

# ***THE FIRST INTERNATIONAL OCEANOGRAPHIC SURVEY OF THE MOUTH OF THE GULF OF THAILAND***

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Participants along with the Director General  
and the Commanding Officer of KD PERANTAU

## **AIM**

1. To inform the committee of the joint cruise organized by IOC - WESTPAC and Royal Malaysian Navy at the mouth of the Gulf of Thailand in conjunction with the programme of activities for the 1998 International Year of the Ocean which was approved by the 29 Session of the General Conference of UNESCO (Paris, 21 October - 12 November 1997).

## **BACKGROUND**

2. The IOC/WESTPAC Workshop on co-operative study on the Gulf of Thailand was opened in the IOC Regional Secretariat for WESTPAC in Bangkok, Thailand on 25 February 1997 by Prof. Manuwadi Hungspreugs, the vice Chairperson of IOC Sub-Commission for the Western Pacific. During the session it was emphasized that the Gulf of Thailand provides substantial resources to its coastal countries. Sustainable use of the resources and rational management of the coastal areas of the Gulf are the key issues facing the countries concerned. It was further pointed out that the international and regional co-operation will be the only way to study, and better understand the natural processes of the gulf as whole.

3. The understanding of natural processes and human impact to the Gulf still need great amount of efforts in compiling the existing data and information on marine and coastal environment in the Gulf as a whole. In order to provide scientific knowledge and information to the various users, further monitoring, observation and research work are fundamental among bordering countries. Realizing the importance, a National presentation was conducted during the session with representatives from Cambodia, Malaysia, Thailand and Vietnam. Malaysia was represented by Dr. Nasir bin Saadon from University Putra Malaysia. He provided information on Physical Oceanographic Research in the East Coast of Peninsular Malaysia. He indicated that the East coast of Peninsular Malaysia faces the Gulf of Thailand in the North and The South China Sea in the East. Therefore the variability of physical processes in the Gulf of Thailand will naturally affect the physical processes in the East coast of Malaysia, and vice versa.

4. During the session the concept and system of IOC International Oceanographic Data and Information Exchange (IODE) were introduced and discussed. It was recognized that to collect and review the existing data and information it would be essential to define a data exchange system. A lengthy discussion was conducted through a session on Data and Information Management. This session which was chaired by First Admiral Mohd Rasip bin Hassan had four presentations and they were:

- a. Existing Data and Information on the Gulf of Thailand.
- b. IODE System and Data Management
- c. Information Management and Global Directory on Marine Science Institutions and Scientists.
- d. Data Exchange and Management in NEAR - GOOS and SEACAMP.

## THE CRUISE

5. The International Cooperative Study on the Gulf of Thailand Project of the Intergovernmental Oceanographic Commission under UNESCO will conduct an International Survey of Physical Oceanography of the mouth of the Gulf of Thailand between 10 - 17 August 1999. Realizing through regional co-operation is the best method to study and better understand the natural processes of the Gulf, the "First Shipboard Training Workshop on Synoptic Oceanography of the Gulf of Thailand" was planned on board the new state of the art Malaysian Navy Hydrographic/Oceanographic ship KD PERANTAU in the exclusive economic zones of Malaysia, Thailand and Vietnam, including the Malaysia - Thailand Joint Development Area. This cruise was originally planned in May 1998, in conjunction with the International Year of the Ocean. However due to inevitable administrative problems and with the prevailing typhoon season, this cruise was postponed till the 10 August 1999.

6. Dr Anond Snidvongs of Chulalongkorn University, Thailand, will be the lead scientist on board. Other international scientists/ participants in this cruise will be from Nature Conservation and Protection Department, Cambodia, Royal Malaysian Navy Hydrographic Department, University Putra Malaysia, Malaysian Meteorological Services, Thailand Hydrographic and Fisheries Department and Hydrometeorological Services and Nha Trang Institute of Oceanography, Vietnam.

7. This oceanographic cruise will yield a recent information on the physics of seawater in the mouth area of the Gulf of Thailand, which is officially defined as the straight line connecting the town of Tumpat in the state of Kelantan, Malaysia, and the tip of Camau Cape, Vietnam. The data obtained will be compared with historical data last collected in 1960 for the same survey area under the Naga Expedition which was jointly conducted by Thailand, Vietnam and United States. After that survey, due to political instability in Indochina countries, regional cooperation on marine science and oceanography was interrupted and very few data from Cambodia and Vietnam were obtained by international scientific community while data from Malaysia and Thailand were relatively more available.

8. Information on water circulation and exchange of water mass between the Gulf and the South China Sea will assist scientists to estimate the influence of the South China Sea and Mekong River on the Gulf's ecology. It is believed that a large portion of production of fish and other animals in the Gulf, especially in the central area, may be derived for foods delivered through the mouth area. Any changes in the water exchange rate owing for examples, to the changing runoff of Mekong River or the changing wind pattern due to global climate change could result in a long term effect on fish population and fisheries industry in the Gulf which is worth over USD 2 billion per year in all four littoral countries combined.

## OBJECTIVES AND BENEFITS

9. The overall objectives are to expose oceanographers to modern equipment and techniques in synoptic oceanography and to collect high quality oceanographic data of the Gulf of Thailand. To meet these objectives, below are the proposed observations:

- a. Water mass characteristics (temperature, salinity and other natural tracers) of the mouth of the Gulf of Thailand.
- b. Ground truth verification of remote sensing data, e.g. sea surface topography, sea surface temperature, sea colour and turbidity.
- c. Diurnal and Semi diurnal components of water current.
- d. Meteorological Observations
- e. Surface Sediment Characteristics

10. The expected output achieved upon completion of this cruise are abundant and non-exhaustive. However the immediate benefits that could be derived are as follows:

- a. The updating of existing database and information.
- b. Acknowledging the baseline of capacity in oceanography in participating countries.
- c. The ability to construct oceanographic modeling tools to be used by researchers and decision makers in the governments of the four littoral states.
- d. A detailed implementative plan for oceanography of the Gulf of Thailand could be designed.
- e. Recognizing regional data managers and scientists capable to handle and analyze oceanographic data.

## CONCLUSION

11. It is impossible for a country to be self sufficient in information, and access is needed to documents and information resources of other countries. By sharing effort, duplication is avoided and each participant benefits from work undertaken by others, having easier, cheaper and improved access to all the information in the system as a whole, in exchange for their own contribution. From this joint cruise which involves scientists/participants from three nations, enables scientists from each nation to satisfy as completely as possible the information requirements of users from ensured access to the fullest range of sources of information and to documents produced abroad.