EEA geospatial data catalogue

CLCplus Backbone 2018 (raster 10 m), Europe, 3-yearly, Feb. 2023

This metadata refer to the 'Corine Land Cover plus Backbone' (CLCplus Backbone) which is a spatially detailed, large scale, Earth Observation-based land cover inventory. The CLCplus Backbone Raster Product is a 10m pixel-based land cover map based on Sentinel satellite time series from July 2017 to June 2019. For each pixel it shows the dominant land cover among the 11 basic land cover classes.

The product has a three years update cycle and is available for the 2018 reference year.

Simple

Date (Creation)	2022-03-07
Date (Publication)	2023-01-23
Edition	01.1
Citation identifier	copernicus_r_3035_10_m_chaplus-backbone2017-2019_p_2018_v01_r1
Code	10.2909/cd534ebf-f553-42f0-9ac1-62c1dc36d32c
Point of contact	**Organisation name** / **Individual name** / **Electronic mail address** / **Website** / **Role** European Commission / / / https://commission.europa.eu / Owner Copernicus Land Monitoring Service / / copernicus@eea.europa.eu / https://land.copernicus.eu / Custodian European Environment Agency / / sdi@eea.europa.eu / http://www.eea.europa.eu / Publisher Copernicus Land Monitoring Service helpdesk / / copernicus@eea.europa.eu / https://land.copernicus.eu/en/contact-service-helpdesk / Point of contact
Maintenance and update frequency	As needed
GEMET - INSPIRE themes, version 1.0	• Land cover
Keywords	
Continents, countries, sea regions of the world.	• United Kingdom • EEA38 (from 2020)
Keywords	
GEMET	• land cover • land
Spatial scope	• European
EEA topics	• Land use
Access constraints	Other restrictions
Other constraints	no limitations to public access

Use constraints	Other restrictions
Other constraints	The Copernicus component is governed by Regulation (EU) No 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU. Within the Copernicus component, a portfolio of land monitoring activities has been delegated by the European Union to the European Environment Agency (EEA) and the DG Joint Research Centre of the European Commission. The Copernicus land monitoring products and services are made available on a principle of full, open and free access, as established by the Commission Delegated Regulation (EU) No 1159/2013 of 12 July 2013. Free, full and open access to the products and services of the Copernicus Land Monitoring Service is made on the conditions that: 1. When distributing or communicating Copernicus Land Monitoring Service products and services (data, software scripts, web services, user and methodological documentation and similar) to the public, users shall inform the public of the source of these products and services. 2. Where the Copernicus Land Monitoring Service products and services have been adapted or modified by the user, the user shall clearly state this. 3. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the European Union.
Spatial representation type	Grid
Distance	10 m
Language of dataset	English
Character set	UTF8
Topic category	• Environment • Imagery base maps earth cover

72.63	N	24.28	S	72.91	E	-56.51	W

Begin date	2017-07-01
End date	2019-06-30
Additional Information	Thematic pixel values: 1: Sealed 2: Woody – needle leaved trees 3: Woody – Broadleaved deciduous trees 4: Woody – Broadleaved evergreen trees 5: Low-growing woody plants (bushes, shrubs) 6: Permanent herbaceous 7: Periodically herbaceous 8: Lichens and mosses 9: Non- and sparsely-vegetated 10: Water 11: Snow and ice 254: outside area 255: No data
Coordinate reference system identifier	EPSG:3035
Distribution format	• GeoTIFF ( )

OnLine resource

Protocol	Linkage	Name
WWW:LINK	https://land.copernicus.eu/en/products/clc-backbone/clc-backbone-2018	CLCplus Backbone — Copernicus Land Monitoring Service
WWW:LINK-1.0-http--link	https://land.copernicus.eu/en/products/clc-backbone/clc-backbone-2018#download	Download (requires authentication)
OGC:WMS	https://copernicus.discomap.eea.europa.eu/arcgis/services/CLC_plus/CLMS_CLCplus_RASTER_2018_010m_eu/ImageServer/WMSServer?service=WMS&request=GetCapabilities&version=1.3.0	0
ESRI:REST	https://copernicus.discomap.eea.europa.eu/arcgis/rest/services/CLC_plus/CLMS_CLCplus_RASTER_2018_010m_eu/ImageServer	
WWW:LINK-1.0-http--link	https://land.copernicus.eu/en/technical-library/product-user-manual-for-clc-backbone-raster-only/@@download/file	Product user manual – CLCplus Backbone 2018

	WWW:LINK-1.0-http--link	https://land.copernicus.eu/en/technical-library/clc-backbone-product-user-manual/@@download/file	Product user manual – CLCplus Backbone 2018 (for raster and vector data)

OnLine resource	Protocol	Linkage	Name
	DOI	https://doi.org/10.2909/cd534ebf-f553-42f0-9ac1-62c1dc36d32c	

Hierarchy level	Dataset

Conformance result

Title	Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services
Date (Publication)	2010-12-08
Explanation	See the referenced specification

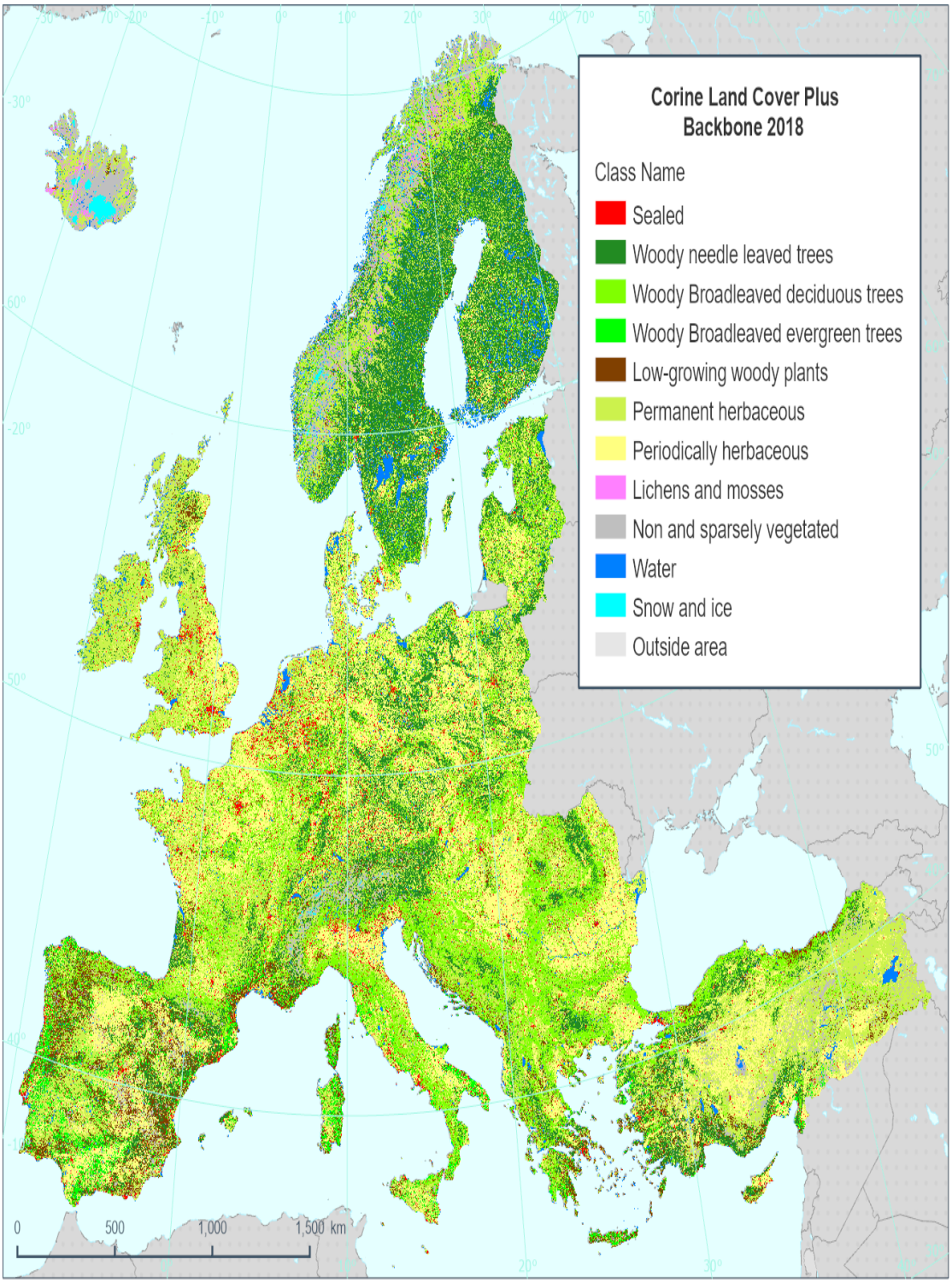
Statement	The CLCplus Backbone Raster Product is primarily based on a supervised classification of satellite image time-series from Sentinel-2 L2A including all scenes with a cloud cover below 80% and acquired from July 2017 and June 2019. The time series is initially resampled in along the time axis to obtain an equidistant time-series at 10-day intervals. Clouds and cloud shadows are masked out before based on masks produced with FMask 4.1. Training and test data were compiled for the reference year 2018 from various sources, such as from adjusted and filtered LUCAS 2018 survey point data; stratified automated LC class annotations based on existing land use/land cover maps, as well as from additional visual sample point photointerpretation relying on VHR imagery, NDVI time series and auxiliary datasets. A temporal Convolutional Neural Network with four hierarchical layers was calibrated on the collected training data and input time-series / features. Given the heterogeneity of the addressed European landscapes, all classifier training, testing and, finally, LC classification, is performed along substrata based on biogeographical regions and existing LC layers. Dedicated post-processing steps include bilateral filtering to reduce labelling noise, as well as adjustments of the class probabilities and threshold based on auxiliary data such as street networks, national and regional land cover and land use maps or existing Pan-European land cover maps. Quality assurance follows the ISO 9001:2015 standards for Quality Management and comprises of dedicated procedures of quality checks (QA breakpoints) during implementation of the production chain, in order to keep persistent control over the various stages of production, assure fitness-for-purpose of the end-products and that all quality requirements are fulfilled. Priority has been given to the target thematic accuracy to be achieved by each product, as well as to the issues of product consistency (spatial, thematic, temporal) and homogeneity. Quality Assessment: The quality assessment has been performed according to INSPIRE Data Specifications. The data quality elements considered are: (i) Completeness, (ii) Logical Consistency, (iii) positional accuracy, (iv) Thematic Accuracy, (v) Temporal quality and (vi) Usability. Geometric accuracy (positioning scale): Equals Sentinel-2 positional accuracy in 2018 (~11m at 95.5% confidence). Thematic target accuracy: An independent internal accuracy assessment based on the interpretation of more than 42,000 samples (plausibility analysis) assessed the overall accuracy for the EU27 area at 92.8% (+-0.3%) and for the full EEA38+UK coverage at 91.9% (+/-0.3%). The targeted producer's and user's accuracies are above the target of at least 85% for all classes except for Low-growing woody plants, Lichens and Mosses, and Non-and sparsely vegetated which are subject to regionally lower accuracies. Further details on the internal validation results are presented in the Product User Manual.

Metadata

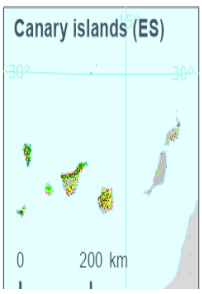
File identifier	cd534ebf-f553-42f0-9ac1-62c1dc36d32c XML
Metadata language	English
Character set	UTF8

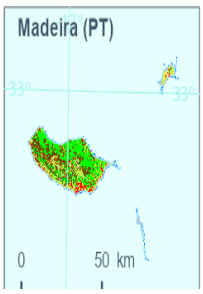
Hierarchy level	Dataset
Date stamp	2025-01-13T11:02:30.316914Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0
Metadata author	**Organisation name**: European Environment Agency **Individual name**: **Electronic mail address**: sdi@eea.europa.eu **Website**: **Role**: Point of contact

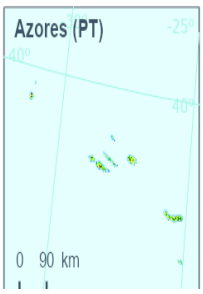
Overviews

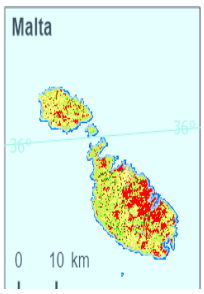


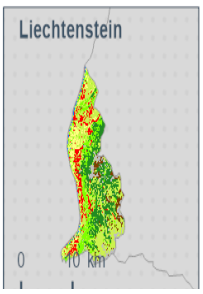
Reference data: © EuroGeographics, © FAO (UN), © TurkStat Source: European Commission – Eurostat/GISCO











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