The theme of the symposium is Role of Ocean Sciences for Sustainable Development. The symposium aims to (i) promote the exchange of ideas and information, particularly among young marine scientists, from both inside and outside the region; (ii) identify the role of marine sciences in the sustainable development in coastal areas; and (iii) address regional and global issues.

Call for papers

The symposium will focus on the following subject areas (i) ocean science in relation to living resources; (ii) ocean science in relation to non-living resources; (iii) marine pollution research and monitoring; and (iv) ocean dynamics and climate. Papers are invited on: monitoring of pollutants from land based activities, harmful algal blooms, near-shore currents and sediment transport, climate impacts, and scientific application to the coastal area management. Sessions on WESTPAC programmes and projects will also be held concurrently with the symposium. Deadline for abstracts: 15 August 1997.

Correspondence concerning the scientific programme and papers should be addressed to: Dr. Hyung Tack Huh, Korea Ocean Research and Development Institute, 1270 Sa-dong, Ansan City, Kyunggi-do 425-600, R. Korea; tel: (82-345) 400-6201; fax: (82-345) 408-5934; email: hhuh@sari.kordi.re.kr. Prof. Makoto Terazaki, Centre for International Cooperation, Ocean Research Institute, University of Tokyo, Minamidai 1-15-1, Tokyo 164, Japan, is the Chairman of the Local Organizing Committee for the symposium.

Venue of the symposium: Okinawa Convention Center, 4-3-1 Mashiiki, Ginowan City, Okinawa 901-22, Japan; tel: (81-98) 898300; fax: (81-98) 8982201.
WESTPAC Activity Report

WESTPAC Paleogeographic map published

Thanks to the contribution made by the participating member states and the leadership of Prof. Wang Pingxian and Dr. Marita Bradshaw, the WESTPAC Paleogeographic Map for the last glacial maximum region has been compiled and published. The map (1:20,000,000) covering entire WESTPAC region, is accompanied by two data maps (1:10,000,000) for the northern and southern hemispheres, and by a volume of explanatory notes. The map shows the paleo-coastlines, sea surface temperature, sediment types, sea-ice limits, some geomorphological features, etc., with paleogeographic information from a total of 779 offshore and onshore sites.

As seen from the map, the emergence and submergence of extensive continental shelves are the most outstanding geographic features of the late Quaternary glacial cycles in the WESTPAC region. The sea-level induced environmental signal has been amplified in the marginal seas, giving rise to drastic changes in the sea areas and configurations, and to reorganization of sea water circulation. It was found that the glacial geographic changes have led to profound impact on regional and global climate change, since the most of marginal seas are influenced by monsoon circulation, and some of those are located within the warm pool in the western Pacific.

For more information on the map, please contact Prof. Wang Pingxian, Department of Marine Geology, Tongji University, Shanghai 200092, China; fax: (86-21) 545 8965; email:mlicdmg@tju.ihp.ac.cn; and Dr. Marita Bradshaw, Australian Geological Survey Organization, GPO Box 1538, Canberra 2601, Australia; fax: 61-93 261 1036.

Ocean Mapping in the WESTPAC Region

The Second Session of the IOC Editorial Board for the International Charts in the WESTPAC Region (IBCWP) was held in the IOC Regional Secretariat for WESTPAC, Bangkok, Thailand, 9-12 December 1996, with participation of board members from 10 countries in the region. The Chief Editor and members in all countries reported to the meeting the progress that has been made in the implementation of the project, especially in the sub-regions 1, 2, 3 and 4.

For Sub-region 1, Russia has completed four plotting sheets at a scale of 1:500,000 for Chart 1-13, which has been submitted to the Chief Editor. It is planned to start the compilation of Chart 1-12 in 1997 and Chart 1-11 in 1998. For the sub-region 2 and 3, China has compiled 12 charts, and is ready to co-operate with other countries to produce plotting sheets for submission to the Chief Editor before next session of the Editorial Board. For Sub-region 2, the meeting assigned the charts to the following producing countries: Chart 2-4 to China; Chart 2-8 to Korea and Chart 2-11 to Japan.

Similar arrangements were also agreed for Sub-region 3, i.e. Charts 3-16 and 3-17 to Malaysia; Charts 3-6 and 3-11 to Vietnam; and Charts 3-2, 3-3 and 3-7 to China.

In Sub-region 4, Charts 4-12 and 4-14 will be prepared for evaluation and approval by Australia.

After reviewing by the Chief Editor, about 13 charts will be submitted to the next session of the Editorial Board for consideration and approval.

IOC Exhibition in Bangkok

With generous support from the National Research Council of Thailand (NRCT), a poster of IOC activities, including GOOS, GLOSS, GIPME and WESTPAC, was introduced in the exhibition entitled Education Towards Peace, commemorating UNESCO’s 50 Anniversary on 10 July 1996. The Deputy Prime Minister of Thailand, General Chavalit Yongchaiyudh, currently the Prime Minister, attended and delivered and opening address at the exhibition.
WESTPAC Activity Report

IOC/WESTPAC is implementing NOWPAP

IOC has been identified as the implementing agency for the Northwest Pacific Action Plan (NOWPAP) of UNEP at the 2nd Intergovernmental Meeting, Tokyo, Japan, 20 November 1996.

On the initiative of the states bordering the semi-enclosed seas of the Northwest Pacific region, the NOWPAP has been under discussion among the states since 1991. The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the NOWPAP and three supporting resolutions were adopted at the First Intergovernmental meeting (Seoul, R. Korea, 14 September 1994). The programme document, with 5 priority projects, was finally adopted at the Tokyo meeting.

The geographical scope of NOWPAP will cover the marine environment and coastal zones of the following states: DPR. Korea, Japan, PR. China, R. Korea and Russian Federation, from about 121°E to 143°E longitude, and from approximately 52°N to 33°N Latitude, without prejudice to the sovereign right of any state.

The two projects to be implemented by IOC, through its WESTPAC, are:

NOWPAP/1 Establishment of a comprehensive database and information management system:
NOWPAP/3 Establishment of a collaborative, regional monitoring programme.

Under NOWPAP/1, the proposed data/information to be collected and managed will include: marine data, land data and other information from management legislation and institutional arrangements.

With regard to NOWPAP/3, the parameters to be monitored will possibly include:
- general sea water quality (nutrients, COD, DO, pH, etc.);
- pollutants in sea water, sediments and organisms (oils and their derivatives, persistent organic pollutants, heavy metals, etc.)
- coastal environment (freshwater availability and quality, BOD, land use, agriculture etc.)
- bio-monitoring (phyto- and zoo-plankton, phyto-plankton pigments, fauna and flora, biological effects, etc.)
- loading of land-based pollutants (point and non-point sources pollution, etc.) and
- marine debris

The identified project activities are closely linked with the IOC regional programmes, and regional components of global programmes in the WESTPAC region, e.g., GOOS, NEAR-GOOS, HOTO, IODE and some regional projects. The first phase of both projects will focus on the assessment of national information and preparation of the proposals to set up the data and information system and the monitoring system. Both will continued for 18 months, including fact finding missions and workshops.

IOC, through its WESTPAC, has been involved in the whole process of the development of NOWPAP, and provided assistance and contributed to the formulation of the project document.

A MOU is being prepared by UNEP and IOC. It is expected that the projects could start implementation in February 1997. More detailed information is available from the IOC Regional Secretariat for WESTPAC.

HOTO Regional Pilot Project

Based on the Strategic Plan of the Health of the Ocean (HOTO) Panel for the Global Ocean Observing System (GOOS), and taking into consideration the regional framework for HOTO pilot projects developed at the Third Session of the HOTO Panel, (Bangkok, September 1995) pilot projects for specific coastal areas are now beginning to be evaluated by the HOTO Panel as a follow-on to the results and recommendations of the Scientific and Technical Committee for GOOS (J-GOOS).

As part of the fact finding activities preparatory to the Fourth Session of the HOTO Panel that will discuss implementation plans for the HOTO Module, Dr. Neil Andersen, and Dr. J. Michael Bewers are planning to visit the Western Pacific Region to discuss with relevant national authorities and experts, issues relating to the potential implementation of pilot projects in this region. This mission will be supported by the IOC through its continued support for GOOS and WESTPAC. The objectives of the visit are to determine the nature of national demands/requirements for data and interpretive products to respond to management and policy objectives, the extent of scientific and technical infrastructure that could be applied to HOTO implementation, and the nature of national and regional interests that will form a basis for focusing coastal area measurements and monitoring.

They will consult with scientific, GOOS, management and policy experts in the relevant countries on the regional HOTO pilot project, its relation to existing WESTPAC projects, e.g., musselwatch programme and NEAR-GOOS, and any resource deficiencies that would need to be addressed prior to implementation. The fact finding mission is now being planned for March/April 1997.
Mangroves and coral reefs are being destroyed at an alarming rate. The problem of managing these resources is complicated by the lack of communication between oceanographers, biologists and resource managers. A project at AIMS with the support of the IBM International Foundation relies on the use of computer technology in modelling and visualisation to enable this exchange of information. This program has a strong Asian component. In particular, in June 1996, this program invited four senior scientists from Asia to AIMS for training and collaborative research on key environmental problems in their home country.

In Vietnam, collaboration with HYDROMET’s Dr. Nguyen Hu Nhan resulted in modelling and visualising the siltation processes in the Mekong River estuary, Vietnam. Field data were collected by HYDROMET-AIMS in 1993 and 1996 and were used to calibrate the models. The model results were computer visualised and animated using the IBM Data Explorer (Figure 1). The study suggests that the Mekong River estuary may degrade following the construction of the proposed 100 hydroelectric dams and water diversion schemes in riparian countries further upstream. One scientific paper is in press and another one submitted.

In Malaysia, collaboration with Dr. Ving Ching Chong at the University of Malaya, resulted in visualising his field data on prawn larvae in the mangrove-fringed Klang Strait (Figure 2) and in using these data to model the link between mangroves and prawn larvae recruitment. The issue is topical because mangroves are being reclaimed. One paper is in press, another one in preparation.

In China, collaboration with Mr. Guan Weibing of the Hangzhou’s 2nd Institute of Oceanography has focused on the siltation of the extremely turbid Jiaojiang River estuary. Detailed field investigations were carried out in 1992 and 1996 by SOA-AIMS and these were used to calibrate a cohesive sediment dynamics model linked to a baroclinic model of the water circulation. The data were visualised (Figure 3) and animated to demonstrate that siltation results from the import of fluid mud at spring tides from coastal waters of the South China Sea. The animations offer a way to test scenarios for various engineering measures and siltation management strategies. A paper has been published and another one is in press.

In Thailand, collaboration with Dr. Gulay Watthayakorn of Chulalongkorn University, has led to merging her data set on dissolved hydrocarbons in coastal waters of the Gulf of Thailand with the NRCT’s Seawatch oceanographic data for the Gulf. Computer visualisation (Figure 4) suggests a link between oil pollution and water and wind circulation. Dilution of wastes and their flushing varying seasonally. Seasonal peaks in hydrocarbon pollution occur along the east coast and are determined by local currents and winds. The mean circulation in the Gulf of Thailand is found to be controlled by the forcing from the South China Sea and not by the local wind. The seasonal intrusion of Mekong River plume water is apparent in the animations of the salinity and current data. The flushing of the upper Gulf of Thailand, the most stressed local body in the Gulf draining Bangkok and several industries, is also strongly controlled by this forcing. This implies that the present models of circulation and pollution in the Gulf, and their use for management, may be unreliable and need new open boundary forcing and verification. A paper has been submitted.

An educational movie is in preparation with the support of IOC which will illustrate some of these achievements. More details can be found on the Internet at http://ibm590.aims.gov.au.
Year of the Reef’ 97

International Year of the Reef (IYOR) was formally announced at the 8th International Coral Reef Symposium in Panama, at the end of June 1996. Almost all of the 1400 participants from numerous countries, including most of the world’s leading reef scientists, signed the IYOR Pledge of support for conservation, education and assessments of reef condition.

An IYOR booth attracted continuous attention throughout the meeting, and distributed a range of materials. A press event attracted television stations, magazines and newspapers and IYOR received good coverage in the press of Latin America.

The handsome IYOR logo designed by the Scripps Institute was a big hit with participants as it appeared on buttons and a T-shirt. Organizations wishing to use the logo in connection with IYOR activities should ask for an application. A brochure in English explaining IYOR has been produced and is being distributed. Further print runs in other languages, as well as country- and region-specific versions, are being planned.

IYOR was designated a sanctioned activity of the International Coral Reef Initiative (ICRI) and assigned responsibility for public awareness in 1997.

An all-day IYOR Symposium on rapid assessments of benthos and fishes and various impacts was well received. Some 20 researchers from around the Western Atlantic enthusiastically endorsed the idea of assessing the condition of reefs remote from centers of population.

Two meetings of those interested in education were well attended and the participants voiced strong support for developing a clearing house with information on all available teaching aids.

Among the IYOR-related activities also promoted at Panama were these: Reef Base, the global database on coral reefs, now available from ICLARM on CD-ROM together with a comprehensive explanation. For information, contact John McManus j.mcmanus@icnet.com.

The Global Coral Reef Monitoring Network (GCMRN) was launched and is developing plans for a network of monitoring sites worldwide. Information brochure available from Clive Wilkinson: C.Wilkinson@pearl.amis.gov.au.

A poster map of the world’s coral reef and mangroves, prepared by the World Conservation Monitoring Center, is available in English or Spanish from Alastair Grenfell: a.grenfell@wcmc.org.uk

PACIFIC:

The Pacific Year of the Reef (PYOR) will be launched on 11 February 1997. It is being led by the South Pacific Regional Environmental Program and to date 17 countries are participating; others are expected to join. The PYOR slogan is “Coral Reefs: Their Health, Our Wealth”. National campaign plans are being developed. Further information from Lucille Overhoff, e-mail: lucille@pactok.peg.apc.org.

The 8th Pacific Science Association’s Inter-congress to be held in Fiji 13-19, 1997, will feature a full report on the status of coral reefs in the Pacific and the results of resurvey of reefs over some decades, both of which are central themes of PYOR. Additional papers on PYOR themes are being solicited. For information contact Dr. Charles Birkeland, UOG Marine laboratory, Mangilao, Guam 96923; email: birkelan@uog9.uog.edu or Dr. Richard W. Grigg, Department of Oceanography, University of Hawaii at Manoa 1000 Pope Rd. Honolulu, Hawaii, 96822; email: rgriggs@oest.hawaii.edu

UNITED STATES


UNITED KINGDOM


AUSTRALIA, MEXICO, COLUMBIA, MALAYSIA, PHILIPPINES:

An Australian Group has organized an electronic auction of donated painting and is assembling information on teaching aids for distribution to schools. Mexican reef enthusiasts are planning surveys and educational activities. The Colombian Committee has plans for a poster and for demonstrations about reefs in a museum. Committees are being formed in Malaysia and the Philippines.

EDUCATION:

The American Association of Zoos and Aquaria is developing plans for demonstrations and feature displays about coral reefs. Several initiatives are underway to assemble information on existing materials and to produce new education and outreach materials. Lists of all available teaching aids in various languages are being assembled and will be widely distributed. A set of transparencies introducing coral reefs as cities under the sea is in preparation and a teacher’s guide will be included.

For further information please contact:
Robert N. Ginsburg, Rosenstiel School of Marine and Atmospheric Science, University of Miami; Phone: (305) 361 4875; fax: (305) 3614094; email: rginsburg@rsmas.miami.edu
Future activities

(Cont'd from p. 1. "NEAR-GOOS is operating) of operational meteorological data among national Meteorological Services. IGOS has adopted this network as its means of exchanging marine meteorological and oceanographical data. For users who do not have direct access to GTS, all the marine meteorological and oceanographical data in GTS network in the specified region are downloaded to RTDB.

After 30 days, the data are passed to DMDB which is under the responsibility of the Japan Oceanographic Data Center. DMDB collects and makes these data available together with detailed observational data which are provided directly from participating institutes to DMDB.

To encourage data exchange in the system, Associate Data Bases may be established, which acts as a node between RTDB/DMDB and various users in each country. In such cases, the users provide their data to the Associate Data Base, which then passes them to RTDB/DMDB, and the data retrieval from RTDB/DMDB is made first by an Associate Data Base for further distribution to the users, thus reducing the communication load on the RTDB and DMDB.

The 29th Session of the IOC Executive Council Meeting (Paris, 24 September-4 October 1996) approved the implementation Plan, and the NEAR-GOOS database system has started its preliminary operation. GTS data have been stored in the databases. Several organizations have already expressed their desire to join the data exchange. A related training event is now planned. However, much more has to be done to make the project capable of demonstrating the benefit of oceanographical data exchange. It now only deals with a limited area of the western Pacific. It should be extended to cover the entire WESTPAC region and involve more nations and institutions. User friendly formats of the data files should be sought. Another important aspect is the application of the data now available through these data bases. The system is waiting for many users to take advantage of its data exchange mechanism, and contribute their feedback for future enhancement of NEAR-GOOS. For further information on the databases, please visit the NEAR-GOOS homepage, (http://www.unesco.org/IOC/goos/neargoos.htm).

Workshop on Cooperative Study on the Gulf of Thailand, IOC Regional Secretariat, Bangkok, Thailand, 25-28 February 1997. Contact: Dr. Anond Snidvongs, fax: (66-2) 251 1951; email: sanond@netserv.chula.ac.th; or Mr. Y. Jiang, IOC Regional Secretariat

IOC/WESTPAC Training Course on Species Identification of Harmful Microalgae, Tokyo, Japan; 28 February - 8 March 1997, Contact: Dr. Y. Fukuyo; fax: (81-3) 3812 2111; email: afukuyo@hongo.ecc.u-tokyo.ac.jp

IOC/WESTPAC Workshop on the Paleographic

Map for Holocene (tentative), Shanghai, China; May 1997 Contact: Prof. Wang Pinxian, email: pxwang@online.sh.cn; or IOC Regional Secretariat.

Second Session of the IOC/WESTPAC Coordinating Committee for NEAR-GOOS, IOC Regional Secretariat, Bangkok, Thailand; 13-15 May 1997; Contact: Mr. N. Hasegawa, fax: (81-3) 3211 3047; email: hasegawa@umi.hq.kishou.go.jp

Nineteenth Session of the IOC Assembly, Paris, France; 2-18 July 1997; Contact; Dr. G. Kullenberg, fax: (33-1) 4568 5812; email: g.kullenberg@unesco.org

WESTPAC Information

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