Announcement on the IOC/WESTPAC Training Course

“Impact of Sedimentary Dynamics and Biogeochemistry on Coral Reefs”

Koh Samui, Thailand, 15th – 18th June 2010

1. Background

The “Coral Reefs under Climate and Anthropogenic Perturbations” (IOC/WESTPAC-CorReCAP) Project was established at the Seventh Intergovernmental Session of IOC Sub-Commission for the Western Pacific (26-29 May 2008, Sabah, Malaysia), aiming to safeguard the health of coral reef ecosystems, and carry out cost-effective management procedures and policies to maintain the sustainability of coral reefs, with a well-coordinated network within the Western Pacific Region.

The project objectives are to:

- understand the biogeochemical and ecological nature of coral reefs in WESTPAC in different environmental settings, as well as different types of human interventions;
- To evaluate the consequences of the impacts of climate change and human activities on the health of coral reefs and their sustainable use; and,
- To promote capacity building in areas related to research on coral reefs through sharing scientific knowledge and training activities.

This project will be carried out mainly through three workshops and training courses, as well as activities in between workshops in 2009-2011.

2. Objective and Scope of the Training Course

It was highlighted at the first workshop of IOC/WESTPAC-CorReCAP Project in Shanghai (23-26 May, 2009), that training activity should be considered as one of important components of this project in developing collaborations on coral reef research in view of the pressing need from member states in WESTPAC Region on capacity building. Therefore, this training activity was designed to:

- build capacity on the impacts of sediment on coral reefs for the WESTPAC member states;
- Establish an international research network in the field of sedimentary dynamics on coral reefs;
• Identify cooperative activities concerning impacts of sediment on coral reefs in the WESTPAC region;
• Sharing information, technology and methodology among researchers and experts from inside and outside the WESTPAC region.

3. Venue of the Training Course

The training activity will be organized at Koh Samui, Suratthani Province, Thailand.

Ko Samui is located in the Gulf of Thailand, about 35 km northeast to the Surat Thani town (9°N, 100°E). The island measures some 21 kilometres at its narrowest point, and 25 km at its longest. It is Thailand's third largest island, with an area of 228.7 km², and surrounded by about sixty other islands, which compose the Ang Thong Marine National Park (Mu Ko Ang Thong National Park) and include other tourist destinations (Ko Phangan, Ko Tao and Ko Nang Yuan). There are approximately 16 km² of coral reef area around the island. Increase in sediment loads from land-use and coastal development is one of the most serious problems facing the coral reef ecosystem around Koh Samui.

4. Dates of the Training Course

The training course will be held on 15th – 18th June 2010 inclusive, prior to the 2nd Asia and Pacific Coral Reef Symposium (APCRS) in Phuket, 20–24 June 2010, and the Second Workshop for IOC/WESTPAC-CorReCAP Project in 22-24 June 2010.

5. Topic of Lectures

The training will cover the following topics with experts invited within WESTPAC Region.

5.1 Sedimentary dynamics of coral reef environment
• Sedimentation processes (e.g., sedimentation rate and variability)
• Sediment characteristics (e.g., composition and source)
• Sediment records of past environmental changes
• Sedimentary dynamics and coral reefs

5.2 Hydro-dynamics of coral reef systems
• Oceanographic characteristics and hydrography in coral reefs
• Circulation and climate related issues
• Numerical models and observation techniques

5.3 Marine pollution and biogeochemistry
• Land and marine sources of nutrients and pollutants to coral reefs
• Cycling of chemical elements in coral reef ecosystems
• Food-web and biogeochemical dynamics
- Effect of climate change and human perturbation on the sustainability of coral reefs

5.4 Application of remote sensing and GIS in studying coral reefs
- Remote sensing applications in ocean studies
- Application of remote sensing techniques in coral reef studies
- Coastal change monitoring and detection using remote sensing and GIS
- Status of remote sensing in the WESTPAC

5.5 Biology and ecology of coral reefs
- Biology of corals and reef ecology
- Climate change and resilience of coral reefs
- Impact of sediment loads on corals and coral reef ecosystem
- Survey and monitoring methodology on coral reefs

6. Participants of this Training Course

About fifteen students at Ph.D candidate level within the WESTPAC region will be identified and involved in this training activity. Kindly note: the deadline for accepting the application will be 25 April 2010.

7. Schedule of Training Course

The training course will be for four days. Lectures will be delivered in day one, followed by practical work over day two and day three; on day four, students will be required to provide their work for synthesis and conclusion. In terms of the practical work, participants in this training course will be assigned to join:

- Field observation to examine the impacts of sediment dynamics on coral reefs
- Field experiments to show tolerance and adaptation of corals to sediment inputs
- Field research methodology concerning various aspects from the workshop

The local host of this training course will kindly prepare biological and ecological equipments for all students at Koh Samui.

8. Expected Outcomes

The training is intended to increase the capacity of participants for mitigating the impacts of sediments on coral reefs. The proceedings compiled from the training course on impacts of sedimentary dynamics and biogeochemistry on coral reefs could be distributed to relevant organizations/institutes in the WESTPAC region for education and research.

9. Organizing Committee
A small organizing committee has been established to facilitate the preparation of this activity with the following members:

Prof. Thamasak Yeemin from Thailand (Co-Chair)
Prof. Jing Zhang from China (Co-Chair)
Prof. John Morrison from Australia
Prof. Fernando P. Siringan from Philippines
Mr. Wenxi Zhu from IOC/WESTPAC Secretariat

10. Contacting Address

Prof. Thamasak Yeemin
Marine Biodiversity Research Group
Faculty of Science
Ramkhamhaeng University
Huamark, Bangkok 10240
Thailand
Tel/Fax: +66-2-310-8415
E-mail: thamasakyemmin@yahoo.com