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This document is executed in Slovenian language. The English version is for informational purposes only. In case of any discrepancies, the Slovenian version shall prevail.

TECHNICAL REQUIREMENTS**for the implementation of the Slovenian Height System 2010 at sea****Introduction**

Slovenian Height System 2010 is determined by the Decree on Determining the Parameters of Height Part of the Vertical Component of the National Spatial Coordinate System (Official Gazette of the Republic of Slovenia, No. 80/18). These technical requirements determine the National Depth Reference System, with the parameters for the implementation of the Slovenian Height System 2010 at sea.

Field of use

The National Depth Reference System is used for determining, marking and using the depths of the sea when performing hydrographic activities and for the needs of ensuring the safety of navigation at the Slovenian sea area.

Components of the National Depth Reference System

The National Depth Reference System consists of the Chart Datum, the Mean Sea Level and the Depth Reference Surface.

Parameters of the National Depth Reference System

- (1) The National Depth Reference System is called the Slovenian Depth System 2010 (official acronym: SGS2010).
- (2) The reference sea level for determining the Chart Datum is the Mean Sea Level (MSL), which is calculated from an 18.6-year long series of observations at the tide gauge station in Koper and refers to the epoch 10. 10. 2010.
- (3) Chart Datum is the level of the Mean Lower Low Water Springs (MLLWS), calculated from an 18.6-year long series of observations at the tide gauge station in Koper and refers to the epoch of 10. 10. 2010. MLLWS is 70 cm below MSL.
- (4) MSL is realized with a reading of 224 cm and MLLWS with a reading of 154 cm on a tide staff of the tide gauge station in Koper.
- (5) The Depth Reference Surface is a model of a geoid at sea and is called the Slovenian Depth Reference Surface 2018, datum Koper (official acronym: SLO_GRP2018/Koper).
- (6) SLO_GRP2018/Koper is part of national geoid model called Slovenian Height Reference Surface 2016, datum Koper (official acronym: SLO_VRP2016/Koper), which extends from the coastline to the sea. It is expressed by geoid heights of points in the grid with spacings $\Delta\varphi = 30''$ and $\Delta\lambda = 45''$.

Connection to the National Height System

SGS2010 is connected to the Slovenian Height System 2010 (official acronym: SVS2010) with a common MSL at the tide gauge station in Koper for the epoch of 10. 10. 2010.

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Connection to the abandoned reference systems

- (1) The so far Mean Sea Level for the needs of hydrographic activity is 9 cm below the MSL.
- (2) The so far Chart Datum for the needs of hydrographic activity is 72 cm below the MSL and 2 cm below the MLLWS.
- (3) The so far Chart Datum is 63 cm below the so far Mean Sea Level.
- (4) The previous height datum Trieste 1875, which was used as part of the Slovenian Height System 2000 (official acronym: SVS2000) for geodetic surveying and also for hydrographic activity, is 15.5 cm below the MSL.

To obtain a new geoid file, contact the Geodetic Institute of Slovenia at
info@gis.si