



Finnish Transport Agency

Baltic Sea Harmonized Vertical reference System

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What?

Harmonized vertical reference for hydrography and navigation (**EVRS**-based)

Why?

No common vertical reference

Who?

International Hydrographic Organization (IHO)

Baltic Sea Hydrographic Commission (BSHC)

Chart Datum Working Group (CDWG)

National Hydrographic Offices



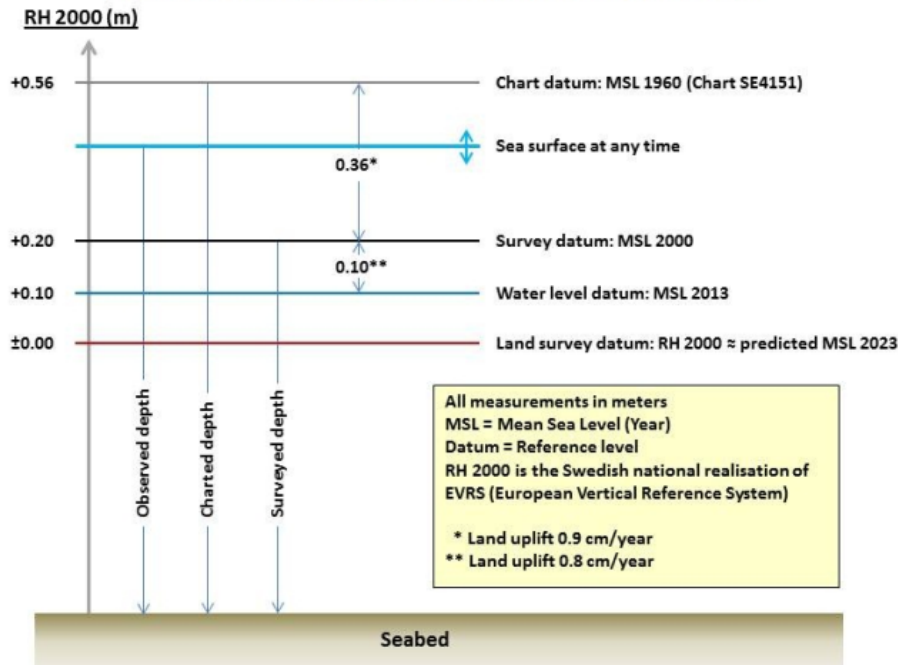
Image by BSHC

Present challenges and future benefits

Present situation

Present relationships within Swedish nautical chart SE4151
(Designed to assess hydrographic surveys and dredging)

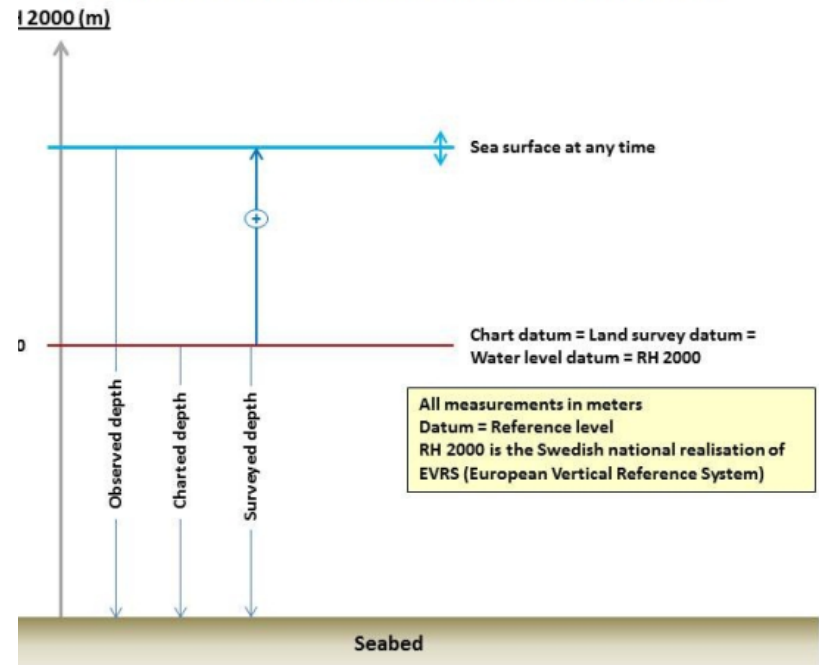
Image by Lars Jakobsson, Swedish Maritime Administration (2013)



After harmonization

Future relationships within Swedish nautical chart SE4151
Designed for nautical use and to assess hydrographic surveys and dredging)

Image by Lars Jakobsson, Swedish Maritime Administration (2013)



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Major changes

- Change from **sea level** based to **geodetic** vertical datum!
- Depths and heights in same vertical reference system
- Northern Baltic Sea: around 20 cm reduction to plotted depths

Summary

- **Present challenge:** No common reference system for hydrographic or navigational tasks
- **EVRS** as a reference system for nautical tasks
- **Implementation by 2020!**
- **The desired result:**
 - Easier, safer and more efficient shipping and navigation
 - Wider use of a bathymetric data
 - Nautical charts and topographical maps in same system

