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.

You can find more information about the product here: https://land.copernicus.eu/en/products/high-resolution-layer-dominant-leaf-type/dominant-leaf-type-change-2015-2018 .

## Simple

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|---|---|
| **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 Environment Agency | | copernicus@eea.europa.eu | https://land.copernicus.eu | Distributor |
| European Environment Agency | | copernicus@eea.europa.eu | https://land.copernicus.eu | Custodian |
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## Point of contact

No information provided.

| | |
|---|---|
| **Maintenance and update frequency** | Continual |
| **GEMET - INSPIRE themes, version 1.0** | • Land cover |
| **Keywords** | |
| **Continents, countries, sea regions of the world.** | • EEA38 (from 2020)<br>• United Kingdom |
| **Keywords** | |
| **GEMET** | • land use<br>• landscape alteration |

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| | • land cover<br>• 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** | Access to data is based on a principle of full, open and free access as established by the Copernicus data and information policy Regulation (EU) No 1159/2013 of 12 July 2013. This regulation establishes registration and licensing conditions for GMES/Copernicus users.<br><br>Free, full and open access to this data set is made on the conditions that:<br><br>1. When distributing or communicating Copernicus dedicated data and Copernicus service information to the public, users shall inform the public of the source of that data and information.<br><br>2. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the Union.<br><br>3. Where that data or information has been adapted or modified, the user shall clearly state this.<br><br>4. The data remain the sole property of the European Union. Any information and data produced in the framework of the action shall be the sole property of the European Union. Any communication and publication by the beneficiary shall acknowledge that the data were produced “with funding by the European Union”. |
| **Spatial representation type** | Grid |
| **Distance** | 20 20 m |
| **Language of dataset** | English |
| **Character set** | UTF8 |
| **Topic category** | • Environment<br>• 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 |
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| **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 | |

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| **Hierarchy level** | Dataset |

## Conformance result

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| **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.

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| | 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** | • |

## Metadata

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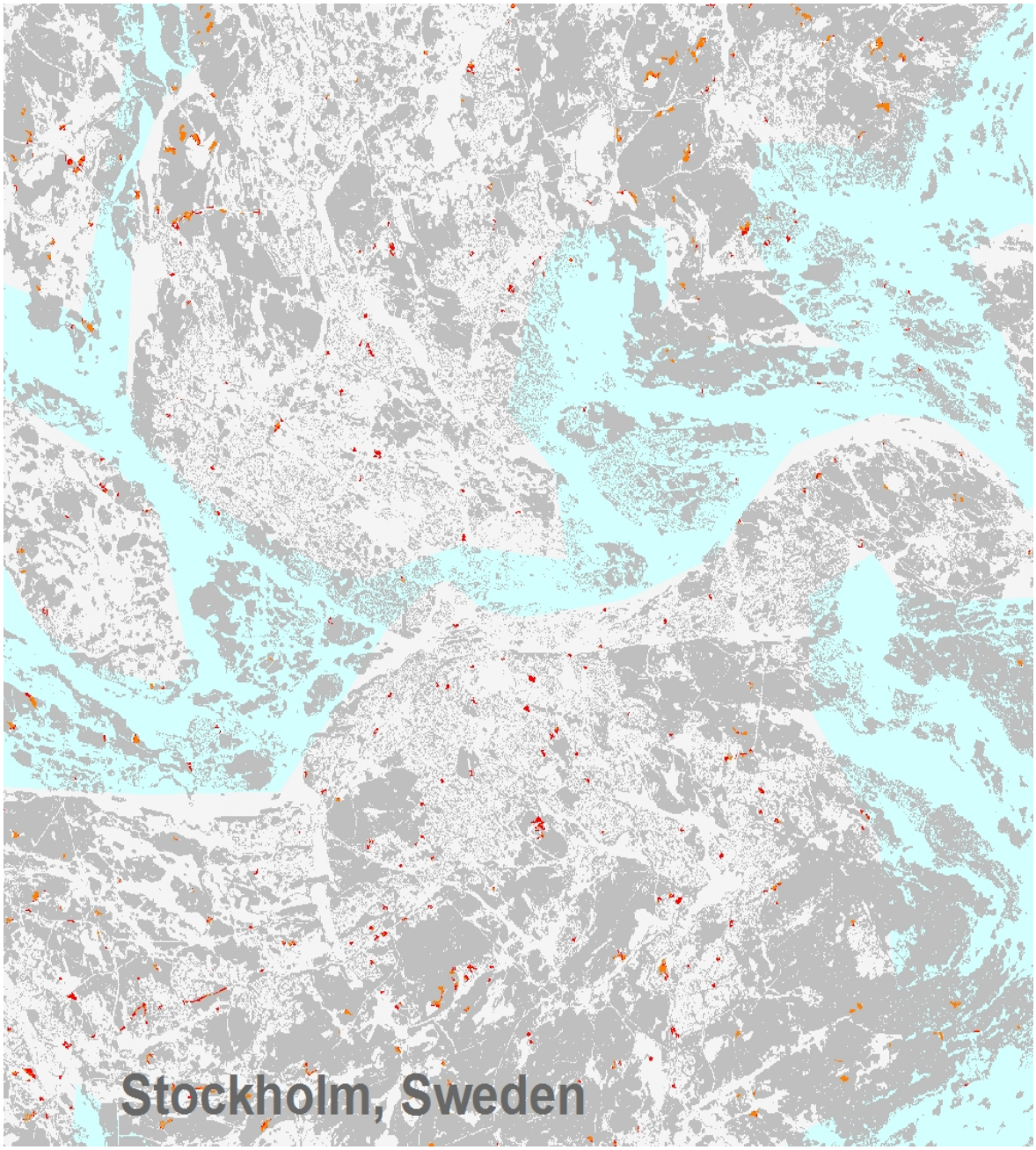
|---|---|
| **File identifier** | 11e54513-eaee-407b-8f0a-4f321cbf9974 XML |
| **Metadata language** | English |
| **Character set** | UTF8 |
| **Hierarchy level** | Dataset |
| **Date stamp** | 2024-02-06T16:44:28.565Z |
| **Metadata standard name** | ISO 19115/19139 |
| **Metadata standard version**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

## Overviews

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