

SPECIAL REPORT

Collaborative Research Survey on Fisheries Resources and Marine Environment of the Central Gulf of Thailand

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The high cost of collecting field data had confined most of the past research studies of the Gulf of Thailand to the coastal areas. With the assistance of PTT Exploration and Production Public Company Limited which provided the cruise fuel, the 30-day M.V. SEAFDEC cruise was able to set off from 14 March 2013. The cruise focused on the cooperative work of researchers from the Department of Fisheries, Department of Marine and Coastal Resources, Pollution Control Department, educational institutes of Thailand, the private sector, and SEAFDEC on an extensive research program. The cruise also served as an avenue for training a number of students from many Thai universities in the field of marine science.

The survey was meant to understand the status of fishery resources and the environment in the central Gulf of Thailand during the post northeast monsoon season. For the survey, total of 45 stations were identified at every 30 nm grid (Fig. 1).

Fisheries resources and marine environment survey

A total of 23 scientists from various universities, government offices, and SEAFDEC were involved in collecting field data for their respective research works. The data could be grouped into 33 topics in the fields of physical, chemical, and biological oceanography as well as fisheries resources and meteorology.

On-the-job training

Forty four graduate and under-graduate students from various Thai universities were involved in the cruise, and were assigned as assistant researches. Every evening, researchers provided them lectures on the concepts, theories and information related to their research as well as on seamanship. The students also learned oceanographic data analysis under the guidance of the researchers during the cruise.

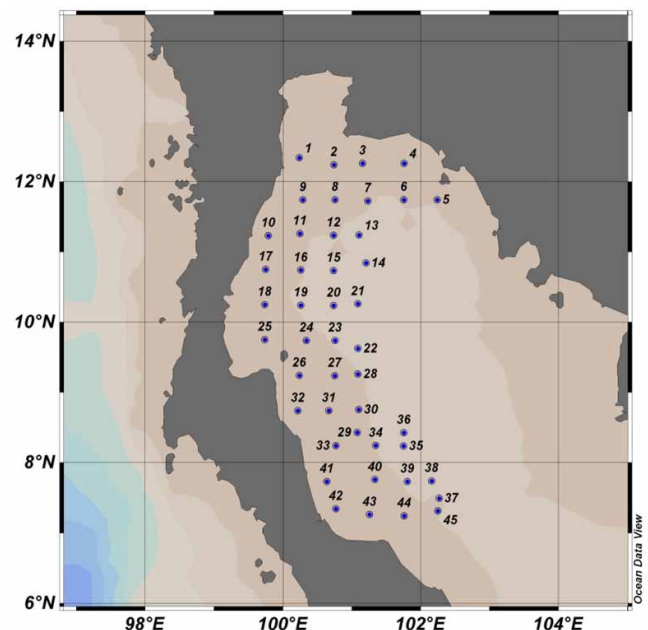
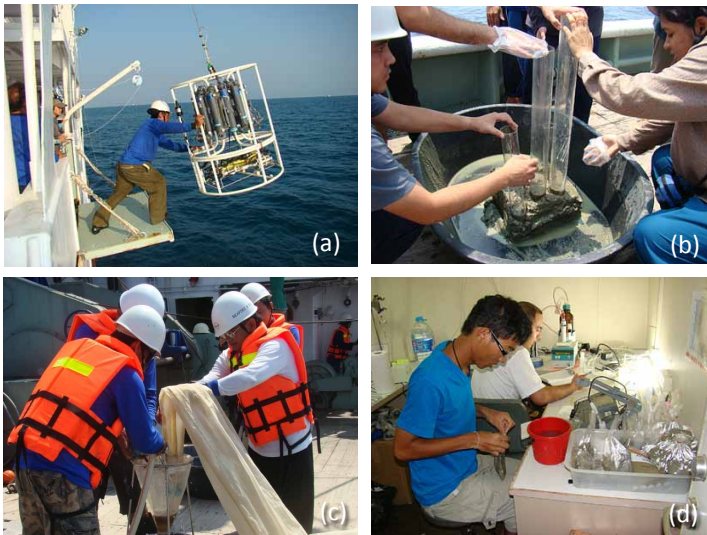


Fig.1 Map of survey station



(a-c) Collection of physico-chemical data, and
(d) data on biological oceanography

Information dissemination

As a matter of principle, the scientists were committed to making their research findings accessible to the public. Therefore, on 11-12 December 2013, SEAFDEC organized the “Conference on the Results of Fishery Resources and Environmental Survey in the Gulf of Thailand”, where 26 topics from the survey results were reported by responsible researchers. Some of the research results will also be presented during the Thailand Marine Science Seminar in June 2014.



Box 1. Research topics presented during the Conference **Atmospheric and physical aspects**

1. Aerosol Optical Thickness in the Central Gulf of Thailand by Hand-held Sun-photometer
2. Circulation Pattern of Current in the Gulf of Thailand during Dry Season
3. Tidal Characteristics in the Gulf of Thailand
4. The Estimation of Sea Surface Chlorophyll Concentration in the Gulf of Thailand by Satellite Remote Sensing Imagery
5. Surface Heat Fluxes at the Sea Surface in the Gulf of Thailand during March and April 2013
6. Water Column Conditions in the Gulf of Thailand during March and April 2013

Chemical aspect

7. Nutrients and Primary Productivity in the Gulf of Thailand
8. Mercury Contamination Level in Seawater of the Gulf of Thailand
9. Total Petroleum Hydrocarbons in Seawater of the Central Gulf of Thailand
10. Distribution of Water Content and Total Organic Matter in Sediments of the Central Gulf of Thailand
11. Sedimentological Characteristics and Mercury and Arsenic Contamination in the Gulf of Thailand Sediments

Biological aspect

12. Population Structure of bacteria in the Central Gulf of Thailand
13. Nanoplankton Groups and Distribution in the Gulf of Thailand
14. Study on Distribution of Phytoplankton in the Central Gulf of Thailand
15. Zooplankton Community Structure in the Gulf of Thailand
16. Composition and Distribution of Fish Larvae in the Gulf of Thailand
17. Distribution and Abundance of Cephalopod Paralarvae in the Gulf of Thailand
18. Species and Distribution of Cephalopods in the Central Gulf of Thailand
19. Preliminary Survey of Marine Mammals in the Gulf of Thailand
20. Diversity and Abundance of Bacteria and Genes Involved in Biodegradation of Petroleum Hydrocarbons in Sediment from Gulf of Thailand
21. Meiofauna on the Seafloor of the Gulf of Thailand
22. Diversity of Marine Macro-benthic Animals Collected by Dredging in the Gulf of Thailand
23. The Species Richness of Crabs and Their Distribution in the Gulf of Thailand

Fishery resources aspect

24. Seafloor Characteristic and Distribution of Epifauna in the Gulf of Thailand Using Under Water VDO Camera
25. Demersal Fishery Resources Survey and Sampling by Trap and Bottom Vertical Longline in the Central Gulf of Thailand
26. Visual Observation on Fishing Activities and Others in the Gulf of Thailand

More information on the survey results is available at https://sites.google.com/a/seafdec.org/got-seeds_presentation/home.

