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(of UNESCO)

INFORMATION DOCUMENT

**PROGRESS REPORT ON WESTPAC ACTIVITIES
SINCE ITS SEVENTH SESSION (MAY 2008–MAY 2009)**

Summary. The document has been prepared by the sub-Commission Secretariat. It takes account of major follow-up by WESTPAC since its seventh Intergovernmental Session in May 2008, which covers the preparations of its regional science plan, establishment of its advisory group, setting up UNESCO/IOC Regional Network of Training & Research Centres on Oceanography and implementation of its regionally rooted projects.

The document concludes by analysing the current major problems WESTPAC has been encountering and providing possible solutions to them in order to better position itself in the region and maximize the benefit to its Member States.

Progress since its Seventh Session of WESTPAC

The Seventh Session of IOC Sub-Commission for the Western Pacific (WESTPAC) in May 2008 has marked a milestone in strategically restructuring and revitalising itself to be aligned with IOC, in which several resolutions were adopted and subsequently endorsed by the 41st Session of IOC Executive Council on Strategy and Programme Structure, WESTPAC Advisory Group, UNESCO/IOC Regional Network of Training and Research Centres on Oceanography, Workplan and Budget (2008–2011) and Change to the WESTPAC Session Schedule.

With the leadership of newly-selected WESTPAC Officers, and kind coordination of IOC National Focal Points, project leaders of WESTPAC, substantial progress has been made so far.

1. Preparations for the WESTPAC Science Plan

WESTPAC hold its first Officers' meeting in November 2008 after new WESTPAC Officers took office. Amongst other matters, the officers decided to start the development of one WESTPAC Science plan in order to further substantialize its strategy and programme structure in line with IOC's high level objectives. The Science Plan will chart the course for ocean science in the Western Pacific region for the upcoming decade, aiming to identify the key regional issues and present possible research priorities, together with pilot projects, to better understand/address them. Once it is finalized, the Science Plan could serve as the blueprint for WESTPAC to mobilize the efforts from member states in the region to work collectively.

Member of the drafting group are being identified, whose first meeting is to be held in July-August of this year.

2. Establishment of the WESTPAC Advisory Group

In accordance with Recommendation SC-WESTPAC-VII.1, one circular letter has been issued to all Member States of WESTPAC for nominating five members of the Advisory Group. The advisory group, composed of the Officers of the Sub-Commission and up to five additional experts in relevant disciplines of marine science, has major responsibilities, *inter alia*, to advise the Sub-Commission on all scientific and technical aspects, and assist in developing and updating, as appropriate, a Scientific Strategic Plan and accompanying short- to medium-term actions plan and targets for the Sub-Commission. Total Six scientists were nominated from China, Indonesia, Japan, Korea, Thailand and Russia, together with their resumes, among which, four are physical-oceanographer, one being biologist and another one working on geology.

All nominees were thoroughly reviewed at the WESTPAC Officers' meeting, and four were finally selected as the members of the WESTPAC Advisory Group with due considerations of their expertise and knowledge on WESTPAC, as well as geographical balance. Besides, the need was emphasized to have one scientist from Australia with multi-disciplinary background, taking into account balanced representation of geographical distribution and the future work of the Advisory Group on assisting in developing one Scientific Strategic Plan. Apart from the nominee of Australia to be identified soon, the WESTPAC Advisory Group is composed of the WESTPAC Officers and the four newly-selected members, namely, Dr Qiao Fangli from the First Institute of Oceanography of the State Oceanic Administration, China, Dr Ir. John I. Pariwono from the Bogor Institute of Agriculture, Indonesia, Dr Yutaka Michida from the University of Tokyo, Japan, and Dr Maitree Duangawasdi from Thailand.

3. Setting up the UNESCO/IOC Regional Network of Training & Research Centres on Oceanography

The new regional capacity building initiative, entitled "UNESCO/IOC Regional Network of Training & Research Centres on Oceanography" was adopted at the 7th Session of WESTPAC, together with relevant Procedures and Guidelines for establishing the above mentioned centres.

The initiative aims to serve as a prime means of capacity building through provision on a free-of-charge basis of training and research opportunities to all WESTPAC Member States on marine science and service in national oceanographic institutes, universities, within their domains of focus.

The information on the activity has been widely distributed to those interested institutes and universities. Two institutes have clearly indicated their willingness to join the regional network and one of them has submitted their application on 23 April 2009. In accordance with the adopted procedures and guidelines, a process of assessment will be undertaken accordingly.

4. Implementation of its regionally-rooted projects;

In general, most of projects, including newly adopted regional projects in 2008, have been carrying out their activities as planned. Noticeable progress has been made on the following projects.

Response of Marine Hazards to Climate Change

WESTPAC newly-adopted Project “the Response of Marine Hazards to Climate Change in the Western Pacific” organized its First International Scientific Workshop in Qingdao, China during 23–24 November 2008, with the generous financial support of the First Institute of Oceanography, SOA. Twenty-two Scientists attended this workshop, coming from ten Member States of IOC/WESTPAC, including Australia, China, Indonesia, Korea, Malaysia, Philippines, Russia, Thailand, United States and Viet Nam.

The project aims to improve the understanding of the physical processes of typical marine hazards, such as typhoon and storm surge, marine ecosystem disasters and their responding mechanisms to global climate change by means of observations, dynamic analysis, numerical modelling and capacity building, in order to further develop the predictive capacity for climate change and the ocean responses.

During the workshop, various presentations were made on the air-sea interaction and multi-scale climate change, impacts of climate change on marine ecosystems and mitigation responses, and the application of several ocean and climate numerical models. Scientists also briefly introduced their on-going research activities relevant with this project and expressed their willingness to work together towards the objectives of the project.

The workshop recognized with concerns the ever increasing impacts of climate change on the marine natural hazards and ecosystem in the Western Pacific region, and welcomed the timely initiation of the project with objectives to improve the regional scientific knowledge on the trends and responding mechanism of marine hazards to climate change. The workshop also emphasized the links of this project with other on-going regional climate related projects and activities, e.g. CLIVAR, to avoid any overlapping, and complement each other for maximum benefit.

In conclusion, the workshop agreed to develop one scientific plan for this project, taking into full account the identified area (7-15°N, 110-145°E) as the pilot target area for the Typhoon Generation Study, and Gulf of Thailand and Bohol Sea for the study on the response of marine ecosystem to climate change. Finally the workshop highlighted the importance of cooperation among countries in carrying out the projects and encouraged the Member States interested to participate in the cooperation and contribution to this project in whatever ways they can.

Coral Reef under Climate and Anthropogenic Perturbation:

In contributions to High Level Objective 3 of the Intergovernmental Oceanographic Commission (IOC) of UNESCO on the “Safeguarding the Marine Ecosystems” (2008–2013), IOC Sub-Commission for the Western Pacific (WESTPAC) adopted one new regional project entitled “Coral Reefs under Climate and Anthropogenic Perturbations” (WESTPAC-CorReCAP) at its Seventh Inter-governmental Session, Sabah, Malaysia, 26–29 May 2008.

In cooperation with the East Normal University, China, the first WESTPAC Workshop on Coral Reef under Climate and Anthropogenic Perturbation will be scheduled for 23–26 May 2009 in Shanghai, funded by the East China Normal University and the Contribution of China to IOC.

The objectives of this CorReCAP Project are to: (i) understand the biogeochemistry and ecological nature of coral reefs in WESTPAC region with different physical and environmental settings as well as under the impact of different types of human interventions; (ii) evaluate the consequence of the impact of climate and other global changes on the health of coral reefs (e.g. regime shifts), their associated biodiversity as well as on their ability to provide goods and services; (iii) promote capacity building in areas related to research on coral reefs through sharing scientific knowledge and training activities, as well as collaboration within existing research networks in WESTPAC.

Coastal Biodiversity and Management

Working together with the Chulalongkorn, University, Thailand, WESTPAC project of Coastal Biodiversity and Management will hold its workshop on Marine Invasive Species on 4–5 June 2009, Thailand. The workshop was mainly funded by the Japan Fund-in-Trust.

Great attention is paid to the marine invasive species amongst other issues on biodiversity and its conservations. To better understand the current status, impacts of marine invasive species, and develop effective prevention and monitoring measures/plan, the workshop aims to: (i) review the regional status on the marine invasive species and increase the knowledge and the awareness of the threats of marine invasive species on marine biodiversity in the Western Pacific region; and (ii) establish the research priority and direction in the Western Pacific region through establishment of quality assurance standard and protocol for scientific data on invasive organisms.

Fluvial Sediment to the South China Sea

In collaboration with the State Key Laboratory of Marine Geology at Tongji University, WESTPAC project on “Fluvial Sediment to the South China Sea” organized its First International Workshop on 27–28 November 2008 in Shanghai, with generous financial support of the State Key Laboratory of Marine Geology and the National Natural Science Foundation of China (NSFC). Thirty participants from seven countries joined the workshop, including ten from China, two from Germany, two from Indonesia, one from Malaysia, two from Philippines, two from Thailand (finally unable to attend due to the closure of Suvarnabhumi Airport of Thailand), and twelve from Viet Nam.

The project aims to investigate sediment discharge to the South China Sea from individual rivers surrounding the South China Sea, determine the source and transport of fluvial sediment into the SSC over the geological past and predict the future sediment discharge. Total eighteen oral presentations were given during the two-day workshop, covering various topics on fine-grained detrital sediment discharge to the South China Sea, Mekong River discharge and its delta evolution, sediment input from Philippines rivers, river discharge of coast rivers of Peninsular Malaysia, changes of coastline and delta evolution in western Indonesia, and pale-oceanography and sedimentation evolution of the South China Sea.

The meeting further suggested, in order to achieve the objectives of the project, fluvial sediments and water samples be collected and measured at same laboratory routines to set up a comparable dataset, a cooperative cruise be possibly organized in the South China Sea to investigate incised valley evolution since the last glacial maximum, and capacity building activities be strengthened on sampling, scientific visits, and student exchanges. The meeting decided to organize the second workshop in Ho Chi Minh City in Viet Nam during November 2009.

South East Asian-Global Ocean Observing System (SEAGOOS): pilot project development

The South East Asia-Global Ocean Observing System (SEAGOOS) was initiated and established by the UNESCO/IOC Sub-Commission for the Western Pacific (WESTPAC) in 2002 and subsequently endorsed by the Intergovernmental Oceanographic Commission (IOC) at its 22nd Assembly. SEAGOOS, aiming to promote regional operational oceanography in the wider Southeast Asian Basin, in view of 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.

The recent progress on SEAGOOS was made to develop its pilot projects as recommended in the Terms of Reference of SEAGOOS Coordinating Committee. Two pilots have been developed, one focusing on the ocean forecast demonstration and the other being the Monitoring Monsoon Onset and its Social and Ecosystem Impacts.

The ocean forecast demonstration project will try to improve the regional capability on numerical modelling through providing access to broad scale ocean model data and products to partner agencies, to be used as boundary conditions for their regional and local high resolution models. This could be done initially through experiments in a small number of countries, using their existing regional/local data and high resolution modelling capabilities. If this project is successful it will constitute a test case and will work to encourage other countries to participate. The initial global ocean model for the project will be BLUElink and others wishing to join.

The pilot project on Monsoon Onset Monitoring and its Social & Ecosystem Impacts (MOMSEI) has been developed for the South East Asia-Global Ocean Observing System (SEAGOOS) at one expert meeting in Phuket, Thailand, 5–6 March 2009. The meeting was co-sponsored by the First Institute of Oceanography (FIO) of SOA, China and hosted by the Phuket Marine Biological Center (PMBC), Thailand. Scientists from China, Indonesia, Malaysia, Thailand and IOC/WESTPAC Secretariat and IOC Perth Programme Office attended this meeting. The meeting agreed to draw up one science plan of this pilot project. Two workshops will be planned to finalize the science plan. The pilot project is expected to be implemented from the early 2010.

Ocean Data & Information Network for WESTPAC (ODINWESTPAC)

ODINWESTPAC was set up primarily to provide an effective capacity building framework, to promote regional collaboration in marine data and information and products sharing, to develop cooperation with other ODINs and international and regional projects/programmes, and to provide data and information services mainly for the WESTPAC Member States and other users.

The coordinator ship of ODINWESTPAC was transferred to the National Marine Data and Information Centre (NMDIS), China following the decision of the 7th Session of WESTPAC in May 2008, Malaysia. So far, the information on the contact points for ODINWESTPAC has been collected from Australia, China, Indonesia, Japan, Malaysia, Philippines, Thailand and Viet Nam; some hardware for constructing the website were purchased and put into use; the preliminary structure of the website has been completed and open to service prior to IODE-XX; according to the workplan, data and information collecting is under way and some from MNDIS has been available on the website.

ODINWESTPAC is planning to organize a working group meeting for focal points of Member States, to develop a strategy and working plan for the project, to carry out training course and to implement capacity building activities in the next step.

Enhancing the Regional Capability on Marine Oil Spills

The first WESTPAC workshop on monitoring techniques and emergency response of marine oil spills took place on 20–23 April 2009 in Qingdao, organized by the First Institute of Oceanography, State Oceanic Administration of China, in co-sponsorship with the Korea Ocean Research and Development Institute. The objective of the training workshops aims to improve the regional capability on the oil spill response, through the provision of theoretical and practical knowledge of monitoring methods, identification methods, emergency responses, environment remediation to the selected participants among the Member States of IOC/WESTPAC.

The training workshop has gained wide recognition. Total thirty-four trainees nominated from twelve countries in the Asia and Pacific region have been selected by the IOC/WESTPAC Secretariat and the Local Organizing Committee. Six lecturers joined and gave presentations covering various topics on the detection, monitoring and identification techniques of marine oil spills, early-warning and forecasting of oil spills, and emergency responses and bioremediation of marine oil spills.

Public Awareness: e-bulletin

Working with UNU, WESTPAC distributed E-bulletin regularly in order to: (i) collect and disseminate updated information on emergent ocean phenomena, the outcome of marine scientific research, research activity, funding, job opportunities etc in the Western Pacific; (ii) raise public awareness on marine scientific research, and scientific services in the Western Pacific; and (iii) promote communication of IOC/WESTPAC with other ocean-related programmes and research communities.

Thanks to the inputs from all project leaders, Member States and other regional partners, three E-bulletins were published since September 2008. Website of the E-bulletin has been established at <http://www.unescobkk.org/index.php?id=8118>, and Visitor Tracking System was inserting into the website to trace the number of visitor and their activities. The E-bulletin was distributed through WESTPAC mailing list that consists of about 400 email addresses, and it was also distributed through the Japan Oceanographic Society mailing list.

5. Assistance in the implementation of IOC global programmes.

As an instrumental “arm” of IOC, WESTPAC should undoubtedly assist in the implementation of IOC global programmes/activities. Over the past year, the communication has been greatly improved between Headquarter and WESTPAC Secretariat, and plenty of efforts have been made in providing region-specific coordination, and helping organize several workshops related to IOC programmes, as well as representing IOC at various meeting held in the region.

6. Operation of Regional Secretariat

The office has been efficiently operational with the generous host of the Department of Marine and Coastal Resources of Thailand. One regular post for the head of the WESTPAC Secretariat has been established and open for recruitment in March 2008. Mr Wenxi ZHU was finally selected and appointed in March 2009 as the head of the office and programme Specialist of UNESCO Bangkok Office. In accordance with the post description, Mr Wenxi ZHU will not only take care of IOC and its WESTPAC matters, but also develop and coordinate other science project in UNESCO Bangkok Cluster Countries of Thailand, Myanmar, Lao PDR, Viet Nam and Cambodia.

Conclusion and Recommendations

It is mainly due to the strong willingness of Member States to cooperate that WESTPAC has been able to regain its dynamism over recent years. Motivated with this willingness, a number of Member States and institutes could contribute whatever they can, either in cash or in kind, to carry out cooperative researches which present far too formidable a task to be undertaken by any one

state or institute. In spite that contributions from all countries could not be exhaustively listed, it should be acknowledged that China, Japan and Republic of Korea has been committing and contributing financially to WESTPAC activities, Thailand has been hosting the office and providing support staff, Malaysia and Indonesia have fully financially and logistically hosted WESTPAC symposia, or workshops.

The prompt response from IOC National Focal Points of WESTPAC should be also highly commendable. Without their timely and appropriate nomination and suggestions, those right experts could not be approached at right time and all activities could not be conducted smoothly.

Despite some progress has been made as planned, efforts are still needed in improving the financial instability, impact of WESTPAC activities, and establishing better coordination between IOC global programmes and its regionally rooted projects.

- To alleviate the financial instability: It does not make much sense to repeatedly request IOC to allocate more budget in support of WESTPAC activities as the IOC Regular Budget from UNESCO has been shrinking over past years, in particular, when UNESCO and it IOC has made efforts recently in re-setting up one P-4 post as Head of WESTPAC Secretariat.

In this context, the only pragmatic way for sustaining WESTPAC is to explore the potentials from its Member States while improving the impacts of relevant activities at the country level. In the regard, all Member States are encouraged to get their scientists involved into WESTPAC activities, motivate their leading scientists to initiate regionally-rooted projects and provide financial support to it, second professionals to work at the WESTPAC Secretariat and financially host the workshops/symposia.

- To enhance the impacts of WESTPAC activities: Having been positioned as a regional organization on Marine Science and Service, WESTPAC, through its tri-annual international scientific symposium, projects and various training activities, has been playing an irreplaceable role in improving the knowledge of its Member States on the nature and resources of the ocean and coastal areas and applying that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making process.

To be frank, science as a whole has been always overlooked or placed into secondary level in national development plans of developing countries. It is no surprising that marine science, amounting to only a small portion in the field of science, has been paid less attention to by governmental agencies as it normally requires long-time observation and multi-disciplinary research, and thus could not provide immediate and tangible solution to the national, regional and global concerns. To financially sustain WESTPAC, the link must be strengthened between WESTPAC activities and those ever pressing national, regional and global challenges of climate change, natural hazards and healthy marine ecosystems, etc. Translating the outcomes of WESTPAC activities into immediate action could be the most appropriate way of enhancing the impacts of WESTPAC at regional and national level.

- To better synergize the efforts between Headquarter and the field office: in addition to WESTPAC activities, there are still some other activities carried out in the region by IOC Headquarter funded through different sources.

To jointly enhance the visibility of IOC and maximize the benefit to Member States, IOC Headquarter need to establish better coordination with its field office by improving information of WESTPAC with regard to emerging funding opportunities and activities to be conducted in the region, involving expert scientists from WESTPAC into the planning and steering process of IOC global programmes. Particularly in terms of fund

raising, IOC headquarter should not become a competitor with its regional office, instead, IOC should get WESTPAC involved from beginning to establish substantial relationship with other donor agencies, and UN regional organizations.

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