



## Medium Resolution Vegetation Phenology and Productivity: Large integral (raster 500m), Oct. 2022

The raster file is the temporal trend in above ground vegetation biomass productivity. The vegetation productivity dataset 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 productivity indicator is based on calculating the area under the PPI temporal curve above the baseline (large integral - LINT) using the TIMESAT software for each year between and including 2000 and 2021.

The Total Productivity (TPROD), 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 Total Productivity (TPROD), or large integral, is the growing season integral computed as the sum of all daily Plant Phenology Index values between the dates of the season start (SOSD) and end (EOSD).

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 Total Productivity (TPROD) 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 Total Productivity (TPROD) 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 in the second half of 2024. Until then the data will be made available 'on-demand' by filling in the form at: <https://land.copernicus.eu/contact-form>

### Simple

<b>Date (Creation)</b>	2022-06-08				
<b>Date (Publication)</b>	2022-10-10				
<b>Edition</b>	01.00				
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### Point of contact

No information provided.

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

<b>GEMET</b>	<ul style="list-style-type: none"> <li>• index</li> <li>• productivity</li> <li>• vegetation</li> <li>• plant ecology</li> <li>• plant production</li> <li>• land</li> <li>• remote sensing</li> </ul>
<a href="#">Spatial scope</a>	<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> </ul>

- Imagery base maps earth cover
- Climatology, meteorology, atmosphere

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<b>Begin date</b>	2000-01-01		
<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>	<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>Title</b>	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
<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 Total Productivity (TPROD): the growing season integral computed as the sum of all daily PPI values between the dates of the season start (SOSD) and end (EOSD).

## Metadata

<b>File identifier</b>	aae5abaa-a796-4aa6-9b1f-1f87449b1467 <a href="#">XML</a>
<b>Metadata language</b>	English
<b>Character set</b>	UTF8
<b>Hierarchy level</b>	Dataset
<b>Date stamp</b>	2024-04-02T13:52:53.397871Z
<b>Metadata standard name</b>	ISO 19115/19139
<b>Metadata standard version</b>	1.0
<b>Metadata author</b>	Electronic

Organisation name

Individual name

mail  
address

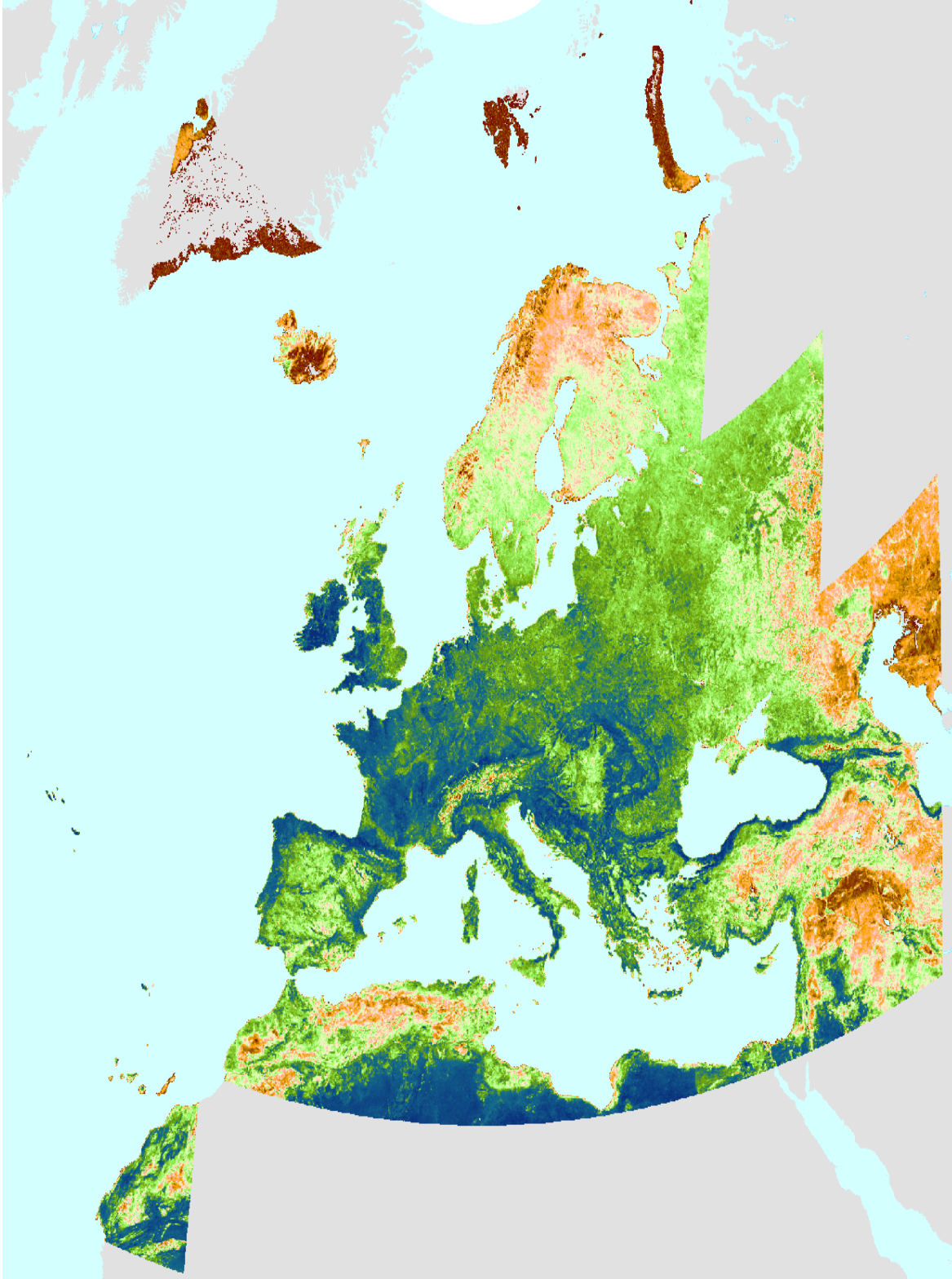
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of  
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## Overviews



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