Committees;
- (ii) to avoid the perpetuation (and the proliferation) of secondary subsidiary bodies (i.e., those created by a primary subsidiary body - which are themselves created by a governing body), it is proposed that all secondary subsidiary bodies should, be established initially for one inter-sessional period only, and that further extension should be by specific decision at each session of their parent bodies;
- (iii) in view of the existence of various IOC subsidiary bodies to guide specific programmes (e.g., the Working Committee for GIPME, the Guiding Groups of Experts on OSLR and OSNLR, the Guiding Committee for GEBCO, etc.), the Preparatory Meeting recommended that the Scientific Review Board be abolished and that, when required, ad hoc meetings, each with a specific remit, be called, consisting of the Chairmen of the major IUC

scientific, technical and regional subsidiary bodies, together with representatives of the Advisory Bodies to the Commission;

- (iv) regarding the basic terms of reference of an IOC subsidiary body in the category "Scientific and Technical Committee", under the function "Programme Development", a new function, on "Standard Setting and Nomenclature", should be added to empower the body, if appropriate, to recommend and co-ordinate the development (with other international organizations, as appropriate) of standards, reference materials and nomenclature for use in marine science and related ocean services;
- (v) Scientific and Technical Committees, Sub-Commissions and Regional Committees should meet at least every two years, the actual frequency being related to the state of development and the requirements of the particular programme or as determined by the Assembly or the Executive Council.

279 Two Delegates expressed concern about the idea of ad hoc meetings of Chairmen of subsidiary bodies as a substitute for the Scientific Review Board; an ad hoc meeting should not be regarded as a subsidiary body and should thus fall outside the proposals on structure embodied in Document IOC/EC-XIX/9.

280 The Secretary explained that the proposed ad hoc meetings of Chairmen did not, in fact, constitute a category of subsidiary body; nevertheless, it would be a useful mechanism for facilitating the work of the Commission, as had been shown at the time of the last Assembly when such an ad hoc meeting had found widespread support; he believed that they could therefore be regarded as a relevant aspect of the structure, and that it would be useful to mention this in the Guidelines section of the IOC Manual.

281 One Delegate also expressed his concern over the proposal (in Document IOC/EC-XIX/9, Section 3, item (vi)) that "Groups of Experts should be the main source of expert guidance on ...", since there were many other sources of expertise outside the IOC but available to it; some of these sources would help to bring the viewpoint of scientists from developing countries to the attention of the Commission.

282 Some Delegates called attention to the large number of secondary subsidiary bodies and questioned the large number of Task Teams created by the Working Committee on IODE.

283 The Executive Council expressed its general satisfaction with the contents of Document IOC/EC-XIX/9 and the recommendations of the Preparatory Meeting thereon (Annex V, hereto).

284 The Executive Council recognized that, since the creation of the Scientific Review Board, a number of IOC programme formulation and review mechanisms for specific programmes had evolved, notably the IOC Working Committees and Guiding Groups of Experts (e.g., on OSLR, OSNLR) or similar bodies (e.g., GEBCO, CCCO), as well as the Advisory Bodies (SCOR, ACMRR, ECOR), there was no further need for the SRB. The Executive Council therefore recommended to the Assembly that it abolish the Scientific Review Board.

285 The Executive Council authorized the Secretary, in consultation with the Officers of the Commission, to arrange, if the available resources of the Commission allow, ad hoc meetings of Chairmen of IOC subsidiary bodies, to focus, as the case may be, on specific problems of programme development, promotion and co-ordination identified by the Assembly or the Council itself, and on the interaction between, and complementarity of, the activities of the various subsidiary bodies. Such ad hoc meetings should take place preferably immediately prior to the Sessions of the two governing bodies.

286 The Executive Council recognized that IOC or joint Groups of Experts represent only one of the main sources of expertise and that this should be reflected in the appropriate section of the revised Guidelines on the Structure and Responsibilities of the Subsidiary Bodies of the Commission.

287 It also requested all the primary subsidiary bodies of the Commission, and particularly the Working Committee on IODE, to review carefully their need for (secondary) subsidiary bodies and to reduce their number as far as would be consistent with effective and efficient development and implementation of their respective programmes of work.

The Executive Council instructed the Secretary to amend Document IOC/EC-XIX/9 in the light of the recommendations of the Preparatory Meeting and the decisions of the Council itself hereabove, and accordingly to revise the Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission, and incorporate them in the IOC Manual.

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The Senior Assistant Secretary, Mr. Ray C. Griffiths, then introduced Document IOC/EC-XIX/10 (Procedures for Streamlining the Conduct of Sessions of the Governing and Subsidiary Bodies of the Commission), which was prepared pursuant to a request of the Assembly at its Thirteenth Session. This Document notes that, in general, IOC meetings are comparatively efficient; nevertheless, every effort has been made in it to see where the major difficulties lie and thus where improvements could be sought. The Document reviews, therefore, the preparation for sessions - documentation, document distribution, document handling, and the timetable. It then considers the conduct of the session, from the standpoint of the Chairman, the Secretariat, the Rapporteur, and the Participants, including the work of special or ad hoc sessional committees and groups. Finally, some proposals on follow-up of sessions are given.

The Executive Council welcomed the Document and made a number of suggestions, particularly regarding the important question of timely dispatch and distribution of documents, especially key documents such as the Provisional Agenda, Annotated Provisional Agenda, the Action Paper and the Secretary's Report on Intersessional Activities.

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The Secretary pointed out that, very often, even if he dispatched documents from IOC in good time, their distribution was subject to a number of factors largely or entirely outside his control - these were, in the normal sequence, the Unesco mail service, the public postal services in France and in the Member States, and the efforts of Action Addressees to ensure that relevant institutions or other official national addressees received copies of relevant documents.

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The Delegate of the Federal Republic of Germany, while welcoming Document IOC/EC-XIX/10, considered fourteen days to be the maximum time to be allocated for a combined meeting of the Executive Council and the Assembly.

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The Executive Council generally endorsed the improvements proposed in Document IOC/EC-XIX/10. However, it recognized that it was probably not possible to implement them all immediately or in full at all times.

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The Executive Council instructed the Secretary to send Document IOC/EC-XIX/10 to all the Member States in all the Working Languages of the Commission as soon as possible, for reference.

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It also instructed the Secretary to take every possible step to ensure that all Working Documents were dispatched well in advance of a given Session, with a view to ensuring, as far as possible, their receipt by all official addressees (in the IOC Correspondence Manual) in accordance with the Rules of Procedure of the Commission or, in any case, two months before the start of the Session.

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It urged Member States, in general, and their Delegations to sessions of IOC governing and subsidiary bodies, in particular, to make every effort, now and in the future, to give effect to the relevant recommendations in Document IOC/EC-XIX/10.

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## 7.2 THE STABILITY AND CONTINUITY OF THE COMMISSION'S RESOURCES

The First Vice-Chairman introduced this item, informing the Council of the debate that had taken place on the same subject during the Preparatory Meeting and of conclusions reached. She recalled the mandate given to her by the Assembly (Resolution XIII-13) and the steps she had taken in preparing, in consultation with the Chairman and the Past Chairman, Document IOC/EC-XIX/11 (Measures to Ensure the Stability and Continuity of the Resources Required for the Implementation of the Commission's Programme). She called attention to the fact that it is clear that the Commission's resources do not meet, by a considerable margin, its needs, and that this situation had existed and had been worsening, even prior to the departure of three IOC Member States from Unesco. Although the reduction in resources provided through Unesco has created a critical lack of funds and staff, one must bear in mind that the

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Commission has continued to expand its programme for quite some time without a commensurate increase in resources. Since statutory financial responsibilities of Member States have not yet been defined and agreed upon, the First Vice-Chairman suggested, as had been proposed by the Preparatory Meeting, that the Council ask that the concerns raised in Document IOC/EC-XIX/11 continue to be studied during the next intersessional period, taking into account the views expressed, and that measures for the immediate and urgent problem of reduced resources be considered in more detail under Item 8.1.

The Executive congratulated the First Vice-Chairman for the clear analysis and study undertaken. It invited the Past Chairman, with the assistance of the Officers of the Commission and of the Secretary, to develop Document IOC/EC-XIX/11 further, during the intersessional period, calling upon the advice of the Chairmen of the major technical and regional subsidiary bodies. The Executive Council stressed that, in carrying out this task, particular attention should be given to:

- (i) the appropriateness of establishing criteria for financial support of the Commission's activities so as to ensure the required level of resources for adequate and timely implementation of the overall IOC programme; and
- (ii) ways in which the formulation of the IOC programme and the establishment of priorities therefor, including related budgetary requirements, could be developed in a manner that would facilitate the mobilization of national funds in support of the Commission.

Several Delegates voiced their concern about the present financial difficulties of the Commission and offered suggestions as to how this situation might be improved in the short and long terms.

The Executive Council stressed that care should be taken not to confuse issues that should be dealt with separately, such as: (i) the long-standing need for voluntary contributions to the IOC Trust Fund to bring the resources of IOC to a level commensurate with its programme and mandate; and (ii) contributions made by those IOC Member States that had withdrawn from Unesco that were intended to compensate for short-falls in the IOC budget. Until such resources were available, the present programme of the Commission would have to be adjusted.

The Delegate of the USSR expressed the view that the best way of addressing the issue of the financial responsibilities of IOC Member States not Member States of Unesco was indeed through adjustment of the IOC Statutes and he hoped that a satisfactory solution regarding the wording of Article 10 could be found between now and the Fourteenth Session of the Assembly. As the budgetary resources are the cornerstones upon which the programme is constructed, it was inevitable that the IOC programme, as endorsed by the Thirteenth Session of the Assembly, would have to be adjusted by the postponement of certain approved activities. He concluded by appealing to all non-Member States of Unesco to cover, to the fullest possible extent, the deficit in IOC resources engendered by their withdrawal from Unesco.

The Delegate of the United States placed on record the interest of his Government in the IOC which was considered as a valuable instrument for international marine scientific co-operation. He informed the Council of certain internal difficulties that had complicated the procedures for obtaining funding support to the Commission. In announcing that his Government will pledge approximately \$200 000 for the calendar year 1986, he stated that the USA would try to expand the level of annual contributions in the future. At the same time, he was pleased to inform the Council that a wide range of in-kind support, not the least of which was secondment of professional staff, would continue to be provided by the United States to support the work of the Commission. He suggested that it would be necessary to establish priorities on the basis of the identified financial support and the needs and interests of the international marine scientific community.

The Delegate of the German Democratic Republic, recalling his statement during the Preparatory Meeting, stressed the importance of including, in the further elaboration of the in-depth study, consideration of how clear priorities for the IOC programme could be established within the context of LEPOR-II, taking into account the Unesco Medium-term Plan for 1990-1995. He also believed that the most immediate problem was to decide how the Commission could implement its 1986-1987 Programme of Work with considerably reduced resources.

The Delegate of Bulgaria expressed the view that all Member States should be concerned about, on the one hand, arriving at the required stability of resources and, on the other, maintaining on-going programmes in the immediate future. Recalling that the Preparatory Meeting had recognized the importance of the substantial national counterpart support to the IOC programme, he was nevertheless obliged to emphasize that the Commission faces a real crisis in its evolution which would remain until the IOC could achieve a clear and mutually acceptable definition of the responsibilities and obligations of membership in the Commission. He drew the Council's attention to the view expressed on page 13 of the in-depth study (Document IOC/EC-XIX/11): "(1) the IOC Programme and Budget, which is approved by the Assembly and, if necessary, adjusted by the Executive Council, must be treated as an ensemble of closely linked activities, the whole of which must be protected from adverse budgetary fluctuations." He said it would be unfair if the burden of providing direct funding to the Commission's programme were to fall only on Member States who have remained in Unesco. He hoped that the US Representative on the Executive Council would be able to communicate to his Government the urgency of the situation and the views of the Executive Council on this matter.

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The Delegate of Peru shared the views previously expressed on the need to set priorities, and stressed the advantages of co-ordinated international efforts compared with bilateral programmes that served a complementary but different purpose. Although he recognized the good will expressed by the Delegate of the USA to the present Session, he would have been more reassured if the statement made by the US Delegate to the Thirteenth Session of the Assembly, as recalled in Resolution XIII-16, had in fact already resulted in more substantial support.

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The Delegate of Indonesia, supporting previous statements, referred to the need to strengthen regional programmes and said that this should be borne in mind when establishing priorities. In his view, countries could best support the programmes, directly and indirectly, through regional programmes of particular interest to them.

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The Delegate of Denmark stated that his country gives the IOC programme high priority within Unesco and views the Commission as the only marine science body with which they can co-operate on a global scale. The bilateral aid arrangements between Denmark and developing IOC Member States could be of assistance in strengthening IOC regional programmes.

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The Secretary announced that he had received a letter from the Government of the United Kingdom which states that it is taking steps to make arrangements to contribute to the IOC in a manner which will be acceptable to all sides and which will entitle the UK to full normal membership". He was hopeful that the announced UK support would be made available to the Commission during the next few months.

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The Delegate of the United Kingdom, noting that an appropriate level of contribution from the United Kingdom to the IOC had been agreed upon, stated that his Government viewed this as general support to ensure implementation of the IOC programme in compensation of any deficits arising within the IOC budget as a result of the withdrawal of the United Kingdom from Unesco. He welcomed the statement of the Delegate of the USA and drew attention to the considerable contribution made by the USA to the Commission in the form of scientific expertise and other support through the IOC Trust Fund. The United Kingdom joined other Delegations in hoping that the United States will be able to find a way out of their financial difficulties.

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The Delegate of Australia expressed his agreement with statements made regarding the advantages for stimulating support offered by regional programmes. He said that the Commission has been most wise to adopt a regional approach to implementation of global programmes as most Member States found it easier to co-operate within that context.

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The Delegate of Brazil, welcoming the statement of the Delegate of the United States, expressed the hope that a longer-term solution to IOC's financial problem would eventually be found through continued unearmarked contributions.

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The Delegate of Cuba stressed the fact that his country, although a developing one with limited resources, has responded positively to the adverse situation in Unesco due to the withdrawal of several Member States, by increasing, however modestly, its contribution to Unesco. He therefore believed that the only adequate response of those Member States that had withdrawn from Unesco but had remained Member States of the IOC was to

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contribute, within their financial possibilities, proportionally to the Commission's needs. He welcomed the statement of the United Kingdom in this sense.

313 The Observer of Sweden expressed the view that the extent to which IOC can play the role expected of it depends largely upon the support it receives from its Member States. In his opinion, the establishment of priorities was needed and this could logically be accomplished through decisions and advice provided by the IOC regional subsidiary bodies.

314 The Executive Council recognized that many Member States would find it easier to mobilize in-kind support and direct contributions through the regional subsidiary bodies in which their interest and participation in IOC activities was most directly related to their national policies. While this would obviously strengthen regional programmes, it would also contribute to global programmes through their regional implementation.

315 The Executive Council stressed the corporate responsibility of all IOC Member States to support the programme to the best of their abilities, and reminded the Member States that the Commission could only fulfil its mandate and play its role as an intergovernmental body in marine affairs if adequate resources, both funding and staff, were provided to it.

316 The Executive Council expressed its concern that the present level of commitment from IOC Member States was not sufficient to fill the gap in resources resulting from reduced funding through Unesco and, therefore, was not sufficient to ensure implementation of the IOC Programme for 1986-87. It stressed the gravity of the situation which coincides with a critical stage in the development of the Commission and which may, if not rapidly rectified, have a negative impact on IOC's future stability and the interaction not only amongst its Member States but also with the international organizations that collaborate in the implementation of the programme.

317 The Executive Council welcomed the initial indications received from the Government of the United Kingdom that their contribution to the IOC budget would be commensurate with what was expected and looked forward to early confirmation of the level of funding and the modality by which such funds would be made available to the Commission.

318 While welcoming the initial commitment made by the United States for 1986, the Executive Council recalled the statement made by the US Delegate to the Thirteenth Session of the Assembly, referred to in Resolution XIII-16 and in para. 123 of the Summary Report thereof: "The Delegate of the USA reaffirmed the United States' intention to remain an active member of the Commission and to participate fully in priority programmes, despite its withdrawal from Unesco. The USA also intends to fulfil its obligations, including its financial responsibilities."

319 The Executive Council made an insistent appeal to all IOC Member States not Member States of Unesco to cover to the full extent the deficit in the IOC budget resulting from their withdrawal from Unesco.

### 7.3 MEASURES TO ENHANCE THE ROLE AND EFFICIENCY OF THE COMMISSION

320 The Chairman invited the Past Chairman, Dr. Agustin Ayala-Castañares, who had supervised the preparation of the in-depth study that is the object of this Agenda Item and who had chaired the Preparatory Meeting, to guide the discussion on this item. The Legal Adviser of Unesco was also invited to attend the Plenary.

321 The Past Chairman reminded the Executive Council that the above-mentioned in-depth study (Document IOC/EC-XIX/12) had been carefully considered by the Preparatory Meeting immediately prior to this Session of the Executive Council. In spite of the short duration of the Meeting and the delicate nature of the subject, the discussions were conducted in a most constructive atmosphere with notable results, as can be seen in the Summary Report (Annex V, hereto). He also reminded the Executive Council that the Commission has taken ten years or more to consider amendments to its Statutes to adapt them to the realities of the Commissions's role and functions and to the evolution of international marine affairs. Various Articles have been discussed in detail at the Tenth, Eleventh and Thirteenth Sessions of the Assembly and at the Eighth, Eleventh, Twelfth and Fourteenth Sessions of the



Executive Council, besides the present one, as well as intensively by two specialized subsidiary bodies: the Working Group on the Future Role and Functions of the Commission, from 1977 to 1978, and the ad hoc Task Team to Study the Implications, for the Commission, of the UN Convention on the Law of the Sea, and the New Ocean Regime, from 1980 to 1984.

At the Preparatory Meeting, amendments to the following Articles were agreed by consensus: Article 1, paragraphs 1 and 2; Article 2, paragraph 1, new sub-paragraphs (f), (g), (k), (l) and (m); Article 2, paragraphs 2 and 3; Article 3; Article 4, paragraph 3; Article 5, paragraph 4, and Article 9, paragraph 1; these amendments are given in Annex 1 of Resolution EC-XIX.8 (see paragraph 377, below).

The Articles on which there was no consensus as to the proposed amendments are given in Annex 2 of Resolution EC-XIX.8. For Article 2, paragraph 1, new sub-paragraph (j), four versions (identified as A, B, C and D) were submitted to the Executive Council for consideration, and for Article 10, paragraph 3, two versions (identified as A and B) were put forward (nevertheless, the eventual acceptance of one or the other, or any, text similar to either, would obviously entail the adjustments, proposed in Document IOC/EC-XIX/12, to paragraphs 1 and 4 of Article 10 to ensure consistency and clarity in the Article as a whole and in its intention).

The Executive Council noted the nature of, and basic rationale for, the changes proposed, and decided that, although all amendments were to be seen as modifications to the text in the present Statutes, it would, at this stage, consider only amendments (proposed at the Preparatory Meeting) to the Proposed Text for each Article concerned given in Document IOC/EC-XIX/12; or, in the interest of clarity, would comment on these Proposed Texts though unmodified at the Preparatory Meeting.

The Past Chairman then called on the Chairman of the Sessional Drafting Group of the Preparatory Meeting, Professor Alexander Yankov, to introduce the relevant points of the Report of the Preparatory Meeting. Professor Yankov reviewed first the proposed amendments to those Articles, their paragraphs and subparagraphs, that had found a general consensus at the Preparatory Meeting.

#### Article 1, paragraph 1

He informed the Executive Council that the Preparatory Meeting agreed to delete the words "highest possible degree of", on the grounds that this was not definable in practical or legal terms, and that the authority referred to was itself, defined by the Statutes as a whole and eventually by the Constitution of Unesco. The afore-mentioned Statutes and the Constitution also define the general limits of the term "functional autonomy". At the same time, giving effect to this term would contribute to increasing the efficiency of the IOC and of Unesco. Since Unesco retains the constitutional power to fix the Commission's programme and budget, it is in Unesco's interest to leave the Commission to decide and manage its programme within the resources available to it.

The Legal Adviser of Unesco commented on the proposed change to Article 1, paragraph 1. She indicated that the proposed reference to "functional autonomy" does not raise any difficulties from the legal standpoint. She pointed out that several other subsidiary bodies of other organizations of the UN system have such autonomy. In the case of the IOC, at least, it is governed by the fact that the Commission is a subsidiary body of Unesco created by the General Conference of Unesco. She expressed concern over the significance of the phrase "determine its programme of work" in the light of the fact that the programme of work of the Commission must be fixed by the General Conference; this prerogative cannot be withdrawn by the Commission.

Several Delegates pointed out that the Commission has other resources than those approved or provided by the General Conference, and this fact ought to be taken into account when dealing with this Article of the Statutes. The existence of such resources, as well as for reasons of efficiency, made it important to derogate to the Commission a considerable freedom to manage its programme of work within the resources available to it.

The Delegate of the United Kingdom pointed out that the IOC is not attempting to withdraw this prerogative of the General Conference of Unesco; rather, it is asking the General Conference to delegate to the Commission the right "to determine its programme of work". In his view, it is certainly within the mandate of the General Conference to do this. He suggested that, if the word "determine" might be interpreted as meaning "decided" or "fixed", the

word "formulate" could be accepted. He noted that Article 12 requires the IOC to report to the General Conference, which, together with the Commission's statutory responsibility to advise Unesco on its marine science programmes (Article 2(h)), reinforces the idea of the Commission's "functional autonomy". He reminded the Executive Council also that it was studying possible future arrangements and not the present ones.

330 Some Delegates suggested that the word "determine" was different in meaning from "approve", and therefore saw no conflict with the prerogatives of the General Conference.

331 Some Delegates pointed out that the limits of IOC's functional autonomy are in effect defined by the Statutes themselves and by the Constitution of Unesco.

332 Several Delegates drew attention to errors in the translations from the English, which is a particularly delicate matter in legal texts. In Article 2, paragraph 1, sub-item (f) in Annex V, hereto (Attachment 3, Part 1), the word "particularly" had not been translated into Russian, and the use of the word "informatizado" in Spanish for "processed" in English in Article 2, paragraph 1, new sub-paragraph (k), was not found to be appropriate.

333 The First Vice-Chairman also noted that there were some problems of translation, "pouvoir" having been used in the French version, instead of "autorité".

334 The Executive Council approved the amendment to Article 1, paragraph 1, recommended by the Preparatory Meeting.

Article 1, paragraph 2

335 The Chairman of the Sessional Drafting Group then explained that the purpose of the Proposed Text was to incorporate the idea of promoting ocean services as well as scientific investigations. The Preparatory Meeting had, however, recommended the deletion of the words "the development of", on the grounds that this did not add any significant meaning to what is conveyed by the word "promote".

336 The Executive Council approved the amendment to Article 1, paragraph 2 recommended by the Preparatory Meeting.

Article 2, paragraph 1

337 The Chairman of the Sessional Drafting Group recalled that the three paragraphs of this Article are, uniquely in the Commission's Statutes, unnumbered in the present text; for present purposes, these three paragraphs are numbered and this numbering is included in the recommended changes to this Article.

338 New sub-paragraph (f): the Preparatory Meeting had no amendments to the Proposed Text, which would appear to be realistic and reflect the Commission's actual work.

339 New sub-paragraph (g): here, the purpose of the amendment given in the Proposed Text is to strengthen TEMA by removing the limitation (in the present text of the Article) consisting of merely making recommendations on TEMA; now added is the idea of promoting TEMA projects in relation to each IOC programme. Thus, in the Proposed Text, the words "to develop" are now replaced by the word "promote"; by omitting the word "to" the notion of "promote" is better detached from the notion of "making recommendations".

340 New sub-paragraph (k): the only concern that had arisen at the Preparatory Meeting was the meaning of the word "product", especially in translation into Spanish. It had therefore been agreed to make it more precise by replacing it by "processed oceanographic data and information", and, in order to distinguish that type of product from the assessment studies, a comma was inserted after the word "information". The thrust of this new sub-paragraph arises from the use of monitoring data and observation for scientific purposes and for application to the protection of the marine environment; this notion is weakly expressed in the present Statutes.

341 New sub-paragraph (l): this entirely new sub-paragraph was adopted at the Preparatory Meeting; it represents a quite new function for the Commission, but one compatible with its purposes, flowing again from the idea of application of results of scientific investigations and from the present practice of the Commission. The Chairman of the Sessional Drafting Group reminded the Executive Council that the demands for this function will increase

and even at this Session of the Executive Council, a proposal for an intergovernmental mechanism to co-ordinate the preparation and distribution of standard reference materials for marine pollution monitoring and chemistry will be considered.

New sub-paragraph (m): this is a catch-all clause allowing the Commission to undertake appropriate activities that may not at present be identified or identifiable but which, quite unexpectedly perhaps, arise and have significant implications for the role and functions of the Commission; however, the Proposed Text was felt, at the Preparatory Meeting, to be too elaborate, and was simplified by referring to the scientific investigation of the "ocean and its interfaces", rather than attempting, as the Proposed Text does, to define, even if only broadly, the nature of those interfaces.

The Executive Council approved all the proposed amendments to Article 2, paragraph 1, with the exception of new sub-paragraph (j) which is dealt with below (paragraphs 358-368).

#### Article 2, paragraph 2

Here there is simply an editorial change, the term "take into account" (in the Proposed Text) being considered (in English, at least) (1) somewhat stronger than "bear in mind" (in the Present Text) the special needs and interests of developing countries.

The Executive Council approved this minor amendment.

#### Article 2, paragraph 3

The Proposed Text was intended to simplify the wording and thus clarify the meaning. The option to restrict it, by limiting it to the Commission, was agreed at the Preparatory Meeting. It constitutes a safeguard to the IOC and to the Member States whose individual position on the nature or extent of the jurisdiction of coastal States, generally or particularly, are not compromised by Article 2 as a whole.

The Executive Council approved the Proposed Text with the above-mentioned restriction to the Commission.

#### Article 3

The Proposed Text clarifies the relationship between the IOC and the international organizations with which it collaborates, with particular though not specific, reference to those Organizations that are members of the Inter-secretariat Committee on Scientific Programmes Relating to Oceanography and parties to the ICSPRO Agreement.

Regarding Article 3, new paragraph 2, the Representative of the IMO suggested that the last two lines in the Proposed Text "and accordingly to sustain the work of the Commission" was rather far from its governing verb "have agreed" so that, in English, there was the possibility that it could, instead, be associated with the first words "The Commission may act ...". He suggested repeating the secondary verb so that the last two lines would read "and have agreed accordingly to sustain the work of the Commission."

The Executive Council approved this proposal and the Proposed Text as thus amended.

#### Article 4, paragraph 3

The Proposed Text sharpens the Present text and introduces the notion of a delay between a notice of intention to withdraw and the effective date of withdrawal, the idea being to allow the Commission to take into account the implications of a withdrawal of a Member State. This Proposed Text was accepted by the Preparatory Meeting, but it was pointed out that, with this text, a maximum delay of up to three years could occur, depending on the date of notice.

To limit this delay, the Executive Council accepted a proposal, at the present Session, submitted by the Delegates of Japan, Cuba, Bulgaria and the UK, by which "The notice shall take effect on the first day of the next ordinary session of the Assembly following the date of notice of withdrawal if the notice is given at least one year before the first day of said session; if the notice of withdrawal is given less than one year before the first day of the said session, it shall take effect one year after the date of notice of withdrawal."

(1) There is no change in this phrase in the French or Russian translations.

Article 5, paragraph 4(b)

353 The Proposed Text is intended to fix in the Statutes the number of seats on the Executive Council open to election; at present this number is fixed in general terms by this Article and in specific terms by Rule of Procedure No. 18, which normally requires a revision of the Rule by means of a Resolution at the beginning of each Assembly. This can sometimes significantly affect Member States' preparation for such an election.

354 The Executive Council approved the Proposed Text adopted at the Preparatory Meeting.

Article 9, paragraph 1

355 The Proposed Text increases the precision of the Present Text by indicating that the executive head of the Commission's Secretariat is the Secretary of the Commission, so that the reference to a Secretary in paragraph 2 of this Article is also clarified. The Proposed Text also corrects the name of one of the organizations supporting the Commission, this organization having changed its name from International Maritime Consultative Organization to International Maritime Organization in May 1982.

356 The Executive Council approved the Proposed Text adopted at the Preparatory Meeting.

357 The Delegate of the USSR stated that the amendment to Articles which had been agreed in the Preparatory Meeting and put in Annex 1 of Resolution EC-XIX.8 (see paragraph 377, below) were, in his view, all consistent with the tenets of the UN Convention on the Law of the Sea, and especially with those of Article 239 of the Convention. He felt it was essential to strengthen the IOC, even within the framework of Unesco, as well as within the UN system.

358 The Executive Council recognized that no agreement on amendments to Article 2, paragraph 1, new sub-paragraph (j), or on Article 10, paragraph 3 could be achieved at the Preparatory Meeting. In the Proposed Text for new sub-paragraph (j) of Article 2, paragraph 1, three new but related ideas are embodied: to include as a function of the IOC the promotion of the "application of the results" of scientific investigation to the benefit of all mankind; then, to achieve this purpose, to facilitate co-operation amongst the Member States; and finally, in carrying out the two aforementioned activities, to take into account the interests and rights of States as far as research in zones under their jurisdiction is concerned. These rights, together with the related duties, are defined in the UN Convention on the Law of the Sea. The main difficulty that arose in the Preparatory Meeting had to do with the implications of the word "facilitate" (and therefore IOC's role) and the way in which States rights relating thereto should be seen or could be interpreted.

359 The Delegate of Brazil explained that his opposition to the Proposed Text was based on the idea, implied in this Text, that the IOC could act as an intermediary to facilitate procedures applicable to the authorization of scientific research in zones under national jurisdiction. This authorization is a prerogative of the Member State concerned. He also wished to avoid any text in the Statutes of the Commission that could be construed as attempting to interpret the Articles of the UN Convention on the Law of the Sea. In a spirit of co-operation, he proposed replacing "taking into account" by "subject to". He recognized that, unfortunately, this proposal, although supported by several Delegations, did not produce a consensus. He believed that the Brazilian position is quite compatible with the UN Convention on the Law of the Sea and is inspired by concern to protect the rights of coastal States in respect of marine scientific research. The Delegate thus supported proposal B which he had submitted to the Preparatory Meeting (Annex 2 of Resolution EC-XIX.8).

360 The Delegate of Argentina stated that the Articles of the UN Convention on the Law of the Sea on matters of interest to the IOC should prevail and guide any activity in this field, and that any amendments to the Statutes of the IOC should not imply in any way a juridical interpretation of the Articles of that Convention. On the understanding that proposals for modifications to the Statutes constitute a preliminary negotiation phase, the Delegate reserved his right to present, if appropriate, any eventual new proposal for modification. Regarding the Proposed Text of Article 2, paragraph 1, new sub-paragraph (j) placed before the Executive Council by the Preparatory Meeting, the Delegate supported proposal B. He was also in favour of incorporating the word "coastal" to qualify the word "States" as in the present text.

361 This latter proposal was supported by the Delegates of Brazil, Chile, Greece, Peru and Venezuela.

Some Delegates pointed out that the term "coastal" was limiting, since all States had rights and interests in this field. They could consider inclusion of the word "coastal" provided the word "duties", identified in the Convention, was added to the phrase "rights and interests", thus preserving the rights and interests of all States.

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The Delegate of Bulgaria reminded the Executive Council that Article 2, paragraph 1, new sub-paragraph (j) was not the place to take up questions of jurisdiction. Nor could the IOC adopt a position on matters of jurisdiction; Article 2, paragraph 3, says so and the Proposed Text was agreed by consensus at the Preparatory Meeting. He was ready to support proposals A ("taking into account all interests and rights of States ...") or C ("respecting all interests and rights ...") or even D (no reference at all to interests and rights, owing to deletion of last part of the Proposed Text), but not B ("subject to all interests and rights ...").

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The Delegate of the USSR supported this view, stressing his firm rejection of proposal B.

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The Delegate of the USA declared his preference for proposal D.

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The Delegate of Mexico reminded the Executive Council of his country's great interest in all aspects of the UN Convention of the Law of the Sea which it had signed and ratified. He informed the Executive Council of the adoption of a new federal marine law in his country to harmonize relevant national legislation with international law. He stressed his belief that the Commission's Statutes should be amended in the light of the UN Convention on the Law of the Sea. In particular, he noted that the present Article 2, paragraph 1, new sub-paragraph (i) was quite obviously obsolete and a revised version (as new sub-paragraph (j)) needs to be negotiated with a view to its adoption by the Assembly.

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The Delegate of the Federal Republic of Germany considered the facilitation of international co-operation in marine sciences as one of the key tasks of IOC. He wanted to see this properly reflected in the Statutes.

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The Observer of The Netherlands suggested that the second part of Article 1, paragraph 2, new sub-paragraph (j) is superfluous. Moreover, it presents all kinds of problems, for example: "...taking into account all interests ..." would seem to be impossible; not only rights and interests but also obligations should be included; and the rights and interests of States other than coastal States, including geographically disadvantaged States, would have to be mentioned as well.

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The Proposed Text for Article 10, paragraph 3 was not accepted, nor was any other text agreed, at the Preparatory Meeting. Two proposals for modifications to this paragraph were submitted to the Council: proposal A is intended to place an obligation on a Member State of the Commission that is not a Member State of Unesco to contribute to the resources of the Commission in accordance with criteria to be set by the Assembly; proposal B calls first on the Assembly to establish criteria and second, on a particular Member State (not a Member State of Unesco) to adhere to such criteria.

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The Delegate of the USSR reaffirmed his position on the contributions of Member States of the Commission not Member States of Unesco, by stating his preference for, and acceptance of, proposal A (Annex 2 of Resolution EC-XIX.8), and his complete rejection of proposal B.

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The Executive Council approved the aforementioned amendments to relevant paragraphs of Articles 1, 2 (with the exception of new sub-paragraph (j)), 3, 4, 5 and 9. The agreed changes are given in Annex 1 of Resolution EC-XIX.8 (see paragraph 377, below).

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The Executive Council noted that no agreement could be reached on Article 2, paragraph 1, new sub-paragraph (j) and on Article 10, paragraph 3.

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The Executive Council instructed the Secretary to send to all Member States, as soon as possible and in all the working languages of the Commission, the Working Document IOC/EC-XIX/12, and the Summary Report of the present Session (which contains in Annex 2 of Resolution EC-XIX.8 the various proposals for amendments to Articles on which no agreement had been reached, and in Annex 1 of the same Resolution the various proposed amendments to Articles on which agreement had been reached) with an invitation to the Member States to study the proposed changes on which agreement had been reached, with a view to approving the proposed changes at the Fourteenth Session of the Assembly.

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374 The Executive Council invited the Assembly at its Fourteenth Session to consider further the proposed amendments to Articles on which no agreement had been reached, with a view to achieving consensus thereon, and to recommend to the General Conference of Unesco, in accordance with Article 13 of the Statutes, all the proposed amendments approved by the Assembly at its Fourteenth Session.

375 The Executive Council also instructed the Secretary to send to the UN Organizations Members of ICSPRO as soon as possible the Summary Report of the present Session of the Executive Council inviting their views on the text adopted for Article 3 with respect to the role of IOC as a joint specialized mechanism.

376 The Executive Council urged Member States, according to their concerns expressed at the present Session of the Council and at the Preparatory Meeting, to consult amongst themselves with a view to developing agreed texts for Articles 2, paragraph 1, new sub-paragraph (j), and Article 10, paragraph 3, keeping the Secretary informed of progress in finding an acceptable text in order to facilitate preparation of appropriate documentation for the Fourteenth Session of the Assembly.

377 The Executive Council adopted Resolution EC-XIX.8.

378 The Chairman reminded the participants that, whatever their final decision on the recommended amendments, the procedures embodied in Article 13 of the Statutes and Rule of Procedure No. 56 would have to be followed in bringing final recommendations for amendments to the attention of the General Conference of Unesco.

#### 8. MEDIUM-TERM PLAN, PROGRAMME AND BUDGET

##### 8.1 IOC PROGRAMME AND BUDGET FOR 1986-87

379 The First Vice-Chairman reviewed decisions taken on the IOC Programme of Work by the Assembly at its Thirteenth Session (March 1985), by the Unesco Executive Board at its 121st Session (June 1985) and by the Unesco General Conference at its 23rd Session (Sofia, 8 October-9 November 1985). Her participation in the General Conference as a Member of her National Delegation had given her the opportunity to follow closely the debate on Programme X.4 (The Ocean and its Resources), within which is found the programme of the Commission. She called the attention of the Council to the strong support that had been given to the IOC Programme by Commission III. An interesting concept that had emerged from the debate was "that consideration should be given to the extent to which IOC Member States could provide direct financial support to the Commission". Although similar suggestions had been made at various times in the past, the present funding difficulties, which were not likely to be resolved through increased support through Unesco, could only be alleviated if Member States themselves assumed more responsibility, preferably by making direct contributions to the IOC Trust Fund. Attention was also drawn to a proposal made at the General Conference on the desirability of ensuring that the IOC programme was easily identifiable within Unesco programme and budget documents in a manner that reflects appropriately the Commission's role, structure and status.

380 The First Vice-Chairman suggested that the Council should note the activities placed in reserve in light of the Approved 23 C/5 (Programme and Budget for 1986-87), extracts of which for Programmes X.4 and X.5, were before the Council. She stressed that, as the Chairman had stated in his Circular Letter No. 1048 of 19 September 1985, "...should the total budget approved for the Commission be that of \$1 817 000, the IOC would return to about the funding level of the 21 C/5 for the period 1981-83.... (and that) the present exceptional situation within Unesco requires an exceptional response on the part of IOC Member States...".

381 In fact, with the further proposed reductions resulting from the withdrawal of two other Member States, the present operational budget of the Commission is \$1 646 700. This, coupled with a reduction in staff positions approved in the 22 C/5 of about 32%, presented a serious situation which required the guidance of the Council. As she had stated on several previous occasions, the reduced staffing of the Secretariat has resulted in an unacceptable workload for the present IOC Secretariat personnel. Even with the exceptional sacrifice being made by them, it was obvious that lack of staff was slowing down the implementation of some ongoing projects and had a negative

impact on the potential to generate proposals for extrabudgetary funding, a process that requires substantial staff time and expertise if it is to be handled correctly. In conclusion, she suggested that priority be given to reactivating projects and activities at the regional level, such as the First Session of IOCEA, and staff positions such as that for the IOCARIBE Secretariat.

There was general agreement on the serious financial situation facing the Commission and the need to address the issue from two perspectives. That on measures to ensure long-term stability in resources will be the subject of intersessional work as decided under Agenda Item 7.2. There remained the question of any immediate decisions that should be taken by the Council to attenuate the negative impact of reductions in the IOC budget and allow the Commission to go through the present crisis with as little damage as possible.

Various Delegates endorsed programmes or activities which, in their view, were particularly important. Others pointed out the danger of reducing funding for all programmes by a commensurate percentage because the inevitable result would be to lower the quality of the IOC programme and slow down a wide spectrum of activities. It would then be much more difficult to restore the momentum of the programme at a later stage when the funding situation improved. Attention was drawn to the potential support that might eventually be mobilized through bilateral programmes where there was an interface with IOC programmes and activities. Several Delegates, referring to contributions by Member States to the resources of the Commission, drew attention to the relation between the fixing of programme priorities and such contributions. They stressed the importance of making the setting of priorities independent of the contributions, giving the governing bodies full freedom to set priorities regardless of the source of funding. Some Delegates expressed the view that, whenever possible, regional activities of direct impact to participating countries should be given precedence over those that had less immediate potential for providing benefits to the Member States.

The Secretary presented the problems facing the Commission not as a crisis, but as an opportunity for Member States to assume their true responsibilities vis-à-vis the IOC which, after all, could never be more or less than a reflection of the commitment of its Members. Although many of the issues raised were far too complex to be resolved during the Session, the level of the debate had demonstrated a growing understanding of the role and functions of the IOC, and of the resources required to carry them out in a satisfactory manner.

The Executive Council recognized that the setting of priorities was a delicate and difficult task. It nevertheless recognized the need to set general guidelines for priority programmes, as suggested by the First Vice-Chairman, but also noted that the availability of funding was not the only factor in determining priority.

The Executive Council also took the view that, until the present deficit in the IOC budget was absorbed, Member States should make voluntary contributions to the IOC Trust Fund whenever possible in general support to the programme and that the Secretary should expend these contributions in such a way as to allow progressive implementation of activities that were included in the IOC programme for 1986-87 and subsequently placed in reserve.

The Executive Council instructed the Secretary to investigate bilateral and other potential sources of funding for IOC.

The Executive Council noted that the question of the financial responsibilities of Member States would be given further study during the intersessional period, as decided under Agenda Item 7.2, but was of the opinion that the likelihood of supplementary resources that might be made available to the Commission during 1986 should be borne in mind when considering the adjustments to the IOC programme that had been made by the General Conference.

The Executive Council recognized that it could not alter such decisions, but it could and should give guidance to the Secretary as to the methodology to be applied in implementing activities that had been placed in reserve, as additional funds became available.

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Based upon proposals in Document IOC/EC-XIX/11, the Executive Council agreed certain general guidelines for adjusting the 1986-1987 IOC programme of work, and authorized the Officers of the Commission to provide guidance to the Secretary on specific questions of priority, following consultation with the Chairmen of IOC Subsidiary Bodies. It suggested that one possible approach would be to request that the Chairmen of regional subsidiary bodies set priorities for those activities forecast within their respective regions, and the Chairmen of the scientific and technical subsidiary bodies to do likewise for activities not linked to a particular region. In view of the time required for such consultation by correspondence and analysis of priorities, this guidance would be particularly applicable to activities forecast for the latter half of 1986 and for 1987.

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The Executive Council agreed that, as had been proposed at the 23rd General Conference of Unesco, the IOC programme should be presented in future C/5 documents in a distinct manner which followed closely the structure and nomenclature used and approved by IOC Governing Bodies.

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The Executive Council adopted Resolution EC-XIX.9.

## 8.2 APPROVED PROGRAMME AND BUDGET 1986-1987 OF THE UNESCO DIVISION OF MARINE SCIENCES

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The Director of the Division of Marine Sciences, Dr. Dale C. Krause, indicated that, whereas other Agenda Items before the Executive Council dealt with IOC matters, this Agenda Item dealt with the programme and budget of the Division of Marine Sciences and the Regional Offices of Science and Technology, on which the Council should, in his view, take a disinterested position in providing advice.

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The Director of the Division outlined the general approach and highlights of that programme for the years 1984-1985 and 1986-1987, as presented in the report of the Division (MARINF/57). He pointed out that, after the separation of the IOC Secretariat in 1972, the Division had concentrated its programme on: (i) marine science manpower and infrastructure development; (ii) the development of coastal marine research; and (iii) co-operation with international non-governmental scientific organizations (NGOs), as a complementary approach to that of the Commission. This led to the establishment in 1979 of Unesco's Major Interregional Project on Research and Training Leading to the Integrated Management of Coastal Systems (COMAR).

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The programme for 1986-87 is concentrated about a hard core of vital, proven projects. Despite the budget cuts due to the withdrawal of the USA, the UK and Singapore, the programme would continue to deliver sound service to Member States and the scientific community. In the short term, flexibility and new initiatives have been adversely affected, but those aspects would be recovered in due course. Unesco was maintaining intellectual co-operation with the scientific communities of the three ex-Member States; the difference from the past being that this intellectual co-operation can no longer take place through governmental channels. The programme for 1986-87 will continue to contain significant co-operation with the marine science NGOs. The COMAR interregional project will continue to show important progress and continued growth through extrabudgetary support such as that for the mangrove ecosystem of the Asia and Pacific region. Training will continue to form a large and essential component of the programme, including advanced training acquired through the conduct of research. The regional programme for infrastructure and research development will continue to be strong, being funded at 97% of the 1984-85 level (before inflation) compared to an 82% average for the whole programme. The training and education activities would concentrate on fellowships, undergraduate marine science curricula and new teaching technology.

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Highlights of the 1984-1985 programme showed, for example, that Unesco enabled about 730 specialists to improve their knowledge in the different areas of oceanography, considerably more than in previous years, and that 25% of the fellowships awarded went to female scientists. The programme in all of the regions was strong, but most gratifyingly so in Africa, where significant scientific progress was accomplished. Co-operation with the marine scientific non-governmental organizations, particularly SCOR, IABO and IAPSO, was also strong, which provided scientific strength to the whole programme, including the publication component.



Concerning the Unesco-IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries, Dr. Krause stated that the Unesco part of the Plan has proceeded very well during 1984-85, thanks to Unesco Member States and their scientific institutions. Sixteen extrabudgetary marine science development projects were executed, totalling US \$9 328 000. This reflected Unesco's long experience in this field. He drew the attention of the Executive Council to the UNDP 1987-91 country-programming cycle; should countries wish to carry out UNDP development projects in marine science during this period, they must ensure that project proposals are presented in their UNDP 1987-91 Country Programmes.

Several Delegates thanked the Director of the Division of Marine Sciences for his extensive report and mentioned the benefits of the programme to Member States, giving as an example the mangrove project in south-east Asia, in which India plays a pivotal role in interaction with other Member States of the region. They expressed concern over the lack of concrete reference to the relation of the Division's activities to those of the IOC. This made it difficult to have a clear picture of the level of co-operation and interface between IOC and the Division.

The Director of the Division of Marine Sciences pointed out that the complementary nature of much of the Division's programmes to those of the IOC is as much an indicator of co-operation as the existence of joint activities.

The Executive Council welcomed the confirmation that the extrabudgetary projects implemented through the Division of Marine Sciences and the Unesco Regional Offices of Science and Technology were an integral part of the Unesco-IOC Comprehensive Plan for a Major Assistance Programme and encouraged continued strengthening of collaborative efforts with the IOC so that the Commission could benefit from the experience which the Division had accumulated over many years.

The Executive Council expressed its appreciation of the periodic Reports on activities presented by the Director of the Division of Marine Sciences and restated previous requests that such reports include clear references to the nature and level of the interfaces between the Division and the IOC's programmes. It instructed the Secretary to do likewise in relevant IOC reports.

### 8.3 PRELIMINARY CONSIDERATION OF IOC PROPOSALS FOR THE UNESCO MEDIUM-TERM PLAN FOR 1990-1995

The Secretary introduced the Document IOC/EC-XIX/8 Annex 4 (Development of the IOC Contribution to the Next Unesco Medium-Term Plan (1990-1995)). It reflects preliminary considerations in the Secretariat, taking into account various recent documents that cover the development of marine sciences, the present status of the major programmes of the Commission and trends in their development. Interessionally, the further elaboration of the IOC contribution to the Unesco Medium-Term Plan should benefit from input and advice from the Officers of the Commission's scientific, technical and regional subsidiary bodies, including the Guiding Groups of Experts, as well as the Commission's advisory bodies, under the overall guidance of a "group of wise men". In this way, input from the scientific and technical community active in marine environmental research and development would be secured. The submission, to the Secretary, by Member States, of suggestions and ideas would also be welcomed. The definition of the areas of scientific emphasis will benefit in particular from reviews such as "Ocean Science for the Year 2000". The formulation should be carried out in close collaboration with the Division of Marine Sciences as well as Member Organizations of ICSPRO, and should take into account the elaboration of LEPOR-II. Particular attention should be given to the need for developing and facilitating research in the coastal zone, in a global context, as one way of stimulating the general advancement of environmental sciences, and the proper use of marine resources. In this context, the development of the Medium-Term Plan can greatly benefit from closer attention to programmes presently being formulated within the ICSU family.

The Executive Council decided that the development of the IOC contribution to the Unesco Medium-Term Plan for 1990-1995 should be carried out under the overall guidance of those concerned with the further elaboration of the in-depth study on Measures to Ensure the Stability and Continuity of the Resources Required for the Implementation of the Commission's Programme of Work (see Agenda Item 7.2), taking into consideration the coastal-zone programmes of the Unesco Division of Marine Sciences and the relevant programmes of other Organizations Members of ICSPRO.

9. CO-OPERATION WITH ORGANIZATIONS OF THE UN SYSTEM AND OTHER BODIES

9.1 TWENTY-FOURTH SESSION OF THE INTER-SECRETARIAT COMMITTEE ON SCIENTIFIC PROGRAMMES RELATING TO OCEANOGRAPHY

404 The First Vice-Chairman referred to the Summary Report of the Twenty-fourth Session of the Inter-secretariat Committee on Scientific Programmes Relating to Oceanography (Document ICSPRO-XXIV/3), and an appraisal thereof by the Chairman of IOC (Document IOC/INF-657). She noted that the subjects covered at the Session encompassed a wide range of activities of mutual interest to Member Organizations and that the periodic meetings of ICSPRO are a vital adjunct to the role of IOC as a joint specialized mechanism for co-ordination of marine science and related activities within the UN System. She called attention to discussions on ways to improve complementarity in the formulation of programme planning documents, the updating of LEPOR, and the next Joint Oceanographic Assembly.

405 The Representative of SCOR reported on progress made to date in finalizing the site and timing of JGA and welcomed the expression of interest from ICSPRO.


406 The Representative of FAO confirmed the interest expressed by his Organization in working through ICSPRO to achieve the necessary interaction in planning for the next Joint Oceanographic Assembly. He reiterated the view expressed at ICSPRO regarding the necessity of identifying suitable themes for the Scientific Programme in order to ensure a successful conference, including mobilization of required support.

407 In absentia, the Director of the UN Ocean Economics and Technology Branch submitted the following information note to the Executive Council:

"At its Twenty-third Session, on 27 December 1968, the General Assembly of the United Nations adopted resolution 2413 (XXIII) on international co-operation in problems related to the oceans in which it 'endorses the concept of a co-ordinated long-term programme of oceanographic research designed to assist in a better understanding of the marine environment through science and to increase, in the interests of world economic development, the resources available to all the people of the world'. It has now been decided to up-date this long-term expanded programme of oceanographic research in order to take into account the developments that have occurred during the nearly 17 years that have elapsed since the adoption of the resolution and thereby to better equip the IOC to confront the challenges of ocean scientific research in the year 2000.

Taking into account discussions held by ICSPRO on this subject at its Twenty-third Session, it is suggested, as an initial step to this end, that the up-dated programme of oceanographic research be given the same status and credibility as the present LEPOR so as to enhance its acceptance and support. The Executive Council may wish to request the Secretary to submit to the summer session of ECOSOC in 1987 a detailed outline of the up-dated programme for its consideration. The ECOSOC should be requested to forward its views on the subject matter to the General Assembly of the United Nations at its 42nd session in September-December 1987. In doing this, the ECOSOC should be made aware that the choice of its summer session in 1987 is due to the fact that during that session the Ocean Economics and Technology Branch of the Department of International Economic and Social Affairs will be presenting a report dealing with economic and technical aspects of marine affairs and that the ECOSOC will be expected to comment on this report and forward its views to the General Assembly at its 42nd session. Thus, because an item on Marine Affairs is already included in the ECOSOC provisional agenda for its 1987 summer session and will then be addressed by the General Assembly, consideration of the outline of the up-dated LEPOR by the two bodies in 1987 will be facilitated and will pave the way for their consideration of a draft of the up-dated LEPOR in 1989."

408 The Executive Council expressed its satisfaction with the particularly useful Report of the Twenty-fourth Session of ICSPRO. Noting the agreement of Member Organizations to a revised time-table for the preparation of LEPOR-II, the Executive Council instructed the Secretary to move forward with the



necessary arrangements and decided that, since this was an activity presently placed in reserve, priority should be given to implementation of the revised plan as soon as additional resources become available.

The Executive Council agreed on the following timetable for the two-stage preparation of this plan, involving preparation of an outline plan and subsequently the full plan:

- (i) as recommended in Resolution XIII-19(B), the Secretary will, "in consultation with the Organizations Members of ICSPRO and, as required, calling on the advice of a few persons associated with the work of the Commission and that of the Member Organizations", develop a draft expanded outline for LEPOR-II based on the outline included in the Proposal for an Action Plan in 1986 contained in Resolution XIII-19;
- (ii) the draft expanded outline will be submitted to the Twenty-fifth Session of ICSPRO for comments and thence to the Fourteenth Session of the IOC Assembly (March 1987), to be forwarded for information to the second regular session of ECOSOC in the summer of 1987 (Geneva) and with a view to its submission to the UN General Assembly at its Forty-first Session (New York, Fall 1987);
- (iii) as further recommended in Resolution XIII-19(B), the Secretary will make the necessary arrangements with "the advisory bodies of the Commission, on the initiative of SCOR, to assist in the convening of an expert group in 1987 or early 1988, under the auspices of IOC and the Organizations Members of ICSPRO", to draft an updated version of LEPOR (LEPOR-II), to be submitted to the Fifteenth Session of the IOC Assembly (March 1989) and, if approved, to ECOSOC at its Summer Session in 1989 with a view to its submission to the UN General Assembly in 1989;
- (iv) the Secretary IOC will proceed, in all phases mentioned above, in close collaboration with the advisory bodies of the Commission.

The Executive Council adopted Resolution EC-XIX.10.

9.2 MEASURES TO STRENGTHEN CO-ORDINATION OF THE PROGRAMMES OF THE IOC AND THE UNESCO DIVISION OF MARINE SCIENCES

The Chairman of the IOC Working Committee for TEMA, Dr. Ulf Lie, who had also lead the Study Group (which included Dr. Agustin Ayala Castañares and Prof. Gotthilf Hempel) informed the Executive Council that, pursuant to Resolution XIII-7, the Group had prepared the study on Measures to Strengthen Co-ordination of the IOC and the Unesco Division of Marine Sciences' Programme Activities in Marine Research and Training. He recalled that the approaches to, and the means of, achieving the objectives of the two Secretariats have always been appreciably different. This, the Study Group believed, had led to a progressive overlap in certain fields, so that optimum use is not being made of the resources made available to the Unesco Division of Marine Sciences and to the Commission. The adoption of the Unesco-IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries is a sign of this community of purpose and action. The Study Group agreed that there was no reason to think that, because each entity was doing good work separately, they could not do it together, and had concluded that this could be achieved in the short to medium term by a much greater co-ordination of programmes and activities, and, in the longer term, by a merging of the two entities into a single Secretariat. One of the main impediments to this greater co-ordination of action was the historical differences between the Division's channels of communication with the Member States (mainly academic institutions and scientists) and the IOC's (usually governmental agencies, laboratories and ministries).

Dr. Lie felt that the Study Group's recommendations were modest and, for the most part, not difficult to implement, and if implemented would appreciably benefit the Member States. He thanked the other members of the Group (Dr. Ayala Castañares and Prof. Hempel) and the two Secretariats for their collaboration.

The Director of the Unesco Division of Marine Sciences, Dr. Dale C. Krause, briefly reviewed the Director General's comments on the Study Group's Report). In particular, as to the proposal that Unesco co-sponsor the Working Committee for TEMA, the Director-General agreed to study the implications of

such a proposal taking into account the fact that IOC and WMO have successfully collaborated since 1977 as co-sponsors of the Working Committee for the Integrated Global Ocean Services System. As to the proposal to enhance the complementarity of the actions of the IOC Secretariat and the Division through increased joint planning and concerted action, as appropriate, in programme implementation, including harmonization of such activities as publication series, missions, and public information, the Director-General noted that, where practicable, it will be effected, and in other cases, suitable feasibility studies will be undertaken. Regarding the proposal to encourage the formation of single National Committees or Commissions to co-ordinate marine science and to facilitate interaction between the Member States and Unesco and its IOC, the Director-General noted that the creation of such national bodies is a matter for the Member States to decide, bearing in mind the existence of National Commissions for Unesco, and the desirability of maintaining close relations with them. The Director-General considered that, under the present staff reductions, the recommendation to establish a Joint Secretariat TEMA Unit would appear not to be feasible.

- 414 Several Delegates stressed the view that, in spite of appearances, due largely to inadequate information and internal co-ordination in the Member States, the purposes and the work of the two entities were substantially different, and in practice, many Member States approach Unesco, on the one hand, and IOC, on the other, in quite different ways and for different reasons. They believed that their countries receive useful but different benefits from the programmes of the Division of Marine Sciences and of the Commission that stem from their different roles. The Division, they believed, deals mainly with academic and research institutions, assisting them, where necessary, to enhance their marine scientific capabilities, whereas the Commission deals mainly with governments and governmental research institutions. They noted that IOC has a major intergovernmental co-ordinating function within the UN system, which the Division does not. The idea of fusion of the two Secretariats would compromise the functional autonomy that the Commission enjoys within Unesco. The difficulties due to the existence of two different channels of communication at the national level were noted. However, some Delegates believed that a single channel may not be practical and may increase centralization.
- 415 The Delegate of Mexico, speaking as a co-author of the Report of the Study Group, reaffirmed the Group's appreciation of the good, but different, work done by both Secretariats, and suggested that, to maximize the benefits to the Member States, the Unesco-IOC Comprehensive Plan should be used as the main vehicle for enhancing the co-operation between the two entities and for co-ordinating their actions. If the two would jointly support the Working Committee for TEMA, which has the responsibility for overseeing and guiding the implementation of the Comprehensive Plan, the best use could be made of the limited resources. It would not then be necessary to fuse the Secretariats and perhaps create other unexpected difficulties. He recalled that the Working Document IOC/EC-XIX/13 before the Council had evoked the possibility, in the long term, of fusing the two secretariats, but he believed that, before it could be discussed, such a possibility would require very careful study, taking into account the advantages, the disadvantages and the time it would require.
- 416 A few Delegates, and the Observer of The Netherlands, suggested that IOC is still poorly perceived by the majority of academic marine scientists at the national level and that an increased effort must be made to clarify for them the role and possibilities of the IOC and of the Division and the underlying complementarity of their actions.
- 417 Some Delegates thought it would be useful to review the Terms of Reference of the Working Committee for TEMA, and to reassess the Working Committee's functions so as to make it more effective.
- 418 They believed that it is in the interests of Member States that the IOC and the Division of Marine Sciences should both be closely involved in the implementation of the Comprehensive Plan, the Division paying particular attention to education and the Commission to international co-operative marine research and ocean services.
- 419 The Delegates of Egypt and Kenya, while believing that the Study Group should make a thorough study of the various problems evoked, also believed that appropriate experts from developing countries should be invited to join it, so as to reflect a broader range of views.

The Delegate of Australia stated that, although the subject is worthy of more consideration in the present situation, Australia reserves its position on this matter.

The Observer of The Netherlands expressed concern about the status of the IOC in the development of marine science. In his view, more Member States and scientists should be involved, particularly through the development of a wide range of global programmes. He proposed a study of the possibility of developing co-operation between IOC programmes and the ongoing activities of the Division of Marine Sciences in the context of COMAR.

The Executive Council thanked Dr. Lie, Dr. Ayala and Prof. Hempel, for the useful report they had put before it.

It agreed that the co-sponsorship of the Working Committee for TEMA by Unesco through the Division of Marine Sciences would enhance the co-ordination of the actions of the two Secretariats, and promote the co-ordination of the work of IOC regional subsidiary bodies with the implementation of regional activities of the Division.

The Executive Council called on the Director of the Division of Marine Sciences and the Secretary of IOC to consult routinely on mission and meeting schedules and, as appropriate, on publications aimed at the Member States and their marine science communities.

The Executive Council believed that the Member States could greatly assist in this matter by making a special effort to unite, if not unify, the various national constituencies of the IOC and the Division of Marine Sciences at the national level through the strengthening, if in existence, or the creation, where necessary and appropriate, of a single National Oceanographic Commission or similar co-ordinating body to facilitate the necessary liaison between the national marine scientific community and the IOC and Unesco.

The Executive Council adopted Resolution EC-XIX.11.

10. DATES AND PLACE OF THE FOURTEENTH SESSION OF THE ASSEMBLY AND THE TWENTIETH SESSION OF THE EXECUTIVE COUNCIL.

10.1 BRUUN MEMORIAL LECTURES AT THE FOURTEENTH SESSION OF THE ASSEMBLY

The First Vice-Chairman introduced the subject of the Bruun Memorial Lectures for 1987, referring to the clear directives that had been given to her by the Thirteenth Session of the Assembly. Based on these directives that the 1987 Lectures should revolve around a regional theme, she consulted with her fellow Officers and they submitted the following themes to the Council for consideration:

- (i) Scientific basis for the prevention of marine pollution in the IOCARIBE region;
- (ii) Geology and tectonics in the WESTPAC region;
- (iii) Monsoons and currents in the Indian ocean;
- (iv) (as an additional possibility) the International Bathymetric Chart of the Mediterranean and Overlay Sheets, as an example for similar activities in other regions.

The Executive Council endorsed the suggestions made by the First Vice-Chairman on the topics for the 1987 Bruun Memorial Lectures, it being understood that a speaker for the fourth topic would be sought if difficulties were encountered in identifying an appropriate speaker for one of the first three topics.

11. ADOPTION OF THE SUMMARY REPORT

429           The Executive Council adopted the Draft Summary Report of the present  
Session as amended and eleven Resolutions (Annex II hereto). It instructed the  
Secretary to make the necessary editorial corrections and improvements in the  
final version.

12. CLOSURE

430           The Chairman briefly addressed the Council. He stressed the high  
value and economic importance of the oceans to the Member States. He believed  
IOC could deliver the services and the scientific results that its Member  
States need, provided the means were made available to it. However, this  
implied increased contributions by the Member States to the IOC Trust Fund or  
by providing facilities for the conduct of IOC activities. He appealed to the  
Delegates to inform their respective governments - especially those of the more  
prosperous Member States - of the importance of providing increased help to the  
Commission. To study the manifold oceanic phenomena that affect human life for  
good or bad, the Member States must co-operate, and support to the Commission  
was a very important way to do so.

431           The Chairman paid tribute to the constructive spirit of the Delegates,  
Representatives and Observers. He particularly thanked those who had served in  
the Sessional Working Groups, as well as the Secretary and the staff and the  
interpreters.

432           The Delegate of Peru, on behalf of the Members of the Council, thanked  
the Chairman for his excellent conduct of the Session, and the Secretariat for  
its devoted support.

433           The Secretary also thanked the participants for their collaboration in  
the conduct of the work and, in particular, the Rapporteur, Dr. El-Refai  
Bayoumi (Egypt). He also paid tribute to his staff.

434           The First Vice-Chairman then informed the Executive Council that this  
was the last Session at which Dr. Neil Campbell would participate as the  
Delegate of Canada, and she wished, on behalf of the Executive Council, to pay  
homage to him. Since Dr. Campbell would soon be retiring from his position  
in the Canadian Government, the Commission would be losing the benefit of his  
wide experience of marine affairs. This experience dates from 1965 when Dr.  
Campbell first became a member of the Canadian Delegation, becoming its Head in  
1971. In 1969, he was elected First Vice-Chairman of the Commission, holding  
this post till the Twelfth Session of the Assembly. During this latter period,  
he participated actively in the Working Group on the Future Role and Functions  
of the Commission; it was this Group that laid the documentary foundations of  
the work of modernizing the Statutes.

435           In a 35-year career, Neil Campbell was also an active participant in  
ICES, in the UN Conference on the Human Environment, in the drawing up of the  
London Dumping Convention, in Canada's bilateral co-operation, and, of course,  
in the UN Conference on the Law of the Sea as a representative of the IOC.  
Following his doctoral degree, Neil Campbell specialized in the oceanography of  
fjords and the Arctic; his first introduction to international marine science  
was as leader of the Canadian oceanographic research programme under the  
International Geophysical Year. This led to high-ranking posts in the Canadian  
Government, culminating in that of Director General for Ocean Sciences in the  
Canadian Department of Fisheries and Oceans.

436           We shall also remember his fine human qualities and shall miss his  
wise counsel at the next Assembly. Nevertheless, we hope that we shall  
continue to be able, in one way or another, to benefit from his vast experience  
in international marine scientific affairs.

437           Following this eulogy, the Delegate of the United Kingdom presented  
Dr. Campbell with a token of the Council's esteem.

438           The Chairman closed the Nineteenth Session of the Executive Council at  
1830 on 12 March 1986.

ANNEX I

AGENDA

1. OPENING
2. ADMINISTRATIVE ARRANGEMENTS
  - 2.1 Adoption of the Agenda
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3. SECRETARY'S REPORT ON INTERSESSIONAL ACTIVITIES
4. OCEAN SCIENCES
  - 4.1 Climatic Changes and the Ocean
  - 4.2 Ocean Mapping
  - 4.3 Marine Pollution Research and Monitoring
  - 4.4 Application of the International System of Units in Oceanography
5. OCEAN SERVICES
  - 5.1 Integrated Global Ocean Services System
  - 5.2 Ocean Observing Systems
    - 5.2.1 Global Sea-level Observing System
    - 5.2.2 Drifting Buoys
  - 5.3 International Oceanographic Data Exchange and Marine Information Management
  - 5.4 International Tsunami Warning System in the Pacific
6. REGIONAL SUBSIDIARY BODIES AND REGIONAL CO-OPERATION
  - 6.1 IOC-Unesco Workshop on Regional Co-operation in Marine Sciences in the Central Indian Ocean and Adjacent Seas and Gulfs
  - 6.2 Marine Science Co-operation in the Mediterranean
  - 6.3 Marine Science Co-operation in the WESTPAC Region
    - 6.3.1 Intersessional Activities of the Programme Group for the Western Pacific
    - 6.3.2 Co-operation with CCOP and CCOP(SOPAC)
7. ENHANCING THE EFFECTIVENESS OF THE COMMISSION TO MEET THE NEEDS OF MEMBER STATES AND THE WORLD COMMUNITY
  - 7.1 The Structure of the Commission and the Organization and Conduct of Meetings
  - 7.2 The Stability and Continuity of the Commission's Resources
  - 7.3 Measures to Enhance the Role and Efficiency of the Commission
8. MEDIUM-TERM PLAN, PROGRAMME AND BUDGET
  - 8.1 IOC Programme and Budget for 1986-1987
  - 8.2 Approved Programme and Budget 1986-1987 of the Unesco Division of Marine Sciences
  - 8.3 Preliminary Consideration of IOC Proposals for the Unesco Medium-Term Plan for 1990-1995
9. CO-OPERATION WITH ORGANIZATIONS OF THE UN SYSTEM AND OTHER BODIES
  - 9.1 Twenty-Fourth Session of the Inter-Secretariat Committee on Scientific Programmes Relating to Oceanography
  - 9.2 Measures to Strengthen Co-ordination of the Programmes of the IOC and the Unesco Division of Marine Sciences
10. DATES AND PLACES OF THE FOURTEENTH SESSION OF THE ASSEMBLY AND THE TWENTIETH SESSION OF THE EXECUTIVE COUNCIL
  - 10.1 Bruun Memorial Lectures at the Fourteenth Session of the Assembly
11. ADOPTION OF THE SUMMARY REPORT
12. CLOSURE

ANNEX II

ADOPTED RESOLUTIONS

<u>Resolution number</u>	<u>Agenda Item</u>	<u>Title</u>
EC-XIX.1	4.1	WCRP - Proposed TOGA Intergovernmental Panel
EC-XIX.2	4.3	Standard Reference Materials for Marine Pollution and Chemistry
EC-XIX.3	4.3	Group of Experts on Effects of Pollutants
EC-XIX.4	4.4	Endorsement of the International System of Units (SI) in Oceanography
EC-XIX.5	5.1	Fourth Session of the Joint IOC-WMO Working Committee for IGOSS
EC-XIX.6	5.2.1	Implementation of the Global Sea-Level Observing System (GLOSS)
EC-XIX.7	5.2.2	Drifting Buoys
EC-XIX.8	7.3	Amendments to the IOC Statutes
EC-XIX.9	8.1	IOC Programme and Budget for 1986-87
EC-XIX.10	9.1	Joint Oceanographic Assembly (JOA) (1988/89)
EC-XIX.11	9.2	Strengthening Co-operation between the Unesco Division of Marine Sciences and the Intergovernmental Oceanographic Commission



Resolution EC-XIX.1

WCRP - PROPOSED TOGA INTERGOVERNMENTAL PANEL

The Executive Council,

Noting (i) that the WMO Executive Council, at its 37th Session, agreed to consider, at its 38th Session, proposed terms of reference for an intergovernmental body to review the state of the implementation of the TOGA Study, and to provide a forum for intergovernmental consultations to facilitate co-ordination of available national resources that might be applied to the Study; (ii) that oceanographic observations, tropical ocean model development and determination of the fluxes across the air-sea interface are three major TOGA components which lie within the competence of the world oceanographic community; (iii) that, according to the principles governing co-operation between Unesco and ICSU on the development of the oceanographic component(s) of the WCRP, through IOC and SCOR, the IOC will act as the intergovernmental body responsible for the overall co-ordination of the oceanographic component(s) of the WCRP and related ocean services;

Noting also that the IOC Assembly, at its Thirteenth Session, stressed the need to strengthen co-operation with WMO regarding intergovernmental planning and co-ordination of proposed experiments and invited WMO to define, jointly with IOC, the arrangements and procedures for co-ordination of intergovernmental aspects of the implementation of TOGA and WOCE, and identify specific contact points in both organizations;

Having undertaken, through CCCO, in co-operation with SCOR and with the Joint Scientific Committee (JSC) for the World Climate Research Programme, the development of the scientific programme for TOGA and the expansion of operational ocean-observing and data-management activities in response to requirements from the Scientific Steering Group for TOGA;

Noting further that, by joint Circular Letters, the Member States of IOC and Members of WMO were requested to designate one person to act as a common WMO-IOC Focal Point for the TOGA Study or designate one expert for meteorology/climatology and one expert for oceanography, to act jointly in that capacity;

Re-emphasizes the need for a forum for intergovernmental consultations on the implementation of TOGA, and that an intergovernmental co-ordination mechanism for TOGA should be a joint effort of the meteorological and oceanographic communities, through WMO and IOC;

Instructs the Secretary to bring the opinion of the Executive Council, that the Proposed TOGA Intergovernmental Panel be jointly sponsored by WMO and IOC, to the attention of the Secretary General of WMO in order that this opinion may be placed before the Informal Planning Meeting on the WCRP (Geneva, 12-16 May 1986) and the 38th Session of the WMO Executive Council.

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Financial implications: none.

Resolution EC-XIX.2

STANDARD REFERENCE MATERIALS FOR MARINE POLLUTION AND CHEMISTRY

The Executive Council,

Recalling the instruction of the Assembly at its Thirteenth Session (in paragraph 278 of the Summary Report) to the Working Committee for GIPME, to prepare, through the IOC-UNEP Group of Experts on Methods, Standards and Intercalibration (GEMSI), a proposal for an international mechanism to co-ordinate the preparation and distribution of standard reference materials for use in marine pollution research and monitoring and in marine chemistry, for consideration by the Executive Council at its Nineteenth Session,

Noting also the progress made, the positive response of producing agencies, and the proposal that a body be established and jointly sponsored by IOC and other relevant international organizations, in particular UNEP, IAEA, and ICES, to provide the necessary international mechanism,

Decides to create a Group of Experts on Standard Reference Materials for Marine Pollution and Chemistry, with the following Terms of Reference:

- (i) to provide advice on the needs for, and availability of, standard reference materials to interested international organizations, the producers of reference materials and the marine chemical oceanographic community;
- (ii) to provide advice on the co-ordination of efforts to develop and distribute standard reference materials, including their use in ensuring the collection of comparable marine chemical data;
- (iii) to co-ordinate activities to resolve analytical problems relating to such materials;
- (iv) to anticipate the long-term development requirements for marine analytical chemistry reference materials, recommend priorities and estimate the resources needed;
- (v) to promote communication between marine and analytical chemistry groups, assist in the exchange of information, and recommend ways of improving the awareness and use of reference materials.

Invites UNEP, IAEA and ICES to co-sponsor the aforementioned Group of Experts.

Instructs the Secretary to establish the exact modalities of co-sponsorship and operation of this Group of Experts through intersecretariat consultations with the co-sponsors.

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Financial implications: not to exceed \$ 5,000

Resolution EC-XIX.3

GROUP OF EXPERTS ON EFFECTS OF POLLUTANTS

The Executive Council,

Noting the recent significant developments in the activities of the Working Committee for GIPME's Group of Experts on Effects of Pollutants (GEEP),

Noting also the continuing strong development of the activities of the Group of Experts on Methods, Standards and Intercalibration (GEMSI), and the associated increase in the number of scientists participating in these activities, partly as a result of the co-sponsorship of the Group by UNEP,

Being aware of the need to maintain a strong capability, in particular in the field of biological effects studies, and to cover the needs of the different ocean regions in this respect,

Being also aware of the responsibilities of the International Maritime Organization (IMO) and the activities of the International Council for the Exploration of the Sea (ICES) in this field,

Decides that the maximum number of participating experts in any one Session of GEEP be increased to ten, to be selected on the basis of the scientific expertise and regional coverage required by the Agenda of a particular session,

Invites IMO and ICES to co-sponsor the Group of Experts on Effects of Pollutants (GEEP).

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Financial implications: \$ 10,000 per annum (not in 23 C/5)

Resolution EC-XI.4

ENDORSEMENT OF THE INTERNATIONAL SYSTEM OF UNITS (SI) IN OCEANOGRAPHY

The Executive Council,

Noting that the International Association for the Physical Sciences of the Ocean (IAPSO) has recommended the adoption of the International System of Units (SI) in Oceanography, as contained in Document Unesco Technical Papers in Marine Science 45/IAPSO Publication Scientifique No.32, and has urged the scientific community and publishers and editors of oceanographic journals to use this System.

Further noting that the Unesco-ICES-IAPSO-SCOR Joint Panel on Oceanographic Tables and Standards and the Hydrography Committee of ICES have endorsed the use of SI units in physical oceanography,

Recalling that the Executive Council, at its Fourteenth Session in June 1981, and the Assembly, at its Twelfth Session in November 1982, adopted and recommended the use of the Practical Salinity Scale (1978) and the International Equation of State of Seawater (1980),

Recognizing the need for scientists and data centres to use universally agreed units, symbols and nomenclature, in order to facilitate the exchange and intercomparability of data,

Expresses its appreciation for the dedicated work of the IAPSO Working Group on Symbols, Units and Nomenclature in Physical Oceanography (SUN), under the leadership of its Chairman, M. Maurice Menaché;

Commends the efforts of IAPSO, the Unesco-ICES-IAPSO-SCOR Joint Panel on Oceanographic Tables and Standards, and the Unesco Division of Marine Sciences in bringing this work to a successful conclusion;

Endorses the International System of Units (SI) in Oceanography;

Urges Member States to promote its use;

Instructs the Working Committee on IODE to promote the use of the SI system by data centres and oceanographic institutions; and

Instructs the Secretary, in co-operation with the Unesco Division of Marine Sciences, to bring this Resolution to the attention of the Member States, and to ensure that Member States receive all necessary information by giving wide distribution to the aforesaid report.

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Financial implications: none.

Resolution EC-XIX.5

FOURTH SESSION OF THE JOINT IOC-WMO WORKING COMMITTEE FOR IGOSS

The Executive Council,

Noting the Executive Summary of the Fourth Session of the Joint IOC-WMO Working Committee for the Integrated Global Ocean Services System (IGOSS) together with the nine Resolutions and the six Recommendations adopted at the Session,

Recalling Resolution XIII-6,

Decides, subject to a similar decision being taken by WMO, to take action on the Recommendations, in co-operation with WMO as appropriate, as follows:

Rec.1 (JWC-IGOSS-IV) - Maintenance and implementation of ship-of-opportunity programmes

- (a) Urges Member States to: (i) maintain and if possible enhance existing ship-of-opportunity programmes; (ii) implement new ship-of-opportunity programmes in data deficient areas through national, bilateral or multilateral efforts; (iii) ensure that oceanographic data so collected are reported through IGOSS;
- (b) Instructs the Secretary to assist Member States in these activities.

Rec.2 (JWC-IGOSS-IV) - Implementation of an IGOSS Sub-surface Thermal Structure Pilot Project

- (a) Approves the establishment and implementation of an IGOSS Sub-surface Thermal Structure Pilot Project with the purpose of producing regional mean sub-surface thermal structure products;
- (b) Urges Member States to participate in this Pilot Project through their National Oceanographic Centres for IGOSS and other national oceanographic institutions.

Rec.3 (JWC-IGOSS-IV) - IGOSS regional implementation and Rec.4 (JWC-IGOSS-IV) - IGOSS Training and Assistance Programme

- (a) Affirms its belief that, in order to be efficiently implemented, the IGOSS Training and Assistance Programme should be closely linked with the regional implementation of IGOSS;
- (b) Urges Member States to increase their participation in IGOSS, its regional components and its Training and Assistance Programme, in particular through additional bilateral assistance, donations to the IOC Trust Fund, participation in the IOC Voluntary Co-operation Programme, and support to relevant TEMA activities.
- (c) Instructs the Secretary to: (i) ensure that an appropriate training and assistance programme is included in regional IGOSS implementation projects;

(ii) make necessary arrangements, possibly by appointing a consultant, to prepare a technical paper to document and demonstrate examples where the use of ocean products provided by IGOSS have resulted in benefit to the Member States.

Rec. 5 (JWC-IGOSS-IV) - General Plan and Implementation Programmes 1982-1985

- (a) Decides to extend the validity of the IGOSS General Plan and Implementation Programme 1982-1985 up to end-1988;
- (b) Instructs the Secretary to make necessary arrangements, in close co-operation with the Secretary-General of WMO, for the preparation of a new IGOSS Plan and Implementation Programme to cover the years 1989 to 1995 inclusive.

Rec. 6 (JWC-IGOSS-IV) - Review of previous resolutions of the IOC and WMO Executive Councils relevant to the field of activities of the Joint IOC-WMO Working Committee for IGOSS

Decides to take into account the Recommendation when reviewing the status of IOC Resolutions.

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Financial implications: Rec. 3/4, (c), (iii)

Note: This Resolution replaces Resolutions EC-XVII.4 which is no longer in force.

Resolution EC-XIX.6

IMPLEMENTATION OF THE GLOBAL SEA-LEVEL OBSERVING SYSTEM (GLOSS)

The Executive Council,

A

Recalling IOC Resolution XIII-7 on the development of the Global Sea-Level Observing System (GLOSS),

Expresses its thanks to the experts who prepared the draft Implementation Plan,

Accepts, in principle, the Implementation Plan for GLOSS and its regional components;

Expresses its appreciation to the Governments of Brazil, China, France, India, Portugal, Sweden and the United States of America, for their offers to provide assistance to developing countries in setting up their national components of GLOSS, and to the United Kingdom for organizing the Third Training Course on Sea-Level Measurements, in 1985.

B

Noting with concern, however, the lack of responses from Member States to the request of the Secretary regarding participation in GLOSS and assistance to other countries, and the fact that the funds allocated in the IOC budget for 1986-1987 are insufficient to implement this project in full,

Again urges Member States to provide, without further delay, the requested information on their participation in GLOSS and on the provision of assistance to other countries through the VCP or Trust Fund, or on a bilateral/multilateral basis;

Invites the Chairmen of all IOC regional subsidiary bodies to consider at their forthcoming sessions the development of regional sea-level projects as components of GLOSS, and to submit the resulting proposals to the IOC Assembly at its Fourteenth Session;

Invites Unesco to provide support for implementation of GLOSS through its Division of Marine Sciences;

C

Recognizing that, in many Member States, the collection and analysis of sea-level data is the responsibility of the national hydrographic services and that the IHO is responsible for a world-wide Tidal Data Bank,

Decides that, when proceeding with the development and implementation of the Global Sea-Level Observing System (GLOSS), IOC shall work in close co-operation with the IHO

D

Noting that sea-level is one of the primary parameters of the approved IGOSS General Plan and Implementation Programme (1982-1985);

Instructs the Secretary, in consultation with the Chairmen of the Joint Working Committee for IGOSS and the Programme Group on Ocean Processes and Climate:

(i) to ensure adequate co-ordination in the development of GLOSS, taking into account ocean service, research and geodetic requirements; (ii) to arrange for publication of the GLOSS Implementation Plan in the IOC Technical Series, after incorporation of comments and statements of commitments from Member States; and (iii) to report on progress in implementation to the Programme Group on Ocean Processes and Climate and to the Fourteenth Session of the Assembly;

Further instructs the Secretary to consider, in consultation with the Chairmen of the IOC regional subsidiary bodies and the Chairman of TEMA, ways and means of providing assistance to developing countries in the establishment and maintenance of sea-level stations and training of specialists.

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Financial implications: \$4,000  
(Not forecast in  
23 C/5 Approved)  
\$3,000  
(Not in 1986 budget)  
\$20,000  
(Placed in reserve; to be funded  
from Member State contributions)  
\$9,000  
(Included in 1986 budget)  
\$12,000  
(Included in 1986 budget)  
\$9,000  
(Placed in reserve; to be funded  
from Member State contributions)



Resolution EX-XIX.7

DRIFTING BUOYS

A

The Executive Council,

Noting (i) the Report of the Joint WMO-IOC Preparatory Meeting for the Establishment of a Drifting-Buoy Consortium (Geneva, 15-19 April 1985) and its Recommendation 1 (WMO/IOC-PREP-DBC) - Drifting-Buoy Co-operation Panel; (ii) Resolution 10 (EC-XXXVII) - Drifting-Buoy Co-operation Panel, adopted by the Executive Council of WMO at its Thirty-seventh Session (Geneva, 5-21 June 1985), and in particular the strong invitation to IOC to establish the Drifting-Buoy Co-operation Panel jointly with WMO; (iii) the decision by the Chairman IOC that the Commission should co-sponsor the First Session of the Drifting-Buoy Co-operation Panel; (iv) the Report of the First Session of the Drifting-Buoy Co-operation Panel (Toulouse, 14-16 October 1985) and, in particular, the request that IOC administer the funds provided for the position of Technical Co-ordinator for the Drifting-Buoy Co-operation Panel; and (v) the action taken by the Secretary to meet this request,

Recognizing: (i) the increased need for oceanographic and marine meteorological data to meet the objectives of major IOC and WMO programmes, in particular from the many data-sparse areas of the world ocean; (ii) the proved ability of drifting-buoys to provide such data on a routine basis; (iii) the economic benefit that may be gained through international co-ordination of drifting-buoys activities; and (iv) the desirability of providing an appropriate joint IOC-WMO framework for working out this co-ordination;

Endorses the action taken by the Chairman regarding the establishment of the Drifting-Buoy Co-operation Panel jointly with WMO, and the holding of its First Session;

Accepts the invitation of WMO to co-sponsor the Drifting-Buoy Co-operation Panel, with the participation of interested Member States of IOC and Members of WMO;

Endorses the Terms of Reference given in Annex 1 to this Resolution;

Agrees that the Drifting-Buoy Co-operation Panel should be served by a full-time Technical Co-ordinator, whose Terms of Reference are given in Annex 2 hereto, provided that the post is supported by participating Member States;

Instructs the Secretary to: (i) provide the Drifting-Buoy Co-operation Panel with secretariat services through the IOC Secretariat, mainly for the preparation for, and holding of, its yearly sessions, within the resources available; (ii) ensure that a Technical Co-ordinator for the Drifting-Buoy Co-operation Panel, with the Terms of Reference in Annex 2 to this Resolution, is appointed as a consultant funded through contributions earmarked for this purpose to the IOC Trust Fund.

B

Noting the report of the Thirteenth Session of the Assembly (paragraph 322);

Recognizing that the legal aspects related to drifting buoys have not been reviewed since 1972;

Instructs the Secretary to explore the matter, in consultation with IMO and WMO, and to submit his findings to the Assembly at its Fourteenth Session.

Annex 1 to Resolution EC-XIX.7

TERMS OF REFERENCE FOR THE DRIFTING-BUOY CO-OPERATION PANEL

The Drifting-Buoy Co-operation Panel shall:

- (i) Consider the expressed needs of the international meteorological and oceanographic communities for real-time or archival data from buoys drifting freely in the oceans and request action from its members, technical co-ordinator or action groups to meet these needs;
- (ii) Co-ordinate activity on existing programmes so as to optimize the provision and timely receipt of good quality data from them;
- (iii) Propose, organize and implement, through the co-ordination of national contributions, the expansion of existing programmes or the creation of new ones to supply such data;
- (iv) Encourage the initiation of national contributions to drifting-buoy programmes from countries which do not make them;
- (v) Promote the insertion of all available and appropriate drifting-buoy data into the Global Telecommunication System;
- (vi) Promote the exchange of information on drifting-buoy activities and encourage the development and transfer of appropriate technology;
- (vii) Ensure that other bodies actively involved in drifting-buoy use are informed of the workings of the Panel and encourage, as appropriate, their participation in the Panel deliberations;
- (viii) Make and regularly review arrangements to secure the services of a Technical Co-ordinator with the Terms of Reference given in Annex 2 hereto;
- (ix) Submit annually to the Executive Councils of the WMO and the IOC a report which shall include summaries of the existing and planned drifting-buoy deployments and data flow.

Annex 2 to Resolution EC-XIX.7

TERMS OF REFERENCE FOR THE TECHNICAL CO-ORDINATOR  
OF THE DRIFTING-BUOY CO-OPERATION PANEL

shall: The Technical Co-ordinator of the Drifting-Buoy Co-operation Panel

- (i) Under the direction of the Drifting-Buoy Co-operation Panel, take all possible steps within the competence of the Panel to assist in the successful achievement of its aims;
- (ii) Assist in the development and implementation of quality-control procedures for drifting-buoy systems;
- (iii) Assist in setting up suitable arrangements for notifying the appropriate user communities of changes in the functional status of operational drifting buoys;
- (iv) Assist in the standardization of drifting-buoy data formats, sensor accuracy, etc.;
- (v) Assist when requested with the development of co-operative arrangements for drifting-buoy deployments;
- (vi) Assist in the clarification and resolution of issues between Service Argos and drifting-buoy operators;
- (vii) Assist in promoting the insertion of all available and appropriate drifting-buoy data into the Global Telecommunication System;
- (viii) Supply information about drifting-buoy developments and applications to the WMO and IOC Secretariats and assist the Drifting-Buoy Co-operation Panel to promote an international dialogue between oceanographers and meteorologists;
- (ix) Co-ordinate and monitor the flow of drifting-buoy data into appropriate permanent archives.

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Financial implications: none

Note: This Resolution replaces Resolutions EC-XI.12, EC-XIII.10 and XII-5, which are no longer in force.

Resolution EC-XIX.8

AMENDMENTS TO THE IOC STATUTES

The Executive Council,

Recalling the action that has been taken by the Commission to review and update its Statutes, in the light of the emerging new ocean regime and the growing demands of its Member States for increased co-operation in international marine science, related ocean services, and training, education and mutual assistance,

Also recalling the invitation addressed by the Assembly, at its Thirteenth Session, through Resolution XIII-13, to the Past Chairman to arrange for the preparation, in collaboration with the Officers of the Commission and the Secretary, of three in-depth studies, including one on "measures to enhance the role and efficiency of the Commission in the long term to meet the new needs of Member States and the world community",

Having studied Document IOC/EC-XIX/12 (Measures to Enhance the Role and Efficiency of the Commission in the Long Term to Meet the Needs of Member States and the World Community) and Document IOC/EC ad hoc-I/3 (Summary Report of the ad hoc Preparatory Meeting),

Having reached a consensus on amendments to Article 1 (paragraphs 1 and 2), Article 2 (paragraph 1, new sub-paragraphs (f), (g), (k), (l) and (m); paragraph 2 and paragraph 3), Article 3, Article 4, paragraph 3, Article 5, paragraph 4, and Article 9, paragraph 1, Article 10, paragraphs 1, 2 and 4,

Recognizing that further study is required to achieve a consensus on amendments to Article 2, paragraph 1, new sub-paragraph (j), and Article 10, paragraph 3, on which the proposals of the Preparatory Meeting are given in Annex 2 to this Resolution,

Recommends that the Assembly approve the amended texts proposed for Articles 1, 2 (except new sub-paragraph (j)), 3, 4, 5 and 9, given in Annex 1 to this Resolution, for transmittal to the Unesco General Conference, in accordance with Statutes Article 13 and Rule of Procedure No. 56,

Urges the Member States concerned to consult among themselves during the inter-sessional period with a view to arriving at agreed amendments to Article 2, paragraph 1, new sub-paragraph (j) and Article 10, paragraph 3, keeping the Secretary informed of progress in their negotiations, in order that the Assembly, at its Fourteenth Session can approve the agreed texts and, together with the other proposed amendments, transmit them also to the General Conference of Unesco.

---

Financial implications: none

Annex 1 to Resolution EC-XIX.8

AMENDMENTS TO IOC STATUTES RECOMMENDED  
BY THE PREPARATORY MEETING

ARTICLE 1, PARAGRAPH 1

Revised proposed text

*"The Intergovernmental Oceanographic Commission, hereafter called the Commission, is established as a body with functional autonomy within the United Nations Educational, Scientific and Cultural Organization, with authority to determine its programme of work and to manage it within the resources available to the Commission."*

Present text

*"The Intergovernmental Oceanographic Commission, hereafter called the Commission, is established*

*within the United Nations Educational, Scientific and Cultural Organization."*

ARTICLE 1, PARAGRAPH 2

Revised proposed text

*"The purpose of the Commission is to promote marine scientific investigations and related services,*

*with a view to learning more about the nature and resources of the oceans through the concerted action of its members."*

Present text

*"The purpose of the Commission is to promote scientific investigations*

*with a view to learning more about the nature and resources of the oceans through the concerted action of its members."*

ARTICLE 2, PARAGRAPH 1

New Sub-paragraph (f)

Proposed text

"(f) to promote and co-ordinate the development and transfer of marine science and its technology, particularly to developing countries."

Present text

(none)

New sub-paragraph (g)

Revised proposed text

"(g) make recommendations to strengthen education and training

in marine science and its technology,

and promote relevant projects in these fields as components of each of its programmes."

"(f) make recommendations to strengthen education and training programmes in marine science and its technology;"

Present text

New sub-paragraph (k)

Revised proposed text

"(k) promote, plan and co-ordinate observing and monitoring systems, on the properties and quality of the marine environment, as well as the preparation and dissemination of processed oceanographic data and information, and of assessment studies."

(none)

Present text

New sub-paragraph (l) displacing the present one to new sub-paragraph (m).

New Sub-paragraph (l)

Revised proposed text

"(l) promote, recommend and co-ordinate, with international organisations, as appropriate, the development of standards, reference materials and nomenclature for use in marine science and related ocean services."

Present text

(none)

New Sub-paragraph (m)

Revised proposed text

"(m) undertake, as appropriate, any other action compatible with its purpose and functions concerning the scientific investigation of the ocean and its interfaces."

Present text

(none)

ARTICLE 2, PARAGRAPH 2

Text Changes

Proposed text

"The Commission, in carrying out its functions, shall take into account the special needs and interests of developing countries, including in particular the need to further the capabilities of these countries in marine science and technology."

Present text

"The Commission, in carrying out its functions, shall bear in mind the special needs and interests of developing countries, including in particular the need to further the capabilities of these countries in marine science and technology."

ARTICLE 2, PARAGRAPH 3

Revised proposed text

"Nothing in this Article shall imply the adoption of a position by the Commission regarding the nature or extent of the jurisdiction of coastal States in general or of any coastal State in particular."

Present text

"Nothing in this Article shall be construed as implying the expression of a position regarding the nature or extent of the jurisdiction of coastal States in general or of any coastal State in particular."

ARTICLE 3

With the new text, it is proposed to create two paragraphs, 1 and 2, for this Article, to separate the two underlying ideas (see Section 2.7.3 of Document IOC/EC-XIX/12). The present text hereunder has been rearranged slightly to facilitate comparison with the proposed text: the first sentence continues below the second sentence.

Proposed text

"1. The Commission shall give due attention to supporting the objective of the international organizations with which it collaborates.

On the other hand, the Commission may request these organizations to take its requirements into account in planning and executing their own programmes

Present text

"The Commission shall give due attention to supporting the objective of the international organizations with which it collaborates and which may request the Commission to act, as appropriate, as an instrument ...

On the other hand, the Commission may request these organizations to take its requirements into account in planning and executing their own programmes.

"2. The Commission may act also as a joint specialized mechanism of the organizations of the United Nations system that have agreed to use the Commission for discharging certain of their responsibilities in the fields of marine science and ocean services, and have agreed accordingly to sustain the work of the Commission."

... for discharging certain of their responsibilities in the field of marine science.

#### ARTICLE 4

##### Proposed text

(none)

paragraph 1

(none)

paragraph 2

##### Present text

(unchanged)

(unchanged)

"3. Any Member State of the Commission may withdraw from it by giving notice of its intention to do so to the Director-General of Unesco.

The date of such notice shall be that of its receipt by the Director-General.

The notice shall take effect on the first day of the next ordinary session of the Assembly following the date of notice of withdrawal, if the notice is given more than one year before the first day of said session; if the notice of withdrawal is given less than one year before the first day of the said session, it shall take effect one year after the date of notice of withdrawal.

"3. Any Member of the Commission may withdraw from it by giving notice of its intention to do so to the Director-General of Unesco.

The notice shall take effect at the end of the first session of the Commission which follows the date on which notice has been given, or if notice has been given during the course of a session of the Commission, at the end of that session unless withdrawn prior to that time."

(none)

paragraph 4

(unchanged)

(none)

paragraph 5

(unchanged)

#### ARTICLE 5, PARAGRAPH 4

There are no changes proposed in the preambular part of paragraph 4 or in 4(a), but there are extensive changes in paragraph 4(b); however, these changes cannot be readily identified by underlining; the two texts are therefore simply placed side by side. It should be noted that the Rule of Procedure No. 18, paragraph 1



defining the number of Member States on the Executive Council is amended periodically according to the total number of Member States of the Commission.

<u>Proposed text</u>		<u>Present text</u>
(none)	paragraph 1	(unchanged)
(none)	paragraph 2	(unchanged)
(none)	paragraph 3,	(unchanged)
<i>"4. During the course of each ordinary session, the Assembly, taking into account the principles of geographical distribution shall elect:</i>		<i>"4. During the course of each ordinary session, the Assembly, taking into account the principles of geographical distribution shall elect:</i>
<i>(a) a Chairman and four Vice-Chairmen who shall be the officers of the Commission, its Assembly and its Executive Council;"</i>		<i>(a) a Chairman and four Vice-Chairmen who shall be the officers of the Commission, its Assembly and its Executive Council;"</i>
<i>"(b) a number of Member States to the Executive Council, which number shall be such that the total membership of the Executive Council shall consist of the duly elected Chairman and four Vice-Chairmen and one fourth of the Member States of the Commission; each Member State so elected, besides those of the Chairman and four Vice-Chairmen, shall each designate its representative on the Executive Council."</i>		<i>"(b) Member States of the Commission who shall each designate a representative of that State to serve on the Executive Council; the number of Member States to be elected to the Executive Council shall be fixed by the Rules of Procedure. This number shall not exceed one-fourth the number of the members of the Commission.</i>
(none)	paragraph 5	(unchanged)
(none)	paragraph 6	(unchanged)

#### ARTICLE 9, PARAGRAPH 1

<u>Proposed text</u>	<u>Present text</u>
<i>"1. With due regard to the applicable Staff Regulations and Rules of the United Nations Educational, Scientific and Cultural Organization, the Secretariat of the Commission shall consist of a Secretary and such other staff as may be necessary,</i>	<i>"1. With due regard to the applicable Staff Regulations and Rules of the United Nations Educational, Scientific and Cultural Organization, the Secretariat of the Commission shall consist of personnel</i>

*provided by the United Nations Educational, Scientific and Cultural Organization, as well as such personnel as may be provided, at their expense, by the United Nations, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization and the International Maritime Organization and other organizations of the United Nations system.*

*provided by the United Nations Educational, Scientific and Cultural Organization, as well as such personnel as may be provided, at their expense, by the United Nations, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization and the Intergovernmental Maritime Consultative Organization and other Organizations of the United Nations system.*

Annex 2 to Resolution EC-XIX.8

PROPOSED TEXTS FOR ARTICLES FOR WHICH  
THE PREPARATORY MEETING COULD NOT REACH CONSENSUS

ARTICLE 2, PARAGRAPH 1, NEW SUB-PARAGRAPH (j)

Four proposals (A, B, C, D) are submitted; proposal A is as given in Document IOC/EC-XIX/12, Section 2.4.5.1, and proposals B, C and D are small modifications thereof, (>).

A. Proposed text

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States, taking into account all interests and rights of States in respect of marine scientific research in zones under their jurisdiction."*

Present text

*"(j) promote freedom of scientific investigation of the oceans for the benefits of all mankind*

*taking into account all interests and rights of coastal States concerning scientific research in the zones under their jurisdiction."*

B. Proposed text

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States, subject to all interests and rights of States in respect of marine scientific research in zones under their jurisdiction."*

>

C. Proposed text

"(j) promote scientific investigation of the oceans and application of the results thereof  
for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States,  
> respecting  
all interests and rights of States  
in respect of marine scientific research in zones under their jurisdiction."

D. Proposed text

"(j) promote scientific investigation of the oceans and application of the results thereof  
for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States.

> (Rest of text deleted)

ARTICLE 10, PARAGRAPH 3

Two proposals (A, B) are submitted; proposal A is as given in Document IOC/EC-XIX/12, Section 2.11.1, and proposal B is a new text.

A. Proposed text

"1. The programmes sponsored and co-ordinated by the Commission and recommended to its Member States for their concerted action shall be carried out with the aid of the resources of participating Member States"

(none)

paragraph 2

Present text

"1. The programmes sponsored and co-ordinated by the Commission and recommended to its Member States for their concerted action shall be carried out with the aid of the resources of participating Member States, in accordance with the obligations that each State is willing to assume."

(unchanged)

"3. A Member State of IOC that is not a Member State of Unesco shall contribute to the resources of the Commission according to criteria to be decided by the Assembly in the light of the Commission's programme of work and budget."

(none)

*"4. In addition to the resources mentioned in paragraphs 1, 2 and 3, above, voluntary contributions may be accepted and established as trust funds in accordance with the financial regulations of the United Nations Educational, Scientific and Cultural Organization and administered by the Director-General of that Organization. Such contributions shall be allocated by the Commission for its programmes."*

*"3. Voluntary contributions may be accepted and established as trust funds in accordance with the financial regulations of the United Nations Educational, Scientific and Cultural Organization and administered by the Director-General of that Organization. Such contributions shall be allocated by the Commission for its programmes."*

**B. New text**

*"The Assembly shall establish criteria for contributions to the resources of the Commission by Member States that are not Member States of Unesco, in the light of the Commission's approved programme of work and budget. Such Member States will be asked to adhere to the agreed criteria."*

Resolution EC-XIX.9

IOC PROGRAMME AND BUDGET FOR 1986-87

The Executive Council,

Bearing in mind the long-standing position taken by the IOC at Sessions of the Council and the Assembly, that substantial increases in the resources available to the Commission were required if it is to carry out adequately the IOC Programme of Work,

Having carefully studied the IOC Programme of Work as endorsed by the Thirteenth Session of the Assembly and as compared with that approved by the Twenty-third Session of the Unesco General Conference,

Taking into account the possibility that further resources may be made available to the Commission through voluntary contributions from Member States to the IOC Trust Fund, but that it is highly unlikely that the total amount thus provided will allow full implementation of the programme and adequate staffing of the IOC Secretariat,

Notes with deep concern the negative impact of reduced financial and staff resources on the implementation of the IOC programme;

Calls attention to the potential consequences of such reductions on the IOC Programme which is based upon a cohesive ensemble of activities undertaken with the collaboration and support of IOC Member States, Member Organizations of ICSPRO and other international organizations collaborating in the work of the Commission;

Restates its conviction that, if the Commission is to carry out its mandate according to the wishes of its Member States, greater stability in the resources and staffing made available is an absolute necessity;

Instructs the Secretary to implement progressively those activities placed in reserve by Unesco as additional funding is made available through contributions to the IOC Trust Fund and other sources, consulting as required the Officers of the Commission, and taking into account the views of the Chairmen of the major Regional Subsidiary Bodies and of the Scientific and Technical Subsidiary Bodies, as well as the views expressed by the Executive Council and the financial implications of decisions made by it, at the present Session;

Expresses the hope that the Executive Board of Unesco accord the highest priority to the IOC programme, when it considers the adjustments to the Approved Programme and Budget for 1986-87;

Invites the Director-General of Unesco to consider the IOC Programme of Work as of particularly high priority and to take the special needs of the Commission into account, if and when voluntary contributions to the Organization enable him to propose for approval of implementation activities placed in reserve;

Further invites the Director-General of Unesco to take all possible measures to remedy the critical staff deficit of the IOC Secretariat by authorizing the recruitment to posts placed in reserve as soon as the situation allows;

Appeals to IOC Member States to make every effort to mobilize voluntary contributions to the IOC Trust Fund, and to offer in-kind support for specific purposes, so as to alleviate the financial difficulties of the Commission, and allow the implementation of activities now placed in reserve.

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Financial implications: none

Resolution EC-XIX.10

JOINT OCEANOGRAPHIC ASSEMBLY (JOA) (1988/89)

The Executive Council,

Recalling Resolutions VII-2 and XI-38, by which support and encouragement was given to the scientific bodies concerned, especially the Scientific Committee on Oceanic Research (SCOR), in regard to organization of the Joint Oceanographic Assemblies (JOA) held in Edinburgh (1976) and Halifax (1982),

Noting that SCOR intends to organize the next JOA in 1988 or 1989,

Noting further that, at the Twenty-fourth Session of ICSPRO, the Organizations Members of ICSPRO expressed interest in being involved in further elaboration of the Scientific Programme and mobilization of support for JOA,

Requests SCOR, in collaboration with other appropriate international organizations, to proceed with the organization of the Scientific Programme for the JOA;

Instructs the Secretary to ensure the necessary liaison between these bodies and the Member Organizations of ICSPRO;

Invites Member States, Member Organizations of ICSPRO and other interested organizations and institutions, to assist in the preparations for the JOA, including the provision of adequate budgetary support.

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Financial implications: - 1986-87: modest provision for preparatory work included in 23 C/5 and placed in reserve.  
- 1988-89: direct IOC support for JOA to be included in 24 C/5 proposals to the Fourteenth Session of the Assembly.

Resolution EC-XIX.11

STRENGTHENING CO-OPERATION BETWEEN THE UNESCO DIVISION OF MARINE  
SCIENCES AND THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

The Executive Council,

Recalling the Commission's statutory duty (Article 2 (h)) to "make recommendations and provide technical guidance as to the formulation and execution of the marine science programmes of the United Nations Educational, Scientific and Cultural Organization";

Also recalling Resolution XIII-17 in which the Commission recommended strongly that "continued efforts be made to ensure that the programmes of the Division of Marine Sciences and the IOC programmes are developed in a complementary and mutually supporting way, taking particularly into account the Unesco-IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries" and by which it instructed the Secretary, in collaboration with the Director, Division of Marine Sciences, "to set up a small study group of experts under the Chairman of the Working Committee for TEMA, with the task of advising on measures to strengthen co-ordination of their programme activities in marine research and training, and to submit the report of the study group, together with an evaluation by the Secretary IOC and the Director, Division of Marine Sciences, to the Nineteenth Session of the Executive Council";

Having studied Document IOC/EC-XIX/13 (Measures to Strengthen Co-ordination of the IOC and the Division of Marine Science Programme Activities in Marine Research and Training) submitted by the study group of experts, pursuant to Resolution XIII-17, and the comments of the Director-General of Unesco thereon (Document IOC/EC-XIX/13 Add.);

Recommends to the Director-General of Unesco that:

- (i) the IOC Working Committee for Training, Education and Mutual Assistance in the Marine Sciences (TEMA) be co-sponsored by IOC and the Unesco Division of Marine Sciences to oversee, inter alia, the implementation of the Unesco-IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries;
- (ii) the Director of the Division of Marine Sciences consult, on a regular basis, and co-operate with the Secretary IOC on:
  - (a) the planning and implementation of the Unesco-IOC Comprehensive Plan and the related formulation of project proposals, as well as the preparation of progress reviews, so as to reflect the activities of both IOC and the Division of Marine Sciences;
  - (b) the objectives and timing of missions, so as to reduce as far as possible duplication and unnecessary expenditure;
  - (c) the meeting schedule, so as to facilitate attendance by Member States and by experts, and to optimize all ways and means available to support them;

- (iii) the Director of the Division of Marine Sciences, with the Secretary IOC, consult on future publications policy with the aim of merging existing technical series whenever possible;
- (iv) the Division of Marine Sciences, when preparing the C/5 and the Medium-term Plan, give priority to the development of:
  - (a) education, especially the development of higher education, university curricula, post-graduate courses in marine sciences/ocean engineering;
  - (b) basic marine science, particularly its methodology and its concepts, and the related collaboration amongst marine scientists;
  - (c) national and regional training and other assistance activities, as requested by the General Conference, as well as those relevant to the regional and global programmes of the Commission;
- (v) the Division of Marine Sciences co-ordinate its work with that of the Regional Subsidiary Bodies of the Commission in the implementation of its activities requiring regional co-operation be they joint projects or components of Unesco projects;
- (vi) the Director of the Division of Marine Sciences co-ordinate with the Secretary IOC, the preparation of an annual report to the IOC Assembly or Executive Council on the co-ordination and joint actions in planned and on-going programmes, thus enabling the IOC governing bodies to make recommendations on actions requiring a concerted approach;

Invites the study group of experts referred to in Resolution XIII-17 to:

(i) continue its work on improvements in co-operation and co-ordination between the Division of Marine Sciences and the IOC Secretariat; (ii) carry out an in-depth study on the ways and means of improving the functioning and reviewing terms of reference of the Working Committee for TEMA in co-operation with the Marine Sciences Division and with the Advisory Bodies of the Commission; and (iii) report to the Fourteenth Session of the Assembly on the best arrangements and further steps to be taken;

Further instructs the Secretary to work closely with the Director of the Division of Marine Sciences on the various activities detailed above.

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Financial implications: none



ANNEX III

OPENING ADDRESSES

- A. Opening address by Professor Inocencio A. Ronquillo,\*  
Chairman of the Intergovernmental Oceanographic  
Commission (IOC)

Mr. Deputy Director-General,  
Mr. Assistant Director-General of Unesco,  
Distinguished Delegates, Representatives and Observers,  
Ladies and Gentlemen,

On behalf of the IOC, I should like to express to you, Mr. Deputy Director-General, our appreciation of your presence here at the opening session of our Executive Council, on behalf of the Director-General, and of the personal interest with which the Director-General follows the affairs of the Commission, his understanding of our problems and his efforts to respond to our needs, especially in a situation as complex as the present one.

About one year ago, during the opening session of our Assembly which commemorate the 25th Anniversary of the IOC, we evaluated the long road we had travelled and our achievements in seeking a better understanding of the ocean and its resources through the concerted action of our Member States and their scientific communities. We were most encouraged by the general appreciation of progress achieved and by the fact that Member States expect an increased role of IOC in a field of vital importance to them as well as to the world community.

The increasing demands on the Commission for adequate servicing of its programmes by the Secretariat and the maintenance of common supporting services confront the Commission's Member States with major policy decisions if the momentum of our programmes is to be maintained. The Assembly, at its Thirteenth Session, decided, therefore, as a follow-up of the preparatory reviews undertaken during the intersessional period, that a number of in-depth studies should be undertaken. The first such study was on the requirements for ensuring continuity in the work of the Commission and the stability of the resources available to it, particularly in terms of budget and secretariat staff required for the effective implementation of the programme. Another study was on the revision of the Commission's Statutes, with a view to making proposals for adjustments so as to reflect better the new needs of Member States, and to define more precisely the Commission's objectives and role up to the end of the century and beyond. These two studies, which complement each other, deal equally with some new situations not foreseen by the founders of the Commission. I am referring, *inter alia*, to the case of Member States of the Commission that are not Member States of Unesco and, therefore, to the need to define their responsibilities and their contributions to the resources of the Commission.

A third study sought to streamline the Guidelines for the Structure and Responsibilities of the Commission's subsidiary bodies.

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\* In the absence of Prof. Ronquillo, his speech was read by the First Vice-Chairman, Ms. M.A. Martin-Sané.

As you can imagine, the preparation of these studies was a difficult task, undertaken under the leadership of my predecessor, Dr. Agustin Ayala-Castañares, with the active collaboration of the First Vice-Chairman, Ms. Martin-Sané, and others who kindly assisted in this effort. My thanks go to them and to the Secretariat which, in spite of the heavy workload under which it has been operating, assisted by providing background information required for the adequate evaluation of the current problems and the possible courses of action to deal with them.

These studies, as you know, were discussed during a Preparatory Meeting which was attended by a majority of the Member States now here at this Session of the Executive Council. In spite of the complexity of the task, I noted with satisfaction that considerable progress had been achieved on the review of the present structure and procedures of our subsidiary bodies. We are therefore, I hope, in a position to approve eventually a revision of the Guidelines and thus facilitate the future functioning of these important mechanisms of global and regional co-operation. I am also pleased to report significant progress in the consideration of the adjustments to the Statutes. As one would expect, progress in dealing with the question of the budgetary and staff resources clearly requires more time, but progress has, nevertheless, been made.

A consensus was reached and some very useful recommendations were formulated to deal with budgetary and staff matters, particularly the immediate measures required to ensure that, during the present biennium, the work of the Commission would be maintained at an acceptable level. I think that this is a wise approach. While priority should be given to the exploration of possible short-term arrangements, particularly through an increased commitment of Member States to the support of the Commission, ultimately complementing the basic budget and staff provided by Unesco, it is essential that we continue to pursue our analysis of the financial basis for the work of the Commission in the medium and long-term. We must also continue our analysis of the Statutes and put forward the desired improvements thereto.

In my opinion, these studies should be pursued in the next intersessional period, on the basis of the guidance that we expect to receive from the Executive Council at this Session, so that we can submit a report to our Assembly in 1987, so that a final decision can be taken by our Assembly in March 1989 and the Commission's proposals for statutory adjustments recommended to the General Conference of Unesco in the fall of 1989.

The Commission is at a cross-roads of its history; in its first twenty-five years it has helped substantially to increase our knowledge of the oceans, but, in doing so, it has learned that, if the Member States, and particularly the developing countries, are to benefit from such knowledge, it must be expressed in the form of precise prediction of the effects of ocean processes on such activities as agriculture, forestry, fishery, manufacture and socio-economic development in general. It has also learned that to do this requires detailed knowledge of variation in the oceans, for which long time-series of key data are required. Such long-term commitments - which are vital to the well-being of the Member States - cannot be undertaken through short-term programming and budgeting.

In other words, a way must be found to avoid the severe adverse short-term effects of the sort of circumstances Unesco, in particular, finds itself in, on the Commission's necessarily long-term commitments.

As you know, I had the opportunity to emphasize this problem when addressing Commission III of the 23rd General Conference in Sofia; I pointed out that every cent spent by Unesco, in IOC affairs at least, is considerably multiplied by the counterpart action of IOC Member States, in a ratio of perhaps a thousand times as much, if not more. I also emphasized that we are in a race against time and that, if Unesco and the IOC do not respond to this great and fundamental need, if they do not take full advantage of the present opportunities, some of them may well be lost forever. Some Member State will see their national goals in marine affairs set back yet once again, and every setback for one of us is a setback for all of us.

We know the constraints upon Unesco's support for the Commission, and the Commission realizes that there are certain general limits not only in the medium term, but also in the long-term. At the same time, however, I wish to stress the importance of ensuring that the support provided by the Member States, either through Unesco or directly to the Commission, be commensurate with the commitments: either we do what is necessary to make scientific results applicable to the solution of the Member States' real needs, or we do not accept such commitments. There is no magic short-cut.

You will see from the documents available to you and particularly from the Secretary's Report that, in spite of the present difficulties, the activities of the Commission have been pursued in a reasonable manner, and, to an appreciable extent, this is due to the support and the freedom of action the Director-General has accorded to the Commission in the pursuit of ever better services to the Member States and their scientific communities. Even so, a certain number of planned activities have been either postponed or put in abeyance because of reductions in the budget and the staff. As expressed in the recent session of the Inter-secretariat Committee on Scientific Programmes Related to Oceanography (ICSPRO), unless greater stability in resources is found, there is a risk that the gap between proposed and planned IOC programmes and their actual implementation would affect the counterpart planning of Member States and organizations Members of ICSPRO and others co-operating with the Commission.

We are most grateful to the Director-General, for the efforts made so far to respond to the request made by the IOC Governing Bodies regarding the Commission's programme and budget. However, for reasons that are well known to all, and in spite of the widespread testimony - in Commission III of the General Conference - of support for the work of the Commission, the proposals submitted to this Conference did not result, as we had hoped, in bringing activities to first priority level that we were obliged to assign second priority. And owing to the departure of another Member State, further adjustments took place, with special adverse implications for the programmes and staffing of the Commission.

Indeed, we are back at the level of 1981-82. We are a Commission with a major programme of Ocean Science in Relation to Non-Living Resources, without a marine geologist on the staff; we have created a Sub-Commission for the Caribbean and Adjacent Regions, without an Assistant Secretary to assume responsibility for this major subsidiary body.

In the Circular Letter that I addressed to Member States last September on these matters, I noted that one must bear in mind that the present exceptional situation within Unesco requires an exceptional response on the part of IOC Member States. I emphasized that it is the responsibility of Member States of the Commission to ensure that all the investments made during the past twenty-five years will not have been in vain, and that the gap between the developed and developing countries will not widen to a point such that it can never be closed again. In fact, as a result of the present difficulties, and their adverse implications for the scientific programmes of the Commission, the Unesco-IOC Comprehensive Plan for a Major Programme of Assistance to Enhance the Marine Science Capabilities of Developing Countries and related activities has been brought practically to a standstill. In this context, we shall, as you know, discuss how to improve further the complementarity and co-operation between IOC and Unesco, especially through its Division of Marine Science, as recommended by our Governing Bodies and strongly encouraged by a number of Delegates at Commission III of the General Conference. This is one of the items of our Agenda and we expect to submit some recommendations and suggestions for the further consideration of the Director-General. We know that Mr. M'Bow attaches great importance to this matter, as well as to the further rationalization of the present structure of programme of work and budget of the Organization, especially to programmes of a heterogeneous nature, such as Programme X.5, that could be reconsidered and eventually restructured. The outcome of such reconsideration would definitely be of special importance when formulating proposals for the future Medium-Term Plan. However, we hope that, in the formulation of proposals for the 1988-89 biennium - the 24 C/5 - some steps towards harmonization and consolidation could be taken, and we are prepared to submit our recommendations to that end. The distinguished experts who kindly accepted to examine the matter and submit a preparatory study to facilitate our deliberations should be thanked for their useful advice and constructive proposals.

I also wish to say how much importance we attach, particularly in the present situation, to the role of the Inter-secretariat Committee on Scientific Programmes Related to Oceanography (ICSPRO) and to the sound co-operation established with other agencies like FAO, WMO, United Nations and IMO on projects of mutual interest. The twenty-fourth Session of ICSPRO in London in January of this year reflects this trend which, I believe, is unique in the United Nations and demonstrates how the system can develop effective forms of co-operation and co-ordination so as to optimize ways and means available to the Organizations to serve Member States better. We hope that the International Atomic Energy Agency (IAEA) and the United Nations Environment Programme (UNEP), which have always been invited to participate as observers, will join the Inter-secretariat Committee and make full use of it as a joint specialized mechanism. The recent progress achieved in development of co-operation with UNEP, particularly in the promotion and development of marine pollution monitoring at the regional level, is, in our view, a step in the right direction. I mention this, because of the special responsibility of the Director-General of Unesco, as the Executive Head of the Organization that is the depository of the ICSPRO Agreement, and we appeal to him to take the necessary measures to place before his fellow Executive Heads, of IAEA and UNEP, the importance of the Commission and, I hope, Unesco attach to their membership of, and active participation in, this key Committee.

Mr. Deputy Director-General,  
Distinguished Delegates, Representatives and Observers,  
Ladies and Gentlemen,

As you will have noted, my address this time was of a different nature from the preceding ones. Under the circumstances, and in the presence of the Deputy Director-General, I have taken advantage of this opportunity to express my views as Chairman of the Commission and to suggest where we hope the emphasis of our discussion should be placed without, evidently detracting from the discussions on tasks that we need to undertake on technical matters.

I have had the opportunity, jointly with some of my colleagues, to meet the Director-General periodically and to have frank and constructive discussions on the enhancement of IOC within the Organization. On the last occasion in Sofia, we discussed our serious staffing and budgetary problems and we were most encouraged by his intention to ensure that, in this critical period, the Secretariat of the Commission would continue to receive his full support and any special consideration that might be due to it in view of its special status in Unesco and its manifold obligations to the Member States.

I must, finally, pay a special tribute to my fellow Officers, and others closely connected with the work of the Commission, for their firm and constructive support during the intersessional period.

With that, I look forward to a successful and constructive Session.

**B. Address by Mr. Jean Knapp, Deputy Director-General  
of the United Nations Educational, Scientific and  
Cultural Organization (Unesco)**

Mr. Chairman,  
Vice-Chairmen,  
Delegates, Representatives and Observers,  
Ladies and Gentlemen,

The Director-General had intended to welcome you to Unesco House this morning, on the occasion of the nineteenth session of the Executive Council of the Intergovernmental Oceanographic Commission. Unfortunately, he is suffering from a slight cold and has lost his voice. Since he cannot be with us, he has asked me to represent him and to deliver the address that he had prepared.

On behalf of the Director-General, therefore, I am happy to greet the members of the Council, the many observers and the representatives of the various organizations that co-operate with the Commission, who have come to attend the work of this session. Your presence here demonstrates the importance attached by your countries and organizations to the Commission, its work and the part it plays in international co-operation, notably as specialized machinery used jointly by the member organizations of ICSPRO. During the twenty-third session of the General Conference of Unesco, held in Sofia in October and November 1985, the delegations of Member States of the Organization expressed their unanimous support for the activities contemplated under Programme X.4 'The ocean and its resources' in the Programme and Budget for 1986-1987. Many of them emphasized the outstanding quality of the world scientific activities to be undertaken by the Commission, which are set forth in the four subprogrammes of that programme.

Many of them also welcomed Programme X.5, in particular the Major Inter-regional Project on Research and Training with a view to the integrated management of coastal systems (COMAR) and MAB activities relating to coastal and island regions.

In conclusion, the debates at the General Conference highlighted the great interest taken by the international community in IOC programmes, in so far as these represent a coherent body of activities ranging from the study of the seabed, its living and non-living resources and the pollution problems that affect it, to the development of methods for the rational exploitation of those resources and the worldwide struggle against pollution, and their interest in means of promoting the flow of information in all these areas.

Consequently, in view of the ever-increasingly heavy responsibilities devolving on Member States as a result of the accelerated use of the oceans and their resources and the consequent management requirements, as well as the prospects opened up by the new order of the sea, many of the delegations to the General Conference urged that Unesco and IOC be provided with all the necessary means of fulfilling their obligations in this respect.

During the most recent of the regular consultations that the Director-General holds with the members of your Bureau, the Sofia consultation, he had talks with your Chairman, your first Vice-Chairman and your former Chairman, concerning the financial and human constraints necessitated by Unesco's present circumstances. With them he looked into the possibility of having recourse to additional forms of support.

The Director-General was informed of your analytical discussion of the Commission and its Member States' growing responsibility towards it.

One aspect of that discussion, and by no means the least important, is the concern for accurate evaluation of the human and financial resources needed to implement your worldwide and regional programmes. And this is where the notion of 'additional support' comes in, for the purpose of expanding the activities planned in Unesco's Programme and Budget. It is here, too, that States bear the heaviest responsibility.

There also remains the question of finding ways whereby States that are not members of the Organization and do not contribute to its budget may continue to pay the dues for which they are liable as participants in the Commission's activities.

Ladies and Gentlemen,

Science is advancing steadily and technologies are evolving apace; increasingly intricate communication and exchange networks are being developed on a world scale. As a result, all forms of joint regional and international, action - both bilateral and multilateral - are being expanded and diversified.

In this context, Unesco's mission is to foster and promote the multilateral dimension of co-operation - which is one of the main historic achievements of the twentieth century. As a collective and impartial body, it sanctions forms of solidarity that preserve the dignity of recipient States by protecting them against any possible pressures from donor States.

It is precisely these forms of aid that some people are today calling into question. Hence the difficulties encountered by a growing number of international organizations.

As you know, Unesco has been in the front line of the institutions under attack. And, as you also know, it has chosen to do all it can to keep to its course of intellectual co-operation based on equality, freedom, justice and solidarity for all States - which alone can lead to the attainment of the 'objectives of international peace and of the common welfare of mankind for which the United Nations Organization was established...'.

The attitude adopted by the world's intellectual communities in this respect - particularly through the non-governmental organizations - will, in any event, be decisive. Among those organizations, IOC enjoys a position that is all the more important since oceanography is, more than any other, the field which calls for indispensable multilateral co-operation that countenances neither privilege nor exclusivity.

Thus the long and fruitful collaboration which has developed between Unesco and IOC and which, I hope, will increase even more in the years to come, is an essential pledge for the future, certainly where oceanography is concerned, but much more broadly as regards the very principle of multilateralism and that of the universality of international organizations in general and of Unesco in particular.

Thank you for your attention.

ANNEX IV

LIST OF WORKING DOCUMENTS

<u>Document Code</u>	<u>Title</u>
IOC/EC-XIX/1	Agenda
IOC/EC-XIX/1 Add. rev.1	Timetable
IOC/EC-XIX/2	Annotated Provisional Agenda
IOC/EC-XIX/3	Summary Report
IOC/EC-XIX/4	List of Documents
IOC/EC-XIX/5	List of Participants
IOC/EC-XIX/6	Report of the Secretary on Intersessional Activities for 1985
IOC/EC-XIX/6 Suppl.	List of Circular Letters, IOC meetings, meetings at which IOC was represented, IOC Information Documents
IOC/EC-XIX/7	Programme of Work and Financial Requirements
IOC/EC-XIX/8	Action Paper
IOC/EC-XIX/6 Suppl.	Proposal for an Intergovernmental Mechanism to Co-ordinate the Preparation and Distribution of Standard and Reference Materials for Marine Pollution Monitoring
IOC/EC-XIX/8 Annex 2	Progress Report of, and Proposed Actions for, the Draft Implementation Plan for the Global Sea-level Observing System
IOC/EC-XIX/8 Annex 3	Proposal for the Co-sponsorship with WMO of a Drifting-buoy Co-operation Panel
IOC/EC-XIX/8 Annex 4	Development of the IOC Contribution to the next Unesco Medium-term Plan (1990-95)
IOC/EC-XIX/8 Add 1	Main Outcomes of the IOC Workshop on the Scientific Results of the Mediterranean (MEDALPEX) and Future Oceanographic Programmes in the Western Mediterranean
IOC/EC-XIX/9	The Structure and Responsibilities of the Subsidiary Bodies of the Commission
IOC/EC-XIX/10	Procedures for Streamlining the Conduct of Sessions of the Governing and Subsidiary Bodies of the Commission
IOC/EC-XIX/11	Measures to Ensure the Stability and Continuity of the Resources Required for the Implementation of the Commission's Programme of Work
IOC/EC-XIX/12	Measures to Enhance the Role and Efficiency of the Commission in the Long Term to Meet the Needs of Member States and the World Community
IOC/EC-XIX/13	Measures to Strengthen Co-ordination of the IOC and the Unesco Division of Marine Sciences' Programme Activities in Marine Research and Training
IOC/EC-XIX/13 Add.	Comments of the Director-General of Unesco on IOC Document IOC/EC-XIX/13 on Measures to Strengthen Co-ordination of the IOC and the Unesco Division of Marine Sciences' Programme Activities in Marine Research and Training

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N.B. This list is for reference only. No stocks of these documents are maintained.



ANNEX V

SUMMARY REPORT OF THE  
AD HOC PREPARATORY MEETING ON THE IN-DEPTH STUDIES  
ON THE STRUCTURE, RESOURCES AND ROLE OF THE IOC  
Paris, 3-5 March 1986

1. OPENING

The First Vice-Chairman, Mlle. Marie-Annic Martin Sane, opened the Preparatory Meeting at 09.45 on 3 March 1986. She expressed the Chairman's regret at not being able to be present at the opening, and informed the Meeting that he was expected shortly.

2. ARRANGEMENTS

2.1 DESIGNATION OF CHAIRMAN AND RAPPORTEUR

The First Vice-Chairman proposed that Dr. Agustin Ayala Castanares be called on to chair the Meeting in view of the trust placed in him by the Assembly at its Thirteenth Session (Resolution XIII-13) in the supervision of the preparation of the three in-depth studies that are the object of the present Meeting.

This proposal was unanimously agreed, and Dr. Ayala assumed the Chairmanship.

The Delegate of Turkey proposed Mr. E.J.F. Neiva of Brazil as Rapporteur. The Delegate of Egypt seconded the proposal. Mr. Neiva accepted the invitation and was so designated.

Dr. Ayala proposed the adoption of the Provisional Agenda as is, and this was accepted. The Agenda is given Appendix I hereto.

2.2 CONDUCT OF THE SESSION AND DOCUMENTATION

The Secretary briefly reminded participants of the three Executive Council Working Documents that were to be considered at the present Meeting: IOC/EC-XIX/9 (The Structure and Responsibilities of the Subsidiary Bodies of the Commission), IOC/EC-XIX/11 (Measures to Ensure the Stability and Continuity of the Resources Required for the Implementation of the Commission's Programme of Work) and IOC/EC-XIX/12 (Measures to Enhance the Role and Efficiency of the Commission in the Long Term to Meet the Needs of Member States and the World Community).

The Chairman proposed that Agenda Item 3.1, 3.3 and 3.2 be taken in that order.

The Preparatory Meeting agreed to these proposals.

3. CONSIDERATION OF IN-DEPTH STUDIES

3.1 STRUCTURE AND RESPONSIBILITIES OF SUBSIDIARY BODIES OF THE IOC

The Preparatory Meeting considered in detail Document IOC/EC-XIX/9 (The Structure and Responsibilities of the Subsidiary Bodies of the Commission). The Participants welcomed the concise but detailed analysis of the short-comings of the present Guidelines for the Structure and Responsibilities of the Subsidiary Bodies of the Commission, and the proposals for streamlining.

The Preparatory Meeting agreed that the best approach would be to propose to the Executive Council possible amendments to Document IOC/EC-XIX/9 which, if approved by the Council, would then be used as the basis for revision of the Guidelines which could then be incorporated in the IOC Manual.

A Sessional Drafting Group, under the Chairmanship of Mr. Desmond D. P. Scott (UK), was created for this purpose; it prepared a list of amendments which were approved by the Preparatory Meeting, and are attached hereto as Appendix II.

The Preparatory Meeting recommended to the Executive Council the approval of the amendments contained in Appendix II and that the present Guidelines on the Structure and Responsibilities of the Subsidiary Bodies of the Commission be redrafted accordingly, and incorporated into the IOC Manual.

### 3.2 STABILITY AND CONTINUITY OF RESOURCES OF THE IOC

In introducing this Item, the First Vice-Chairman recalled the mandate given to her by the IOC Assembly (Resolution XIII-13) and the steps she had taken in preparing, in consultation with the Chairman and Past Chairman, Document IOC/EC-XIX/11 (Measures to Ensure the Stability and Continuity of the Resources Required for the Implementation of the Commission's Programme of Work). Referring to the three main sections of the document, she called attention to the fact that it was clear that the resources of the IOC do not meet, by a considerable margin, the needs of the Commission. Since it is not likely that Unesco will be able, in the foreseeable future, to increase substantially its support to IOC, it is imperative to investigate alternative sources to fill the gap. She suggested that the Preparatory Meeting consider this problem from two perspectives: immediate measures that could attenuate the negative impact of the present adverse financial situation and longer-term consideration of ways by which the Commission could ensure that the means available are sufficient to carrying out the IOC programme. The document under consideration was an initial step in this direction, the goal of which should be to help IOC, through the commitment of its Member States, to go through the present critical period with as little damage as possible.

The Delegate of the USSR reserved his position on Section 3.3.3 of Document IOC/EC-XIX/11.

The Preparatory Meeting expressed general satisfaction with the manner in which IOC funding and staffing had been presented in the document and congratulated the First Vice-Chairman on her work. Some Delegates, expressing regret that they had received the in-depth study only after the beginning of the Meeting, reserved their position pending further analysis of certain implications, especially those concerning the financial responsibilities of Member States.

The Preparatory Meeting agreed that the matter should be viewed not only within the immediate context of reduced resources from Unesco but also so as to allow serious consideration of the longer-term expectations of Member States as to the mission and role of the Commission. In the first instance, it would be necessary for the Nineteenth Session of the Executive Council to review the Programme and Budget of the Commission for 1986-1987 (23 C/5 Approved and Adjusted) in the light of the implications of reduced funding and staff to the on-going programmes, taking into account any additional resources that might become available in the near future. In the longer term, using Document IOC/EC-XIX/11 as a point of departure, further analysis should be made of the responsibilities related to membership in the Commission and ways by which the formulation of IOC programmes and budgetary requirements could be improved.

The Preparatory Meeting, considering the desirability of making a further effort to define priorities during a period of economic constraint, recognized that this is a complicated and delicate task, especially in view of the fact that not all Member States had identical spheres of major interest. Likewise, although it might be tempting to look to other organizations to assume greater financial responsibilities, particularly in jointly sponsored programmes, an indication of reduced capability or interest from IOC might well endanger such joint programmes and/or lessen the influence of the marine scientific community in their balanced development and implementation. As an example, reference was made to the strong collaboration between WMO and IOC in IGOS which had resulted in the mobilization of two complementary scientific communities (oceanographic and meteorological). Member States would suffer rather than benefit from any action that would diminish IOC's role as a joint specialized mechanism and its influence on important joint endeavours that had been developed over many years.

The Preparatory Meeting also noted that preparation of the next Unesco Medium-term Plan would offer an opportunity to consider the future work of the Commission, taking into account a detailed analysis of the tasks before the IOC and the anticipated and identifiable resources.

The Delegate of Bulgaria proposed that the First Vice-Chairman, in consultation with the Chairman and past Chairman and with the assistance of the Secretary, undertake further work in the intersessional period. His opinion, which was shared by numerous other Delegates, was that the two actions proposed under Section 3.3.1 of the in-depth study required further careful consideration, based upon the views expressed under this Agenda Item. He suggested that, among other factors to be taken into account when proposing criteria for the responsibilities of Member States, consideration should be given to standards applied by other bodies such as UNDP where a national counterpart and in-kind contribution of 35% was required before a given programme could be approved. He reminded Delegates that, in this difficult economic period, IOC must prove what are the benefits to Member States as well as what they stand to lose if a programme is not carried out.

Several Delegates, referring to the responsibilities of Member States, emphasized the substantial national counterpart activities in which they invest considerable expertise, ship-time, and facilities, complemented by in-kind contributions in support of IOC activities, which have always been the backbone of the Commission. The Preparatory Meeting stressed the importance of such support and, in particular, the catalytic action generated through IOC which resulted in a notable multiplier effect.

Summarizing the discussion, the Chairman recalled that, of the three in-depth studies, the one on resources was at the earliest stage of development, whereas the other two on Structure and the Statutes had already gone through considerable elaboration over the past few years. With this in mind, he suggested that the exchange of views that had taken place at the Preparatory Meeting be used as guidance for further reflection and development of the study on the stability and continuity of the resources of IOC, as proposed by the Delegates of Bulgaria.

The Preparatory Meeting recommended that Document IOC/EC-XIX/11 be further developed in the intersessional period by the First Vice-Chairman, in consultation with the Chairman and Past Chairman and with the assistance of the Secretary, calling upon the advice of the Chairmen of the major technical and regional subsidiary bodies. In carrying out this task, particular attention should be given to:

- (i) the appropriateness of establishing criteria of financial responsibility to be considered by IOC Member States in making annual contributions to ensure the required level of resources for adequate and timely implementation of the overall IOC programme; and
- (ii) ways in which the formulation and the establishment of priorities therefor, including related budgetary requirements, could be developed in a manner that would facilitate the mobilization of national funds in support of the Commission.

The Delegate of the USSR pointed out that the proposals of the Preparatory Meeting were silent on the question of contributions of IOC Member States that are not Member States of Unesco, and that no appropriate link had been established between the consideration of this aspect of Document IOC/EC-XIX/11 and the relevant IOC Statutes.

### 3.3 ROLE AND EFFICIENCY OF THE IOC

The Chairman reminded the Preparatory Meeting that the adaptation of the Statutes to the increasing demands of the Member States and, in the last few years, to the requirements of the new ocean regime has been under study for more than a decade. Major consideration was given twice: first by the Working Group on the Future Role and Functions of the Commission (1976-1978) and then by the Task Team to Study the Implications, for the Commission, of the UN Convention on the Law of the Sea, and the New Ocean Regime (1980-1984). The recommendations of these two subsidiary bodies were also considered by the Assembly, notably at its Tenth, Twelfth and Thirteenth Sessions and by the Executive Council, notably at its Eighth, Eleventh, Twelfth and Fourteenth Sessions.

He therefore stressed the importance of not re-opening all the earlier discussions, but rather of finalizing the text of those Articles that had previously met with the general approval of the Member States; for those few Articles that still presented problems, every effort should be made to arrive at a consensus text that could be recommended to the Executive Council.

In doing this, he reminded the Participants that the Council should itself make Recommendations to the Assembly, and should decide, and provide guidance on, any further intersessional work that might be required.

The Preparatory Meeting, after a general discussion on the content of Document IOC/EC-XIX/12 (Measures to Enhance the Role and Efficiency of the Commission in the Long Term to Meet the Needs of Member States and the World Community), formed a Sessional Drafting Group, under the Chairmanship of Prof. Alexander Yankov (Bulgaria), to consider each proposed change in the Articles of the Commission. Proposed new texts were agreed as follows:

Article	Paragraph	Sub-paragraph	Amendment
1	1	-	yes
1	2	-	yes
2	1	new (f)*	yes
2	1	new (g)	yes
2	1	new (j)	no
2	1	new (k)	yes
2	1	new (l)**	yes
2	1	new (m) - former (l) in IOC/EC-XIX/12	yes
2	2	-	yes
2	3	-	yes
3	-	-	yes
4	3	-	yes
5	4	-	yes
9	1	-	yes
10	new 3	-	no

The proposed new texts, alongside the texts, if any, in the present Statutes are given in Appendix III, Part 1, to this Summary Report of the Preparatory Meeting.

The Preparatory Meeting, recognizing that these proposed amendments had been accepted, recommended that the Executive Council adopt them and submit them to the Assembly for consideration.\*\*\*

Regarding Article 4, paragraph 3, the Delegate of Japan pointed out that, although the intention of the new wording (Document IOC/EC-XIX/12 Section 2.8.1) was to provide a delay of at least one year before a notice of withdrawal of a Member State became effective, it was possible to have a delay of almost three years if the next Ordinary Session of the Assembly were within less than one year of the notice of withdrawal, since the withdrawal would not become effective till the following Ordinary Session. He felt that this was not sufficiently clear. He informed the Preparatory Meeting that he intended to propose new wording after having considered the matter further.

The Assistant Secretary responsible for the Sessional Working Group pointed out that the idea was to allow the Commission some time to adjust to the effects of withdrawal and that it would be up to a Member State to assess such implications.

\* As proposed in Document IOC/EC-XIX/12

\*\* New sub-paragraph agreed by the Preparatory Meeting

\*\*\* In accordance with Rule of Procedure No. 56

Amendment of two other Articles required further consideration. Article 2, paragraph 1, new sub-paragraph (j) was met by the reservation of the Delegate of Brazil who stressed that his country was against any change that would move in the direction of making IOC an intermediary in relations between States on marine scientific research in zones under national jurisdiction. He thus had some difficulty with the term "facilitate," owing to its implications in this context. He suggested that this could be solved by substituting the phrase (in the proposed new text in Document IOC/EC-XIX/12, Section 2.4.5.1) "taking into account" by "subject to".

The Delegates of Argentina, Chile and Venezuela supported this proposal; they also wished to retain the word "coastal" before the word "States", as in the present Statutes.

The Delegate of Bulgaria, in his capacity as the Chairman of the Sessional Drafting Group, summarizing the views of some other Delegates, pointed out that this Article would, in his view, in no way limit the jurisdiction or the sovereignty of any State. At the same time, the term "subject to" would be more restrictive, since the conduct of marine scientific research entails not only rights but obligations as well, and thus would operate against the principle of universality. He also noted that some coastal States were also research States so that the deletion of the word "coastal", as in the proposed text in Section 2.4.5.1, allowed both categories of States to be encompassed, the idea of "coastal" being reflected in the word "their" in the last line of the proposed text.

The Delegate of the USSR stressed that the proposed text of Article 2, paragraph 1, new sub-paragraph (j) was, in his view, fully consistent with the UN Convention on the Law of the Sea and protected the concerns of all Member States.

Various attempts were made to overcome the difficulties but no overall agreed text could be produced. It was agreed to submit four proposals for Article 2, paragraph 1, new sub-paragraph (j); these are given in Appendix III, Part 2, hereto.

The Delegate of Argentina reserved his position on the proposal to submit four texts for this Article since insufficient time had been allowed to study these new texts. He also stressed the importance of keeping quite separate, in the Summary Report, those Articles on which agreement had been reached and those on which there had been no agreement.

Regarding the proposed changes to Article 10, the Delegate of the USA explained the domestic legal difficulty in approving any text that would constitute an obligation on the US Government, since any such obligation would have to be approved by the US Congress. Her Delegation could not ensure in advance such Congressional approval.

The Delegate of the United Kingdom, while not formally objecting to the proposed formulation (Document IOC/EC-XIX/12, Section 2.11.1), had to reserve his position.

The Delegate of the USSR stressed the importance of retaining wording that would formalize the obligation of a Member State of IOC not a Member State of Unesco to contribute to the resources of the Commission.

Since the present Proposed Text attempted to formalize an obligation ("shall contribute") but qualify this by "criteria to be decided", a number of possible wordings were considered covering the range from purely voluntary contributions to formal obligations.

The Preparatory Meeting agreed to cover this range of positions by recommending consideration of two proposals to amend Article 10, paragraph 3; these are given in Appendix III, Part 2, hereto.

#### 4. REPORT AND RECOMMENDATION TO THE EXECUTIVE COUNCIL

The Preparatory Meeting adopted the Summary Report of its deliberation.

#### 5. CLOSURE

The Chairman thanked the participants for their constructive spirit in dealing with the complex issues before the Preparatory Meeting, as well as the Secretariat and supporting staff. He closed the Meeting at 18.15 on 5 March 1986.

APPENDIX I

AGENDA

1. OPENING
2. ARRANGEMENTS
  - 2.1 Designation of Chairman and Rapporteur
  - 2.2 Conduct of the Session and Documentation
3. CONSIDERATION OF IN-DEPTH STUDIES
  - 3.1 Structure and Responsibilities of Subsidiary Bodies of the IOC
  - 3.2 Stability and Continuity of Resources of the IOC
  - 3.3 Role and Efficiency of the IOC
4. REPORT AND RECOMMENDATIONS TO THE EXECUTIVE COUNCIL
5. CLOSURE

## APPENDIX II

### AMENDMENTS TO DOCUMENT IOC/EC-XIX/9 RECOMMENDED BY THE PREPARATORY MEETING

Amendments to Document IOC/EC-XIX/9 "The Structure and Responsibilities of the Subsidiary Bodies of the Commission" proposed by the Ad hoc Preparatory Meeting on the In-depth Studies on the Structure, Resources and Role of the IOC, Paris, 3-5 March 1986:

1. Section 3, item (i) - Amend to read "All Working Committees should be global scientific and technical subsidiary bodies". Note: A suggestion was made that the word "Working" be deleted, but if the word "Committee" is used on its own, it would encompass the Regional Committees in Section 3, item (iii) which is dealt with in point 2 of the present Document below.

2. Section 3, item (iii) - Add "Note: The Existing Programme Group on Ocean Processes and Climate" would be classified as a "Scientific and Technical Committee".

3. Under Section 3, add new sub-paragraph (viii) and renumber existing (viii) and (ix) to read (ix) and (x): "(viii) All Secondary Subsidiary Bodies shall be established initially for one inter-sessional period only. Further extension shall be by specific decision at each session of their parent bodies."

4. Insert alternative text: "(x) In view of the existence of various IOC subsidiary bodies to guide specific programmes (e.g., GIPME, OSLR, OSNLR, GEBCO, etc.) it is recommended that the Scientific Review Board be dissolved (abolished) and that, when required, ad hoc meetings, each with a specific remit, be called, consisting of the Chairmen of the major IOC subsidiary bodies, together with representatives of the Advisory Bodies to the Commission."

5. Section 3.1.1 Table II.

a) For "Technical Committee", substitute "Scientific and Technical Committee".

b) Under Programme Development, add a new column headed "Standard setting and nomenclature" and insert x in this column against "Scientific and Technical Committee".

6. Section 3.1.2 (v) - After the sub-section entitled "Scientific and technical advice and guidance", insert new sub-section as follows: "Standard setting and nomenclature 'Recommend and co-ordinate the development (with other international organizations) of standards, reference materials and nomenclature for use in marine science and related ocean services'".

7. Add new Section 3.3 and renumber existing Sections 3.3 to 3.7 to read 3.4 to 3.8.

#### "3.3 Joint Subsidiary Bodies

Joint subsidiary bodies with other organizations may be established only by the Assembly (Art. 6 of the IOC Statutes) in which case the procedures governing such joint bodies should be agreed with these other organizations following as far as possible the Guidelines given in IOC Manual, Part I, Section 5.

There are four "Scientific and Technical Committees" that are jointly sponsored with other organizations: The Joint Working Committee for the Integrated Global Ocean Services System (IGOSS), with WMO; and the Joint Working Groups on the Investigations of El Nino, with WMO and CPPS; that for Post-IDOE Studies on East Asia Tectonics and Resources (SEATAR), with CCOP; and that for South Pacific Tectonics and Resources (STAR), with CCOP(SOPAC).

There are five Joint Groups of Experts: the Joint IOC-IHO Guiding Committee for GEBCO; the Joint SCOR-IOC Committee on Climatic Changes and the Ocean (CCCO); the Joint IOC-FAO Guiding Group of Experts on OSNLR; the Joint IOC-UN(OETB) Guiding Group of Experts on OSNLR; and the Joint IOC-UNEP Group of Experts on Methods, Standards and Intercalibration (GEMSI)."



8. Section 3.4 (now 3.5) MEMBERSHIP. For "Technical Committees" read "Scientific and Technical Committees".
9. Section 3.6 (now 3.7) RESPONSIBILITIES OF MEMBER STATES. Line 1. For "Technical Committees" read "Scientific and Technical Committees".
10. Section 3.7 (now 3.8) second paragraph - Amend to read "Nevertheless, in general, Sub-Commissions, Scientific and Technical Committees and Regional Committees should meet at least every two years, the actual frequency..."
11. The Annex (of Document IOC/EC-XIX/9) should be amended to bring it into line with the IOC Manual Part II, Revised Edition, December 1985.

APPENDIX III

PART 1:      AMENDMENTS TO IOC STATUTES RECOMMENDED  
BY THE PREPARATORY MEETING

ARTICLE 1, PARAGRAPH 1

Revised proposed text

*"The Intergovernmental Oceanographic Commission, hereafter called the Commission, is established as a body with functional autonomy within the United Nations Educational, Scientific and Cultural Organization, with authority to determine its programme of work and to manage it within the resources available to the Commission."*

Present text

*"The Intergovernmental Oceanographic Commission, hereafter called the Commission, is established*

*within the United Nations Educational, Scientific and Cultural Organization."*

ARTICLE 1, PARAGRAPH 2

Revised proposed text

*"The purpose of the Commission is to promote marine scientific investigations and related services,*

*with a view to learning more about the nature and resources of the oceans through the concerted action of its members."*

Present text

*"The purpose of the Commission is to promote scientific investigations*

*with a view to learning more about the nature and resources of the oceans through the concerted action of its members."*

ARTICLE 2, PARAGRAPH 1

New Sub-paragraph (f)

Proposed text

"(f) to promote and co-ordinate the development and transfer of marine science and its technology, particularly to developing countries."

Present text

(none)

New sub-paragraph (g)

Revised proposed text

"(g) make recommendations to strengthen education and training

in marine science and its technology, and promote relevant projects in these fields as components of each of its programmes."

Present text

"(f) make recommendations to strengthen education and training programmes in marine science and its technology;"

New sub-paragraph (k)

Revised proposed text

"(k) promote, plan and co-ordinate observing and monitoring systems, on the properties and quality of the marine environment, as well as the preparation and dissemination of processed oceanographic data and information, and of assessment studies."

Present text

(none)

New sub-paragraph (l) displacing the present one to new sub-paragraph (m).

New Sub-paragraph (l)

Revised proposed text

"(l) promote, recommend and co-ordinate, with international organisations, as appropriate, the development of standards, reference materials and nomenclature for use in marine science and related ocean services."

Present text

(none)

New Sub-paragraph (m)

Revised proposed text

"(m) undertake, as appropriate, any other action compatible with its purpose and functions concerning the scientific investigation of the ocean and its interfaces."

Present text

(none)

ARTICLE 2, PARAGRAPH 2

Text Changes

Proposed text

"The Commission, in carrying out its functions, shall take into account the special needs and interests of developing countries, including in particular the need to further the capabilities of these countries in marine science and technology."

Present text

"The Commission, in carrying out its functions, shall bear in mind the special needs and interests of developing countries, including in particular the need to further the capabilities of these countries in marine science and technology."

ARTICLE 2, PARAGRAPH 3

Revised proposed text

"Nothing in this Article shall imply the adoption of a position by the Commission regarding the nature or extent of the jurisdiction of coastal States in general or of any coastal State in particular."

Present text

"Nothing in this Article shall be construed as implying the expression of a position regarding the nature or extent of the jurisdiction of coastal States in general or of any coastal State in particular."

ARTICLE 3

With the new text, it is proposed to create two paragraphs, 1 and 2, for this Article, to separate the two underlying ideas (see Section 2.7.3 of Document IOC/EC-XIX/12). The present text hereunder has been rearranged slightly to facilitate comparison with the proposed text: the first sentence continues below the second sentence.

Proposed text

"1. The Commission shall give due attention to supporting the objectives of the international organizations with which it collaborates.

On the other hand, the Commission may request these organizations to take its requirements into account in planning and executing their own programmes

Present text

"The Commission shall give due attention to supporting the objectives of the international organizations with which it collaborates and which may request the Commission to act, as appropriate, as an instrument ...

On the other hand, the Commission may request these organizations to take its requirements into account in planning and executing their own programmes.

"2. The Commission may act also as a joint specialized mechanism of the organizations of the United Nations system that have agreed to use the Commission for discharging certain of their responsibilities in the fields of marine science and ocean services, and accordingly to sustain the work of the Commission."

... for discharging certain of their responsibilities in the fields of marine science.

#### ARTICLE 4

##### Proposed text

##### Present text

(none)

paragraph 1

(unchanged)

(none)

paragraph 2

(unchanged)

"3. Any Member State of the Commission may withdraw from it by giving notice of its intention to do so to the Director-General of Unesco.

"3. Any Member of the Commission may withdraw from it by giving notice of its intention to do so to the Director-General of Unesco.

The date of such notice shall be that of its receipt by the Director-General.

The notice shall take effect on the first day of the next ordinary session of the Assembly following the date of notice of withdrawal, provided that at least one year has elapsed since said date.

The notice shall take effect at the end of the first session of the Commission which follows the date on which notice has been given, or if notice has been given during the course of a session of the Commission, at the end of that session unless withdrawn prior to that time."

(none)

paragraph 4

(unchanged)

(none)

paragraph 5

(unchanged)

#### ARTICLE 5, PARAGRAPH 4

There are no changes proposed in the preambular part of paragraph 4 or in 4(a), but there are extensive changes in paragraph 4(b); however, these changes cannot be readily identified by underlining; the two texts are therefore simply placed side by side. It should be noted that the Rule of Procedure No. 18, paragraph 1

defining the number of Member States on the Executive Council is amended periodically according to the total number of Member States of the Commission.

<u>Proposed text</u>		<u>Present text</u>
(none)	paragraph 1	(unchanged)
(none)	paragraph 2	(unchanged)
(none)	paragraph 3,	(unchanged)
<i>"4. During the course of each ordinary session, the Assembly, taking into account the principles of geographical distribution shall elect:</i>		<i>"4. During the course of each ordinary session, the Assembly, taking into account the principles of geographical distribution shall elect:</i>
<i>(a) a Chairman and four Vice-Chairmen who shall be the officers of the Commission, its Assembly and its Executive Council;"</i>		<i>(a) a Chairman and four Vice-Chairmen who shall be the officers of the Commission, its Assembly and its Executive Council;"</i>
<i>"(b) a number of Member States to the Executive Council, which number shall be such that the total membership of the Executive Council shall consist of the duly elected Chairman and four Vice-Chairmen and one fourth of the Member States of the Commission; each Member State so elected, besides those of the Chairman and four Vice-Chairmen, shall each designate its representative on the Executive Council."</i>		<i>"(b) Member States of the Commission who shall each designate a representative of that State to serve on the Executive Council; the number of Member States to be elected to the Executive Council shall be fixed by the Rules of Procedure. This number shall not exceed one-fourth the number of the members of the Commission.</i>
(none)	paragraph 5	(unchanged)
(none)	paragraph 6	(unchanged)

ARTICLE 9, PARAGRAPH 1

<u>Proposed text</u>	<u>Present text</u>
<i>"1. With due regard to the applicable Staff Regulations and Rules of the United Nations Educational, Scientific and Cultural Organization, the Secretariat of the Commission shall consist of a <u>Secretary</u> and such other staff as may be necessary,</i>	<i>"1. With due regard to the applicable Staff Regulations and Rules of the United Nations Educational, Scientific and Cultural Organization, the Secretariat of the Commission shall consist of personnel</i>

*provided by the United Nations Educational, Scientific and Cultural Organization, as well as such personnel as may be provided, at their expense, by the United Nations, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization and the International Maritime Organization and other organizations of the United Nations system.*

*provided by the United Nations Educational, Scientific and Cultural Organization, as well as such personnel as may be provided, at their expense, by the United Nations, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization and the Intergovernmental Maritime Consultative Organization and other Organizations of the United Nations system.*

**PART 2:                    PROPOSED TEXTS FOR ARTICLES FOR WHICH  
THE PREPARATORY MEETING COULD NOT REACH CONSENSUS**

**ARTICLE 2, PARAGRAPH 1, NEW SUB-PARAGRAPH (j)**

Four proposals (A, B, C, D) are submitted; proposal A is as given in Document IOC/EC-XIX/12, Section 2.4.5.1, and proposals B, C and D are small modifications thereof, (>).

**A.            Proposed text**

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States, taking into account all interests and rights of States in respect of marine scientific research in zones under their jurisdiction."*

**Present text**

*"(j) promote freedom of scientific investigation of the oceans for the benefits of all mankind*

*taking into account all interests and rights of coastal States concerning scientific research in the zones under their jurisdiction."*

**B.            Proposed text**

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States, subject to all interests and rights of States in respect of marine scientific research in zones under their jurisdiction."*

>

C. Proposed text

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States,*

> *respecting all interests and rights of States in respect of marine scientific research in zones under their jurisdiction."*

D. Proposed text

*"(j) promote scientific investigation of the oceans and application of the results thereof for the benefit of all mankind and facilitate, to this end, co-operation amongst the Member States.*

> (Rest of text deleted)

ARTICLE 10, PARAGRAPH 3

Two proposals (A, B) are submitted; proposal A is as given in Document IOC/EC-XIX/12, Section 2.11.1, and proposal B is a new text.

A. Proposed text

*"1. The programmes sponsored and co-ordinated by the Commission and recommended to its Member States for their concerted action shall be carried out with the aid of the resources of participating Member States"*

(none)

paragraph 2

Present text

*"1. The programmes sponsored and co-ordinated by the Commission and recommended to its Member States for their concerted action shall be carried out with the aid of the resources of participating Member States, in accordance with the obligations that each State is willing to assume."*

(unchanged)

*"3. A Member State of IOC that is not a Member States of Unesco shall contribute to the resources of the Commission according to criteria to be decided by the Assembly in the light of the Commission's programme of work and budget."*

(none)



*"4. In addition to the resources mentioned in paragraphs 1, 2 and 3, above, voluntary contributions may be accepted and established as trust funds in accordance with the financial regulations of the United Nations Educational, Scientific and Cultural Organization and administered by the Director-General of that Organization. Such contributions shall be allocated by the Commission for its programmes."*

*"3. Voluntary contributions may be accepted and established as trust funds in accordance with the financial regulations of the United Nations Educational, Scientific and Cultural Organization and administered by the Director-General of that Organization. Such contributions shall be allocated by the Commission for its programmes."*

B. New text

*"The Assembly shall establish criteria for contributions to the resources of the Commission by Member States that are not Member States of Unesco, in the light of the Commission's approved programme of work and budget. Such Member States will be asked to adhere to the agreed criteria."*

ANNEX VI / ANNEXE VI / ANEXO VI / ПРИЛОЖЕНИЕ VI /  
الملحق السادس / 附件 VI

LIST OF PARTICIPANTS / LISTE DES PARTICIPANTS/  
LISTA DE PARTICIPANTES/ СПИСОК УЧАСТНИКОВ  
قائمة المشتركين / 与会者名单

Names and titles in the following lists are reproduced as handed in to the Secretariat by the delegations concerned. Countries are shown in the English alphabetical order.

Les noms et titres qui figurent dans les listes ci-après sont reproduits dans la forme où ils ont été communiqués au Secrétariat par les délégations intéressées. Les pays sont mentionnés dans l'ordre alphabétique anglais.

Los nombres y títulos que figuran en las listas siguientes se reproducen en la forma en que las delegaciones interesadas los han comunicado a la Secretaría. Los países se mencionan en el orden alfabético inglés.

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أدرجت الأسماء والألقاب في هذه القائمة كما  
قدمتها للسكرتارية الوفود المعنية، ورتبت  
أسماء البلاد بحسب الترتيب الهجائي  
الانجليزي

下列名单系根据各有关代表团提交秘书处之  
姓名和头衔复制。国名按英文字母顺序排列。

**I. IOC OFFICERS**  
**BUREAU DE LA COI**  
**MESA DE LA COI**  
**ДОЛЖНОСТНЫЕ ЛИЦА**

هیئة مکتب کوی / 政府间海洋学委员会主席团

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MEMBRES DU CONSEIL EXÉCUTIF/  
PARTICIPANTES DE LOS ESTADOS MIEMBROS,  
MIEMBROS DEL CONSEJO EJECUTIVO/  
УЧАСТНИКИ ОТ ГОСУДАРСТВ-ЧЛЕНОВ,  
ЧЛЕНЫ ИСПОЛНИТЕЛЬНОГО СОВЕТА  
/المشاركون من الدول الاعضاء، واعضاء المجلس التنفيذي/ 执行理事会理事**

**Algeria/Algérie/Argelia/ Алжир/الجزائر/  
阿尔及利亚**

Head of Delegation

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ANNEX VII

LIST OF ACRONYMS

ACMRR	Advisory Committee on Marine Resources Research
ASDIC	Anti-submarine Detection Investigation Committee
ASFA	Aquatic Sciences and Fisheries Abstracts
ASFIS	Aquatic Sciences and Fisheries Information System
BT	Bathythermograph
CARIPOL	IOCARIBE Pollution Monitoring Programme
CASP	Canadian Atlantic Storm Project
CCCC	Joint SCOR-IOC Committee on Climatic Changes and the Ocean
CCOP(SOPAC)	Committee for the Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas
COBSEA	Co-ordinating Body for the Seas of East Asia
COMAR	Unesco Major Interregional Project on Research and Training Leading to the Integrated Management of Coastal Systems
CPPS	Comisión Permanente del Pacífico Sur
DBCP	Drifting-Buoy Co-operation Panel
DNA	Declared National Agency
DNP	Declared National Programme
ECOR	Engineering Committee on Oceanic Resources
ECOSOC	Economic and Social Council
EEZ	Exclusive Economic Zone
EPA	Environmental Protection Agency
ERFEN	Regional Study of the Phenomenon Known as "El Niño"
FAO	Food and Agriculture Organization of the United Nations
GAPA	Geological/Geophysical Atlases of the Atlantic and Pacific Oceans
GEBCO	General Bathymetric Chart of the Oceans
GEEP	GIPME Group of Experts on Effects of Pollutants
GEMSI	GIPME Group on Experts on Methods, Standards and Intercalibration
GESAMP	Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	IOC Working Committee for the Global Investigation of Pollution in the Marine Environment
GLORIA	Geological Long-range Inclined ASDIC
GLOSS	Global Sea-level Observing System

IABO	International Association for Biological Oceanography
IAEA	International Atomic Energy Agency
IAPSO	International Association for the Physical Sciences of the Ocean
ICES	International Commission for the Exploration of the Sea
ICSPRO	Inter-secretariat Committee on Scientific Programmes Relating to Oceanography
IDRC	International Development Research Centre
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
IGB	International Gravimetric Bureau
IGOSS	Integrated Global Ocean Services System
IHO	International Hydrographic Organization
IHB	International Hydrographic Bureau
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IOCEA	IOC Programme Group for the Central Eastern Atlantic
IOCINCWIO	IOC Programme Group for the Co-operative Investigation in the North and Central Western Indian Ocean
IOCINDIO	IOC Programme Group for the Central Indian Ocean
IODE	International Oceanographic Data Exchange
IOS	IGOSS Observing System
IREP	International Recruitment Experiment
ISLPP	IGOSS Sea Level Pilot Project
ITIC	International Tsunami Information Centre
ITPO	International TOGA Project Office
ITSU	International Tsunami Warning System in the Pacific
JASIN	Joint Air-Sea Interaction Project
JOA	Joint Oceanographic Assembly
JPOTS	Joint Panel on Oceanographic Tables and Standards
JSC	Joint Scientific Committee
MARPOLMON	Marine Pollution Monitoring Programme
MEDALPEX	Mediterranean Alpine Experiment
MEDI	Marine Environmental Data Information Referral System
MIAS	Marine Information and Advisory Service

MIM	Marine Information Management
MMS	Mapping Microwave Spectrometer
MSL	Mean Sea Level
MV	Motor Vessel
NBS	National Bureau of Standards
NERC	Natural Environment Research Council (UK)
NGO	Non-governmental Organization
NIES	National Institute of Environmental Sciences (Japan)
NOAA	National Oceanic and Atmospheric Administration (USA)
NODC	National Oceanographic Data Centre
NOP	National Oceanographic Programme
NRC	National Research Council (USA)
ODAS	Ocean Data Acquisition Systems, Aids and Devices
OETB	Ocean Economics and Technology Branch
OMLET	Ocean Mixed Layer Experiment
ORSTOM	Office of Overseas Scientific and Technical Research (France)
OSLR	Ocean Science in Relation to Living Resources
OSNLR	Ocean Science in Relation to Non-Living Resources
POEM	Physical Oceanography of the Eastern Mediterranean
PSMSL	Permanent Service for Mean Sea Level
RNODC	Responsible National Oceanographic Data Centre
ROPME	Regional Organization for the Protection of the Marine Environment
RRS	Royal Research Ship
SARP	Sardine-Anchovy Recruitment Project
SCOR	Scientific Committee on Oceanic Research
SEAS	Committee for the Scientific Exploration of the Atlantic Shelf
SEATAR	Joint CCOP-IOC Working Group on Post-IDOE Studies of East Asia Tectonics and Resources
SI	International System of Units
SOC	Specialized Oceanographic Centre
SOP	Ship-of-Opportunity Programme
SPREP	South Pacific Regional Environment Programme
STAR	Joint CCOP(SOPAC)-IOC Working Group on South Pacific Tectonics and Resources
SUN	IAPSO Working Group on Symbols, Units and Nomenclature
TEMA	Training, Education and Mutual Assistance in the Marine Sciences

TOGA	Tropical Oceans and Global Atmosphere
TOPEX/POSEIDON	Ocean Topography Experiment
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USGS	United States Geological Survey
VCP	Voluntary Co-operation Programme
WCP	World Climate Programme
WCRP	World Climate Research Programme
WESTPAC	IOC Programme Group for the Western Pacific
WHO	World Health Organization
WOCE	World Ocean Circulation Experiment
WOCE-IPO	WOCE International Planning Office
XBT	Expendable Bathythermograph