

Slope of the Green-up Period 2017-present (raster 10 m), Europe, yearly, Sept. 2021

The Slope of the green-up period (Left Slope, LSLOPE), 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 slope of the green-up period (LSLOPE) expresses the rate of change in the values of the Plant Phenology Index (PPI) at the day when the vegetation growing season starts.

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, which is a filtered time series with regular 10-day time step. 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 green-up period slope is one of the 13 parameters. The full list is available in the table 3 of the Product User Manual <https://land.copernicus.eu/en/technical-library/product-user-manual-of-seasonal-trajectories/@@download/file>

A complementary quality indicator (QFLAG) provides a confidence level, that is described in table 4 of the same manual.

The LSLOPE dataset is made available as raster files with 10 x 10m resolution, in UTM/WGS84 projection corresponding to the Sentinel-2 tiling grid, for those tiles that cover the EEA38 countries and the United Kingdom and for two seasons in each year from 2017 onwards. It is updated in the first quarter of each year.

Simple

Date (Publication)	2021-09-02
Date (Creation)	2021-09-02
Edition	01.01
Citation identifier	copernicus_r_utm-wgs84_10_m_hrvpp-vpp-lslope_p_2017-now_v01_r01
Code	10.2909/ecba54a6-bdc3-429e-8474-d8dcd0f20971

Point of contact

No information provided.

Point of contact

No information provided.

Maintenance and update frequency	Annually
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> Environmental monitoring facilities Habitats and biotopes Orthoimagery
Keywords	
Keywords	
GEMET	<ul style="list-style-type: none"> productivity index plant production land plant ecology vegetation remote sensing

Spatial scope	<ul style="list-style-type: none"> • European
Temporal resolution	<ul style="list-style-type: none"> • Annually
Continents, countries, sea regions of the world.	<ul style="list-style-type: none"> • EEA38 (from 2020) • United Kingdom
Access constraints	Other restrictions
Other constraints	no limitations to public access
Use constraints	Other restrictions
Other constraints	<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"> 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. 2. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the Union. 3. Where that data or information has been adapted or modified, the user shall clearly state this. 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".
Aggregate DatasetIdentifier	copernicus_r_utm-wgs84_10_m_hrvpp-vi-qflag2_p_2017-ongoing_v01_r01
Association Type	Cross reference
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Aggregate DatasetIdentifier	copernicus_r_utm-wgs84_10_m_hrvpp-vi-lai_p_2017-ongoing_v01_r01
Association Type	Cross reference
Spatial representation type	Grid
Distance	10 10 m
Language of dataset	English
Character set	UTF8
Topic category	<ul style="list-style-type: none"> • Environment • Imagery base maps earth cover • Climatology, meteorology, atmosphere



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Distribution format	<ul style="list-style-type: none"> GeoTIFF (1.0) 												
OnLine resource	<table border="0"> <thead> <tr> <th>Protocol</th> <th>Linkage</th> </tr> </thead> <tbody> <tr> <td>WWW: LINK-1.0- http--link</td> <td>https://www.wekeo.eu/data?view=viewer&t=1562219742857&z=0&center=13.08408%2C48.33915&zoom=12.34&layers=W3siaWQiOiJjMSIsInJlcGxhY2VtZW50Q29sb3JNYXBjZC16bnVsbCwibGF5ZXJJZC16IkVPOkVFQTPpEQVQ6QC</td> </tr> <tr> <td>WWW: LINK-1.0- http--link</td> <td>https://www.wekeo.eu/data?view=viewer&t=1562219742857&z=0&center=13.08408%2C48.33915&zoom=12.34&layers=W3siaWQiOiJjMSIsInJlcGxhY2VtZW50Q29sb3JNYXBjZC16bnVsbCwibGF5ZXJJZC16IkVPOkVFQTPpEQVQ6QC</td> </tr> <tr> <td>OGC:WMTS</td> <td>https://phenology.vgt.vito.be/wmts?request=GetCapabilities</td> </tr> <tr> <td>OGC:WMTS</td> <td>https://phenology.vgt.vito.be/wmts?request=GetCapabilities</td> </tr> <tr> <td></td> <td>https://land.copernicus.eu/en/technical-library/hr-vpp-data-access-manual/@_@download/file</td> </tr> </tbody> </table>	Protocol	Linkage	WWW: LINK-1.0- http--link	https://www.wekeo.eu/data?view=viewer&t=1562219742857&z=0&center=13.08408%2C48.33915&zoom=12.34&layers=W3siaWQiOiJjMSIsInJlcGxhY2VtZW50Q29sb3JNYXBjZC16bnVsbCwibGF5ZXJJZC16IkVPOkVFQTPpEQVQ6QC	WWW: LINK-1.0- http--link	https://www.wekeo.eu/data?view=viewer&t=1562219742857&z=0&center=13.08408%2C48.33915&zoom=12.34&layers=W3siaWQiOiJjMSIsInJlcGxhY2VtZW50Q29sb3JNYXBjZC16bnVsbCwibGF5ZXJJZC16IkVPOkVFQTPpEQVQ6QC	OGC:WMTS	https://phenology.vgt.vito.be/wmts?request=GetCapabilities	OGC:WMTS	https://phenology.vgt.vito.be/wmts?request=GetCapabilities		https://land.copernicus.eu/en/technical-library/hr-vpp-data-access-manual/@_@download/file
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OnLine resource	Protocol	Linkage	Name
	DOI	https://doi.org/10.2909/ecba54a6-bdc3-429e-8474-d8dcd0f20971	

Hierarchy level	Dataset
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Conformance result

Date (Publication)	2010-12-08
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Explanation	See the referenced specification
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Statement	<p>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 slope of the green-up period (Left Slope - LSLOPE), that expresses the rate of PPI value change at the day when the growing season starts. The date and PPI value for the season start are available as well.</p> <p>The latest validation results are described in the validation report at https://land.copernicus.eu/en/technical-library/validation-report-of-seasonal-trajectories-vpp-parameters/@_@download/file.</p>
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Source	•
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Metadata

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Metadata language	English
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Character set	UTF8
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Hierarchy level	Dataset
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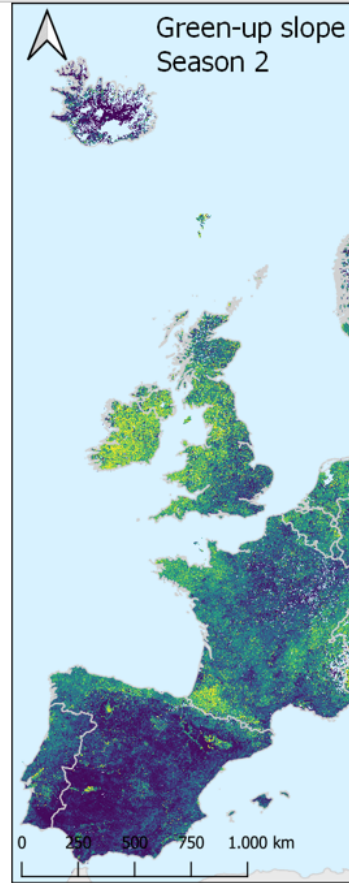
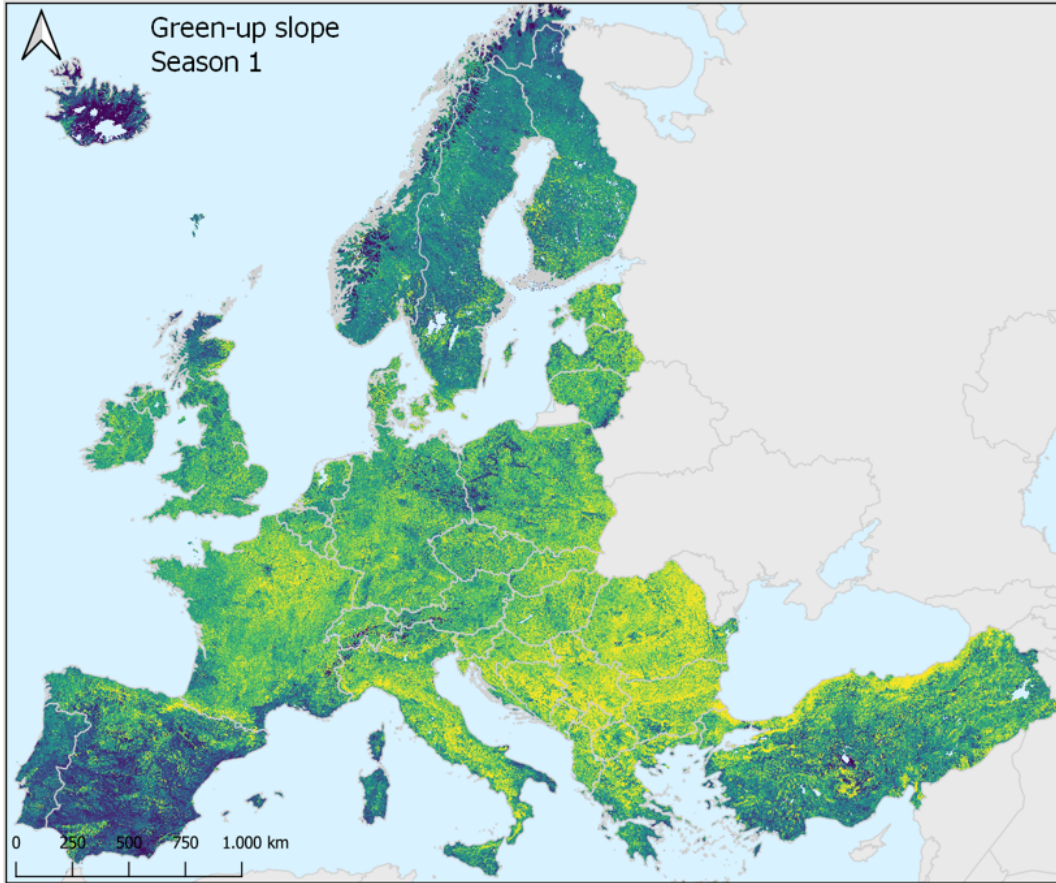
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Metadata standard name	ISO 19115/19139
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Metadata standard version	1.0
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Metadata author	<table border="0"> <tr> <td>Organisation name</td> <td>Individual name</td> <td>Electronic mail address</td> <td>Website Role</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Point</td> </tr> </table>	Organisation name	Individual name	Electronic mail address	Website Role				Point
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			Point						

Overviews



Provided by

