EEA geospatial data catalogue

Dominant Leaf Type Change 2015-2018 (raster 20 m), Europe, 3-yearly, Dec. 2020

This metadata refers to the Copernicus High Resolution Layer Forest product Dominant Leaf Type Change (DLTC) 2015-2018. The DLTC raster product provides information on the change between the reference years 2015 and 2018 and consists of 7 thematic classes (unchanged areas with no tree cover / new broadleaved cover / new coniferous cover / loss of broadleaved cover / loss of coniferous cover / unchanged areas with tree cover / potential change among dominant leaf types) at 20m spatial resolution and covers the full of EEA38 area and the United Kingdom. The production of the High Resolution Forest layers was coordinated by the European Environment Agency (EEA) in the frame of the EU Copernicus programme.

The High Resolution Forest product consists of three types of (status) products and additional change products. The status products are available for the 2012, 2015 and 2018 reference years: 1. Tree cover density providing level of tree cover density in a range from 0-100%; 2. Dominant leaf type providing information on the dominant leaf type: broadleaved or coniferous; 3. A Forest type product. The forest type product allows to get as close as possible to the FAO forest definition. In its original (20m) resolution it consists of two products: 1) a dominant leaf type product that has a MMU of 0.5 ha, as well as a 10% tree cover density threshold applied, and 2) a support layer that maps, based on the dominant leaf type product, trees under agricultural use and in urban context (derived from CLC and high resolution imperviousness 2009 data). For the final 100m product trees under agricultural use and urban context from the support layer are removed.

Simple

Date (Creation)	2020-12-10
Date (Publication)	2020-12-10
Edition	01.00
Citation identifier	copernicus_r_3035_20_m_dltc-2015-2018_p_2014-2018_v01_r00
Code	10.2909/11e54513-eaee-407b-8f0a-4f321cbf9974
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	Continual
GEMET - INSPIRE themes, version 1.0	• Land cover
Keywords	
Continents, countries, sea regions of the world.	• EEA38 (from 2020) • United Kingdom
Keywords	
GEMET	• land use • landscape alteration • land cover • forest management
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	20 m
Language of dataset	English
Character set	UTF8
Topic category	• Environment • Imagery base maps earth cover
Begin date	2014-01-01
End date	2018-10-31

72.66	N	24.28	S	72.91	E	-56.51	W

Coordinate reference system identifier	EPSG:3035
Distribution format	• GeoTIFF (1.0)

OnLine resource

Protocol	Linkage	Name
ESRI:REST	https://image.discomap.eea.europa.eu/arcgis/rest/services/GioLandPublic/HRL_DominantLeafTypeChange_15_18/ImageServer	
OGC:WMS	https://image.discomap.eea.europa.eu/arcgis/services/GioLandPublic/HRL_DominantLeafTypeChange_15_18/ImageServer/WMSServer?request=GetCapabilities&service=WMS	
WWW:LINK-1.0-http--link	https://land.copernicus.eu/en/products/high-resolution-layer-dominant-leaf-type/dominant-leaf-type-change-2015-2018#Download	Download (requires authentication)

OnLine resource

Protocol	Linkage	Name
DOI	https://doi.org/10.2909/11e54513-eaee-407b-8f0a-4f321cbf9974	

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 Dominant Leaf Type Change (DLTC) 2015-2018 is a change product based on the 20m Tree Cover Change Mask (TCCM) 2015-2018 considering changes of the leaf type by taking the Dominant Leaf Type (DLT) information of the two reference years 2015 and 2018 into account. The layer has a 1 pixel boundary filter applied in order to mitigate geometric imprecisions between the input layers 2015 and 2018, caused by the different satellite input data characteristics. Change classes are provided with a Minimum Mapping Unit (MMU) of 1 ha. The product covers the whole EEA39 area and is provided in European projection. National products might show a broken MMU due to reprojection.

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): Less than one pixel (20m) according to ortho-rectified satellite image base delivered by ESA.

Thematic target accuracy: 90% producer and user accuracy for change classes.

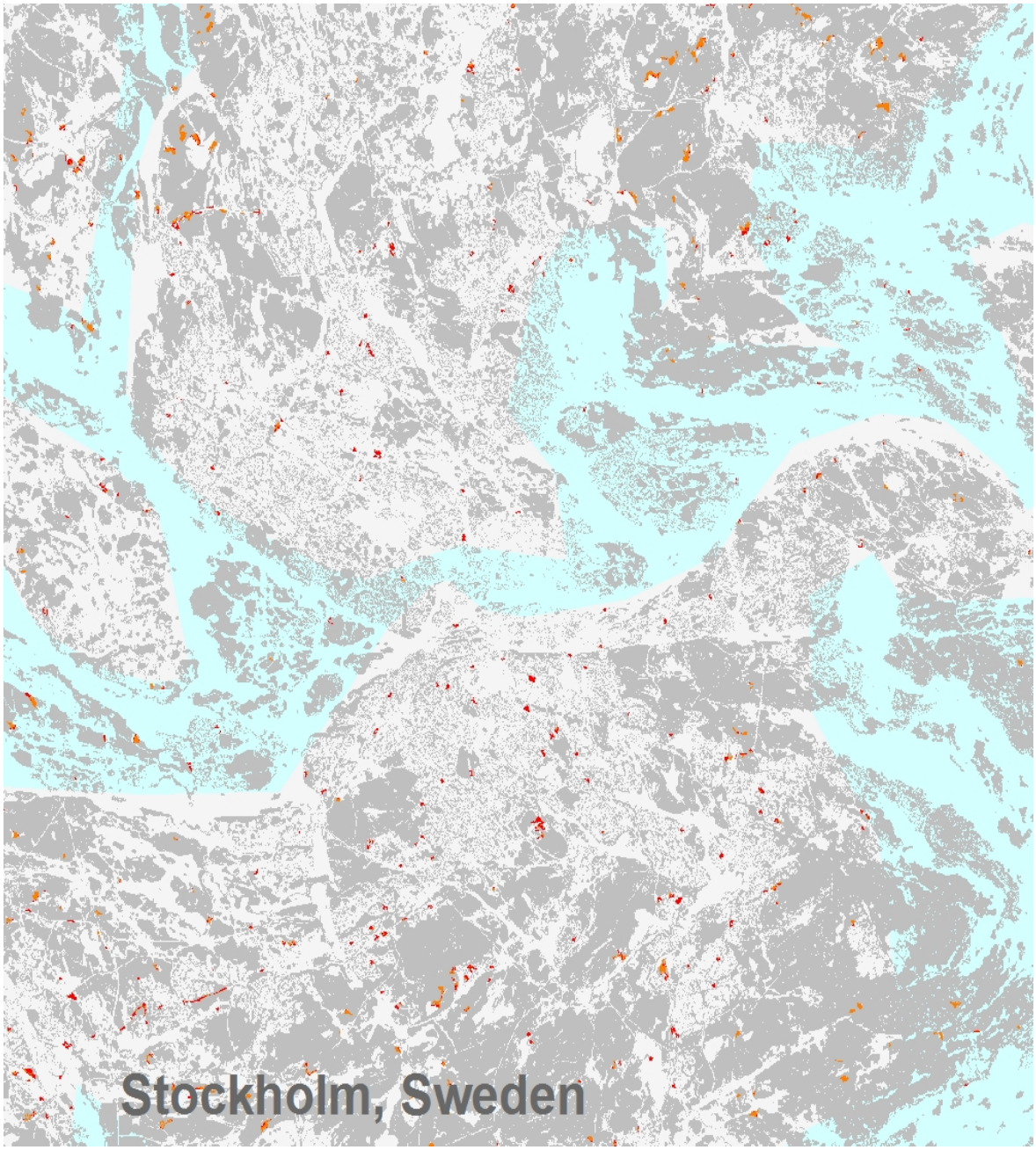
Final validation results DLTC 1518 at pan-European level: 98.16% overall accuracy with a 95% confidence level applied (no tree cover: 98.47% producer accuracy and 98.67% user accuracy; new broadleaved cover: 71.50% producer accuracy and 92.24% user accuracy; new coniferous cover: 96.78% producer accuracy and 98.77% user accuracy; loss of broadleaved cover: 88.62% producer accuracy and 70.64% user accuracy; loss of coniferous cover: 72.67% producer accuracy and 91.86% user accuracy; unchanged

	areas with tree cover: 98.02% producer accuracy and 97.51% user accuracy). The class potential change among dominant leaf types has not been assessed. Thematic accuracy has been assessed using a stratified random sampling approach with 11,695 points (area weighted), visually interpreted using VHR_IMAGE_2018, VHR_IMAGE_2015 and Sentinel-2 time series data, complemented by additional data sources like virtual globes (e.g. Google Earth Pro).
Source	• Tree Cover Change Mask 2015-2018 (raster 20 m), Europe, 3-yearly, Dec. 2020 • Dominant Leaf Type 2015 (raster 20 m), Europe, 3-yearly, Apr. 2018 • Dominant Leaf Type 2018 (raster 10 m), Europe, 3-yearly, Sep. 2020

Metadata

File identifier	11e54513-eaee-407b-8f0a-4f321cbf9974 XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2024-02-06T16:44:28.565Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0
Metadata author	**Organisation name** / **Individual name** / **Electronic mail address** / **Website** / **Role** European Environment Agency / / sdi@eea.europa.eu / / Point of contact

Overviews



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