Report to the 10th Session of the IOC Group of Experts On the Global Sea Level Observing System(GLOSS) China National Sea Level Network

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The China national network to observe sea level was maintained by State Oceanic Administration (SOA). It consists of many stations which include the thirteen key stations (Laohutan, Qinhuangdao, Tanggu, Yantai, Shijiusuo, Lianyungang, Lusi, Kanmen, Shanwei, Zhapo, Beihai, Haikou and Dongfang) and other basic stations around China. Float operated gauges are installed in each station. Six stations of them have been registered in GLOSS Core Network and the detail information about them is showed in Table 1.

Data is collected, banked and updated by National Marine Data and Information Service (NMDIS), which maintains the quality controlled data output from these stations for use in tidal analysis, prediction, service and research. Data retrieved is subject to extensive quality control procedures on a regular basis, which reformat from old data formats, check for timing errors, remove spikes, identify data gaps, compile benchmark details and datum information, etc. All observed and derived data output from these stations is provided by NMDIS based on some special regulations.

In recent years, SOA is focus on the follow aspects about sea level:

1. Modifying the China sea level observed network
2. Checking the historical variation of benchmark at every tide gauge
3. Setting up the system of impaction assessment upon sea level rising
4. Stressing sea level variation study

In 2007, SOA release the “China Sea level Bulletin , 2006” which shows that SOA reinforced the work with regard to the sea level, modified the China sea level monitoring network and started the impact assessment of sea level rising, as well as the operational system construction. Results of monitoring and analysis indicate that, the sea level of China showed a general trend of continuous ascending. Average rate of the sea level rise was 2.5mm/year. In 2004~2006, the impact of sea level change over social economy and ecological environment of our country deepened, intensifying the storm surge disasters of the coastal areas of Zhejiang and Fujian, etc. As a result, the frequency and intensity of the storm surge in these areas were higher than average years and disaster losses also the heaviest over the years; intensifying seashore erosions of the coastal areas of Shandong, Jiangsu, Shanghai and Hainan, etc.; seriously damaging the local ecological environment; causing salt water intrusions in Shanghai, Guangdong, etc.; and affecting the normal water

supply as well as making water resources an important ecological problem in these areas. Looking to the future three to ten years, the sea level of China may rise 9~31mm in contrast to the year of 2006.

It is hoped that more stations in China National Network are joined to GLOSS Core Network in the future.

Table 1: Status of GLOSS Stations in China

	Location	Status
1	Laohutan 38-52N, 121-41E	• Ongoing, currently using a digital gauge • The period of record spans from Jan 1980 to now. • Hourly height data from Jan 1975 to Dec 1999 has been sent to UHSLC. • MSL data from Jan 1991 to April 2007 has been sent to PSMSL.
2	Lusi 32-08N, 121-37E	• Ongoing, currently using a digital gauge • The period of record spans from Oct 1959 to now. • Hourly height data from Jan 1975 to Dec 1999 has been sent to UHSLC. • MSL data up to April 2007 has been sent to PSMSL.
3	Kanmen 28-05N, 121-17E	• Ongoing, currently using a digital gauge • The period of record spans from Oct 1959 to now. • Hourly height data from Jan 1975 to Dec 1999 has been sent to UHSLC. • MSL data up to April 2007 has been sent to PSMSL.
4	Zhapo 21-35N, 111-50E	• Ongoing, currently using a digital gauge • The period of record spans from Oct 1957 to now. • Hourly height data from Jan 1975 to Dec 1999 has been sent to UHSLC. • MSL data up to April 2007 has been sent to PSMSL.
5	Xisha	• Ongoing, currently using a digital gauge. • The period of record spans from July 1990 to now. • No hourly height data in CNODC. • MSL data up to April 2007 has been sent to PSMSL.
6	Nansha	• Data delayed for data transmit system problem • The period of record spans from June 1990 to July 2002. • No hourly height data in CNODC • MSL data up to April 2007 has been sent to PSMSL.