

## Medium Resolution Vegetation Phenology and Productivity: End-of-season date (raster 500m), Oct. 2022

The raster file is the time series of the end of the vegetation growing season. The end of the growing season time-series is based on the time series of the Plant Phenology Index (PPI) derived from the MODIS BRDF-Adjusted Reflectance product (MODIS MCD43 NBAR). The PPI index is optimized for efficient monitoring of vegetation phenology and is derived from the source MODIS data using radiative transfer solutions applied to the reflectance in visible-red and near infrared spectral domains. The end of season indicator is based on calculating the end of the vegetation growing season from the annual PPI temporal curve using the TIMESAT software for each year between and including 2000 and 2021.

The End-of-Season Date (EOSD), one of the Vegetation Phenology and Productivity (VPP) parameters, is a product of the pan-European High Resolution Vegetation Phenology and Productivity (HR-VPP) component of the Copernicus Land Monitoring Service (CLMS).

The End-of-Season Date (EOSD) marks the date when the vegetation growing season ends in the time profile of the Plant Phenology Index (PPI). The end-of-season occurs, by definition, when the PPI value reaches 15% of the season amplitude during the green-down period.

The Plant Phenology Index (PPI) is a physically based vegetation index, developed for improving the monitoring of the vegetation growth cycle. The PPI index values, with 5-day satellite revisit cycle, are first used in a function fitting to derive the PPI Seasonal Trajectories. From these Seasonal Trajectories, a suite of 13 Vegetation Phenology and Productivity (VPP) parameters are then computed and provided, for up to two seasons each year. The End-of-Season Date (EOSD) is one of the 13 parameters. The full list is available in the Product User Manual: [https://land.copernicus.eu/user-corner/technical-library/clms\\_mrvpp\\_pum\\_d1-0.pdf](https://land.copernicus.eu/user-corner/technical-library/clms_mrvpp_pum_d1-0.pdf)

The End-of-Season Date (EOSD) time series dataset is made available as raster files with 500x 500m resolution, in ETRS89-LAEA projection corresponding to the MCD43 tiling grid, for those tiles that cover the EEA38 countries and the United Kingdom and for two seasons in each year from 2000 onwards. It is updated in the first quarter of each year.

The full on-line access to open and free data for this resource will be made available by the end of 2022. Until then the data will be made available 'on-demand' by filling in the form at: <https://land.copernicus.eu/contact-form>

### Simple

Date (Creation)	2022-06-08
Date (Publication)	2022-10-10
Edition	01.00
Citation identifier	copernicus_r_3035_500_m_mrvpp-eos_p_2000-now_v01_r00

### Point of contact

No information provided.

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No information provided.

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No information provided.

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No information provided.

Maintenance and update frequency	Annually
<a href="#">GEMET - INSPIRE themes, version 1.0</a>	<ul style="list-style-type: none"> <li><a href="#">Environmental monitoring facilities</a></li> <li><a href="#">Habitats and biotopes</a></li> <li><a href="#">Orthoimagery</a></li> </ul>

<b>Keywords</b>	
<b>Keywords</b>	
<b>GEMET</b>	<ul style="list-style-type: none"> <li>• remote sensing</li> <li>• land</li> <li>• index</li> <li>• vegetation</li> <li>• plant production</li> <li>• productivity</li> <li>• plant ecology</li> </ul>
<b>Spatial scope</b>	<ul style="list-style-type: none"> <li>• <a href="#">European</a></li> </ul>
<b>Temporal resolution</b>	<ul style="list-style-type: none"> <li>• Annually</li> </ul>
<b>Continents, countries, sea regions of the world.</b>	<ul style="list-style-type: none"> <li>• United Kingdom</li> <li>• EEA38 (from 2020)</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>Aggregate DatasetIdentifier</b>	copernicus_r_utm-wgs84_10_m_hrvpp-vi-qflag2_p_2017-ongoing_v01_r01
<b>Association Type</b>	Cross reference
<b>Aggregate DatasetIdentifier</b>	copernicus_r_utm-wgs84_10_m_hrvpp-vi-ndvi_p_2017-ongoing_v01_r01
<b>Association Type</b>	Cross reference
<b>Aggregate DatasetIdentifier</b>	copernicus_r_utm-wgs84_10_m_hrvpp-vi-fapar_p_2017-ongoing_v01_r01
<b>Association Type</b>	Cross reference
<b>Aggregate DatasetIdentifier</b>	copernicus_r_utm-wgs84_10_m_hrvpp-vi-lai_p_2017-ongoing_v01_r01
<b>Association Type</b>	Cross reference
<b>Spatial representation type</b>	Grid
<b>Distance</b>	500 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><li>• Climatology, meteorology, atmosphere</li></ul>

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<b>Begin date</b>	2000-01-01		
<b>CRS 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>	<b>Linkage</b>	<b>Name</b>
	WWW:LINK-1.0-http--link	<a href="https://land.copernicus.eu/user-corner/technical-library/clms_mrvpp_pum_d1-0.pdf">https://land.copernicus.eu/user-corner/technical-library/clms_mrvpp_pum_d1-0.pdf</a>	User manual
<b>Hierarchy level</b>	Dataset		

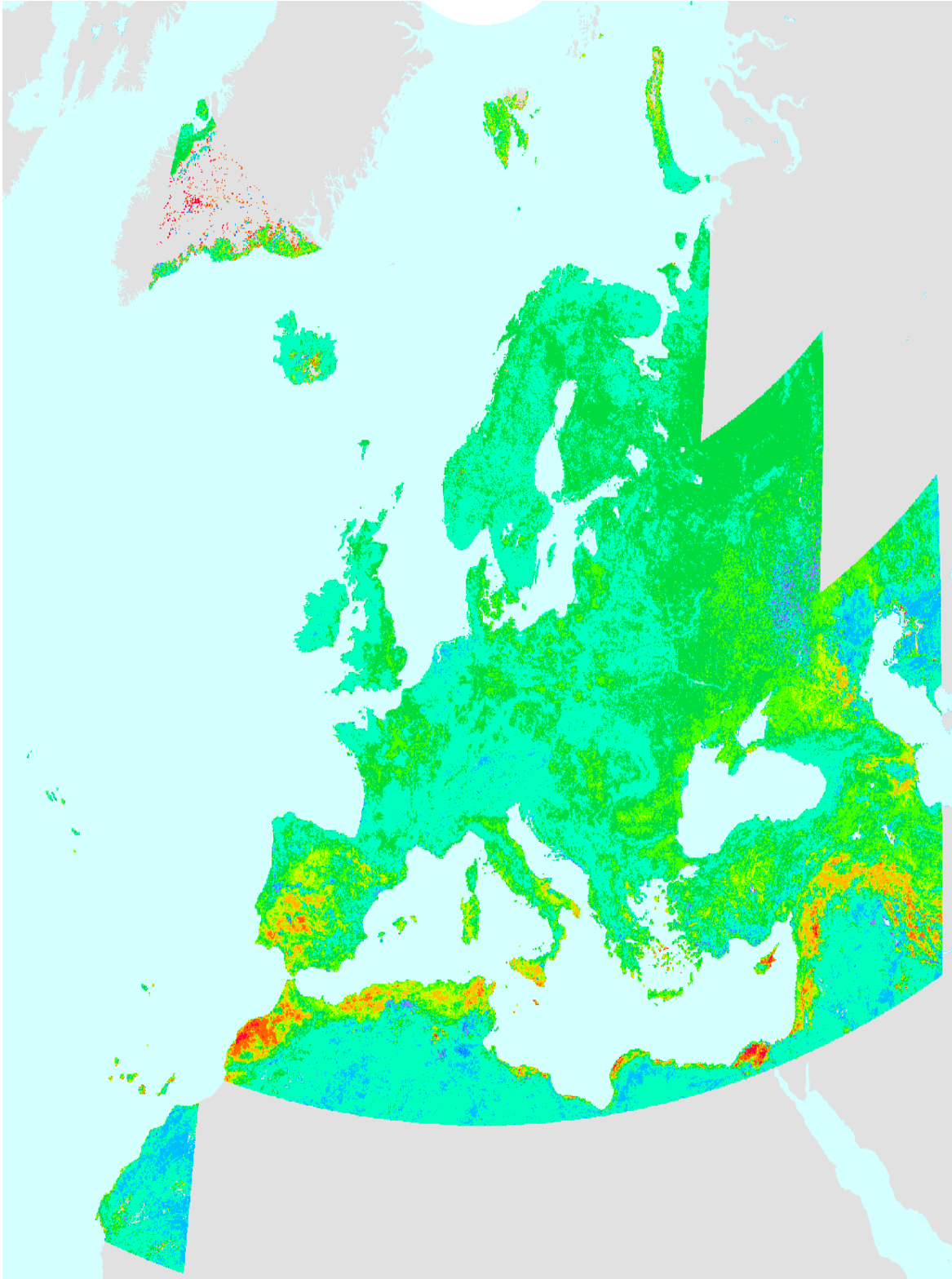
## Conformance result

<b>Date (Publication)</b>	2010-12-08
<b>Explanation</b>	See the referenced specification
<b>Statement</b>	Vegetation Phenology and Productivity parameters (VPP) are based on Plant Phenology Index (PPI) seasonal trajectories and are yearly produced for two seasons using the Timesat software. One of the parameters is the end date of the vegetation growing season (End-of-Season Date - EOSD). The related PPI value and slope (rate of PPI change) for this date are available as well.

## Metadata

<b>File identifier</b>	a3cfb2c4-156a-413c-a73b-15ebbb016557 <a href="#">XML</a>		
<b>Metadata language</b>	English		
<b>Character set</b>	UTF8		
<b>Hierarchy level</b>	Dataset		
<b>Date stamp</b>	2023-02-20T11:07:15.05Z		
<b>Metadata standard name</b>	ISO 19115/19139		
<b>Metadata standard version</b>	1.0		
<b>Metadata author</b>	<b>Organisation name</b>	<b>Individual name</b>	<b>Electronic mail address</b> <b>Role</b> Point

## Overviews



Provided by

