Supplementary Material for the article

German inventory of small lakes and ponds

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S1 Data sources

Federal state	URL to data	Last accessed on	License
Bavaria	https://geodaten.bayern.de/opengeodata/OpenDataDetail.html?pn=atkis_basis_dlm	05.08.2024	
Baden-Württemberg	https://www.lgl-bw.de/Produkte/Landschaftsmodelle/Basis-DLM/index.html	02.08.2024	Data License Germany By 2.0.
Berlin	https://geobasis-bb.de/lgb/de/geodaten/landschaftsmodelle/basis-dlm/#	05.08.2024	Data License Germany By 2.0.
Brandenburg	https://geobasis-bb.de/lgb/de/geodaten/landschaftsmodelle/basis-dlm/#	05.08.2024	Data License Germany By 2.0.
Bremen	https://metaver.de/trefferanzeige?docuuid=265E2B65-66DB-4B17-AB29-FAFC8C9B6150&q=bremen+basis+dlm&f=	02.08.2024	Creative Commons By 4.0
Hamburg	https://metaver.de/trefferanzeige?docuuid=DDABB1F8-C90D-4849-95EE-18E9F8D6D0FA	02.08.2024	Creative Commons By 4.0
Hessia	https://gds.hessen.de/INTERSHOP/web/WFS/HLBG-Geodaten-Site/de_DE/-/EUR/ViewDownloadcenter-Start?path=Digitales%20Landschaftsmodell/Digitales%20Basis-Landschaftsmodell%20(shape)	02.08.2024	Data License Germ

			any Zero 2.0.
Mecklenburg-Vorpommern	https://www.laiv-mv.de/Geoinformation/Geobasisdaten/Landschaftsmodelle/	02.08.2024	Creative Commons By 4.0
Niedersachsen	https://ni-lgln-opengeodata.hub.arcgis.com/documents/lgln-opengeodata::basis-dlm-shapefile/about	02.08.2024	Creative Commons By 4.0
North Rhine Westphalia	https://www.opengeodata.nrw.de/produkte/geobasis/lm/akt/basis-dlm/	02.08.2024	Data License Germany Zero 2.0.
Rhineland Palatine	https://www.geoportal.rlp.de/mapbender/php/wfs.php?FEATURETYPE_ID=3622&INSPIRE=1&INSPIRE=1	28.10.2024	Data License Germany By 2.0.
Saxony	https://www.geodaten.sachsen.de/landschaftsmodelle-3991.html	02.08.2024	Data License Germany By 2.0.
Saxony-Anhalt	https://geodatenportal.sachsen-anhalt.de/gfds/de/gdp-basis-dlm-lsa.html	02.08.2024	Data License Germany By 2.0.
Saarland	https://geoportal.saarland.de/gdi-sl/inspirewfs_Hydro_Physische_Gewaesser_ATKIS_BDLM	28.10.2024	Data License Germany By 2.0.

Schleswig-Holstein	https://geodaten.schleswig-holstein.de/gaialight-sh/_apps/dladownload/dl-atkis_bdlm.html	02.08.2024	Creative Commons By 4.0
Thuringia	https://geoportal.thueringen.de/gdi-th/download-offene-geodaten/download-digitales-landschaftsmodell	02.08.2024	Data Licens e Germ any By 2.0

S2 Figures
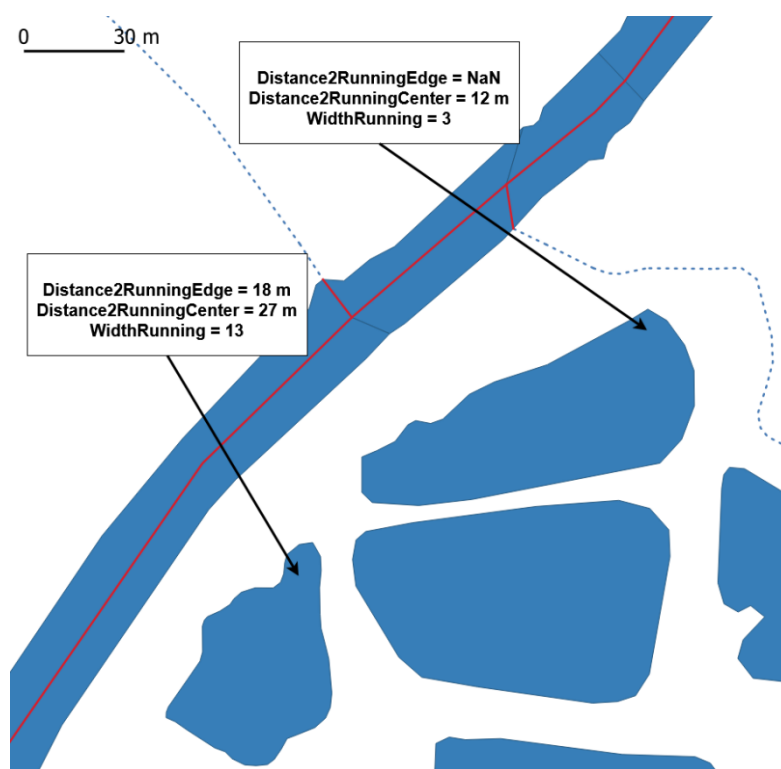
Figure S1: Example of the metrics describing lakes or ponds distance to the river network. The blue dashed line represents a stream or river with a width less than 12 meters. The blue polygon represents a river with wider than 12 meters. The red line represents the middle line of the polygon, as well as the hypothetical connection to the smaller river/ stream.
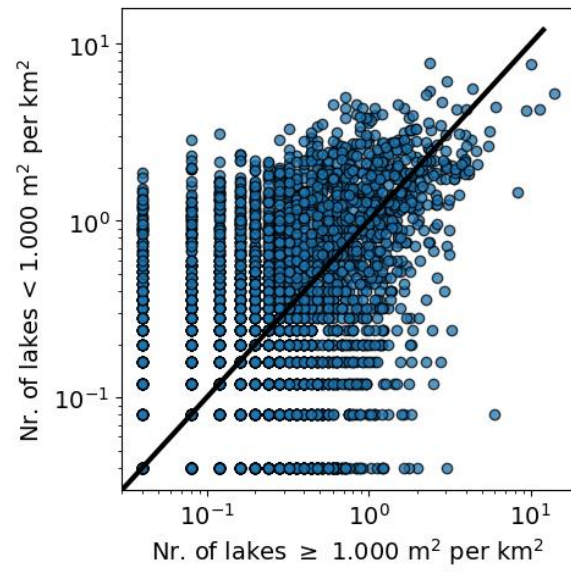
Figure S2: Relationship between density of lakes ≥ 1.000 and lakes < 1.000 m². The number of lakes refers to the lakes within each 5 x 5 km grid cell, as shown in Fig.1.
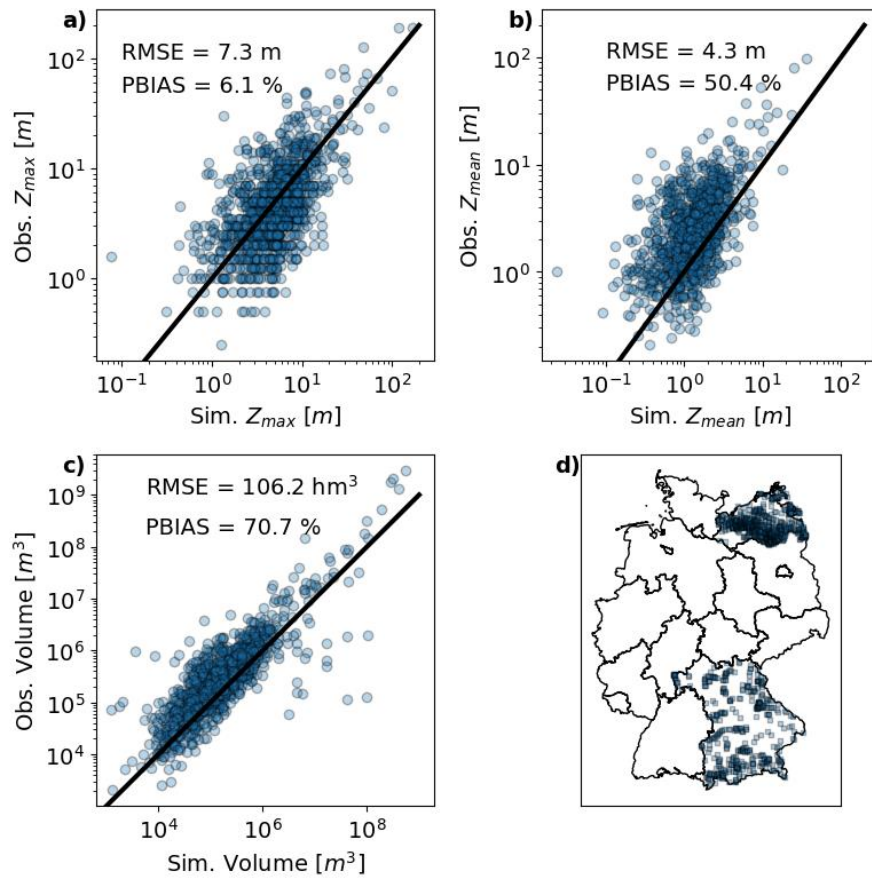
Figure S3: Simulated versus observed lake or pond maximum depth (a), mean depth (max. depth by area) (b) and volume (c) for ~1.600 lakes and ponds located in Bavaria and Mecklenburg Vorpommern (d).
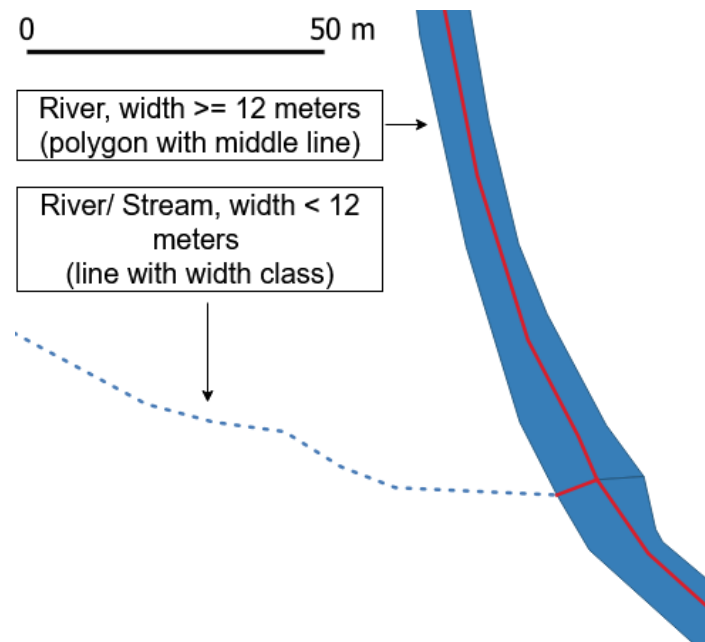
Figure S4: Representation of rivers and streams in the ATKIS Basis DLM. The blue dashed line represents a stream or river with a width less than 12 meters. The blue polygon represents a river with wider than 12 meters. The red line represents the middle line of the polygon, as well as the hypothetical connection to the smaller river/ stream.
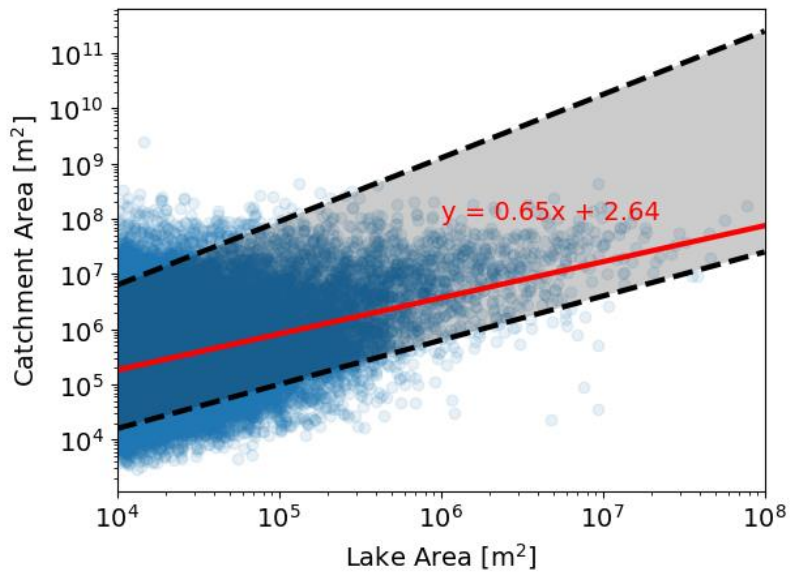
Figure S5: Relationship between lake/ pond and catchment area for all lakes & ponds > 10.000 m² (1 ha). The red line shows a fitted linear regression line between log10 of lake area and catchment area. The shaded area represents the span of linear relationships between lake and catchment area described by (Walter et al., 2020).
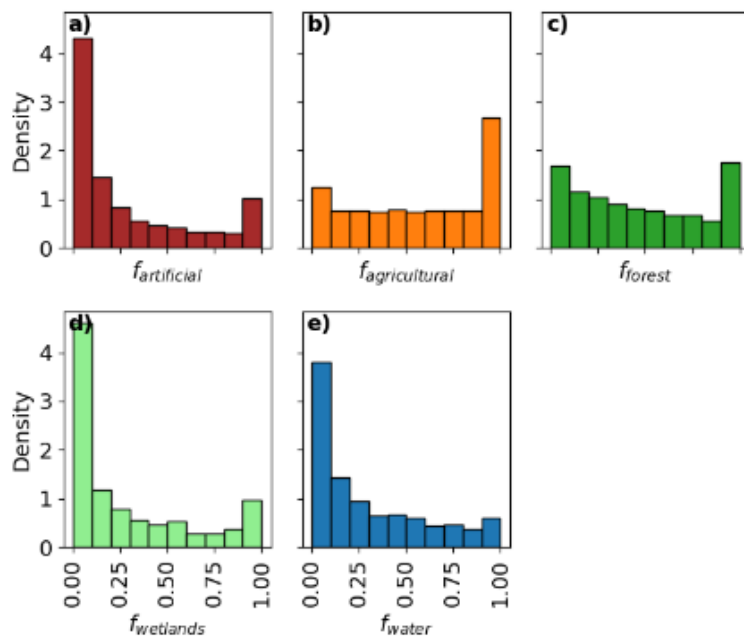
Figure S6: Fraction of the small lake or pond catchments covered by the CORINE level one land cover classes.