

## **Road Map Implementation of a Harmonized Reference System, S-104 Water Level and S-111 Surface Currents in the Baltic Sea**

### **A. OVERVIEW**

This is a Draft Road Map describing the implementation of a Harmonized Reference System, S-104 Water Level and S-111 Surface Currents in the Baltic Sea. The purpose of the roadmap is to provide guidelines for BSHC member countries to develop national transition plans and to enable the CDWCWG to monitor and harmonize implementation within the Baltic Sea region.

#### **A.1 Final outcome**

Harmonized Reference System in use in the Baltic Sea by the year 202X.

Production of S-104 Water Level and S-111 Surface Currents in Baltic Sea by the year 202X.

#### **A.2 Vision**

Transition to S-100 environment and usage of new S-100 based products will happen in the future, S-101 based ENC's expected to be available and in use by 2025 ([S-100 Implementation Strategy](#)). Change from separate national vertical references to harmonized one makes it possible to take all the advantages of the new environment in to use in the Baltic Sea region.

#### **A.3 Benefits**

- Future navigation more reliable and safe
  - Only one vertical reference in use within the Baltic Sea
  - Depth and water level information consistent within the Baltic Sea
- Future navigation more effective by possibility to utilize all the new features and possibilities of S-100 based systems
- Water level information more efficiently in use
  - Better utilization of ship's cargo carrying capacity

#### **A.4 Commitments**

- BSHC commitments
- IHO resolutions (3/1919) - technical specifications
- HELCOM ministerial declarations - political support
- INSIPRE - requirements

#### **A.5 Role of CDWCWG**

- Foster and support the transition process
- Propose harmonize actions and follow up (monitor) progress
- Propose a framework for future management and revision of the reference system
- Communicate with and support other stakeholders (e.g. BOOS, IHO/TWCWG)
- Giving general information e.g. by articles, presentations and posters
- Report to BSHC and relevant international bodies

## **B. MAIN PHASES OF IMPLEMENTATION**

Here is presented some main steps as general guidelines leading to harmonized vertical reference and implementation of S-104 and S-111 bearing in mind that there will be national differences in the implementation.

### **B.1 Evaluate national actions and time schedules**

- National decisions needed
  - political commitment
  - time schedule
  - resources
- National feasibility studies
  - scope of the transition (all the data or not, precision of the transformation etc.)
  - legislation regulations
  - technical standards
- Establish a national contact network
  - identify relevant national stakeholders (national administrations, pilots, ports, ship-owners etc.)

### **B.2 Prepare national plans to organize the transition**

- Nomination of the leading organization (national HO?)
- Organizing the transition, e.g.:
  - as a separate project or
  - included in normal work routines
- Planning the main milestones for the transition period

### **B.3 Analyse of present national situation**

- Source data (depth data, other chart objects with depth or height information)
- Data systems
- Products
- Connection to national height reference frame
- Water level data
- Current data

### **B.4 National implementation plan**

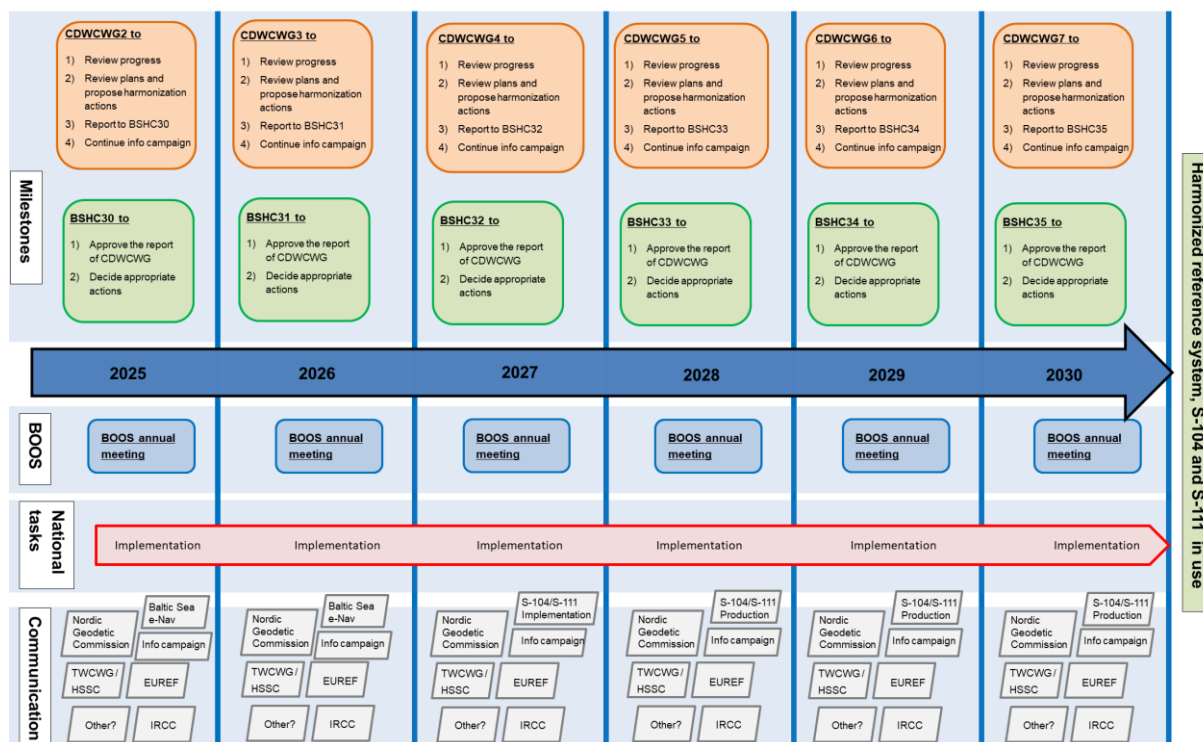
- Detailed national milestones
- Overview how following issues has been taken into account in the national implementation plan
  - water level and surface currents information
  - data systems
  - transformation of the water level information to new datum
  - publishing the products

## Appendix 1: CDWCWG Road map

Sketch showing the road map for the BSHC Chart Datum, Water level and Currents Working Group (CDWCWG) Implementation of a Harmonized Reference System, S-104 Water Level and S-111 Surface Currents in the Baltic Sea.

### RoadMap

BSHC CDWCWG / Harmonized Reference System / S-104 and S-111 Implementation / Time Line  
2024-10-11



## Appendix 2: CDWCWG International relations

### CDWCWG International relations

