# National Report of Denmark

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## **Denmark**

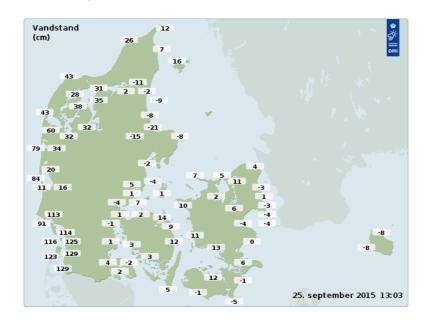
DMI and the Danish Coastal Authority operate together with local harbour authorities tide gauge instruments at more than 80 sites along the Danish coast. All data are collected at DMI, and the instantaneous sea level observations are displayed at DMI's webpage by a close co-operation between the authorities.

A list of existing Danish tide gauges with real time data collected by DMI is available here: http://www.dmi.dk/hav/maalinger/vandstand/stationlist

Different types of instruments are in operation in Denmark:

- acoustic type
- TD instrument
- Bobble sensor
- pulse radar

The map below shows the on-line sea level data displayed at DMI's webpage: http://www.dmi.dk/hav/maalinger/vandstand



#### **Data for PSMSL:**

Data from the following 17 Danish stations, operated 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	55 17 N	14 45 E
Hammerhavn		
130/019 Christiansø	55 19 N	15 11 E
130/061 Mommark	54 56 N	10 03 E

The tide gauge in Esbjerg is equipped with a permanent GPS station.

Likewise the stations in Hirtshals, Gedser and Tejn are equipped with permanent GPS stations in the vicinity of the stations.

### **Data for NEAMTWS:**

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

### Greenland

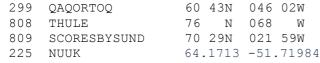
DMI and the previous Danish Maritime Safety Administration (DaMSA) ended all sea level activities in Greenland in 2002 and 2004, respectively. This included the GLOSS GCN stations 225 Nuuk (DMI) & 228 Ammassalik (DaMSA). All available data from Nuuk and Ammassalik have been delivered to the GLOSS and PSMSL database. Furthermore DaMSA has sent all available data up to 2004 from all their 8 stations to the GLOSS database.

DTU Space opearates three stations in Greenland:

- Qagortog (PSMSL 980/045).
- Thule. Since 2001 and upgraded to international standards in 2006. (Currently under maintenance)
- Illoggortoormiit. Since 2006
- Nuuk. Since 2014.

The station at Nuuk was re-established in 2014. The physical site, however, is not the same because the old side has been removed due to construction. The geodetic fixing linking the two sites has not been performed yet.

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







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

#### **Data for NEAMTWS:**

Data from all four 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, operated by DMI, stopped during winter 2006 due to technical failure. The Faroe Islands have taken over the responsibilities for meteorological measurements and DMI has no influence on the status of the tide gauge in Torshavn anymore.