

Intergovernmental Oceanographic Commission
Reports of Governing and Major Subsidiary Bodies



**Twenty-second Session
of the Assembly**

Paris, 24 June – 2 July 2003

UNESCO

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1. OPENING

1 The Chairman, Professor Su Jilan, opened the 22nd Session of the IOC Assembly at 10.00hr on Tuesday 24 June 2003.

2 The Director-General of UNESCO, Mr Koichiro Matsuura, addressed the Assembly. Mr Matsuura restated the high importance that UNESCO gives to the work of the Intergovernmental Oceanographic Commission. This is illustrated by the fact that, in the UNESCO Medium-term Strategy (2002–2007), IOC is justly recognised as one of the two *flagship programmes* of the Organisation. IOC receives widespread recognition for its leadership and support of international scientific programmes and is recognised as being a reliable and effective partner when working with other UN bodies. The scope of the co-ordination needed in ocean activities is broad, extending across the social, economic and environmental aspects of sustainable development and responds to the principle enunciated in the preamble of the United Nations Convention on the Law of the Sea (UNCLOS): *that the problems of ocean space are closely interrelated and need to be considered as a whole*. The effective use of UNCLOS by Member States depends on the ability of the UN system to work together as a whole, utilising a clear division of labour. The Global Environmental Conventions adopted after UNCED, Agenda 21 and the recent series of World Summits have extended the responsibility of the UN system into new areas of work. Further co-operation, partnership and co-ordination on issues related to oceans and coastal areas are thus essential if effective and coherent action is to be achieved in this new international context. The new UN System Chief Executives Board for Co-ordination, in which UNESCO participates together with all the other Heads of UN Agencies, and its two high-level Commissions are trying to improve governance in the UN by giving a more executive character to the co-ordination role of its senior executives. Sadly, as a result of this reform, some of the standing co-ordination mechanisms, especially the former Sub-Committee on Oceans and Coastal Areas, have ceased to function. However, as requested by the World Summit on Sustainable Development and by last year's UN General Assembly Resolution on Oceans and the Law of the Sea, efforts are being made to identify and recommend a new mechanism. The Director-General encouraged IOC Member States to participate in the discussions that are taking place in the UN General Assembly on these issues.

3 The Director-General expressed his appreciation to the IOC governing bodies for approving an indicative budget and programme sufficiently in advance to be considered in the UNESCO planning process. He noted that this innovation has been acknowledged by the External Auditor as an improvement in the UNESCO internal governance practices, since it adds to the transparency and accountability of UNESCO's system of governance.

4 The return of the USA to UNESCO next October will create a unique opportunity to break the sequence of budgets that have been approved under the Zero Nominal Growth policy. The Director-General expressed his expectation that the General Conference will go along with the proposed \$610 million budget, a budget that would provide for the first time in many years a modest but real growth. The UNESCO Programme will be focused on a few main priorities. Although the management of water resources is UNESCO's first priority in the Natural Science Sector, IOC also will benefit from a substantial increase in its regular budget under the 610-million-dollar budget scenario, fully compensating for the loss of the USA's contribution to the IOC Trust Fund. The Director-General, recognising that one of IOC's more pressing needs is to strengthen its Secretariat so that it may respond to the increasing demands on the Programme, reported that he is considering allowing IOC to use part of these new resources to hire personnel under the Limited Duration Assignment regime.

- 5 The Chairman, Prof. Su Jilan, in his opening statement, reported on the World Summit on Sustainable Development in Johannesburg. Both the Global Conference on Oceans and Coasts hosted by IOC here in Paris in December 2001, and the Extraordinary Executive Council of the IOC, convened immediately afterwards, were instrumental in gaining momentum for the Ocean agenda in the preparatory process. The Commission not only prepared the IOC Declaration to WSSD, but also played an important role in activating and promoting the consideration by the Summit of a full agenda of Ocean issues. There were three outcomes from the WSSD: the Heads of State Declaration; the Plan of Implementation; and the Series of type-II partnerships recognised by the process. It is a remarkable fact that the Plan of Implementation includes a specific reference to IOC in its paragraph 34. That paragraph addresses the importance of a science-based approach to sustainable development, and identifies several important actions and commitments that are crucial for the future work of IOC, one of which is the participation of IOC in the Global Marine Assessment, a regular process to be established by 2004, which will be discussed further in this Assembly. The opening statements made by the Director-General and the IOC Chairman are reproduced in [Annex III](#) (A and B, respectively).
- 6 The Chairman also called the attention of the Assembly to the IOC guidelines for the Transfer of Marine Technology. Although the Transfer of Marine Technology is also referred to in the Plan of Implementation of WSSD, the IOC initiative attempts to help with the implementation of a critical part of the United Nations Convention on the Law of the Sea. In promoting the transfer of marine technology, we are inviting the international community to use IOC as an honest broker between demand for ocean technology and the suppliers of that technology.
- 7 The Informal Consultative Process (ICP) on Oceans and the Law of the Sea, established in 1999 by the United Nations General Assembly, has proved to be a very useful exercise. The IOC has participated in all ICP meetings, assuming an important role in the fields of its competence and being clearly recognised as the focal point in Ocean Sciences and Ocean Services for the UN system. Last year, the 57th General Assembly of the UN, after evaluating the performance of the ICP, decided to extend its mandate for another three years. This is an important development that should have a positive impact on the governance of the ocean. Furthermore, through ICP, a broad recognition by governments that, to improve governance of the ocean, there is an urgent need to improve co-ordination of ocean affairs within the UN system. The role that IOC played in the past through ICSPRO and later on in the ACC Sub-Committee on Oceans and Coastal Areas (SOCA), as pointed out by the Director-General of UNESCO, will need to continue in the future mechanism to be established.
- 8 With regard to the internal working of the IOC, the Chairman reported on the interaction of the Officers of the Commission, on behalf of the Member States, with the Executive Secretary. Regular meetings have been held twice a year between the Officers and the Executive Secretary, one of which takes place immediately before meetings of the IOC governing bodies. This has turned out to be a very useful and practical instrument to bring closer together the everyday working of the Secretariat with the guidance of the Member States.
- 9 The Chairman called on the participants to stand in silence for one minute as a mark of respect for distinguished individuals who had collaborated with the Commission and had sadly passed away since the 21st Session. Special reference was made to: Ms Elizabeth Mann-Borgese, a promoter of ocean governance and founder of the International Ocean Institute; Dr George Needler, a distinguished member of I-GOOS from the very beginning and a major contributor to WOCE; and Dr Manuel Flores, Scientific Secretary of the Permanent Commission for the South Pacific (CPPS) and a long-standing fisheries expert in Latin America.

2. ORGANISATION OF THE SESSION

2.1 ADOPTION OF THE AGENDA

10 The Executive Secretary introduced the Agenda, referring to Document IOC-XXII/1 prov. rev. 2. He noted that the evaluation of the Tsunami Programme requested by the Assembly at its 21st Session will only take place later this year; the findings will be reported to the 37th Session of the Executive Council in 2004. He informed the Assembly of a few minor changes to the Provisional Agenda and Timetable recommended by the Executive Council.

11 **The Assembly adopted** the Agenda, which is given in [Annex I](#).

2.2 DESIGNATION OF THE RAPPORTEUR

12 Upon a motion by Argentina, seconded by Spain, **the Assembly accepted** with gratitude the offer by Mexico to provide the Rapporteur for the present session. **The Assembly designated** Mr Francisco Brizuela Venegas as the Rapporteur to act on behalf of the Member States to ensure the accuracy of the report of the Assembly.

2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES

13 **The Assembly accepted** the recommendations of the 36th Session of the IOC Executive Council, acting as the Steering Committee for the Assembly under Rule of Procedure 19(2), on the establishment of intrasessional committees, as follows:

- (i) Nominations Committee (Agenda item 5.2): the Committee was chaired by Professor Dieter Kohnke (Germany) and had the following composition: Chile, China, Indonesia, Iran, Kenya, Russian Federation and USA;
- (ii) Resolutions Committee (Agenda item 6): the Committee was chaired by Dr Geoff Holland (Canada) and had the following composition: Brazil, Chile, China, France, Japan, Republic of Korea, Russian Federation, Tanzania, United Kingdom and USA;
- (iii) Financial Committee (Agenda items 3.4 and 5.1): this open-ended Committee was chaired by Dr David Pugh (United Kingdom), IOC Vice-Chairman, and had among its members: Argentina, Brazil, Canada, Chile, China, France, India, Iran, Japan, Republic of Korea, Portugal, Russian Federation, Sweden, United Kingdom and USA.

2.4 INTRODUCTION OF DOCUMENTATION AND TIMETABLE

14 The Executive Secretary introduced the documentation for the Session. As was the case for IOC-XXI and EC-XXXV, the Action Paper (Document IOC-XXII/2) incorporated all information necessary to adopt decisions; it included references to relevant Annexes to the Action Paper, to information documents, and contained draft texts for the Draft Summary Report of the present session of the Assembly, as well as some Draft Resolutions.

15 **The Assembly expressed** its satisfaction of the Secretariat's effort in the preparation and circulation of documents required by the Assembly in the four working languages, and in particular of the Action paper.

- 16 **The Assembly adopted** the Revised Provisional Timetable (Document IOC-XXII/1 add. prov. rev. 2). The List of Documents is given in [Annex X](#), the List of Participants in [Annex XI](#), and the List of Acronyms in [Annex XII](#).

2.5 ANTON BRUUN AND N.K. PANIKKAR MEMORIAL LECTURES

- 17 Dr Harsh K. Gupta, Secretary to the Government of India at the Department of Ocean Development, and Dr Patrick K. Takahashi, Emeritus Director of the Hawaii Natural Energy Institute, School of Ocean and Earth Science and Technology, University of Hawaii at Manoa, delivered the Bruun Memorial Lectures 2003 on “Energy from the Sea.”

- 18 Dr Gupta made a presentation on “[Gas-hydrates – a Potential Source of Energy from the Oceans](#).” The methane stored within and trapped below the hydrated sediments is estimated to be twice the amount of the total fossil-fuel energy reserves of the world.

- 19 Dr Takahashi addressed specifically “[Ocean Thermal Energy Conversion \(OTEC\)](#)”, a technology that extracts clean, renewable solar thermal energy from temperature differences in the ocean. By describing OTEC as part of the essence of ocean energy, the author showed the way towards a sea of change, a *Blue Revolution*.

- 20 Dr Kwame Koranteng, Director of the Marine Fisheries Research Division, Ministry of Food and Agriculture, Ghana, and Dr Julius Francis, Executive Secretary of the Western Indian Ocean Marine Science Association, delivered the N.K. Panikkar Memorial Lectures 2003 on the topic “Oceanography in Africa.”

- 21 Dr Koranteng made a presentation on “[Capacity-building for Oceanography in Africa: the Case of Biological Oceanography in the Central Eastern Atlantic Region](#).” Some relevant capacity-building programmes of IOC and associated bodies were examined with a view to assessing possible impacts on oceanography in the IOCEA region.

- 22 On the same subject, Dr Francis spoke on “[Realities and Prospects: a Case Study of the IOCINWIO Region](#).” The summaries of the Bruun and Panikkar lectures 2003 are given in [Annex IV](#).

3. STATUTORY REPORTS

3.1 STATEMENT OF THE CHAIRMAN ON THE STATE OF IOC

- 23 The Chairman combined his statement on this Agenda item with his opening statement (Agenda item 1), covering the recent developments in the work of the Commission and its perspectives for the coming years. The Chairman’s overall statement (covering Agenda items 1 and 3.1) is given in [Annex III Part B](#) to the present report.

3.2 REPORT BY THE EXECUTIVE SECRETARY ON PROGRAMME AND BUDGET IMPLEMENTATION

- 24 The Executive Secretary introduced this item. He highlighted the IOC role in the preparation of the World Summit on Sustainable Development (WSSD), which involved the co-ordinated work of IOC Member States, in close co-ordination with the Secretariat, to maintain the visibility of Oceans at the Summit. As a result of this work, Ocean issues are well covered in the Implementation Plan of WSSD. IOC received full recognition and was given the responsibility of playing a key role in building local capacity in marine science and sustainable

management of the oceans and their resources. An important item of his presentation referred to the African Process and the achievements of the Partnership Conference, chaired by President Chissano of Mozambique and attended by other African Heads of State during WSSD. The Executive Secretary noted the inclusion of the outcomes of the African Process in the framework of the New Partnership for Africa's Development (NEPAD) and the important contributions of African Member States and the expected donors. He then made a presentation on the most salient results of the IOC Programmes, showing the degree of accomplishment of the Data Buoy Co-operation Panel and the Argo floats deployment. He expressed concern regarding the gap between the available observation products and the developing countries' level of utilisation of them.

25 The Executive Secretary also introduced the document IOC-XXII/2 Annex 2 *Progress Report on Budget Execution (2000–2001, and 2002)* containing an overview of the current status of revenue and expenditure in relation to the IOC Regular Programme and the IOC Trust Fund Special Account, 1 January 2000–31 December 2001 and 1 January 2002–31 December 2002. He drew the attention of the Assembly to the satisfactory level of programme implementation achieved by IOC in the current biennium. The introduction of SISTER and SAP as management tools in UNESCO has enabled the Commission to achieve significant improvements in programme evaluation, accounting and budgetary systems, a need that had been identified in Recommendations 2.10 and 4.11 of the External Evaluation Report. The detailed reports in SISTER are online and open for consultation by UNESCO permanent delegations up to the Main Line of Action level. The Executive Secretary also presented updated information on the Member States' contributions to the IOC Special Account in 2003.

26 Some Member States expressed concern about the current level of staffing in the office of the IOC Sub-Commission for the Western Pacific (WESTPAC); others addressed different aspects of the programme of IOC. Several Member States indicated that the chances of effectively coping with the growing workload of the Commission are seriously affected by the continuous staff reductions in UNESCO. This is in sharp contrast to the advice of the External Auditor who requested UNESCO to consider doubling the number of permanent posts in the IOC from 9 to 18 in a reasonable period of time.

27 **The Assembly invited** the Executive Secretary to expose his vision of the potential impact of the USA's return to UNESCO in October 2003.

28 Three scenarios of budget ceiling prepared by the UNESCO Secretariat for 2004–2005 all have direct financial implications for IOC: the Zero Nominal Growth Scenario (ZNG), with a total budget ceiling of \$544 million; the Reduced Real Growth Scenario (RRG), with a total budget ceiling of \$576 million; and a Real Growth Scenario (RG) with a total budget ceiling of \$610 million. In the RRG scenario, IOC would be reinforced with half a million USD relative to the previous biennium, while in the RG Scenario an additional \$1 million would be dedicated to Main Lines of Action 1 & 2. These reinforcements are a partial (RRG) or a total (RG) compensation for the potential loss of direct contributions from the United States to the IOC Special Account following its return to UNESCO. However, the Executive Secretary pointed out that, everything considered, despite this important contribution, the IOC will essentially receive a "zero nominal growth" budget, at a moment in which all the rest of UNESCO's programmes are experiencing a real increase in their resource base, in some cases amounting to a very significant increase.

29 The Executive Secretary also informed the Assembly of the recent developments in the co-ordination of UN programmes relating to oceans, following the abolition of the ACC Sub-Committee on Oceans and Coastal Areas (SOCA). Resolution A/57/RES/141 on *Ocean Affairs*

and the Law of the Sea adopted by the General Assembly on 12 December 2002 invited the Secretary-General of the UN *to establish an effective, transparent and regular interagency co-ordination mechanism on oceans and coastal issues within the United Nations system*. This high-level decision was based on a recommendation of the Informal Consultative Process (ICP) on Oceans and the Law of the Sea, which was endorsed by the World Summit on Sustainable Development. The Executive Secretary reported on the main issues discussed and the conclusions of the 4th meeting of the ICP (New York, June 2003), highlighting the usefulness of this forum to informally exchange reviews and positions on difficult issues, such as the responsibilities of flag States, unregulated, unreported fisheries, fishery subsidies or the establishment of Marine Protected Areas in the High Seas. The Executive Secretary believed that the process had reached a level of maturity that made it a very important instrument to improve ocean governance.

- 30 **The Assembly welcomed and accepted** the report of the Executive Secretary on the execution of the Commission's Programme and Budget for 2001–2002.

3.3 REPORT OF IOC ACTIVITIES (2001–2002) TO THE NEXT UNESCO GENERAL CONFERENCE

- 31 The Executive Secretary introduced this item. The 30th Session of the General Conference of UNESCO in 1999 approved a modification of the Statutes of the Commission and confirmed the functional autonomy of IOC and the requirement to report directly to the General Conference. The External Auditor, in his Report (165EX/29 Add.), recommended that UNESCO, IHP and IOC *should tailor their performance information reports to their different governing bodies, reflecting the different roles of the General Conference (...) and the IOC Assembly*. Following this recommendation, the Executive Secretary decided to bring to the attention of the Assembly this draft report and proposed that it should highlight the achievements of IOC for the period with respect to the main results expected in the UNESCO Medium-term Strategy 2002–2007 (31 C/4).

- 32 With some amendments proposed by Member States, to include statements on the finances and regionalisation of the Commission's activities, **the Assembly adopted** the Report by the IOC on its Activities (2001–2002), for submission to the 32nd General Conference of UNESCO.

3.4 PRESENTATION OF THE DRAFT PROGRAMME AND BUDGET 2004–2005: BACKGROUND ASSUMPTIONS

- 33 The Executive Secretary introduced this item. He briefly referred to the summary of the budgetary outlook made under item 3.2 and to the recommendations of the 166th Executive Board of UNESCO, on the draft Programme and Budget that are relevant to IOC. Pursuant to Resolution XXI-13, the Executive Council at its 35th Session identified the Main Lines of Action (MLAs) for the Programme and Budget for the biennium 2004–2005, as an early input to the preparation of the UNESCO Draft Programme and Budget for 2004–2005 (referred to as Draft 32 C/5). These MLAs are integrated into the Draft 32 C/5 as approved by the IOC Executive Council.

- 34 **The Assembly requested** the Chairman of the open-ended sessional Financial Committee to discuss the 32 C/5 proposal and to report back to the Assembly under Agenda item 5.1.

4. PROGRAMME MATTERS REQUIRING DECISIONS BY THE ASSEMBLY

4.1 GENERAL POLICY ISSUES

4.1.1 Medium-term Strategy for IOC

35 The Executive Secretary introduced this item. The Medium-term Strategy of UNESCO for 2002–2007 (31 C/4) and the Programme and Budget (C/5 Series) are the programmatic pillars of UNESCO, as approved by the UNESCO General Conference in Resolution III/1, adopted at its 31st Session in October–November 2001. The Strategy aims at projecting a new vision and a new profile for the Organisation as a whole.

36 The External Evaluation of the IOC, carried out during the biennium 1998–1999, recommended that the IOC governing bodies and the Executive Secretary give priority to the development and implementation of an appropriate system of strategic planning and programme evaluation compatible with the needs and working methods of the Commission. Pursuant to this recommendation, the IOC Assembly at its 21st Session decided that the Officers and the Executive Secretary of the IOC should develop a differentiated Medium-term Strategy to help the Commission meet the new challenges effectively.

37 The Draft Medium-term Strategy for the IOC (2004–2007) is based on a four-year period so as to be in phase with the current Medium-term Strategy of UNESCO, which spans 2002–2007. However, and for the same reason, it is desirable that, after this initial period, the Medium-term Strategy of IOC should fully correspond to that of UNESCO. The proposed IOC Medium-term Strategy focuses on the modalities of action to accomplish the IOC commitments under the UNESCO Medium-term Strategy. The IOC document takes into account comments of the Executive Council at its 35th Session on a preliminary draft (IOC/EC-XXXV/2 Annex 8).

38 Taking note of the recommendation of the 36th Session of the Executive Council, **the Assembly concluded** that there was no need for the establishment of an open-ended sessional working group to develop a final version of the IOC Medium-term Strategy (2004–2007).

39 **The Assembly decided** to amend the Draft Medium-term Strategy for IOC (2004–2007) with (i) a paragraph recalling that the IOC has been accorded flagship status by the UNESCO General Conference and (ii) a paragraph recalling the collaboration between IOC and the other scientific programmes of UNESCO (IHP, IGCP, MAB, MOST) and their focus on sustainable development, **and instructed** the Executive Secretary to ensure that this be reflected in the IOC Medium-term Strategy and in the UNESCO Medium-term Plan and associated budget.

40 **The Assembly endorsed** the amended Medium-term Strategy for IOC (2004–2007).

4.1.2 Report of the Consultation of Member States on Resolution XXI-5

41 The Executive Secretary introduced this item. In the last two decades, the IOC has pursued a series of initiatives to improve its function, structure and financing, consistent with the Commission's functional autonomy within UNESCO. As a result of these efforts, the new Statutes of IOC were elaborated and finally adopted by the 31st General Conference of UNESCO, and the new Rules of Procedure were adopted by the IOC Assembly at its 21st Session. As instructed by the Assembly, the Executive Secretary, by Circular Letter 2009, sought the views of Member States on how to address the further development, consolidation and strengthening of the Commission, and prepared a report for the 35th Session of the Executive Council based on the responses received.

42 In view of the small number of responses received by the opening of the 35th Session of the Executive Council, the Council decided to continue the process of inviting the views of Member States. Consequently, Circular Letter 2049 was issued. The Executive Council at its 35th Session also asked the Executive Secretary to report on the matter to the IOC Assembly at its 22nd Session. Document IOC-XXII/2 Annex 5 summarises the responses received from 19 Member States.

43 The two important policy conclusions from this exercise are: (i) the great majority of the Member States that participated in the consultation did not support the creation of a special intersessional intergovernmental group to address the issues highlighted; (ii) a majority of them did not see a need for changing the current legal framework under which IOC functions within UNESCO.

44 Given the new responsibilities that IOC and its Member States are facing, particularly in support of the sustained operation of observation networks and the provision of timely ocean data and data products, the need for a stronger legal instrument might deserve reconsideration *ab initio* in the medium term.

45 The Executive Secretary noted in particular some specific suggestions for improvements contained in document IOC-XXII/2 Annex 5, including the request to reinforce regional structures and IOC's regional presence, which is addressed in part through the Draft Guidelines for the Establishment of Decentralised Offices (see Agenda item 4.1.3), and a request to reinforce National Oceanographic Committees and the links between these Committees, the Permanent Delegations, the National Commissions for UNESCO, and the IOC (see Agenda item 4.1.7).

46 **The Assembly requested** the IOC Officers to follow up the suggestions for improvements contained in document IOC-XXII/2 Annex 5 with a view to incorporating them into their regular monitoring of the work of the Commission.

47 **The Assembly considered** the issue of the legal and financial frameworks of the Commission to continue to be of major importance and that it should be revisited when required by the development of existing and new responsibilities of IOC and its Member States. **The Assembly concluded** that the potential of the existing legal framework has not yet been fully exploited and that it provides room for improved efficiency in particular at the level of regional co-operation.

4.1.3 Guidelines for the Establishment of Regional and Project Offices

48 The Chairman informed the Assembly that Dr Thomas Ajayi, Chairman of the Intersessional Working Group on Guidelines for the Establishment of IOC Decentralised Offices had retired and could not attend the 22nd Assembly and therefore continue his role in this matter. The Chairman IOC had therefore requested Dr Guillermo Garcia Montero (Cuba) to accept the chairmanship of the Working Group and he had kindly accepted.

49 Dr Garcia introduced this item. Referring to document IOC-XXII/2 Annex 6 (*Draft Guidelines for the Establishment of Decentralised Offices*), he recalled that the Working Group was established in 2002 by the Executive Council at its 35th Session, with the following terms of reference:

- (i) to establish definitions of “regional office”, “programme office” and “project office” and their appropriate terms of reference;

- (ii) to recommend issues to be taken into consideration in assessing the need for the establishment of regional, programme and project offices (taking into consideration costs, objectives, existing UNESCO and other structures, benefits, other specific concerns);
- (iii) to recommend minimum criteria for the hosting of regional, programme and project offices including policies for resource commitments;
- (iv) to recommend approval requirements for the establishment of regional, programme and project offices;
- (v) to recommend appropriate hierarchies of responsibility and reporting for regional, programme and project offices;
- (vi) to recommend elements to be used for the performance evaluation of regional, programme and project offices;
- (vii) to prepare framework Memoranda of Understanding for regional, programme and project offices.

50 In addition, the Intersessional Working Group was invited to take into consideration: (i) the terms of reference of existing regional, programme and project offices; (ii) the existing review reports (and their recommendations) of existing regional, programme and project offices; and (iii) the concerns of national governments relating to the establishment of such offices. The Group was tasked with submitting its proposed guidelines to the IOC Assembly at its 22nd Session, in 2003.

51 The Group has been able to respond to the terms of reference (i) to (vi), and its draft report was sent to IOC Member States under IOC Circular Letter 2061, in February 2003, inviting their comments, and to the IOC regional, programme and project offices. Only a few responses were received; all were positive.

52 **The Assembly appreciated** the quality of the Intersessional Working Group's document which was very much in harmony with the UNESCO policy of decentralisation. With a view to allowing the Member States to contribute to the document, **the Assembly established** a Sessional Working Group, chaired by Dr Garcia. The Sessional Working Group proposed a few modifications and clarifications of the document.

53 **The Assembly recognised** that the GOOS offices may need further attention, since they may not currently fit any of the three identified types.

54 **The Assembly instructed** the Executive Secretary to review the present status of existing offices, in consultation with the host countries, taking into consideration the adopted guidelines, and to report to the 37th Session of the IOC Executive Council.

55 **The Assembly requested** the Intersessional Working Group on Guidelines for the Establishment of IOC Decentralised Offices to complete its task by preparing the framework Memoranda of Understanding for regional, programme and project offices, for submission to the IOC Executive Council at its 37th Session.

56 **The Assembly adopted** [Resolution XXII-1](#).

4.1.4 Progress Report on the Implementation of the New IOC Publishing Policy

- 57 The Executive Secretary introduced this item. The IOC External Evaluation team and the Assembly (at its 21st Session) posed the problem of the substantial secretariat time and financial resources consumed in the obligatory preparation of often excessively detailed and repetitive documentation, and the imbalanced use of the working languages of the Commission, as well as the late delivery of the documentation for governing body sessions. In 2002 the Secretariat reported to the Executive Council on this issue and the Council adopted a decision on a new publishing policy for the IOC. In so doing, the Executive Council recognised that the issue was not only an administrative one, but also a matter of visibility and credibility. Some improvements in the direction of a more reliable and efficient network of communication, a CD-based archival system and fund-raising for publications were also identified as necessary elements of a comprehensive response to the problems. The Executive Council instructed the Executive Secretary to report on these matters.
- 58 The Executive Secretary reported on the preparation of the documentation for the present session of the Assembly. Twenty working documents plus the Action Paper were prepared, of which, all, except the Provisional Timetable, were available and sent for translation in French, Spanish and Russian by mid-April. Nine reports and executive summaries, all translated, were produced at the same time, for the consideration of the Assembly. This is a significant improvement in terms of delivery. The Action Paper contains as many draft resolutions as possible at the date of its preparation and was designed to be a stand-alone document for the whole session. Nevertheless the Secretariat considered it counter-productive to limit too drastically the information needed by Member States for their decision-making; accordingly, 16 annexes and addenda to the Action Paper were produced and translated. Moreover, the Executive Secretary felt that certain documents, such as the financial documents and the report of the Executive Secretary, could not be shortened easily. The estimated cost of translation and printing for this session was \$47,000, which shows no decrease compared to the past exercises.
- 59 Since the implementation of the new IOC publishing policy in March 2002, 90 reports and IOC main-series publications were produced, of which, 8 were in electronic format only; this ratio is due partly to previous commitments to publish in paper. Eight posters and four brochures were issued; they included the IOC document prepared for the World Summit on Sustainable Development, *One Planet...One Ocean*, which was issued in six languages and attracted much attention. A new book titled *Les humeurs de l'océan—Effets sur le climat et les ressources vivantes* (The Changing Ocean—Its Effects on Climate and Living Resources) has been published by the UNESCO Publishing House as No. 4 of the Ocean Forum Series; English and Spanish translations will be published soon.
- 60 The Executive Secretary informed the Assembly that the new version of the IOC list of publications and depository centres contained in a compact disk would be mailed to delegates in July 2003. It would also include the IOC publications available on the Internet and a capture of the IOC website, deemed particularly useful to countries with difficult Internet access. The IOC electronic library has been adapted to make better use of the facilities and the know-how of the central services of UNESCO in that domain. This is expected to improve the accessibility to IOC publications and save time and resources in the IOC secretariat.
- 61 The building of a reliable and efficient network of communication is under way based on a single database of all IOC contacts. The Executive Secretary invited Member States to identify one single co-ordinating body for liaison with the IOC in each country. Increasingly, information from the IOC Secretariat is being circulated by e-mail to IOC Member States. For this method to be fully effective, however, each State must nominate just one official e-mail address.

62 **The Assembly instructed** the Executive Secretary to proceed with the revision of the guidelines on the preparation of documents and reports, for inclusion in the IOC Manual, taking fully into account the comments and advice expressed by Member States during the present session. Several Member States favoured executive summaries for all reports, shorter reports and some standardisation of format when warranted. It was agreed that, during the transition from paper to electronic reports, some redundancy was necessary as Member States acquire the new technology and skills.

63 **The Assembly expressed** its satisfaction with the timely provision of reports and the electronic formatting used for this Assembly.

4.1.5 Feasibility of Establishing a Regular Process for the Assessment of the State of the Marine Environment

64 The Executive Secretary introduced this item. He recalled that the IOC Executive Council, at its 35th Session, considered Decision 21/13 of the Governing Council of the United Nations Environment Programme (UNEP), adopted in February 2001, calling for a feasibility study on the establishment of a regular process for the Global Assessment of the State of the Marine Environment (GMA) that will build on ongoing assessment programmes. The Decision stressed the active involvement of governments and regional agreements on the assessment of the state of the marine environment and singled out the IOC as a competent organisation capable of contributing to GMA. The IOC Executive Council, by Resolution EC-XXXV.3, instructed the Executive Secretary to: *(i) explore with UNEP and other relevant partners the feasibility of IOC leading the assessment programme, including the mobilisation of necessary funds through governments, international agencies and donor organisations, as well as co-operation with other global assessment programmes; and (ii) report to the next ordinary session of the Assembly on the development of this matter, including the financial and human-resource implications of IOC leading the assessment programme.*

65 The World Summit on Sustainable Development (WSSD, 26 August–4 September 2002), in its Plan of Implementation, called for the establishment by 2004 of *a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments.* Taking note of this call by WSSD, the matter was considered by the United Nations General Assembly (UNGA) at its 57th Session.

66 Welcoming the outcome of the WSSD, in December 2002, the 57th Session of the UN General Assembly (UNGA) adopted Resolution A/57/141 and decided to establish, by 2004, a regular process under the United Nations for the global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments. The General Assembly also requested the Secretary-General, in close collaboration with Member States, relevant organisations and agencies and programmes of the United Nations system, other competent intergovernmental organisations and relevant non-governmental organisations, to prepare proposals on modalities for a regular process for such global reporting and assessment, taking into account the recently completed review by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), and to submit these proposals to the General Assembly at its 58th Session for its consideration and decision, including on the convening of a possible intergovernmental meeting.

67 The Executive Secretary emphasised that, in view of Resolution A/RES/57/141, the UN General Assembly expects to play a direct role in the GMA initiative, which is consistent with

the role that it has traditionally taken with respect to UNCLOS and ocean governance issues. The hypothesis that the report of the GMA should be addressed to the General Assembly, and that its implementation should be endorsed *ab initio* by an intergovernmental meeting, could make of this initiative a significant contribution to the improvement of ocean governance.

68 The Executive Secretary pointed out that a review titled *A Survey of Global and Regional Marine Environmental Assessments and Related Scientific Activities*, which constitutes a contribution to the feasibility study on the establishment of a process for regular GMA, has been carried out by the UNEP World Conservation Monitoring Centre in collaboration with, and with funds from: UNEP; IOC; the Federal Ministry for Education and Research in Germany; the Ministry for the Environment in Iceland; and the Department for the Environment, Food and Rural Affairs in the U.K.

69 Also pursuant to Resolution A/57/141, the UN Department of Ocean Affairs and the Law of the Sea (DOALOS) has contacted Member States and all relevant organisations mentioned in Resolution A/57/141 to solicit proposals on modalities for a regular process for global reporting and assessment of the state of marine environment. These proposals will be integrated and presented to the 58th Session of the General Assembly for consideration. An interagency meeting to facilitate this process will take place at IOC Headquarters in September 2003.

70 Given that broad consensus was reached on the recommendations of the Bremen consultative meeting (Technical Workshop for Establishing a Regular Process for the Global Assessment of the Marine Environment, Germany, March 2002, document IOC-XXII/2 Annex 7) among the representatives of national institutions, governments, regional and global organisations and programmes, and in response to the call from the Secretary-General of the UN, IOC could adopt these recommendations as the principal bases of the GMA.

71 As to the financial and human-resource implications of IOC leading the GMA, the framework encompassing the regional and global aspects of a credible, significant and legitimate GMA that emerged from the Bremen meeting would have minimum financial implications of \$9.2 million for a five-year process.

72 The IOC could, however, take the leading role only on assessments for specific scientific themes as inputs to the regional and global assessment reports. In this case, the annual budget needed would be about \$300,000. The annual budget for the thematic working groups within the Ocean Sciences Section, which can be regarded as activities that could provide scientific underpinning for a GMA, is \$130,000. With appropriate extrabudgetary funding, the cost of carrying out thematic assessments would not be an unbearable burden on IOC.

73 The Delegate of Portugal recalled the willingness expressed by Portuguese authorities to the Executive Secretary, during his visit to Lisbon in conjunction with the Third Meeting of IOC/ABE-LOS, to consider hosting the proposed intergovernmental meeting establishing the assessment of the marine environment process as contained in Resolution 57/141, and to assist IOC in establishing a technical secretariat for the GMA if welcomed by all parties concerned.

74 **The Assembly commended** the Executive Secretary's follow-up of the GMA initiative and his report to the Assembly.

75 **The Assembly acknowledged** the need for the proposed global reporting and assessment of the state of the marine environment, and restated its view that the development of a GMA is one of the most important co-operative international developments in ocean affairs and that it could benefit significantly from close interaction with the relevant IOC programmes. The GMA

would also benefit from IOC's experience of interagency advisory mechanisms, such as GESAMP, UNEP–IOC–IMO GIPME Programme and active participation in the UNEP Regional Seas Programme.

76 **The Assembly stressed** that the GMA will require an effective interagency mechanism to ensure co-operation and co-ordination within the UN system, particularly in respect of resources and funding, and that the GMA should be a policy-relevant but not a policy-prescriptive process.

77 **The Assembly adopted** [Resolution XXII-2](#).

4.1.6 Follow-up of Key Recommendations of the External Evaluation

78 The Executive Secretary introduced this item. Since the publication of the External Evaluation Report in 2000, the Assembly and the Executive Council have requested the Executive Secretary to report regularly on follow-up actions and implementation. At its 35th Session, the Executive Council decided moreover that the follow-up of actions should be prioritised.

79 The three levels of issues addressed in the Evaluation Report are: (i) the strategic positioning of IOC, including its status as a competent international organisation in the field of marine research; (ii) its current performance/efficiency as a body with functional autonomy within UNESCO; and (iii) the quality of the management.

80 Many of the original recommendations of the External Evaluation Team (document IOC-XXII/2 Annex 8) have been incorporated into the IOC Statutes and Rules of Procedures and/or into the proposed IOC Medium-term Strategy. Following the guidance of the Executive Council (at its 35th Session), the document IOC-XXII/2 Annex 8 refers only to pending key recommendations.

81 In his follow-up of the UN General Assembly Resolution A/57/141 on the establishment of an effective, transparent and regular interagency co-ordination mechanism on oceans and coastal issues within the United Nations system, the Executive Secretary, in co-ordination with representatives of Member States, arranged for this matter to be put on the agenda of the 2nd and 3rd sessions of the Informal Consultative Process (ICP) on Oceans and Law of the Sea, the 57th and 58th UN General Assemblies and the World Summit on Sustainable Development. Referring especially to paragraph 49, Part A, of the report of the 3rd Session of the ICP, pursuant to Resolution A/57/141 and to a request from the UN Assistant Secretary-General for Policy Co-ordination and Interagency Affairs, the Executive Secretary explained the views of the IOC Secretariat on co-operation and co-ordination with respect to ocean and coastal-area issues, proposing a two-tier approach. (i) An open-ended group of representatives (at Director level) of programmes and agencies with appropriate technical expertise, to meet regularly, at least once a year, to review ongoing and identify new joint activities by two or more agencies. Meetings could be held jointly with sessions of the ICP of the General Assembly. The new mechanism should not be based on fulfilment of reporting requirements, but should foster programme development and joint-execution/implementation of programme activities through co-operation. (ii) Specific time-limited initiatives with well defined terms of reference should be led and implemented by task-oriented groups. Appropriate modalities of the involvement of organisations outside the UN system could be introduced at this level.

82 **The Assembly strongly supported** the UN Secretary-General's proposal to establish a co-ordinating mechanism and agreed that the IOC should play a lead role if appropriate.

83 **The Assembly agreed** to the proposed two-tier mechanism, including task-oriented groups for addressing specific issues on a limited basis, **but cautioned** against the organisation of too many meetings **and encouraged** the use of e-mail for communications whenever possible.

84 The Chairman stressed the importance of evaluation as a continuing task for the IOC and recalled that Resolution EC-XXXV.3 required that the agenda of future Assemblies should take into account the need for such a process. The detailed follow-up to the recommendations of the External Evaluation Report of 2000 would then be subsumed under the more general and permanent evaluation requirement.

85 The Executive Secretary reported on the efforts made to invite Member States to establish or strengthen their national co-ordinating structures and specifically referred to IOC Circular Letter 2017 of 27 March 2002 to the Member States, quoting IOC Resolution XII-8 which expressly urged the Member States of the Commission to improve or establish, as required, National Oceanographic Commissions or equivalent bodies. The Resolution also suggested desirable composition and functions for such Commissions or Committees. This had been followed up by IOC Circular Letter 2062 of 17 March 2003 inviting the IOC Member States to nominate an official national co-ordinating body for liaison with the Commission.

86 A large number of Member States stressed the importance of National Oceanographic Commissions and shared their experience in setting them up. Some Member States encouraged the limiting of IOC focal points to one national agency.

87 **The Assembly urged** those Member States that had still not created a National Oceanographic Commission or Committee to make every effort to do so as soon as possible, **and instructed** the Executive Secretary to provide all possible assistance in such endeavours.

4.1.7 Results of the External Audit of Science Sector Focused on Hydrology (HYD) and the IOC (Managing and Governing for Results)

88 The Executive Secretary introduced this item. Document 165 EX/29 Add. issued for the 165th Executive Board of UNESCO in September 2002 focused, in paragraphs 147–210, on IOC governance. The Executive Secretary drew the attention of the Assembly to recommendations made to UNESCO to improve the governance of IOC (paragraphs 173 and 203). The recommendations in paragraph 173 of document 165 EX/29 Add. call for an agreement and understanding among Member States on the major respective roles of the General Conference of UNESCO and the IOC Assembly, in particular with respect to providing strategic direction and monitoring organisational performance; and *consider having [the IHP Council/Bureau and] the IOC Assembly/Council play a role in setting expectations for and reviewing the performance of the Executive Secretary.*

89 The Director-General of UNESCO has suggested that it will be for [the IHP Council,] the IOC Assembly and the General Conference to consider these recommendations. However, the Director-General believes that he is probably best placed to judge the performance of the staff members acting as executive secretaries, leaving the governing bodies to focus on the execution of the programme.

90 Paragraph 203 of document 165 EX/29 Add. recommends that UNESCO and IOC consider convening country meetings to assist Member States in co-ordinating their involvement within IOC. The Director-General of UNESCO invited the Assembly to approve implementation of this recommendation, drawing on the network of National Oceanographic Commissions/Committees.

91 **The Assembly agreed** that the IOC should assist as appropriate in helping Member States to convene meetings in countries and regions. **It called on** the IOC Officers to assist in this process for their regions as far as possible. **The Assembly instructed** the Executive Secretary to consider visiting countries that have not already established National Oceanographic Commissions/Committees with the aim, also as appropriate, of strengthening the national institutions in charge of ocean services and research, the national co-ordinating mechanism on ocean affairs in general, and the IOC National Oceanographic Commissions/Committees in particular.

92 Further, **the Assembly instructed** the Executive Secretary to respond to requests from IOC national liaison bodies or IOC focal points, for information, advice and assistance on the enhancement of institutional capacities related to their involvement in the activities of the IOC.

93 **The Assembly also agreed** that it was appropriate for the Director-General to evaluate the performance of the Executive Secretary.

94 **The Assembly decided** that a Resolution was necessary to clarify the issues raised by this study based on existing statutory documents.

95 The Chairman requested a small drafting group to assist in the drafting of the Resolution and invited Dr Mário Ruivo (Portugal) to chair the group, assisted by Cuba, Canada, India and a lawyer with relevant legal expertise from one of these three Member State delegations.

96 **The Assembly adopted** [Resolution XXII-3](#).

4.2 OCEAN SCIENCES SECTION

4.2.1 Role of IOC in the Development of Standards for Ocean Research and Operational Oceanography

97 The Head of the Ocean Sciences Section of IOC, Dr Ümit Ünlüata, introduced this item. The Executive Council, at its 35th Session, instructed the Executive Secretary to refine, through consultation with JCOMM on existing and planned future initiatives for the development of standards, the terms of reference and the workplan, and submit them to the present session of the IOC Assembly.

98 The JCOMM Management Committee, at its 2nd Session (Paris, February 2003), welcomed the initiative and agreed with the thesis presented by the Executive Secretary on the role of IOC in codifying the standards needed for operational oceanography, noting that, for some measurements, several different techniques might be used to reach the standard required (JCOMM Meeting Report No. 20). The Management Committee also agreed that the first step should be to compile the information, list what was available, and advertise it through the JCOMM website. It considered that a 3–6 month consultancy over a 1- to 2-year period was necessary to compile the available information, starting with the protocols recommended by WOCE and JGOFS, including the protocols that had been developed for the SOOP, VOS and DBCP programmes, and by other international bodies, such as ICES. The IOC–WMO Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) requested the Executive Secretary of IOC to treat the question of compiling standards for operational oceanography as a priority.

99 The Co-president of JCOMM noted that the JCOMM Management Committee also recognises the need to develop standards, to develop an effective mechanism to disseminate the information by a variety of means, and to develop training programmes on the use of standards.

The Co-president of JCOMM offered the use of the JCOMM website as an appropriate mechanism for information dissemination and offered JCOMM's full collaboration with the IOC in the development of standards for oceanographic research and operational oceanography.

100 Several Member States noted that the workplan and budget information provided were lacking in details, and, in agreement with the JCOMM Management Committee decision, restated the view that an important first step would be to identify existing and planned initiatives for standards development.

101 Other Member States stated that, while JCOMM on behalf of IOC should, in the context of operational oceanography, take the lead in prioritising the needs for standards for physical variables, there is also a need for IOC to involve other organisations such as FAO, UNEP, IAEA and IMO in devising mechanisms for addressing the needs for non-physical variables.

102 **The Assembly stressed** the view that capacity-building in standards development and use merits special attention, with a view to enabling all Member States to participate fully in international ocean research and operational oceanographic programmes.

103 **The Assembly instructed** the Executive Secretary to develop a workplan and budget for this activity and to bring this initiative to the attention of Member States with a view to finding adequate resources.

4.2.2 Terms of Reference of the Programme Elements in Ocean Science

104 The Head of the Ocean Sciences Section of IOC, Dr Ümit Ünlüata, introduced this item. The Executive Council, at its 35th Session, discussed the terms of reference for the programme elements of the IOC's Ocean Sciences Section (document IOC/EC-XXXV/2 Annex 10). The Executive Council instructed the Executive Secretary to prepare a revised version of the document to be circulated to the Member States. The final version of this document (IOC/INF-1180) was distributed in advance to the Assembly.

105 Several Member States stated that the document revealed gaps in addressing coastal and non-living-resource programmes dealing with geology and geophysics and ocean-margin processes, as well as a lack of emphasis on physical oceanographic research and polar ocean science. The Secretariat pointed out that many of the non-living-resource programmes are now being addressed through the Integrated Coastal Area Management (ICAM) and Floating University—Training-Through-Research Programme and that they involve research relevant to the study of coastal erosion, biosphere–geosphere coupling process, and protection of the high-seas and deep-sea environment.

106 Several Member States noted the need for the Assembly to have an opportunity to review progress and priorities. They stated that there is a clear need for an advisory group for the Ocean Science Section, to assist it in setting programme priorities that better meet the changing needs and ongoing development of the programmes of the Commission. Some Member States emphasised the need for the IOC to address more-applied aspects of ocean science in support of living- and non-living-resource management, environmental assessment and protection, and climate-change assessment.

107 **The Assembly endorsed** the terms of reference for the programme elements in the new structure of the Ocean Sciences Section as given in IOC/INF-1180, with the provision that the terms of reference be periodically reviewed by a small scientific advisory group and revised, if necessary, to better meet the needs of the Member States.

108 **The Assembly urged** the Member States to promote, mainly through the IOC regional subsidiary bodies, the IOC ocean science programmes at the regional level and particularly to ensure that their scientists participated in these regional programmes.

4.2.3 Report of the 6th Session of the IOC Intergovernmental Panel on Harmful Algal Blooms

109 The Chairwoman of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), Dr Beatriz Reguera, introduced this item. The 6th Session of IPHAB (St. Petersburg, Florida, October 2002) focused on strengthening the regional components of the programme, on assisting the development of the IOC–SCOR GEOHAB Programme (Global Ecology and Oceanography of Harmful Algal Blooms) and of the capacity-enhancement aspects of the HAB Programme. The Panel made a number of recommendations to the Assembly.

110 Recalling the priority of implementation of IOC programmes at the regional level, the Panel recommended that the IOC Secretariat assess the feasibility of regional HAB activities in three areas: (i) the Benguela region; (ii) North Africa; and (iii) the Indian Ocean.

111 The GEOHAB Implementation Plan is now in its final form after review by a team of external experts and SCOR. The Chairwoman of IPHAB requested the Assembly to endorse the GEOHAB Implementation Plan in order for IOC and SCOR to proceed with the implementation. Several countries have already established national GEOHAB research programmes and the European Commission and the US National Science Foundation have issued a joint call for project proposals in the autumn of 2003, which provides an ideal opportunity to seek funding for GEOHAB research. The US NSF and the National Oceanic and Atmospheric Administration (NOAA) have provided significant support to the development of the Science and Implementation Plans, but additional resources are required to implement GEOHAB effectively.

112 IPHAB recommended that the IOC ensure that data-quality management and data exchange relevant to GEOHAB be given due consideration, in accordance with the terms of reference for the Group of Experts on Biological and Chemical Data Management Exchange Programme (GE–BCDMEP), and that a GEOHAB Representative be instated in the GE–BCDMEP.

113 The Panel reviewed the Draft Strategic Design Plan for the Coastal Ocean Observations Module of the Global Ocean Observing System (GOOS) and concluded that, in its current stage of development, the Draft Strategic Design Plan did not specify the relevant variables for the detection of HABs; the Panel proposed to co-operate with appropriate GOOS bodies to develop effective systems for monitoring harmful species at the appropriate functional level.

114 Recognising that the effects of chronic exposure of humans to low concentrations of algal toxins have so far been poorly investigated and that such effects may seriously influence public health wherever seafood, drinking water, or other products contain algal toxins below current regulatory limits, the Panel recommended that IOC consult WHO and invite it to be a partner in a joint task team to assess gaps in current knowledge and to advise on approaches and methods to provide data that may serve to better assess any effects of such exposure.

115 The Panel requested the IOC Secretariat to assess the feasibility of providing Member States with emergency assistance to deal with unexpected or unusual HAB outbreaks and, if found feasible, to establish a rapid-response service. It also recommended IOC to study the feasibility of establishing a mechanism to assist Member States technically in the formulation

and preparation of development projects to enhance national or regional capability in HAB monitoring, management and research.

- 116 The Panel decided to continue its Task Team on Algal Taxonomy, particularly to maintain and develop the present on-line IOC Taxonomic Reference List of Toxic Planktonic Algae.
- 117 The Panel was concerned by the limited co-ordination and potential incompatibility of regulations on the contamination of seafood with phycotoxins and the consequent impediment to trade in seafood products; it therefore established a Task Team to identify incompatibilities among the regulations governing various seafood markets and to prepare technical guidelines for providing international compatibility of methodology and legislation regarding the control of contamination of seafood by phycotoxins.
- 118 The Panel revised the HAB Training and Capacity-Enhancement Programme which: continues ongoing activities; raises the priority for capacity-building in monitoring and management; gives priority to activities responding to GEOHAB requirements; and expands the partnership of the IOC Science and Communication Centres with relevant scientific institutions, so as to provide a broader and longer-term platform for capacity-building.
- 119 The Chairwoman of the IPHAB urged the IOC Member States to match the relevant national priorities, and the related funding, with the HAB Programme Workplan in order to actively interact with and support its implementation, and suggested that partial or full coverage of staff costs for the Programme by IOC–UNESCO was a way to free extra-budgetary resources for HAB Programme implementation and to help ensure future commitment of main sponsors.
- 120 **The Assembly endorsed** the IPHAB report and the plan for the development of GEOHAB.
- 121 **The Assembly urged** IPHAB to continue to collaborate with the Coastal Ocean Observations Panel of GOOS and with I-GOOS to ensure that relevant variables are being considered in the implementation of the coastal component of GOOS.
- 122 **The Assembly acknowledged** with appreciation the long-standing extrabudgetary support of, in particular: Denmark, Japan, Spain and the USA, in the development and implementation of the Programme; France, for its reconfirmation of its commitment to partially support an International Project Office (IPO) for GEOHAB; Germany, for the renewal of its commitment to co-operate with the Programme in training and capacity-enhancement; and Spain, for its continued commitment to the operation of the Science and Communication Centre in Vigo, Spain. Many Member States confirmed initiatives at the national level to contribute to and participate in GEOHAB.
- 123 **The Assembly acknowledged** the need to ensure the operation of the IPO for GEOHAB **and urged** Member States to contribute to it.
- 124 **The Assembly instructed** the Executive Secretary to maintain a high level of priority in the IOC budget for the Programme.
- 125 **The Assembly adopted** [Resolution XXII-5](#).

4.2.4 Activities of SCOR Relevant to the IOC

126 The Chairman of the Scientific Committee on Oceanic Research (SCOR), Professor Bob Duce, informed the Assembly of the activities of SCOR, with special emphasis on those carried out in collaboration with IOC.

127 Among the major joint SCOR–IOC activities are: SCOR–IGBP–IOC Global Ocean Ecosystem Dynamics Programme (GLOBEC); SCOR–IOC Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) Programme; SCOR–IOC Ocean CO₂ Advisory Panel, SCOR–IOC Working Group 119 on Quantitative Ecosystem Indicators for Fisheries Management; SCOR–IOC–GCP International Ocean Carbon Co-ordination Project; and SCOR–IOC POGO Fellowship Programme. SCOR and IOC will sponsor a major symposium on the Science of Ocean Carbon Sequestration in 2004. IOC has facilitated the development of the new SCOR–IGBP Integrated Marine Biogeochemistry and Ecosystem Research Project (IMBER) by hosting its science meeting at the UNESCO Headquarters.

128 **The Assembly expressed** its appreciation to Professor Duce for his presentation. **It confirmed** its satisfaction with the present joint IOC–SCOR activities and its commitment to sustain and enhance collaborative activities between the IOC and SCOR.

4.3 OCEAN SERVICES SECTION

4.3.1 Progress Report on the Strategic Plan for Oceanographic Data and Information Management

129 The Chairman of the Task Team on the Development of a Unified, Comprehensive IOC Strategic Plan for Oceanographic Data and Information Management, Dr Neville Smith, introduced this item. He recalled that the IOC Executive Council created the Task Team at its 35th Session.

130 Owing to the heavy calendar in 2002, it had not been possible to organise a session of the Task Team in 2002. In addition, it was felt that the deliberations and decisions of the 17th Session of the IODE Committee (March 2003) would assist the Task Team. Accordingly, the 1st Session of the Task Team was held at UNESCO Headquarters on 23 June 2003. The report of the Task Team Chairman is found in [Annex VI](#).

131 The Representative of WMO expressed his organisation's appreciation of the achievements of the Task Team and thanked IOC for involving WMO in this important undertaking. Taking into consideration the related work being undertaken by WMO within the framework of its Future Information System (FWIS), he offered his organisation's active collaboration in the Task Team's work.

132 **The Assembly expressed** its appreciation of the work of the Task Team at its 1st Session and urged it to complete its work by the next session of the Assembly.

133 **The Assembly strongly urged** the Task Team to ensure that the IOC Strategic Plan for Oceanographic Data and Information Management build upon existing national, regional and international (infra)structures and capacities, and be based upon an assessment of needs, which will then lead to the identification of technological requirements.

4.3.2 Report of the 2nd Session of the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy

- 134 The Chairman of the Intergovernmental Working Group (IWG) on IOC Oceanographic Data Exchange Policy, Dr Angus McEwan, introduced this item. He referred first to Document IOC/INF-1175 (*Second Session of the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy*), recalling that, at its 33rd Session, the IOC Executive Council commended the ad hoc Working Group of Experts for its contribution to the preparation of a Draft IOC Data Policy Statement. However, the Executive Council then also noted that the Group could not reach consensus on a draft text and concluded that this matter needed the attention of an Intergovernmental Working Group, comprising representatives of the States members of the IOC Executive Council.
- 135 Resolution EC-XXXIII.4 tasked the IWG to continue detailed discussions on and assessment of existing agreements and practices within and outside IOC, with regard to the exchange of oceanographic and related environmental data and products, with a view to proposing to the IOC Assembly:
- (i) a statement of the general IOC principles and policy on oceanographic data exchange;
 - (ii) a statement of recommended practices and associated institutional arrangements for the exchange of oceanographic data;
 - (iii) a draft resolution for consideration by the Assembly.
- 136 Since its establishment, the Intergovernmental Working Group met twice (Brussels, May 2001; Paris, June 2002). It prepared a statement, referred to in (i) above, and a draft resolution, referred to in (iii) above. The statement, in the report of the 2nd Session of the Group (document IOC/INF-1175), was also submitted to IODE-XVII (Paris, March 2003). The IODE Committee expressed its strong support for the draft policy prepared by the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy and called on the IOC Assembly to adopt it. The IODE Committee also noted that any policy is only as effective as its implementation and it urged Member States to consider mechanisms for ensuring maximum compliance with the policy, should it be adopted by the IOC.
- 137 Dr McEwan informed the Assembly that important comments had been received from France on the draft policy document and these were made available for discussion before the Assembly.
- 138 Accordingly, **the Assembly established** a Sessional Working Group to address these comments and to agree on a revision of the draft policy statement. The Sessional Working Group, after two meetings, was able to agree on a revised statement.
- 139 **The Assembly expressed** its deep appreciation to Dr McEwan for his role in bringing this important matter to a successful conclusion.
- 140 **The Assembly stressed** the need to ensure correct translation of the Resolution in all working languages to ensure unambiguous understanding and interpretation of the Policy by all Member States as well as other data originators.
- 141 Argentina pointed out that the reference to “international conventions” should refer first and foremost to UNCLOS.

142 Many Member States, in welcoming the new policy, pledged their continued and reinforced efforts to maximise the exchange of oceanographic data.

143 The Representative of SCOR, also speaking on behalf of ICSU, reaffirmed both organisations' support for "free and unrestricted" exchange of oceanographic data but, while welcoming the new IOC policy, called for caution with regard to the reference to "the right of Member States and data originators to determine the terms of such exchange."

144 The Representative of WMO congratulated IOC on the adoption of the new policy which was equally important to WMO. Referring to WMO Resolutions 40 and 25, the Representative complimented IOC on reaching agreement on its new policy after only three years, and he was therefore very pleased to be able to report to WMO the adoption by IOC of its new policy that clears the way for the further successful development of global observing systems.

145 **The Assembly adopted [Resolution XXII-6](#).**

4.3.3 Report of the 17th Session of the IOC Committee on International Oceanographic Data and Information Exchange

146 The Chairwoman of the IOC Committee on International Oceanographic Data and Information Exchange (IODE), Dr Lesley Rickards, introduced this item. The IOC Committee on International Oceanographic Data and Information Exchange held its 17th Session (IODE-XVII) at UNESCO Headquarters, 3–7 March 2003.

147 The Committee reviewed the progress made in several areas of work: IODE co-operation with GOOS and JCOMM; the new IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BCDMEP); the new Global Ocean Surface Underway Profile Programme (GOSUD); the development of a marine XML; the Marine Environmental Data Inventory (MEDI); the training system "OceanTeacher"; the dynamic content management system, BeeBox; and the regional networks ODINAFRICA and ODINCARSA.

148 The Committee recommended the merging of the GETADE and the JCOMM/IODE Expert Team on Data Management Practices (ETDMP). It established an intersessional working group to examine the future role of WDCs, RNODCs and NODCs, and an ad hoc working group on the implications for IODE of the development of GOOS and the establishment of JCOMM. It called for further support for the ODINAFRICA and ODINCARSA networks, and recommended the establishment of the Ocean Information Technology pilot project, jointly sponsored with JCOMM and GOOS.

149 The Committee elaborated the terms of reference for the IODE Review and expressed its strong support for the draft policy prepared by the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy.

150 The Committee had strongly supported the establishment of an IODE Project Office and recommended that the IOC accept the offer of the Government of Flanders and the City of Oostende to host the Office in Oostende, Belgium.

151 The Representative of the International Ocean Institute (IOI) thanked IODE for the support it has provided to develop the new IOI website and identified this support as fully responding to the call by the UN Secretary-General for improved co-operation between UN and non-UN organisations.

152 The JCOMM Co-President, Dr Savi Narayanan, expressed her strong appreciation of the assistance from IODE in developing the data management elements of JCOMM and of IODE's agreement to join its GETADE with JCOMM's ETDMP, thereby avoiding duplication of effort.

153 The Representative of the International Atomic Energy Agency (IAEA) informed the Assembly that his organisation maintained a comprehensive database on marine radioactivity and other contaminants which constituted an excellent opportunity for co-operation between IAEA and IODE.

154 Many Member States expressed their strong appreciation and support for IODE, describing it as one of the most important programmes of the IOC.

155 **The Assembly congratulated** Dr Lesley Rickards on her election as Chairwoman of the IODE Committee and on her excellent report on IODE-XVII.

156 Several African Member States informed the Assembly of how ODINAFRICA had benefited their countries, resulting in the establishment of active national oceanographic data and information centres, and the development of products such as atlases and websites, etc.

157 Belgium informed the Assembly that continuation of support to IODE by Flanders was being considered favourably, and welcomed new proposals that would integrate data management with GOOS and ICAM.

158 The Delegate of the Islamic Republic of Iran and Chairman of the IOC Regional Committee for the Central Indian Ocean (IOCINDIO) informed the Assembly that IODE-XVII had welcomed the planned development of an Oceanographic Data and Information Network (ODIN) for the IOCINDIO region (ODINCINDIO) and that consultations with Member States in the IOCINDIO region on the way forward were progressing well.

159 **The Assembly expressed** its appreciation of the substantial success of the ODINAFRICA and ODINCARSA projects as examples of IOC capacity-building, **and called on** the Member States to continue to develop ODIN networks.

160 **The Assembly thanked** the Government of Flanders (Belgium) for its substantial support for the ODINAFRICA project **and expressed** its hope that such support would be continued.

161 **The Assembly thanked** the Government of Flanders and the City of Oostende for the kind and generous offer to host the IODE Project Office **and accepted** the offer.

162 **The Assembly instructed** the Executive Secretary to proceed with the necessary administrative procedures to establish the Office.

163 **The Assembly expressed** its appreciation of Mr Rodney Martinez's (Ecuador) work as regional co-ordinator of the ODINCARSA Project, and of his hard work in the development of this new network.

164 **The Assembly stressed** the importance of excellence in quality control, metadata and preservation of data as historical as well as current and future priorities for IODE and its appreciation of the continued balance between data and information management in the IODE programme.

165 **The Assembly also stressed** the need to strengthen national data centres as the essential building blocks of the IODE system, without which, the international IODE system could not function.

166 **The Assembly welcomed** the great efforts of IODE to forge alliances with other organisations, programmes and projects, as well as its focus on applying new technologies at the national and international level (e.g. OIT) to the management, exchange and dissemination of data, services and products, and IODE's current steps to expand the scope of IODE to include biological and chemical data.

167 **The Assembly**, recognising the success of IODE, **appreciated** the need for increased financial and human resources to enable the programme to continue its important work.

168 **The Assembly adopted** [Resolution XXII-7](#).

4.4 OPERATIONAL OBSERVING SYSTEMS SECTION

4.4.1 GOOS Activities

4.4.1.1 Report of the 6th Session of the Intergovernmental Committee for the Global Ocean Observing System

169 The Chairwoman of the Intergovernmental Committee for GOOS (I-GOOS), Ms Silvana Vallerga, introduced this item. I-GOOS, at its 6th Session (UNESCO Headquarters, Paris, March 2003) presented the four goals of I-GOOS, namely: (i) transferring of science and technology related to GOOS from the research mode into operational mode; (ii) learning from the activity of the regions, and ensuring the coherence between regional activities and global planning; (iii) ensuring that all Member States co-operate in and benefit from the development of GOOS, by capacity-building activities involving the transfer of enabling technologies and expertise; (iv) promoting timely observations in the Exclusive Economic Zones allowed by the new technologies available, with the assistance of IOC/ABE-LOS. Furthermore it created an I-GOOS Board to handle Committee business intersessionally, with a view to improving the efficiency and effectiveness of I-GOOS.

170 As a further improvement in the management of GOOS, a Regional GOOS Forum was established. The first meeting of the Forum (Athens, December 2002) brought together the leaders of all of the GOOS Regional Alliances (GRAs), with the principal aims being to ensure that the regional developments were in harmony with those at the global level, to share experience, to assess progress, to identify gaps, to promulgate "best practices" among GRAs, and to create a sense of community amongst them. GRAs are composed of national agencies and organisations committed to the regional implementation of global observation networks.

171 The meeting of the Forum was held at that time and place to enable participants to benefit from attending the 3rd EuroGOOS Conference on Operational Oceanography. The Forum participants identified several capacity-building requirements that needed to be met to make the GRAs effective. To strengthen the network of GRAs, as components of a fully operational global system, Forum participants developed a joint proposal to the European Commission, under its Sixth Framework Programme (FP6), for a GOOS Regional Alliances Network Development (GRAND). The European Commission has accepted the proposal.

172 In future the GRAs would report on their progress to I-GOOS meetings, and new ones would be created and managed in accordance with a stated policy.

- 173 The next meeting of the Forum is expected to take place in Fiji during the week of 9 February 2004, to capitalise on a major oceans meeting being held there the previous week. Intersessionally the Forum will continue to work to address the common needs.
- 174 The Chairwoman of I-GOOS welcomed some significant recent regional developments, including: (i) the finalisation (Mauritius, November 2002) of the proposal for a Western Indian Ocean Marine Applications Project (WIOMAP); (ii) the first IOGOOS Conference, and the adoption and signature of the IOGOOS Memorandum of Understanding (Mauritius, November 2002); (iii) the 3rd EuroGOOS Conference on Operational Oceanography (Athens, December 2002); (iv) the funding of the Black Sea GOOS ARENA Project by the European Commission; and (v) acceptance of GOOS–AFRICA’s “ROOFS–AFRICA” proposal under of the New Partnership for Africa’s Development (NEPAD).
- 175 In response to a request from the Russian Federation to form a Caspian GOOS, the Chairwoman of I-GOOS noted that Caspian activities would in future be covered by an expansion of Mediterranean and Black Sea GOOS activities regionally.
- 176 I-GOOS recognised the important role of the GOOS Steering Committee (GSC) in providing scientific advice on the design and implementation of GOOS and the important contributions of the GSC’s two advisory panels: the Ocean Observations Panel for Climate (OOPC); and the Coastal Ocean Observations Panel (COOP). The COOP’s Integrated Design Plan for a Coastal GOOS is being published (as GOOS Report 125 and IOC/INF-1183).
- 177 The Chairwoman of I-GOOS noted that significant progress had been made under the aegis of the OOPC in the implementation of the Global Ocean Data Assimilation Experiment (GODAE) and the Argo Profiling Float Programme.
- 178 Although the GOOS Project Office has managed to increase its staffing to respond to the growth of the GRAs, and to the growth of JCOMM, the Project Office staff at the IOC Secretariat were experiencing overload due to the increase in work imposed by newly created bodies, such as the I-GOOS Board and its subsidiary working groups, the Regional GOOS Forum, the Capacity-Building Panel, the IOC’s involvement with the space agencies, and growing co-operation with ICES and PICES. Consistent with IOC staffing policies and practice, the Chairwoman of I-GOOS invited Member States to provide secondments (including “distant secondments” in which the “seconded persons” work from their home institution) to cope with the growing workload and called on Member States to continue implementing and expanding the observing system and to exchange the resulting data, which would make GOOS work for the benefit of all.
- 179 I-GOOS recognized the importance of addressing the assessment and prediction of the ecosystem within the coastal module of GOOS, possibly with the support of pertinent international organisations.
- 180 The United States Under Secretary of Commerce and Administrator of the US National Oceanic and Atmospheric Administration, Admiral Conrad Lautenbacher expressed appreciation for the report and made an extended intervention ([Annex III Part C](#)).
- 181 The United States is very supportive of the GOOS Programme. We have a remarkable opportunity to develop and implement significant new capabilities in Earth observations – beginning with the G-8 leaders’ agreement earlier in June 2003 on global observations being one of three priorities in science and technology. Following this, the Earth Observation Summit on 31 July 2003 in Washington DC, will kick off discussion to define a conceptual implementation

plan for Earth observations, which will be delivered to a follow-on Summit in Tokyo in May 2004. Feeding into this is the 2nd GCOS Adequacy Report and the COP-9 meeting in Milan in December 2003.

182 In order for the oceanographic community to take advantage of this opportunity, the United States suggested that we agree on a process to develop and prioritise requirements, which in turn will provide the basis for defining specific elements of GOOS. In order to do so, we need to agree on a set of scientifically based, policy-relevant, and easily understandable questions, which we are seeking to answer. This is an important opportunity for I-GOOS to gain commitment and support for GOOS and JCOMM.

183 **The Assembly endorsed** the regional GOOS Policy as given in Annex IV of the I-GOOS-VI Executive Summary report.

184 **The Assembly also noted** the creation of GRAs as a mechanism for the promotion and implementation of GOOS when appropriate at the regional level, and recognised six GRAs in particular, namely EuroGOOS, MedGOOS, GOOS–AFRICA, Pacific Islands GOOS, Indian Ocean GOOS, and US GOOS, in addition to the three already endorsed by the IOC governing bodies (NEAR–GOOS, by Resolution EC-XXIX.5; Black Sea GOOS, by Resolution XXI-10; and IOCARIBE–GOOS, by Resolution EC-XXXV.5). **The Assembly called for** close collaboration between GRAs and the IOC regional subsidiary bodies.

185 **The Assembly thanked** Ms Vallergera for her excellent presentation of the work done by I-GOOS and for her work in developing the GRAND proposal, which seemed poised to further support the development of the GRAs as an interlinked global activity.

186 **The Assembly recognised** that recent innovations in the structure, with an I-GOOS Board and Regional GOOS Forum, are working well and make I-GOOS more efficient and effective, as the governmental body responsible for the system. **The Assembly endorsed** the terms of reference and membership of the I-GOOS Board, as set out in Annex II of document IOC-WMO-UNEP/I-GOOS-VI/3s.

187 While approving of the overall developments in GOOS capacity-building, **the Assembly requested** I-GOOS to continue the evaluation of the effectiveness of the GOOS structure with a view to ensuring appropriate linkages between national, regional and global activities, in which context, the systematic evolution of performance will be needed.

188 **The Assembly appreciated** the important role of the GOOS Steering Committee (GSC) in providing the scientific advice underpinning the development of GOOS, and the energetic efforts of its former Chairman, Dr Worth Nowlin, in guiding the GSC.

189 **The Assembly warmly welcomed** the news from the UK that the funding support was in place for the launch of the JASON-2 satellite for ocean altimetry, a key tool for GOOS.

190 **The Assembly took note** (i) of the observation of the UK that the use of the term “operational observations” to describe particular activities in support of GOOS might make it difficult for researchers to obtain the needed funds for such activities, and that it might be better that this term be replaced by the phrase “sustained and systematic observations”, which would not be prejudicial to researchers’ opportunities; and (ii) of the Russian Federation’s view that there would be a need eventually for some form of legal instrument regulating the deployment of some oceanographic measuring devices that, despite being deployed in the high seas, can drift into waters under national jurisdiction.

191 **The Assembly adopted [Resolution XXII-8](#).**

192 On the occasion of the retirement of Mr Arthur Alexiou, after 18 years of service to the Secretariat, **the Assembly awarded** him an IOC Certificate of Appreciation and a UNESCO Medal for his substantial contributions to the IOC's Climate Programme, and in particular his tireless support for the work of the Ocean Observations Panel for Climate.

193 In reply, Mr Alexiou expressed his gratitude for the appreciation, the pleasure he had had working both with and for the Member States, and with the outstanding scientists who had contributed freely to the work of the Panel, and the reward he had received in the many friendships he had made with delegates and Panel members over the years.

194 **The Assembly also awarded** Professor Worth Nowlin, an IOC Certificate of Appreciation and a UNESCO Medal for his substantial contributions over many years to IOC's work on climate and the oceans, and in particular for his seminal role in the planning and implementation of the World Ocean Circulation Experiment (WOCE), for his contributions to the Global Climate Observing System (GCOS) Steering Committee and to the JCOMM Management Committee, and for his chairmanship of the Ocean Observing Systems Development Panel (OOSDP) from 1990 to 1995, and of the GOOS Steering Committee (GSC) from 1998 to 2002.

195 In reply, Professor Nowlin expressed his appreciation of the award, and thanked the many individuals who had worked closely with him to make GOOS and JCOMM the successes that they are today.

4.4.1.2 Draft Memorandum of Understanding between UNEP and IOC Concerning the Relation between UNEP's Regional Seas Programme and GOOS

196 The Executive Secretary introduced this item. IOC Circular Letter 2073 called for a Supplementary Item to be added to the Assembly's agenda in the Operational Observing Systems Section. The item (document IOC-XXII/Supplementary item 3) dealt with a Draft Memorandum of Understanding (MOU) on Co-operation between the UNEP's Regional Seas Programme (RSP) and the IOC's Global Ocean Observing System (GOOS). The draft MOU had been prepared in response to the request of the IOC Assembly, at its 21st Session, that a MOU be prepared between UNEP and IOC as a formal instrument to facilitate co-operation between the RSP and GOOS; the Draft MOU was proposed jointly by the Executive Director of UNEP and the Executive Secretary.

197 The Executive Secretary then introduced Mr Ellik Adler of UNEP, who first conveyed the greetings from the Executive Director of UNEP, Mr Klaus Töpfer, to the Assembly. Mr Adler then presented the key points of the document, noting that one of the key drivers for a close association between the RSPs and GOOS lay in the fact that the GOOS regions corresponded very closely to those of the RSPs. Under the MOU, the RSP and GOOS would co-operate and co-ordinate their initiatives in the following key topics (among others):

- (i) Promoting and enhancing awareness of their respective activities and programmes;
- (ii) Mutual and cross-participation in relevant GOOS and RSP meetings;
- (iii) Strengthening global and regional linkages between RSPs and GOOS and its GRAs;

- (iv) Provision of appropriate joint training and capacity-building initiatives to support RSPs;
- (v) Development of appropriate joint activities and projects to advance GOOS and RSPs;
- (vi) Exchanges of data and information.

198 The Representative of UNEP stated that interactions between the RSP and GOOS would be facilitated by designated focal points. There was no direct financial implication in the MOU. If the undertaking of a joint activity necessitated a financial contribution, both parties would work together to secure the appropriate funding. The primary benefit would be improved co-operation between two of the key environmentally focused agencies within the UN system, at the programme level where their interests were closely interlocked.

199 **The Assembly agreed** that it was desirable to institutionalise co-operation between UNEP and IOC namely through the Regional Seas and IOC regional subsidiary bodies on a programme-by-programme basis, as needs arose, and that this particular agreement would help in the implementation of the proposed Global Marine Assessment. It would also help to avoid duplication of effort between GOOS and the RSP. The MOU implied a significant commitment of effort arising from the involvement of the GPO and the officers of the GRAs. **The Assembly agreed** that this should be avoided as much as possible.

200 **The Assembly agreed** that the present draft of the MOU was, on the one hand, too detailed and, on the other hand, did not sufficiently address the relationships between the RSPs, GOOS, the GRAs and the IOC Regional Committees and Sub-Commissions. A more simple and clear message was required, with fewer preambular statements.

201 **The Assembly invited** Member States to make suggestions in writing for improvements to the draft text, and to send them to the Executive Secretary before the end of October 2003.

202 **The Assembly instructed** the Executive Secretary to produce a final draft of the MOU, taking these comments into account, for approval at all levels of management within the two organisations, and submit this draft to the IOC Executive Council, at its 37th session, in June 2004, for final approval.

203 **The Assembly also agreed** that it would be desirable to examine separately the overarching MOU between UNEP and the IOC, which dated back to 1987, with a view to redrafting it into a “compact” between the two organisations.

4.4.1.3 Memorandum of Understanding between the International Council for the Exploration of the Sea (ICES) and the IOC

204 The Executive Secretary introduced this item. He explained that ICES had recently finished a major Strategic Review, as a result of which, ICES reconsidered its current MOU with the IOC. Bearing in mind that the existing MOU was signed in 1983, and both organisations have since undergone significant changes, it seems advisable to revisit the MOU. The IOC collaborates actively with ICES in several different areas, for instance through the joint ICES–IOC Steering Group on GOOS, and in the HAB Programme, among others. To explore a possible revision to the MOU to adapt to the changing nature of the two organisations, the ICES and IOC Secretariats met in Paris on 10 June 2003.

205 Finland supported by Canada reminded the Assembly that ICES, which includes 18 States, also members of IOC, has a considerable interest in improving its involvement in GOOS, an area in which the ICES–IOC Steering Group on GOOS is already working hard to benefit from what both sides have to offer. ICES expected to be able to bring to this and other joint activities its extensive environmental and fishery knowledge and data banks. In turn, ICES will depend on many of the initiatives being developed in GOOS, in order to meet new challenges with respect to ecosystem effects on fisheries and fishing. ICES believes it can play an active and useful role in the design and implementation of GOOS, by specifying requirements for data and information, and by contributing to the design and implementation of the Coastal Module of GOOS in particular. A good example of what may be possible is given by the development of the joint ICES–EuroGOOS North Sea Ecosystem Pilot Project (NORSEPP), under the aegis of the ICES–IOC Steering Group on GOOS, which aims to show how the GOOS approach might help to apply an ecosystemic approach to fishery and environmental management. Similar possibilities are now being explored for the US–Canadian margin and the Bay of Biscay margin.

206 **The Assembly instructed** the Executive Secretary to pursue discussions with ICES with a view to developing a stronger and more detailed MOU on work in the North Atlantic and adjacent areas that would allow joint approaches to issues of common interest.

207 **The Assembly adopted** [Resolution XXII-9](#).

4.4.2 Review of the Structure of the Global Ocean Observing System (GOOS): Final Report

208 The Chairman of the GOOS Review Group, Dr Paul Mason, introduced this item. Referring to document IOC/INF-1185, he reminded the Assembly that Resolution XXI-7 had called for a review of the organisational structure of GOOS to be carried out by an external independent Review Group during 2002, and reported to the Assembly at its 23rd Session. The Review Group was appointed by the Chairman of the IOC in February 2002 and comprised Dr Mason (UK) (replacing Dr G. Love of Australia), Dr K. Radhakrishnan (India), Dr John Field (South Africa) and Dr Ichio Asanuma (Japan). The Group reviewed the development and implementation of GOOS, with particular attention to its structure, mandates and *modus operandi*, the activities of its advisory panels, the development of the GOOS Initial Observing System, including its pilot projects, the regional development of GOOS, the national development of GOOS, and the extent to which capacity-building in support of GOOS could benefit Member States.

209 The views of the wider community were sought through a questionnaire and through interviews. Twenty-three Member States responded, providing 25 written and 8 verbal responses. Five organisations (JCOMM, SCOR, WMO, I-GOOS and the GPO) responded in writing. Formal interviews were carried out by the Review Group during its meeting in Paris (September 2002), with representatives of GOOS bodies, sponsors (IOC, WMO and ICSU), and industry.

210 Analysis of the responses revealed some reasonably clear signals from the community: 88% indicated that the COOP and OOPC were doing an adequate job as advisory panels; 80% indicated that GOOS implementation and governance were consistent with its mandate; 71% indicated that the GOOS Regional Alliances are not well integrated into GOOS; and 57% indicated that the present structure was inadequate. The community was less clear in its response to other questions. There was a more or less even distribution of yes and no answers to questions about whether or not: (i) GOOS capacity-building was effective; (ii) the present GOOS *modus operandi* was appropriate; and (iii) the GOOS Initial Observing System, including its pilot

projects, was adequate. In his judgment a good deal of the confusion about these aspects of GOOS did not reflect poor organisation or performance in GOOS, but rather a combination of inadequate information about the actual state of GOOS (the last comprehensive description being dated 1998), combined with lack of in-depth knowledge on the part of some respondents.

211 The Review Group noted a number of concerns over the current arrangements, in particular over I-GOOS's functions and its relation to the GSC. Some of these concerns were linked to the different views of, and possible confusion about, the nature of GOOS itself, and to the possible roles of "implementation bodies". The Group further noted that the recent establishment of JCOMM had provided an essential and previously lacking component of implementation at the intergovernmental level and raised the need to ensure appropriate links between it and the various bodies formally involved in GOOS. While JCOMM and the IODE were outside the Group's terms of reference, it proved impossible to offer sensible advice that did not involve these two bodies. The Group took implementation to be the responsibility of Member States.

212 The Review Group judged that the mandate for GOOS was satisfactory and should not be changed. To avoid confusion over the "identity of GOOS", the Group considered that GOOS should stand for the comprehensive, end-to-end Global Ocean Observing System, which includes the acquisition of all types of oceanographic data and marine meteorological data that need to be made internationally available to meet national, regional and global requirements.

213 The Review Group judged the *modus operandi* to be stated appropriately though not always pursued with a clear remit or in a wholly satisfactory way. This reflected a lack of effectiveness of I-GOOS in the past in tackling its primary roles, and confusion about the roles of I-GOOS and the GSC in relation to each other and to JCOMM. The terms of reference of I-GOOS and the GSC should be modified to reflect their relations to each other and to JCOMM.

214 The Review Group felt that many of the concerns about the functioning of the current structures arose from the absence of national operational oceanographic bodies or even of good co-ordination of oceanographic activities in many nations. This makes national engagement of Member States in GOOS difficult. Encouragement of the development of national oceanographic bodies and national oceanographic co-ordinating mechanisms, involving all organisations that may be expected to benefit from GOOS, is a key issue for IOC.

215 The Review Group considered that much of the confusion about GOOS arose from the figure on the GOOS website and in the questionnaire depicting the GOOS structure. The Review Group had greatly simplified that figure, thereby considerably streamlining the structure and clarifying the links between the GSC and I-GOOS and between the GPO and both of those bodies. The Group recognised that useful moves towards effective management of the structure had been made by the creation of the I-GOOS Board, the GSC Executive Committee and the JCOMM Management Committee, which were now linked with each other and with the GPO and with IODE.

216 Dr Mason noted, among other things, that the Group recommended that I-GOOS play a stronger role in the co-ordination of regional developments of GOOS, that the GOOS Regional Alliances report to I-GOOS, and that I-GOOS, the GSC and JCOMM combine their separate capacity-building efforts into a single panel.

217 **The Assembly thanked** Dr Mason for his excellent report. It noted that I-GOOS is already evolving in such a way that its performance has improved, although more could be done by Member States to make it a fully effective body.

218 **The Assembly noted** that, in drawing up a Plan of Action to implement recommendations of the group, it might be appropriate to consider working jointly with other organisations such as UNEP and FAO to deal with the regional needs of countries in relation to coastal GOOS.

219 **The Assembly welcomed** the statement from the Representative of SCOR that ICSU was committed to continuing its sponsorship of the GSC so long as it retained its independent status as a source of scientific advice.

220 **The Assembly noted** that: (i) the success of GOOS is dependent upon the willingness of Member States to commit themselves to sustained ocean observations on a long-term basis, and that a clear structure and **modus operandi** are essential for such commitment; (ii) the GOOS Steering Committee, with its co-sponsorship by ICSU, UNEP and WMO, provided an excellent source of advice for I-GOOS; and (iii) the name of the GOOS Steering Committee might be altered to reflect the fact that it provided scientific and technical advice to the I-GOOS, the intergovernmental body responsible for GOOS.

221 **The Assembly considered** the Recommendations of the Report, of which, many are pointing in the right direction. However, **it noted** concerns in terms of the substantive conclusions and implementation of the Recommendations in several areas including recommendations (a) GOOS Planning, (b) The Number of Meetings, (c) Structure Recommendation, (d) I-GOOS, (e) Applications and modelling, and (f) GOOS Regional Alliances.

222 **The Assembly decided** to create an intersessional open-ended working group to examine such matters and to consider the Review Group's recommendations in detail and develop an Action Plan for the consideration of the IOC Executive Council at its 37th Session. Dr Radhakrishnan (IOC Vice-Chairman and former member of the GOOS Review Group) agreed to chair the group. **The Assembly instructed** the Executive Secretary to invite Member States and sponsoring organisations to nominate members to participate in the working group.

223 **The Assembly adopted** [Resolution XXII-4](#).

4.4.3 Second Report on the Adequacy of the Global Observing System for Climate

224 The Chairman of the GCOS Steering Committee, Dr Paul Mason, introduced this item. Referring to document IOC-XXII/2 Annex 9 and to the Second GCOS Report on the Adequacy of the Global Observing System for Climate in Support of the UNFCCC (<http://www.wmo.ch/web/gcos/gcoshome.html>), he recalled that the goals of the Second Adequacy Report were: (i) to determine what progress has been made in defining and implementing climate-observing networks and systems since the publication of the First Adequacy Report (in 1998); (ii) to determine the degree to which these networks meet scientific requirements and conform to associated principles; and (iii) to assess how well current systems and planned improvements will meet the needs of the UN Framework Convention on Climate Change (UNFCCC). Since the publication of the First Adequacy Report, a wide consensus on the design of the ocean component of the GCOS, composed essentially of the observation networks of GOOS, has been achieved. The first priority is to implement this initial system, including the development of the necessary associated data, analytical and product capabilities and the research and development needed to improve capabilities for monitoring key climate variables and to improve understanding of the oceanic ecosystems and processes that limit forecast skill. Although there have been significant improvements as a result of new satellite data, the implementation of Argo, and a new international co-ordination mechanism (i.e.

JCOMM), ocean networks are not yet adequate to meet the needs of the Parties to the UNFCCC for data on most variables and in most regions of the planet. Nevertheless, the capability to observe climate changes in the ocean on a global scale has now been demonstrated.

225 **The Assembly noted** the possibilities for novel small-satellite technologies to contribute to the collection of climate data at lower cost. **It also noted** the opportunity presented by the International World Climate Change Conference, planned in Moscow, October 2003, for extended discussion of what more is needed for climate observations.

226 Recognising the dearth of observations in the polar regions, **the Assembly agreed** that this issue could be addressed within the context of a proposed “International Polar Year”.

227 **The Assembly called on** the representatives of the Member States to contact their national delegations to the 9th Session of the UNFCCC Conference of the Parties (Milan, 1–12 December 2003) to endorse the Second GCOS Report on the Adequacy of the Global Observing System for Climate in Support of the UNFCCC and to support the required improvements in the observing system for climate, including especially its ocean component.

4.4.4 Draft Memorandum of Understanding between IOC and WMO Regarding Regulatory and Procedural Aspects of the Conduct of the Joint WMO–IOC Commission for Oceanography and Marine Meteorology (JCOMM)

228 The Executive Secretary introduced this item. The IOC and WMO governing bodies have requested their Secretariats to develop some common rules and procedures that would apply to all future JCOMM sessions. The Assembly, at its 21st Session, recommended a Memorandum of Understanding (MOU), rather than modifications of existing rules of either organisation, as the appropriate modality.

229 The Executive Council, at its 35th Session, reviewed the draft MOU and expressed its overall agreement with the draft. It invited comments and/or proposed amendments from the Member States, and instructed the Executive Secretary, in close collaboration with the WMO Secretariat, to incorporate those comments and/or amendments, including any from the WMO Executive Council, into a new draft and to submit it to the next session of the Assembly.

230 Comments and/or amendments by Member States on the draft MOU were solicited through IOC Circular Letter 2025. All the answers thereto showed full agreement with the content and the wording of the draft. The Assembly therefore had before it the final draft version of the MOU prepared jointly by the IOC and WMO Secretariats and submitted to both governing bodies.

231 The Representative of WMO informed the Assembly of the strong appreciation of and support offered to JCOMM by the recent 14th World Meteorological Congress, which had urged its Members to provide the support necessary to ensure the full implementation of the JCOMM work programme. The 14th World Meteorological Congress approved the draft MOU, and, subject to a similar approval by the IOC Assembly, authorised the Secretary-General to proceed with its signature, with the Executive Secretary, requesting that the MOU be regularly reviewed. The WMO Representative concluded by expressing to the Assembly his appreciation of its enthusiastic support for JCOMM.

232 **The Assembly approved** the Memorandum of Understanding on JCOMM rules and procedures, noting the requirement that it should be regularly reviewed and updated, **and**

authorised the Executive Secretary to sign the MOU (attached as [Annex VIII](#) to the present Report), with the Secretary-General of WMO.

4.4.5 JCOMM Observation Programme Area: GLOSS Group of Experts Adequacy Report

233 The Co-president of JCOMM, Dr Savi Narayanan (Ms), and the Chairman of the Global Sea Level Observing System Programme, Dr Philip Woodworth, introduced this item. Dr Savi Narayanan first provided an overview of JCOMM progress and drew attention to changes in the JCOMM Team. She highlighted a few key results in many of the JCOMM programme areas, such as: (i) the steady increase in the number of deployed Argo floats; (ii) the collaboration with IODE on data management; (iii) various products within the service programme area; (iv) the merger of the JCOMM and GOOS capacity-building panels and the first meeting of the task team on resources. All JCOMM Programme Area Observation component teams have funding problems to meet stated targets and need support to resolve these. The Co-president of JCOMM requested Member States to support its observational network to ensure the required level of temporal and spatial coverage. While research programmes are extremely useful, operational oceanography and meteorology require stability of funding and sustainability and this will require institutional support.

234 Several project proposals are in preparation, such as (i) the Western Indian Ocean Marine Applications Project (WIOMAP) which has an initial focus on marine services; and (ii) the Marine Impacts on Lowland Agriculture and Coastal Resources (MILAC) Project which is being developed as part of the Natural Disaster Reduction Programme of WMO and cuts across many of its Commissions' fields of action.

235 Proposals are also coming out of performance assessments that JCOMM has requested of its observation programme area. Philip Woodworth presented such an assessment for the GLOSS Group of Experts. Of the GLOSS Core Network of 290 stations, two-thirds are operational as defined in terms of mean-sea-level data being provided to the Permanent Service for Mean Sea Level. Of those, about half have provided hourly observations to be accessible on the GLOSS website (as required by the *GLOSS Implementation Plan, 1997*), of which about 80 also provide data accessible in near-real time to the GLOSS Fast Data Centre in Hawaii. There is an increasing demand for GLOSS to deliver "fast" data in real time, and GLOSS, as a system, needs to be modernised, particularly with regard to the provision of fast data for operational modelling and satellite altimeter calibration. For instance, the Global Ocean Data Assimilation Experiment (GODAE) requested that data from the GLOSS Ocean Circulation (GLOSS-OC) data set be available from 2003 for assimilation within several days. This requires the GLOSS Fast Data Centre to develop new processing capabilities. Also, of the stations identified as GLOSS-OC, only half of them have fast-delivery capability. Upgrades are needed immediately throughout the GLOSS Core Network, and the GLOSS Adequacy Report contains a draft proposal including provision for new hardware, training and installation assistance, with a total cost of \$3.5 million.

236 **The Assembly expressed** strong support for JCOMM **and noted** with satisfaction its fine progress.

237 **The Assembly endorsed** the GLOSS Group of Experts Adequacy Report.

238 **The Assembly urged** Member States to give effect to each recommendation of the GLOSS Group of Experts Adequacy Report without delay, in view of the urgency for data for programmes such as GODAE and GOOS, and in particular, to take the necessary immediate measures (i) to upgrade all GLOSS stations to the extent possible for real-time data delivery by

2004; and (ii) in this context to provide resources for technical assistance and capacity-building for developing nations.

239 **The Assembly noted** the contribution of regional development, such as the MedGLOSS programme in the Mediterranean and the Black Sea, to the objectives of GLOSS and **called on** the Member States to further develop regional sea-level networks that supplement the GLOSS Core Network.

240 **The Assembly instructed** the Executive Secretary to develop specific plans and actions, including obtaining extrabudgetary resources, aimed at overcoming the obstacles that Member States face in fulfilling their commitments to GLOSS.

241 Recalling that JCOMM, as a technical commission, is a subsidiary body of the IOC, **the Assembly called on** JCOMM to provide, in the future, a written report on the activities of JCOMM to seek the guidance and decisions of the Assembly for the overall long-term plans and priorities.

242 **The Assembly instructed** the Executive Secretary to include in the agenda of each Assembly an agenda item dealing with the JCOMM report to ensure that the Commission gives due regard to the balance of efforts in the integrated approach co-ordinated by JCOMM.

243 Following the suggestion by China, **the Assembly expressed** its strong appreciation to Dr Colin Summerhayes for his leadership of the GOOS Project Office and his dedication to the development of GOOS over the past years.

4.5 REGIONAL ACTIVITIES

4.5.1 IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (IOCINCWIO): IOCINCWIO-V Report

244 The Head of the IOCINCWIO Project Office, Mr Mika Odido, introduced this item. The Regional Committee for IOCINCWIO, at its 5th Session (UN, Nairobi, September 2003) expressed its satisfaction with the high level of implementation of the IOCINCWIO-IV Work Plan during the 1997–2002 intersessional period. It also expressed its gratitude to the Governments of Sweden and of Flanders (Belgium) for the support provided, and to the Government of France for their support for the 5th Session.

245 The Head of the IOCINCWIO Project Office then presented the Workplan for 2002–2005 adopted by IOCINCWIO-V. This Plan focuses on: development and strengthening of capacity to undertake observations and monitoring of the oceans and coastal areas; analysis and interpretation of the data/information available, to enable their use for sustainable management of the marine environment and resources; training courses/workshops on: ocean modelling; satellite altimetry and oceanography; use of remote sensing and GIS for ICAM; taxonomy; techniques for rapid assessment of pollution; data and information management.

246 The Regional Committee also proposed that the IOC Secretariat consider the organisation of a mission of experts to Comoros and Madagascar to assess their capacity-building requirements. The need for continuous time-series data on key oceanographic parameters, such as sea level, salinity, currents and winds, will be addressed through: (i) the establishment of a Group of Experts on Ocean Dynamics and Climate; (ii) improvement of observing systems, especially the sea-level and coastal observing networks; (iii) assessment and monitoring of shoreline changes; and (iv) monitoring of potentially harmful marine microalgae.

247 Mr Odido informed the Assembly that IOCINCWIO-V had proposed that the name of the Regional Committee be changed to “IOC Regional Committee for the Western Indian Ocean – IOCWIO”.

248 Several Member States pointed out: the need to improve collection of data required for assessment of sea-level changes, pollution and water-quality studies in the regions; Integrated Coastal Area Management, so as to improve data flow to the data centres established within ODINAFRICA and to enable the preparation of data products for management of the marine environment and resources. In this regard, there must be closer collaboration between ODINAFRICA and other IOC programme elements, such as GLOSS, ICAM and GOOS–AFRICA.

249 **The Assembly welcomed** the co-operation between IOCINCWIO and IOCINDIO, and the active participation of the Member States from both regions in the development of the Indian Ocean GOOS and the Western Indian Ocean Marine Applications Project.

250 **The Assembly reaffirmed** its support for the strengthening of capacity-building initiatives in the region.

251 **The Assembly accepted** the Executive Summary report of IOCINCWIO-V and its five recommendations **and urged** Member States to provide extra resources for the full implementation of the approved Work Plan.

252 **The Assembly decided** to change the name of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (IOCINCWIO) to the IOC Regional Committee for the Western Indian Ocean (IOCWIO).

253 **The Assembly adopted** [Resolution XXII-10](#).

4.5.2 IOC Sub-Commission for the Western Pacific (WESTPAC): WESTPAC-V Report

254 The Chairman of the IOC Sub-Commission for the Western Pacific (WESTPAC), Dr Hyung-tack Huh (Republic of Korea), introduced this item. At its 5th Session (Fremantle, August 2002) the Sub-Commission elected Dr Hyung-tack Huh as its Chairman, Prof. Dang Ngoc Thanh (Viet Nam) as its First Vice-Chairman, and Mr Haiqing Li (China) as its Second Vice-Chairman.

255 Dr Huh noted that the successful 5th WESTPAC International Scientific Symposium (Seoul, August 2001) provided an opportunity for some of WESTPAC’s programmes to hold workshops to plan further developments. One such workshop, on Ocean Environment Forecasting, was jointly organised by NEAR–GOOS and PICES. Progress was made in the creation of the South-East Asian Regional GOOS (SEAGOOS) through the SEAGOOS First Implementation Planning Workshop (Seoul, August 2001), and a Co-ordinating Committee was created to develop SEAGOOS.

256 Throughout the biennium, scientists from the WESTPAC region had provided significant scientific inputs to several of the IOC global programmes, including GEOHAB, GLOBEC, CLIVAR, IODE, IBCWP and GOOS, thus helping to implement those programmes in the region. The NEAR–GOOS Co-ordinating Committee, at its 7th Session (Vladivostok, October 2002), developed a new outline strategic plan for NEAR–GOOS and broadened its terms of reference so that it could meet the needs of the wider community in the region.

- 257 He reported that good progress has been made in capacity-building. Firstly, in the framework of the International Co-operative Study on the Gulf of Thailand, several capacity-building activities have been organised, including two workshops on oceanographic data and information. The Government of Japan has continued to sponsor annual regional training courses on the detection and forecasting of Harmful Algal Blooms and on NEAR-GOOS Data and Information Management.
- 258 Links have been improved between WESTPAC and other organisations in the region, and ties strengthened between WESTPAC and PICES in NEAR-GOOS, GEOHAB, CLIVAR, GLOBEC and CoML (Census of Marine Life), and between WESTPAC and UNEP's Regional Seas Programme for the Northwest Pacific Action Plan (NOWPAP).
- 259 The Chairman of WESTPAC recognised that the Pacific Islands community has not been well served by WESTPAC in the recent past, and that there is a need to ensure a better balance between Asian and Pacific Island interests in the future programmes of WESTPAC, making full use of existing co-operation agreements with sub-regional organisations active and representing the Pacific Islands community.
- 260 Dr Huh reminded the Assembly that the WESTPAC Secretariat has been without an Officer since the departure of Mr Kuijper in November 2002, but he was happy to announce the appointment of the distinguished biologist from the Philippines, Dr Miguel Fortes, as the new Head of the WESTPAC Office in Bangkok, starting in October 2003.
- 261 The Executive Secretary reminded the Assembly that some concern had been expressed at WESTPAC-V about the weakness of the linkage between the IOC's global programmes and their regional components, and the regional programmes developed by the Sub-Commission, and about the organisation of regional meetings of IOC's programmes in the WESTPAC area without sufficient involvement of the WESTPAC Member States. He noted that the problem was common to all regional subsidiary bodies and arose in part from the fact that, although the rules of procedure required the Regional Sub-Commissions and Committees to implement the IOC's global programmes regionally, there was a tendency for the regions also to wish to develop activities meeting their particular local interests. This issue needs addressing in a substantive and systematic way through consultations and the subsequent drafting of a report by the Secretariat.
- 262 **The Assembly thanked** the Chairman of WESTPAC for his comprehensive presentation, and Dr Keisuke Taira for his work as the previous Chairman.
- 263 **The Assembly welcomed** the appointment of Dr Fortes **and looked forward** to seeing a reinvigorated WESTPAC Secretariat operating under his leadership. **It also welcomed** Dr Fortes' proposal that his priorities should be: (i) to get more committed support for IOC programmes in the region, by raising new funds or in-kind resources through shared investment; (ii) improve internal co-ordination between the WESTPAC countries, the Secretariat, and the scientific community; and (iii) address the needs of Member States more efficiently and effectively through partnerships operating in an environment of mutual trust and respect, so as to get more involvement by the Member States in WESTPAC activities.
- 264 **The Assembly welcomed** the announcement by China that it would host the 6th WESTPAC Scientific Symposium in Hangzhou in 2004, and that it has provided \$20,000 to the IOC Trust Fund in support of that meeting.
- 265 **The Assembly invited** the IOC global programmes to consider holding regional meetings in association with the WESTPAC Scientific Symposium.

266 **The Assembly welcomed** the commitment of Japan to continue its financial support to capacity-building programmes in the region, and noted the potential benefits to SEAGOOS of the Japanese Coastal Oceanography Project in S.E. Asia.

267 With regard to the future direction of WESTAC programmes, **the Assembly welcomed** the suggestion from the Russian Federation that its research vessel of the Maritime State University in Vladivostok acting as a Floating University could become the base for an IOC–WESTPAC Training-Through-Research (TTR) programme like that carried out in European waters.

268 **The Assembly noted** the suggestion by Australia that work on ocean dynamics and climate could form a focus for WESTPAC’s activities.

269 On the occasion of his retirement, **the Assembly awarded** Dr Keisuke Taira, the former Chairman of WESTPAC, an IOC Certificate of Appreciation and a UNESCO Medal for his services to WESTPAC, and particularly for his seminal role in the development and implementation of NEAR–GOOS. The award was received on Dr Taira’s behalf by Prof. Terazaki from the Japanese delegation.

270 In reply, the Japanese delegation read out a note from Dr Taira recording his great pleasure at such appreciation and referring to his satisfaction with the way in which NEAR–GOOS had developed in its early years. He wished WESTPAC well for the future and assured the Assembly that he would continue to promote the work of the IOC.

271 **The Assembly endorsed** the Summary Report of SC-WESTPAC-V and the recommendations therein.

272 **The Assembly instructed** the Executive Secretary to arrange an appropriate intersessional consultation on the roles of the Regional Sub-Commissions in the linkage between the IOC’s global and regional programmes, with a view to developing a concept paper based on existing rules, expanding on the modalities of regional implementation of IOC programmes and the functional role of IOC Regional Committees and Sub-Commissions, for consideration by the IOC Executive Council at its 37th Session, in 2004.

4.5.3 The African Process and NEPAD

4.5.3.1 The African Process for the Development and Protection of the Marine and Coastal Environment in Sub-Saharan Africa and NEPAD

273 IOC Technical Secretary, Mr Julian Barbière, introduced this item. He reported on the finalisation of the African Process and its recent integration into the New Partnership for Africa's Development (NEPAD) framework. As a result of the intensive support provided by IOC and its partners, a portfolio of 20 regional project proposals has been developed by African experts in consultation with national authorities. The portfolio was presented at the Partnership Conference held during the WSSD, at the Head of State level, under the chairmanship of President Chissano of Mozambique. The portfolio was well received by the international community and one of main decisions of the Partnership Conference was to integrate the African Process, and its follow-up, into the NEPAD framework, as the main marine and coastal sub-theme of the Environment Component of NEPAD (ECONEPAD). The African Process was also endorsed by WSSD as a type-II partnership, as well as being specifically referred to in the WSSD Plan of Implementation.

- 274 This integration into the NEPAD framework has involved the full participation of IOC/UNESCO at relevant forums and in particular in the meetings of the Environment Action Plan of NEPAD. This finalised Plan was presented to the African Ministerial Conference on the Environment (AMCEN, June 2003) and will be presented to the African Union Summit (July 2003) for consideration by African Heads of State. IOC is therefore playing an active role in the finalisation and consolidation of the NEPAD Environment Action Plan, specifically in the sub-theme of Coastal and Marine Issues, including Fresh Water. In addition to its contribution to the elaboration of the overall African Process portfolio, IOC is now facilitating the development of the second phase of the process and working on the implementation of specific projects, such as GOOS–AFRICA and coastal-erosion projects, and is launching an African Coastal Zone Forum for the promotion and development of ICAM. Support to the NEPAD Environment Action Plan is therefore considered as a priority for IOC in the proposed Programme and Budget of UNESCO (Draft 32 C/5).
- 275 The Representative of the Ministry of Environment of Kenya, Mr Ali Mohamed, provided an overview of the NEPAD framework, its overall objectives and operational mechanisms. He informed the Assembly of the finalisation of the NEPAD Environment Action Plan, into which the African Process has been integrated, and provided details of the mechanisms put in place to move forward with the implementation of the portfolio of projects. He informed the Assembly that, following a Ministerial meeting (Dakar, October 2002), under the chairmanship of the President of Senegal, H.E. Maitre Wade (NEPAD Co-ordinator for the Environment), Kenya was requested to act as the clearing-house mechanism for the Coastal and Marine Environment Component of NEPAD, under the overall co-ordination of the Nairobi and Abidjan Conventions. As a result, pending the final decisions of the forthcoming African Union Summit, Kenya will be hosting a Secretariat in Nairobi which will assist in the further development of the coastal and marine projects and in seeking resources for their implementation, liaising with the partner community and relevant governments. Finally, he requested the support of the Assembly to assist Kenya in its proposed new role.
- 276 Several Member States expressed their support for the African Process and the NEPAD Environment Action Plan, and called on IOC to take a leading role in the implementation of the Marine and Coastal Component of NEPAD.
- 277 Belgium welcomed the integrated approach developed under the African Process, in line with scientific interdisciplinarity in UNESCO, and which will also be promoted at the forthcoming meeting in Brussels (September 2003) on ODINAFRICA's future development.
- 278 The Representative of the International Ocean Institute expressed the willingness of his organisation to fully co-operate with IOC in the establishment of the African Coastal Zone Forum, and the organisation in 2004 of a joint conference to launch this initiative is being considered.
- 279 **The Assembly expressed** its satisfaction with the contribution that IOC has made to the implementation of the African Process for the last three years, as a direct follow-up of PACSICOM, and with the recognition at WSSD that IOC is a competent technical agency to assist with the NEPAD Coastal and Marine Component.
- 280 **The Assembly stressed** the need, in following up the African Process, to extend the initial geographical coverage so as to cover the whole continent, thus harmonising with the NEPAD philosophy. In this context, **the Assembly encouraged** Member States to set up appropriate national structures for co-operation with the IOC.

281 **The Assembly urged** Member States to endorse the NEPAD initiative and especially its Environment Action Plan at the national level, **and instructed** the Executive Secretary to pursue, in this new phase, the implementation of those proposals that are closely related to the programmatic priorities of IOC, such as coastal erosion and GOOS–AFRICA, by seeking the support of donors and other extrabudgetary resources.

4.5.3.2 GOOS–AFRICA and ODINAFRICA

282 IOC Technical Secretary, Mr Justin Ahanhanzo, introduced this item. The GOOS–AFRICA Working Groups and Co-ordinating Committee, as well as the GOOS Project Office of IOC, have facilitated the development of GOOS in Africa. A project proposal for a Regional Ocean Observing and Forecasting System for Africa (ROOFS–AFRICA) has been developed in partnership with UNIDO, UNEP, ADB, ACMAD, a former STRC/OAU, and AARSE, with contributions from France, Finland, The Netherlands, USA (NOAA, ONR), the UK Met Office, ESA and EUMETSAT. The 6th Conference of the Contracting Parties to the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan, May 2002) adopted the GOOS–AFRICA Project proposal. Pursuant to the recommendation of the Preparatory Meeting of the Partnership Conference (Abuja, June 2002), the Heads of the African States, at the Partnership Conference conducted in Johannesburg during the WSSD, adopted the GOOS–AFRICA Project for the revitalisation of the Abidjan and Nairobi Conventions, with a view to achieving the sustainable development of the marine environment in Africa.

283 GOOS–AFRICA has developed partnerships and mechanisms for joint activities with existing regional initiatives. The African Large Marine Ecosystems projects funded by the World Bank–UNEP–UNDP Global Environment Facility (GEF) have recognised GOOS–AFRICA as a complementary project that provides observations and forecasting as a basis for sustainable management. GOOS–AFRICA shares an interest with Indian Ocean GOOS (IOGOOS) in the development of GOOS in the western Indian Ocean, and GOOS–AFRICA and IOGOOS both support the Western Indian Ocean Marine Applications Project (WIOMAP). Both also share a considerable interest in observations relating to weather and ocean forecasting in that area. GOOS–AFRICA and PIRATA (Pilot Research Moored Array in the Tropical Atlantic) also share an interest in collecting observations relating to weather and climate in the eastern Atlantic Ocean (West Africa). GOOS–AFRICA provides an added value to both WIOMAP and PIRATA in developing a strategy with planned activities for collecting and integrating data from remote sensing and from *in situ* observations and measurements, and processing them with numerical modelling to derive useful products. Due to the successful co-operation with the African Centre of Meteorological Applications for Development (ACMAD), GOOS–AFRICA has also established mechanisms for joint activities with the Global Climate Observing System in Africa. There is a natural link between GOOS–AFRICA and ODINAFRICA initiatives, since data stored by ODINAFRICA should be converted into operational information. The adoption of GOOS–AFRICA's ROOFS–AFRICA proposal, as a key part of the New Partnership for Africa's Development (NEPAD) is a demonstration of the rapid development of the concept in the region and its ownership by the African countries.

284 **The Assembly welcomed** with appreciation the rapid development of GOOS in Africa and the integrated approach of GOOS–AFRICA.

285 **The Assembly welcomed** the organisation of the GOOS–AFRICA Stakeholders and Resources Mobilisation Workshop, planned in co-operation with the South African Weather and Meteorological Service and the NEPAD Steering Committee, for October 2003.

286 **The Assembly requested** Member States to provide additional financial and technical assistance, **and instructed** the Executive Secretary to seek additional support to ensure a rapid implementation of the ROOFS–AFRICA.

287 The ODINAFRICA Regional Co-ordinator for the IOCINCWIO region, Mr Mika Odido, highlighted some of the activities implemented in the current phase of the ODINAFRICA Project. New National Oceanographic Data and Information Centres (or DNAs) have been established in Benin, Cameroon, Senegal, Togo and Tunisia, bringing the total number of data centres established in the framework of ODINAFRICA to 16. To improve networking, databases developed at national level are now being merged, quality-controlled and formatted for access via the Internet in order to encourage broader usage. Two training workshops on data management were organised (Casablanca, April 2001; Tunis, April–May 2002), and two on marine information management (Cape Town, October–November 2001; Tunis, April–May 2002).

288 The External Evaluation of the ODINAFRICA Project, undertaken in 2002, was very positive and recommended the Project's continuation. The Evaluation report identified a few areas for improvement, such as: (i) Internet connectivity; (ii) disparities in capacity between the different institutions; and (iii) the need for more equipment for preparation of products for ICAM (e.g. GIS equipment).

289 Several actions have already been undertaken to respond to the Evaluation's recommendations. Regarding improvement of Internet access, a pilot initiative will be implemented to improve connectivity in Benin, Côte d'Ivoire, Kenya, Mauritius, Nigeria, Senegal and Seychelles. Remedial training courses for data and information management have been organised to ensure that all the institutions reach the same level. ODINAFRICA partner institutions have also recommended that ODINAFRICA–III should strongly promote close collaboration between the established ocean data and information centres, GOOS–AFRICA, ICAM and JCOMM, with a view to ensuring that the established national and regional capacity is fully utilised for the development and provision of a wide range of ocean data and information products and services. ODINAFRICA partner institutions participated in the First IOGOOS Conference (Grand Bay, Mauritius, November 2002).

290 Belgium expressed satisfaction with the progress in implementation of ODINAFRICA-II and informed the Assembly of the Government of Flanders's intention to continue providing support.

291 **The Assembly noted** the progress made in the implementation of ODINAFRICA and the positive evaluation the Project had received, **and called on** the concerned Member States to develop a proposal for the next phase of ODINAFRICA.

292 **The Assembly thanked** the Government of Flanders (Belgium) for funding the ODINAFRICA project **and welcomed** their intention to continue providing support for the Project.

293 **The Assembly urged** other Member States to extend support to the proposed next phase of the Project, emphasising the successful results of the first and second phases.

4.5.3.3 UNESCO Cross-cutting Projects on the Application of Remote Sensing

1. The application of remote sensing for integrated management of ecosystems and water resources in Africa

294 The Project Manager, Mr Justin Ahanhanzo, introduced this item. The Project is implemented through three lines of action: (i) Research, Education and Training; (ii) Developing UNESCO Chairs and Networks, and Specialised Centres in Remote Sensing; and (iii) Fostering Outreach. Research and educational institutions, including seven UNESCO Chairs in nine African countries (Benin, Botswana, Côte d'Ivoire, Equatorial Guinea, Guinea, Mozambique, Niger, Senegal, and South Africa), form part of the Network; the first meeting of the Network (UNESCO, Paris, November 2002) developed its Action Plan. The UNESCO Regional Bureau for Education in Africa (BREDIA) in Dakar (Senegal) and the UNESCO Regional Office for Sciences and Technology (ROSTA) in Nairobi (Kenya) supported the Network National Workshops to identify national capacities, needs and priorities and to establish national work programmes in the nine countries mentioned above. Capacities and needs have thus been assessed and a clear picture of the status of remote sensing applied to ecosystems and water resources at national and regional levels has been obtained. Relevant stakeholders are now co-operating to implement the Project at national and regional levels. The Project is complementary to the ROOFS–AFRICA proposal mentioned under item 4.5.3.2 which involves a much larger community (22 Member States) working on remote sensing in conjunction with other technologies and numerical modelling. This present crosscutting project addresses a smaller community focusing on remote sensing alone and considers terrestrial as well as marine issues. The Project has established a number of co-operative actions, including: South–South co-operation with the Brazilian Space Agency and the Indian Space Research Organisation; North–South co-operation involving ESA, EUMETSAT, France (CNES), The Netherlands (ITC), UK (SOC), Germany, the European Commission and the Committee on Earth Observing Satellites (CEOS). The Project is contributing to the forthcoming CEOS capacity-building workshop planned for October in Stellenbosch (South Africa) and to the AFRICAGIS Conference in Dakar in November 2003.

295 Following the recommendation of the participating Member States, the Project's Management Team submitted a request to UNESCO for the Project's extension under the UNESCO Programme and Budget for the next biennium, 2004–2005 (32 C/5).

296 **The Assembly recognised** that this initiative will support the remote-sensing efforts of the Commission.

297 **The Assembly urged** the Member States to support the extension of the Project, with increased budget, during the discussion and approval of the UNESCO Programme and Budget document (32 C/5) at the next General Conference of UNESCO (September–October 2003), and to provide additional financial and technical assistance to the Project for its extension to other countries.

2. UNESCO/IOC regional ocean sub-portals as part of the UNESCO knowledge portal

298 The Head of the IOCINCWIO Project Office, Mr Mika Odido, introduced this item. Content-editors were recruited and trained in the development of the African Ocean Portal. The editors elected Dr Desiderius Masalu (Tanzania) Chief Editor, with Ms Regina Folorunsho (Nigeria) as Assistant Chief Editor. The editors have met twice (UNESCO/IOC, Paris, May 2002; Mombasa, January 2003). The website <http://www.africanoceans.net> was launched in March 2003 and provides access to information and data on all aspects of ocean/coastal research and management for the benefit of various communities, such as decision-makers, the private sector, the research and education community and the general public.

299 In view of the considerable progress in the development of the African Ocean Portal, a proposal for an extension of the Project (2004–2005), focusing on public awareness and community participation, has been submitted to UNESCO for consideration.

300 **The Assembly noted** the progress in the development of the African Ocean Portal as an effective tool for the dissemination of information on sustainable development and management of the oceans and coastal zones to a wide, non-specialised, audience **and encouraged** Member States to participate actively in the continued building and maintenance of the Portal by submitting information on national ocean and coastal activities on a regular and sustained basis, as well as to promote the Portal at the national level.

301 **The Assembly urged** Member States to support the extension of the Project during the discussion of the new Programme and Budget (32 C/5) at the next General Conference of UNESCO.

4.5.4 Memorandum of Understanding between IOC and the Permanent Commission for the South Pacific (CPPS)

302 The Chairman invited Mr Gonzalo Pereira, the General Secretary of the Permanent Commission for the South Pacific, to introduce this item. Mr Pereira recalled the history of CPPS, introduced the contents of the proposed terms of reference of the Memorandum of Understanding and highlighted the role of GOOS in the new agreement.

303 **The Assembly endorsed** the terms of reference as in Document XXII/2 Annex 11 **and authorised** the Executive Secretary to finalise arrangements for the signature of the Memorandum of Understanding.

4.5.5 IOC Activities in the Caspian Sea

304 The Delegate of the Russian Federation introduced this item. He referred to document IOC-XXII/Supplementary item 1, reflecting the views of the various countries of the Caspian Sea region. It called for the strengthening of the IOC role in the organisation and co-ordination of research on the Caspian Sea and the development of an integrated environmental monitoring system, as well as strengthening of marine research capacity. The IOC and UNESCO have provided support, mainly through the Caspian Floating University and the UNESCO interdisciplinary initiative on sustainable development of the Volga–Caspian Basin, but there is a need to give more importance to the marine and coastal environmental issues in the possible continuation of the UNESCO interdisciplinary initiative. Recalling the activities of the WMO through CASPCOM and CASPAS, he identified climate and ocean processes, marine ecosystem protection, ICAM and GOOS as the main priority areas for the Caspian riparian countries. He proposed to the Assembly that a regional conference be organised by IOC to identify the appropriate co-ordination mechanism for research and monitoring in the Caspian Sea, and urged IOC to continue its support to the Caspian Floating University and UNESCO Volga–Caspian initiative.

305 The Islamic Republic of Iran welcomed the proposal made by the Russian Federation on behalf of the Caspian Sea countries.

306 The Representative of the International Ocean Institute (IOI) stressed the fact that the establishment of a regional co-ordination mechanism for the Caspian Sea is in line with the recommendations of a recent IOI expert group meeting (Astrakhan, May 2003), which also called for countries of the region to become members of international organisations such as IOC,

WMO and UNEP. He informed the Assembly that IOI is planning to organise a Conference on the Caspian Sea Environment in 2004 and suggested joining forces with IOC.

307 **The Assembly adopted [Resolution XXII-11](#).**

4.6 UN CONVENTIONS AND AGREEMENTS

4.6.1 **Criteria and Guidelines on the Transfer of Marine Technology**

308 The Chairman of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), Mr Elie Jarmache, introduced this item. He informed the Assembly that, pursuant to Resolution EC-XXXV.7 adopted by the IOC Executive Council at its 35th Session, the IOC/ABE-LOS, at its 3rd Session (Lisbon, May 2003), in close co-operation with UN/OLA/DOALOS, addressed: (i) the final draft of the IOC Criteria and Guidelines on the Transfer of Marine Technology; (ii) the elaboration of an IOC internal procedure for an appropriate and effective application of Article 247 of UNCLOS; (iii) the collection and analysis of information through the third IOC questionnaire on the practice of States in the field of marine scientific research (MSR) and transfer of marine technology (TMT).

309 The IOC proposal on criteria and guiding principles in the transfer of marine technology, prepared by Mr Ariel Gonzales (Argentina), Co-ordinator of the sub-group on this subject, was adopted by IOC/ABE-LOS-III. In view of India's difficulty with respect to Section B (b), a compromise was reached at the present Assembly by the insertion of a new paragraph in Draft Resolution XXII-12 beginning [*The Assembly*] *Recognises (...)*.

310 The IOC internal procedure for the implementation of Article 274 of UNCLOS, prepared by Professor Soons (The Netherlands), Co-ordinator of the sub-group on this matter, was discussed at IOC/ABE-LOS-III. It was not possible to complete the discussion, so the Advisory Body decided to continue this work intersessionally. **The Assembly noted** the proposal of Colombia to play an active part in this intersessional work.

311 Regarding the practice of States in the field of marine scientific research (MSR) and the transfer of marine technology (TMT), Mr Jarmache recalled that the Secretariat had submitted to the IOC/ABE-LOS an analysis of this practice, based on the results of the IOC questionnaires Nos. 2 and 3 completed by IOC Member States. IOC/ABE-LOS recommended that it be authorised to establish a working sub-group to analyse the replies to the questionnaire and that IOC Member States that have not yet answered the questionnaire on MSR and TMT be encouraged to do so.

312 Mr Jarmache reported that he had invited the Chairwoman of I-GOOS, Dr Silvana Vallerga, to attend IOC/ABE-LOS-III and to give a presentation on the main needs of GOOS in relation to UNCLOS. In this way, the Chairman of IOC/ABE-LOS had made the first step to honour the appeal of the IOC Executive Council for better communication between IOC subsidiary bodies.

313 Dr Vallerga described current I-GOOS activities and reported the interest of I-GOOS in seeking greater co-operation with IOC/ABE-LOS on the issues related to the legal framework applicable to the collection of oceanographic data in the Exclusive Economic Zones. IOC/ABE-LOS at its 3rd Session generally accepted that scientific inputs are necessary for its work and that a dialogue between scientists and legal experts must be encouraged and reinforced in order to implement the provisions of UNCLOS.

314 IOC/ABE-LOS, at its 3rd Session, expressed the wish that IOC present a report to the Meeting of States Parties to UNCLOS. It was also suggested that the IOC consider changing the name of the IOC/ABE-LOS taking into account the fact that this body consists of scientists and legal experts, pursuant to IOC Resolution XIX-19 adopted by the IOC Assembly in 1997. A decision on this matter should be taken between the Chairman of IOC/ABE-LOS and the Chairman of the Commission.

315 The Chairman of IOC/ABE-LOS expressed his gratitude to the Government of Portugal for its warm hospitality and assistance in hosting the meeting.

316 The Executive Secretary expressed his gratitude to Australia, Belgium and France for their contributions to the IOC Trust Fund dedicated to supporting the participation of experts from developing countries in IOC/ABE-LOS activities.

317 India, after explaining the rationale behind its objection to the adoption of the Draft IOC Criteria and Guidelines at IOC/ABE-LOS III, confirmed the acceptance of the suggested compromise text and India's full support for the IOC Criteria and Guidelines on the Transfer of Marine Technology.

318 Several Member States expressed the view that the legal issues associated with the collection of data in the EEZ should be incorporated into the mandate of IOC/ABE-LOS.

319 Brazil noted the pressing need to give advice on a legal framework for those GOOS activities not yet covered by any specific regulation, and especially not by UNCLOS, and which may be awaiting such advice for their successful implementation.

320 Some Member States expressed the view that IOC should participate in, and report to, the Meeting of States Parties to UNCLOS.

321 Greece informed the Assembly that it would be pleased to consider hosting the next session of IOC/ABE-LOS. The Executive Secretary acknowledged and thanked, with appreciation, Greece for its kind offer.

322 **The Assembly endorsed** the oral report of the 3rd Session of IOC/ABE-LOS presented by the Advisory Body's Chairman.

323 **The Assembly adopted** the IOC Criteria and Guidelines on the Transfer of Marine Technology in document IOC-XXII/2 Annex 12 Rev.

324 **The Assembly urged** the Member States that had not yet replied to IOC questionnaire No. 3 to do so.

325 **The Assembly requested** IOC/ABE-LOS to undertake the analysis of the legal and technical aspects associated with the automated collection of data in Exclusive Economic Zones under the auspices of IOC.

326 **The Assembly adopted** [Resolution XXII-12](#).

4.7 CAPACITY-BUILDING, TEMA AND PUBLIC AWARENESS

327 The Executive Secretary introduced this item. He recalled the establishment of the UNESCO/IOC Chairs, which range from Marine Science Focused on Integrated Coastal Management (in Mozambique) and Marine Geosciences (in Russia), to Physical Oceanography

(in Chile and Georgia). He requested the Assembly to confirm their support to the establishment and reinforcement of UNESCO/IOC Chairs.

328 **The Assembly reaffirmed** the IOC's full support for the continuation of these activities **and suggested** the establishment of a few other Chairs in well focused domains, such as remote sensing in oceanography and ocean modelling, which would strengthen key capacity-building needed for the successful implantation of the IOC programme in developing countries and provide the Member States with trained personnel in disciplines in which they are particularly weak today, but which represent important avenues in ocean research and its practical applications tomorrow.

329 The Executive Secretary presented a Certificate of Appreciation to Professor Gothilf Hempel (Germany) for his substantial contributions over many years to IOC's programme, especially to the Training, Education and Mutual Assistance. Gothilf Hempel has an outstanding scientific carrier, having held professorships at the University of Kiel and at the Centre for Tropical Marine Ecology. He was also director of the Alfred Wegener Institute for Polar and Marine Research, in Bremerhaven, where he played a key role in securing funds for the construction of the R.V. *Polarstern*. He was the Head of the German delegation to the IOC for many years and has been a member of many international working groups, notably the FAO Advisory Committee on Marine Resources Research, SCOR Working Group 86 on Ecology of Sea Ice, and was a member of the IOC Steering Group on Ocean Science in relation to Living Resources Programme. Prof. Hempel has participated in many IOC capacity-building initiatives and his efforts have contributed to the success of IOC's TEMA Programme.

4.7.1 Partnership for Observation of the Global Oceans (POGO)

330 The Executive Secretary introduced the Partnership for Observation of the Global Oceans (POGO) which was established by a group of marine research institutions wishing to work together more effectively in support of global oceanography. The terms of reference of POGO include *to make a major contribution to the attainment of sustained in situ observations of the global ocean that meet the requirements of international research and operational programmes*. IOC has joined POGO in its efforts and, together with SCOR, has been providing regular support for the Fellowships Programme of POGO, which enables scientists from developing countries to visit POGO institutions for periods of intensive training in *in situ* observation techniques.

331 The Chairman invited the Executive Director of POGO, Ms Shubha Sathyendranath, to report to the Assembly on the POGO–IOC–SCOR Initiative for Intelligent Use and Management of the Oceans. This is a type-II partnership initiated for the World Summit on Sustainable Development and aimed at promoting intelligent and sustainable use and management of the oceans through: (i) promotion of collaboration and co-ordination among major oceanographic institutions committed to ocean science; (ii) development of capacity in the weaker countries for using and managing their ocean space under UNCLOS intelligently; and (iii) advocacy of sound use and management of the oceans.

332 **The Assembly thanked** Ms Shubha Sathyendranath for her report **and instructed** the Executive Secretary to continue to support POGO activities, and to work with the Executive Director of POGO and with POGO institutions in the context of the new type-II partnership, with a view to developing such a partnership as an effective platform on which to build capacity in developing countries for the sustainable use of the oceans.

4.7.2 UNESCO–IOC Strategy on Capacity-Building for Remote Sensing

333 The Head of the Operational Observing Systems Section, Dr Colin Summerhayes, introduced this item. Referring to document IOC-XXII/2 Annex 13, he stressed the need for the IOC to develop a coherent strategy on remote sensing, with a view to meeting the needs of developing countries to make best use of the remotely sensed ocean data from the satellites that overfly their waters day after day. This need was expressed most recently at the 35th Session of the Executive Council in 2002. The proposed strategy calls for the IOC Secretariat to: (i) arrange a series of regional conferences/workshops to determine regional requirements; (ii) develop a plan to meet those needs; (iii) assign the incumbent of the new P5 post on capacity-building to assist part-time in implementing the strategy; and (iv) make best use of appropriate training tools, including, among others, the UNESCO Bilko Learning Project on Remote Sensing.

334 The Vice-Chairman of the GOOS Capacity-Building Panel, Dr Craig Donlon, then introduced the UNESCO Bilko Learning Project on Remote Sensing (document IOC/INF-1184). The Project has a good track record, can tailor-make learning programmes for specific geographic areas, can move quickly to meet Member States' needs, and requires the involvement of Member States in the design of the course for their areas, so that local materials are used to supplement the generic training materials. The Project operates at low cost and can attract extra-budgetary funds for implementation; it also offers an excellent opportunity to strengthen co-operation with the UN Office for Outer Space Affairs, the Committee on Earth Observing Satellites and the Integrated Global Observing Strategy Partners.

335 **The Assembly warmly welcomed** the development of the strategy, **and noted** with interest that the presentation occurred on the 25th anniversary of the launch of Seasat, the first satellite fully dedicated to oceanography.

336 **The Assembly recognised** that, while much had been achieved in satellite remote sensing since the Seasat launch, for instance the development of more accurate and reliable sensors, innovative sensors are still needed. **It also recognised** that the key challenge is to make better use of the remotely sensed data we already collect, and that the usefulness of these data has been demonstrated to be enhanced by combining them with other forms of data within a numerical ocean-modelling framework.

337 **The Assembly expressed** its concern about the loss of access to free data from the SeaWiFS ocean-colour sensor as it progresses to a fully commercial status in the near future. SeaWiFS has been and continues to be very successful and appears to still have several years of useful life remaining. Access to other sources of ocean-colour data needs more time to reach the same state of maturity as SeaWiFS. This state of affairs raises difficulties in developed countries, but is even more critical for less developed countries.

338 **The Assembly instructed** the Executive Secretary to explore the issue with NASA to see what possibilities exist for continuation of free and open access to SeaWiFS data.

339 **The Assembly adopted** [Resolution XXII-13](#).

4.7.3 Information Strategy

340 The Executive Secretary introduced this item. The Assembly, at its 21st Session, stressed the need for high-quality and user-oriented public-awareness and promotion services and called for the development of an information strategy. In response to this requirement, the Secretariat prepared a Draft Information Strategy which was distributed to the Member States under

Circular Letter 2059 prior to the present session of the Assembly. The responses received to this Circular Letter were all very positive and offered useful advice on specific aspects of the strategy.

341 **The Assembly endorsed** the Information Strategy and requested the Executive Secretary to proceed with its implementation, reporting the progress achieved to the 37th Session of the IOC Executive Council.

4.7.4 Training and Technology Transfer in Africa for the Implementation of Article 76 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS)

342 IOC Technical Secretary, Ms Diénaba Beye, introduced this item. She informed the Assembly of the initiative being pursued by the Secretariat to implement Resolution XXI-11, item 3, (iii), on capacity-building in relation to Article 76 of UNCLOS, and to respond to the statement made by the President of the 11th Meeting of States Parties to the United Nations Convention on the Law of the Sea calling for such efforts (New York, May 2001).

343 The main objectives of this initiative are to transfer knowledge and to build capacity within African coastal States with continental shelf beyond 200 nautical miles to prepare a submission under Article 76 to the Commission on the Limits of the Continental Shelf (CLCS) and to compile, store, and analyse existing public-domain data for such submission.

344 She informed the Assembly that the initiative is planned in three phases: feasibility, implementation and evaluation. Canada has offered to fund the feasibility study.

345 The initiative would include the organisation of three levels of training courses: basic, medium and advanced.

346 Many Member States and, in particular, the Chairman of the IOC Regional Committee for the Central Eastern Atlantic, expressed their support of this initiative and their gratitude to Canada for offering to fund the feasibility study phase. Some Member States suggested the extension of this initiative to other IOC Regions.

347 In this regard, **the Assembly**, after listening to many delegations, **expressed** its support for this initiative, **noted** with appreciation the offer of Canada to fund the feasibility study as laid out in IOC-XXII/Inf.4, **and instructed** the Executive Secretary to proceed with the necessary arrangements.

348 In accepting the decision to proceed with the initiative, a number of Member States indicated that they had already offered training opportunities very similar to those proposed and that they would continue to do so. In this context Brazil indicated that it proposed to run a second training course in 2004 and that this would be open to participants from outside the region. This course had the particular merit that it would be carried out in association with the Commission on the Limits of the Continental Shelf. The UK indicated that training courses were ongoing and that it would be happy to provide advice on the content of the proposed course for the African Region.

349 **The Assembly further instructed** the Executive Secretary to initiate, upon successful completion of the feasibility study, the preparation for the subsequent implementation phase as soon as extra budgetary funds can be made available, and to consider the request from other Member States to expand this initiative into other regions.

350 **The Assembly requested** that the progress made in this initiative be reported to the 37th Session of the Executive Council, including the possibility of the extension of this training to other regions.

5. ADMINISTRATION AND MANAGEMENT

5.1 DRAFT PROGRAMME AND BUDGET 2004–2005

351 The Chairman of the sessional Financial Committee and Vice-Chairman of IOC, Dr David Pugh, introduced this item. He informed the Assembly that the Committee examined in detail the accounts for the biennium 2000–2001 and for 2002 (document IOC-XXII/2 Annex 2). It commended the continuing improvement in, and the excellent state of, the documents. The Executive Secretary presented to the Committee the proposal for the Draft Programme and Budget for 2004–2005 based on the Core \$576-million Reduced Real Growth Scenario (see Agenda item 3.2). The adjustments necessary for the expected adoption by the UNESCO General Conference of the \$610-million Real Growth Scenario were explained. The Committee finally dealt with the Draft Resolution which was presented for approval; it contains information on the potential impact of the expected return of the USA to UNESCO and calls for recognition of the fact that this will at best result in near-zero real growth of the IOC budget under the Real Growth Scenario, while the budgets of the rest of the UNESCO programmes will be significantly enhanced.

352 Dr Pugh reminded the Assembly, on the important advice of the Chairman of the Resolutions Committee, that the financial implications of the Draft Resolutions must delineate regular programme funds as identified in document IOC-XXII/2 Annex 3 (up-dated for the \$610-million Real Growth Scenario) and the separate extrabudgetary resources that will be needed for full implementation of adopted Draft Resolutions.

353 **The Assembly thanked** the Financial Committee for its work and Dr Pugh for his excellent leadership and guidance.

354 **The Assembly adopted** [Resolution XXII-14](#).

5.2 ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS OF THE EXECUTIVE COUNCIL

355 The Chairman of the Nominations Committee, Professor Dieter Kohnke, reported on the status of the candidatures for the elections; all the nomination forms the Committee had before it were valid and had therefore been forwarded to the Assembly in document IOC-XXII/NOM-WP.4.

356 **The Assembly noted** the report by the Nominations Committee.

5.2.1 Election of the Chairperson of the Commission

357 **The Assembly noted** that there was only one candidate, Dr David Pugh (United Kingdom) for the position of Chairperson, who therefore was elected by acclamation.

5.2.2 Election of the Vice-Chairperson of the Commission

358 **The Assembly noted** that there was only one candidate from each electoral group for the positions of Vice-chairperson. Accordingly, each was elected by acclamation.

Professor Mário Ruivo (Portugal)	Group I
Dr Alexander V. Frolov (Russian Federation)	Group II
C. de N. Javier A. Valladares (Argentina)	Group III
Dr K. Radhakrishnan (India)	Group IV
Professor Amor El Abed (Tunisia)	Group V

5.2.3 Election of the Members of the Executive Council

359 **The Assembly noted** that there were 10 candidates for the remaining Member State seats on the Executive Council for electoral group I, whereas the maximum number of seats assigned to this group is nine (Rule 18.2 of the Rules of Procedure). A vote was therefore held to elect the Member States from electoral group I on the Executive Council.

360 **The Assembly noted** that there was one candidate for the remaining Member State seat on the Executive Council for electoral group II. The candidate Member State was therefore declared elected.

361 **The Assembly noted** that there were eight candidates for the remaining Member State seats on the Executive Council for electoral group III, which was the maximum number of seats assigned to this group. The candidate Member States were therefore declared elected.

362 **The Assembly noted** that there were 10 candidates for the remaining Member State seats on the Executive Council for electoral group IV, whereas the maximum number of seats assigned to this group is eight. A vote was therefore held to elect the Member States from electoral group IV on the Executive Council.

363 **The Assembly noted** that there were eight candidates for the remaining Member State seats on the Executive Council for electoral group V, which was the maximum number of seats assigned to this group. The candidate Member States were therefore declared elected.

364 After a first ballot for electoral group I, two Member States of this group, namely Greece and the United States of America, received the same number of votes, signifying that, in principle, a second ballot would have to be held. However, Greece decided to withdraw its candidate for election to the Executive Council in order to facilitate the smooth running of the work of the Commission. The United States thanked Greece for its generous gesture.

365 **The Assembly appreciated** the decision of Greece.

366 **The Assembly thanked** the technical secretary, Mr Yves Tréglos, for his dedication, over so many years, to guiding the delegations of IOC Member States through the elections of Officers and Members of the Executive Council.

367 The composition of the Executive Council and the list of Member States of the Commission are given in [Annex IX](#).

5.3 DATES AND PLACE OF THE TWENTY-THIRD ASSEMBLY AND THE THIRTY-SEVENTH AND THIRTY-EIGHTH SESSIONS OF THE EXECUTIVE COUNCIL

368 The IOC Executive Secretary introduced this item. He referred, in particular, to the recommendations of the Executive Council on this issue. He also called the attention of the Assembly to the duration of the sessions of the IOC governing bodies in the light of the experience acquired in the present shortened session.

369 **The Assembly decided** on the dates of the 37th Session of the Executive Council: from Wednesday 23 June to Tuesday 29 June 2004. In 2005 the Executive Council will act as the Steering Committee of the 23rd Session of the Assembly and will meet during half a day on the day (Monday 20 June 2005) preceding the opening of the 23rd Session of the Assembly.

370 **The Assembly also decided** to hold its 23rd Session over a seven-working-day period from Tuesday 21 June to Wednesday 29 June 2005, leaving a final decision to the IOC Officers and Executive Secretary taking into account the Agenda of the Session.

5.4 THEMES OF THE NEXT A. BRUUN AND N.K. PANIKKAR MEMORIAL LECTURES

371 The Executive Secretary recalled that the Bruun and Panikkar Memorial Lectures were created for the purpose of communicating the most recent advances in ocean science and technology to the Assembly. He went further to recall that the format of the initial Lectures were full Seminars, with a series of invited speakers selected according to a pre-defined objective. He suggested that, given the new shorter format of the Assembly, the Lectures could recover their original format, providing the much-needed interface between science and policy-making for the Assembly and Executive Council.

372 **The Assembly instructed** the Executive Secretary to consult widely, through a Circular Letter, on the content and appropriate format of the next A. Bruun and N.K. Panikkar Memorial Lectures at the 23rd Assembly in 2005 and subsequently to inform Member States of his proposal.

6. ADOPTION OF RESOLUTIONS AND SUMMARY REPORT

373 Dr G. Holland, Chairman of the Resolutions Committee, reported on the work of the Committee during this Assembly and its findings. His report is included as [Annex V](#) to the Summary Report. In particular the Committee recommended the revision of document IOC/INF-734 Rev. on the preparation of Resolutions, bringing it in line with the Assembly's current procedures.

374 **The Assembly adopted** the Summary Report of its 22nd Session and the Resolutions thereof (given in [Annex II](#)).

7. CLOSURE

375 On behalf of the Assembly, the delegate of Canada expressed the Member States' appreciation and thanks to Professor Su Jilan upon completion of his two successive terms as Chairman. *We need to look back and realise how fortunate we have been to have you, Professor Su Jian, as our leader for the past four years. The many accomplishments of the Commission over this time, including the flagship status we are now enjoying within UNESCO, can be directly related to the contribution of yourself, the hard work and dedication, and the fair and professional manner you have unfailingly displayed in the conduct of our business, however contentious. There have been many occasions where one could expect your patience and good humour to have failed. Yet it has not. You have been attentive to arguments as long as we have kept them brief. And even then you have terminated our interventions in a manner that was courteous at all times. Professor Su Jilan, perhaps I could display our respect to you by referring to you as "Lao Su". We owe you a debt of appreciation and would like to express to you our deepest thanks for your contribution to our Commission. Thank you.*

376 Professor Su Jilan expressed his gratitude to the Assembly for these kind remarks.

377 The Chairman thanked the Rapporteur, Mr Francisco Brizuela Venegas (Mexico), for his diligent work during the present session.

378 On behalf of the IOC, the Chairman presented a Certificate of Appreciation to Dr Agustín Ayala-Castañares for his contribution to the development of IOC, in particular in Latin America. Dr Ayala-Castañares was co-ordinator of scientific research in the Autonomous National University of Mexico (UNAM) and director of the Institute of Sciences of the Sea and Limnology, positions in which he was outstanding in his commitment to stimulating development of new human resources for research programmes of Mexico. An important part of the life of Agustín Ayala-Castañares has been dedicated to the promotion of the international co-operation in marine sciences. He stimulated and made reality the participation of his Latin-American colleagues in the regional programmes of the Intergovernmental Oceanographic Commission. Later, as a result of his excellent work in the Commission, Dr Ayala-Castañares occupied the position of Chairperson of the IOC (1977–1982), a role from which he impelled the diversification of the programmes of the Commission, the qualification of human resources from developing countries within the framework of TEMA and furthermore facilitated the development of operational oceanography. He led the participation of the IOC in the fora that led to the approval of the Convention of the Law of the Sea (UNCLOS).

379 The Chairman closed the 22nd Session of the IOC Assembly at 18.10 on 2 July 2003.

ANNEX I

AGENDA

1. OPENING

2. ORGANISATION OF THE SESSION

- 2.1 ADOPTION OF THE AGENDA
- 2.2 DESIGNATION OF THE RAPPORTEUR
- 2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES
- 2.4 INTRODUCTION OF DOCUMENTATION AND TIMETABLE
- 2.5 ANTON BRUUN AND N.K. PANIKKAR MEMORIAL LECTURES

3. STATUTORY REPORTS

- 3.1 STATEMENT BY THE CHAIRMAN ON THE STATE OF THE IOC
[Rule of Procedure 8.1(a)]
- 3.2 REPORT OF THE EXECUTIVE SECRETARY ON PROGRAMME AND BUDGET IMPLEMENTATION
[Rule of Procedure 8.1(b); Rule of Procedure 49.1]
- 3.3 REPORT OF IOC ACTIVITIES (2001–2002) TO THE NEXT UNESCO GENERAL CONFERENCE
[Statutes Art. 3.2; Rule of Procedure 49.2]
- 3.4 PRESENTATION OF THE DRAFT PROGRAMME AND BUDGET (2004–2005):BACKGROUND ASSUMPTIONS
[Rule of Procedure 8.1(c)]

4. PROGRAMME MATTERS REQUIRING DECISIONS BY THE ASSEMBLY

4.1 GENERAL POLICY ISSUES

- 4.1.1 Medium-term Strategy for IOC
[Rec. XXI Item 4.4 para. 92; Rec. EC-XXXV Item 4.1.7. para. 102]
- 4.1.2 Report of the Consultation of Member States on Resolution XXI-5
[Res. XXI-5; Dec. EC-XXXV Item 4.1.3. para. 59 & Item 7 para. 198]
- 4.1.3 Guidelines for the Establishment of Regional and Project Offices
[Rec. XXI Item 5.4 para. 267; Inst. EC-XXXV Item 4.1.4. para. 68]
- 4.1.4 Progress Report on the Implementation of the New IOC Publishing Policy
[Res. XXI-1; Inst. EC-XXXV Item 4.1.1 para. 54]
- 4.1.5 Feasibility of Establishing a Regular Process for the Assessment of the State of the Marine Environment
[Res. EC-XXXV.3]
- 4.1.6 Follow- up of Key Recommendations of the External Evaluation
[Rec. XXI Item 4.4 para. 94; Dec. EC-XXXV Item 3.3. para. 47]
- 4.1.7 Results of the External Audit of Science Sector, Focused on Hydrology and the IOC (Managing and Governing for Results)
[Rule of Procedure 8.1(g)]

4.2 OCEAN SCIENCES SECTION

- 4.2.1 Role of IOC in the Development of Standards for Ocean Research and Operational Oceanography
[Rec. XXI Item 4.7 para. 126; Inst. EC-XXXV Item 4.2.1 para. 120]
- 4.2.2 Terms of Reference of the Programme Elements in Ocean Science
[Res. XXI-6; Rec. XXI Item 5.1.5 para. 178; Inst EC-XXXV Item 4.2.2 para. 123]
- 4.2.3 Report of the 6th Session of the IOC Intergovernmental Panel on Harmful Algal Blooms
[Rule of Procedure 48.3]
- 4.2.4 Activities of SCOR Relevant to the IOC
[Rules of Procedure 8, 9 and 11.2]

4.3 OCEAN SERVICES SECTION

- 4.3.1 Progress Report on the Strategic Plan for Oceanographic Data and Information Management
[Res. EC-XXXV.2]
- 4.3.2 Report of the 2nd Session of the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy
[Res. EC-XXXIII.4 and Dec. XXI Item 4.6 para. 115]
- 4.3.3 Report of the 17th Session of the IOC Committee on International Oceanographic Data and Information Exchange
[Rule of Procedure 48.3]

4.4 OPERATIONAL OBSERVING SYSTEMS SECTION

- 4.4.1 GOOS Activities
 - 4.4.1.1 Report of the 6th Session of the Intergovernmental Committee for the Global Ocean Observing System**
[Rule of Procedure 48.3]
 - 4.4.1.2 Draft Memorandum of Understanding between UNEP and IOC Concerning the Relation between UNEP's Regional Seas Programme and GOOS**
[Rules of Procedure 8, 9 and 11.2]
 - 4.4.1.3 Memorandum of Understanding between the International Council for the Exploration of the Sea (ICES) and the IOC**
[Rules of Procedure 8, 9 and 11.2]
- 4.4.2 Review of the Structure of the Global Ocean Observing System (GOOS): Final Report
[Res. XXI-7]
- 4.4.3 Second Report on the Adequacy of the Global Observing System for Climate
[Rule of Procedure 8.1(g)]
- 4.4.4 Draft Memorandum of Understanding between IOC and WMO Regarding Regulatory and Procedural Aspects of the Conduct of the Joint WMO–IOC Commission for Oceanography and Marine Meteorology (JCOMM)
[Rec. XXI Item 5.2.2 para. 197; Inst EC XXXV Item 4.4.3 para. 151]
- 4.4.5 JCOMM Observation Programme Area: GLOSS Group of Experts Adequacy Report
[Rule of Procedure 8.1(g)]

4.5 REGIONAL ACTIVITIES

4.5.1 IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (IOCINCWIO):
IOCINCWIO-V Report
[Rule of Procedure 48.3 and Res. XXI-11]

4.5.2 IOC Sub-Commission for the Western Pacific (WESTPAC):
WESTPAC-V Report
[Rule of Procedure 48.3]

4.5.3 The African Process and NEPAD
[Res. XX-10, XX-20, XX-21, EC-XXXIII.13, XXI-11]

**4.5.3.1 The African Process for the Development and
Protection of the Marine and Coastal Environment
in Sub-Saharan Africa and NEPAD**

4.5.3.2 GOOS–AFRICA and ODINAFRICA

**4.5.3.3 UNESCO Cross-cutting Projects on the Application
of Remote Sensing**

4.5.4 Memorandum of Understanding between IOC and the Permanent
Commission for the South Pacific (CPPS)
[Inst. XXI Item 5.6.6 para. 416]

4.5.5 IOC Activities in the Caspian Sea
[Rules of Procedure 8, 9 and 11.2]

4.6 UN CONVENTIONS AND AGREEMENTS

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[Res. XXI-2 and Res. EC-XXXV.7]

4.7 CAPACITY-BUILDING, TEMA AND PUBLIC AWARENESS

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[Rule of Procedure 8.1(g)]

4.7.2 UNESCO–IOC Strategy on Capacity-Building for Remote Sensing
[Rec. EC-XXXV item 2.5 paras. 24 & 27; Rule of Procedure 8.1(g)]

4.7.3 Information Strategy
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4.7.4 Training and Technology Transfer in Africa for the Implementation of
Article 76 of the 1982 United Nations Convention on the Law of the Sea
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[Res. XX-20, XX-21, XXI-11]

5. ADMINISTRATION AND MANAGEMENT

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Statutes Articles 1.2, 6.B(4); Res. XXI-13 and Rec. XXI Item 6.1 para. 418;
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5.2 ELECTIONS OF THE OFFICERS OF THE COMMISSION AND
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[Statutes Article 6.B.5; Appendix I to the Rules of Procedure]

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N.K. PANIKKAR MEMORIAL LECTURES

6. ADOPTION OF RESOLUTIONS AND SUMMARY REPORT

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ANNEX II

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Resolution XXII-1

GUIDELINES FOR THE ESTABLISHMENT OF DECENTRALISED OFFICES

The Intergovernmental Oceanographic Commission,

Recalling the statement of the 21st Session of the IOC Assembly stressing in para. 266 of its Summary Report that *the establishment of Regional Project Offices is an efficient mechanism to increase IOC's awareness of the needs of its Member States and to encourage commitments of governments to support these structures with a limited term,*

Recalling further that the 21st Session of the IOC Assembly had requested that a comprehensive set of Guidelines for the Establishment of Regional and Project Offices be presented at the 35th Session of the Executive Council,

Noting the decision by the 35th Session of the IOC Executive Council to establish an open-ended intersessional Working Group on Guidelines for the Establishment of IOC Decentralised Offices,

Adopts the Guidelines for the Establishment of IOC Decentralised Offices as contained in Annex VII of the Summary Report of the 22nd Session of the IOC Assembly;

Instructs the IOC Executive Secretary to inform the Director-General of UNESCO accordingly and to publish and circulate the Guidelines for the Establishment of IOC Decentralised Offices.

Financial implications: None

Resolution XXII-2

FEASIBILITY OF ESTABLISHING A REGULAR PROCESS FOR THE ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT

The Intergovernmental Oceanographic Commission,

Recalling the Commission's positive response (Resolution EC-XXXV.3) to Decision 21/13 of 9 February 2001 of the Governing Council of the United Nations Environment Programme, by which the Executive Director of this Programme was requested to explore the feasibility of establishing a regular process for assessing the state of the marine environment, building on ongoing assessment programmes, in co-operation with IOC of UNESCO,

Noting that the Plan of Implementation of the World Summit on Sustainable Development (2002), in its paragraph 36 (b), called for the establishment by 2004 of *a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments,*

Welcoming the decision of the UN General Assembly, in its Resolution A/57/141 of 12 December 2002 on Oceans and the Law of the Sea, to establish *a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects both current and foreseeable, building on existing regional assessments*, and its request to the UN Secretary-General to *prepare proposals on modalities for a regular process for global reporting and assessment of the state of the marine environment, drawing, inter alia, upon the work of the United Nations Environment Programme pursuant to Governing Council Decision 21/13, and taking into account the recently completed review of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, and to submit those proposals to the 58th Session of the General Assembly for its consideration and decision, including on the convening of a possible intergovernmental meeting*,

Recognising the need to link science and policy-making and, in that context, to promote intergovernmental co-operation, mobilise the scientific community and foster interagency co-operation in support of a regular process for reporting and assessment of the state of the marine environment,

Stressing the need to ensure that sustainable capacity-building in developing countries is established as an integral part of the assessment process as identified in the consultation phase,

Instructs the IOC Executive Secretary:

- (i) to arrange an appropriate contribution of IOC and its programmes, including the feasibility of taking a lead role, to the preparation of proposals on modalities of a regular process for global reporting and assessment of the state of the marine environment;
- (ii) to seek, in co-operation with other relevant organisations, extra-budgetary resources, including for the Commission, in support of its involvement in a regular process for reporting and assessing the state of the marine environment, taking into account the need for the active participation of developing countries;
- (iii) to report to the next ordinary session of the IOC Executive Council, on the development of this matter, including the financial and human resources implications of IOC leading the assessment programme.

Financial implications: (2004–2005)
\$35,000 from Regular Programme (Policy)
\$14,300 from Regular Programme (Ocean Science)

Resolution XXII-3

IMPROVED GOVERNANCE OF IOC AFFAIRS WITHIN UNESCO

The Intergovernmental Oceanographic Commission,

Recalling the Financial Report and Audited Financial Statements of UNESCO for the Period Ended 31 December 2001 and the Report by the External Auditor (Document 165 EX/29 Add.), especially the recommendations contained in paragraphs 173 and 203 related to governance issues on IOC and IHP,

Welcoming the invitation of the Director-General to the IOC Assembly to approve implementation of the recommendation contained therein, drawing on the network of existing National Oceanographic Commissions or equivalent bodies dealing with ocean affairs,

Recalling Article 1.1 of the Statutes of the Commission that were approved by the UNESCO 30th General Conference, recognising the IOC as a body with functional autonomy within UNESCO, which includes definition and implementation of its own programme within the framework of the budget adopted by the General Conference,

Further recalling Article 6.B of the Statutes of the Commission which empowers the Assembly to establish general policy and the main line of work of the Commission and to approve the IOC biennial Draft Programme and Budget, in accordance with the IOC Statutes,

Taking into account that IOC has established a Medium-term Strategy in concert with the UNESCO Medium-term Strategy, and has produced and endorsed its programme and budget in a timeframe that enables the governing bodies of UNESCO to consider its recommendations in the formulation of the UNESCO Programme and Budget,

Reiterates the invitation addressed to Member States to:

- (i) reinforce the capacity and the role of National Oceanographic Commissions or equivalent bodies so as to enhance their functions as efficient liaison mechanisms with IOC;
- (ii) establish, if necessary, such mechanisms;

Encourages enhanced exchange of information and dialogue on matters of mutual interest between the National Commissions for UNESCO and the national mechanism set up for liaison with IOC;

Invites the Chairperson of IOC to convey to the Director-General of UNESCO IOC's appreciation for the support and the encouragement that IOC has been given under its flagship status within UNESCO;

Further invites the Chairperson of IOC to express to the Director-General of UNESCO:

- (i) the desire of Member States of the Commission to develop more effective and efficient mechanisms to deal jointly with the Commission affairs within UNESCO;
- (ii) a request to give close consideration to the special problems faced by the Commission due to the imminent changes in the UNESCO Regular Budget;
- (iii) the willingness of the Commission, within its mandate, to collaborate with relevant UNESCO Programmes *inter alia* through the cross-cutting projects;
- (iv) the readiness of the Commission to develop closer co-operation with UNESCO programmes that could strengthen education and capacity-building in support of ocean affairs;

Instructs the IOC Executive Secretary to respond to requests from IOC national liaison bodies or IOC focal points, for information, advice and assistance to national authorities on the enhancement of institutional capacities related to their involvement in the activities of the IOC.

Resolution XXII-4

**REVIEW OF THE STRUCTURE OF THE
GLOBAL OCEAN OBSERVING SYSTEM (GOOS)**

The Intergovernmental Oceanographic Commission,

Noting the decision of the IOC Assembly at its 21st Session (Resolution XXI-7) that a review of the organisational structure of GOOS be carried out by an external independent Review Group during 2002,

Noting further with appreciation the Report of the GOOS Review Group on the Structure, Mandates and *Modus Operandi* of GOOS (IOC/INF-1185), and the position of the GSC and I-GOOS on the Review Group's Report,

Expresses its thanks to the members of the Review Group for the work done;

Urges Member States to support the further development of the coastal and climate components of GOOS, by strengthening their contributions to GOOS and their association with the IOC subsidiary bodies that support its implementation, including JCOMM, by:

- (i) ensuring effective national oceanographic co-ordination and representation;
- (ii) enhancing national and international programmes in line with internationally agreed GOOS planning, and
- (iii) ensuring adequate resources for international planning and secretariat functions;

Decides to establish an open-ended intersessional working group of interested Member States and Representatives of the GOOS-sponsoring organisations, to take into account the recommendations of the Report of the GOOS Review Group and comments from Member States, and to work mainly by correspondence:

- (i) to revise the terms of reference of I-GOOS, GSC and the GPO accordingly;
- (ii) to develop a draft plan of action; and
- (iii) to present their findings to the IOC Executive Council at its 37th Session.

Financial implications: none

Resolution XXII-5

**SIXTH SESSION OF THE IOC INTERGOVERNMENTAL PANEL
ON HARMFUL ALGAL BLOOMS (IPHAB)**

The Intergovernmental Oceanographic Commission,

Recalling :

- (i) the establishment of the joint SCOR–IOC international science programme on the Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB), through Resolution EC-XXXI.3, and the associated GEOHAB Science Plan,
- (ii) the recommendations of IPHAB Sessions I to V concerning the required and sustainable staffing of the HAB Programme,

Noting with appreciation the stable and long-standing extra-budgetary support for IOC/HAB Programme staff by Denmark, as well as by other Member States,

Having considered the Summary Report with Resolutions and Recommendations of the 6th Session of IPHAB (IPHAB-VI),

Endorses the IPHAB-VI Report together with its Resolutions and Recommendations;

Decides to take further action on the Recommendations as follows:

Recommendation IPHAB-VI.1 — Regional HAB Programme Development

Urges Member States to identify and pool resources for HAB regional activities specifically for (i) the Benguela region, (ii) North Africa and (iii) the Indian Ocean;

Recommendation IPHAB-VI.9 — HABP Workplan 2004–2005

Approves the HABP Workplan 2004–2005 within the available resources in the Regular Programme and the identified extrabudgetary resources, as presented in the Annex to this Resolution;

Recommendation IPHAB-VI.10 — Operation of the IOC Intergovernmental Panel on Harmful Algal Blooms

Decides to convene the 7th Session of the IOC/IPHAB in 2005 sufficiently before the 23rd Session of the IOC Assembly, to allow the Assembly to receive the Report;

Requests the Chair of IPHAB to pursue the finalisation of the IOC–SCOR GEOHAB Implementation Plan and to report on progress to the next ordinary session of the IOC Executive Council;

Urges Member States to contribute to the IOC Trust Fund in support of the HAB Programme.

Financial implications: As presented in the Annex to this Resolution.

Annex to Resolution XXII-5

Summary of budgetary implications for the biennium 2004--2005 (in \$)

ACTIVITY: (see IPHAB Work Plan)	A. Total financial implication of IPHAB-VI Resolutions and Recommendations	B. Estimated available Regular Programme funds * incl. Cross-cutting	C. Expected extrabudgetary contributions specifically for HAB	D. Required additional extrabudgetary contributions for full programme implementation [A-(B+C)]
Programme support				
General (travel)	20,000	12,000	—	8,000
IOC HAB Science and Communication Centres, including 1 seconded staff	340,000	20,000	320,000	—
Educational elements				
Capacity-building	400,000	106,000	240,000	54,000
Publications	56,000	36,000	20,000	—
Scientific elements (including regional components and GEOHAB IPO)	220,000	52,000	—	168,000
Operational elements	25,000	—	—	25,000
TOTAL	1,061,000	226,000	580,000	255,000

Resolution XXII-6

IOC OCEANOGRAPHIC DATA EXCHANGE POLICY

The Intergovernmental Oceanographic Commission,

Recalling Resolution XX-11 on Oceanographic Data Exchange Policy (1999),

Noting:

- (i) WMO Resolution 40 (Cg-XII) which defined a policy and practice for the international exchange of meteorological and related data and is intended to promote the free and unrestricted exchange of basic data,

- (ii) The “Statement on Data Management Policy for Global Ocean Programmes” as submitted by the IOC Committee on IODE (Recommendation IODE-XIV.6, December 1992) and adopted by the IOC Assembly at its 17th Session (Paris, 25 February–11 March 1993) (para. 20 of the Summary Report of the Session),

Considering the reports of deliberations of:

- (i) The ad hoc Working Group on Oceanographic Data Exchange Policy (Paris, 15–17 May 2000),
- (ii) The First Session of the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy (Brussels, 29–31 May 2001),
- (iii) The Second Session of the Intergovernmental Working Group on IOC Oceanographic Data Exchange Policy (Paris, 17–18 June 2002),

Adopts the IOC Oceanographic Data Exchange Policy as detailed in the Annex to this Resolution.

Financial implications: none

Annex to Resolution XXII-6

IOC OCEANOGRAPHIC DATA EXCHANGE POLICY

Preamble

The timely, free and unrestricted international exchange of oceanographic data is essential for the efficient acquisition, integration and use of ocean observations gathered by the countries of the world for a wide variety of purposes including the prediction of weather and climate, the operational forecasting of the marine environment, the preservation of life, the mitigation of human-induced changes in the marine and coastal environment, as well as for the advancement of scientific understanding that makes this possible.

Recognising the vital importance of these purposes to all humankind and the role of IOC and its programmes in this regard, the Member States of the Intergovernmental Oceanographic Commission agree that the following clauses shall frame the IOC policy for the international exchange of oceanographic data and its associated metadata.

Clause 1

Member States shall provide timely, free and unrestricted access to all data, associated metadata and products generated under the auspices of IOC programmes.

Clause 2

Member States are encouraged to provide timely, free and unrestricted access to relevant data and associated metadata from non-IOC programmes that are essential for application to the preservation of life, beneficial public use and protection of the ocean environment, the forecasting of weather, the operational forecasting of the marine environment, the monitoring and modelling of climate and sustainable development in the marine environment.

Clause 3

Member States are encouraged to provide timely, free and unrestricted access to oceanographic data and associated metadata, as referred to in Clauses 1 and 2 above, for non-commercial use by the research and education communities, provided that any products or results of such use shall be published in the open literature without delay or restriction.

Clause 4

With the objective of encouraging the participation of governmental and non-governmental marine data-gathering bodies in international oceanographic data exchange and maximising the contribution of oceanographic data from all sources, this Policy acknowledges the right of Member States and data originators to determine the terms of such exchange, in a manner consistent with international conventions, where applicable.

Clause 5

Member States shall, to the best practicable degree, use data centres linked to IODE's NODC and WDC network as long-term repositories for oceanographic data and associated metadata. IOC programmes will co-operate with data contributors to ensure that data can be accepted into the appropriate systems and can meet quality requirements.

Clause 6

Member States shall enhance the capacity in developing countries to obtain and manage oceanographic data and information and assist them to benefit fully from the exchange of oceanographic data, associated metadata and products. This shall be achieved through the non-discriminatory transfer of technology and knowledge using appropriate means, including IOC's Training Education and Mutual Assistance (TEMA) programme and through other relevant IOC programmes.

Definitions

“Free and unrestricted” means non-discriminatory and without charge. “Without charge”, in the context of this resolution means at no more than the cost of reproduction and delivery, without charge for the data and products themselves.

“Data” consists of oceanographic observation data, derived data and gridded fields.

“Metadata” is "data about data" describing the content, quality, condition, and other characteristics of data.

“Non-commercial” means not conducted for profit, cost-recovery or re-sale.

“Timely” in this context means the distribution of data and/or products sufficiently rapidly to be of value for a given application.

“Product” means a value-added enhancement of data applied to a particular application.

Resolution XXII-7

**INTERNATIONAL OCEANOGRAPHIC DATA AND
INFORMATION EXCHANGE (IODE)**

The Intergovernmental Oceanographic Commission,

Recognising:

- (i) the importance of comprehensive, long-term and high-quality data sets for the investigation of global environmental issues,
- (ii) the challenges faced by the oceanographic data centres with increasing volumes of data, data types and complexity,
- (iii) the need to integrate different data types to create multi-disciplinary data sets, and
- (iv) the data management issues associated with operational oceanography,

Acknowledging:

- (i) the close and growing collaboration of IODE with GOOS and JCOMM,
- (ii) the success of IODE's Global Oceanographic Data Archaeology and Rescue Project,
- (iii) the long and successful history of IODE in capacity-building activities such as the ODINAFRICA and ODINCARSA projects, as well as the OceanTeacher training system,
- (iv) the strong efforts of IODE to manage biological and chemical data through its newly established IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices,
- (v) the successful development by IODE of information products and tools, including OceanPortal, OceanExpert, MEDI, BeeBox, and the continued involvement of IODE in ASFA,
- (vi) the active role of IODE in the development of marine XML (Extensible Markup Language), and the commitment of IODE in the development of the Ocean Information Technology (OIT) Pilot Project,

Noting with appreciation the strong interest of the IODE community in assisting the management of operational oceanography data,

Welcoming the successful implementation of the UNESCO cross-cutting projects on Ocean Portals in Africa and the Caribbean and South American regions,

Endorses the Executive Summary Report of IODE-XVII and the Recommendations contained therein;

Decides to:

- (i) continue the development of regional Ocean Data and Information Networks (e.g. ODINAFRICA and ODINCARSA);
- (ii) merge the IODE Group of Experts on Technical Aspects of Data Exchange and the JCOMM Expert Team on Data Management Practices, noting the recommendation of the JCOMM Management Committee in this regard;
- (iii) task the IODE Secretariat with the IOC Secretariat duties for the JCOMM Data Management Programme Area;
- (iv) establish the Ocean Information Technology Pilot Project;

Accepts with appreciation the offer of the Government of Flanders and the city of Oostende to host the IODE Project Office;

Urges Member States to increase their participation in international oceanographic data and information exchange through the establishment and/or strengthening of national data and information management infrastructures;

Invites Member States to assist strongly in the implementation of the IODE work plan during the period 2004–2005 through the provision of extrabudgetary funds and/or the secondment of experts to the IOC Secretariat and/or IODE Project Office.

Financial implications (2004–2005):

UNESCO Regular Programme:	\$300,000 for programme activities \$100,000 for staff
Extrabudgetary confirmed:	\$60,000
Extrabudgetary requested:	\$245,000

Resolution XXII-8

**SIXTH SESSION OF THE IOC INTERGOVERNMENTAL COMMITTEE FOR THE
GLOBAL OCEAN OBSERVING SYSTEM (GOOS)**

The Intergovernmental Oceanographic Commission,

Having considered the Executive Summary and Report of the Sixth Session of the Intergovernmental Committee for GOOS (I-GOOS-VI),

Taking into account the Report of the GOOS Review Group on the Structure, Mandate and *Modus Operandi* of GOOS,

Endorses the I-GOOS-VI Report and the Recommendations and Resolutions contained therein;

Urges Member States to consider the secondment of staff to the GPO, recognising that such staff could be made available through virtual secondment (hence working in their own offices, rather than in Paris);

Instructs the IOC Executive Secretary:

- (i) to give high priority to ensuring continuity in the post of Director of the GPO;
- (ii) to ensure continued support to the GOOS capacity-building programme;
- (iii) to consider ways of addressing the increased workload of the GPO resulting from the support to the work of JCOMM, and to report to the next ordinary session of the IOC Executive Council.

Financial Implications:

1. Regular Programme 2004–2005, assuming no Regular Programme increase from UNESCO	
1.1: GOOS Implementation (incl. JCOMM)	\$290,000
1.2: GOOS Regional Development	\$207,000 (excludes \$44,000 for GOOS, GLOSS training)
1.3: GOOS Contract Posts	\$270,000 (assumes \$40,000 contribution from cross-cutting project)
Subtotal	\$767,000
2. Regular Programme additions 2004–2005 assuming a Regular Programme increase from UNESCO	
2.1: GOOS Implementation	\$160,000 (for JCOMM-II)
2.2: GOOS Regional Development	\$413,000 (includes GLOSS, remote sensing, modelling)
Subtotal	\$573,000
Possible Sum of 1 + 2	\$1,340,000 (excludes contribution to be determined towards running costs)
Extrabudgetary income	\$1,200,000

Resolution XXII-9

MEMORANDUM OF UNDERSTANDING BETWEEN ICES AND IOC

The Intergovernmental Oceanographic Commission,

Recalling the close co-operation between ICES (International Council for the Exploration of the Sea) and the IOC, especially since the signing in 1983 of the first Memorandum of Understanding in the field of marine scientific research and related aspects, particularly those involving studies in the North Atlantic Ocean and its adjacent seas,

Recalling further the parallel and complementary nature of many aspects of the work of both organisations, which have co-sponsored various programmes and working groups in recent decades with respect to the sustainable management of the oceans,

Being aware of the additional benefits that could be derived through even closer collaboration in the respective activities of IOC and ICES,

Recognising the need for both organisations to develop international co-operative arrangements to utilise more efficiently the respective scientific networks on which they rely,

Noting that IOC does not have a regional organisation explicitly dedicated to the study of the North Atlantic and its adjacent seas,

Instructs the IOC Executive Secretary to build on recent discussions and to draft, jointly with the ICES Secretariat, a new Memorandum of Understanding between IOC and ICES, which would be an overall document describing *the modus operandi* of the relationship, and would allow both organisations to work together, *inter alia* :

- (i) in the preparation of specific plans to intensify co-operation and to co-ordinate programmes, and to avoid unnecessary duplication, in the study of the North Atlantic and its adjacent seas;
- (ii) in the development of a common approach to specific issues, for example education and technology transfer for third parties, or joint workshops and symposia on key issues;

Invites the ICES Council to consider the new Memorandum of Understanding at the most opportune time for that organisation;

Further instructs the IOC Executive Secretary to submit the new Memorandum of Understanding for approval by the IOC Executive Council at its 37th Session.

Financial implications: none

Resolution XXII-10

FIFTH SESSION OF IOC REGIONAL COMMITTEE FOR THE CO-OPERATIVE INVESTIGATION IN THE NORTH AND CENTRAL WESTERN INDIAN OCEAN (IOCINCWIO)

The Intergovernmental Oceanographic Commission,

Recalling Resolution XXI-11 on African Priorities,

Considering the high level of implementation of the activities during the IOCINCWIO intersessional period 1997–2002,

Acknowledging with appreciation the support provided by Member States and by interested organisations in the implementation of activities in the region,

Noting with satisfaction the performance of the IOCINCWIO Project Office in facilitating and co-ordinating the implementation of the IOCINCWIO Workplan,

Recognising the need to focus the work of the Regional Committee on the development and strengthening of capacity for observations and monitoring of the oceans and coastal areas, as well as the analysis and interpretation of the available data and information to enable their use for sustainable management of the marine environment and resources,

Expressing its appreciation to the Government of Kenya for hosting the 5th Session of the Regional Committee, 23–26 September 2002, and to the Government of France for providing funds to assist in the organisation of this session,

Endorses the Executive Summary of the 5th Session of the Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean together with its five Recommendations;

Decides to change the name of the Regional Committee to “IOC Regional Committee for the Western Indian Ocean – IOCWIO”;

Decides to:

- (i) further develop capacity-building initiatives in the region, especially in the use and application of GIS and remote sensing in the management of the coastal environment, and other appropriate emerging technologies;
- (ii) continue to facilitate the implementation of the decisions and projects approved within the framework of WSSD, NEPAD and the African Process, in particular in the IOCINCWIO region;
- (iii) initiate actions to promote and foster inter-regional linkages, and to identify common issues for joint implementation;
- (iv) maintain the current level of staff support provided to the IOCINCWIO Project Office, and to provide financial support for the operational costs of the IOCINCWIO Project Office until further review by the IOCINCWIO Regional Committee in 2005, and in full compliance with the Guidelines for the Establishment of IOC Decentralised Offices;

Urges Member States and donor agencies:

- (i) to actively participate in the implementation of the IOCINCWIO-V Workplan, through provision of extrabudgetary funds and/or expertise;
- (ii) to provide additional resources and technical staff to strengthen the operations of the IOCINCWIO Project Office, and to further develop capacity-building initiatives in the region, especially in the use of GIS and remote sensing;

Invites other international and regional organisations and programmes focussing on the Indian Ocean to collaborate in the implementation of activities identified in the IOCINCWIO-V Workplan.

Financial implications	(2004–2005):	
	UNESCO Regular Programme:	\$87,000
	Extra-budgetary funds requested:	\$1,470,000

Resolution XXII-11

IOC ACTIVITIES IN THE CASPIAN SEA REGION

The Intergovernmental Oceanographic Commission,

Recalling:

- (i) Resolution XX-19 in which the IOC Executive Secretary was instructed to organize a regional conference to identify a mechanism for co-ordination of research and monitoring activities in the Caspian Sea,
- (ii) the support expressed by the Assembly at its 21st Session for the implementation of the Caspian Floating University Project under the auspices of IOC,
- (iii) the recognition, expressed by the Assembly at its 21st Session, of the leading role of the IOC within UNESCO in the Caspian Sea research and protection, and that IOC would be responsible for conducting the study of the Caspian Sea by applying an integrated, well co-ordinated approach,

Noting the activities of the WMO Co-ordinating Committee on Hydrometeorology and Pollution Monitoring of the Caspian Sea (CASPCOM) leading to the establishment of the Integrated Programme on Hydrometeorology and Monitoring of Environment in the Caspian Sea (CASPAS), and the UNESCO interdisciplinary initiative on sustainable development of the Volga–Caspian Basin,

Expresses its concern with regard to the continued lack of adequate co-ordination in the Caspian Sea, especially regarding marine research and observation;

Decides:

- (i) to organise in 2004 a regional workshop of the Caspian Sea countries in co-operation with the relevant international organisations, to identify a mechanism for co-ordination of research and monitoring activities in the Caspian Sea, to propose actions to develop IOC-related programmes, such as IODE and GOOS, in the Caspian Sea, and to identify the capacity-building requirements;
- (ii) to continue supporting the on-going IOC-related activities in the Caspian region including the UNESCO Volga–Caspian Basin Initiative and the Caspian Floating University project.

Financial implications: (2004–2005)
\$40,000 from Regular Programme

Resolution XXII-12

**THIRD MEETING OF THE IOC ADVISORY BODY OF EXPERTS ON THE LAW OF
THE SEA (IOC/ABE–LOS-III)**

The Intergovernmental Oceanographic Commission,

Taking note of the oral report of the Chairperson of IOC/ABE–LOS,

Having considered the Revised Draft IOC Criteria and Guidelines on the Transfer of Marine Technology as contained in Document IOC-XXII/2 Annex 12 Rev.,

Recalling:

- (i) the role of IOC as a competent international organisation to respond to the requirements deriving from the United Nations Convention on the Law of the Sea (UNCLOS), in particular its Part XIII (Marine Scientific Research) and Part XIV (Development and Transfer of Marine Technology), Articles 271 and 272,
- (ii) the document IOC/INF-612 on *Marine Science and Ocean Services for Development: UNESCO/IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries* adopted by the 12th Session of the IOC Assembly in 1982,

Noting the various references in UN General Assembly Resolution A/RES/57/141 on *Oceans and the Law of the Sea*, to the many obligations of competent international organisations under Part XIII – in particular paragraphs 23, 24; and to the co-operation, co-ordination and strengthening as regards capacity-building and transfer of marine technology—in particular, paragraphs 25, 35, 36, 37 and 40,

Recognising that, in response to the call made to IOC in UNGA A/RES/57/141, a comprehensive Plan could be reinforced and implemented through a flexible and generally accepted international scheme for promoting the transfer of marine technology in accordance with Part XIV of UNCLOS, which complements current efforts at the bilateral, sub-regional and regional levels,

Expresses satisfaction with the progress made by IOC/ABE–LOS;

Endorses the Recommendations annexed to this Resolution and in particular **adopts** the revised IOC Criteria and Guidelines on the Transfer of Marine Technology as contained in document IOC-XXII/2 Annex 12 Rev.;

Recognises that in any transfer of marine technology it is essential to take into account the capacity of the recipient State to pay such transfer;

Decides to disseminate these Criteria and Guidelines among Member States and other international organisations, and to set up and monitor the mechanisms by which Member States make use of them;

Decides that the IOC Executive Secretary, in consultation with the Chair of IOC/ABE–LOS, shall establish an open-ended sub-group of IOC/ABE–LOS, working by electronic correspondence and in consultation with the I-GOOS Board with regard to the scientific and technical aspects and UN/OLA/DOALOS, to provide advice on the legal framework within the context of UNCLOS which is applicable for the collection of oceanographic data;

Invites the Chair of IOC/ABE–LOS to report on the progress of this initiative at the next session of the Executive Council.

Financial implications: \$15,000 (from Regular Programme)
for the IOC/ABE–LOS-IV meeting

Annex to Resolution XXII-12

RECOMMENDATIONS

The IOC Advisory Body of Experts on the Law of the Sea at its third meeting (IOC/ABE–LOS-III) recommended the following:

- 1) That the 22nd Session of the Assembly adopts the Revised Draft IOC Criteria and Guidelines on the Transfer of Marine Technology;
- 2) That the 22nd session of the Assembly take note of the progress report by the Chairman of the IOC/ABE–LOS sub-group on the work related to an appropriate internal procedure related to an effective and appropriate use of Article 247 of the UN Convention on the Law of the Sea (IOC/ABE–LOS- III/8), and request that IOC/ABE–LOS continue its work on this topic with a view to considering the adoption of such internal procedure by the 23rd Session of the Assembly. This sub-group should work by electronic mail and in close co-operation with the Division of Ocean Affairs and the Law of the Sea of the United Nations (UN/OLA/DOALOS);
- 3) That an open-ended sub-group on the practices of IOC Member States regarding marine scientific research and transfer of marine technology be established. This sub-group should work by electronic mail and in close co-operation with the United Nations Office of Legal Affairs, Division of Ocean Affairs and the Law of the Sea of the United Nations (UN/OLA/DOALOS). It should draw preliminary conclusions from the data provided in Annex 6 of Document IOC/ABE–LOS-III/9, as complemented by the UN/OLA/DOALOS database on MSR legislations, and by further replies to the Questionnaire No. 3, and relevant other objective data, with a view to assisting IOC in fulfilling effectively its purpose and functions as set out in Articles 2 and 3 of its Statutes.

Resolution XXII-13

A STRATEGY FOR THE USE OF REMOTE SENSING IN OCEANOGRAPHY

The Intergovernmental Oceanographic Commission,

Noting:

- (i) the need of developing countries to have access to and to make more use of the data from earth observation satellites,
- (ii) the wishes of Member States as expressed in various Resolutions and most recently at the 35th Session of the Executive Council,
- (iii) the WSSD Implementation Plan which calls for widespread use of remote sensing from space as a tool for sustainable development,

Endorses the Strategy as given in Document IOC-XXII/2 Annex 13;

Decides:

- (i) to organise a series of regional conferences/workshops to bring together specialists in ocean science and remote sensing to establish regional requirements in terms of data access, product development, and training;
- (ii) to promote widespread use of appropriate training tools in remote sensing, including among others the UNESCO Bilko Learning Project on Remote Sensing; and
- (iii) that the IOC Executive Secretary should prepare a comprehensive plan to be presented to the 37th Session of the IOC Executive Council for increasing training in remote sensing, and access to remotely sensed data.

Financial Implications (2004–2005):

- (i) \$10,000/year Regular Programme investment in the Bilko Project with extrabudgetary resources and UNESCO cross-cutting project funds to an appropriate level based on evaluation of proposals;
- (ii) Continuation of \$10,000/year investment in the IOCCG, based on \$10,000 from Regular Programme funds, supplemented by extrabudgetary resources;
- (iii) \$20,000/year Regular Programme investment in regional workshops/conferences with one per year for one of the following regions: Africa, the Caribbean, Latin America, South East Asia, and the Pacific Islands, starting with Africa in 2004, supplemented by extrabudgetary funds of \$100,000–200,000/year.

Resolution XXII-14

PROGRAMME AND BUDGET FOR 2004–2005

The Intergovernmental Oceanographic Commission,

Recalling Article 1 (2) and Article 10 (1) of the IOC Statutes,

Noting with appreciation the presentation of the IOC Draft Programme and Budget for 2004–2005, as contained in Document IOC-XXII/2 Annex 3,

Emphasising the flagship status of IOC within UNESCO as designated in the 31 C/4—Medium-term Strategy 2002–2007,

Recalling the unique role of the IOC as the competent intergovernmental body dealing with ocean science and ocean services, as well as being the ocean arm of UNESCO, operating through the concerted action of IOC Member States,

Noting:

- (i) the regular funds provided by UNESCO have attracted substantial supplementary support from Member States, notably through contributions to the IOC Trust Fund, and secondment of personnel,
- (ii) the importance of continuing support by Member States in addressing the long-term plans of the IOC, through voluntary extrabudgetary contributions,
- (iii) the expected return of the USA to membership in UNESCO, which may result in the loss of the special USA voluntary contribution paid directly into the IOC Trust Fund,

Emphasising that collective participation in ocean science and ocean services programmes, and the associated observing systems will:

- (i) improve scientific knowledge and understanding of oceanic and coastal processes with a view to assisting Member States in the design and implementation of sustainable policies for the ocean and coastal zones,
- (ii) accelerate the collection of ocean and coastal observations, the modelling and the production of forecasts needed for the management and sustainable development of the open and coastal ocean,
- (iii) further develop the capability of Member States to use ocean data, particularly through the International Ocean Data and Information Exchange (IODE) system, through the development of Ocean Data and Information Networks (ODIN) in the different regions, following the model already being implemented in Africa (ODINAFRICA) and Latin America (ODINCARSA), in accordance with the existing United Nations conventions and UNESCO's approach on data and information,

- (iv) continue the follow-up to the Pan-African Conference on Sustainable Integrated Coastal Management (PACSICOM) through the development and implementation of regional coastal management projects contributing to the operational phase of the African Process in the framework of the Environment Component of NEPAD,
- (v) answer the call to the IOC contained in the Plan of Implementation of WSSD to support the development of permanent capacities in ocean sciences, services and observations by Member States of IOC,

Emphasising further the importance of IOC subsidiary bodies and the related role of TEMA in capacity-building,

Having considered the preliminary proposals regarding the structure, formulation and budgetary framework for 2004–2005 biennium (*Draft UNESCO Programme and Budget for 2004–2005*, Draft 32 C/5),

Decides that the IOC Programme and Budget for 2004–2005 should be based upon five main lines of action:

- (i) Main Line of Action 1: Addressing scientific uncertainties for the management of the marine environment, and for climate change;
- (ii) Main Line of Action 2: Developing, monitoring and forecasting capabilities for the management and sustainable development of the open and coastal ocean;
- (iii) Main Line of Action 3: Developing and strengthening a global mechanism to ensure full and open access to ocean data and information for all;
- (iv) Main Line of Action 4: Developing ocean governance issues and increasing the effectiveness of the IOC governing bodies;
- (v) Main Line of Action 5: Developing the capacity and effectiveness of Member States in marine scientific research, and in the management and sustainable development of the open and coastal ocean;

Requests the Thirty-second Session of the UNESCO General Conference to appropriate funds to the IOC in the amount of \$4,795,800 (The Real Growth \$610M Scenario) for the IOC programme implementation under the Regular Programme, Major Programme II (draft 32 C/5);

Adopts the IOC Programme and Budget 2004–2005 as contained in Document IOC-XXII/2 Annex 3 with the following additional sums:

- (i) MLA 1, Action (3) — Marine Science for Integrated Coastal Area Management — \$250,000;
- (ii) MLA 2, Actions (1) and (2) — GOOS Implementation and Regional development — \$750,000;

Urges Member States to actively support, through their national representatives, the IOC programme proposals when the Draft 32 C/5 is being considered by the UNESCO Executive Board and the General Conference;

Reminds Member States that the proposed 25% nominal increase in Regular Programme allocation to the IOC according to the Real Growth Scenario is a realignment in the budget and will in reality only result in a near Net Zero Growth for the IOC after taking into account the potential reduction in the special USA voluntary contribution to the IOC Trust Fund;

Invites the General Conference of UNESCO to allocate additional resources to the IOC to enable it to benefit from the general enhancement of UNESCO programmes, and to accelerate the implementation of the above Main Lines of Action;

Also urges Member States to continue and increase their support to the IOC through direct and in-kind contributions.

Financial implications: none

ANNEX III

ADDRESSES

A. Opening address

by Mr Koïchiro Matsuura
Director-General of the United Nations Educational, Scientific and Cultural Organisation
(UNESCO)

24th June 2003

Professor Su Jilan, Chairperson of the IOC,
Distinguished Vice-chairpersons,
Members of the IOC Assembly,
Ladies and Gentlemen,

It is an honour and a pleasure to be with you today at the opening of this 22nd Session of the IOC Assembly. We in UNESCO give high importance to the work of the Intergovernmental Oceanographic Commission. This is illustrated by the fact that, in our Medium-term Strategy (2002–2007), IOC is justly recognised as one of the two “*flagship programmes*” of the Organisation.

Since becoming the Director-General of UNESCO, I have received many positive remarks about the activities of IOC in different international fora. IOC receives widespread recognition for its leadership and support of international scientific programmes and is recognized as being a reliable and effective partner when working with other UN bodies.

I would like to begin my remarks with some reflections on partnership and co-ordination. Allow me to remind you of the historical context, because IOC’s role and work cannot be understood without reference to this.

After the Second World War, outer space and the oceans were the first global spatial domains in which the UN was called to use its new standard-setting authority. The scope of the co-ordination needed in ocean activities is broad. It extends across the social, economic and environmental aspects of sustainable development and responds to the principle enunciated in the preamble of the United Nations Convention on the Law of the Sea (UNCLOS): “*that the problems of ocean space are closely interrelated and need to be considered as a whole*”. In contrast with more recent international agreements, this very important Convention deals with all aspects of ocean use, development and protection: transport, fishing, freedom of movement, protection of the environment, marine scientific research and mining, among others.

Given its scope, the full implementation of the Convention cannot be seen as the responsibility of one or two units of the UN Secretariat or just one or two specialised agencies. The effective use of UNCLOS by Member States depends on the ability of the UN system to work together as a whole, utilising a clear division of labour.

It is for this fundamental reason that co-ordination of “oceans affairs” is a preoccupation at the highest levels in the UN system. Besides UNCLOS, more than 500 international agreements on different aspects of ocean protection and the use of marine resources are today in place. However, compliance with the obligations and enforcement of the rights of the parties to

those agreements are very much an ongoing challenge for the international community. Consequently, Member States have expressed their concern that existing levels of co-ordination are insufficient and have been calling for the establishment of a more effective and transparent mechanism.

Meanwhile, the Global Environmental Conventions adopted after UNCED, Agenda 21 and the recent series of World Summits have extended the responsibility of the UN system into new areas of work. Further co-operation, partnership and co-ordination on issues related to oceans and coastal areas are thus essential if effective and coherent action is to be achieved in this new international context.

The new CEB, in which I participate together with all the other Heads of UN Agencies, and its two high-level Commissions are trying to improve governance in the UN by giving a more executive character to the co-ordination role of its senior executives. Sadly, as a result of this reform, some of the standing co-ordination mechanisms, especially the former Subcommittee on Ocean and Coastal Areas, has ceased to function. However, as requested by the World Summit on Sustainable Development and by last year's UN General Assembly Resolution on Oceans and the Law of the Sea, efforts are being made to identify and recommend a new mechanism.

The importance of oceans has been acknowledged by the UN General Assembly by creating the Informal Consultative Process on Oceans and the Law of the Sea, an initiative that encourages a broader, high-level policy exchange of views prior to the formal discussion during the General Assembly itself. This process allows and encourages a very open participation by organizations from outside the UN system.

Through the ADG/IOC, we have participated actively in the consultations. We believe that, for the co-ordination of ocean issues, as we did for the management of water resources, it would be useful to maintain a collegiate forum in the UN in which all agencies, plus the UN Secretariat, participate. In addition, we need to find a mechanism to accommodate new partners from outside the UN system. Perhaps a two-tier approach could be found where a more general gathering of senior officials can enable an exchange of strategic views. This might be complemented by task-oriented groups with a broader composition that can be responsible for specific time-bound initiatives with well-defined terms of reference.

The UN system works under a set of pressures that very often establish barriers for co-operation among agencies. Everybody is competing for resources and very often for mandates. We need to find innovative and non-traditional ways to overcome these difficulties. I am told that, in the past, we had a very successful mechanism of co-ordination for Ocean Scientific Research in the form of a signed protocol or agreement between the Heads of Agencies involved. I am referring to the ICSPRO agreement, for which UNESCO is the depositary of the legal instrument establishing it. Perhaps we can learn from this experience — the modalities of this new phase of co-ordination could include the establishment of written agreements among Heads of Agencies. This would commit the agencies and programmes beyond general expressions of good-will, and send a clear and strong signal to everybody about their plans to co-operate and how.

I encourage you to participate in the discussions that are taking place in the UN General Assembly around these issues. They are vital for better defining the roles and functions of the IOC within the UN family.

Last year's World Summit on Sustainable Development in Johannesburg was an important event for UNESCO as a member of the UN system. I would like to express here our sincere thanks to IOC for its dedicated involvement in the preparation of the World Summit and for its active participation in the event itself. We succeeded in taking the most pressing ocean issues to Johannesburg. We also succeeded in requesting and receiving enlarged responsibilities from the Summit. Now it is for us to decide how best to respond to these new challenges. I am sure that in your deliberations you will be able to find the right answers.

The Johannesburg Summit sounded a note of alarm that, despite the many efforts by the UN to protect the oceans, all indications tell us that things are not improving. On the contrary, in many areas there are worrying signs that our efforts are failing. We placed a lot of hope in the development of a Global Marine Assessment to ascertain the status of many of the natural processes, ecosystems and special environments in the ocean. Through Resolution 57/141, the Secretary-General of the UN was called upon to report to this year's 58th General Assembly on the modalities to undertake such a complex task. I am pleased to know that IOC has actively participated in the preparatory work, taking a leading role, and that your meeting will discuss the possible future involvement of IOC in this process. I encourage you to be prudent but, at the same time, assertive and pro-active. The UN system needs the leadership of its Member States.

Ladies and Gentlemen,

We appreciate the contribution of the IOC governing bodies to the formulation of the next Programme and Budget of UNESCO. I understand that your Executive Council now approves an indicative budget and programme sufficiently in advance to be considered in the UNESCO planning process. This innovation has been acknowledged by the External Auditor as an improvement in our internal governance practices. Of course, the final decision lies with the General Conference of UNESCO, but the contribution of the IOC governing bodies is most welcome since it adds to the transparency and accountability of our system of governance.

Everybody is looking forward to a very positive result in the autumn in the final discussion of our Programme and Budget. The return of the USA to UNESCO next October will create a unique opportunity to break the sequence of budgets that have been approved under the Zero Nominal Growth policy. We are optimistic enough to believe that the General Conference will go along with the proposed 610 million dollar budget, a budget that would provide for the first time in many years a modest but real growth. I have maintained the principle of concentrating the UNESCO Programme around a few main priorities. Although the management of water resources is our first priority in the Natural Science Sector, IOC also will benefit from a substantial increase in its regular budget under the 610-million-dollars budget scenario, fully compensating for the loss of the USA contribution to the IOC Trust Fund.

We recognise that one of IOC's more pressing needs is to strengthen its Secretariat so that it may respond to the increasing demands on the Programme. I am considering allowing IOC to use part of these new resources to hire personnel under the new Limited Duration Assignment regime.

Distinguished Delegates,

It remains for me to wish you a very successful and fruitful Assembly. I very much look forward to receiving your recommendations and suggestions.

Thank you.

B. Opening address
by Professor Su Jilan,
Chairman of the Intergovernmental Oceanographic Commission of UNESCO

24th June 2003

Mr. Koichiro Matsuura, Director-General of UNESCO,
Officers of the Commission,
Dr. Patricio Bernal, Assistant Director-General for the IOC and its Executive Secretary,
Distinguished delegates and representatives of international organisations,
Ladies and Gentlemen,

I would like, first, to welcome all of you to this 22nd Session of the Assembly of the Intergovernmental Oceanographic Commission and to thank the presence of Mr. Koichiro Matsuura, Director-General of UNESCO.

The year 2002 was marked by several important events for the IOC, but certainly the most important one was, as the Director-General has just referred to, the World Summit on Sustainable Development in Johannesburg. Both the Global Conference hosted by IOC here in Paris in December 2001 and the Extraordinary Session of the Executive Council of the IOC, convened immediately afterwards, were instrumental in gaining momentum for the Ocean agenda in the preparatory process. The Commission not only prepared the IOC Declaration to WSSD, but also played an important role in activating and promoting the consideration by the Summit of a full agenda of Ocean issues.

There were three outcomes from the WSSD: The Heads of state Declaration, the Plan of Implementation and the Series of Type-II Partnerships recognized by the process. It is a remarkable fact that the Plan of Implementation includes a specific reference to IOC in Paragraph 34¹. That Paragraph addresses the importance of a science-based approach to sustainable development, and identifies several important actions and commitments that are crucial for the future work of IOC, one of which is the participation of IOC in the Global Marine

¹ Par 34. *Improve the scientific understanding and assessment of marine and coastal ecosystems as a fundamental basis for sound decision-making, through actions at all levels to:*

- (a) *Increase scientific and technical collaboration, including integrated assessment at the global and regional levels, including the appropriate transfer of marine science and marine technologies and techniques for the conservation and management of living and non-living marine resources and expanding ocean-observing capabilities for the timely prediction and assessment of the state of marine environment;*
- (b) *Establish by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments;*
- (c) *Build capacity in marine science, information and management, through, inter alia, promoting the use of environmental impact assessments and environmental evaluation and reporting techniques, for projects or activities that are potentially harmful to the coastal and marine environments and their living and non-living resources;*
- (d) *Strengthen the ability of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, FAO and other relevant international and regional and subregional organizations to build national and local capacity in marine science and the sustainable management of oceans and their resources.*

Assessment, a regular process to be established by 2004, that we shall discuss further in this Assembly.

During this Assembly we shall also consider the draft Guidelines for the Transfer of Marine Technology. Although also referred to in the Plan of Implementation of WSSD, here it is in the context of helping with the implementation of a critical part of the United Nations Convention on the Law of the Sea. In promoting the transfer of marine technology, we are inviting the international community to use IOC as an honest broker between demand for ocean technology and the suppliers of that technology. I am almost certain that, in the past, IOC has not taken the initiative at this level. It remains to be seen how effective we can be in this new area of activity. In this connection, the imminent recruitment of the new head of the Capacity-Building Programme in the Secretariat shall give impetus to this activity.

The Informal Consultative Process (ICP) on Oceans and the Law of the Sea, established in 1999 by the United Nations General Assembly, has demonstrated that it is a very useful exercise. The IOC has participated in all ICP meetings, assuming an important role in the fields of its competence and being clearly recognised as the focal point in Ocean Sciences and Ocean Services for the UN system. Last year, after evaluating the performance of the ICP process, the 57th General Assembly of the UN decided to extend its mandate for another three years. This is an important development that should have a positive impact on the governance of the ocean.

Furthermore, through ICP a broad recognition has emerged on the part of governments that, to improve governance of the ocean, there is an urgent need to improve co-ordination on ocean affairs within the UN system. The role that IOC played in the past through ICSPRO and later on in SOCA, as pointed out by the Director-General, Mr. Matsuura, will need to continue in the future mechanism to be established. I wish to thank the Director-General for his encouragement and support in this matter.

Let me turn myself now to two aspects of the internal working of the IOC. The first is the interaction of the Officers of the Commission, on behalf of the Member States, with the Executive Secretary. As you may recall, each of the vice-chairs represents a respective geographic group of Member States. During my two terms as Chairman of IOC we have maintained regular meetings twice a year between the Officers and Dr. Bernal, one of which takes place immediately before the formal IOC gathering. This has turned out to be a very useful and practical instrument to bring closer together the everyday working of the Secretariat with the guidance of the Member States.

During these four years, we have also tried to find a more effective format for the meetings of our governing bodies. On the one hand, we need to dedicate sufficient time to assure a smooth and well-informed decision-making process. On the other hand, the time spent in the meeting should not be overburdened for the delegates. We have now managed to shorten the meetings to ten working days. However it is legitimate to ask: How well are we doing in maintaining the balance? One thing is clear. As a result of these changes we have in front of us a very demanding Agenda and an even more demanding Timetable. I look forward to lively debates in the next ten days.

C. Statement

**by Vice Admiral Conrad C. Lautenbacher, Jr. USN (ret.)
Under Secretary of Commerce for Oceans and Atmosphere**

Progress Towards a Co-ordinated Earth Observation System

Paris, June 26, 2003

Mr Chairman: It is a great honor and pleasure to be able to address this Assembly, and report on progress that we have made since I spoke to your Executive Council last year. I would also like to offer my perspective on a number of exciting developments that are underway.

But before I begin my statement, I want you to know how pleased we are about the U.S. becoming a full participating member of UNESCO. We look forward to working with you and the member nations to meet IOC needs, to achieve IOC objectives, and to seek new opportunities for the IOC. I would like you to know that I will be meeting with the UNESCO Director-General Matsuura tomorrow to discuss our interests in the IOC.

Earth Science Renaissance. We are at the beginning of an Earth Science renaissance. Science and technology are giving us a remarkable capability to observe and, with resulting observations, understand the Earth as a system. This understanding in turn provides us with a means to improve our predictive capabilities to meet a variety of pressing needs—improving weather forecasts, managing fisheries, mitigating disasters, protecting human life, monitoring crops, and exploring the oceans—just to name a few. All of this begins with observations, and their importance is now being recognized by world leaders. This is a remarkable opportunity.

G-8 Action Plan. The meeting of the G-8 leaders earlier this month resulted in what I think is a most notable Action Plan for Science and Technology for Sustainable Development. That plan includes global observation strategies as one of three priority areas. As stated in that Plan, the G8 will work to strengthen and develop close co-ordination of our respective global observation strategies over the next ten years; identify and fill observational gaps of coverage in existing systems; favor interoperability with reciprocal data-sharing, and develop an implementation plan to achieve these objectives by the time of a Tokyo ministerial conference next May.

SBSTA/COP-9. At the same time the G-8 was meeting, SBSTA—the Subsidiary Body for Scientific and Technical Advice—was planning for the Ninth Meeting of the Conference of the Parties (COP-9) in Milan this coming December. SBSTA, a supporting body for COP-9, reviewed the recently released Second Adequacy Report of the Global Climate Observing System (GCOS) with a view toward putting GCOS onto the agenda of COP-9. Specifically, COP-9 will likely decide to invite (1) GCOS and GOOS to report on funding of the initial ocean climate observing system, and (2) GCOS to develop an implementation plan, taking into account the Second Adequacy Report, existing global, regional, and national plans and initiatives, such as the Earth Observations Summit.

Earth Observations Summit. The U.S. will host the Earth Observations Summit on July 31 in Washington, D.C, for Ministers of the G-8 and (at last count) 25 other nations, as well as 30 established international organizations. They will discuss at the political level what is needed to commit to building an international, comprehensive, co-ordinated, and sustained observing system, not just for climate, but the Earth.

In addition to the Ministerial meeting, an ad hoc Working Group will commence work the day after the Summit on developing an international conceptual framework and ten-year plan. Over the coming year, this group will work on the steps for coordinating and sustaining existing observing systems, addressing issues of data management and standards, and incorporating user requirements. This process will be coordinated with GCOS and the COP-9 process and will feed into a second Summit in Japan in May.

Why am I here at the IOC? The IOC, working together with its WMO partner and the Joint Technical Commission for Oceanography and Marine Meteorology, is a logical organization to facilitate implementation of the oceanic elements of a co-ordinated Earth observing system. And the Ocean Observations Panel for Climate, working with GCOS and GOOS, is a logical organization to address requirements driving their implementation. And this Assembly is an appropriate forum to ensure that there is a means for the timely, full and open exchange of data resulting from the ocean observing systems.

How might we proceed? The 2nd GCOS Adequacy Report and our own pending Strategic Plan for Climate Change Science are two reasonable reference points for developing an implementation plan for the ocean climate element of an Earth Observing System. I think we should consider the possibility of agreeing on a set of easily understandable, policy-relevant, science-based questions that could be used to drive requirements for collecting sustained, systematic, global observations of the Earth. Here are some examples of questions that need to be answered, along with what we need to answer them. In answering the following questions, the numbers I have cited for specific observing system elements have been taken directly from the 2nd GCOS Adequacy Report.

Sea Level. How fast is sea level rising? What is the projected rate in the future, and what observations do we need to collect in order to reduce the uncertainties? Three oceanic observing systems come to mind as being critical to answering these questions—the Jason-class satellite observations of the surface topography of the oceans, combined with about 90 geocentrically located, real-time reporting GLOSS (Global Sea Level Observing System) sea level stations, and a 3,000-float global Argo array.

Warming of the Oceans. How fast are the oceans warming? What is the projected rate in the future, and what observations do we need to collect in order to reduce the uncertainties? For sea surface temperature, a global array of 1,250 surface drifting buoys is needed to complement satellite infrared and microwave radiometers. To describe seasonal changes in upper-ocean heat storage, we need a 3,000-float Argo array. To understand changes in total-water-column heat storage, we need ~27 cross-basin, surface-to-bottom hydrographic sections taken every decade.

Carbon Storage in the Oceans. How fast are the oceans accumulating carbon? What is the projected rate in the future and what observations do we need to collect in order to reduce the uncertainties? For decadal changes in total-water-column carbon storage, carbon measurements can be added to the 27 cross-basin, surface-to-bottom hydrographic sections that are inventorying heat storage.

Air-Sea Fluxes. What are the rates of air-sea exchange of heat, water, and carbon? What are projected rates in the future; and what observations do we need to collect in order to reduce the uncertainties? The observations required here include air-sea flux stations moored at ~29 representative sites globally, combined with two broad-swath satellite sensors capable of measuring surface vector winds. These observations, combined with barometers on the 1,250

surface drifting buoys, will contribute to improved Numerical Weather Prediction, which in turn will provide basic information on fluxes globally.

Improved Seasonal Forecasts. How can we improve ENSO-based forecasts for North America? To what extent can we generate similar forecasts for other parts of the globe, and how can this help distinguish climate variability from climate change? Satellite-derived surface topography and vector winds, Argo, and an efficient TAO/Triton-like array spanning the global tropics can provide invaluable basic information on seasonal-to-decadal variability as a basis for improving forecasts.

Other Questions. There are other questions we could ask:

- How do the oceans influence the hydrological cycle?
- How can we characterize the overturning ocean circulation?
- How does basin-scale variability influence the coastal oceans on regional and local levels?
- How does climate variability affect marine ecosystems?

Where do we go from here? The oceanographic community needs to agree on a process for moving forward to take advantage of these exciting scientific, technical, and policy developments related to Earth observations, and the IOC offers an appropriate forum for doing this. In order to do this, I believe that we need consensus on questions that can be used to drive requirements, which in turn can be used as the basis for determining the mix of observing system elements needed to satisfy those requirements. With consensus on the process, we can—just as we have for Argo—agree among the sponsoring nations how we can build a partnership to meet those requirements.

International collaboration is essential. Working together, we can establish—within this decade—critical elements of the Global Ocean Observing System which are of special importance to the IOC and which serve the needs not just for GCOS, but for Earth Science.

I believe that the upcoming Earth Observations Summit, hosted by the U.S. on July 31, will be an outstanding opportunity to gain the recognition and enhanced support needed for the Global Ocean Observing System. I urge you to support your Executive Secretary who has accepted our invitation to participate in this watershed event.

Thank you very much for your time and attention.

ANNEX IV

LECTURES

A. THE BRUUN MEMORIAL LECTURES, 2003

Gas-Hydrates – A Potential Source of Energy From the Oceans

Harsh K. Gupta

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Summary – Gas-hydrate is a solid substance composed of water and low molecular weight hydrocarbon (mainly methane) and is also known as clathrate. It occurs worldwide in the oceanic and polar sediments where temperature is low enough and pressure is sufficiently high to crystallize the methane into gas-hydrates. The study of gas-hydrates has attracted the attention of the scientific community worldwide because of their widespread occurrences and potential energy content. Methane stored within and trapped below the hydrated sediments has a large energy potential. It is estimated to be twice the amount of total fossil fuel energy reserves of world. However, to date not much is known about the nature and distribution of gas-hydrates. No suitable technique is available for quantitative assessment of gas-hydrates. Various parameters like bathymetry, seabed temperature, sedimentation, total organic carbon content etc. indicate favourable conditions for the formation of gas-hydrates in both offshore regions of India. So, it is felt necessary to carry out various geological, geochemical and geophysical analyses systematically for the identification and quantification of gas-hydrates along the continental margins of India for evaluating the resource potential. Some proxies like venting through the seabed or gas escape features; BSR on seismic section, chloride or sulphate anomaly are useful indicators for the identification of gas-hydrates in an area. Tomography, AVO, waveform inversion are very important tools to quantify the amount of hydrates and/or free gas. The resistivity anomaly also helps in identifying gas-hydrates in an area where seismic method does not show any indication. Here we describe some of the important studies and techniques to demarcate the zones of gas-hydrate occurrences and to quantify the amount of gas-hydrates and the underlying free gas.

Dr Harsh K. Gupta (India) — Born on June 28, 1942 in Moradabad (U.P.), India, Dr Harsh Gupta had his education at the Indian School of Mines (B.Sc.(Hons), M.Sc. and A.I.S.M) and University of Roorkee (Ph.D.). Currently Dr Gupta is a Secretary to Government of India looking after the Department of Ocean Development. Among the important positions held earlier include Director, Centre for Earth Science Studies, Trivandrum (1982–87); Vice-Chancellor, Cochin University of Science & Technology (1987–90); Adviser, Department of Science & Technology, Govt. of India, New Delhi (1990–92) and Director, National Geophysical Research Institute, Hyderabad (1992–2001). Earlier he was a Research Scientist at the University of Texas at Dallas (1972–77) and an Adjunct Professor (1977–2001). Dr Gupta has published over 130 research papers in International Journals, written three pioneering books all published by Elsevier Scientific Publishing Company, Amsterdam, and edited over 15 volumes.

Dr Gupta has been very deeply involved with investigations related to oceans. He has participated in the India Ocean Expedition Programme and in detailed investigations of regional crustal structure of the Bay of Bengal and Arabian Sea and later, as the Director, Centre for Earth Science Studies (1982–87), Trivandrum, pioneered efforts to generate wave atlas of the west coast of India.

He was the leader of the 3rd Indian Scientific Expedition to Antarctica (1983–84), which established a permanent base for India in a record time. This station fulfilled a very urgent scientific requirement of the country by setting up of a permanent seismic and a permanent GPS station.

In recent years, at the National Geophysical Research Institute, he has initiated work on Gas Hydrates in the Exclusive Economic Zone of India. Another landmark work by him in identifying locations where bottom simulating reflectors occur has helped in identifying zones of gas-hydrate occurrences.

Dr Gupta is internationally known. He is the founder President of Asian Seismological Commission, Bureau Member of the International Union of Geodesy and Geophysics (IUGG) and Councillor of the International Union of Geological Sciences (IUGS). Earlier, he has been the Chairman of IASPEI/UNESCO/ICL Working Group on Seismology and Related Sciences in Africa as well as Bureau Member and Chairman of several Committees of the International Lithosphere Programme.

Dr Gupta has been a visiting Professor at University of Paris Sud, Paris, France; University of Texas at Dallas, USA and University of Hamburg, Germany. He has also been a visiting scientist at US Geological Survey and Adviser/Consultant to UNESCO, IAEA and Commonwealth Science Council on several occasions. He is a Fellow of the Indian National Science Academy (INSA), National Academy of Science, Third World Academy of Sciences (TWAS) and several other academies.

**Energy from the Sea:
The Potential and Realities of Ocean Thermal Energy Conversion (OTEC)**

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Summary — A google search of the keywords “ocean energy” produced more than a million entries. Merely boiling this information down in a technical presentation describing the various forms of sustainable marine energy options would not be particularly useful, nor productive, for the purpose of the audience and this event.

The Intergovernmental Oceanographic Commission (IOC) has supported a range of Big Ocean projects. This is all well and good, as the IOC is a governmental international organization and we need to first understand the sea around us. But, has the time come to do something more useful for society? While the paper will summarize the essence of ocean energy, the timing might be ideal to more importantly suggest a pathway to interest this IOC assemblage, and potential readers, towards a sea of change, a Blue Revolution.

Thus, given the current state of knowledge in this field, a system will be proposed for development to yield next generation forms of sustainable energy, seafoods, green materials and habitats, in a manner which can enhance the environment. This bridge to the future has been referred to as the Blue Revolution.

Surprising commercial interest has recently been shown in Deep Ocean Water Applications (DOWA). The attraction of this nutrient-rich, cold, and essentially pathogen-free fluid has, thus far, mostly been nurtured by a romance of the seas, cultural preferences and good marketing, but the sudden availability of more than a dozen deep ocean water facilities is an important early element of the Blue Revolution.

As such, and to keep within time and space constraints, in consideration of the vast long-term potential of the package of possible co-products—electricity, hydrogen, bio-alcohol, freshwater, ocean ranches and marine biomass plantations, to mention only a few—from artificially upwelled deep ocean water, this paper will focus on ocean thermal energy conversion, or OTEC, as the driving mechanism to bring reality to the Blue Revolution.

About the lecturer

Patrick Takahashi retired as Professor of Engineering and Director of HNEI at the University of Hawaii, and served as vice president for development of PICHTR. In 1979, while working in the U.S. Congress, he assisted in drafting both the original OTEC and

hydrogen bills that were eventually enacted into law, which for two decades now have guided R&D in the United States for the former and a dozen years for the latter. He was instrumental in bringing to the University of Hawaii a number of national centers, including the National Science Foundation Marine Bioproducts Engineering Center, Department of Interior Center for Marine Resources and Environmental Technology and Department of Energy Hydrogen Center of Excellence, and formed the PICHTR OTEC engineering office. He was awarded the Bechtel Energy Award by the American Society of Civil Engineers, and has produced for the United Nations a textbook on OTEC, a chapter in a solar energy publication and various papers on sustainable resources.

B. N.K. PANIKKAR MEMORIAL LECTURES, 2003

**Capacity-Building for Oceanography in Africa:
The Case of Biological Oceanography
in the IOCEA Region**

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Summary — This paper looks at a brief history of oceanography especially as it applies to early explorations and notes the absence of Africa in this history in spite of the traditional knowledge of early Africans in the field of navigation and fishing that make use of oceanography. The paper then looks at biological oceanography generally, its objectives and needs and examines the capacity required for Africa to participate fully in the biological oceanographic activities so as to benefit from its results. This is discussed in the context of international initiatives and programmes in biological oceanography. Specific capacity needs for Africa, with particular emphasis on the Central Eastern Atlantic region of the Intergovernmental Oceanographic Commission (IOCEA) are discussed and suggestions are made to address these needs. Some relevant capacity-building programmes of IOC and associated bodies are examined with a view to assessing possible impacts on oceanography in the IOCEA region.

Dr Kwarme A. Koranteng is Director of the Marine Fisheries Research Division, Ministry of Food and Agriculture, Ghana. Ph.D. in Biological Sciences (University of Warwick, Ecosystems Analysis and Management Group). Diverse academic and professional achievements in fishery science, marine environmental assessment and biometry. Areas of specialisation—fish stock assessment and statistics, ecosystem approach to fisheries management. Member of FAO Advisory Committee on Fishery Research, Ghana National Commission for UNESCO's Natural Science Committee, the Ghana Science Association and Chairman of the GOOS–Africa Co-ordinating Committee. Twenty-two years working experience in marine and brackish water fisheries assessment and management extending scientific advice to government and non-governmental organisations; consultant to FAO, UNEP and other international bodies on various aspects of fisheries and the marine environment.

**Capacity-Building for Oceanography in Africa—
Realities and Prospects:
A Case Study of the IOCINCWIO Region**

Julius Francis

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Summary — The purpose of the lecture is to provide an analysis of important achievements and setbacks in relation to different completed and on-going capacity-building initiatives in the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean (IOCINCWIO) region. I briefly examine capacity-building programmes over the last decades in their broader sense, including strategies and approaches and with specific examples from across the region. Finally, I analyse implications of various achievements and highlight important lessons and priorities for the future.

The Western Indian Ocean region, being one of the least studied oceans, requires more scientific research if it (the region) has to have a fair chance of gaining a better understanding of coastal and marine environment and of determining how important (economically, socially and culturally) they are to the countries, and of resolving some of several pressing challenges facing the use of region's marine environment and its resources.

In recognition of the need to strengthen the capacity to conduct more scientific research in the region, countries on their own and/or in collaboration with their partners have over the years designed and implemented a number of capacity-building initiatives.

While significant progress has been made, with some degree of success, in areas of human and institutional capacity building, noticeable progress has been made with regard to building financial and infrastructural capacities. Scientific infrastructure is expanding and so is the access to the latest technologies in terms of equipment and communication. Also the international scientific visibility of scientists from the WIO region is slowly growing as reflected by the number of publications in international peer-reviewed journals as well as the number of research projects being implemented in the region

Julius Francis has a Ph.D. in Physical Oceanography from the Flinders University of South Australia, Australia. He is currently the Executive Secretary of the Western Indian Ocean Marine Science Association (WIOMSA) and a Senior Research Fellow at the Institute of Marine Sciences of the University of Dar es Salaam. From 1995 to 2001, he was the Director of the Institute of Marine Sciences, where amongst others, he co-ordinated the implementation of both the Regional Marine Science Programme and the Tanzania–Sweden Bilateral Marine Science Programme. He has also been responsible for the development of a number of capacity-building programmes in the region.

Within WIOMSA, since 2001, he has been responsible for management of a competitive research programme, Marine Science for Management (MASMA) as well as fundraising and co-ordinating the implementation of other core activities of the Association including the publication of the Western Indian Ocean Journal of Marine Science.

ANNEX V

REPORT OF THE CHAIRMAN OF THE RESOLUTIONS COMMITTEE

Mr Geoff Holland (Canada)

Firstly I would like to thank the Members of the Committee and the staff officer Julian for their hard work over the past week.

In general, the Committee found that the Resolutions submitted were of a high standard, which made our task simpler. I would like to make some general comments about the process, before referring to a few specific points.

There persists some confusion in the use of standard terms, for example in the interchangeable use of “adopts” or “accepts” or “endorses” when dealing with reports and recommendations submitted from subsidiary bodies.

When using quotations in our Resolutions, the authors should confirm whether the text has been lifted “verbatim” from another document, or whether there has been an editorial attempt to extract the meaning in a different form of words.

The Committee found that the requirement to identify the financial implications of a resolution needs further clarification. The detail in the figures given varied from one or two words to a funding schedule. In many cases, it was unclear as to which biennium the given figures referred to. The problem is most apparent in cases where the Resolution covers the activities of subsidiary bodies that meet at various times in our biennial cycle and whose workplans cover several years. It would be useful for the authors of these Resolutions to be given direction on what to identify and in what format it should be presented.

Mr Chairman, there is a document (IOC/INF-734 Rev.) that addresses the standardisation of Resolutions and on which the Committee relies. The Committee would like to recommend to the Assembly however, that this document, which is dated 1992, be further revised and brought into line with our current practices.

Two comments on the work process of the Committee. Firstly, on the few occasions where the Committee found a possible ambiguity or was unsure of the intent of a paragraph, it was grateful to the willingness of the author or relevant staff member to attend personally to assist in ensuring the correct words were used in the text. This is a practice that should be continued in the future. Secondly, whilst recognising that some rotation will be both necessary and useful in the selection of Committee members, a degree of continuity in the membership should be a consideration when this sessional body is established.

Mr Chairman, I would like to close with a comment on the matter that the Resolutions Committee referred to the Programme and Budget Committee. Two Resolutions initially contained a specific instruction to the Executive Secretary to approach the Director-General for staff support. In both cases the matter had been raised in plenary, during the debate, but the Resolutions Committee felt that such matters could only be dealt with in the overall consideration of the IOC programme and budget. The Chair of the Programme and Budget Committee concurred and charged Member States with the responsibility of addressing such requests when adopting the IOC budget document.

Mr Chairman, that is the report of the Resolutions Committee. We will of course be ready to respond to questions that may arise on any specific Resolution.

ANNEX VI

PROGRESS REPORT ON THE STRATEGIC PLAN FOR OCEANOGRAPHIC DATA AND INFORMATION MANAGEMENT

Dr Neville Smith

Chairman of the Task Team on the Development of a Unified, Comprehensive IOC Strategic
Plan for Oceanographic Data and Information Management

The Task Team considered some elements of the strategy for a future data and information management system, guided by the vision of “A comprehensive and integrated ocean data and information system, serving the broad and diverse needs of IOC Member States, for both routine and scientific use.” The concept of delivering a data service for the “global ocean commons” (global public good) is central to this vision. The scope will be comprehensive and be across all the disciplines within the mandate of IOC. There will be no *a priori* separation of functions based on the lead time for data delivery (e.g. real-time versus delayed mode). Different strategies might be employed to satisfy global, regional and local requirements, and to meet timeliness needs.

The system will need to provide the data and information required to, *inter alia*: (i) provide scientific information and data on ocean, coastal and inland waters and ecosystems in support of integrated resource management and conservation and sustainable use of marine resources; (ii) support the information and data requirements for marine services, transportation and navigation; (iii) undertake marine assessments and routinely provide indices of the “health” of the marine environment; (iv) detect and forecast climate change and variability; (v) predict and mitigate the impact of natural and man-made hazards; (vi) manage risk for operations in the coastal and open ocean, including the oil and gas industry. This list is not complete but does send the message that the system should be serving all of the requirements of IOC programmes, from GOOS through to science and assessment (e.g. the GMA).

The specific objectives of the system will include (i) support for scientific research and resource assessments at a national, regional, and global level (the regional and global aspects have international contexts); (ii) collaborate with other intergovernmental bodies to ensure greater flexibility in the provision of timely and cost-effective access to data and information; (iii) support IOC’s commitment to its Member States and to other international organisations; (iv) to provide reliable, cost-effective and affordable access for developing- as well as developed-country Member States (technologically sustainable and appropriate to local expertise, modular and scalable, flexible, able to adjust to changing requirements and allow dissemination of products from diverse data sources); (v) embrace capacity-building. The system will also need to address how to support different user groups and access policies, to integrate diverse data sets, network security, long-term and reliable data archiving, and accessibility, as well as ad hoc and routine requests for data and products (“pull” as well as “push”), and timely delivery of data and products (appropriate to requirements). In a practical sense, the objective should be to make the future data and information management system the system of choice for all ocean activities, particularly those of research programmes.

Since its establishment, the Task Team had neither the time nor the resources to fully develop the strategy. Several of the background documents list activities that are either underway or being developed, separately and jointly within JCOMM and IODE. The Task Team recognised the value of these activities and, rather than seeking to dismantle or interrupt the

progress of this work, aimed to develop a strategy that would increase the impact and utility of these efforts. A brief analysis of the global components of the strategy, provided jointly by IODE and JCOMM, did not reveal any significant gaps. It is clear we require an enhanced system for data and transport, very similar to that proposed by the WMO. Several methods are being tested, including the use and implementation of OPeNDAP technology, as proposed by the US Integrated Ocean Observing System in its Data Management and Communications system. Clearly, there are opportunities for collaboration with WMO, perhaps including joint implementation.

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

At the national level, it is also clear that there is a merging and blending of the formerly separate activities of ocean data exchange and archiving, as represented by the system of National Oceanographic Data Centres (NODCs), and those associated with operational ocean and climate prediction. The latter are often, but not always, associated with national meteorological services. The IOC does not yet have the equivalent of National Ocean (prediction) Centres.

The Task Team recognised that the regional aspects of data and information management are extremely important and that there are several different drivers for creating regional and specialised data centres: (i) to serve the data and information management requirements of GOOS Regional Alliances; (ii) to satisfy the requirements of an IOC-defined region or Regional Subsidiary Body; (iii) to satisfy the data and information management requirements of other regional programmes, e.g. an LME or Regional Seas Programme; (iv) to satisfy a specialist requirement, e.g. a science programme, a specific data service (e.g. sea level); (v) to satisfy capacity-building requirements, as through the Ocean Data and Information Networks (ODIN); (vi) geopolitical, geographic or other forms of regional affinity (as noted in the UNESCO approach); and (vii) WMO Regional Associations. It is therefore a challenge for the data and information strategy to determine an approach that is optimal in terms of regional effectiveness and efficiency. It is conceivable that the Commission could use its Regional Subsidiary Bodies as a way of organising its regional approach, implementing procedures such as those used by WMO. Under such an arrangement, there would be increased responsibility compared to the present arrangement. In such a scenario, all data management would be given a home(s) within this structure.

The Task Team recognised that JCOMM does have the advantage of being new and thus possessing a fairly “clean” structure. The Strategy should avoid destructive interference in the present arrangements but, at the same time, provide a mechanism for an eventual smooth union of the now separate ocean data management activities. The Strategy will recognise a broad set of requirements from the Commission and therefore will need careful guidance, both in terms of management and in terms of technical and scientific guidance.

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

ANNEX VII

GUIDELINES FOR THE ESTABLISHMENT OF IOC DECENTRALISED OFFICES

This Section describes the proposed Terms of Reference for the establishment of the three types of IOC decentralised offices:

- **IOC Project Office**
- **IOC Programme Office**
- **IOC Regional Office**

3.1 IOC Project Office

3.1.1 Definition

An IOC Project Office shall be established to implement a particular IOC project (or multiple projects of the same nature).

The main purpose of an IOC Project Office is to administratively and technically underpin projects that have specific objectives, clearly defined deliverables and a pre-determined duration.

The Project Office should be seen as a flexible mechanism to support the implementation of projects in the field.

3.1.2 Terms of Reference

The main purpose of an IOC Project Office shall be to:

- Implement IOC projects;
- Report on the progress of the implementation of project activities to the Chair of the parent IOC Subsidiary Body, the IOC Executive Secretary, the Programme Office of the Project's Parent Programme (as available), and participating Member States, on a regular basis;
- Plan and organise meetings, workshops, training courses and other capacity-building activities relevant to the project;
- Liase and maintain links with relevant IOC programmes and other projects;
- Establish and maintain links with other relevant organisations, institutions and programmes in order to promote co-operation with the Project;
- Seek partnerships and potential sources of funding to strengthen the Project implementation.

3.1.3 Needs assessment

An IOC Project Office should be established in those cases where the project is of a nature that requires specific technical facilities and/or human resources that are not available at the IOC Secretariat (or cannot easily be transferred to the field) or where implementation can be effected more efficiently or cheaper in the host institution/host country.

Accordingly, the needs assessment for an IOC Project Office should demonstrate that technical infrastructures and/or facilities and/or human resources required for the efficient and effective implementation of the Project are not available or available at higher cost, at UNESCO/IOC Headquarters, Paris. Other elements may be the cost of living (per diem) for visiting experts or part-time staff, available space, proximity to academic or other expert communities.

3.1.4 Minimum criteria for the hosting of an IOC Project Office

A Member State that wishes to host an IOC Project Office shall, as a minimum:

- (i) offer the bare use of office space and utilities (and related taxes) (see also 3.1.5), free of charge to the IOC for the duration of the agreement, and for a period not less than 3 (three) years;
- (ii) provide not less than the equivalent of 1 (one) local support staff.

Offers made by Member States shall be compared on a competitive basis, taking into consideration all services and facilities offered.

3.1.5 Funding of an IOC Project Office

- **Cost of establishment**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Construction/renovation	Construction works, electrical, heating and plumbing works		X	
Furniture and furnishing	Office furniture, office equipment, end-user wiring, removable lighting, telephones and their wiring,			X
Relocation/transfer of facilities	Moving equipment, office furnishings, files, etc. from headquarters to the Project Office	X		
Staff transfer costs	Relocating IOC staff to the Project Office	X		
Staff cost	Professional and support staff	X (if applicable)	X (minimum of the equivalent of one support staff to be provided by the host country.)	

(*) "paid by IOC" indicates that the costs will be paid by the **project** that may be funded under UNESCO Regular Programme funding or through extrabudgetary funding.

- **Costs of Operation**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Utilities	water, electricity, heating		X	
Taxes	physical facilities		X	
Office consumables				X
Telecommunication and postage				X
Office equipment maintenance				X
Office cleaning and maintenance				X
Insurance and maintenance of the building			X	
Staff cost		X (if applicable)	X	

(*) “paid by IOC” indicates that the costs will be paid by the **project** that may be funded under UNESCO Regular Programme funding or through extrabudgetary funding.

- **Costs of closing**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Closing of utility subscriptions			X	
Closing of telecommunication subscriptions				X
Moving costs	moving equipment, office furnishings, files etc. from the Project Office to headquarters	X		
Staff transfer costs	relocating IOC staff from the field to HQ (or other)	X		

(*) “paid by IOC” indicates that the costs will be paid by the **project** that may be funded under UNESCO Regular Programme funding or through extra-budgetary funding.

Where possible IOC shall give preference to establishing project offices in existing UNESCO field offices, provided that the cost of establishment + cost of operation + cost of closing will be lower than if the IOC office were hosted elsewhere. In this case, the proposal shall evaluate the full cost of UNESCO field office hosting the Project Office.

Preference shall be given to hosts that are able and willing to cover the full cost of the project office operation (costs of operation).

Professional staff cost may be covered by the host country through provision of relevant experts on a permanent or temporary basis. Easy access to interns with relevant technical/professional expertise shall also be encouraged.

Alternatively IOC may choose to temporarily “relocate” existing UNESCO posts to the established Project Office.

3.1.6 Approval requirements

The request/proposal for the establishment of an IOC Project Office shall be submitted by an IOC Primary Subsidiary Body (such as a Technical Committee or Regional Committee) to the IOC Executive Secretary.

The establishment of an IOC Project Office requires formal approval by an IOC Governing Body through a Resolution. The IOC Governing Body shall be provided with a detailed document that includes the needs assessment and a detailed estimation of cost (covering the duration of the agreement), as well as a draft host agreement.

The IOC Primary Subsidiary Body that proposed the establishment of an IOC Project Office may also recommend the continuation of such an Office after the expiry of the agreement. Such renewal can be requested ONLY after an independent performance evaluation of the Project Office has been conducted with a positive result. (see 3.1.9)

The approval process for renewal will be the same as for the initial establishment of the Project Office.

3.1.7 Responsibility and reporting hierarchy

An IOC Project Office shall be managed by an IOC Project Office Manager who can be an IOC Staff Member (permanent/temporary position, or ALD—appointment of limited duration) or an IOC Consultant. When appointing the IOC Project Office Manager, the intergovernmental nature of the IOC and rules of geographic distribution of UNESCO should be taken into consideration.

The IOC Project Office Manager shall report to the Head of Section of the Section under which the Project is implemented and will be under the authority of the IOC Executive Secretary.

3.1.8 Formal agreements with hosts

An IOC Project Office will be hosted by an IOC Member State and will be the subject of a host agreement between the IOC and the IOC Member State. The host agreement will include a sunset clause specifying that the Project Office shall be closed upon completion of the Project. Nevertheless, it may be decided to renew the agreement based upon the renewal of the Project (see 3.1.6)

3.1.9 Performance evaluation

The independent performance evaluation of an IOC Project Office will be managed by the related Head of Section, in consultation with the host country, and approved by the Primary or, where applicable, Secondary Subsidiary Body that oversees the project. (see also 3.1.6)

The IOC Executive Secretary shall include a short assessment of a Project Office through the statutory report on implementation of the respective Resolution.

3.2 IOC Programme Office

3.2.1 Definition

An IOC Programme Office shall be established to assist in the implementation of an IOC Programme. A programme is defined as an activity with a long-term strategy and objectives (as detailed in a UNESCO C/5 Main Line of Action). A Programme Office will mainly be tasked with the decentralised management of a Programme, and can be established to assist with the regional implementation of the Programme.

3.2.2 Terms of Reference

The main purpose of an IOC Programme Office shall be to:

- (i) Serve as decentralised Technical Secretariat for the programme and oversee its implementation;
- (ii) Co-ordinate and supervise the activities of associated Project Offices, in close consultation with the Programme's Parent Body (IOC Primary Subsidiary Body), its Chair, the corresponding Heads of Section, and the IOC Executive Secretary;
- (iii) Report on the progress of the Programme to the Chair of the Parent IOC Subsidiary Body, the IOC Executive Secretary and participating Member States, on a regular basis;
- (iv) Organise major scientific/technical conferences related to the Programme, including meetings of its Parent Body, as defined in the Programme Work Plan;
- (v) Assist in the definition, co-ordination and implementation of the Programme's capacity-building strategies, as adopted by the Parent IOC Primary Subsidiary Body and IOC Governing Bodies;
- (vi) Liase and maintain links with relevant IOC programmes and other projects;
- (vii) Establish and maintain links with other relevant organisations, institutions and programmes in order to promote co-operation with the Programme;
- (viii) Seek partnerships and potential sources of funding to strengthen Programme implementation.

3.2.3 Needs assessment

An IOC Programme Office should be established in those cases where the Programme is of a nature that would benefit from having a decentralised management, or where implementation can be effected more efficiently in a host institution or host country.

In the case of the establishment of an IOC Programme Office, the availability of local staff is more pronounced than in the case of a Project Office, with special reference to scientific experts (professional staff). A Programme Office is especially appropriate for programmes that require highly skilled scientific/technical staff and facilities. An IOC Programme Office should preferably be established in (or be closely associated with) an existing research or related scientific/technical facility in a Member State or in a UN or intergovernmental partner organisation.

3.2.4 Minimum criteria for the hosting of an IOC Programme Office

A Member State that wishes to host an IOC Programme Office shall, as a minimum:

- (i) Offer the bare use of office space and utilities (and related taxes) (see also 3.2.5), free of charge to the IOC for the duration of the agreement, and for a period not less than 3 (three) years;
- (ii) Provide not less than 1 (one) local support staff (secretary level);
- (iii) Provide not less than 1 (one) professional (scientific/technical) staff;
- (iv) Offer the use of required scientific and/or technical facilities (as required by the Programme and detailed in the agreement).

Offers made by Member States shall be compared on a competitive basis, taking into consideration all services and facilities offered. Offers made by UN or intergovernmental partner organisations will have priority.

3.2.5 Funding of an IOC Programme Office

- **Cost of establishment**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Construction/renovation	Construction works, electrical, heating and plumbing works		X	
Furniture and furnishing	Office furniture, office equipment, end-user wiring, removable lighting, telephones and their wiring,			X
Relocation/transfer of facilities	Moving equipment, office furnishings, files, etc. from headquarters to the Programme Office	X		
Staff transfer costs	Relocating IOC staff to the Programme Office	X		
Staff cost	Professional and support staff	X (if applicable)	X (minimum of one support staff [secretary level] and one professional [scientific/technical] to be provided by the host country)	
Specialised scientific/technical equipment			X	

(*) "paid by IOC" indicates that the costs will be paid by the **programme** that may be funded under UNESCO Regular Programme funding or through extra-budgetary funding.

- **Cost of operation**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Utilities	Water, electricity, heating		X	
Taxes	Physical facilities		X	
Office consumables				X
Telecommunication and postage				X
Office equipment maintenance				X
Office cleaning and maintenance				X
Insurance and maintenance of the “building”			X	
Staff cost		X (if applicable)	X	

(*) “paid by IOC” indicates that the costs will be paid by the **programme** that may be funded under UNESCO Regular Programme funding or through extra-budgetary funding.

- **Costs of closing**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC (*)	Host country	IOC or host country subject to agreement terms
Closing of utility subscriptions			X	
Closing of telecommunication subscriptions				X
Moving costs	Moving equipment, office furnishings, files, etc. from the Programme Office to headquarters	X		
Staff transfer costs	Relocating IOC staff from the field to HQ (or other)	X		

(*) “paid by IOC” indicates that the costs will be paid by the **programme** that may be funded under UNESCO Regular Programme funding or through extra-budgetary funding.

Preference shall be given to hosts that are able and willing to cover the full cost of the programme office operation (costs of operation).

Professional staff cost will be shared by the host country/organisation through provision of relevant experts on a permanent or temporary basis. Easy access to interns and students with relevant technical/professional expertise will also be included here.

Alternatively IOC may choose to relocate existing UNESCO posts to the established Programme Office.

3.2.6 Approval requirements

The request/proposal for the establishment of an IOC Programme Office shall be submitted by an IOC Primary Subsidiary Body (such as a Technical Committee or Regional Committee) to the IOC Executive Secretary.

The establishment of an IOC Programme Office requires formal approval by an IOC Governing Body through a Resolution. The IOC Governing Body shall be provided with a detailed document that includes the needs assessment and a detailed estimation of cost (covering the duration of the agreement), as well as a draft host agreement.

The IOC Primary Subsidiary Body that proposed the establishment of an IOC Programme Office may also recommend the continuation of such an Office after the expiry of the agreement. Such renewal can be requested ONLY after an independent performance evaluation of the Programme Office has been conducted with a positive result. (see 3.2.9)

The approval process for renewal will be the same as for the initial establishment of the Programme Office.

3.2.7 Responsibility and reporting hierarchy

An IOC Programme Office shall be managed by an IOC Staff Member (permanent/temporary position or appointment of limited duration). When appointing the IOC Programme Office Manager, the intergovernmental nature of the IOC and rules of geographic distribution of UNESCO (para. 24.1 of IOC Rules of Procedure) should be taken into consideration.

The IOC Programme Office Manager shall report to the Head of the Section under which the Programme is implemented and will be under the authority of the IOC Executive Secretary.

3.2.8 Formal agreements with hosts

An IOC Programme Office will be hosted by an IOC Member State or by a UN or an intergovernmental partner organisation and will be the subject of a host agreement between the IOC and the host. The agreement will have a specified duration but will be automatically renewed unless the two parties decide otherwise.

3.2.9 Performance evaluation

The independent evaluation of an IOC Programme Office will be managed by the Head of Section of the Section related to the implementation of the Programme, in consultation with the host country, and approved by the Primary Subsidiary Body that established it. The IOC Executive Secretary shall include a short assessment of the Programme Office through the statutory report on implementation of the related Resolution.

3.3 IOC Regional Office

3.3.1 Definition

An IOC Regional Office shall be established to assist in the implementation of IOC Programme activities within a specific geographic region.

3.3.2 Terms of Reference

The main purpose of an IOC Regional Office shall be to assist with the implementation of all the Programmes of IOC in a regional context. It will therefore have Terms of Reference similar to those of a Programme Office but serve as a Technical Secretariat for a Regional Subsidiary Body. As such it shall:

- (i) Serve as the Technical Secretariat for the regional programme and oversee its implementation by co-ordinating regional components of the global programmes and activities of the IOC;
- (ii) Promote the development and use, at the regional level, of ocean services and related supporting activities, co-ordinated or maintained by IOC;
- (iii) Facilitate the exchange of scientific data and information and the transfer of knowledge resulting from marine scientific research, especially to developing countries in the region;
- (iv) Assist with the identification of Training, Education and Mutual Assistance (TEMA) needs in the region, especially those related to the programmes of the corresponding Sub-Commission, when appropriate, and promote the required TEMA activities;
- (v) Report on the progress of the Programme to the Chair of the IOC Regional Subsidiary Body, the IOC Executive Secretary and participating Member States, on a regular basis;
- (vi) Organise major scientific/technical conferences related to the Programme, including meetings of the corresponding Sub-Commission, as defined in the Programme Work Plan;
- (vii) Liase and maintain links with all IOC programmes and relevant IOC projects;
- (viii) Establish and maintain links with other relevant organisations, institutions and programmes in order to promote co-operation with the Programme;
- (ix) Seek partnerships and potential sources of funding to strengthen Programme implementation.

3.3.3 Needs assessment

An IOC Regional Office should be established in those cases where activities in a region have reached a level where effective implementation can no longer be ensured fully by the IOC Secretariat in Paris but requires decentralised management and additional assistance in the region.

3.3.4 Minimum criteria for the hosting of an IOC Regional Office

A Member State that wishes to host an IOC Regional Office shall offer, free of charge to IOC,

- (i) office space and related infrastructures and facilities (office furniture, telephone equipment, photocopying facilities);
- (ii) utilities (electricity, heating, water);
- (iii) supporting staff (number determined on the basis of need and negotiation).

Operational costs and staff costs will be covered by IOC or other sources, unless otherwise specified in the agreement.

3.3.5 Funding of an IOC Regional Office

• **Cost of establishment**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC	Host country	IOC or host country subject to agreement terms
Construction/renovation	Construction works, electrical, heating and plumbing works		X	
Furniture and furnishing	Office furniture, office equipment, end-user wiring, removable lighting, telephones and their wiring,			X
Relocation/transfer of facilities	Moving equipment, office furnishings, files, etc. from headquarters to the Regional Office	X		
Staff transfer costs	Relocating IOC staff to the Regional Office	X		
Staff cost	Professional and support staff	X (if applicable)	X	

• **Cost of operation**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC	Host country	IOC or host country subject to agreement terms
Utilities	Water, electricity, heating		X	
Taxes	Physical facilities		X	
Office consumables				X
Telecommunication and postage				X
Office equipment maintenance				X
Office cleaning and maintenance				X
Insurance and maintenance of the "building"			X	
Staff cost		X (if applicable)	X	

- **Costs of closing**

Costs Component	Component Elements	Payment Responsibility Allocation		
		IOC	Host country	IOC or host country subject to agreement terms
Closing of utility subscriptions			X	
Closing of telecommunication subscriptions				X
Moving costs	Moving equipment, office furnishings, files etc. from the Regional Office to headquarters	X		
Staff transfer costs	Relocating IOC staff from the field to HQ (or other)	X (if applicable)		

Preference shall be given to hosts that are able and willing to cover the full cost of the Regional Office operation (costs of operation).

Professional staff cost will be paid or shared by the host country/organisation through provision of relevant experts on a permanent or temporary basis. Easy access to interns and students with relevant technical/professional expertise will also be included here.

Alternatively IOC may choose to relocate existing UNESCO posts to the established Regional Office.

3.3.6 Approval requirements

The proposal for the establishment of an IOC Regional Office will be submitted by an IOC Regional Subsidiary Body (Regional Committee or Sub-Commission) to an IOC Governing Body through a Resolution. Approval for the establishment will be required from an IOC Governing Body. The IOC Governing Body will take into consideration para. 5.2 of the IOC Manual (doc. IOC/INF-785) that relates to the establishment of Sub-Commissions. Along those lines a Sub-Commission shall be established when:

- (i) an existing Regional Subsidiary Body of the Commission has formally requested the Assembly to designate it as a regional Sub-Commission;
- (ii) the budget and secretariat required for the effective functioning of the proposed regional Sub-Commission will be made available;
- (iii) the Member States of the region for which a regional Sub-Commission is proposed are already actively engaged in co-operative activities or have demonstrated their commitment to do so.

Under the same article it is stated that Secretariat support for a regional Sub-Commission shall be provided by the IOC Secretariat (headquarters staff and staff outposted in the region), and by Member States. The outposted IOC staff providing secretariat services to a regional Sub-Commission shall be located in an appropriate office of UNESCO or of any organisation of the United Nations system in the region of the regional Sub-Commission, or elsewhere in a Member

State of the region, provided that such a State offers facilities considered adequate by the regional Sub-Commission and approved by a Governing Body of the Commission.

3.3.7 Responsibility and reporting hierarchy

An IOC Regional Office shall be managed by an IOC Staff Member (permanent/temporary position or appointment of limited duration). The IOC Regional Office Manager shall report to the IOC Executive Secretary. When appointing the IOC Regional Office Manager, the intergovernmental nature of the IOC and rules of geographic distribution of UNESCO should be taken into consideration.

3.3.8 Formal agreements with hosts

An IOC Regional Office will be hosted by an IOC Member State and will be the subject of a host country agreement between the IOC and the IOC Member State, or be covered under an existing agreement between UNESCO and the host country. The specific agreement will have a specified duration but will be automatically renewed unless the two parties decide otherwise.

3.3.9 Performance evaluation

The independent performance evaluation of an IOC Regional Office will be managed by the IOC Executive Secretary, in consultation with the host country, endorsed by the Regional Subsidiary Body that established it and approved by one of the IOC Governing Bodies.

ANNEX VIII

MEMORANDUM OF UNDERSTANDING BETWEEN WMO AND IOC REGARDING REGULATORY AND PROCEDURAL ASPECTS OF THE CONDUCT OF THE JOINT WMO–IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM)

The Secretary-General of the World Meteorological Organisation (WMO) and the Executive Secretary of the Intergovernmental Oceanographic Commission (IOC) of UNESCO,

Recalling the establishment in 1999 of the Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), through Resolutions 14 (Cg-XIII) and XX-12 of the World Meteorological Congress and the IOC Assembly, respectively,

Recalling further the considerations that led to the establishment of JCOMM, namely:

- (1) The need for a fully co-ordinated mechanism for implementing the requirements for ocean and surface marine meteorological data in support of GOOS and GCOS,
- (2) The expanding requirements of all marine users for a comprehensive range of marine meteorological data and products,
- (3) The need to co-ordinate and manage better the existing range of marine-related activities of WMO and IOC, to reduce duplication and overlap, enhance efficiencies and reduce costs to both Organisations,
- (4) The potential benefits to be gained from making better use of the diverse and extensive range of expertise and facilities available to both WMO and IOC at all levels,
- (5) The expected cost savings from a rationalisation of existing marine-related bodies and activities, and from joint support of marine programme activities by WMO and IOC.

Noting the great success of the first session of JCOMM (Akureyri, Iceland, 19–29 June 2001) which, by formal agreement of the Executive Councils of WMO and IOC, was organised and funded by WMO and was conducted entirely according to WMO rules and procedures for sessions of technical commissions,

Recognising that, as a major intergovernmental technical subsidiary body of both WMO and IOC, the work of JCOMM, including sessions of the Commission, should be undertaken in conformity with the relevant rules and procedures of both Organisations pertaining to such bodies,

Recognising further that, in view of the fully joint nature of JCOMM, a single set of mutually agreed rules and procedures should apply to the work of the Commission,

Have agreed as follows:

(Notes: (i) Regulations of the WMO General Regulations and Rules of the IOC Rules of Procedure are referred to hereafter as “Regulation(s)” and “Rule(s)” respectively.

(ii) The text below in small font and square brackets contains an analysis of those sections of the Regulations and Rules which contain apparent inconsistencies or require clarification. The substance of the agreements relating to these sections is given in the preceding numbered paragraphs.)

SESSIONS OF JCOMM

Place of session

1. It is agreed that the procedure for accepting an invitation to host a session of JCOMM should be as laid down in Regulation 17 and its Annex, irrespective of which Organisation has the lead role for the preparation of the session.

[If a session of JCOMM is not held in the Headquarters of WMO or IOC, Regulation 17 and its Annex lay down the procedure for accepting the invitation to hold a session of a WMO technical commission. Such a procedure will be applied if WMO is the lead Organisation for the preparation of a session of JCOMM. This is not in contradiction with the equivalent UNESCO rules (see Article 24 of the "Regulations for the general classification of the various categories of meetings convened by UNESCO", in "Basic Texts" of UNESCO)]

Credentials of the delegations to sessions of JCOMM

2. It is agreed that the Secretary-General of WMO and the Executive Secretary IOC should jointly consult Members/Member States, to request them to designate an appropriate national authority for authorising the credentials of all experts from such Members/Member States in JCOMM sessions, and for designating the head of delegation. Regulation 20 is then sufficient to also cover IOC credential procedures.

3. It is further agreed that, during the sessions of JCOMM, experts nominated by each Member of WMO/Member State of IOC together shall constitute a single national delegation, with a single head of delegation.

[During the sessions of JCOMM, experts nominated by each Member of WMO/Member State of IOC together shall constitute a single national delegation.

Regulation 190 stipulates that each session of a technical commission shall consider a report on credentials on the basis of Regulations 20 and 21. For this purpose, WMO Members have designated those who are authorised to sign the credentials of their delegations to sessions of the WMO technical commissions.

JCOMM membership differs from that of other WMO technical commissions, as it includes members drawn from both the meteorological and oceanographic agencies representing their Governments in WMO and IOC respectively. However, IOC does not have an equivalent Rule or procedure for formalising credentials. In any case, it would appear preferable that there be only one authority in each Member/Member State designated to sign the credentials for the whole delegation from that Member/Member State to sessions of JCOMM.]

Quorum at sessions of JCOMM

4. It is agreed that the quorum at JCOMM sessions will be defined in accordance with WMO Regulations 193 and 194, taking into consideration paragraph 7 below concerning voting rights. In addition, it is recognised that Members/Member States without experts at a session may formally designate an expert from another Member/Member State to represent them by proxy, for the purposes of voting. No individual person shall have more than one vote in sessions of JCOMM.

[IOC Rule 37(1) stipulates that a simple majority of the members of the Executive Committee and of committees and subsidiary or other bodies shall constitute a quorum for meetings of these bodies.

For WMO technical commissions, Regulation 193 stipulates that the quorum for a meeting of the Commission shall be a majority of the Members with voting rights represented at that time at that session, provided this majority shall not be less than one-third of Members with voting rights which

have designated experts to represent them permanently in the Commission. Regulation 194 provides the procedures to be followed if the quorum is not obtained.]

Languages at sessions of JCOMM

5. It is agreed that the obligation of WMO to apply its Regulation 120 in sessions of JCOMM shall be maintained, namely that the official languages for sessions of JCOMM shall be Arabic, Chinese, English, French, Russian and Spanish. At the same time, to allow conformity also with IOC Rule 33, it is further agreed that WMO will be solely responsible for providing the documentation and interpretation services for Arabic and Chinese for all sessions of JCOMM, irrespective of which Secretariat has primary responsibility for the preparation and conduct of the session. This agreement will only apply, however, while the official languages of IOC remain as presently defined in Rule 33, namely English, French, Russian and Spanish. The addition of Arabic and/or Chinese to the official languages of IOC will immediately confer an obligation on IOC to provide for appropriate services also in the additional language(s), specifically at those sessions of JCOMM for which IOC has primary responsibility.

[WMO Regulation 120 stipulates that the six official and working languages of WMO, namely Arabic, Chinese, English, French, Russian and Spanish, shall be used in the WMO technical commissions and their committees.

On the other hand, IOC Rule 33(1) stipulates that the official languages of IOC shall be English, French, Russian and Spanish. Further, IOC Rule 33(4) confines the use of the official languages of the IOC committees, subsidiary or other bodies, to the appropriate working languages according to the needs of the representatives of Member States at the meeting.]

Conduct of business in sessions of JCOMM

6. It is recognised that voting on procedural matters other than for the election of officers is extremely rare. Therefore an invocation of Regulation 60 is unlikely to arise in practice at sessions of JCOMM. However, in the event that it is invoked, it is agreed that the provisions of Regulations 60 to 62 will be applied to JCOMM, since they do not conflict with any of the IOC Rules.

[There are no major differences for the conduct of business for JCOMM as provided for in WMO Regulations and IOC Rules.

The main difference between the WMO and IOC procedures for voting is that while Regulations 60, 61 and 62 provide for the process of voting by secret ballot if so demanded by two or more delegations, IOC Rule 45 does not provide for such a process. Voting by secret ballot is only provided for election by virtue of Rule 42(1).]

Voting rights at sessions of JCOMM

7. It is agreed that any Member/Member State with voting and related rights and privileges within either WMO or IOC shall be able to exercise these within the context of JCOMM only, as a joint body of both Organisations.

[This agreement is designed to ensure that there is no misunderstanding or conflict regarding voting and related rights. A major difference between the WMO procedures for voting and election during sessions of constituent bodies and those of IOC arises through the application of WMO Resolution 37 (Cg-XI) — Suspension of Members for failure to meet financial obligations, which states that:

- (a) *Members who through non-payment of their contributions are in arrears for more than two consecutive calendar years shall not be entitled to vote in sessions of the WMO constituent bodies including the technical commissions;*
- (b) *That nationals or representatives of a Member in arrears as indicated in (a) above shall not be eligible for nomination or renomination for elected offices of WMO constituent bodies including the technical commissions.*

It is recognised that this is a complicated issue, as some IOC Member States are not Member States of UNESCO, and therefore do not contribute to the UNESCO regular budget. They pay contributions to IOC on a “voluntary” basis, into the IOC Trust Fund. Also, there may be Member States that are paid up to UNESCO/IOC but not to WMO, or vice versa. In this case, it is quite likely that some Members/Member States will fall into different voting rights categories in WMO and IOC, making this Congress resolution difficult to apply consistently. At the same time, however, it is logical to consider that a Member/Member State with voting rights under either WMO or IOC rules should therefore be eligible to vote and exercise all other relevant rights, within the context of JCOMM alone, as a joint body of both Organisations.]

VOTING, ELECTION AND CONSULTATION BY CORRESPONDENCE

8. It is agreed that the procedures detailed in Regulations 65 to 78 and 90 to 93 should apply to JCOMM, since these do not conflict with anything in the IOC Rules. It is further agreed that the Secretary-General of WMO and the Executive Secretary IOC will jointly approach Members/Member States, with a view to having a single national authority designated for the purposes of voting by correspondence for JCOMM. This approach should be conducted together with that agreed in paragraph 2 above.

[While the WMO General Regulations provide detailed procedures for voting and election by correspondence in Regulations 65 to 78 and Regulations 90 to 93, respectively, there are no provisions for such procedures in the IOC Statutes and Rules of Procedure.

The only procedure for consulting IOC Member States by correspondence occurs for the IOC Executive Council in Rule 23, whereby the Council or its chairman are authorised to consult Member States by correspondence on substantial matters prior to taking action, and may establish a reasonable time-limit for the replies. There are no detailed provisions for this procedure.

By virtue of IOC Rule 25, a Committee, subsidiary or other bodies shall, whenever possible, carry out their work by correspondence.]

DOCUMENTATION

9. It is agreed that the documentation style for JCOMM sessions should be largely consistent with that for sessions of other WMO constituent bodies. This style will apply irrespective of which Organisation has primary responsibility for preparing the session.

[Although this does not strictly concern the regulations, there is nevertheless a difference in the documentation styles used by WMO and IOC for meetings of technical commissions or equivalent. For JCOMM-I, WMO used the style adopted for Congress and the Executive Council, with a few exceptions. The IOC style (for its Executive Council, Assembly and Committees) at present does not include any draft text for the final report in pre-session documentation. However, IOC has begun to introduce such draft text for sessions of its Executive Council and Assembly. It is important that a common style be adopted for all formal JCOMM sessions.]

[MEMBERSHIP OF JCOMM]

During the discussions preceding the approval of JCOMM at the IOC Assembly in 1999, it was agreed that JCOMM would be a partnership, with 50 per cent of its members from meteorology and 50 per cent from oceanography (final report of the Assembly, paragraph 32).

Article 19(b) of the WMO Convention stipulates that all the Members of the Organisation (States and Territories) have the right to be represented on the technical commissions. Regulation 182 gives the right to WMO Members to designate such number of experts to serve on a technical commission as it deems necessary.

It is, therefore, not appropriate to impose on WMO Members/IOC Member States the designation of limited numbers of experts for JCOMM to meet the concept of partnership referred to in paragraph 1, above.

It is agreed that this does not represent a problem for JCOMM, and in any case does not require consideration of a possible change to WMO regulations. If any imbalance in JCOMM members develops over time, in either sense, it will be addressed by encouraging more members from the other discipline, and not by restricting the membership of either meteorologists or oceanographers.]

[PRESIDENCY AND VICE-PRESIDENCY OF JCOMM]

Thirteenth WMO Congress decided that there should be two co-presidents of JCOMM who should be drawn one from the oceanic and one from meteorological sciences. This principle was endorsed by the twentieth session of the IOC Assembly. (*Abridged Final Report with Resolutions of the Thirteenth World Meteorological Congress* (WMO-No. 902) general summary paragraph 3.4.4.5 and *Report of the Assembly*, paragraph 32).

By virtue of Regulations 11, 12, 184 and 190(11), each WMO technical commission shall elect a president and vice-president of the Commission whose term of office shall be from the end of an ordinary session to the end of the succeeding ordinary session of the Commission. They will be eligible for re-election at the end of this term of office.

No mention was made of a vice-president in the decisions or proceedings of the WMO Thirteenth Congress or of the twentieth session of the IOC Assembly referred to above. As there are two co-presidents of JCOMM, it is unclear, from a WMO standpoint, whether or not there should also be two co-vice-presidents of the Commission, who would be drawn equally from the oceanic and meteorological sciences. Such an uncertainty does not arise for IOC.

This uncertainty was resolved by the fifty-second session of the WMO Executive Council, which "...agreed that (the decision of Congress) should be interpreted as meaning that, for JCOMM as a technical commission sponsored jointly by another international organisation, the two co-presidents were the equivalent of the normal president and vice-president as officers of a technical commission." (See the *Abridged Final Report with Resolutions of the Fifty-second Session of the Executive Council* (WMO-No. 915), general summary paragraph 6.4.5.) In addition, JCOMM, at its first session (Akureyri, June 2001), "... agreed that, in order to avoid confusion regarding management responsibilities, the meteorology co-president should assume primary authority for guiding the work of JCOMM during the first two years of the intersessional period, and the oceanography co-president during the second two years." It is thus agreed that this matter no longer represents a difficulty for JCOMM.]

ANNEX IX

A -- LIST OF MEMBER STATES OF THE IOC EXECUTIVES COUNCIL

<u>Chairperson</u>	: Dr David T. Pugh (United Kingdom)	Group I
<u>Vice-chairpersons</u>	: Professor Mário Ruivo (Portugal)	Group I
	Dr Alexander V. Frolov (Russian Federation)	Group II
	C. de N. Javier A. Valladares (Argentina)	Group III
	Dr K. Radhakrishnan (India)	Group IV
	Professor Amor El Abed (Tunisia)	Group V

Other members of the Executive Council

Electoral group I:	Belgium France Spain	Canada Germany Turkey	Finland Italy USA
Electoral group II:	Ukraine		
Electoral group III	Brazil Cuba Mexico	Chile Ecuador Peru	Colombia Jamaica
Electoral group IV:	Australia Iran (Islamic Rep. of) Philippines	China Japan Rep. of Korea	Indonesia Malaysia
Electoral group V:	Algeria Kenya South Africa	Egypt Nigeria Unit. Rep. of Tanzania	Gabon Senegal

B — MEMBER STATES OF THE COMMISSION (129)

(as of 30 June 2003)

AFGHANISTAN	(11 March 1991)	LEBANON	(Oct. 1962/Jun. 1964)
ALBANIA	(26 January 1993)	LIBYAN ARAB JAMAHIRIYA	(11 March 1974)
* ALGERIA	(Jul. 1964/Nov. 1965)	MADAGASCAR	(Dec. 1965/Oct. 1967)
ANGOLA	(26 October 1982)	* MALAYSIA	(Jul. 1964/Nov. 1965)
* ARGENTINA	(Before November 1961)	MALDIVES	(20 May 1987)
* AUSTRALIA	(Before November 1961)	MALTA	(Oct. 1969/Nov. 1971)
AUSTRIA	(Oct. 1962/Jun. 1964)	MAURITANIA	(Before November 1961)
AZERBAIJAN	(27 January 1998)	MAURITIUS	(Oct. 1969/Nov. 1971)
BAHAMAS	(29 January 1979)	* MEXICO	(Before November 1961)
BANGLADESH	(29 October 1982)	MONACO	(Before November 1961)
BARBADOS	(18 December 1985)	MOROCCO	(Before November 1961)
* BELGIUM	(Before November 1961)	MOZAMBIQUE	(08 April 1981)
BELIZE	(22 September 1995)	MYANMAR	(07 June 1988)
BENIN	(23 October 1986)	NAMIBIA	(25 April 2001)
* BRAZIL	(Before November 1961)	NETHERLANDS	(Before November 1961)
BULGARIA	(Oct. 1967/Dec. 1969)	NEW ZEALAND	(Nov. 1961/Sep. 1962)
CAMEROON	(Nov. 1971/Nov. 1973)	NICARAGUA	(17 November 1977)
* CANADA	(Before November 1961)	* NIGERIA	(Nov. 1971/Nov. 1973)
CAPE VERDE	(20 August 1984)	NORWAY	(Before November 1961)
* CHILE	(Before November 1961)	OMAN	(16 November 1982)
* CHINA	(Before November 1961)	PAKISTAN	(Before November 1961)
* COLOMBIA	(Oct. 1967/Dec. 1969)	PANAMA	(Oct. 1967/Sep. 1969)
COMOROS	(08 February 2000)	* PERU	(Dec. 1965/Oct. 1967)
CONGO	(Nov. 1961/Sep. 1962)	* PHILIPPINES	(Oct. 62/Jun. 1964)
COSTA RICA	(28 February 1975)	POLAND	(Before November 1961)
CÔTE D'IVOIRE	(Before November 1961)	* PORTUGAL	(Oct. 1969/Nov. 1971)
CROATIA	(24 December 1992)	QATAR	(20 July 1976)
* CUBA	(Before November 1961)	* REPUBLIC OF KOREA	(Before November 1961)
CYPRUS	(05 December 1977)	ROMANIA	(Before November 1961)
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	(31 October 1978)	* RUSSIAN FEDERATION	(Before Nov. 1961)
DENMARK	(Before November 1961)	SAINT LUCIA	(14 September 1992)
DOMINICA	(21 September 1999)	SAMOA	(10 April 1978)
DOMINICAN REPUBLIC	(Before November 1961)	SAUDI ARABIA	(14 June 1978)
* ECUADOR	(Before November 1961)	* SENEGAL	(Oct. 1967/Sep. 1969)
* EGYPT	(Oct. 1969/Nov. 1971)	SEYCHELLES	(27 February 1979)
EL SALVADOR	(16 February 1993)	SIERRA LEONE	(19 April 1974)
ERITREA	(12 November 1993)	SINGAPORE	(Dec. 1965/Oct. 1967)
ESTONIA	(10 March 1992)	SLOVENIA	(16 June 1994)
ETHIOPIA	(05 March 1976)	SOLOMON ISLANDS	(11 May 1982)
FIJI	(09 July 1974)	SOMALIA	(10 July 1974)
* FINLAND	(Before November 1961)	* SOUTH AFRICA	(Oct. 1967/Sep. 1969)
* FRANCE	(Before November 1961)	* SPAIN	(Before Nov. 1961)
* GABON	(26 October 1977)	SRI LANKA	(Jun. 76/Jan. 1977)
GAMBIA	(30 August 1985)	SUDAN	(26 August 1974)
GEORGIA	(09 July 1993)	SURINAM	(21 January 1977)
* GERMANY	(Before November 1961)	SWEDEN	(Jul. 1964/Nov. 1965)
GHANA	(Before November 1961)	SWITZERLAND	(Before Nov. 1961)
GREECE	(Oct. 1962/Jun. 1964)	SYRIAN ARAB REPUBLIC	(Oct. 1969/Nov. 1971)
GUATEMALA	(Dec. 1965/Oct. 1967)	THAILAND	(Before Nov. 1961)
GUINEA	(01 May 1982)	TOGO	(22 October 1975)
GUINEA-BISSAU	(26 January 1984)	TONGA	(03 January 1974)
GUYANA	(20 July 1977)	TRINIDAD & TOBAGO	(Oct. 1967/Sep. 1969)
HAITI	(23 March 1976)	* TUNISIA	(Before Nov. 1961)
ICELAND	(Oct. 1962/Jun. 1964)	* TURKEY	(Nov. 1961/Sep. 1962)
* INDIA	(Before November 1961)	* UKRAINE	(Nov. 1961/Sep. 1962)
* INDONESIA	(Oct. 1962/Jun. 1964)	UNITED ARAB EMIRATES	(02 June 1976)
* IRAN, Islamic Republic of	(03 June 1975)	* UNITED KINGDOM OF GREAT BRITAIN & NORTHERN IRELAND	(Before Nov. 1961)
IRAQ	(Oct. 1969/Nov. 1971)	* UNITED REPUBLIC OF TANZANIA	(Oct. 1967/Sep. 1969)
IRELAND	(07 November 1978)	* UNITED STATES OF AMERICA	(Before Nov. 1961)
ISRAEL	(Before November 1961)	URUGUAY	(Before Nov. 1961)
* ITALY	(Before November 1961)	VENEZUELA	(Oct. 1962/Jun. 1964)
* JAMAICA	(Oct. 1967/Dec. 1969)	VIET NAM	(Before Nov. 1961)
* JAPAN	(Before November 1961)	YEMEN	(22 May 1960)
JORDAN	(06 April 1975)		
* KENYA	(Nov. 1971/Nov. 1973)		
KUWAIT	(13 November 1974)		

MEMBERS OF THE EXECUTIVE COUNCIL ARE INDICATED WITH AN ASTERISK

ANNEX X

LIST OF DOCUMENTS

Document Code	Title	Agenda Items	Languages available
WORKING DOCUMENTS			
IOC-XXII/1 prov. rev. 2	Second Revised Provisional Agenda	2.1	E F R S
IOC-XXII/1 Add. prov. rev.2	Second Revised Provisional Timetable	2.4	E only
IOC-XXII/2	Action Paper	2.1	E F R S
IOC-XXII/2 Annex 1	Report by the IOC Executive Secretary on Programme Implementation	3.2	E F R S
IOC-XXII/2 Annex 1 Add. 1	SISTER Statistical Report on Follow-up Qualitative Report for the IOC	3.2	E F R S
IOC-XXII/2 Annex 1 Add. 2	Implementation of IOC Governing Bodies Resolutions	3.2	E F R S
IOC-XXII/2 Annex 2	Progress Report on Budget Execution (2000—2001, & 2002)	3.2	E F R S
IOC-XXII/2 Annex 3	Draft Programme and Budget 2004–2005 (draft 32 C/5)	3.4 & 5.1	E F R S
IOC-XXII/2 Annex 4	Medium Term Strategy for IOC (2004–2007)	4.1.1	E F R S
IOC-XXII/2 Annex 5	Result of Consultation of Member States on Resolution XXI-5	4.1.2	E F R S
IOC-XXII/2 Annex 6 rev.	Revised Draft Guidelines for the Establishment of Decentralized Offices	4.1.3	E F R S
IOC-XXII/2 Annex 7	Feasibility of Establishing a Regular Process for the Assessment of the State of the Marine Environment	4.1.5	E F R S
IOC-XXII/2 Annex 8	Follow up of Key Recommendations of the External Evaluation	4.1.6	E F R S
IOC-XXII/2 Annex 9	Main Lines of the GCOS Second Report on the Adequacy of the Global Observing System for Climate in Support of the UNFCCC	4.4.3	E F R S
IOC-XXII/2 Annex 10	GLOSS Adequacy Report	4.4.5	E F R S
IOC-XXII/2 Annex 11	Terms of Reference of a new Agreement between IOC and the Permanent Commission for the South Pacific (CPPS)	4.5.4	E F R S
IOC-XXII/2 Annex 12 rev.	Revised Draft IOC Criteria and Guidelines on the Transfer of Marine Technology	4.6.1	E F R S
IOC-XXII/2 Annex 13	A Strategy for Remote Sensing	4.7.2	E F R S
IOC-XXII/2 Annex 14	Draft Information Strategy	4.7.3	E F R S
IOC-XXII/3 prov.	Draft Summary Report	6.	E F R S
IOC-XXII/4 prov.	Provisional List of Documents	2.4	E F R S
IOC-XXII/5 prov.	Provisional List of Participants	—	E/F/S

Document Code	Title	Agenda Items	Languages available
IOC-XXII/6	Draft Biennial Report of the Commission on its Activities, 2001–2002	3.3	E F R S
IOC-XXII/Supplementary item 1	IOC activities in the Caspian Sea	4.5.5	E F R S
IOC-XXII/Supplementary item 2	Activities of SCOR relevant to the IOC	4.2.4	E F R S
IOC-XXII/Supplementary item 3	Draft Memorandum of Understanding between UNEP and IOC concerning the relation between UNEP's Regional Seas Programme and GOOS	4.4.1.2	E F R S
REPORTS OF IOC AND CO-OPERATIVE BODIES REQUIRING ACTION			
IOC/EC-XXXVI/3	Summary Report of the Thirty-Sixth session of the Executive Council, Paris, 23 June 2003	2.1	E F R S
IOC/IPHAB-VI/3s	Executive Summary Report of the Sixth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, St. Petersburg, FL, USA, 17–19 October 2002	4.2.3	E F R S
IOC/IODE-XVII/3s	Executive Summary Report of the 17 th Session of the IOC Committee on International Oceanographic Data and Information Exchange, Paris, France, 3–7 March 2003	4.3.3	E F R S
IOC-WMO-UNEP/I-GOOS-VI/3s	Executive Summary Report of the sixth Session of the Intergovernmental Committee for the Global Ocean Observation System, Paris, 10–14 March 2003	4.4.1.1	E F R S
IOCINCWIO-V/3s	Summary Report of the Fifth Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Nairobi, 23–26 September 2002	4.5.1	E F R S
IOC/SC-WESTPAC-V/3	Summary Report of the Fifth Session of the Sub-Commission for the Western Pacific, Fremantle, 26–30 August 2002	4.5.2	E only
IOC/ABE-LOS-III/3	Report of the Third Meeting of the Advisory Body of Experts on the Law of the Sea (ABE-LOS), Lisbon, 12–15 May 2003	4.6.1	E
IOC/INF-1175	Report of the 2nd Session of the Working Group on IOC Oceanographic Data Exchange Policy	4.3.2	E F S R
IOC/INF-1180	Terms of Reference of the Programme Elements in Ocean Science	4.2.2	E F S R
IOC/INF-1184	The UNESCO Bilko Learning Project in Remote-Sensing	4.7.2	E only
IOC/INF-1185	Review of the Structure of the Global Ocean Observing System (GOOS): Final Report	4.4.2	E F R S
INFORMATION AND OTHER REFERENCE DOCUMENTS			
IOC-XXI/3	Summary Report of the Twenty-first Session of the IOC Assembly, Paris, 9–13 July 2001	–	E F R S

Document Code	Title	Agenda Items	Languages available
IOC/EC-XXXV/3	Summary Report of the Thirty-fifth Session of the IOC Executive Council, Paris, 4–14 June 2002	–	E F R S
United Nations document A/RES/57/141	UN Resolution on Oceans and the Law of the Sea	3.2	E F R S
United Nations document A/57/80	Oceans and the law of the sea – Report on the work of the United Nations Open-ended Informal Consultative Process established by the General Assembly in its resolution 54/33 in order to facilitate the annual review by the Assembly of developments in ocean affairs at its third meeting	3.2	E F R S
165 EX/29 Add.	Financial report and audited financial statements of UNESCO for the period ended 31 December 2001 and report by the External Auditor	4.1.7	E F R S
IOC/IODE-XVII/14	IOC Oceanographic Data Exchange Policy: Status Report	4.3.3	E only
IOC/IODE-XVII/35	IOC Strategic Plan for Oceanographic Data and Information Management	4.3.1	E only
IOC/INF-1169	The African Process	4.5.3.1	E F
IOC/INF-1187	IODE Project Office Business Plan	4.3.4	E (<i>Executive Summary in F R S</i>)
IOC/INF-1190 & corr.	A Report on the Status of the GLOSS Programme and a Proposal for Taking the Programme Forward	4.4.5	E only
IOC/INF-1189	Report of the POGO–IOC–SCOR Initiative for Intelligent Use and Management of the Oceans	4.7.1	E only
IOC/INF-785	IOC Manual	–	E
IOC/INF-1148	IOC Statutes, November 1999	–	E/F/S/R
IOC/INF-1166	IOC Rules of Procedure, July 2001	–	E/F/S/R
IOC-XXII/Inf.1	Guidelines for Participants	–	E only
IOC-XXII/Inf.2	Presentation and Abstracts of A. Bruun and N.K. Panikkar Memorial lectures, 2003	–	E F R S
IOC-XXII/Inf.3	Amendments suggested by France to the Proposed Text on IOC Oceanographic Data Exchange Policy	4.1.3	E only
IOC-XXII/Inf.4	Training and Technology Transfer in Africa for the Implementation of Article 76 of UNCLOS	4.7.4	E F

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IX. AWARDS

Prof. Dr G. Hempel
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Mexico

Mr A. Alexiou
USA

Mr W. Nowlin
USA

Prof. K. Taira
Japan (in absence)

ANNEX XII

LIST OF ACRONYMS

AARSE	African Association of Remote Sensing of the Environment
ACC	Administrative Committee on Co-ordination [<i>New name: United Nations System Chief Executives Board for Co-ordination (CEB). A UN Committee</i>]
ACMAD	African Centre of Meteorological Applications for Development
ADB	African Development Bank
AFRICAGIS	Africa's foremost event on GIS technology and its applications (every two years)
ALD	Appointment of limited duration/UNESCO
AMCEN	African Ministerial Conference on the Environment
Argo	Array for Real-time Geostrophic Oceanography (GODAE global profiling float project)
Black Sea GOOS-ARENA Project	A Regional Capacity-Building and Networking Programme to Upgrade Monitoring and Forecasting Activity in the Black Sea Basin
BREDA	UNESCO Regional Bureau for Education in Africa
CASPAS	Integrated Programme on Hydrometeorology and Monitoring of Environment in the Caspian Sea Region
CASPCOM	Co-ordinating Committee on Hydrometeorology and Pollution Monitoring of the Caspian Sea
CEOS	Committee on Earth Observing Satellites - European Commission
CLIVAR	Climate Variability and Predictability
CNES	Centre national d'études spatiales/France
CoML	Census of Marine Life
COOP	Coastal Ocean Observations Panel
COP	Conference of the Parties
CPPS	Permanent Commission for the South Pacific
DBCP	Data Buoy Co-operation Panel
DNA	Designated National Agency
DOALOS	UN Department of Ocean Affairs and the Law of the Sea
ECONEPAD	Environment Component of NEPAD
EEZ	Exclusive Economic Zone
ESA	European Space Agency
ETDMP	Expert Team on Data Management Practices
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EuroGOOS	European Regional GOOS/IOC
FAO	Food and Agriculture Organisation of the United Nations
FWIS	Future Information System/WMO
GCOS	Global Climate Observing System
GE-BCDMEP	Group of Experts on Biological and Chemical Data Management Exchange Programme
GEF	Global Environment Facility/World Bank-UNEP-UNDP
GEOHAB	Global Ecology and Oceanography of Harmful Algal Blooms
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GETADE	Group of Experts on Technical Aspects of Data Exchange
GIS	Geographic Information System

GLOBEC	Global Ocean Ecosystem Dynamics Programme/SCOR-IGBP-IOC
GLOSS	Global Sea Level Observing System Programme/IOC
GLOSS-OC	GLOSS Ocean Circulation/IOC
GMA	Global Marine Assessment
GODAE	Global Ocean Data Assimilation Experiment
GOOS	Global Ocean Observing System/IOC-WMO-UNEP
GOOS-AFRICA	African Global Ocean Observing System
GOSUD	Global Ocean Surface Underway Profile Programme
GPO	GOOS Project Office/IOC
GPS	Global Positioning System
GRAND	GOOS Regional Alliances Network Development
GRA	GOOS Regional Alliance
GSC	GOOS Steering Committee
HAB	Harmful Algal Blooms
IAEA	International Atomic Energy Agency
IASPEI	International Association of Seismology and Physics of the Earth's Interior
IBCWP	International Bathymetric Chart of the Western Pacific
ICAM	Integrated Coastal Area Management Programme/IOC
ICES	International Council for the Exploration of the Sea
ICL	International Consortium on Landslides
ICP	Informal Consultative Process
ICSPRO	Inter-secretariat Committee on Scientific Programmes Relating to Oceanography
ICSU	International Council for Science
IGCP	International Geoscience Programme
I-GOOS	Intergovernmental Committee for GOOS/IOC-WMO-UNEP
IHP	Intergovernmental Council of the International Hydrological Programme/UNESCO
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research Project /SCOR-IGBP
IMO	International Maritime Organisation
INSA	Indian National Science Academy
IOC	Intergovernmental Oceanographic Commission/UNESCO
IOC/ABE-LOS	IOC Advisory Body of Experts on the Law of the Sea
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IOCEA	IOC Regional Committee for the Central Eastern Atlantic
IOCINCWIO	IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean
IOCINDIO	IOC Regional Committee for the Central Indian Ocean
IOCWIO	IOC Regional Committee for the Western Indian Ocean [<i>ex IOCINCWIO</i>]
IODE	International Oceanographic Data and Information Exchange/IOC
IOGOOS	Indian Ocean GOOS/IOC
IOI	International Ocean Institute
IPHAB	IOC Intergovernmental Panel on Harmful Algal Blooms
IPO	International Project Office
ITC	International Institute for Geo-Information Science and Earth Observation/ The Netherlands
IUGG	International Union of Geodesy and Geophysics
IUGS	International Union of Geological Sciences
IWG	Intergovernmental Working Group

JCOMM	IOC–WMO Joint Technical Commission for Oceanography and Marine Meteorology
MAB	International Co-ordinating Council of the Programme on Man and the Biosphere/UNESCO
MAB	Programme on Man and the Biosphere/UNESCO
MASMA	Marine Science for Management
MEDI	Marine Environmental Data Inventory
MLA	Main Lines of Action
MOST	Management of Social Transformations and Capacity-Building Unit
MOST	Secretariat of the Management of Social Transformations Programme
MOU	Memorandum of Understanding
MSR	Marine scientific research
NASA	US National Aeronautics and Space Administration
NEAR–GOOS	North-East Asian Regional GOOS
NEPAD	New Partnership for Africa's Development
NOAA	US National Oceanic and Atmospheric Administration
NODC	National Oceanographic Data Centre
NORSEPP	North Sea Ecosystem Pilot Project/ICES–EuroGOOS
NOWPAP	Northwest Pacific Action Plan/UNEP
OAU	Organization of African Unity
ODIN	Oceanographic Data and Information Network
ODINAFRICA	Ocean Data and Information Network for Africa/IOC
ODINCARSA.	Ocean Data and Information Network for the Caribbean and South America Regions/IOC
ODINCINDIO	ODIN for the IOCINDIO region/IOC
OIT	Ocean Information Technology Pilot Project
ONR	US Office of Naval Research
OOPC	Ocean Observations Panel for Climate
OOSDP	Ocean Observing Systems Development Panel
OPeNDAP	Open-source Project for a Network Data Access Protocol (both the name of a non-profit organisation and the name of the protocol which the OPeNDAP organisation has developed)
OTEC	Ocean Thermal Energy Conversion
PACSICOM	Pan-African Conference on Sustainable Integrated Coastal Management
PICES	North Pacific Marine Science Organization
PICHTR	Pacific International Center For High Technology Research
PIRATA	Pilot Research Moored Array in the Tropical Atlantic
POGO	Partnership for Observation of the Global Oceans
RG	Real Growth Scenario
RNODC	Responsible National Oceanographic Data Centre
ROOFS–AFRICA	Regional Ocean Observing and Forecasting System for Africa
ROSTA	Regional Office for Science and Technology for Africa
RRG	Reduced Real Growth [budgetary scenario]
RSP	UNEP's Regional Seas Programme
SAP	System Applications and Products
SBSTA	Subsidiary Body for Scientific and Technological Advice/UNESCO
SCOR	Scientific Committee on Oceanic Research
SEAGOOS	South-East Asian Regional GOOS
Seasat	Earth satellite dedicated to oceanographic applications/USA
SeaWiFS	Sea-Viewing, Wide-Field-of-View Sensor/USA
SISTER	System of Information on Strategies, Tasks and the Evaluation of Results

SOC	Southampton Oceanography Centre/UK
SOCA	ACC Sub-Committee on Oceans and Coastal Areas
SOOP	Ship-of-Opportunity Programme/IOC–WMO
STRC	Scientific, Technical and Research Commission/OAU
TMT	Transfer of marine technology
TTR	Training-Through-Research
TWAS	Third World Academy of Sciences
UK	United Kingdom
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNIDO	United Nations Industrial Development Organisation
US NSF	US National Science Foundation
USA	United States of America
VOS	Vessel of Opportunity/WMO
WDC	World Data Centre
WESTPAC	IOC Sub-Commission for the Western Pacific
WHO	World Health Organisation
WIOMAP	Western Indian Ocean Marine Applications Project
WIOMSA	Western Indian Ocean Marine Science Association
WOCE	World Ocean Circulation Experiment
WSSD	World Summit on Sustainable Development
XML	Extensible Mark-up Language
ZNG	Zero Nominal Growth [budgetary scenario]