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.

<table>
<thead>
<tr>
<th>Member state</th>
<th>Lithuania</th>
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<tbody>
<tr>
<td>Date of reply</td>
<td>2020-01-09</td>
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<tr>
<td>Point of Contact</td>
<td>Mindaugas Zakarauskas, Lithuanian Transport Safety Administration, <a href="mailto:hydrography@ltsa.lrv.lt">hydrography@ltsa.lrv.lt</a></td>
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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?
Officially LAS-07 has been introduced at 01 Jan 2016

1.2. What are the national decisive organizations?
Decree of director of National Land Service under Ministry of Agriculture of the Republic of Lithuania

What is the national status of implementation of chart datum?

2.1. What actions have already been done?
All geodetic surveys has to be done in new LAS-07 height system, hydrographic data acquisition inland are done in LAS-07, nautical usually in BHS-77 as most of nautical data users are still working in BHS-77.

2.2. What actions have been planned to be executed and what is the schedule?
After bathymetric data migration to new DB system, at the end of 2020 (expected) all the data will be recalculated to LAS-07

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).

Paper charts has a note how to get depth values from BHS-77 to LAS-07.

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?
All tide gauges are under responsibility of Lithuanian Hydrometeorological Service

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?

All the acquired tide gauge data are acquired and distributed to end users in BHS-77.
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?

There is no plans to change reference (information on transformation value is provided).

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?

Preferable

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

Preferable Yes

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?

Mainly yes, for nautical application nautical data end users, mariners, navy, port authority.

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

Mainly 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?

Currently no such plans

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?

Most users are used to operate in BHS-77, especially port authority pilots and other services.

5.2. What measures has been planned to avoid them?

Currently as the data are in BHS-77 no need to warn, but as the nautical data will be compiled and distributed in new LAS-07 special notice in data sets and labels on distribution media are planned

6. Connections to neighbouring countries

6.1. Which are the relevant countries to cooperate?

Latvian HO

6.2. Are the needed points of contacts already known?

Yes, point of contacts are known

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

Oral agreement on exchange relevant data, we have annual meeting between maritime administrations.

7. Are there any needs for support from BSHC?

Yes preferable.

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

Currently not
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.)

Inland and near coastal surveys are using LITPOS system.

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.)

The new LITPOS system is referred to LAS-07 height reference system,