

# **National Report**

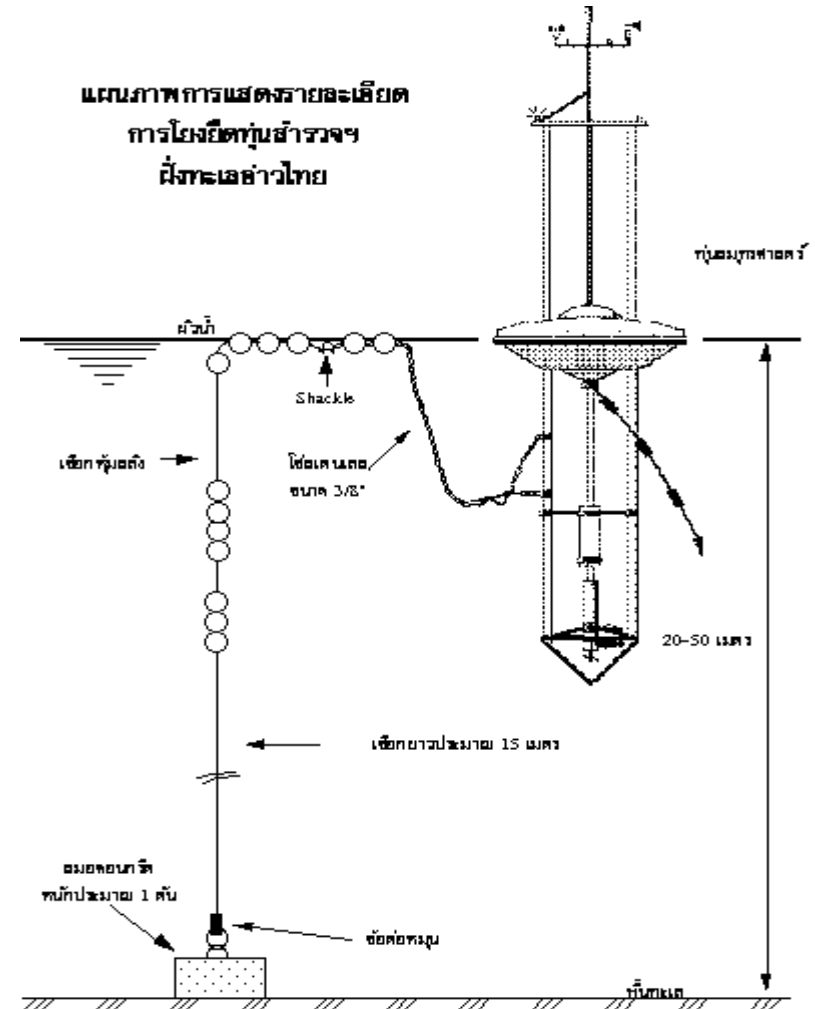
**“Status of buoy activities in Thailand”**

**DBCPC-XXVI**

**26th session of the Data Buoy Cooperation Panel  
27 - 30 September 2010,  
Oban, United Kingdom**

# Status of buoy activities in Thailand

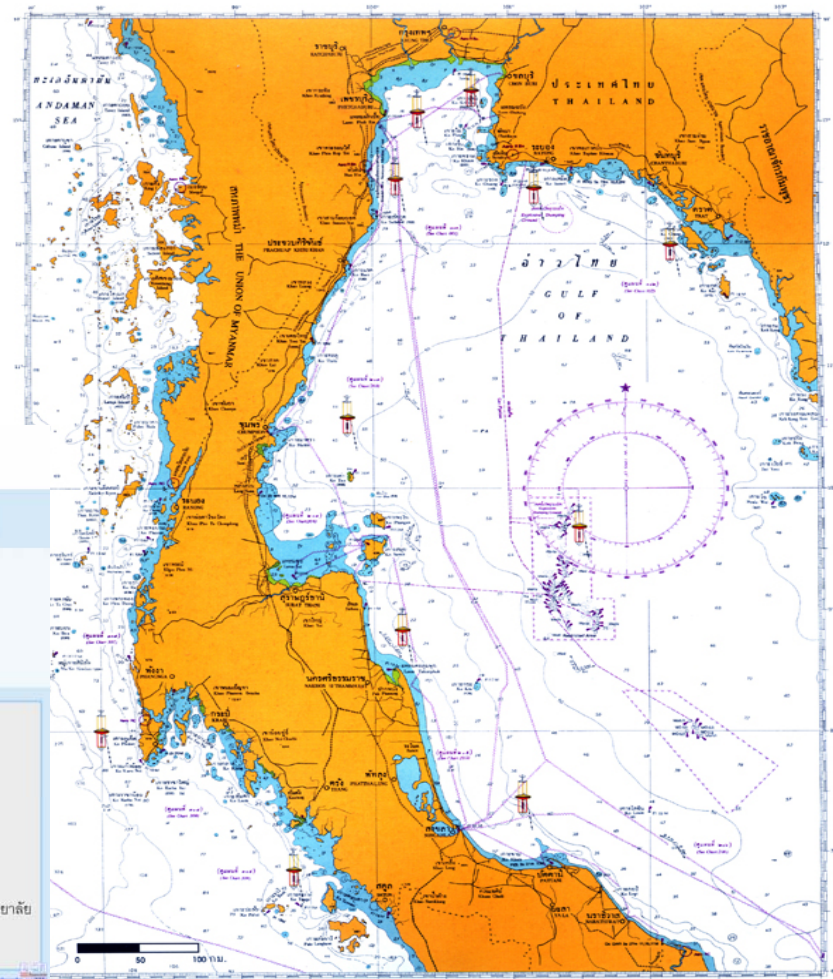
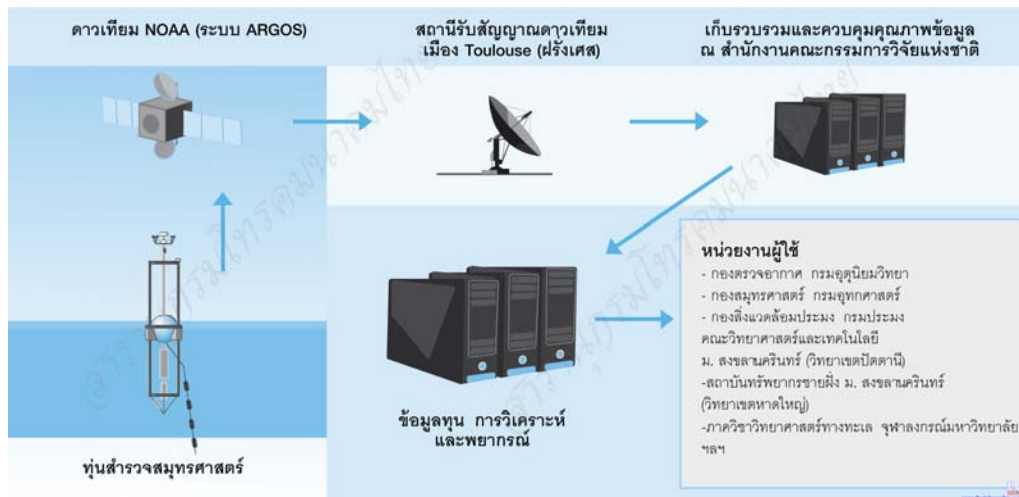
- Thailand used to deploy and operate a marine environmental monitoring system.
- In order to integrate data collection using oceanographic buoy network and data analysis with an advanced computerized system for distribution of marine information to interested operators and/or authorities.
- The SEAWATCH project started in 1991 under co-operation between the National Research Council of Thailand (NRCT), OCEANOR, the Oceanographic Company of Norway, and other involving parties, including the Thai Meteorological Department (TMD) and several agencies, etc.



# Status of buoy activities in Thailand

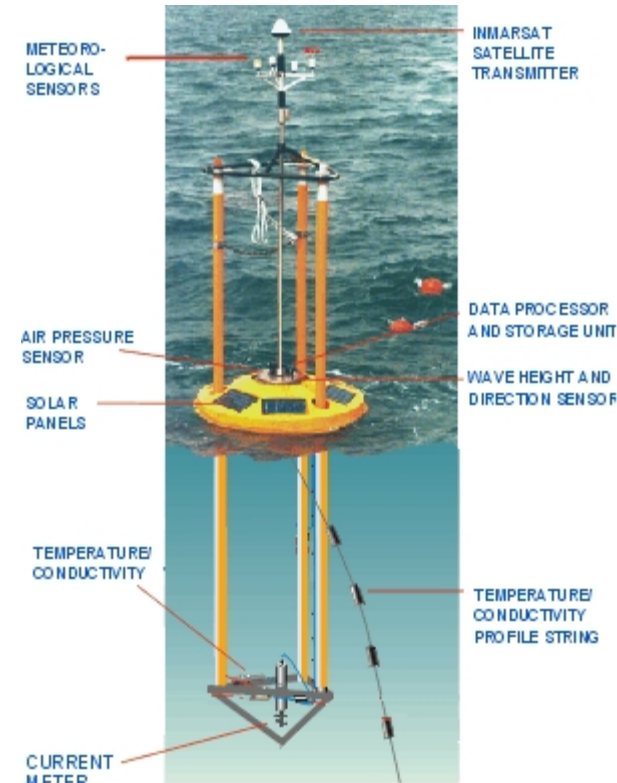
- Since November 2, 2000, Geo-Informatics and Space Technology Development Agency (GISTDA) was officially established and the activity was then transferred to GISTDA as Marine Information center.

แผนผังแสดงโครงข่ายการทำงานของ ระบบสำรวจและพยากรณ์ทางสมุทรศาสตร์ และสภาพแวดล้อมทางทะเล



# Status of buoy activities in Thailand

- The objectives of program were to set up a marine database using technological integration of remote sensing, buoy network, and meteorological data, archive and distribute marine data and information to involving offices both in governmental and private sectors,
- To be used in national resources development and management, coordinate and work with other offices in the studies and researches in the field of oceanography and marine resources.
- The activities of program were data acquisition a real time data covering is provided by a network of moored data buoys, for measurement of meteorological parameters and oceanographic parameters.
- The buoys had also their own data logging equipment, on-board processing and a transmission system.



# Status of buoy activities in Thailand

- After, tsunami struck the shores of southern Thailand and along the Andaman coastline on the December 26th, 2004.
- NOAA built the deep-ocean assessment and reporting of tsunamis (DART) buoy was part of a two-year, \$16.6 million U.S. contribution to the Indian Ocean tsunami warning system.



# Status of buoy activities in Thailand

- The DART buoy was deployed on the ocean floor, at 9 degrees north latitude, 89 degrees east longitude, halfway between Thailand and Sri Lanka,
- It uses sensitive water pressure sensors on the ocean floor to detect tsunami waves that are generated after large undersea earthquakes and send data by satellite to scientists about three minutes after an earthquake occurs.



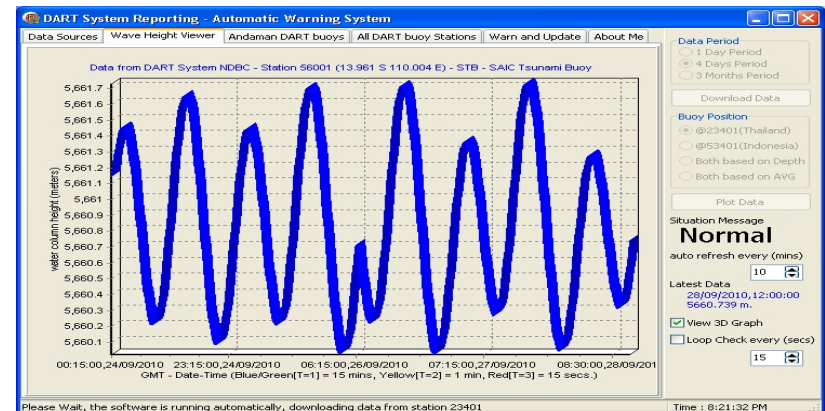
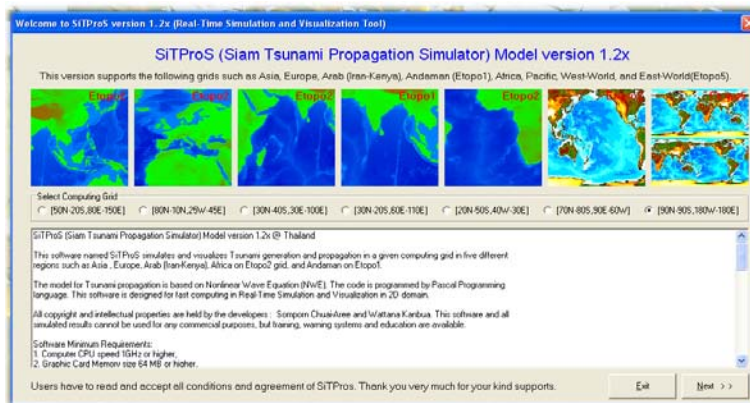


# Status of buoy activities in Thailand

- The DART system was being deployed through a partnership between the United States and the Royal Thai government as a contribution to the Indian Ocean tsunami warning system.
- NOAA provided technical assistance during deployment and initial operation, and the National Disaster Warning Center (NDWC) in Bangkok has shared responsibility for the deployment and long-term buoy operation and maintenance.

# Status of buoy activities in Thailand

- Marine Meteorological Center and Department of Mathematics and Computer Science, Faculty of Science and Technology, Prince of Songkla University, Pattani Campus, Pattani, Thailand have created tsunami model in order to compute arrival time of tsunami and
- Also created DART viewer program in order to monitor tsunami from DART system around the world.





# Status of buoy activities in Thailand

- Royal Thai government by NDWC is being installed tsunami detection system in Indian Ocean on the end of this year.
- The system consists of 2 surface buoys and 2 BPRs.
- The surface buoy receives transmitted information from the BPR via an acoustic link and then transmits data through a satellite link to central stations.

# Status of buoy activities in Thailand

- In order to confirm whether the earthquake has actually triggered a Tsunami or not,
- It is essential to measure the change in water level in the open ocean with high accuracy in real time.
- The network is designed to detection, measurement and monitoring tsunamis. The network comprises of 2 BPRs transmitting real time data through satellite communication to NDWC and TMD at Bangkok simultaneously for processing and interpretation.

**The end.**