

## Grassland Change 2015-2018 (raster 20 m), Europe, 3-yearly, Oct. 2020

The High Resolution Layer (HRL) Grassland Change 2015-2018 raster product at 20m resolution provides information on changes in grassland vegetation cover between the reference years 2015 and 2018. The thematic classes indicate all non-grassland areas, grassland gain and grassland loss, unchanged grassland in both years and unverified grassland gain and loss areas for the pan-European area of EEA38 and the United Kingdom. The production of the High Resolution grassland layers was coordinated by the European Environment Agency (EEA) in the frame of the EU Copernicus programme.

This dataset is provided as 20 meter rasters in 100 x 100 km tiles grouped according to the EEA38 countries and the United Kingdom (fully conformant with the EEA reference grid).

The HRL Grassland layer is the main High Resolution grassland product. This grassy and non-woody vegetation baseline product includes all kinds of grasslands: managed grassland, semi-natural grassland and natural grassy vegetation. It is a binary status layer for the 2015 reference year mapping grassland and all non-grassland areas in 20m and (aggregated) 100m pixel size and, for the 2018 reference year, in 10m and (aggregated) 100m pixel size.

You can read more about the product here: <https://land.copernicus.eu/en/products/high-resolution-layer-grassland/grassland-change-2015-2018> .

### Simple

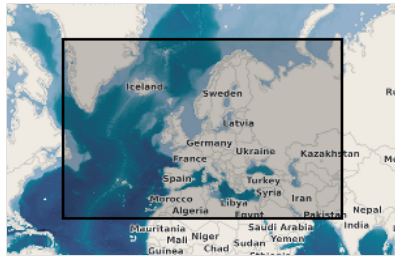
<b>Date (Creation)</b>	2020-10-20			
<b>Date (Publication)</b>	2020-10-20			
<b>Edition</b>	01.00			
<b>Citation identifier</b>	copernicus_r_3035_20_m_grac-2015-2018_p_2010-2018_v01_r00			
<b>Code</b>	<a href="https://land.copernicus.eu/10.2909/a0925bc0-d3d8-49af-ba9d-c4f1cf2b654d">10.2909/a0925bc0-d3d8-49af-ba9d-c4f1cf2b654d</a>			
<b>Point of contact</b>	<b>Organisation name</b>	<b>Individual name</b>	<b>Electronic mail address</b>	<b>Website</b> <b>Role</b>
	European Environment Agency		copernicus@eea.europa.eu	<a href="https://land.copernicus.eu">https://land.copernicus.eu</a> Distributor
	European Environment Agency		copernicus@eea.europa.eu	<a href="https://land.copernicus.eu">https://land.copernicus.eu</a> Custodian
	European Environment Agency		copernicus@eea.europa.eu	<a href="https://land.copernicus.eu">https://land.copernicus.eu</a> Point of contact

### Point of contact

No information provided.

<b>Maintenance and update frequency</b>	Continual
<b>GEMET - INSPIRE themes, version 1.0</b>	<ul style="list-style-type: none"> <li>Land cover</li> </ul>
<b>Keywords</b>	
<b>Continents, countries, sea regions of the world.</b>	<ul style="list-style-type: none"> <li>EEA38 (from 2020)</li> <li>United Kingdom</li> </ul>
<b>Keywords</b>	
<b>GEMET</b>	<ul style="list-style-type: none"> <li>forest management</li> <li>land cover</li> <li>landscape alteration</li> <li>land use</li> </ul>

<b>Spatial scope</b>	<ul style="list-style-type: none"> <li>• <a href="#">European</a></li> </ul>
<b>EEA topics</b>	<ul style="list-style-type: none"> <li>• Land use</li> </ul>
<b>Access constraints</b>	Other restrictions
<b>Other constraints</b>	<a href="#">no limitations to public access</a>
<b>Use constraints</b>	Other restrictions
<b>Other constraints</b>	<p>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.</p> <p>Free, full and open access to this data set is made on the conditions that:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the Union.</li> <li>3. Where that data or information has been adapted or modified, the user shall clearly state this.</li> <li>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".</li> </ol>
<b>Spatial representation type</b>	Grid
<b>Distance</b>	20 20 m
<b>Language of dataset</b>	English
<b>Character set</b>	UTF8
<b>Topic category</b>	<ul style="list-style-type: none"> <li>• Environment</li> <li>• Imagery base maps earth cover</li> </ul>
<b>Begin date</b>	2010-01-01
<b>End date</b>	2018-10-31



<b>Coordinate reference system identifier</b>	<a href="#">EPSG:3035</a>		
<b>Distribution format</b>	<ul style="list-style-type: none"> <li>GeoTIFF ( 1.0 )</li> </ul>		
<b>OnLine resource</b>	<b>Protocol</b> ESRI:REST  OGC:WMS  WWW:LINK-1.0-http-link	<b>Linkage</b> <a href="https://image.discomap.eea.europa.eu/arcgis/rest/services/GioLandPublic/HRL_GrasslandChange_15_18/ImageServer">https://image.discomap.eea.europa.eu/arcgis/rest/services/GioLandPublic/HRL_GrasslandChange_15_18/ImageServer</a> <a href="https://image.discomap.eea.europa.eu/arcgis/services/GioLandPublic/HRL_GrasslandChange_15_18/ImageServer/WMServer?request=GetCapabilities&amp;service=WMS">https://image.discomap.eea.europa.eu/arcgis/services/GioLandPublic/HRL_GrasslandChange_15_18/ImageServer/WMServer?request=GetCapabilities&amp;service=WMS</a> <a href="https://land.copernicus.eu/en/products/high-resolution-layer-grassland/grassland-change-2015-2018#Download">https://land.copernicus.eu/en/products/high-resolution-layer-grassland/grassland-change-2015-2018#Download</a>	<b>Name</b>     Download (requires authentication)
<b>OnLine resource</b>	<b>Protocol</b> DOI	<b>Linkage</b> <a href="https://doi.org/10.2909/a0925bc0-d3d8-49af-ba9d-c4f1cf2b654d">https://doi.org/10.2909/a0925bc0-d3d8-49af-ba9d-c4f1cf2b654d</a>	<b>Name</b>
<b>Hierarchy level</b>	Dataset		

## Conformance result

<b>Date (Publication)</b>	2010-12-08
<b>Explanation</b>	See the referenced specification

<b>Statement</b>	<p>The Grassland Change Layer 2015-2018 at 20m spatial resolution is derived from the primary Pan-European Grassland Status Layers of the reference years 2015 (HRL GRA at 20m resolution) and 2018 (HRL GRA at 10m spatial resolution) and covers the area of EEA38 and the United Kingdom. The GRA Change Layer is the first of its kind indicating changes in grassland vegetation cover in five thematic classes. The production workflow consists of a map-to-map comparison of both years and takes adequate time features of both years as well as ploughing information from PLOUGH 2015 and 2018 back to the year 2010 into account.</p> <p>Due to substantial transformations concerning resolution (20m to 10m), significantly enhanced data availability and therefore a refined technical approach, differences between the reference years of 2015 and 2018 are not always illustrating real changes in grassland vegetation cover but are sometimes technically induced. Areas differing in the years 2015 and 2018 that could not be verified as real change by the workflow are therefore labelled as unverified gain or loss areas.</p> <p>Geometric accuracy (positioning scale): Less than one pixel (10m) according to ortho-rectified satellite image base (Sentinel-2 Level-2A) delivered by ESA.</p> <p>Thematic target accuracy: The thematic accuracy has been assessed on the primary pan-European Change product and refers to classes 1-gain, 2-loss, 10-unchanged grassland in both years and 0-all non-grassland areas. Unverified areas are not part of the validation process. The unweighted overall accuracy is 88,97%. The weighted overall accuracy is 99,30% and considers the relative importance of all classes.</p>
------------------	--

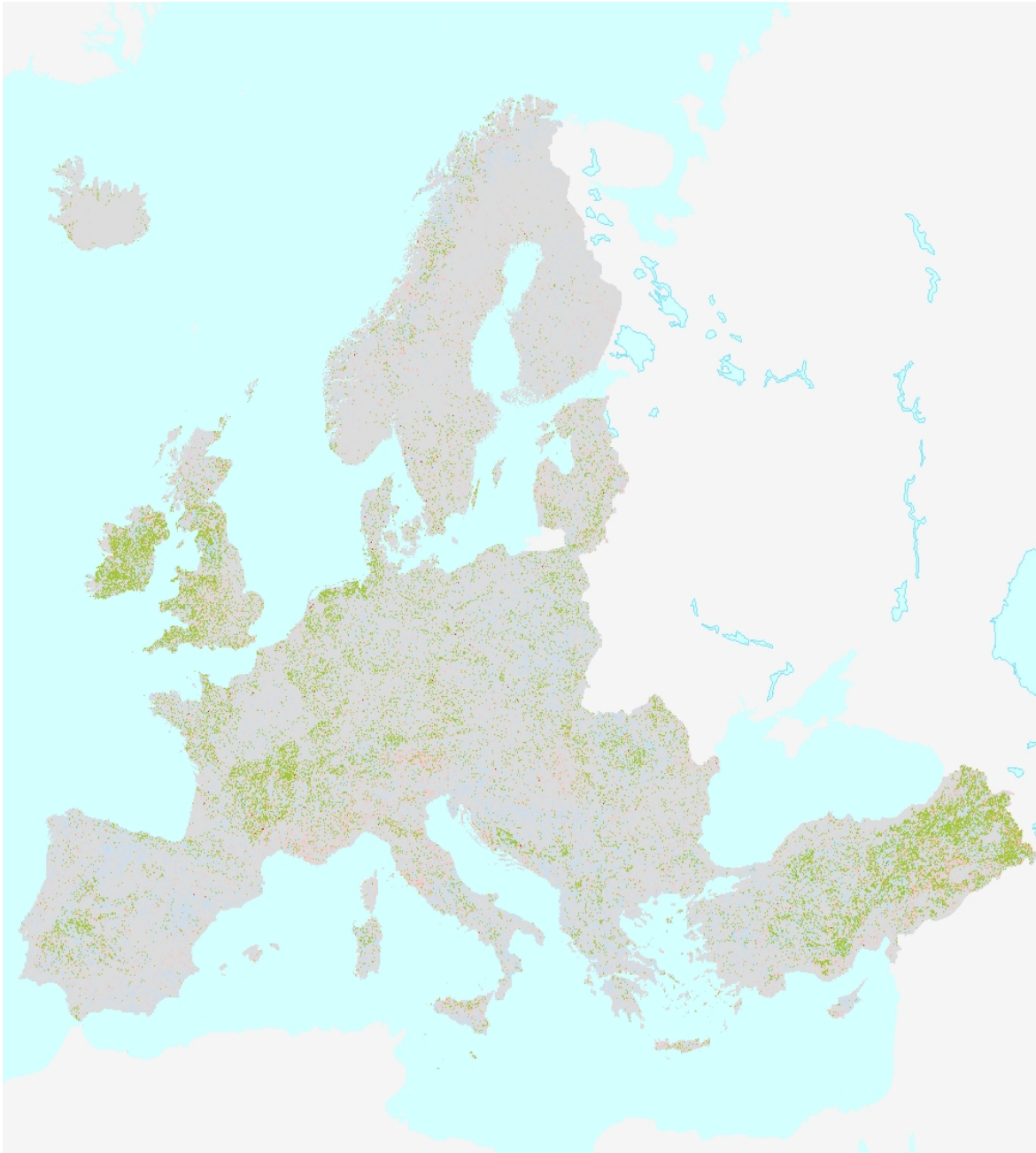
<b>Source</b>	<ul style="list-style-type: none"> <li></li> </ul>
---------------	--

## Metadata

<b>File identifier</b>	a0925bc0-d3d8-49af-ba9d-c4f1cf2b654d <a href="#">XML</a>
------------------------	--

<b>Metadata language</b>	English										
<b>Character set</b>	UTF8										
<b>Hierarchy level</b>	Dataset										
<b>Date stamp</b>	2024-02-06T16:45:24.005Z										
<b>Metadata standard name</b>	ISO 19115/19139										
<b>Metadata standard version</b>	1.0										
<b>Metadata author</b>	<table border="1"> <thead> <tr> <th>Organisation name</th> <th>Individual name</th> <th>Electronic mail address</th> <th>Website Role</th> </tr> </thead> <tbody> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td>Point of contact</td> </tr> </tbody> </table>	Organisation name	Individual name	Electronic mail address	Website Role	European Environment Agency		sdi@eea.europa.eu	Point of contact		
Organisation name	Individual name	Electronic mail address	Website Role								
European Environment Agency		sdi@eea.europa.eu	Point of contact								

## Overviews



Provided by

