

Intergovernmental Oceanographic Commission
Reports of Governing and Major Subsidiary Bodies



**IOC Sub-Commission
for the Western Pacific**

Fifth Session

Fremantle, Australia

9 – 13 September 2002

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TABLE OF CONTENTS

SUMMARY REPORT	page
1. OPENING.....	1
2. ADMINISTRATION.....	2
2.1 ADOPTION OF THE AGENDA.....	2
2.2 DESIGNATION OF RAPPORTEUR FOR THE SESSION.....	2
2.3 CONDUCT OF THE SESSION.....	2
3. REPORT ON INTERSESSIONAL ACTIVITIES AND PROGRAMME EVALUATION.....	3
3.1 REPORT ON INTERSESSIONAL ACTIVITIES.....	3
3.1.1 Follow-up to Recommendations of SC-WESTPAC-IV.....	3
3.1.2 Fifth IOC/WESTPAC Scientific Symposium.....	3
3.1.3 IOC Global Programme Activities.....	4
3.1.4 Joint Activities with other agencies or programmes.....	4
3.1.5 Operation of the IOC Regional Secretariat for the Western Pacific.....	5
3.1.6 Budget Overview.....	5
3.2 THE UNESCO EXTERNAL EVALUATION OF IOC.....	6
3.3 RECENT DEVELOPMENTS WITHIN IOC AND UNESCO RELEVANT TO WESTPAC.....	6
3.3.1 Cross-cutting Projects.....	6
3.3.2 General Policy Considerations.....	6
4. REVIEW OF PROGRAMMES AND PROJECTS FOR 1999-2002.....	7
4.1 SCIENCE.....	7
4.1.1 OSLR.....	7
4.1.2 OSNLR.....	7
4.1.3 Marine Pollution Research and Monitoring.....	8
4.1.4 Ocean Dynamics and Climate.....	8
4.1.5 Remote Sensing for ICAM.....	9
4.1.6 Gulf of Thailand Cooperative Study.....	9
4.2 GLOBAL OCEAN OBSERVING SYSTEM.....	9
4.2.1 NEAR-GOOS.....	9
4.2.2 SEAGOOS.....	10
4.2.3 PacificGOOS.....	11

	page
4.3 OCEAN SERVICES	12
4.3.1 International Bathymetric Chart of the Western Pacific (IBCWP).....	12
4.3.2 International Oceanographic Data and Information Exchange (IODE) – Activities of the RNODC and GODAR WESTPAC.....	12
5. TEMA.....	12
5.1 REGIONAL GRADUATE SCHOOL OF OCEANOGRAPHY	12
5.2 POGO SCHOLARSHIP PROGRAMME.....	13
6. MEETING THE NEEDS OF OCEAN-RELATED CONVENTIONS AND PROGRAMMES	13
7. CO-OPERATION WITH OTHER ORGANIZATIONS.....	14
7.1 ORGANIZATIONS AND PROGRAMMES OF THE UN SYSTEM	14
7.1.1 UNEP	14
7.1.2 GEF 14	
7.1.3 WMO	14
7.2 REGIONAL ORGANIZATIONS/PROGRAMMES AND OTHERS.....	14
7.2.1 PICES	14
7.2.2 SEA START RC	15
7.2.3 APN 15	
7.2.4 SOPAC	15
7.2.5 OTHERS, INCLUDING NGOs	15
8. REFORM OF PROGRAMME AND PROJECT STRUCTURE	15
9. PROGRAMME AND WORKPLAN FOR 2002-2004	17
9.1 IMPLICATIONS OF A REVISED PROGRAMME STRUCTURE.....	17
9.2 PROGRAMME AND BUDGET FOR 2002 – 2004: WESTPAC ACTION PLAN	18
10. OTHER MATTERS	18
11. ELECTIONS.....	19
12. DATE AND PLACE OF THE NEXT SESSION	19
13. ADOPTION OF REPORT AND RECOMMENDATIONS	19
14. CLOSURE.....	19

ANNEXES

- I AGENDA
- II RECOMMENDATIONS
- III LIST OF DOCUMENTS
- IV LIST OF PARTICIPANTS
- V TERMS OF REFERENCE FOR WESTPAC V INTERSESSIONAL WORKING GROUP
ON STRUCTURE AND MODUS OPERANDI
- VI LIST OF ACRONYMS

1. OPENING

1 The Chairperson of the IOC Sub-Commission for the Western Pacific, Professor Keisuke Taira called the Fifth Session of the Sub-Commission to order at 10:00 on Monday, 9 September 2002, in Fremantle, Australia and extended a warm welcome to the delegates from the Member States and representatives from various intergovernmental and non-governmental agencies.

2 In his address, Prof. Taira alluded to the Co-operative Study of the Kuroshio, which marked the beginning of WESTPAC collaboration in 1965. It was not until 1989 that the IOC/WESTPAC Sub-Commission was established. WESTPAC aims to develop, promote and facilitate international oceanographic research programs in the region, to establish operational regional components of a global ocean observing system, to develop educational and training programs, and to share oceanographic data and information, and oceanographic knowledge. At the three yearly session, the Sub-Commission reviews the progress made in the various programmes over the previous years, in particular the Fifth IOC/WESTPAC International Scientific Symposium and GOOS.

3 He finally thanked the Government of Western Australia and the many sponsoring agencies that supported this event. He also thanked the Thai Government for the continuous support in hosting the IOC/WESTPAC Secretariat and invited the next speaker to address the meeting.

4 Mr. Mark McGowan, Parliamentary Secretary to the Premier of Western Australia and Minister welcomed the participants to the cities of Fremantle and Perth. Western Australia is renown for the naval base, the oil and gas industry, sailing, tourism and the rich maritime history. He commended the foresight of the IOC to establish a Regional Programme Office in Perth in 1999, and the significant role it played in attracting scientists from all over the world to the region.

5 The third speaker, the Honourable Dr. Sharman Stone, Parliamentary Secretary to the Minister of Environment and Heritage, referred to significance of the oceans to Australia, and noted the various threats to and the still poor understanding of the oceans – a common heritage to all. There was clearly a challenge for the scientific community to deal with all these aspects. She concluded by wishing the Sub-Commission success in the deliberations.

6 On behalf of the IOC and the Director General of UNESCO, Dr. Patricio Bernal, Executive Secretary IOC thanked the Australian Government for hosting the meeting and extended special thanks to the local organizers for the preparations of this event. He reflected on the outcome of the World Summit of Sustainable Development, held in Johannesburg the previous weeks, and suggested that the success of the meeting can only be judged by the actions that will take place in the years to come. In this regard, he noted that the plan of action, Agenda 21, adopted at the previous summit, the UNCED in Rio, ten years earlier had inspired the development of GOOS, ultimately changing the face of the science of the oceans with the advent of remote sensing, the deployment of Argo floats, the Global Ocean Data Assimilation Experiment (GODAE) and other global partnerships. Partnerships also took centre stage at the WSSD, with governments – Australia a good example – international agencies, NGOs and the private sector assuming their responsibility in making such partnerships a success.

7 He emphasized the need to infuse a new dynamism and impetus in the Sub-Commission and invited the Member States to put their energy in WESTPAC activities accordingly. He concluded by wishing the meeting a fruitful week.

8 Dr. John Zillman concluded the series of opening addresses by welcoming the delegates to Australia on behalf of the National Commission for UNESCO and the committee of Heads of Marine Agencies (HOMA) that, with 16 members, acts as a platform for bringing the various Australian marine interests together. In his capacity of President of the World Meteorological Organization, he further valued the cooperation with the IOC in the stewardship of the common environment, and commented on the important coordinating role that the IOC had to play.

9 He noted the significant challenge that the Sub-Commission faces. Recognising the limited resources, the Sub-Commission has to find ways to carry out programmes that are beneficial to the region, to ensure that WESTPAC focused on those programmes that are most important, and that the Member States decide how the limited resources should be spent.

10 In concluding, Dr. Zillman acknowledged the role that the IOC Regional (Perth) Programme Office had played in attracting a large number of conferences to the region. On behalf of HOMA, he acknowledged the support of the Permanent Delegation of Australia to UNESCO and Dr. Angus McEwan in the preparations for this meeting. He congratulated the Chairperson for his guidance over the past two intersessional periods and expressed his wish that the meeting will be successful.

2. ADMINISTRATION

2.1 ADOPTION OF THE AGENDA

11 The Technical Secretary for the Session, Mr. Maarten Kuijper, introduced the agenda item referring to document IOC/SC-WESTPAC-V/2 prov., the Annotated Provisional Agenda. **The Sub-Commission adopted the Agenda**, as given in Annex I.

2.2 DESIGNATION OF RAPPORTEUR FOR THE SESSION

12 **The Sub-Commission accepted** the proposal of the Republic of Korea, seconded by Thailand to designate Mr. Wenxi Zhu, China to serve as Rapporteur for the Session.

2.3 CONDUCT OF THE SESSION

13 The Technical Secretary introduced the Provisional Timetable (Document IOC/SC-WESTPAC-V/1.Add.Prov.) and the Provisional List of Documents (Document IOC/SC-WESTPAC-V/4.Prov.) and Information sheet for participants (Document IOC/SC-WESTPAC-V/Inf. 1). **The Session adopted** the Provisional Timetable and List of Documents. The List of Documents is given in Annex IV, the List of Participants in Annex V and the List of Acronyms in Annex VIII.

14 He further drew the attention of the meeting to the information session in the Agenda, and expressed his hope that the presentations would encourage discussion on the future work-plan. In this regard, he also pointed out that an ad hoc Sessional Drafting Groups may be formed to deal with specific questions arising from the discussion of particular agenda items.

3. REPORT ON INTERSESSIONAL ACTIVITIES AND PROGRAMME EVALUATION

3.1 REPORT ON INTERSESSIONAL ACTIVITIES

3.1.1 Follow-up to Recommendations of SC-WESTPAC-IV

15 The Chairperson introduced the Agenda Item referring to Document IOC/SC-WESTPAC-V/6 and requested the Technical Secretary to report. The Technical Secretary reported that all the recommendations of the Fourth Session of the IOC/WESTPAC Sub-Commission, subsequently adopted at the Twentieth Session of the Assembly of the IOC, had been fully or partially implemented.

16 He noted the Memorandum of Cooperation between the IOC and SEA START Regional Centre (RC) to be signed on the occasion of this Session. He thanked the Republic of Korea for the excellent organization of the Fifth WESTPAC International Scientific Symposium, held in Seoul, 27-31 August 2001. Another significant event was the International Conference on the International Oceanographic Data and Information in the Western Pacific 1999 (ICIWP99), successfully held in Langkawi, Malaysia from 1-4 November 1999. He noted the support of Member States as evidenced through the active participation in the co-ordination and implementation of ongoing and new national and international programmes, in particular the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM).

17 The Technical Secretary then reported briefly on the implementation of the work plan and the follow-up to the Graduate School Initiative and referred to the more elaborate reports to be given by the project leaders, programme coordinators or representatives under separate agenda items.

18 The representative from the WMO highlighted the close cooperation between the WMO and IOC in global programme activities, particularly JCOMM, which was formally established in 1999 by the Thirteenth WMO Congress and the Twentieth Session of the IOC Assembly, through a merger of the former WMO Commission for Marine Meteorology and the IOC/WMO Committee for IGOS. JCOMM is charged with the international coordination, regulation and management of an integrated, operational oceanographic observing, data management and services system which will become the ocean equivalent of the World Weather Watch. It is the primary implementation mechanism for a substantial part of GOOS (Agenda Item 4.2) and thus also directly supports much of the work being undertaken within WESTPAC.

3.1.2 Fifth IOC/WESTPAC Scientific Symposium

19 Acknowledging the kind support from the Republic of Korea, Prof. Keisuke Taira introduced Dr. Hyung Tack Huh, Chairperson of the Scientific Steering Committee of the Symposium. Dr. Huh briefed the Sub-Commission on the Fifth IOC/WESTPAC Scientific Symposium that was successfully organized in Seoul, Republic of Korea, 27-31 August 2001 at Hoam Faculty House, Seoul National University. More than 240 scientists attended the Symposium from 18 countries from both inside and outside the WESTPAC region. Eighty scientific papers were presented in both plenary and parallel sessions. Several workshops and side meetings were convened during the workshop. The proceedings have been published on CD-ROM. An extended book of abstracts with summaries of the various side meetings and workshops will be published as an IOC Workshop Report.

20 A discussion ensued on the format, regional representation and themes of these Symposia. The Executive Secretary expressed his appreciation of the Scientific Symposia carried out under the WESTPAC Sub-Commission and considered their prime functions as a leverage mechanism for upgrading the common understanding on the projects and programmes carried out in the region. Another participant however commented that the time available to really discuss the programmes is limited, and suggested to allocate more time for such discussions in future symposia.

21 Following the report, the Chairperson invited the meeting to set up a small *ad hoc* sessional working group for the discussion of the theme, financial support, date and place of next symposium. Prof. Zhouwen Yu of the People's Republic of China volunteered to chair the working group and was requested to report the outcome of their deliberations to the Sub-Commission under Agenda item 9.2.

3.1.3 IOC Global Programme Activities

22 The Chairman, Prof. Taira, introduced this Agenda Item and made reference to the Report on Intersessional Activities.

23 The Technical Secretary then provided details of the implementation of regional components of IOC global programmes. Scientists from the WESTPAC region have participated in and provided scientific inputs to the global programmes of the IOC proper as well as those programmes of which it is one of the main supporters. This has significantly helped the implementation of IOC programme activities in the region and globally, for instance within the context of the GEO-HAB programme, GLOBEC, CLIVAR and the Global Ocean Observing System (GOOS). He left the programmes on IODE, IBCWP, SEAGOOS and NEARGOOS to be covered under the presentations of the respective project leaders under Agenda Item 4.

24 He noted with concern that the established lines of communication between the global and the regional programmes do not seem to work well. The Executive Secretary elaborated on this by explaining the governing structure of the IOC and how it attempts to articulate the regional programmes on the one hand and the global programmes on the other hand. He further noted that in collaborating with global and regional programmes, it is necessary to consider whether the relation is mutually reinforcing. Duplication of efforts and competition for resources should be avoided. There is also a need to instil a sense of ownership of the programmes on the part of the Member States of the Sub-Commission.

3.1.4 Joint Activities with other agencies or programmes

25 The IOC supports a number of activities in the region that are not part of the work-plan. This is often a result of requests to the IOC to co-sponsor particular activities. The Technical Secretary informed the meeting about the Rapid Assessment of Marine Pollutants Workshop in Hanoi, Vietnam, 1999, funded by DFID; the SCOPE workshop on Land-Ocean Nutrient Fluxes held in Nha Trang, Vietnam, in September 2000; the IOC-Census of Marine Life Workshop on Marine Biodiversity in Southeast Asia, held in October 2001 in Phuket, Thailand; and the Coastal Zone Asia Pacific Conference, held in Bangkok, May 2002. A presentation on the Census of Marine Life Workshop is planned in the presentation session.

26 Other types of programme are carried out in the region in response to agreements that exist between the IOC and other organizations. In this regard, the Technical Secretary highlighted the collaboration with the North-western Pacific Action Plan, NOWPAP, a Regional Seas Programme

of UNEP. IOC/WESTPAC organized two back-to-back expert meetings in Beijing, China, in May 2001, that discussed a plan of action for NOWPAP to foster international cooperation in marine environmental protection in the region. The meetings led to the establishment of specific work-plans for the so-called regional activity centres (RACs) that are located in Toyama, Beijing, Vladivostok and Taejon, respectively. Close collaboration between NOWPAP and IOC/WESTPAC is foreseen in areas of its competence. There are also activities or programmes carried out by the WESTPAC Secretariat in collaboration with other sectors of the UNESCO programme.

27 Responding to a question from Dr. Angus McEwan on the nature of these programmes vis-à-vis the IOC/WESTPAC work-plan, the Executive Secretary of IOC explained how these seemingly unconnected activities become part of the work of the IOC Secretariat. Dr. Angus McEwan suggested that such activities should be better communicated to the Member States. He proposed to further discuss the linkage and reporting mechanisms of the Secretariat and the Sub-Commission under Agenda Item 8.

3.1.5 Operation of the IOC Regional Secretariat for the Western Pacific

28 At the invitation of the Chairperson, the Executive Secretary explained about the current situation in the IOC/WESTPAC Secretariat. Since its establishment in November 1994, the Regional Secretariat has continued to function with the generous support from the Royal Thai Government through the National Research Council of Thailand. The Regional Secretariat could also count on support from the UNESCO Bangkok Office, which takes care of many administrative matters.

29 The staff consists of Dr. Shigeki Mitsumoto, who occupies a UNESCO post as a Programme Specialist in Marine Sciences, and Mr. Maarten Kuijper, who until July 1999 had worked as an Associate Expert funded through the Dutch Government, and who currently held a temporary UNESCO post of Assistant Programme Specialist, paid for with extrabudgetary support. The Executive Secretary hoped that the IOC would be able continue this level of overall support to the region.

30 The Executive Secretary further informed the meeting that Dr. Mitsumoto would leave the Secretariat at the end of September. In light of this imminent departure and the fact that it will take time to fill the position, since the vacancy has to be advertised and recruited in accordance with UNESCO regulations, he urged the Sub-Commission to consider temporary secondment of personnel to the Secretariat.

3.1.6 Budget Overview

31 The Executive Secretary provided a brief report on the budget status of the Sub-Commission, referring to Document IOC/SC-WESTPAC-V/7. He noted that the level of expenditure in programme implementation is variable, but that the contribution of the Regular Programme budget shows a diminishing trend. This trend is also visible in many of the other IOC programmes.

32 He noted with concern that the proportion of personnel cost to programme cost is not healthy. The investment on personnel in the WESTPAC Secretariat is significant. The IOC needs to seek to increase expenditure on programme implementation in the region.

3.2 THE UNESCO EXTERNAL EVALUATION OF IOC

33 The Executive Secretary delivered a short report on the follow-up to the External Evaluation recommendations in relation to the WESTPAC Sub-Commission. The external evaluation was implemented during 1999-2000 with the goal of providing an objective view of the capacities and capabilities of IOC as an intergovernmental organization and a dedicated mechanism for carrying out the mission assigned to IOC by the statutes. As part of the evaluation process, two members of the evaluation team, Dr. John Field and Dr. John Zillman visited the WESTPAC Secretariat. A number of recommendations were made with respect to the improvement of the Secretariat and the linkages with headquarters.

3.3 RECENT DEVELOPMENTS WITHIN IOC AND UNESCO RELEVANT TO WESTPAC

3.3.1 Cross-cutting Projects

34 The Executive Secretary explained the rationale behind a new initiative within UNESCO. Recognizing that UNESCO covers many mandates, and as such can build on a breadth of expertise, the organization has allocated a significant amount of resources in the current biennium for proposals on two cross-cutting themes, as part of the overall reform process within UNESCO. This initiative attempts to foster joint planning and implementation of activities between sectors and between offices, thereby allowing the organization to build on its full breadth of expertise. The IOC participates in three of these cross-sectoral proposals that have obtained funding under this new scheme. Two of the projects concern a remote sensing project for Africa and the Ocean Portal. Further information on these projects is provided in the information session and information documents.

3.3.2 General Policy Considerations

35 Under this agenda item, the Executive Secretary informed the meeting about the elaboration of a Draft Policy on Regional Programme and Project Offices, which was called for by the Twenty-first Assembly. There is a need to sharpen the goals and means of how the regional offices work, with a system that allows for regular assessment and evaluation. The policy should address the deficiencies in the way the IOC supports regional activities. The Executive Secretary invited the Member States to take an active part in the consultations of the intersessional working group led by Dr. Ajayi, one of the vice-chairpersons of the IOC.

36 Various delegates supported the idea of a policy that would address such needs. In this context, Dr. McEwan raised the example of the IOC Perth Regional Programme Office, which had benefited from clear Terms of Reference in the implementation of its programme. The representative of SOPAC, Mr. Alf Simpson, questioned the balance between implementation of global programmes and programmes responding to regional priorities, and the way in which the Sub-Commission obtains its mandate. He noted that the Pacific Islands have little means of influencing the WESTPAC work-plan, which largely has an Asian focus.

37 The Executive Secretary agreed that the planning mechanism had limitations. Some activities clearly benefit from bottom-up planning, but others, require a top-down approach preceded by a process of building awareness. By using the proposal for a Global Assessment of the Ocean as an example, he demonstrated the various levels of stakeholder consultation that are required, with the broad definition of the programme being planned at the global level, but further

refining of the questions and issues being done at the regional level. A sense of ownership on the part of the region is a critical aspect in this regard.

38 Dr. Neville Smith synthesised the discussions by pointing out that any policy should give careful consideration to some of the following pertinent aspects: (i) strengths and weaknesses; (ii) regional relevance; (iii) the future direction; and (iv) critical associations with sister organizations.

39 With reference to the Medium-Term Strategy currently being prepared for the IOC, the observer from Papua New Guinea sought a clarification about the overall vision and how the regional programmes fit into that strategy. The Executive Secretary replied that in essence the vision of the IOC is to become the effective focal point for ocean science and ocean services in the United Nations system, but that this requires in implementation of activities at the regional level, increasingly supported by extrabudgetary funding.

4. REVIEW OF PROGRAMMES AND PROJECTS FOR 1999-2002

40 The Chairperson introduced this agenda item, inviting the respective programme and project leaders or the Secretariat to provide a synthesis of the individual programmes in terms of objectives, and activities carried out over the last intersessional period. The future programme will be discussed under Agenda Item 9, following a discussion on the programme and project structure.

41 The Sub-Commission is invited to consider the actions taken, and give recommendations on further improvements.

4.1 SCIENCE

4.1.1 OSLR

42 Prof. Yasuwo Fukuyo reported on the WESTPAC Harmful Algal Blooms (HAB) project. A series of annual training courses is conducted with the generous support of the government of Japan. Apart from training, WESTPAC HAB produces reference materials, and documentation, channelled to interested parties through a network in the region. Two strategy workshops were organized with the participation of a number of scientists from the region. A discussion was held with the IOC/WESTPAC Secretariat and the HAB Centre in Copenhagen with a view to redefining the current planning system of WESTPAC HAB.

4.1.2 OSNLR

43 Prof. Wang Pinxian provided some information on the Paleogeographic Map project. Members of the Working Group have contributed to the production of a paleogeographic map of the Holocene Optimum (ca. 6,000 years ago). The members convened during 14 – 18 October 1999, on the occasion of the 4th International Conference on Asian Marine Geology (ICAMG-IV) in Qingdao where a special Data Compilation Workshop was held. Vietnamese data were added during a separate visit of Dr. Nguyen Van Lap to Tongji University in Shanghai in January 2000. Tongji University has finalized the analytical and editorial work. Unfortunately, attempts to find funding for publishing the map were unsuccessful.

44 On the question of how the IOC could assist in publishing this map, the Technical Secretary suggested exploring the possibility of producing digital maps on CD-ROM in a similar cost-effective manner to that used by the International Hydrographic Organization.

45 The Technical Secretary informed the meeting that no report was received from Dr. Kagami on the project 'Tectonics and its impacts to the coastal zone (TICZ)'.

4.1.3 Marine Pollution Research and Monitoring

46 On behalf of the respective project leaders, the Technical Secretary informed the Sub-Commission on the developments of the projects under the WESTPAC marine pollution research and monitoring programme, notably, Mussel Watch and Atmospheric Inputs.

47 Under the Mussel Watch Programme, the only activity carried out was a quality assurance / quality control exercise, with the objectives of testing whether the results of measurements are reliable and comparable among the participating laboratories and of promoting the intercalibration of analytical methods among member countries. The exercises demonstrated enormous differences between the different laboratories.

48 On the suggestion of Prof. Manuwadi Hungspreugs and the Secretariat, the IOC/WESTPAC **Sub-Commission decided** to discontinue the Mussel Watch Programme under WESTPAC. It was argued that there was no need for WESTPAC to take on the management of a Mussel Watch programme, since those countries that already participate in Mussel Watch are likely to continue to do so, whereas those countries that do not do so at present are unlikely to do so in the future.

49 On behalf of Dr. Jing Zhang, project leader of the Atmospheric Inputs Project, the Technical Secretary informed the Sub-Commission of the two activities that took place under that project, notably: (i) an extensive sampling campaign of ACE-Asia Program (Aerosol Characterization Experiment – Asia) was carried out in April-May 2001 using ground stations, an airplane, and surface ships in the Northwest Pacific Ocean, with follow-up discussion meetings in the US and China; and (ii) the special session and workshop on Atmospheric Inputs, was held in conjunction with the Fifth IOC/WESTPAC Scientific Symposium in Seoul, August 2001.

4.1.4 Ocean Dynamics and Climate

50 The Technical Secretary informed the meeting that the programme coordinator of the Ocean Dynamics and Climate Programme, Dr. Roger Lukas had expressed his desire to withdraw from the position. With due consultation with the Chairperson of the Sub-Commission, it was decided to transfer the responsibility of coordinating the programme to Dr. Bo Qiu of the University of Hawaii. The Technical Secretary referred to the report prepared by Dr. Bo Qiu for the present Session on relevant scientific issues to be considered by the programme.

51 It was recommended that the programme should avoid any unnecessary overlap with existing international research programmes, but the Technical Secretary noted that the present programme was in fact more concerned with facilitating collaboration between and liaison among scientists in the region, than it was with the actual conduct of the scientific research.

52 With reference to several of the previous presentations, Dr. Smith asked the Sub-Commission to consider the real value of the programme to IOC and questioned whether there are not other organizations which are better candidates for handling this kind of projects. The Sub-Commission has to consider its role in coordinating regional science with regional impacts.

4.1.5 Remote Sensing for ICAM

53 The Chairperson introduced this Agenda Item by informing the meeting that at the time of the Fifth IOC/WESTPAC Scientific Symposium in August 2001, Prof. Hiroshi Kawamura was invited to become co-project leader. Dr. Hiroshi Kawamura subsequently informed the meeting about a preparatory workshop that was organized in July 2002 in Bangkok with the objective of discussing the future direction of a Remote Sensing related programme under WESTPAC. Apart from Drs Huang and Kawamura, scientists from Australia, Thailand and Japan participated in the workshop.

4.1.6 Gulf of Thailand Cooperative Study

54 The project leader, Dr. Anond Snidvongs, presented the activities under the framework of the International Cooperative Study on the Gulf of Thailand between 1999-2002. Five capacity building activities were organized wholly or partially by the Project, which included the Shipboard Training Workshop on Synoptic Oceanography, on board the Royal Malaysian Navy research vessel KD PERANTAU in the EEZ and territorial waters of Malaysia, Thailand and Vietnam in August 1999, and two workshops on oceanographic data and information system. A number of young scientists from the Gulf of Thailand coastal countries were also financially supported by the Project to attend several scientific meetings. In addition, to encourage oceanographic research by young scientists in the sub-region, the project also supported directly or indirectly a number of theses and senior projects carried out by students of universities in the region.

55 The Gulf of Thailand sub-regional oceanographic information centre, which has been operated at the Southeast Asia START Regional Centre, has maintained its data archives and some new data were also added. In addition, a near real-time system to forecast the circulation using the Princeton Ocean Model and numerical weather prediction was developed. Some of those modelling initiatives were supported by national funding from Thailand.

56 A regional textbook on “Physical Oceanographic Processes in the Southeast Asian Waters” has been prepared by Professor Mathias Tomczak using oceanographic data from Southeast Asia as examples and exercise cases. The book will be published in electronic form in early 2003. Pursuant to the recommendation adopted by the last Session of the IOC/WESTPAC Sub-Commission, SEA START RC signed a Memorandum of Cooperation with the IOC.

57 Prof. Dang Ngoc Thanh of Vietnam requested the Gulf of Thailand Cooperative Study to be renewed. He appreciated the efforts of Dr. Snidvongs in establishing an on-line database to facilitate the exchange of data. He further offered to make relevant Vietnamese datasets available to the Gulf of Thailand project, and hoped that more contributions could be received from the coastal countries.

58 Asked about the relation between the Gulf of Thailand project with the UNEP/GEF Project on ‘Reversing Environmental Degradation Trends in the South China Sea and the Gulf of Thailand’, Dr. Snidvongs replied that there is already extensive collaboration.

4.2 GLOBAL OCEAN OBSERVING SYSTEM

4.2.1 NEAR-GOOS

59 Dr. Dong-young Lee reported to the Sub-Commission that during the intersessional period there has been considerable progress in the development of NEAR-GOOS. The Coordinating

Committee convened three times. At the Fifth Session of the Coordinating Committee in Seoul, December 2000, the Committee decided to embark on a strategic planning exercise, in essence marking the commencement of the second phase of NEAR-GOOS.

60 This strategic planning exercise will offer the countries clear guidelines on how to establish a capacity in operational oceanography through the integration of data sets and research from across the region. To this end, a special workshop was organized entitled 'NEARGOOS Ocean Environment Forecasting' in conjunction with the Fifth IOC/WESTPAC International Symposium in August 2001 that brought together relevant marine scientists who contributed to this discussion from their varying backgrounds and perspectives. The Japanese Government, KORDI and PICES sponsored the workshop.

61 The Strategic Plan is currently being drafted. The preliminary draft of the plan will be discussed during the 7th Session of the NEAR-GOOS Coordinating Committee scheduled to be held from October 2-4, 2002 in Vladivostok, Russian Federation. The IOC contact point in DPR Korea has confirmed that a delegation of the Democratic People's Republic of Korea will attend in an observer capacity.

62 The Technical Secretary added that it was necessary for the Sub-Commission to change the Terms of Reference of the Coordinating Committee, which at present is limited to data exchange. This would enable the Coordinating Committee to adapt to the demands set by the Strategic Plan.

63 Several delegates provided comments on the report. Prof. Yu acknowledged the active role of the Chairperson of the Coordinating Committee in pushing NEAR-GOOS forward. There have been considerable achievements in the past that NEAR-GOOS should build on. Dr. Yoshida concluded that NEAR-GOOS had led to a better understanding of ocean processes in the region and improvement of ocean services. Dr. Bernal suggested that if the countries are planning the extension of their data acquisition systems, NEAR-GOOS might benefit from collaborative efforts, for instance in the joint development and sharing of platforms.

64 Following the discussions, the Chairperson asked Dr. Lee to coordinate a small informal sessional working group for the drafting of a recommendation on the need for new Terms of Reference for NEAR-GOOS.

4.2.2 SEAGOOS

65 At the request of Dr. Taira, the Chairperson of the Ad Hoc Steering Committee for SEAGOOS, First Admiral Mohd Rasip bin Hassan, provided a summary of the activities and results of SEAGOOS over the last intersessional period. He elaborated on the history and explained the perceived outcome of SEAGOOS. The Admiral highlighted some of the problems that in his opinion thwarted the initial attempts to establish SEAGOOS. First and foremost, he felt that substantive commitments could not be made if *ad hoc* steering committee members are nominated as individual experts and not as official government representatives. Further needs were highlighted in terms of funding, instruments and expertise. He further suggested that a consultant be contracted to assist in the development of SEAGOOS and that some early useful products or services are important to 'sell' SEAGOOS to the regional decision makers.

66 The Admiral highlighted the outcome of the SEAGOOS First Implementation Planning Workshop, Seoul, 2001, that resulted in specific plans on three different topics: Coastal Dynamics and Pollution, Ecosystems and Fisheries, and Climate and Tropical Cyclones. In line with the recommendations of the workshop, he hoped that the Sub-Commission would consider the

establishment of a coordinating committee to guide the initial establishment and development of SEAGOOS.

67 Following the presentation, the representative from the WMO referred to the joint WMO/IOC 'Southeast Asian Centre for Atmospheric and Marine Prediction (SEACAMP)' project that will provide major support to and impetus for the future development of SEAGOOS. This initiative was started in the early 1990s and the project has now been endorsed by the ASEAN Sub-Committee on Meteorology and Geophysics and formally adopted by ASEAN, whose Secretariat is in the process of identifying appropriate resources for implementation. The centre, when established, will be located in Singapore.

68 The representative of the WMO further pointed out that duplication should be avoided. If a committee would be set up for SEAGOOS, then co-location of the SEAGOOS secretariat and SEACAMP is an option.

69 The Admiral also referred to JCOMM as possibly acting as useful vehicle for the development of SEAGOOS. In this regard, the Technical Secretary drew the meeting's attention to two information documents that were provided to the Sub-Commission: one synthesised the outcome of a comprehensive questionnaire distributed after the JCOMM-TCP 'South China Sea Storm Surge, Waves and Circulation Forecasting' Workshop" held in Hanoi, Viet Nam, January 2002, and the other concerned a proposal for a hands-on training workshop on operational oceanography to be held in 2003 in Malaysia.

70 The chairperson requested the First Admiral to set up a small ad hoc sessional working group to further discuss the Terms of Reference of a Coordinating Committee.

4.2.3 PacificGOOS

71 The Chairperson introduced this Agenda Item and invited Mr. Alf Simpson, chairperson of the ad hoc steering committee of PacificGOOS to provide a summary of the activities and results of PacificGOOS over the last intersessional period. In his turn, Mr. Simpson briefly highlighted the history of PacificGOOS. A Coastal GOOS workshop for PacificGOOS was held in Apia in August 2000 that identified four viable pilot projects. In September 2000, the SOPAC annual meeting endorsed the PacificGOOS process in the region and established a working group to advance its work.

72 He stated that PacificGOOS faces a dilemma in that in a science-driven manner it has identified the issues, but that there is a lack of a critical mass of people who can and are willing to move PacificGOOS forward. There is a definite role for capacity building. In this regard, the Executive Secretary suggested an approach of informing the users, explaining what the benefits of the system are, and at what cost. The campaign should not overstate its goals.

73 A discussion ensued on the role that WESTPAC could provide to PacificGOOS. In spite of WESTPAC's previous non-involvement, future involvement could be reflected in the proposal for restructuring of the programme and project structure.

4.3 OCEAN SERVICES

4.3.1 International Bathymetric Chart of the Western Pacific (IBCWP)

74 Capt. Yacob bin Ismail, member of the IBCWP Editorial Team, provided a detailed report on the progress in the IBCWP programme. Many countries are actively contributing to or taking charge of the compilation of data sets. Prof. Dang Ngoc Thanh highlighted the contribution of Vietnam to the IBCWP.

75 First Admiral Mohd Rasip bin Hassan lamented the fact that despite the efforts of the various countries in making data available, the work-plan remains the same because there is neither a QA/QC exercise nor a meeting to approve the quality-controlled data and subsequent publishing of completed bathymetric charts.

76 The Executive Secretary explained that he understood the problems of many of the GEBCO regional charts. The IOC cannot assist with the printing costs, but would hope that some countries in the region can defray the cost.

77 Mr. Simpson explained that SOPAC had the responsibility of Region V, but that it has problems obtaining the data from ships conducting marine scientific research in the area. Out of 150 known scientific cruises over the decade, only 25% have made their data available to SOPAC. In this regard, the Executive Secretary proposed that he write to the countries to seek their support in making such data available.

4.3.2 International Oceanographic Data and Information Exchange (IODE) – Activities of the RNODC and GODAR WESTPAC

78 Mr. Sato of the Japan Oceanographic Data Centre briefed the Sub-Commission on the various programmes carried out by the centre. This includes a NEAR-GOOS Data Management Training Course, the maintenance of two databases (NEAR-GOOS and JDOSS), the work as Responsible National Oceanographic Data Centre and IODE –WESTPAC Coordinator and the GODAR WESTPAC Project. Dr. Anond suggested assisting the Institute of Oceanography in Nha Trang in Vietnam in the recovery of valuable datasets.

79 **The Sub-Commission took note** of the information provided and **adopted** the Executive Secretary's Report on Intersessional Activities.

5. TEMA

80 Prof. Taira explained that Capacity Building is a core element of most of the IOC programmes, and that under this agenda two separate TEMA related initiatives are discussed.

5.1 REGIONAL GRADUATE SCHOOL OF OCEANOGRAPHY

81 Prof. Manuwadi Hungspreugs made a short presentation on the deliberations of the *ad hoc* working group on the establishment of a Regional Graduate School of Oceanography in Southeast Asia. She noted the lack of oceanographic expertise in all the disciplines in the region, and the difficulty of adapting knowledge to local conditions. She referred to the example of the Graduate School in Oceanography in Concepción, Chile, and argued that the establishment of a similar graduate school in SE Asia is perhaps not yet feasible. Instead she proposed an alternative and

cost-effective way to enhance the graduate education in the region, namely through the invitation of scientists to teach during sabbaticals or on the occasional visit. Another option would be to organize separately funded training courses on specific advanced topics in the region. The WESTPAC Secretariat could help in the coordination effort.

82 Dr. Miguel Fortes offered to prepare a short synthesis document that highlighted the current status in the discussion on the Graduate School. The document would be distributed to each of the participants for their further consideration in or after the meeting.

83 Several participants provided information on specific graduate programmes in their respective universities.

5.2 POGO SCHOLARSHIP PROGRAMME

84 At the invitation of the Chairperson, the Executive Secretary informed the Sub-Commission on the Partnership for Observations of the Global Oceans (POGO) and the mechanisms established to enable young promising scientists to gain useful experience at one of the partner institutions. He further elaborated on some of the significant successes that these partnerships brought about, including the 2.5 million US\$ educational programme between Woods Hole Oceanographic Institution and the Concepción University in Chile.

85 The POGO fellowship programme is particularly useful for training of technical personnel in very specific skills, which should ultimately benefit GOOS.

86 Prof. Yu lamented the fact that only few people know about the POGO fellowship programme, and suggested that the WESTPAC Secretariat could make an effort in disseminating information on the programme to young scientists in the region.

87 Referring to the implementation of UNCLOS, Mr. Simpson argued that it is difficult when the capacity is just not there. He suggested that senior executive programmes could offer a useful mechanism for countries that require experience. Agreeing with the idea of Mr. Simpson, Dr. Bernal added that the UN volunteers' scheme constitutes another useful model.

88 Following the discussion on TEMA related subjects, **the Sub-Commission decided** that the IOC/WESTPAC Secretariat should (i) provide a coordinating role in ensuring that the developing countries of the WESTPAC Sub-Commission benefit from the occasional distinguished professor of opportunity who is travelling in the region; (ii) provide secretarial support to an open-ended group that will continue the discussion on regional graduate education; and (iii) disseminate information on the POGO fellowship programme and other opportunities through the Internet and newsletter.

6. MEETING THE NEEDS OF OCEAN-RELATED CONVENTIONS AND PROGRAMMES

89 The IOC is competent organisation for UNCLOS with specific reference to parts 13 and 14 therein covering marine scientific research and capacity building respectively. As such, the IOC is recognized as the responsibly agency for acquiring knowledge and capacity in the field of marine science. In this regard, it is worth noting that the Informal Consultative Process on Oceans for the United Nations will prepare a draft resolution on oceans and coast for endorsement by the UN Assembly, perhaps commemorating the 20-year anniversary of the signing of the Montego Bay Declaration that led to the establishment of the International Seabed Authority.

7. CO-OPERATION WITH OTHER ORGANIZATIONS

7.1 ORGANIZATIONS AND PROGRAMMES OF THE UN SYSTEM

7.1.1 UNEP

90 The Chairperson informed the meeting that the representative of UNEP had to cancel his participation.

7.1.2 GEF

91 The Technical Secretary informed the meeting that he would prepare a written information document on the GEF mechanism as a possible source of funding for IOC/WESTPAC Activities.

7.1.3 WMO

92 The Thirteenth Session of the WMO Regional Association V for the South-West Pacific, Manila, May 2002, appointed two co-rapporteurs on regional oceanographic and marine meteorological services, and invited IOC/WESTPAC to co-sponsor the work of these co-rapporteurs. This work includes a review (through a questionnaire) of the status of implementation of oceanographic and marine meteorological services, observing systems and programme support activities in the region. This questionnaire will cover both marine meteorological services and oceanographic services and it is expected that the meteorological and oceanographic services within each country will work together, within the spirit of JCOMM, to complete the questionnaire. The final report of the co-rapporteurs will be available to both the WMO Regional Association V and the IOC/WESTPAC Sub-Commission.

93 Noting that this would be an invaluable opportunity for oceanographers to collaborate directly with meteorologists within each country, the **Sub-Commission provided its full support** to this proposal. It was noted that this information exchange activity will have no financial implication to the IOC/WESTPAC Secretariat.

7.2 REGIONAL ORGANIZATIONS/PROGRAMMES AND OTHERS

7.2.1 PICES

94 At the request of the Chairperson, Dr. Hyung-tack Huh, Chairperson of PICES addressed the meeting. PICES was established in 1992 to promote and coordinate marine scientific research and to upgrade knowledge on the environment and resources of the North Pacific Ocean. It has six member countries. Over the last intersessional period, PICES participated in and co-sponsored the NEAR-GOOS Ocean Environment Forecasting Workshop (Seoul, August 2001). PICES further sponsored a PICES/CREAMS meeting, which concerned cooperation in East Asian marginal seas. PICES has the intention to become the climate focal point for the northern Pacific, and is linking to climate related research programmes such as GLOBEC and CLIVAR.

95 Dr. Huh invited the WESTPAC Sub-Commission to join the North Pacific Ecosystem Status Report. He further saw an opportunity for the two organizations to work together in the field of fisheries oceanography vis-à-vis climate change.

96 Dr. Fukuyo added that PICES had an active HAB Working Group. The Group is currently constructing a standardised database that allows the countries to report HAB events.

7.2.2 SEA START RC

97 The mission and activities of the Global Change System for Analysis, Research and Training (START) were explained to the Session by Dr. Anond Snidvongs. Those activities carried out at the Southeast Asia START Regional Centre included operational information services, regional syntheses and integrated assessments.

7.2.3 APN

98 Subsequently Dr. Snidvongs also introduced the Asia Pacific Network for Global Change Research (APN) including its organization structure, research framework, and annual call for proposal.

7.2.4 SOPAC

99 Mr. Simpson thanked Australia for the support of three representatives of the SOPAC region to the present Fifth Session of the IOC/WESTPAC Sub-Commission. He informed the Sub-Commission that SOPAC is supporting national and regional initiatives and actions towards promoting sustainable development in its member states by providing services in three key programme areas, notably: (i) ocean and islands; (ii) community risk; and (iii) community lifelines. SOPAC is one of ten regional organizations in the Council of Regional Organizations of the Pacific.

100 He then invited the IOC to consider supporting the Ocean Forum, which should lead to an action plan for the region. He further welcomed the I-GOOS Session that may be held in Fiji in the year 2004 as a means of exposing the Pacific community to relevant experts and programmes.

101 Dr. Fukuyo recalled the initial contacts between the HAB community and SOPAC at the time of the Noumea Workshop in 1997, but regretted that since then the dialogue had lapsed. Mr. Simpson explained that HAB interests in the Pacific are covered by the Secretariat of the Pacific Community, a sister organization of SOPAC. He suggested that the IOC/WESTPAC secretariat could contact the SPC to explore possible cooperation in this field.

7.2.5 OTHERS, INCLUDING NGOs

102 No further reports were delivered under this Agenda Item.

8. REFORM OF PROGRAMME AND PROJECT STRUCTURE

103 At the invitation of the Chairperson, the Technical Secretary made a presentation on a proposal for the reform of programme and project structure in WESTPAC. He referred the Sub-Commission to the Working Document SC-WESTPAC-V/8.

104 The document describes the rationale behind a restructuring of the programme and project structure, and elaborates on a proposed redefinition of the terms of references of programmes and projects.

105 Several delegates criticised the document for being overly prescriptive. The impression is given that programme coordinators have previously spent little effort in fundraising, while the contrary is more likely to be true.

106 Other delegates approved of the document but noted that even with the new programming in place, countries have to be careful in the programming and make an effort to choose those programmes that the countries are most interested in.

107 Another deficiency of the proposed procedure is the assumption that scientists will have ample opportunity to input in the programme. A new structure should allow for ample consultation between the scientists participating in the proposed Programme Working Group, preferably by allocating sufficient time at the Scientific Symposia for meetings.

108 The Executive Secretary noted the apparent dichotomy in programming. On the one hand it is the Member States' contribution that builds a programme. In that sense, the IOC only coordinates. But for a programme to be successful, the Secretariat has to instil a sense of ownership among the several constituencies involved in the work of the Sub-Commission. This calls for preparatory activities before submitting a new programme in the form of a proposal.

109 After these discussions, the **Sub-Commission decided** as follows:

- That the proposed procedure for a new and more effective programme and project structure offers valuable guidance on the establishment and evaluation of future programmes, but will require additional revision to meet some of the concerns addressed;
- To approve the suggested termination of the OSLR and OSNLR programme in their present form and the upgrading and redefinition of some of the projects as programmes under WESTPAC, and to reflect these changes in the proposed new work-plan;
- To maintain in effect the procedure adopted by the Third Session of the IOC/WESTPAC Sub-Commission (as Annex V of the Summary Report thereof);
- That the Sub-Commission needs a clear strategy on its relation to the global programme of the IOC, and that the governing bodies of the IOC should undertake a critical appraisal of the long-term strategic role of the Sub-Commission, through the Sub-Commission,
- To draw up a document that outlines the guiding principles and Terms of Reference.

110 The Chairperson suggested the establishment of a small ad hoc sessional working group to draw up a document that describes the Guiding Principles and Terms of Reference needed to facilitate the discussions on the reform of programme and project structure.

111 With a view to adopting an improved procedure at the next Session, **the Sub-Commission decided** that an Intersessional Working Group on Structure and Modus Operandi of the WESTPAC programme be established with a Terms of Reference and Guiding Principles as attached in Annex VI of this report.

112 **The Sub-Commission adopted Recommendation SC-WESTPAC-V-1.**

INFORMATION SESSION – SCIENTIFIC SEMINAR

113 The Chairperson informed the meeting that the information session consists of a number of invited presentations relevant to the programmes and activities of the IOC/WESTPAC Sub-Commission. Each presentation will allow for informal discussion. The purpose of this information session is to set the stage for future programming of the Sub-Commission.

114 The first speaker was Mr. Stan Stroud of Woodside Petroleum, who offered insights in the Indonesian Through-flow derived internal waves, within the context of WA GOOS.

115 The second speaker was Dr. Ray Steedman, who presented a SWOT analysis of the WA GOOS.

116 The third speaker was Dr. Dong-young Lee, who elaborated on the medium term strategy plan for NEAR-GOOS.

117 The fourth speaker was Dr. Miguel Fortes who elaborated on the outcome of the Census of Marine Life Workshop and the challenge it presents to the region and Sub-Commission. Following the presentation, the **Sub-Commission requested** Dr. Fortes to draw up a draft recommendation for further consideration by the Sub-Commission under Agenda Item 9.2.

118 The fifth speaker was Dr. Jae Ryoung Oh who made a presentation on the value of a series of innovative techniques for monitoring marine pollution.

119 The sixth speaker was Dr. Yasuwo Fukuyo who introduced the HAB SEA Portal, with particular emphasis on the distance-learning module.

120 The seventh speaker was Mr., Maarten Kuijper who provided an overview of ODINAfrica and made suggestions for a similar programme in WESTPAC. Subsequently, participants discussed the possibility of including in the WESTPAC work-plan the development of an Ocean Data and Information Network (ODIN) for Southeast Asia, but agreed that this would be too premature in the absence of identification of the substantial extrabudgetary resources required. It was agreed that an ODIN might be a good idea at some point, if substantial resources could be found to build up national data holding capabilities across the region.

121 The last speaker was Dr. Neville Smith who made a presentation on GODAE and Argo.

9. PROGRAMME AND WORKPLAN FOR 2002-2004

9.1 IMPLICATIONS OF A REVISED PROGRAMME STRUCTURE

122 Against the background of the preceding discussions, the Chairperson invited project leaders and programme coordinators to present their new ideas and work-plan for each of the projects under their responsibility. He further asked the Sub-Commission to consider the proposed work-plans and make recommendations as to their improvement or re-orientation.

123 After careful consideration of the various proposed activities, the **Sub-Commission arrived at** the following Programme structure:

Corresponding Component of IOC	Programme	Programme Coordinator
Oceans and Climate	PaleoCurrents	Dr. Wang Pinxian
	Ocean Dynamics and Climate	Dr. Bo Qiu
Ocean Ecosystem Science	Census of Marine Life	Dr. Miguel Fortes
Marine Environmental Protection	Atmospheric Inputs	Dr. Jing Zhang
	Biomarker Research	Dr. Jae Ryoung Oh
	HAB	Dr. Yasuwo Fukuyo
Interdisciplinary Programmes	Gulf of Thailand Cooperative Study	Dr. Anond Snidvongs
	Ocean Remote Sensing	Dr. Hiroshi Kawamura
GOOS	NEAR-GOOS	Dr. Dong-young Lee (CC Chair)

Corresponding Component of IOC	Programme	Programme Coordinator
GOOS	SEAGOOS	To be identified (CC Chair)
Ocean Services	IBCWP	To be confirmed
	GODAR-WESTPAC	JODC

9.2 PROGRAMME AND BUDGET FOR 2002 – 2004: WESTPAC ACTION PLAN

124 The Chairperson invited the chairman of each of the ad hoc sessional working groups to report back to the Sub-Commission with the suggested recommendation, and actions to be taken accordingly.

125 The sessional working group under the chairmanship of Prof. Yu proposed to have the Sixth Symposium organized in the year 2004 in China, date and city to be identified at a later stage. He further welcomed the delegates to nominate other countries and cities for consideration. The Sessional Working Group further requested the Secretariat to assist in the formulation of a tentative scientific organizing committee that would discuss the title and format of the Symposium. **The Sub-Commission adopted** [Recommendation SC-WESTPAC-V.5](#).

126 The Chairperson asked Dr. Miguel Fortes to report back on the draft recommendation on the Census of Marine Life Programme in South East Asia. **The Sub-Commission considered** the draft and **adopted** [Recommendation SC-WESTPAC-V-2](#).

127 The Chairperson then asked the First Admiral Mohd Rasip bin Hassan to report on the deliberations in the ad hoc sessional working group on SEAGOOS. Further to the report of the Chairman of the ad hoc SEAGOOS working group, the sessional working group suggested the establishment of a Coordinating Committee as a management and coordinating body for SEAGOOS.

128 In conformity with the suggestion made, the Sub-Commission **decided** to establish a SEAGOOS Coordinating Committee and **adopted** [Recommendation SC-WESTPAC-V-3](#) to that effect.

129 Finally, the Chairperson asked Dr. Dong-young Lee to report on NEAR-GOOS. The **Sub-Commission agreed** to give a mandate to the Coordinating Committee to amend its revised Terms of Reference and **adopted** the draft as [Recommendation SC-WESTPAC-V-4](#).

130 Delegates were invited to examine a table prepared by the Secretariat on the Programme and Budget. This table was prepared following the discussions of the respective agenda items during the meeting and reflected the input from each Programme Co-ordinator.

131 **The Sub-Commission considered** the proposed actions and **adopted** the table with amendments. This table is presented as an appendix to [Recommendation SC-WESTPAC-V.6](#).

10. OTHER MATTERS

132 No other matters were discussed under this Agenda Item.

11. ELECTIONS

133 The Chairperson invited nominations for Chairperson, first and second Vice-Chairpersons in that order noting that officers can serve for 2 terms. The delegate of Thailand nominated Dr. Hyung-tack Huh for the post of Chairperson. The nomination was seconded by the Delegate of China and unanimously supported. Dr. Huh was therefore elected Chairperson by acclamation.

134 The Delegate of Australia nominated Prof. Dang Ngoc Thanh of Vietnam to be the First Vice-Chairperson. The nomination was seconded by the Delegate of Japan and unanimously supported. Prof. Dang Ngoc Thanh was therefore elected by acclamation.

135 The Delegate of the Republic of Korea nominated Mr. Haiqing Li of the People's Republic of China to be the Second Vice-Chairperson. The nomination was seconded by the Delegate of Indonesia and unanimously supported. Mr. Li was therefore elected by acclamation.

12. DATE AND PLACE OF THE NEXT SESSION

136 Prof. Dang Ngoc Thanh proposed that the next session be held in Vietnam in 2005 subject to a final decision by the government. **The Sub-Commission adopted [Recommendation SC-WESTPAC-IV. 7.](#)**

13. ADOPTION OF REPORT AND RECOMMENDATIONS

137 After having carefully read the summary report, the Rapporteur confirmed that the report adequately reflected the discussions and decisions taken at the meeting. The **Sub-Commission reviewed** the draft report and **adopted** it, together with the recommendations attached as Annex II.

14. CLOSURE

138 The Chairman expressed his great appreciation to all Delegates, and the Rapporteur for their co-operation in the conduct of the Session. He thanked the Government of Australia and the Local Organizing Committee for their generous support to the Session.

139 **The Sub-Commission expressed appreciation** to the host country for the excellent arrangements ensuring the success of the Session.

140 The Chairman closed the Fifth Session of the IOC Sub-Commission for WESTPAC at 12.00 hours on 13 September 2002.

ANNEX I

AGENDA

- 1. OPENING**
- 2. ADMINISTRATION**
 - 2.1 ADOPTION OF THE AGENDA
 - 2.2 DESIGNATION OF RAPPORTEUR FOR THE SESSION
 - 2.3 CONDUCT OF THE SESSION
- 3. REPORT OF THE EXECUTIVE SECRETARY ON INTERSESSIONAL ACTIVITIES AND PROGRAMME EVALUATION**
 - 3.1 REPORT ON INTERSESSIONAL ACTIVITIES
 - 3.1.1. Follow-up to Recommendations of SC-WESTPAC-IV
 - 3.1.2. Fifth IOC/WESTPAC Scientific Symposium
 - 3.1.3. IOC Global Programme Activities
 - 3.1.4. Joint activities with other agencies or programmes
 - 3.1.5. Operation of IOC Regional Secretariat for WESTPAC
 - 3.1.6. Budget Overview
 - 3.2 FOLLOW-UP TO EXTERNAL EVALUATION COMMISSION
 - 3.3 RECENT DEVELOPMENTS WITHIN IOC AND UNESCO RELEVANT TO WESTPAC
 - 3.3.1. Cross-cutting Projects
 - 3.3.2. General Policy Considerations
- 4. REVIEW OF WESTPAC PROGRAMMES AND PROJECTS IN 1999 – 2002**
 - 4.1 SCIENCE
 - 4.1.1. OSLR
 - 4.1.2. OSNLR
 - 4.1.3. Marine Pollution Research and Monitoring
 - 4.1.4. Ocean Dynamics and Climate
 - 4.1.5. Remote Sensing for ICAM
 - 4.1.6. Gulf of Thailand Cooperative Study
 - 4.2 GLOBAL OCEAN OBSERVING SYSTEM
 - 4.2.1. NEAR-GOOS
 - 4.2.2. SEA-GOOS
 - 4.2.3. PacificGOOS
 - 4.3 OCEAN SERVICES
 - 4.3.1. International Bathymetric Chart of the Western Pacific (IBCWP)

4.3.2. International Oceanographic Data and Information Exchange (IODE) – Activities of the RNODC and GODAR WESTPAC

5. TEMA

5.1 GRADUATE SCHOOL OF OCEANOGRAPHY

5.2 POGO SCHOLARSHIP PROGRAMME

6. MEETING THE NEEDS OF OCEAN RELATED CONVENTIONS AND PROGRAMMES

7. COOPERATION WITH OTHER ORGANIZATIONS

7.1 ORGANIZATIONS AND PROGRAMMES OF UN SYSTEM

7.2 REGIONAL ORGANIZATIONS / PROGRAMMES AND OTHERS

8. REFORM OF PROGRAMME AND PROJECT STRUCTURE

INFORMATION SESSION / SCIENTIFIC SEMINAR:

- FUTURE OF GOOS REGIONAL ALLIANCES
 - NEAR-GOOS
 - SEAGOOS
- NEW SCIENTIFIC DEVELOPMENTS IN MARINE POLLUTION RESEARCH
- ODINAFRICA – A WESTPAC ANALOGUE?
- WESTPAC HAB-PORTAL / IOC ICAM PORTAL

9. REVISION OF THE PROGRAMME AND WORKPLAN FOR 2002-2004

9.1 IMPLICATIONS OF A REVISED PROGRAMME STRUCTURE

9.2 PROGRAMME AND BUDGET FOR 2002 - 2004: WESTPAC ACTION PLAN

10. OTHER MATTERS

11. ELECTIONS

12. DATE AND PLACE OF THE NEXT SESSION

13. ADOPTION OF REPORT AND RECOMMENDATIONS

14. CLOSURE

ANNEX II

RECOMMENDATIONS

According to the IOC Statutes and Rules of Procedure recommendations of Sub-Commission and other main subsidiary bodies in particular those that have financial implications need to be endorsed and approved by the IOC Assembly in order for them to be incorporated in the draft Programme and Budget of the Commission.

Recommendation SC-WESTPAC-V.1

PROGRAMME AND REFORM OF PROGRAMME AND PROJECT STRUCTURE

The IOC Sub-Commission for the Western Pacific,

Strategic programme planning in the Sub-Commission

Recalling:

- (i) the External Evaluation of the IOC made during 1999-2000 by a team of independent experts and presented to the Thirty-third Session of the IOC Executive Council in June 2000,
- (ii) Resolution XXI-6 on the restructuring of the Ocean Science Programmes of the Commission;
- (iii) the initial effort made by the Secretariat on the development of a long-term strategy plan for the IOC/WESTPAC Sub-Commission as presented at the Fourth Session of the IOC/WESTPAC Sub-Commission (Seoul, 1999).
- (iv) The request from the Twenty-first IOC Assembly to draw up a Medium-Term Strategy for the Commission for 2002-2007
- (v) the Draft Medium Term Strategy presented and discussed at EC XXXV.

Noting that the IOC is in a continuous process of evolution. This evolution occurs both as individual programmes develop, and as the Commission as a whole develops and adopts new implementation strategies in order to increase its impact.

Acknowledging the need for effective collaboration with other international organizations and in particular global and regional research programmes to ensure the mutual reinforcement and avoidance of duplication of efforts.

Instructs the IOC Executive Secretary to complement efforts on the elaboration of the Policy on the Establishment of Regional Project and Programme Offices and Medium-Term Strategy for the IOC, with a more targeted evaluation of the long-term direction and strategic role of the Sub-Commission for the Western Pacific and report to the next ordinary session of the IOC/WESTPAC Sub-Commission. The evaluation should pay particular attention to the need for strengthening and

streamlining the planning and management mechanisms of the individual programmes under the Sub-Commission.

Urges WESTPAC Member States to actively participate in this strategic evaluation.

Financial Implications: None

Recommendation SC-WESTPAC-V.2

IOC-CENSUS OF MARINE LIFE (CoML) ‘PARTNERSHIP’

The IOC Sub-Commission for the Western Pacific,

Recalling Resolution XVII-9 of the IOC Assembly, which calls on Member States for enhanced collaboration in regional efforts on marine biodiversity conservation;

Recalling Resolution XIX-5 of IOC Assembly, which emphasizes the need for coordinated effort to use and protect coastal and marine resources through the Integrated Coastal Area Management (ICAM);

Recalling that IOC, in the spirit of partnership and working with the Census of Marine Life (CoML), has convened a workshop (Phuket, Thailand, 10-12 October 2001) to introduce and expand the CoML to Southeast Asia;

Recalling that the workshop recommends:

- (i) that a *Southeast Asian Regional Steering Committee (SEA RSC)* be established to oversee the development of CoML in the region; and
- (ii) that workshops be organized to further the identified projects.

Considering that CoML had hoped that the workshop would mark the beginning of a significant research programme on marine biodiversity in Southeast Asia;

Noting with concern

- (i) that while the region is the centre of marine generic richness and diversity, it also has the highest rate of species extinction in the world;
- (ii) that the region lacks the knowledge on the history of marine floral and faunal populations;
- (iii) that the use of newer and more effective techniques and technologies is needed in collecting and identifying species and in managing the data for regional access and use;
- (iv) that no coherent and effective mechanism exists in the region that will address these issues;

Recommends that the Member States of WESTPAC consider participation in the *Southeast Asian Regional Steering Committee* for CoML and, as appropriate, support the activities and work program of the Steering Committee.

Financial Implications: None

Recommendation SC-WESTPAC-V.3

SEAGOOS

SEAGOOS Coordinating Committee

The IOC Sub-Commission for the Western Pacific,

Recalling Resolution No. XVI.8 concerning the establishment of GOOS;

Recognizing:

- (i) That the GOOS Strategy explicitly identifies the value of regional cooperation and coordination and that such an approach enhances opportunities for benefits to accrue to regional Member States;
- (ii) The importance of sustained, high-quality ocean observations in the wider Southeast Asian region in its efforts for sustainable development together with disaster mitigation and for the understanding and ultimately prediction of regional and global climate variability;
- (iii) The need for effective collaboration with international organizations and Member States in the establishment of a regional capacity in operational oceanography and marine meteorology;

Acknowledging:

- (i) The existing SEACAMP project, initiated by WMO and IOC and further developed under the auspices of ASEAN;
- (ii) The interest of J-COMM and WMO-TCP in establishing a pilot project in the region;

Noting the substantial progress made in GOOS in adjacent regions and at a global level;

Considering the results of the First Implementation Planning Meeting on the Establishment of SEAGOOS held in Seoul (Republic of Korea, 30-31 August 2001);

Invites all WESTPAC Member States that have relevant observation programmes and requirements in the region, to participate in SEAGOOS;

Decides to establish a Coordinating Committee as a management and coordination body for SEAGOOS with structure and Terms of Reference as given in the annex of this Recommendation;

Urges Member States to use or establish national mechanisms to facilitate the widest possible national participation in SEAGOOS and ensure adequate coordination of its contributions;

Financial implications: US\$ 20,000 (from Regular Programme)
 US\$ 20,000 (Extrabudgetary)

Annex to Recommendation SC-WESTPAC-V.3

Terms of Reference for the SEAGOOS Co-ordinating Committee:

1. Composition:

The Committee shall consist of representatives of all countries invited to participate. Each country shall endeavour to designate two members, preferably with one person coming from the operational meteorological/oceanographic community. The Committee shall elect a Chairperson and Vice-chairperson among the members. The Chairperson of the Co-ordinating Committee will act as SEAGOOS Co-ordinator. The Committee shall meet in regular annual sessions at the expense of the participating countries as far as possible. Other countries and appropriately affiliated organizations can attend the sessions as observers.

2. Terms of Reference:

- (i) Promote regional operational oceanography in the wider Southeast Asian Basin through the Global Ocean Observing System (GOOS) by establishing SEAGOOS.
- (ii) Draft a SEAGOOS Strategy document that incorporates the economic, social and environmental protection needs of the region with a clear approach to detailed planning and implementation of SEAGOOS.
- (iii) Publicise and disseminate SEAGOOS plans and information to regional governments and the general public.
- (iv) Recommend scientific and technical activities to support SEAGOOS implementation by coordinating new pilot projects and providing linkages to existing projects such as SEACAMP, the GEF/UNEP South China Sea Project, and other relevant projects.
- (v) Produce guiding documents for the near real time data collection and exchange in the Wider Southeast Asian Region.
- (vi) Advise and consider sources of funding for pilot project development with various funding agencies and in consultation with pilot project leaders.
- (vii) Identify the SEAGOOS capacity building needs of participating countries and international or regional organisations that can contribute to SEAGOOS.
- (viii) Liaison with national SEAGOOS committees, NEAR-GOOS, GOOS Project Office and other GOOS-related bodies as appropriate.

Recommendation SC-WESTPAC-V.4

NEAR-GOOS

The IOC Sub-Commission for the Western Pacific,

Recalling Resolution EC-XXIX-5 on the Establishment of the Co-ordinating Committee for NEAR-GOOS.

Noting with satisfaction the substantial progress achieved in NEAR-GOOS in the field of data exchange and management under its current Terms of Reference in the first phase of the programme.

Taking note of the current initiative of Co-ordinating Committee to draw up a strategic plan that addresses the future direction of NEAR-GOOS.

Recognizing

- (i) the need to expand NEAR-GOOS activities beyond its current emphasis on data exchange and management;
- (ii) the need to amend the Terms of Reference of the NEAR-GOOS Coordinating Committee to enable it to better respond to the demands set by any future strategy;
- (iii) the need to change the composition of the Co-ordinating Committee to better reflect the new mandate that accompanies the next phase of the NEAR-GOOS as presented in the draft Strategy Plan
- (iv) the fact that the GOOS regional alliances adhere to a common set of guidelines

Decides to give a mandate to the Coordinating Committee to amend its Terms of Reference at its annual meetings as the need arises.

Recommendation SC-WESTPAC-V.5

INTERNATIONAL WESTPAC SCIENTIFIC SYMPOSIUM

The IOC Sub-Commission for the Western Pacific,

Recalling its decision of its First Session that a major multi-disciplinary symposium should become a principal intersessional activity of the Sub-Commission,

Having reviewed the output and results of the Fifth IOC/WESTPAC Scientific Symposium on Ocean Sciences at the Dawn of a New Millennium, 27-31 August 2001, Seoul, the Republic of Korea

Expressing its great appreciation to the Government of the Republic of Korea for having hosted it,

Having formulated its programme for the period 2003-2005,

Bearing in mind the need for discussion of scientific and programmatic issues in an interdisciplinary forum,

Noting the presentations made at the Scientific Seminar during this Session of the Sub-Commission,

Recognizing the success of the previous symposia,

Accepts with appreciation the consideration of the Government of the Peoples Republic of China to act as host of the Symposium subject to a final decision being made.

Recommends that the Fifth IOC/WESTPAC Symposium be organized in 2004

Further recommends that regional and global cooperating international organizations be invited to support and participate in the Symposium,

Established an interim scientific planning committee to formulate a detailed proposal for the scope, contents and structure of the Symposium, under the chairmanship of the Chairman of the Sub-Commission.

Recommendation SC-WESTPAC-V.6 (See Appendix)

**THE WORK PROGRAMME OF THE SUB-COMMISSION
AND THE BUDGET ESTIMATE FOR 2002-2005**

The IOC Sub-Commission for the Western Pacific,

Having reviewed the implementation of the programme that took place during the intersessional period,

Noting the activities and priorities identified in the Fifth Session,

Acknowledging the importance of the IOC Regional Secretariat for WESTPAC for the success of the programme,

Express its appreciation to the Government of Thailand for the continued support to the Secretariat,

Invites other governments to provide resources directly or in-kind to support the Bangkok Office,

Decides to adopt the Programme of Work and its regional cooperation over the period 2002-2005 as indicated in the Table annexed to this Recommendation,

Urges cooperation and coordination with other global and regional organizations, both in and adjacent to the WESTPAC region,

Further urges Member States to participate in and actively support the implementation of the proposed programme,

Requests the IOC and other organizations cooperating with the Sub-Commission to allocate the necessary resources and to assist with obtaining extra-budgetary funds from governmental and donor agencies.

Programme	Activities			Funding required	Participation	Remark
	Action / Project	1.1.1 Objectives	Date and place			

SCIENCE FOR OCEAN ECOSYSTEMS AND MARINE ENVIRONMENTAL PROTECTION						
WESTPAC/HAB PC: Fukuyo	Organize strategic planning workshops (PL: Fukuyo)	Discussions on areas of common interest, future direction of WESTPAC-HAB	Using different meeting opportunities 2002-2004	-	Selected experts from the region	
	1. Training course on 'Advanced Techniques in Identification of Harmful Microalgae (PL: Anton) 2. Two additional courses in 2004-2005	Capacity Building	23-30 March 2003	16,000 US\$ JFiT for three years	8 participants from member countries, 8 Malaysian students	Date and place of next courses to be decided by PWG
	HABSEA PORTAL (PL: Azanza)	1. Establishment of Webpage 2. Distant Learning Module 3. Introductory workshop 4. Practical microscopy course	2002-2004	UNESCO (IOC Paris)	Not known	
	Red Tide Monitoring using Satellite Image (PL: Furuka)	1 st planning workshop 2. Technique Development 3. 2 nd workshop 3. 3 rd workshop	2002-2005	Outside funding available	-	Coop. with remote sensing programme:
	Dissemination of CDs, acquire permission from copyright holders (PL: Fukuyo)	1. Promotional 2. Capacity Building	2002-2005	(10,000 US\$) Japan provides for 3 years Outside funding available		
	Establishment of a network of national focal points (PL: Fukuyo)					
	GEOHAB information dissemination (PL: Fukuyo)					
	Interaction with other projects on HAB (PL: Fukuyo)					

Atmospheric Inputs Study PC: Jing Zhang	Participation in SOLAS PL: Jing Zhang	Capacity Building	2003-2005	Seed money IOC, 4,000 US\$ IOC		
	Intercomparison exercise PL: Uematsu (to be confirmed)	Capacity Building		Japan Outside funding available		
	Expansion of network to other interested countries (PL: Jing Zhang)			-		
Biological Effects Monitoring in Studies of Marine Pollution PC: JaeRyoung Oh	Training Course on Core Biomarkers	Capacity Building	2003-2005	KOICA – APEC Outside funding available	20 trainees from APEC countries	
	Intercalibration Exercises on Core Biomarkers and QA/QC and Data Management	Capacity Building	2003-2005	30,000 US\$ (source to be identified)	1-2 trainees from WESTPAC Member States	
	Support domestic workshops	Capacity Building	2003-2005	10,000 US\$ (source to be identified)	about 30 trainees or more per country	Cost pertains to support of three resource persons

Programme	Activities			Funding required	Participation	Remark
	Action / Project	1.1.1 Objectives	Date and place			
<i>OCEANS AND CLIMATE</i>						
Paleo Currents PC: Wang Pinxian	2003: 1 st workshop, Shanghai 2004: 2 nd workshop 2005: publication of scientific results	1. Identify proxies for the Western Boundary Currents 1. Compile data oceanographic / paleo-oceanographic data of Western Boundary Currents 2. Display variations at specific time intervals (Last Glacial Maximum, Holocene Optimum) 3. Study their paleo-oceanographic impact on the entire Pacific and paleoclimate impact on Asia and Australia	2003-2005	Funding required for participation of scientists 15,000 US\$ from IOC	Japan, Korea, Russia, China, Australia and SE Asian Countries	Standalone programme, affiliated to Ocean and Climate
Ocean Dynamics and Climate PC: Bo Qiu	Participate in Oceans and Climate-related global and regional research programmes (GODAE, CLIVAR, CREAMS, PBECS, JECCS)	Facilitate participation of WESTPAC scientists	2002-2005	To be identified	WESTPAC Member States	
	Mathematical Modelling of Marginal Seas (PL: to be identified)	Build up adequate scientific knowledge about the physical oceanography of selected shallow seas of the WESTPAC region, so as to eventually develop predictive models of the circulation pattern and water level variation.	2002-2005	20,000 US\$ from IOC	WESTPAC Member States	Taken over from last workplan, in collaboration with NEAR-GOOS or SEAGOOS

	Monsoon Oceanography (PL: to be identified)	To conduct a workshop on monsoon oceanography to assess understanding and models of (i) ocean-atmosphere interaction; (ii) response of shallow seas to monsoonal forcing; (iii) Develop strategy for development and integration	?	20,000 US\$ to be identified	WESTPAC Member States	Taken over from last workplan
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<i>INTERDISCIPLINARY PROGRAMMES</i>						
Gulf of Thailand Co-operative Study PC: Anond Snidvongs	Maintenance of the Sub-regional information system	On-line oceanographic data archive / subregional data node	2003-2005, SEASTART-RC, Bangkok	15,000 US\$ for operation from IOC	Gulf of Thailand Countries	Corresponds to IODE at global level
	Third Training Workshop on Operational Data and Information System for GoT, Nha Trang, VN	Capacity Building	2003 (Q2)	10,000 US\$ from IOC	Gulf of Thailand Countries 15 participants 2 resource persons	Corresponds to IODE at global level
	Thesis Research Support	Capacity Building	2003-2005	12,000 US\$ from IOC	4 per year	TEMA
	Fellowship Programme	Capacity Building	2003-2005	12,000 US\$ from IOC	4 per year	TEMA
	Regional Workshop on 'Teaching Physical Oceanography in SE Asian Universities	Capacity Building	2003	25,000 US\$ from IOC	25 (SE Asia and China), 2 resource persons	
	Hardcopy publication 'Physical Oceanographic Processes in Southeast Asian Waters	Capacity Building	2004 (Q1)	8,000 US\$ from IOC		Based on CD-ROM Tomczak
	Translation of textbook into national languages	Capacity Building	2003-2005	In kind contribution of countries		

Programme	Activities			Funding required	Participation	Remark
	Action / Project	1.1.1 Objectives	Date and place			
Gulf of Thailand Co-operative Study PC: Anond Snidvongs	Development of demonstration systems for local area marine forecast using combinations of real-time forecasting and modelling techniques	Establish Capacity in Operational Oceanography	2003-2005	2004: 5,000 US\$ x 3 yrs. 2005: 5,000 US\$ x 3 yrs. from IOC	2003, co-sponsored by SEASTART RC	
	Develop standard framework and ToR for technical collaboration between project and other agencies / companies, especially on marine forecasting		2003-2005	-	-	There are currently no guidelines on how to collaborate with Private Sector
Ocean Remote Sensing Programme PC: Hiroshi Kawamura	New generation SST project PL: Kawamura	1. Development of 1km, cloud-free, 3-hourly, quality-controlled (Regionally-tuned) satellite SST 2. Contribute to NEAR-GOOS 3. Link with GODAE	2002-2005	Outside funding	Applicable to NEARGOOS area	
	Red Tide monitoring project PL: Huang Weigen	Establish Red-tide monitoring capability	2002-2005	To be defined		
	Case-II project PL: Matsumura, Lynch		2002-2005	To be defined		
	Training/capacity building (to be identified)		2002-2005	To be defined	All WESTPAC Member States	

GOOS PROGRAMME						
NEAR-GOOS Chairperson selected by CC	Conform Strategic Plan and successive decisions on the workplan by the Coordinating Committee				Applicable to NEARGOOS area	
NEAR-GOOS Data Management Training Course	Annual training course to train NEARGOOS operators and individuals from other interested countries		Tokyo 2003-2005 Each year	25,000 US\$ x 3 yrs (JFIT)	WESTPAC Member States	
SEA-GOOS Chairperson selected by CC	Establishment of Coordinating Committee		2002-2003	5,000 US\$ x 3 yrs (IOC)	Applicable to member states interested in SEAGOOS	Joint effort of Secretariat and focal points
	Comprehensive survey of user capabilities and requirements		2003	-		
	Regional Technical Workshop on SEAGOOS	To formulate a strategic plan for SEAGOOS	2003	30,000 US\$ (IOC)		
	MATLAB Workshop, Kuantan	Co-sponsorship	July 2003	5,000 US\$ (IOC)	SEAGOOS members	Initiated by JCOMM
	Activities conform Strategic Plan					
SEACAMP	Conform proposal once approved					
OCEAN SERVICES						
IBCWP	Organize 4 th Meeting of IBCWP Editorial Board	To discuss measures to ensure wider participation Ensure more frequent and regular meetings Review the report on the Ocean Mapping Activities	2003	20,000 US\$ Source to be identified	Each participating member state	

Programme	Activities			Funding required	Participation	Remark
	Action / Project	1.1.1 Objectives	Date and place			
	Quality Control Workshop and Training Programme	Train WESTPAC participant in Ocean Mapping and QA/QC	2004 Boulder Colorado, US	30,000 US\$ Source to be identified	Each participating member state	
GODAR WESTPAC	Data rescue	Conform Workplan	Several meetings over three years	Funds to be sought by Japan	Interested member states	
OCEAN-PORTAL	Establishment of a dedicated WESTPAC Ocean-Portal (IOC led initiative)	Conform workplan		UNESCO (IOC Paris)		

GENERAL ACTIVITIES OF THE SUB-COMMISSION						
Cooperation with other agencies / organizations						
CCOP	Co-sponsorship of 5 th Asian Marine Geology Conference	Conform agreement	Bangkok, 2004	4,000 US\$ (JFIT)	WESTPAC member states	
UNEP/COBSEA	Activities to be identified					
UNEP/NOWPAP	Activities to be identified					
PEMSEA	Activities to be identified					
Public Awareness and information	Publication of newsletters and maintenance of website	To network among scientists of the region and beyond	2002-2005	4,000 US\$ (IOC)	-	
6th Scientific Symposium	Organization of Symposium	To provide a forum for young scientists of the region to present scientific papers, and follow-up discussions on WESTPAC programmes	2004, China	35,000 US\$ IOC 15,000 JFiT Additional sources of funding to be identified Considerable in kind contribution from China	WESTPAC Member States	

IOC/SC-WESTPAC-V/3

Annex II

WESTPAC VI Session	Organization of 6 th Session of the Sub-Commission	Facilitate the participation of key individuals in the meeting	Vietnam (pending official confirmation)	15,000 IOC Other sources to be identified	WESTPAC Member States	
Regional Secretariat	Operation cost		2002-2005	39,000 US\$		

Outside funding sources identified (e.g. Japan)	-
Core appropriation from the IOC (RP+EXB) (e.g. JFIT)	350,000 US\$
Funding Sources yet to be identified	125,000 US\$
UNESCO/IOC Cross-cutting Programme (e.g. HABSEA, OceanPORTAL)	-
Running Cost	39,000 US\$

Recommendation SC-WESTPAC-V.7

DATES AND PLACE OF NEXT SESSION

The IOC Sub-Commission for the Western Pacific,

Bearing in mind the need for a sufficient period of time between sessions of the Sub-Commission to allow a reasonable implementation of its programmes,

Recalling the decision of its First Session to have a three-year time period between its regular sessions,

Decides that its next session shall be in 2005, tentatively in Vietnam, subject to the endorsement by the relevant authorities,

Requests its officers, in consultation with the Executive Secretary IOC, to decide on further arrangements for the Sixth Session including as required as regards place and exact dates.

ANNEX III

LIST OF DOCUMENTS

Working Documents

IOC/SC-WESTPAC-V/1.prov.	PROVISIONAL AGENDA
IOC/SC-WESTPAC-V/1.add.prov.	PROVISIONAL TIME TABLE
IOC/SC-WESTPAC-V/2.prov.	PROVISIONAL ANNOTATED AGENDA
IOC/SC-WESTPAC-V/3.prov.	DRAFT SUMMARY REPORT
IOC/SC-WESTPAC-V/4.prov.	PROVISIONAL LIST OF DOCUMENTS
IOC/SC-WESTPAC-V/5.prov.	PROVISIONAL LIST OF PARTICIPANTS
IOC/SC-WESTPAC-V/6	EXECUTIVE SECRETARY'S REPORT ON INTERSESSIONAL ACTIVITIES
IOC/SC-WESTPAC-V/7	STATUS REPORT ON PROGRAMME AND BUDGET
IOC/SC-WESTPAC-V/8	REFORM OF PROGRAMME AND PROJECT STRUCTURE

15. Information Documents

IOC/SC-WESTPAC-V/inf.1	Information on Services Available
IOC/SC-WESTPAC-V/inf.2	Excerpts from the External Evaluation Report and Follow-up to Recommendations
IOC/SC-WESTPAC-V/inf.3	Census of Marine Life in Southeast Asia
IOC/SC-WESTPAC-V/inf.4	Work Plan for GODAR in the WESTPAC Region Year 2002-2006
IOC/SC-WESTPAC-V/inf.5	Report on Activities of RNODC for WESTPAC
IOC/SC-WESTPAC-V/inf.6	Report of Activities of Atmospheric Inputs Study
IOC/SC-WESTPAC-V/inf.7	Report on Ocean Dynamics and Climates
IOC/SC-WESTPAC-V/inf.8	A SEAGOOS Embryum
IOC/SC-WESTPAC-V/inf.9	Proposal for the Second Workshop on South China Sea Storm Surges, Waves and Ocean Circulation Forecasting
IOC/SC-WESTPAC-V/inf.10	The UNESCO/IOC OceanPortal
IOC/SC-WESTPAC-V/inf.11	IOC activities in the South Pacific

ANNEX IV

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ANNEX V

TERMS OF REFERENCE FOR WESTPAC V INTERSESSIONAL WORKING GROUP ON STRUCTURE AND MODUS OPERANDI.

Composition

- (i) Chairperson appointed by the Chair, WESTPAC with guidance of Member States,
- (ii) Up to five delegates nominated by Member States, chosen considering balanced representation of WESTPAC programmes, interests and disciplines.
- (iii) Director or Acting Director, WESTPAC Office

Duration

Convened as soon as possible after WESTPAC V and winding up on presentation of report to WESTPAC VI

Conduct of Business

By e-mail correspondence. Secretariat support by WESTPAC office. An Interim or draft report to be prepared within a year and presented to WESTPAC Chair for circulation and refinement by Member States and organizations.

Terms of Reference

1. Taking into account relevant comments and recommendations of
 - the report of the IOC External Evaluation,
 - the Principles guiding the design of the structure and modus operandi of WESTPAC programmes and activity as presented below,
 - Document WESTPAC V/8,
 - Existing programmes and activities of WESTPAC,
2. develop a new design for the programme and project structure for WESTPAC activity associated with the Programmes of IOC
3. Define general rules guiding the selection, management, governance, sponsorship, reporting, review and termination of designated WESTPAC Programmes, projects and other activities, including those which are jointly sponsored with other organizations and programmes.
4. Outline the general responsibilities and matters that should be included in the Terms of Reference of Programme and Project Coordinators, committees and other executive entities,
5. Provide a final report containing the recommended structures and practices to WESTPAC VI

PRINCIPLES GUIDING AN INTERSESSIONAL WORKING GROUP FOR DESIGNING THE STRUCTURE AND MODUS OPERANDI OF WESTPAC PROGRAMMES AND ACTIVITY

These principles should also provide the ES with guidance on general principles concerning the strategic role of Sub-commissions and regional programmes.

The IOC External Evaluation identified two roles for regional bodies:

- to facilitate participation of regional Member States in the IOC global programmes, and
- to address the identified regional programme priorities of the Member States.

The Evaluation noted IOC regional bodies are of special significance in terms of their particular concern with the needs of the developing country Members of the IOC.

1. To the best degree, the organizational structure of WESTPAC should mirror or map upon the structure of IOC principal components. Projects and other activities should be organized under these component headings. This is not intended to diminish the regional mandate of WESTPAC but ensures a clear connection between IOC Programmes and the outputs and outcomes that are attributed to WESTPAC activity.
2. WESTPAC should take active responsibility for determining the acceptance of activities for incorporation into its programmes and ordering the priorities for their implementation and support, the overriding criterion being the potential benefit for the WESTPAC partners.
3. Where regional activities are envisaged which do not align easily with the IOC Programme structure, careful consideration should be given to sponsoring them jointly with other appropriate international or national organizations and programmes, perhaps under the heading of 'Joint Regional programmes'.
4. WESTPAC is responsible for establishing proper governance and rules of procedure of its programmes. The Statutes, Procedures and Policies of IOC provide the basic framework. WESTPAC defines the roles of the Sub-Commission, the Secretariat, working groups, etc. This will include guidelines terms of reference for establishing projects, working groups, meetings/symposia and the reporting mechanisms for each.
5. The WESTPAC Secretariat (Office) has the day-to-day responsibility for monitoring implementation of the work programme. This includes secretariat support, monitoring milestones and performance metrics, support for meetings, collation and publication of reports, etc. The agreed work program (from the Sub-Commission) provides the fundamental guidance to the Secretariat.
6. Raising resources is a shared responsibility of the Member States of WESTPAC, the Secretariat, and those involved with specific projects. As a general rule projects should aim to be self-supporting with the core resources of the WESTPAC Office seen in a supportive and facilitating (coordination) role.

ANNEX VI

LIST OF ACRONYMS

ACE	Aerosol Characterization Experiment
APN	Asia Pacific Network for Global Change Research
ASEAN	Association of Southeast Asian Nations
CLIVAR	Climate Variability and Predictability Study
CREAMS	Circulation Research of the East Asian Marginal Seas
DFID	Department for International Development (United Kingdom)
EEZ	Exclusive Economic Zone
GEBCO	General Bathymetric Chart of the Oceans
GEF	Global Environment Facility
GEO-HAB	Global Ecology and Oceanography of Harmful Algal Blooms
GLOBEC	Global Ocean Ecosystems Dynamics
GODAE	Global Ocean Data Assimilation Experiment
GODAR	Global Oceanographic Data Archaeology and Rescue Project
GOOS	Global Ocean Observing System
HAB	Harmful Algal Blooms
HOMA	Heads of Marine Agencies
IBCWP	International Bathymetric Chart of the Western Pacific
ICAM	Integrated Coastal Area Management
ICAMG	International Conference on Asian Marine Geology
ICIWP	International Conference on the International Oceanographic Data and Information in the Western Pacific
IGOSS	Integrated Global Ocean Service System
IOC	International Oceanographic Commission
IODE	International Oceanographic Data and Information Exchange
JCOMM	Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology
JCOMM-TCP	JCOMM - Tropical Cyclone Programme
JDOSS	JODC Data Online Service System
JODC	Japan Oceanographic Data Centre (Japan)
KORDI	Korea Ocean Research and Development Institute (Republic of Korea)
NEAR-GOOS	North-East Asian Regional GOOS
NGO	Nongovernmental Organisation
NOWPAP	North-West Pacific Action Plan (UNEP)

ODIN	Ocean Data and Information Network
ODINAFRICA	ODIN for Africa
OSLR	Ocean Science in Relation to Living Resources
OSNLR	Ocean Science in Relation to Non-Living Resources
PICES	North Pacific Marine Science Organisation
POGO	Partnership for Observation of the Global Oceans
QA	Quality Assurance
QC	Quality Control
RAC	Regional Activity Centre
RC	Regional Centre
RNODC	Responsible National Oceanographic Data Centre
SCOPE	Scientific Committee on Oceanic Research (ICSU)
SEA	Southeast Asia
SEACAMP	Southeast Asian Centre for Atmospheric and Marine Prediction
SEAGOOS	South-East Asian GOOS
SOPAC	South Pacific Applied Geoscience Commission
START	Global Change System for Analysis, Research and Training
SWOT (analysis)	Strength, Weakness, Opportunities and Threads (analysis)
TEMA	Training, Education, and Mutual Assistance in Marine Science
TICZ	Tectonics and its Impacts to the Coastal Zone
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
WA GOOS	Western Australian GOOS
WESTPAC	Regional Committee for the Western Pacific
WMO	World Meteorological Organisation
WSSD	World Summit on Sustainable Development

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

1.	Eleventh Session of the Working Committee on international Oceanographic Data Exchange	E, F, S, R
2.	Seventeenth Session of the Executive Council	E, F, S, R, Ar
3.	Fourth Session of the Working Committee for Training, Education and Mutual Assistance	E, F, S, R
4.	Fifth Session of the Working Committee for the Global Investigation of Pollution in the Marine Environment	E, F, S, R
5.	First Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions	E, F, S
6.	Third Session of the <i>ad hoc</i> Task team to Study the Implications, for the Commission, of the UN Convention on the Law of the Sea and the New Ocean Regime	E, F, S, R
7.	First Session of the Programme Group on Ocean Processes and Climate	E, F, S, R
8.	Eighteenth Session of the Executive Council	E, F, S, R, Ar
9.	Thirteenth Session of the Assembly	E, F, S, R, Ar
10.	Tenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific	
11.	Nineteenth Session of the Executive Council, Paris, 1986	E, F, S, R, Ar
12.	Sixth Session of the IOC Scientific Committee for the Global Investigation of Pollution in the Marine Environment	E, F, S
13.	Twelfth Session of the IOC Working Committee on International Oceanographic Data Exchange	E, F, S, R
14.	Second Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Havana, 1986	E, F, S
15.	First Session of the IOC Regional Committee for the Central Eastern Atlantic, Praia, 1987	E, F, S
16.	Second Session of the IOC Programme Group on Ocean Processes and Climate	E, F, S
17.	Twentieth Session of the Executive Council, Paris, 1987	E, F, S, R, Ar
18.	Fourteenth Session of the Assembly, Paris, 1987	E, F, S, R, Ar
19.	Fifth Session of the IOC Regional Committee for the Southern Ocean	E, F, S, R
20.	Eleventh Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Beijing, 1987	E, F, S, R
21.	Second Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Arusha, 1987	E, F
22.	Fourth Session of the IOC Regional Committee for the Western Pacific, Bangkok, 1987	E only
23.	Twenty-first Session of the Executive Council, Paris, 1988	E, F, S, R
24.	Twenty-second Session of the Executive Council, Paris, 1989	E, F, S, R
25.	Fifteenth Session of the Assembly, Paris, 1989	E, F, S, R
26.	Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1989	E, F, S, R
27.	Twelfth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Novosibirski, 1989	E, F, S, R
28.	Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, Caracas, 1989	E, S
29.	First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1990	E only
30.	Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1990	E only
31.	Twenty-third Session of the Executive Council, Paris, 1990	E, F, S, R
32.	Thirteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, New York, 1990	E only
33.	Seventh Session of the IOC Committee for the Global Investigation of Pollution in the Marine Environment, Paris, 1991	E, F, S, R
34.	Fifth Session of the IOC Committee for Training, Education and Mutual Assistance in Marine Sciences, Paris, 1991	E, F, S, R
35.	Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1991	E, F, S, R
36.	Twenty-fourth Session of the Executive Council, Paris, 1991	E, F, S, R
37.	Sixteenth Session of the Assembly, Paris, 1991	E, F, S, R, Ar
38.	Thirteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Baja California, 1991	E, F, S, R
39.	Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992	E only
40.	Twenty-fifth Session of the Executive Council, Paris, 1992	E, F, S, R
41.	Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992	E, F, S, R
42.	Second Session of the IOC Regional Committee for the Central Eastern Atlantic, Lagos, 1990	E, F
43.	First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Investigation of Pollution in the Marine Environment, Paris, 1992	E, F, S, R
44.	First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1992	E, F, S
45.	Fourteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Paris, 1992	E, F, S, R
46.	Third Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Vascoas, 1992	E, F
47.	Second Session of the IOC Sub-Commission for the Western Pacific, Bangkok, 1993	E only
48.	Fourth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Veracruz, 1992	E, S
49.	Third Session of the IOC Regional Committee for the Central Eastern Atlantic, Dakar, 1993	E, F
50.	First Session of the IOC Committee for the Global Ocean Observing System, Paris, 1993	E, F, S, R
51.	Twenty-sixth Session of the Executive Council, Paris, 1993	E, F, S, R
52.	Seventeenth Session of the Assembly, Paris, 1993	E, F, S, R
53.	Fourteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Tokyo, 1993	E, F, S, R
54.	Second Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1993	E, F, S
55.	Twenty-seventh Session of the Executive Council, Paris, 1994	E, F, S, R
56.	First Planning Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Melbourne, 1994	E, F, S, R
57.	Eighth Session of the IOC-UNEP-IMO Committee for the Global Investigation of Pollution in the Marine Environment, San José, Costa Rica, 1994	E, F, S
58.	Twenty-eighth Session of the Executive Council, Paris, 1995	E, F, S, R
59.	Eighteenth Session of the Assembly, Paris, 1995	E, F, S, R
60.	Second Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1995	E, F, S, R

61.	Third Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1995	E only
62.	Fifteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Papetee, 1995	E, F, S, R
63.	Third Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1995	E, F, S
64.	Fifteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange	E, F, S, R
65.	Second Planning Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1995	E only
66.	Third Session of the IOC Sub-Commission for the Western Pacific, Tokyo, 1996	E only
67.	Fifth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Christ Church, 1995	E, S
68.	Intergovernmental Meeting on the IOC Black Sea Regional Programme in Marine Sciences and Services	E, R
69.	Fourth Session of the IOC Regional Committee for the Central Eastern Atlantic, Las Palmas, 1995	E, F, S
70.	Twenty-ninth Session of the Executive Council, Paris, 1996	E, F, S, R
71.	Sixth Session for the IOC Regional Committee for the Southern Ocean and the First Southern R Ocean Forum, Bremerhaven, 1996	E, F, S,
72.	IOC Black Sea Regional Committee, First Session, Varna, 1996	E, R
73.	IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Fourth Session, Mombasa, 1997	E, F
74.	Nineteenth Session of the Assembly, Paris, 1997	E, F, S, R
75.	Third Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1997	E, F, S, R
76.	Thirtieth Session of the Executive Council, Paris, 1997	E, F, S, R
77.	Second Session of the IOC Regional Committee for the Central Indian Ocean, Goa, 1996	E only
78.	Sixteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Lima, 1997	E, F, S, R
79.	Thirty-first Session of the Executive Council, Paris, 1998	E, F, S, R
80.	Thirty-second Session of the Executive Council, Paris, 1999	E, F, S, R
81.	Second Session of the IOC Black Sea Regional Committee, Istanbul, 1999	E only
82.	Twentieth Session of the Assembly, Paris, 1999	E, F, S, R
83.	Fourth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1999	E, F, S, R
84.	Seventeenth Session of the International Coordination Group for the Tsunami Warning System in the Pacific, Seoul, 1999	E, F, S, R
85.	Fourth Session of the IOC Sub-Commission for the Western Pacific, Seoul, 1999	E only
86.	Thirty-third Session of the Executive Council, Paris, 2000	E, F, S, R
87.	Thirty-fourth Session of the Executive Council, Paris, 2001	E, F, S, R
88.	Extraordinary Session of the Executive Council, Paris, 2001	E, F, S, R
89.	Sixth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, San José, 1999	E only
90.	Twenty-first Session of the Assembly, Paris, 2002	E, F, S, R
91.	Thirty-fifth Session of the Executive Council, Paris, 2001	E, F, S, R
92.	Sixteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Lisbon, 2000	E, F, S, R
93.	Eighteenth Session of the International Coordination Group for the Tsunami Warning System in the Pacific, Cartagena, 2001	E, F, S, R
94.	Fifth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 2001	E, F, S, R
95.	Seventh Session of the IOC Sub-commission for the Caribbean and Adjacent Regions (IOCARIBE), Mexico, 2002	E, S
96.	Fifth Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Nairobi, 2002 (Addendum: Recommendations in F, S and R)	E