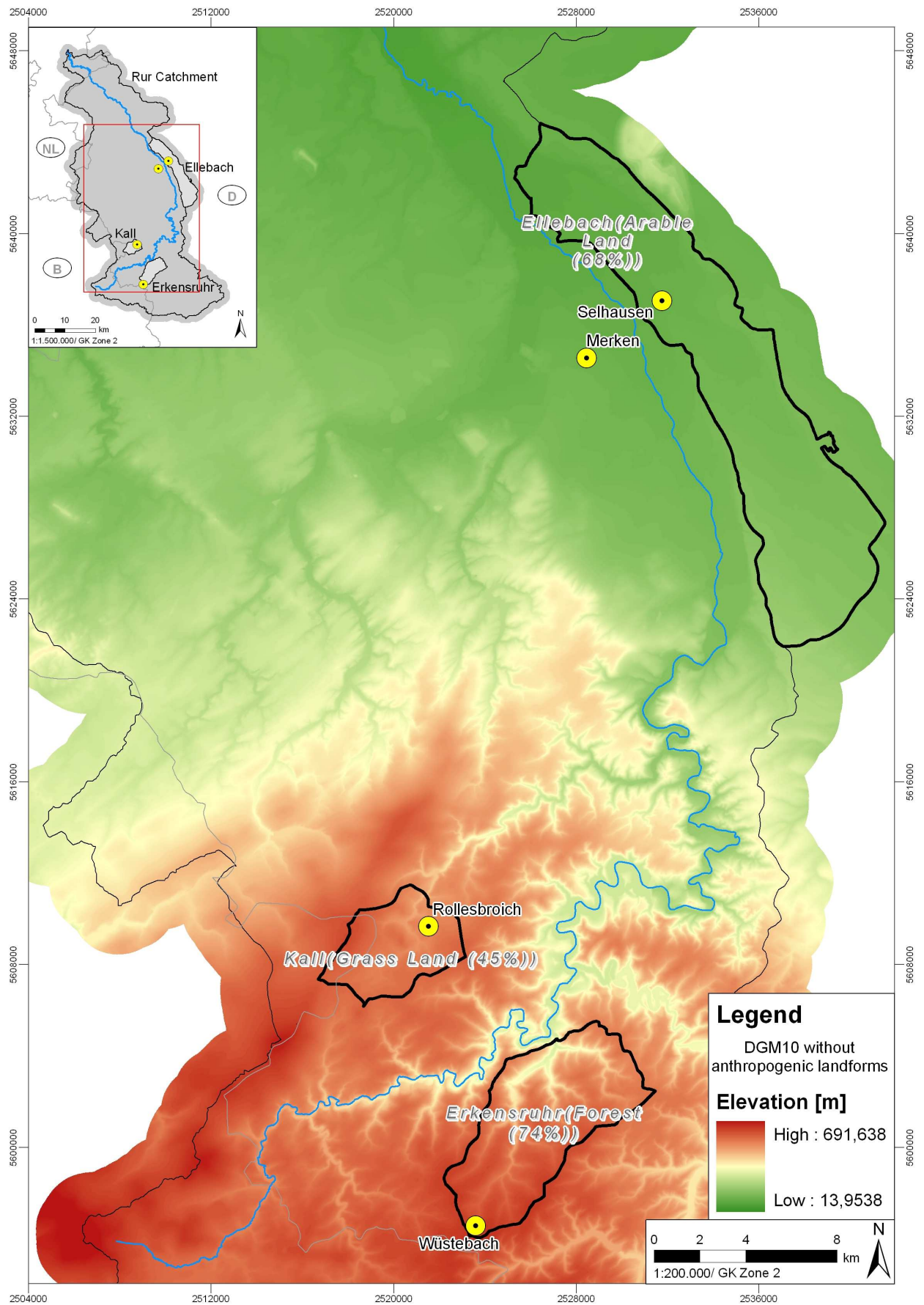


## Documentation – Digital Elevation Model 10 – DEM 10 [DGM10] (without anthropogenic landforms)

Content	
files:	<p>data</p> <p>DEM10_TR32_WITHOUT_anthropo_RF</p> <p>demtr32_10m_wo_anthro_rf.tif: .tif file of the DEM10 including anthropogenic landforms</p> <p>demtr32_10m_wo_anthro_rf_ascii.txt: ASCII file of the DEM10 including anthropogenic landforms</p> <p>documentation</p> <p>this file</p> <p>DGM10_scilands_wo_screenshot.jpg</p> <p>research</p> <p>Dokumentation_DGM1_DGM10.pdf: description of the construction of the DGM10 including procedure and methods</p> <p>Kurze_Erlaeuterungen_DGM10_Rur_ergaenzt.pdf: additional information on the datasets from the Netherlands and Belgium</p>
data size:	<p>data folder: 566 MB</p> <p>entire folder: 566 MB</p>
extend:	Rur Catchment + 2km-buffer (dark grey area in overview map of example)
provider:	scilands GmbH based on data from the Bezirksregierung Köln, the Ministry of Transport, Public Works and Watermanagement of the Netherlands (Rijkswaterstaat) and the National Geographic Institute of Belgium, Brussels.
language:	German
date of publication:	2010
date of purchase:	2009
Description	
description:	The DEM10 provides elevation information in raster format with a spatial resolution of 10m (Projection: Gauß-Krüger Zone 2, EPSG::31466). It was combined from different sources by the scilands GmbH: the DGM 5L (1-5 m grid size) provided by the GEObasis.nrw Bezirksregierung Köln, Germany, the AHN5 (Actueel Hoogtebestand

	<p>Nederland) Netherlands (5m grid size) and the DTM-1:10.000 Belgium (20m grid size). The scilands GmbH produced the digital elevation model of the Rur catchment using datasets from the sources mentioned above.</p> <p>First of all, data gaps were closed by using the SAGA-module 'Close Gaps' and noise was removed by using a modified, variable Lee-filter. Removing the noise also unveiled hidden geomorphological information.</p> <p>For the analysis of current geomorphological processes anthropogenic landforms like embankments, sunk roads or railways, dikes, open cast mining areas etc. are important. When classifying certain relief areas a DGM without anthropogenic landforms is needed.</p> <p>Therefore two datasets have been created.</p> <p>In order to reduce the amount of data and the amount of detail, a generalization into a 10 m grid size was carried out. A resampling method developed by the scilands GmbH using local minima and maxima preserved the anthropogenic features which could then be detected and removed. Therefore, a filter (SAGA-module) was improved and enabled to identify nearly all artificial dikes in the landscape. A manual correction took place afterwards. Finally, the SAGA-module 'Close Gaps' and the Lee-filter were used again to fill in the missing values.</p> <p>When including the data from the Netherlands and Belgium, which is partly overlapping the German DGM10, the same steps as above were performed.</p> <p>For the data from the Netherlands, data gaps were closed e.g. on water surfaces, the coordinate system was changed from 'Amersfoort RD new' into Gauß-Krüger-coordinates (which resulted in an inaccuracy of up to 10 m), resampling to a 10 m grid size, and elimination of anthropogenic landforms were carried out.</p> <p>In the DTM-1:10.000 of Belgium the triangular structure of the TIN was removed, the coordinate system was changed from 'Belgian Lambert 2008' into Gauß-Krüger-coordinates and resampling to a 10 m grid size took place.</p> <p>Finally, all datasets were combined whilst trying to produce a fluent passage from one dataset to the other.</p>
more information:	<p>Dokumentation_DGM1_DGM10.pdf,</p> <p>Kurze_Erlaeuterungen_DGM10_Rur_ergaenzt.pdf</p>
abbreviations used in data:	not necessary

## Example



Example of DGM10 for TR32 without anthropogenic landforms displayed in ArcGIS

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