



LGM major inland waters of Europe - GIS dataset

J. Verheul, M. Zickel, D. Becker, C. Willmes

Abstract

This GIS dataset contains the major inland waters (rivers and lakes) of Europe during the LGM (Clark et al., 2009). The data was collected from data published in scholarly works.

1 Context

This dataset was first published on December 11th 2015 in the CRC806-Database Willmes et al. (2014). The work for collecting the data and creating the GIS dataset was conducted within the Z2 Data Management and Data Services sub project of the Collaborative Research Centre 806 (www.sfb806.de).

The dataset is assigned with a DOI, and can be cited as follows in scholarly works:

J. Verheul, M. Zickel, D. Becker, C. Willmes (2015): LGM major inland waters of Europe - GIS dataset. CRC806-Database, doi: 10.5880/SFB806.14.

2 Metadata

The basic descriptive metadata of the dataset is given in this section.

2.1 Basic Metadata

Title	LGM major inland waters of Europe - GIS dataset
Author(s)	J. Verheul, M. Zickel, D. Becker, C. Willmes
Year	2015
License	CC-BY
Topic	InlandWaters
Keywords	LGM, Paleoenvironment, Hydrology.
Publisher	CRC806-Database
DOI	10.5880/SFB806.14

2.2 Spatial Metadata

Type	BoundingBox.
BoundingBox (SW, NE)	-7.0 30.0, 68.0 81.0
Region	Europe

2.3 Temporal Metadata

Type	Interval.
Name	Last Glacial Maximum (LGM).
Interval	26500, 19000

For temporal indexing the dates are given in year before present (yBP).

3 Data sources

The inland water data was derived from sources listed in the table. In cases, where the river geometry was incomplete, the remaining geometry was derived using GIS flow direction and flow accumulation modelling based on the GeBCO topography.

Dataset	Source	Notes
Gebco 2014	General Bathymetric Chart of the Oceans (2014)	The topographic and bathymetric data.
The first estimation of Fleuve Manche palaeoriver discharge during the last deglaciation: Evidence for Fennoscandian ice sheet meltwater flow in the English Channel ca 20–18 ka ago	Toucanne et al. (2010)	Maps of main LGM rivers in northern Europe.
Lake Status Records, Caspian and Aral Seas.	Harrison et al. (1991)	LGM Caspian sea and Aral lake.
Late Weichselian map of Northern Eurasia	Grosswald (1980)	Russian and Siberian Rivers and Lake in today's German Bight.
Quaternary Glaciations - Extent and Chronology	Ehlers et al. (2011)	(Ice dammed-) lakes and drainage during LGM.
Map of Ebro Basin (NE Iberia)	Garcia-Castellanos et al. (2003)	LGM Ebro river.
Map of Italy during LGM	Orombelli et al. (2004)	LGM Po river.
NaturalEarthData	(Kelso and Patterson, 2010)	Some parts of the river geometries.
Caspian and Aral sea	(Harrison et al., 1991)	LGM Extent of Caspian and Aral Sea.
Map of Northern Europe	(Toucanne et al., 2010)	Northern Rivers (Rhine, Loire, Seine, Elbe)
LGM Map of Levante	(Torfstein et al., 2013)	Geometry of paleo lake Lisan.

4 Maps and Visualisations



Figure 1: Map of the Dataset: LGM major inland waters of Europe

5 Data resources

There are two spatial layers; LGM major rivers, and LGM major lakes. Both are published as WebGIS layers and attached as resources to this dataset.



5.1 File resources

File	Format	Size
LGM_Rivers.zip	Zipped Shapefile	80 KB
LGM_Lakes.zip	Zipped Shapefile	230 KB

5.2 Web resources

DOI	10.5880/SFB806.14
LGM major rivers	http://crc806db.uni-koeln.de/layer/show/294/
LGM major lakes	http://crc806db.uni-koeln.de/layer/show/293/
OGC OWS	http://www.sfb806db.uni-koeln.de/owsproxy.php?service=wms&version=1.3.0&request=GetCapabilities

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