



Questionnaire to BSHC Member States on their implementation status of the transition to a Harmonised Vertical Reference, Baltic Sea Chart Datum 2000 (BSCD2000).

Please return to Thomas Hammarklint by email (thomas.hammarklint@sjofartsverket.se) at the latest by **21 February 2020**.

Member state	Denmark
Date of reply	2020-02-25
Point of Contact	Peter Ladegård Sørensen, GST, pls@gst.dk

1. Are all the decisions done to implement the Baltic Sea Chart Datum 2000?

- 1.1. When the decisions has been done or planned to be done?
The decision is to do nothing because the new BSCD2000 has almost no effect for the Danish Waters.
- 1.2. What are the national decisive organizations?
See 1.1.

What is the national status of implementation of chart datum?

- 2.1. What actions have already been done?
GST has followed the working groups regarding the implementation and taken into account that it will not effect Denmark.
- 2.2. What actions have been planned to be executed and what is the schedule?
We will however make sure the put at note in the Charts stating the BSCD2000 is in the Chart.
- 2.3 Which ENC Approach have been updated with the new reference datum? If possible, attach a chart datum overview covering Your countries nautical charts, designed graphically or as a table, updated around January, 2019. Also, if possible, include an attribute to each named chart describing the CD difference to BSCD2000 in cm (CD minus BSCD2000). Example attached at the end of the Questionnaire (Annex).
No ENC approach, since it has no effect for Danish Waters.

3. Has Your country established the national realization of EVRS and are the water level stations connected to this new height system (BSCD2000)?

- 3.1 Which organization/-s is responsible for the water level stations/data in Your country?
Danish Meteorological Institute (DMI).
- 3.2 Which reference are used today to present water level information?
In the Baltic Sea it is DVR90.
Does Your country planning to present water level information referring to BSCD2000? Doing it already today? Date decided for change the reference to BSCD2000?



Contact Danish Meteorological Institute (DMI) for more info.

3.3 Are there any plans for digital service/-s intended for the users to have the option to choose MSL or BSCD2000 as the reference level for water level information?

Contact Danish Meteorological Institute (DMI) for more info.

3.4 GNSS supported UKC control/confirmation is probably the reality in a few years. But we also need reliable water level predictions for carrying out optimal loading and real time water level data to check the GNSS data. Do we need a shared service in the Baltic Sea for water level information (predictions/real-time), that fulfils nautical needs and demands?

Contact Danish Meteorological Institute (DMI) for more info.

3.5 Do we need to work together with the development of the IHO S-104 standard?

Unknown.

4. Are the relevant national contacts and interest groups defined for the change of chart datum and water level reference?

4.1. What are the essential national interest groups in Your country?

- Danish Meteorological Institute (DMI)
- Søfartsstyrelsen/Danish Maritime Authority (DMA)
- Kystdirektoratet/Danish Coastal Authority (DCA)

4.2. Are the relevant point of contacts known and contacts been made to them?

Unknown

4.3 Are You planning any information campaign about the change of chart datum and water level reference? If, yes have you published information about this somewhere?

We will inform our users when Sweden get to do waters covering Danish Charts.

5. Have You identified any obstacles or major issues concerning transition to the harmonized vertical reference?

5.1. What are the major obstacles or issues?

Unknown

5.2. What measures has been planned to avoid them?

Unknown

6. Connections to neighbouring countries

6.1. Which are the relevant countries to cooperate?

Sweden and Germany

6.2. Are the needed points of contacts already known?

Yes



6.3. What actions have been agreed with the relevant countries (e.g. synchronising plans and schedules)?

7. Are there any needs for support from BSHC?

No

8. Do you have any other proposals or guidance to the CDWG to help and foster the transition process?

No

9. Are you using GNSS and GNSS augmentation services for referring to your (bathymetric) surveys to the chart datum? Yes

9.1 What GNSS augmentation service is used for hydrographic surveys? (If there are several augmentation services, list all of them.)

VRS from GPSNET and own base stations related to EUREF89/DVR90

9.2 To which coordinate system, and vertical reference level/frame the GNSS augmentation service is referred to? (If there are several systems in use, list all of them.)

Horizontal: EUREF89 and vertical: DVR90