



Vietnam National Report On Sea Level Observing Activities

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1. Map of tide gauges network in Vietnam

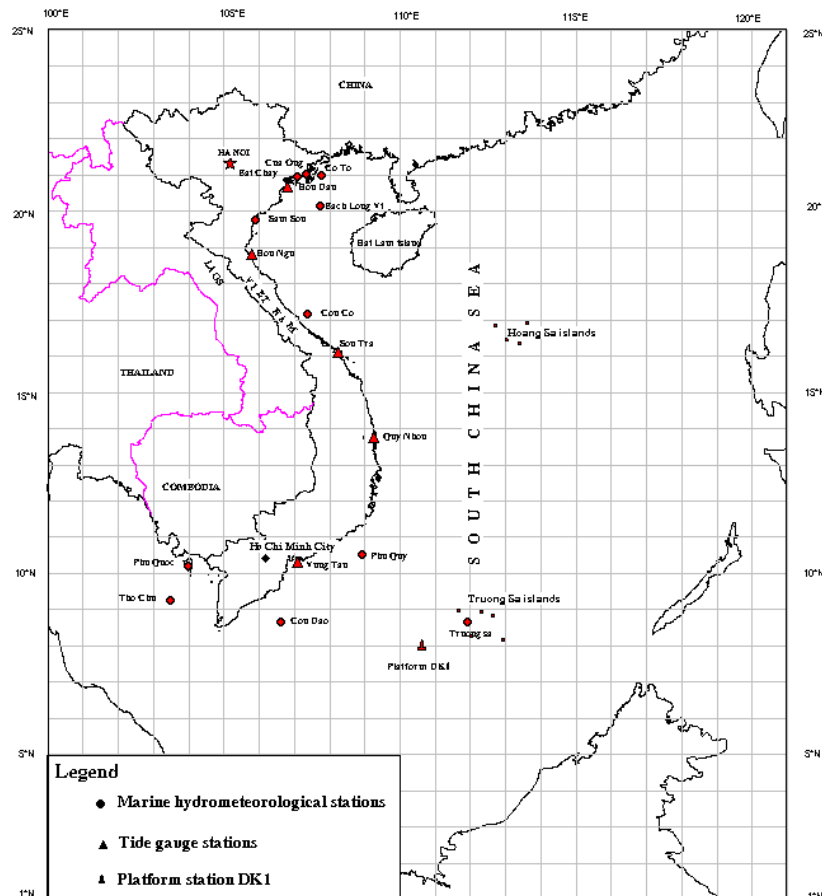


Figure 1: Marine hydro-met observing stations

There are 27 marine hydro-met observing stations located at islands and along the coast in Vietnam. The observation parameters are meteorological (Wind, Pressure,



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Air temperature, Humidity...) and oceanographic (wave, sea level, salinity, water temperature...). Almost the parameters are observed four times per day at 01, 07, 13 and 19 o'clock, local time.

Most of the stations are using simple techniques to measure sea level. Only 9 of 27 stations have installed Tide gauges to record sea level every one hour.

The stations which have tide gauges are listed at table 1.

No	Name of Station	Location		Established	Remarks
		Lat.(N)	Long.(E)		
1	Hon dau	20 ⁰ 40'	106 ⁰ 48'	1956	
2	Hon ngu	18 ⁰ 48'	105 ⁰ 46'	1961	
3	Son Tra	16 ⁰ 06'	108 ⁰ 13'	1963	
4	Ly Son	15 ⁰ 23'	109 ⁰ 09'	2015	
5	Quy Nhon	13 ⁰ 46'	109 ⁰ 13'	1963	Gloss Station
6	Vung tau	10 ⁰ 20'	107 ⁰ 04'	1918	
7	Phu quoc	10 ⁰ 13'	106 ⁰ 35'	1976	
8	DK1-7	8 ⁰ 01'	110 ⁰ 37'	1995	platform station
9	Tra Co			2017	

Table 1: The list of tide gauges sites

2. An overview of the tide gauge technology employed in the network

At initial, most of the sites used Russian gauges. However the equipment had been getting out of date and damaged by time. Recently, some new tide gauges model A71, A90 and A91 provided by the United States were installed to replace the old ones.

The technologies of the tide recorders operating in the network could be listed as below:

- Onshore type: Stevens (made by USA), Shaft Encoder
- Offshore type: Acoustic Wave and Current Profiler (AWAC) (made by Sutron), Radar Level Recorder, pressure tide gauge, acoustic/ultrasonic gauges.

In 2017, Hawaii Center supported Quy Nhon and Vung Tau stations to install 3 type of tide gauges for each site which are radar gauge, pressure tide gauge, acoustic/ultrasonic gauge.



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3. An overview of the data availability

Hourly sea level data recorded by the tide gauges are checked carefully at stations before sent to Marine Hydrometeorological Center. The data would be processed by using softwares such as ORKAN (European), TIDE (Canada). The data are mainly stored in paper formats, CD and floppy disks. The data are also sent to Vietnam Meteorological and Hydrological Administration. All the data recording and analyzing processes have to follow the standards issued by Vietnam Meteorological and Hydrological Administration. These data could be provided for hydromet, marine forecast, early warning of extreme event purposes, social economical activities, etc.

4. Web, email address of data banks and of source

All of Data from network station are stored in paper formats, CD in Network Station and Management Division at HYMENET, and users card access by requirement. The sea level data recorded by Quy Nhon and Vung Tau station are available online at IOC network website:

<http://ioc-sealevelmonitoring.org/station.php?code=vung>