Swedish Maritime Administration
Hydrographic Office

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

*Please return to Thomas Hammarklint by email (thomas.hammarklint@sjofartsverket.se) at the latest by **25 January 2019**.*

Member state	Poland
Date of reply	2019-01-17
Point of Contact	Witold Stasiak, Hydrographic Office of Polish Navy, w.stasiak@ron.mil.pl

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?

Until the end of 2019.

1.2. What are the national decisive organizations?

Hydrographic Office of Polish Navy (Biuro Hydrograficzne Marynarki Wojennej)
Head Office of Geodesy and Cartography (Główny Urząd Geodezji i Kartografii)

What is the national status of implementation of chart datum?

2.1. What actions have already been done?

The decision has been made to use vertical reference system PL-EVRF2007-NH for new editions of nautical charts (ENC) from the beginning of 2020.

2.2. What actions have been planned to be executed and what is the schedule?

The "road map" was developed to achieve the new vertical reference system.
There is:
- ongoing analysis of the metadata (vertical) bathymetric database,
- consultations with the institution which manage water level stations,
- the new edition of nautical charts and ENC will be issued on areas where data has been collected according to the new vertical reference system,
- possible bathymetric data correction (shift) in areas (surveys) were data corrections are well defined.

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 ENCs has been updated so far.

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?

Institute of Meteorology and Water Management (Instytut Meteorologii i Gospodarki Wodnej)

3.2 Which reference are used today to present water level information? Does Your country planning to present water level information referring to BSCD2000? Doing it already today? Date decided for change the reference to BSCD2000?

Curently: PL-EVRF2007-NH, which is the realisation of Amsterdam (N.A.P.) reference system.

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?

N/N

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?

N/N

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

N/N

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?

Maritime Offices (Gdynia, Słupsk, Szczecin), Harbour Masters.

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

Yes

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?

Nothing has been published so far. Information about a new reference system can be distributed by Notice to Mariners.

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?

- no metadata for historical bathymetric data collected in database;
- required a lot of time for bathymetric data analysis;
- impossible to issue all new editions of paper charts in one year.

5.2. What measures has been planned to avoid them?

Consultation with the Institute of Meteorology and Water Management (water level stations owner) about the past changes in water level stations vertical reference system.

6. Connections to neighbouring countries

6.1. Which are the relevant countries to cooperate?

No cooperation so far.

6.2. Are the needed points of contacts already known?

N/N

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

N/A

7. Are there any needs for support from BSHC?

According to the statistical data, the difference between MSL used on Polish nautical charts and the currently used reference system is less than 9 cm. Referring to this information, in what range of depths (type of areas) do you recommend data correction.

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

N/N

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

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

DGPS
GPS RTK (Gulf of Gdańsk - local FM radio)
ASG-EUPS (GPS RTK)
SmartNet Poland (GPS RTK)
TPI Net pro (GPS RTK)
VRSnet (GPS RTK)

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.)
WGS-84