METADATA

Hydrogeological model raster data

Last edited: 05/10/2022

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1. General Information

Folder: raster

Files: topography_hgsm_nor.tif

topography_hgsm_nor_resampled_dx20m_dy20m.tif

[CUnitID]_base_hgsm_norderney.tif

[CUnitID]_thickness_hgsm_norderney.tif

[CUnitID] are the conceptual model units, "/" are replaced by "_" in the filenames. E.g. "qh/S" is "qh_S".

Unit "qp/S" base shows the lower base at the interface to "tmim-tpl". The base of "qp/S" overlaying "qp/T-U" can be obtained from "qp/T-U_base" + "qp/T-U_thickness" which gives the top of "qp/T-U" which is the top of "qp/T-U". The thickness of this part of "qp/S" is the elevation difference between top of "qp/T-U" and "qh_base" (Holocene base).

qh_base and qh_thickness (Holocene base) consolidate units qh/S and qh/T-U.

q_base and q_thickness (Quaternary base) consolidate units qh/S, qh/T-U, qp/S, and qp/T-U.

tmim_base and tmim_thickness (Upper likely aquifer base location) consolidate units qh/S and qh/T-qh/S, qh/T-U, qp/S, qp/T-U, and tmim-tpl.

teoo_base and teoo_thickness (Lower likely aquifer base location) consolidate units qh/S and qh/T-qh/S, qh/T-U, qp/S, qp/T-U, tmim-tpl, tmiu, tolm-tolo, and tolm-teoo.

2. Metadata

Nr.	Metadata	Value
1	**Title**	topography_hgsm_nor.tif
		topography_hgsm_nor_resampled_dx20m_dy20m.tif
		[CUnitID]_base_hgsm_norderney.tif
		[CUnitID]_thickness_hgsm_norderney.tif
2	**Subject**	geospatial, hydrogeology, layer data, bathymetry, surface elevation
3	**Description**	Raster data files containing layer base and thickness data as well as topography of the hydrogeological model of Norderney.
		topography_hgsm_nor.tif, surface elevation and bathymetry data on original raster discretization (10 x 10 m).
		topography_hgsm_nor_resampled_dx20m_dy20m.tif, surface elevation and bathymetry data on raster discretization of the hydrogeological model (20 x 20 m)
		[CUnitID]_base_hgsm_norderney.tif, base elevation of CUnitID, raster cell size is 20 x 20 m.

		[CUnitID]_thickness_hgsm_norderney.tif, thickness of CUnitID, raster cell size is 20 x 20 m.
		Included are also stratigrapic bases:
		Holocene (qh_base), Quaternary (q_base), Middle Miocene (tmim_base), and Upper Eocene (teoo_base) as well as their corresponding thickness.
		Coordinate system of spatial data: ETRS89 / UTM zone 32N, EPSG:25832
		Further spatial related meta data are found within the raster file.
4	**Type**	Geospatial data
5	**Source**	BAW - Bundesanstalt für Wasserbau. „EasyGSH-DB: Bathymetrie 2016 (German)", 2016. http://mdi-de.baw.de/easygsh/Easy_DownloadG.html#2016 [19/03/2020].
		Sievers, J., M. Rubel, und P. Milbrandt. „EasyGSH-DB: Bathymetrie (1996-2016)". Bundesanstalt für Wasserbau (BAW) [Federal Waterways Engineering and Research Institute], 2020. https://doi.org/10.48437/02.2020.K2.7000.0002.
		Landesamt für Bergbau, Energie und Geologie (LBEG) [State Office for Mining, Energy, and Geology]. „Lower Saxony Borehole database (Bohrdatenbank von Niedersachsen - BDN), map sheets TK25 2208, 2209, 2210, 2308, 2309, 2310, 9999", 2021.
		Stadtwerke Norderney [Norderney Municipal Works]. „Borehole database of the Norderney municipal works", 2021.
		Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) [Federal Institute for Geosciences and Natural Resources], Landesamt für Bergbau, Energie und Geologie (LBEG) [State Office for Mining, Energy, and Geology], und Bundesamt für Seeschifffahrt und Hydrographie (BSH) [Federal Maritime and Hydrographic Agency], Hrsg. „Geopotential Deutsche Nordsee - Full coverage geological 3D model of the German North Sea, map sheets C2306, C2310", 2013. https://www.gpdn.de/?pgId=309.
		Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) [Federal Institute for Geosciences and Natural Resources], Landesamt für Bergbau, Energie und Geologie (LBEG) [State Office for Mining, Energy, and Geology], und Bundesamt für Seeschifffahrt und Hydrographie (BSH) [Federal Maritime and Hydrographic Agency], Hrsg. „Geopotential Deutsche Nordsee - Holocene base for the German North Sea coast", 2013. https://www.gpdn.de/?pgId=401.
		Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) [Federal Institute for Geosciences and Natural Resources], Landesamt für Bergbau, Energie und Geologie (LBEG) [State Office for Mining, Energy, and Geology], und Bundesamt für Seeschifffahrt und Hydrographie (BSH) [Federal Maritime and Hydrographic Agency]. „Geopotential Deutsche Nordsee - Holocene base for the German North Sea offshore", 2013. https://www.gpdn.de/?pgId=401.
		Landesamt für Bergbau, Energie und Geologie (LBEG) [State Office for Mining, Energy, and Geology]. „Coastal geological map of Lower Saxony, 1:25 000 - Relief of the Holocene base". Hanover, 2000. https://nibis.lbeg.de/net3/public/ikxcms/default.aspx?pgid=151
6	**Relation**	NA
7	**Coverage**	Location: Norderney and surrounding Wadden Sea

8	**Creator**	Patrick Haehnel
10	**Publisher**	Zenodo
11	**Contributor**	NA
12	**Date**	Date of creation:
		topography_hgsm_nor.tif, 29 July 2021
		topography_hgsm_nor_resampled_dx20m_dy20m.tif, 14 July 2022
		[CUnitID]_base_hgsm_norderney.tif, 25 July 2022
		[CUnitID]_thickness_hgsm_norderney.tif, 25 July 2022
13	**Format**	GeoTIFF
14	**Identifier**	10.5281/zenodo.7113404
15	**Language**	English

3. Data fields (Raster bands)

Nr.	Name	Datatype	Unit	Description
1	**Band 1**	float	meter	Elevation,
				m ü. NHN for
				topography_hgsm_nor.tif
				topography_hgsm_nor_resampled_dx20m_dy20m.tif
				[CUnitID]_base_hgsm_norderney.tif
				meter for
				[CUnitID]_thickness_hgsm_norderney.tif
				Nodata value: -9999