CORINE Land Cover 10 ha

CLC10 (2012)

Status of the documentation: 13.09.2018

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1   Data stock overview

Product	:	CLC10
Content	:	

Description of the most important geometrical features of the land cover in vector format in the nomenclature of CORINE Land Cover (CLC). Basis for the data stock are the LBM-DE2012 data, which were generalized to a minimum size of 10 hectares (ha).

Area	:	Federal Republic of Germany
Spatial structure:		- total dataset
Georeferencing	:	

- Gauß-Krüger projection in the 3rd, 4th or 5th meridian strip, Bessel Ellipsoid, Potsdam Datum (origin Rauenberg)

- UTM projection in zones 32 or 33, Ellipsoid GRS80, Datum ETRS89

- Geographic coordinates in decimal degrees, Ellipsoid GRS80, Datum ETRS89

- further on request

Topicality	:	Reference year 2012 (vegetation period)
Source	:	LBM-DE2012
Data formats	:	SHAPE
Data volume	:	approx. 400 MB
Data carrier	:	DVD, online(ftp)

2   Description of the data stock CLC10

The data set CLC10 offers a description of the landscape in vector format under the nomenclature of the CLC classes, which reflect land cover, on the one hand, but also involve aspects of land use, on the other. CLC10 is based on the land cover model Germany 2012 (LBM-DE2012) with its detailed segmentation into land cover (LB) and land use (LN) at the minimum size of 1 ha. Unique CLC classes are derived from the combinations of LB and LN ("CLC2012"). These data will subsequently be generalized for CLC10 to a size of 10 ha.

The CLC classes „242 Complex cultivation pattern", „243 Land principally occupied by agriculture, with significant areas of natural vegetation" and „313 Mixed forest" are scale-dependent. For this reason, they cannot be derived to CLC by only combining certain LB and LN values, but they are generated using local structures. The CLC classes 242, 243 and 313 were generated by analysing the spatial distribution (scattering) of relevant CLC objects at the highest resolution level. The objects of the classes 242, 243 and 313 contained in this data set were generated for the official data set CLC2012 with a minimum mapping unit (MKF) of 25 ha. A separate derivation for a MKF of 10 ha was not performed.

CLC data for Europe are published every six years (next reference year 2018). The LBMDE is generated/updated every three years (next update for 2015). Derived products of the data set CLC10 can also be generalized from the LBM-DE every three years, if necessary.

The data stock CLC10 is available in a flat, topologically precise structure, i.e. without overlaps and gaps.

2.1   Data material used

The CLC10 data set is based on the LBM-DE, which uses selected object types of the ATKIS® BasisDLM from the categories settlement, traffic, vegetation and water bodies. By means of satellite images, the land cover was determined as of the reference year 2012 and many land uses were taken from the ATKIS types of use. A detailed description of the LBM-DE is contained in the product description LBM-DE2012.

2.2   Specifications CLC10

2.2.1   Area size

The minimum area size is about 10 ha and relates to single isolated objects that differ from their neighbouring objects with regard to their CLC class.

The generalization is performed in several steps based on the 1 ha data set:

- Summarizing all neighbouring objects with the same CLC value (classes)
- Summarizing neighbouring objects over small spatial distances for building areas and water areas
- Generating objects for filling the complex classes (CLC 242 – complex parcel structure and CLC 243 – agriculture with natural land cover) and for generating mixed forest objects (CLC 313)
- The actual generalization is based on a combined approach considering the similarity of the neighbouring objects as well as taking into account the length of the common border.
- Simplifying of geometry:
    - o   reduction of vertices
    - o   delete narrow objects
    - o   smoothing

Furthermore, single objects were manually revised after analysing with automatic test routines.

2.2.2 Table of attributes

Table 1: The <u>Table of attributes of the CLC10</u> contains the following attributes:

Attribute	*Information*
OBJECTID	Unique ID of the data set
Shape	Type of geometry → always polygon
Shape_Length	Perimeter of the polygon
Shape_Area	Surface area of the polygon
clc	CLC class

Table 2: CLC classes: Description of the used CLC classes in Germany

CLC Code	CLC class name (English)	CLC class name (German)
111	Continuous urban fabric	Durchgängig städtische Prägung
112	Discontinuous urban fabric	Nicht durchgängig städtische Prägung
121	Industrial or commercial units	Industrie und Gewerbeflächen, öffentliche Einrichtungen
122	Road and rail networks and associated land	Straßen-, Eisenbahnnetze und funktionell zugeordnete Flächen
123	Port area	Hafengebiete
124	Airports	Flughäfen
131	Mineral extraction sites	Abbauflächen
132	Dump sites	Deponien und Abraumhalden
133	Construction sites	Baustellen
141	Green urban area	Städtische Grünfläche
142	Sport and leisure facilities	Sport- und Freizeitanlagen
211	Non-irrigated arable land	Nicht bewässertes Ackerland
221	Vineyards	Weinbauflächen
222	Fruit tree and berry plantations	Obst- und Beerenobstbestände
231	Pasture, meadows and other permanent grasslands under agricultural use	Wiesen und Weiden
242	Complex cultivation patterns	Komplexe Parzellenstruktur
243	Land principally occupied by agriculture, with significant areas of natural vegetation	Landwirtschaftlich genutztes Land mit Flächen natürlicher Bodenbedeckung von signifikanter Größe
311	Broad-leaved forest	Laubwälder
312	Coniferous forest	Nadelwälder
313	Mixed forest	Mischwälder
321	Natural grassland	Natürliches Grünland
322	Moors and heathland	Heiden und Moorheiden
324	Transitional woodland/shrub	Wald-Strauch-Übergangsstadien
331	Beaches, dunes and sand plains	Strände, Dünen und Sandflächen
332	Bare rock	Felsen ohne Vegetation
333	Sparsely vegetated areas	Flächen mit spärlicher Vegetation
334	Burnt areas	Brandflächen
335	Glaciers and perpetual snow	Gletscher und Dauerschneegebiete
411	Inland marshes	Sümpfe

412	Peatbogs	Torfmoore
421	Coastal salt marshes	Salzwiesen
423	Intertidal flats	In der Gezeitenzone liegende Flächen
511	Water courses	Gewässerläufe
512	Water bodies	Wasserflächen
521	Coastal lagoons	Lagunen
522	Estuaries	Mündungsgebiete
523	Sea and ocean	Meere und Ozeane

3   Data ordering and support

The data stock can be ordered free of charge in the specifications with the most frequent demand and as web service under

> *www.geodatenzentrum.de → Open Data*

Other spatial references of the data stock (chargeable) can be ordered and will be delivered on data carrier or by FTP.

You may send your orders to the following address:

Bundesamt für Kartographie und Geodäsie
Unit GI5 - Dienstleistungszentrum (Service Center)
Karl-Rothe-Straße 10-14
D-04105 Leipzig

Phone: +49(0)341 5634 333
Fax: +49(0)341 5634 415
E-mail: dienstleistungszentrum@bkg.bund.de

For further information and services, please refer to www.geodatenzentrum.de.

4 Colour legend for CORINE Land Cover

(Source: http://www.corine.dfd.dlr.de/media/image/page/legende_weiss_de.gif)

BEBAUTE FLÄCHEN
STÄDTISCH GEPRÄGTE FLÄCHEN
111 Durchgängig städtische Prägung
112 Nicht durchgängig städtische Prägung
INDUSTRIE-, GEWERBE- UND VERKEHRSFLÄCHEN
121 Industrie- und Gewerbeflächen
122 Straßen, Eisenbahn
123 Hafengebiete
124 Flughäfen
ABBAUFLÄCHEN, DEPONIEN und BAUSTELLEN
131 Abbauflächen
132 Deponien und Abraumhalden
133 Baustellen
GRÜNFLÄCHEN
141 Städtische Grünflächen
142 Sport- und Freizeitanlagen
LANDWIRTSCHAFTLICHE FLÄCHEN
ACKERFLÄCHEN
211 Nicht bewässertes Ackerland
DAUERKULTUREN
221 Weinbauflächen
222 Obst- und Beerenobstbestände
GRÜNLAND
231 Wiesen und Weiden
HETEROGENE LANDWIRTSCHAFTLICHE FLÄCHEN
242 Komplexe Parzellenstrukturen
243 Landwirtschaft und natürliche Bodenbedeckung

WÄLDER UND NATURNAHE FLÄCHEN
WÄLDER
311 Laubwälder
312 Nadelwälder
313 Mischwälder
STRAUCH- UND KRAUTVEGETATION
321 Natürliches Grünland
322 Heiden und Moorheiden
324 Wald-Strauch-Übergangsstadien
OFFENE FLÄCHEN OHNE / MIT GERINGER VEGETATION
331 Strände, Dünen und Sandflächen
332 Felsflächen ohne Vegetation
333 Flächen mit spärlicher Vegetation
334 Brandflächen
335 Gletscher und Dauerschneegebiete
FEUCHTFLÄCHEN
FEUCHTFLÄCHEN IM LANDESINNERN
411 Sümpfe
412 Torfmoore
FEUCHTFLÄCHEN AN DER KÜSTE
421 Salzwiesen
423 In der Gezeitenzone liegende Flächen
WASSERFLÄCHEN
WASSERFLÄCHEN IM LANDESINNERN
511 Gewässerläufe
512 Wasserflächen
MEERESGEWÄSSER
521 Lagunen
522 Mündungsgebiete
523 Meere und Ozeane
Flächen außerhalb des Bearbeitungsgebietes