

# National Report of Denmark to GLOSS GE-XII

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## Denmark

DMI, DaMSA and the Danish Coastal Authority run together with local harbour authorities 87 tide gages along the Danish coast. All data are collected at DMI, and the instantaneous sea level observations are displayed at DMI's webpage by a close co-operation between the institutes.

A full list of existing Danish tide gauges with real time data is available:

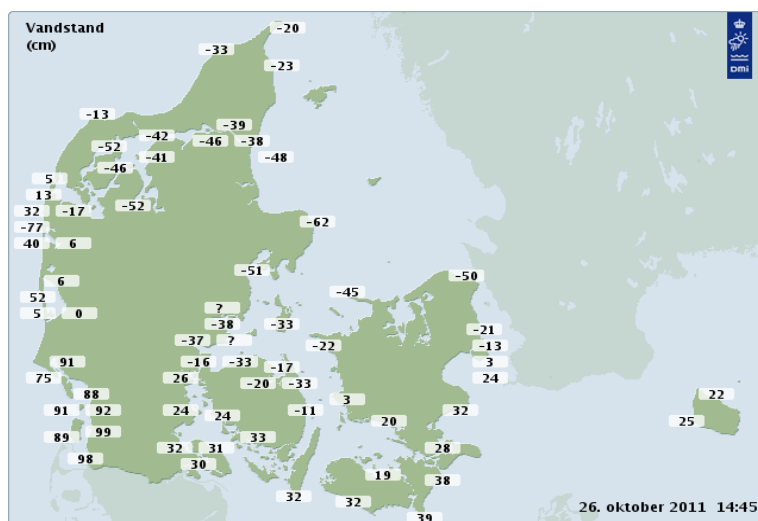
<http://www.dmi.dk/dmi/index/viden/maledata/stationsliste.htm>

Installation of 10 new tide gauges are under construction. These new stations are initiated by the Danish Storm Council to improve the coverage of tide gauges along the Danish coast. All 10 stations will be operational primo 2012 (2 are operated by the Danish Coastal Authority and 8 by DMI).

The map below shows the on-line sea level data displayed at DMI's webpage:

<http://www.dmi.dk/dmi/index/danmark/vandstand.htm>

Most of the sea level stations are also displayed on the webpage of DaMSA at <http://ifm.frv.dk>



**Data for PSMSL:**

Data from the following 17 Danish stations, run by DMI, are available through PSMSL.

These 14 tide gauges are operational stations:

130/001 Gedser	54 34 N	11 56 E
130/011 Rødbyhavn	54 39 N	11 21 E
130/016 Tejn	55 15 N	14 50 E
130/021 København	55 42 N	12 36 E
130/031 Hornbæk	56 06 N	12 28 E
130/041 Korsør	55 20 N	11 08 E
130/051 Slipshavn	55 17 N	10 50 E
130/062 Fynshav	55 00 N	09 59 E
130/071 Fredericia	55 34 N	09 45 E
130/081 Aarhus	56 09 N	10 13 E
130/091 Frederikshavn	57 26 N	10 34 E
130/101 Hirtshals	57 36 N	09 58 E
130/111 Hanstholm	57 07 N	08 36 E
130/121 Esbjerg	55 28 N	08 26 E

These three tide gauges have stopped and only historical data are available:

130/018 Hammerhavn	55 17 N	14 45 E
130/019 Christiansø	55 19 N	15 11 E
130/061 Mommark	54 56 N	10 03 E

The tide gauges in Gedser, Hirtshals, Esbjerg and Tejn are equipped with permanent GPS stations.

**Instruments:**

DaMSA uses acoustic type tide gauges on all their stations (9). DMI operates Aanderaa CTD instruments on all their existing stations (15), and will on the 8 new stations use puls radar as the primary instrument supplemented by a secondary pressure instrument.

**NEAMTWS:**

Data from the tide gauge station in Hirtshals are available for the IOC Sea Level Station Monitoring Facility in real time. Sampling interval is 10 minutes.

**Greenland**

DMI and DaMSA ended all sea level activities in Greenland in 2002 and 2004, respectively. This included the GLOSS GCN stations 225 Nuuk (DMI) & 228 Ammassalik (DaMSA). All available data from Nuuk and Ammassalik have been delivered to the GLOSS and PSMSL database.

Furthermore DaMSA has sent all available data up to 2004 from all their 8 stations to the GLOSS database.

DTU-Space runs three stations in Greenland:

- Qaqortoq (PSMSL 980/045).
- Thule. Since 2001 and upgraded to international standards in 2006.
- Illoqqortoormiit. Since 2006.

The stations have the following GLOSS numbers and contribute to the GLOSS Core network and the fast data center:

299	QAQORTOQ	60	43N	046	02W
808	THULE	76	N	068	W
809	SCORESBYSUND	70	29N	021	59W

At all three stations permanent GPS are jointly collocated. Instruments: Aanderaa WLR7 instruments.

#### **NEAMTWS:**

Data from all three tide gauge station in Greenland are available for the IOC Sea Level Station Monitoring Facility in real time. Sampling interval is 5 minutes.

#### **Faroe Islands**

The GLOSS station (GCN 237) Torshavn (DMI): The station, of floating/well device type, run by DMI, stopped during winter 2006 due to technical failure. The local harbour authority in Torshavn plans to re-install the station.