



**National Presentation**  
**“Thai Marine Meteorological Services”**

**By**  
**Dr. Wattana Kanbua**  
**Director, Marine Meteorological Center**  
**Thai Meteorological Department**

# **OUTLINE**

- 1. Organization**
- 2. Function**
- 3. Marine Meteorological service for shipping route**
- 4. Research and Development**
- 5. Marine Meteorological Disaster Warning System Project**
- 6. Summary**

## ORGANIZATION

**Director**

*Technical Services Section*

*Observations Section*

### ***Function and Responsibilities***

- To observe and record marine meteorology data at the marine meteorological stations
- To receive and record marine meteorology data from buoys, automatic weather station at Oil-rig platform;
- To analyze the data for studying wave height in the Gulf of Thailand and Andaman Sea;
- To run ocean wave model (WAM) for forecasting sea state.
- To study interaction between air and sea;
- To service and distribute the marine meteorological data;
- To give the consultant about the marine meteorological aspect;
- To develop numerical model and method in order to forecast sea state.
- To cooperate and coordinate with other agency both at home and abroad

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## Functions

### Technical Services Section

- *Run meso-scale model and wave model*
- *Analyze marine meteorological data.*
- *Process marine meteorological data*
- *To improve and develop research works*
- *Prepare and issue waves forecasts to the Weather Forecast Bureau and update marine information in webpage of MMC.*

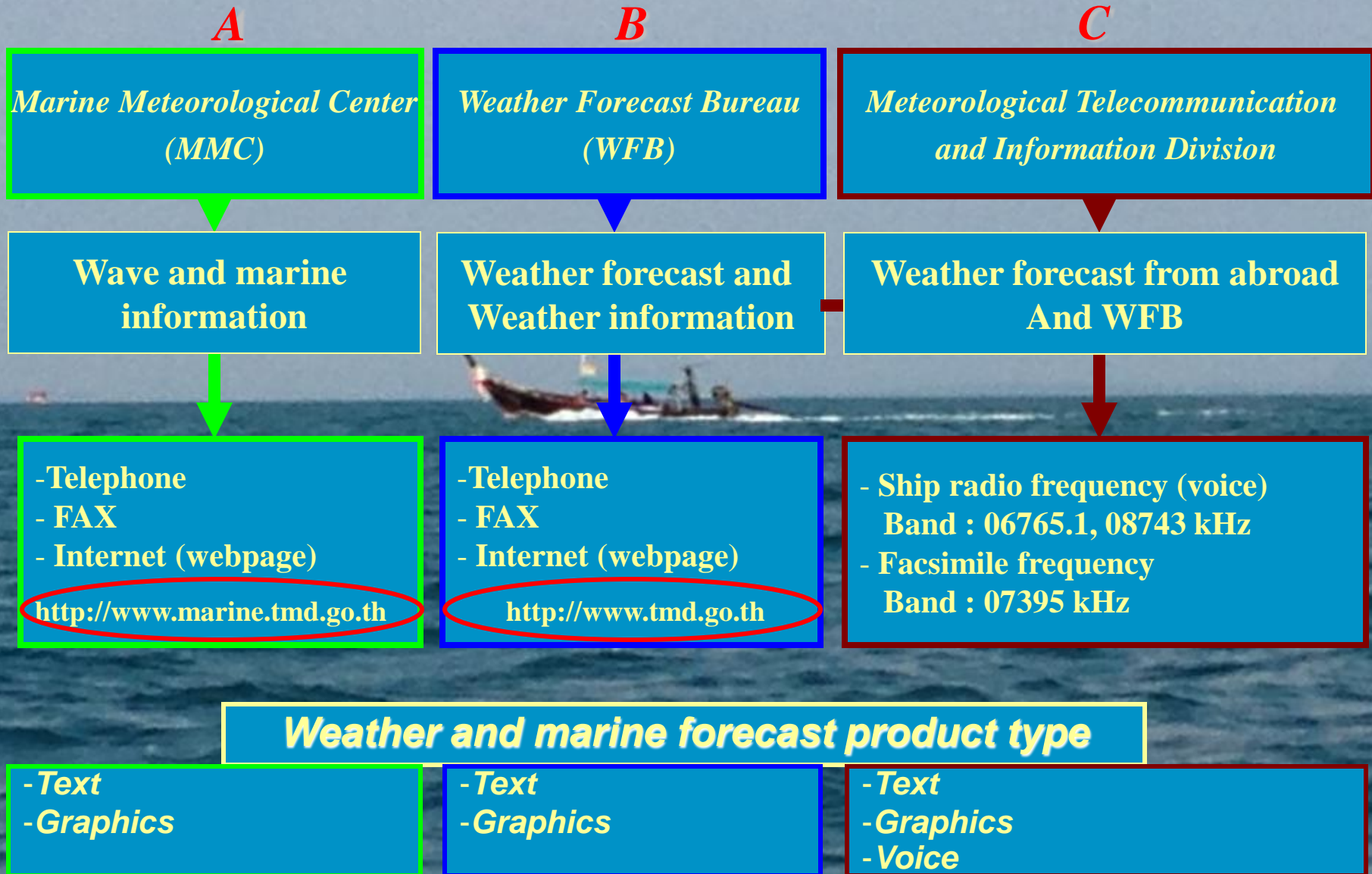
### Observations Section

- *to observe marine meteorological data at the port and marine meteorological offices*
- *to do quality control of marine data*
- *to collect marine data to be database*

<http://www.marine.tmd.go.th>

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## MARINE METEOROLOGICAL SERVICES FOR SHIPPING ROUTE



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## Marine Meteorological Offices

- Currently, the enrolment to become the members of the VOS Scheme has just begun in Thailand.
- Since the TMD has been asked about the weather observation procedure on board from the owners of ocean liners,
- it has planned to provide a training course on “Ships’ Weather Observation” for those who have become the members of the VOS Scheme later on.
  
- From what mentioned above, it can be clearly seen that the VOS Scheme in Thailand must be based on the close cooperation between 2 governmental units:
  - the TMD (responsible on observing; analyzing; and forecasting the weather and sea state ) and
  - the Marine Department (in charge of the ships registration and control nationwide).



## Marine Meteorological Offices

Marine Meteorological Office at Bangkok Port

Marine Meteorological Office at Bangkok Pilot bar station

Marine Meteorological Office at Laemchabang Port

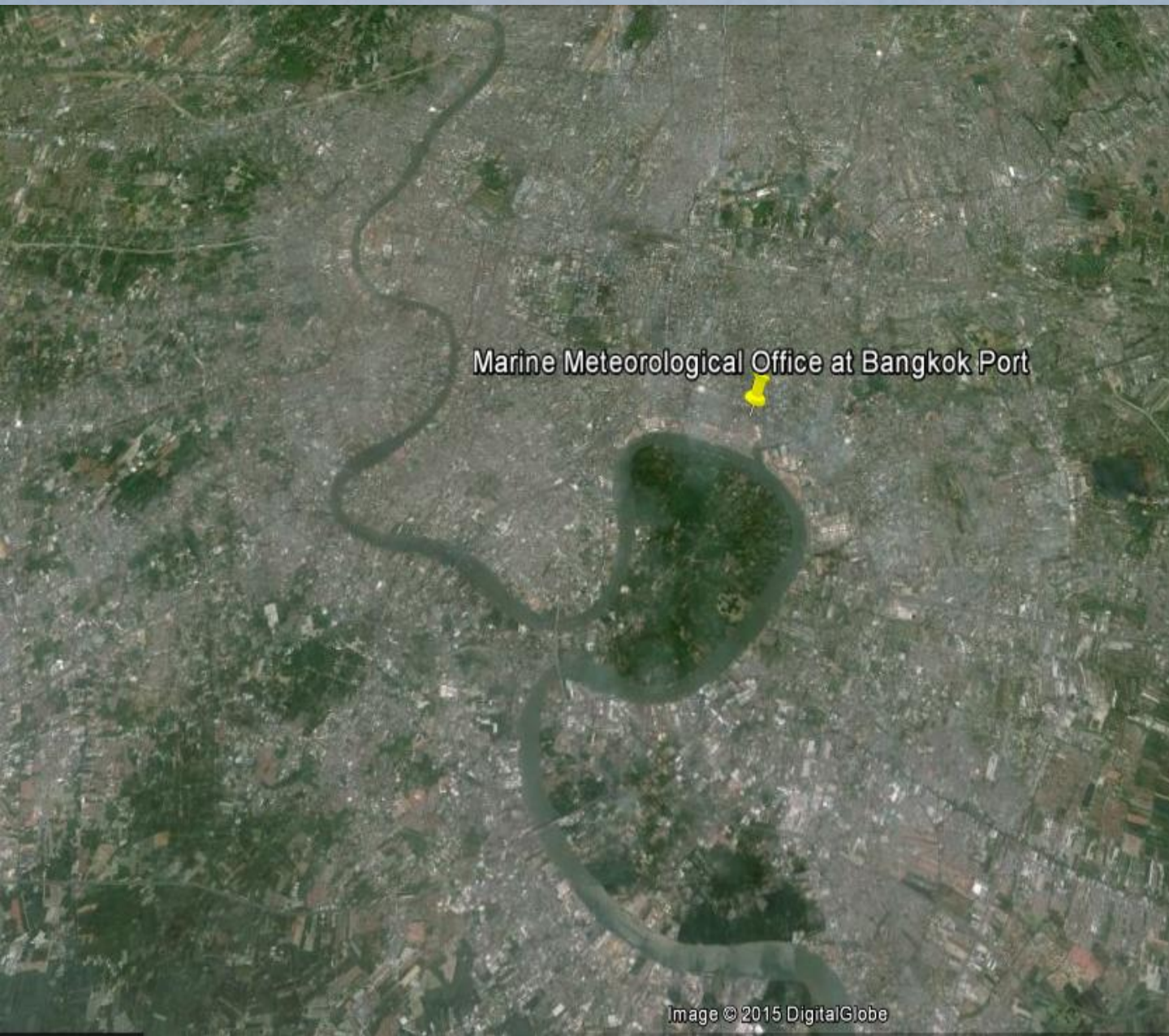
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat

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Marine Meteorological Office at Bangkok Port

Image © 2015 DigitalGlobe

The Meteorological Department

**Barometer Comparison Check Request Form**

After completing this form, send it by facsimile (FAX) to your name observation. Ensure you follow the instructions below before reading the barometer.

Be anchored in a sheltered port.  
 Make sure that the wind is not blowing. Strong wind may disturb the barometer readings.  
 Open the window or door of the house to measure outdoor air pressure.  
 Read the barometer JUST ON THE HOUR.

**Ship details**

Name of ship	EDEN MARU		Call sign	3FJT4
Name of person in charge	Call	Cell	Radio	Gross tonnage
T E L	870-773208787	INMARSAT (mobile, mobile, other)		60 488 GRT
F A X	010-870-761150153	INMARSAT-B (other) F77 )		
Marine FAX	090-302-N/A	Marine TEL 090-302-N/A		
E-mail	3FJT4@globeemail.com			
Latitude	13-09.4	N	Current	Bit Racha
Longitude	100-52.9	E	port of call	in Thailand

**Shipping agent at port**

Name of agent	SKY MARITIME AGENCY Co., Ltd		
T E L	882-9813045	F A X	882-9813046
E-mail	SKY_TH@yahoo.com		

**Barometer**

Barometer reading	1012.5	(Pa, [0.1hPa unit])
Location of barometer in your ship	BRIDGE	
Outdoor air temperature	22.0	(°C, [0.1°C unit])
Time of reading	Year 2015 Month JANUARY Day 11	Just 00 h 20 min (UTC)
Height of barometer above sea level (The green height is usually between 10 meter & 15 meter)	in ballast	28.105 m
	at present	25.590 m
	at full load	25.055 m
Manufacturer	ELR 88090	Serial No. 8155
Date of manufacture	N/A	Date of official calibration 15 July 2009

**THAILAND METEOROLOGICAL DEPARTMENT**

THAILAND METEOROLOGICAL DEPARTMENT FAX TEL  
 06-2566-9272 06-2566-1291  
 06-2566-90406

E-mail address: [barpam0000@gmail.com](mailto:barpam0000@gmail.com)

© 2015 Barometer details © is returned between 09-17 23:57 from the Department of Meteorology

Google earth

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Marine Meteorological Office at Bangkok Port

Marine Meteorological Office at Bangkok Pilot bar station



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Marine Meteorological Office at Bangkok Pilot bar station

Marine Meteorological Office at Laemchabang Port

The Meteorological Department

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Be anchored in a sheltered port.  
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 Read the barometer JUST ON THE HOUR.

**【Your ship】**

Name of ship	EDEN MARU	Call Sign	SPJT4
Name of person in charge	Call Sign	Gross Tonnage	60 488 GRT
T E L	870-77300787	INMARSAT (Inmarsat Mobile, other)	
F A X	010-870-761180183	INMARSAT-E (Inmarsat F77)	
Marine FAX	090-302-N/A	Marine TEL	090-302-N/A
E-mail	SPJT4@globalbeamail.com		
Latitude	13-09.4	N	Current port of call
Longitude	100-52.9	E	Bit Racks in Thailand

**【Shipping agent at port】**

Name of agent	SKY MARITIME AGENCY Co., Ltd		
T E L	882-9813045	F A X	882-9813046
E-mail	SKY_TH@yahoo.com		

**【Barometer】**

Barometer reading	1012.5	(Pa) (0.1hPa unit)
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(The green height is usually between 10 meter & 15 meter)	at present	25.590 m
	at full load	25.055 m
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Date of manufacture	N/A	Date of official calibration 15 July 2009

**【SHIP USE ONLY】**

(To return observation only)

The Meteorological Department

TEL: 66-0-2566-9272 FAX: 66-0-2566-9271

E-mail address: [barpam000@gmail.com](mailto:barpam000@gmail.com)

※ Results of barometer checks will be returned between 09:00-17:00 hours (Thailand Time) to the respective port meteorological office.

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 Image Landsat  
 Image © 2015 TerraMetrics

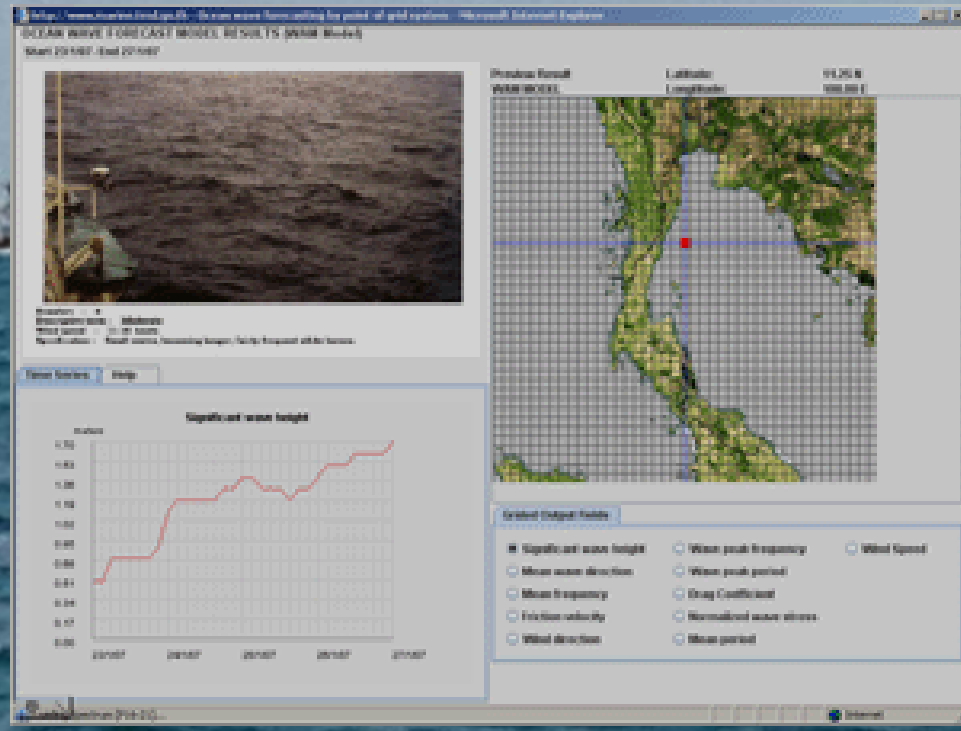
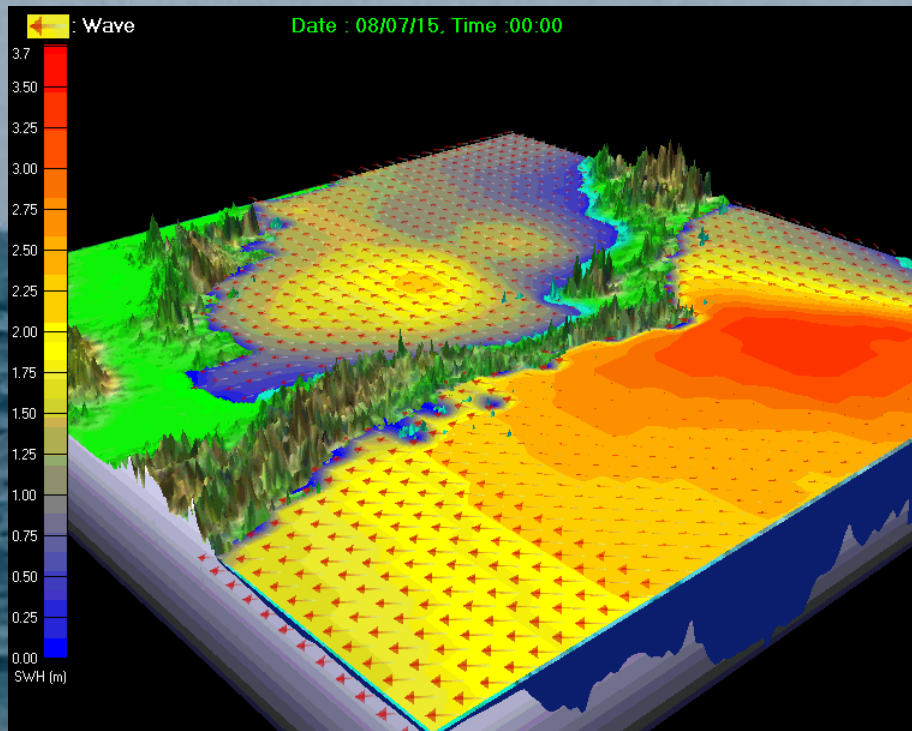
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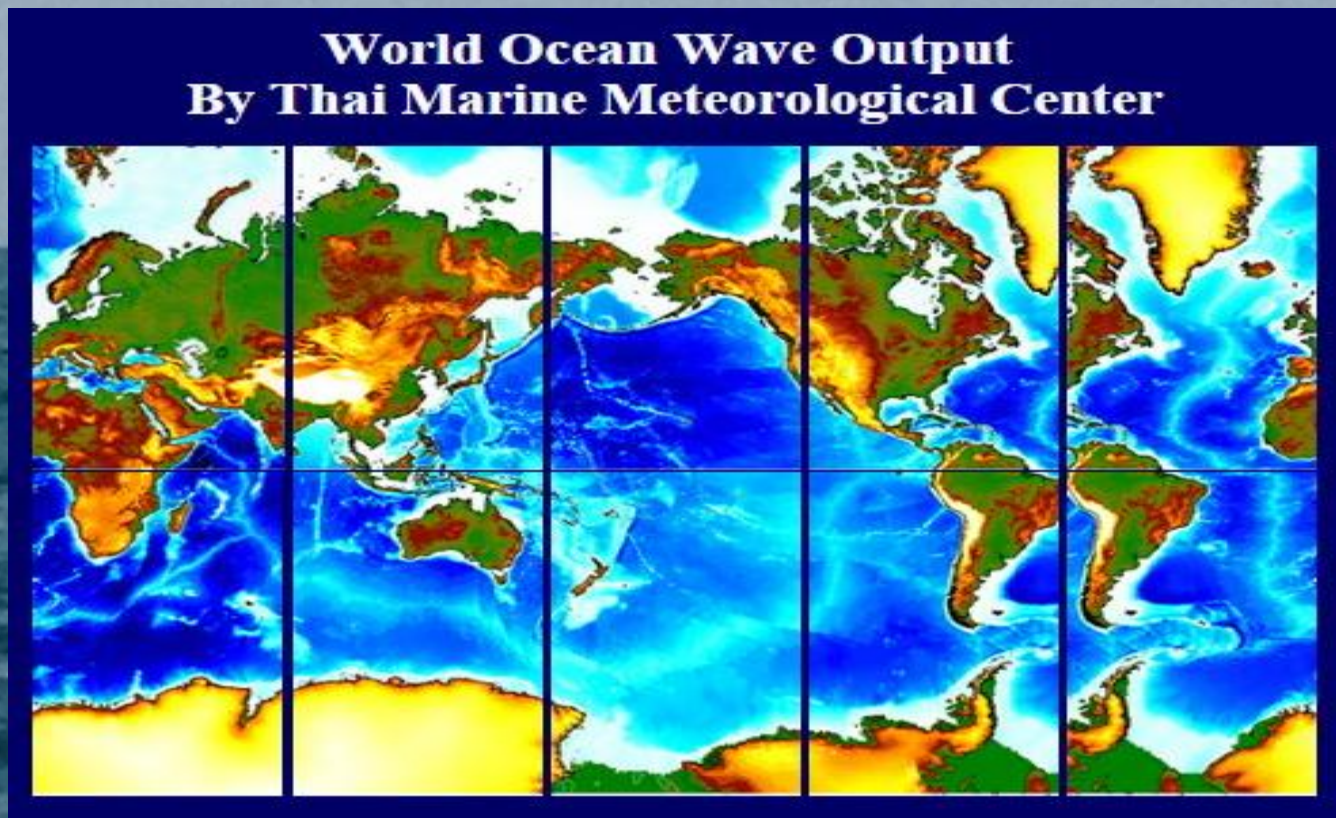
# RESEARCH AND DEVELOPMENT

## 1. Ocean Wave modeling



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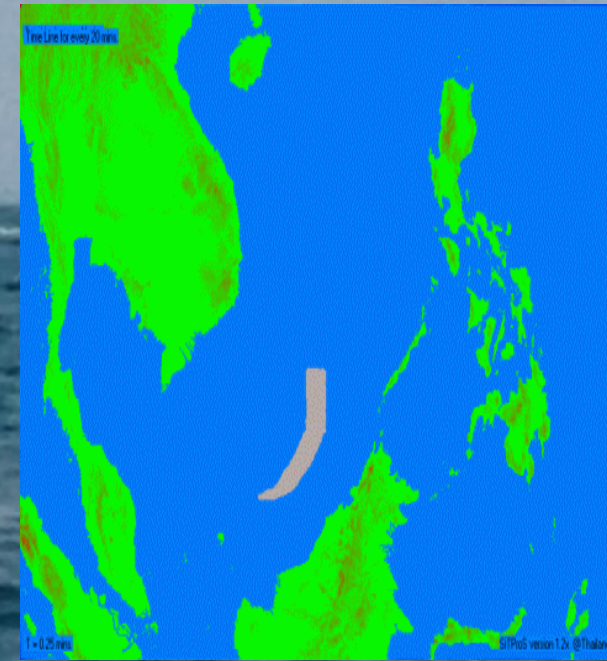
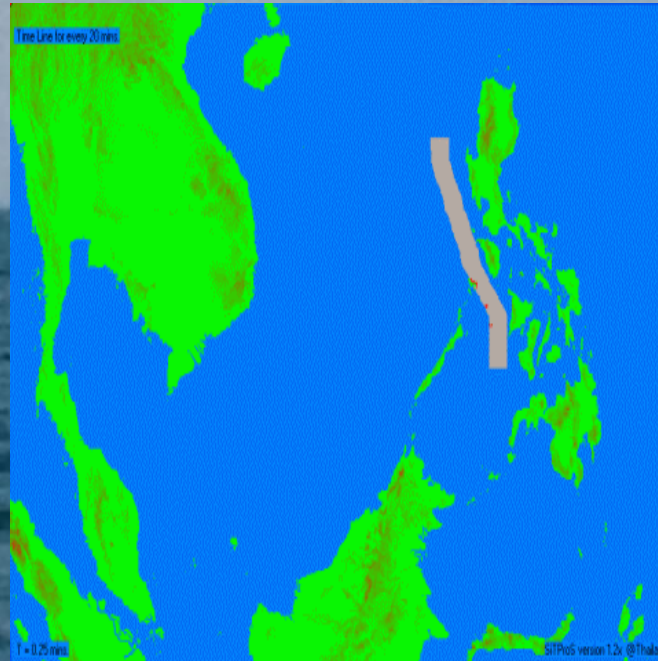
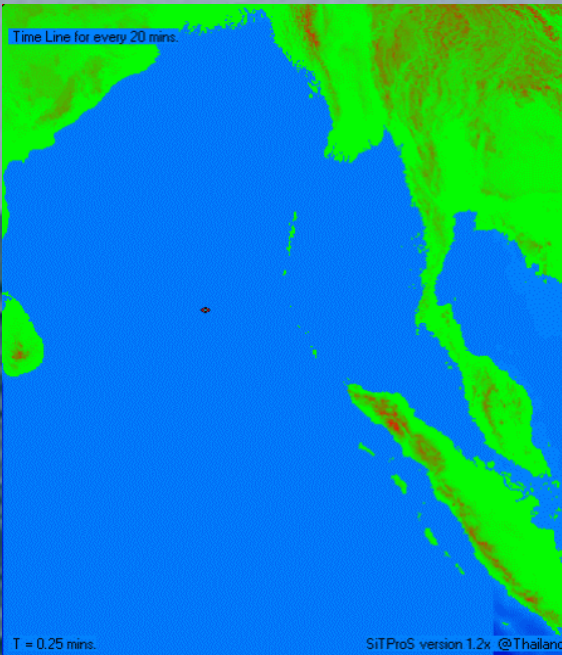
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# RESEARCH AND DEVELOPMENT

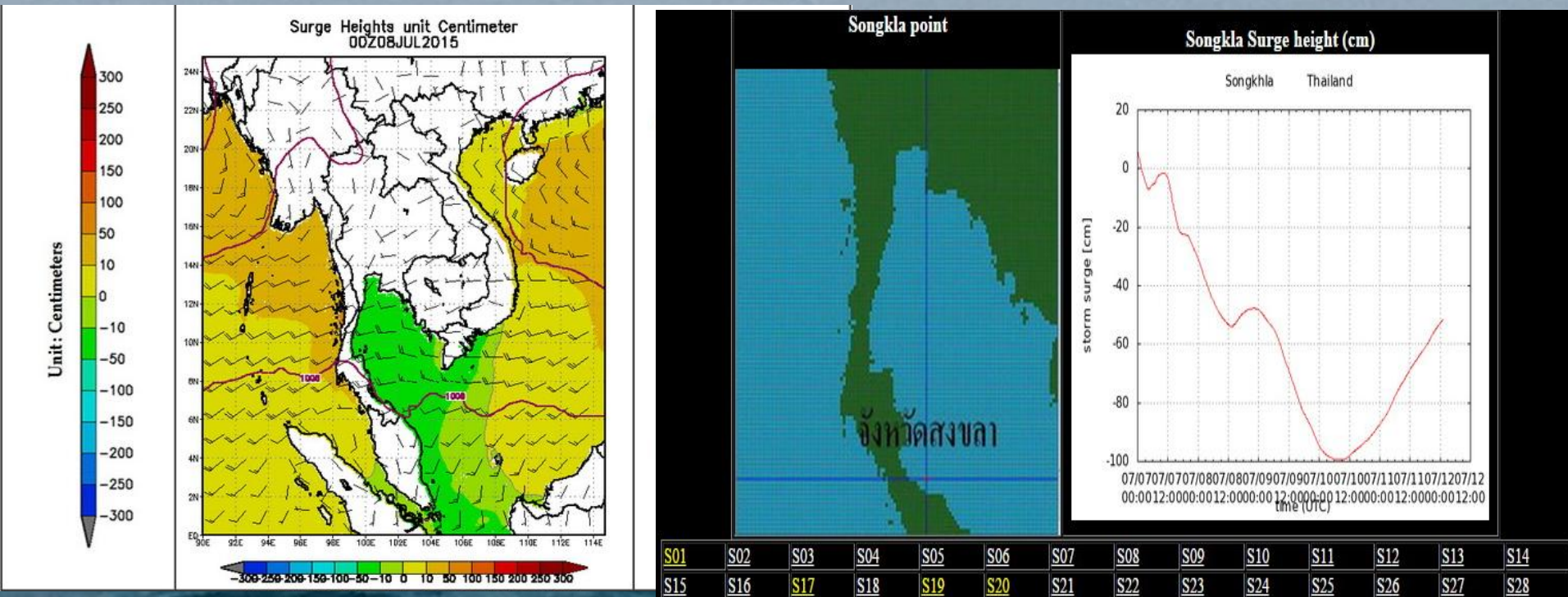
## 2. Tsunami model as SiTProS :

### Siam Tsunami Propagation Simulator



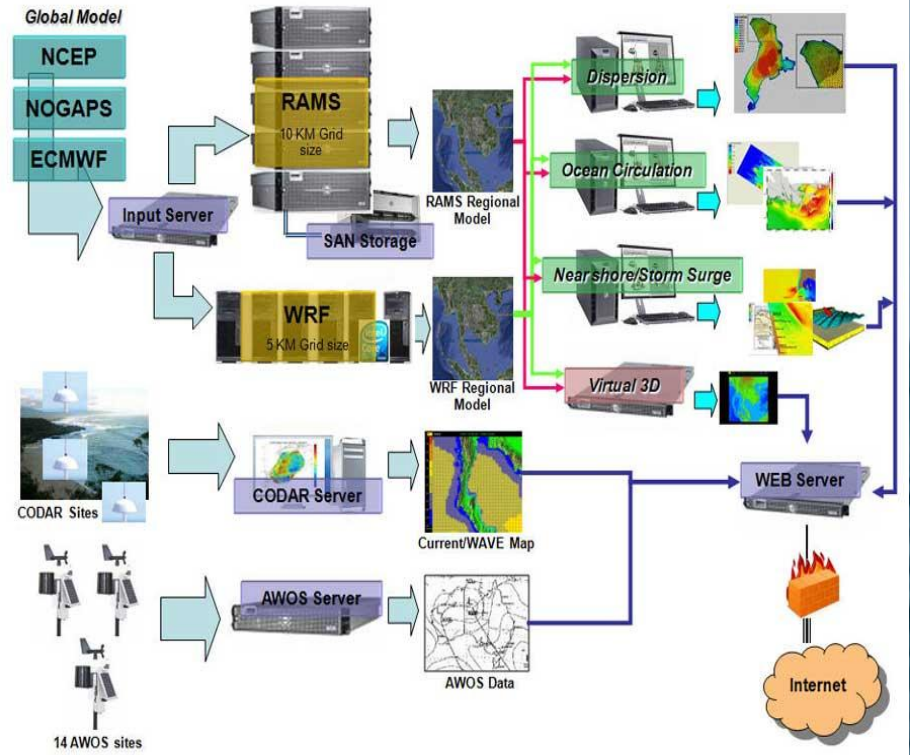
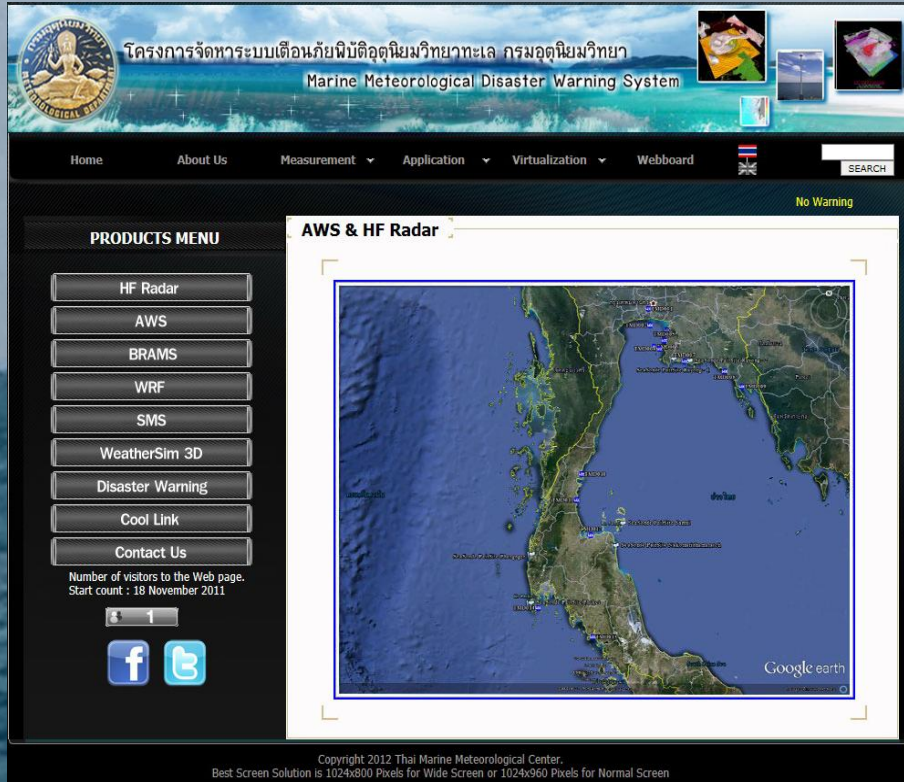
# RESEARCH AND DEVELOPMENT

## 3. TMD Storm surge Model





## Marine Meteorological Disaster Warning System Project



- Therefore, Thai Meteorological Department established a marine meteorological disaster warning system project in order to provide maritime surveillance and warning.
- HF Radars installations are the part of project which measure ocean waves and currents.

*Long range HF Radar*



Receiver at  
Phang-nga site



Transmitter at  
Phang-nga site



*Long range HF Radar*



Receiver at  
Phuket site



Transmitter at  
Phuket site

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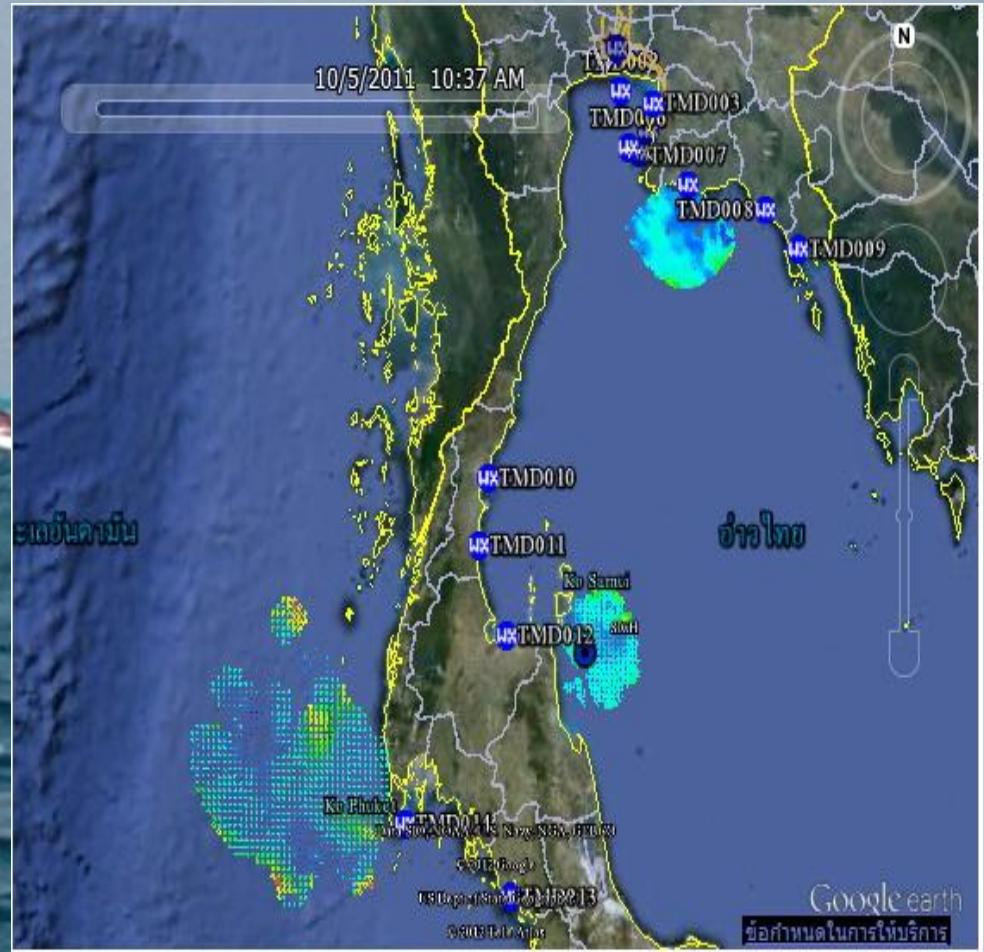
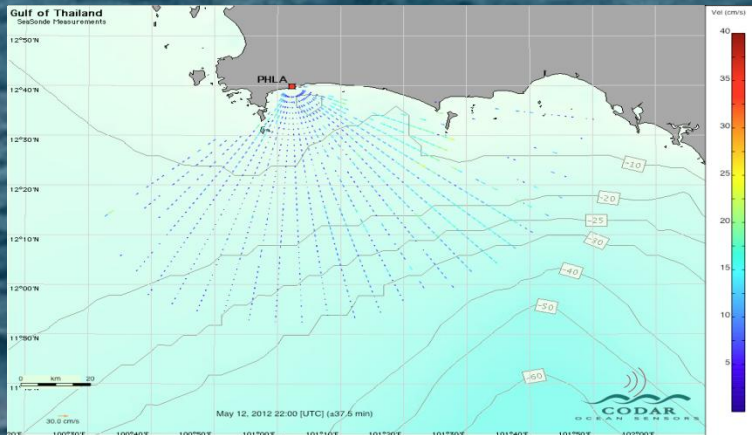
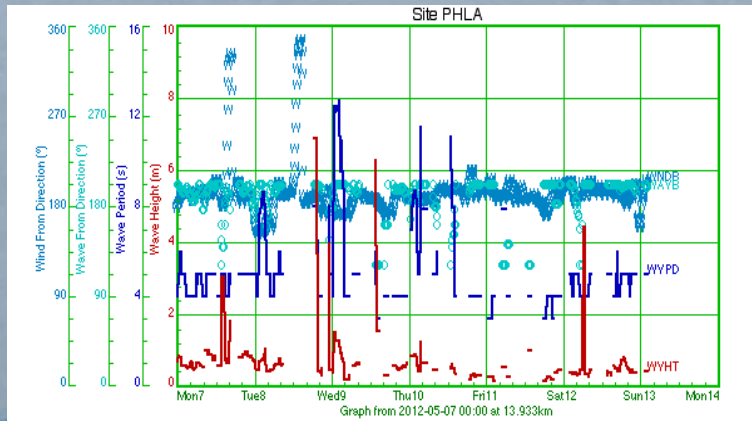
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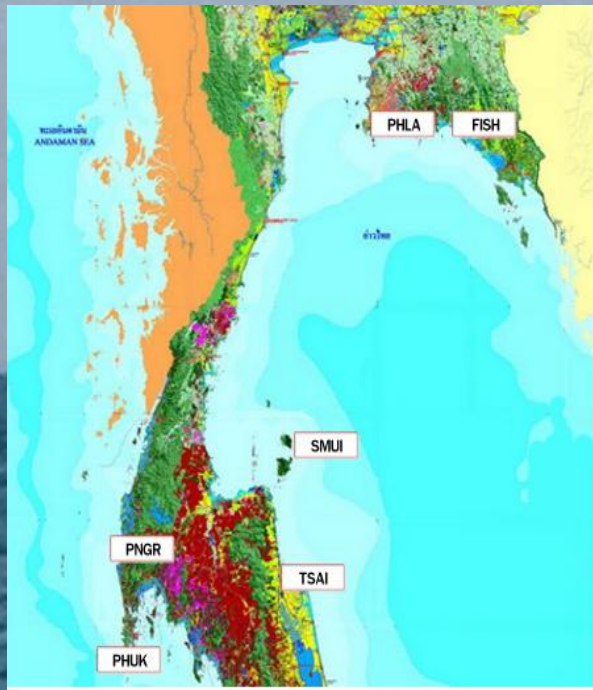
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# Results of HF Radar



## HF Radar installation of TMD



No.	Provinces	Locations	Installation places	Host
1	Surat Thani	Samui Meteorological Station	The transmitter and receiver will be installed on the deck of the building and the computer will be installed inside the building.	Thai Meteorological Department
2	Nakorn Sri Thamarat	Thung Sai Beach	The HF Radar will be installed at the hospice on the far left of the area.	Thung Sai Subdistrict Administrative Organization
3	Phuket	Lam Kor Sai Kod	The HF Radar will be installed at the rock hell where penetrate to the sea at Lam Kor Sai.	Patong Municipality
4	Phang Nga	Tsunami monument	The HF Radar will be installed on the lawn in front of the monument.	Bang Moung Subdistrict Administrative Organization
5	Rayong	Coastal Fishery research and development center	The HF Radar will be installed on the jetty in front of research center.	Department of Fishery
6	Rayong	Pla beach	The HF Radar will be installed on the Pla Beach.	Pla Subdistrict Administrative Organization





# Conclusions

- The MET Dept is trying to improve the marine meteorological service, in order to serve or support fleet.
- MET Dept provides calibration of barometer of vessel as requests at marine meteorological office.
- MET Dept still has run ocean wave model for shipping route.

Thanks for attention

