

# Leaf Area Index: version 1, 333m resolution, globe, 10-daily

LAI was defined by CEOS as half the developed area of the convex hull wrapping the green canopy elements per unit horizontal ground. This definition allows accounting for elements which are not flat such as needles or stems. LAI is strongly non linearly related to reflectance. Therefore, its estimation from remote sensing observations will be scale dependant over heterogeneous landscapes. When observing a canopy made of different layers of vegetation, it is therefore mandatory to consider all the green layers. This is particularly important for forest canopies where the understory may represent a very significant contribution to the total canopy LAI. The derived LAI corresponds therefore to the total green LAI, including the contribution of the green elements of the understory. The product at 333m resolution is provided in Near Real Time and consolidated in the next six periods.

## *Proposition de citation*

European Commission Directorate-General Joint Research Centre. Leaf Area Index: version 1, 333m resolution, globe, 10-daily. [http://land.copernicus.vgt.vito.be/geonetwork/srv/api/records/urn:cgl:global:lai300\\_v1\\_333m](http://land.copernicus.vgt.vito.be/geonetwork/srv/api/records/urn:cgl:global:lai300_v1_333m)

## Simple

Date ( Creation )  
2017-01-01

Edition  
Version 1

Edition date  
2017-01-01

Identifier  
urn:cgl:global:lai300\_v1\_333m

Date ( Revision )  
2016-01-01

Other citation details  
<http://land.copernicus.eu/global/documents/lai300/v1/pum>

Purpose  
This product is first designed to fit the requirements of the Global component of Land Service of the Copernicus programme. It can be also useful for all applications related to the environment monitoring.

Credit  
LAI products were generated by the Global Land Service of Copernicus, the Earth Observation programme of the European Commission. The research leading to the current version of the product has received funding from various European Commission Research and Technical Development programs. The product is based on PROBA-V 333m data (copyright BELSPO and distribution by VITO NV).

Status  
Completed

## Principal investigator

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*Organization website*

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*Protocol*

<http://ies.jrc.ec.europa.eu>

*Name*

*EC DG-JRC Institute for Environment and Sustainability*

*Description*

*Organization website*

*Function*

*Information*

*Maintenance and update frequency*

*As needed*

*Update scope*

*Series*

*Name*

*NetCDF*

*Version*

*4.2.1.1*

*Specification*

*Network Common Data Form*

GEMET - INSPIRE themes, version 1.0 ( Theme )

- Orthoimagery

GEMET - Concepts, version 2.1

- geophysical environment

Mots clés ( Theme )

- biogeophysical , leaf area

Mots clés ( Place )

- GLOBE

Mots clés ( Temporal )

- Dekad , 10-daily composite

Copernicus Themes ( Theme )

- Vegetation

Copernicus Variables ( Theme )

- LAI

Use limitation

No limitations

Use constraints

Copyright

Access constraints

Other restrictions

Other constraints

(d) the confidentiality of commercial or industrial information, where such confidentiality is provided for by national or Community law to protect a legitimate economic interest, including the public interest in maintaining statistical confidentiality and tax secrecy.

Association Type

Part of seamless database

Initiative Type

Project

Association Type

Source

Initiative Type

Platform

Association Type

Source

Initiative Type

Sensor

Spatial representation type

Grid

Distance

0.0029761905 [http://standards.iso.org/ittf/PubliclyAvailableStandards/ISO\\_19139\\_Schemas/resources/uom/ML\\_gmxUom.xml#deg](http://standards.iso.org/ittf/PubliclyAvailableStandards/ISO_19139_Schemas/resources/uom/ML_gmxUom.xml#deg)

Metadata language

eng

Character set

UTF8

Topic category

- Imagery base maps earth cover
- Biota
- Farming
- Environment

N

S

E

W

Time period

10-daily compositedekad2014-01-01T00:00:002019-12-31T23:59:59

Reference system identifier

EPSG Geodetic Parameter Dataset / EPSG:4326

Reference system identifier

World Geodetic System / WGS84

Number of dimensions

2

Dimension name

Row

Dimension size  
47040

Resolution  
0.0029761905 deg

Dimension name  
Column

Dimension size  
120960

Resolution  
0.0029761905 deg

Cell geometry  
Area

Transformation parameter availability  
false

Checkpoint Availability  
true

Checkpoint Description  
Upperleft corner tiepoint

Point in Pixel  

- Center

Distribution format  

- NetCDF (4.2.1.1 )

Specification  
Network Common Data Form

## Distributor

### Distributor

[VITO NV](#)  
*Boeretang 200 Mol 2400*

*Hours of service*  
*Office hours, 7 days per week*

*Contact instructions*  
*Preferably by e-mail*

*Website*  
[Data portal](#)  
  
*Project portal*

Fees  
Free by ftp and EUMETCast; cost of medium by DvD or tape

Ordering instructions  
Products can be downloaded online via HTTP (or FTP) or can be received through EUMETCast satellite reception in Europe, Africa and Latin-America. When ordering products from the online archive or subscribing to receive future products, users are informed via e-mail whenever the requested products are ready to be downloaded on the FTP server.

Units of distribution  
Per product

OnLine resource  
[Copernicus Global Land Service](#)  
  
1. Search, download and custom order products from Catalogue and Ordering services

OnLine resource  
[Copernicus Global Land Service](#)  
  
2. Subscribe to receive future products via e-mail

Units of distribution  
Per product

OnLine resource

[Copernicus Global Land Service](#)

3. Register to receive products via EUMETCast

Hierarchy level

Series

## Conformance result

Date ( Publication )

2010-12-01

Explanation

<http://land.copernicus.eu/global/documents/lai300/v1/vr>

Pass

1

## Conformance result

Date ( Publication )

2010-04-26

Explanation

See the referenced specification

Pass

true

Statement

The input data are the daily Top of the Atmosphere reflectances measured by the sensor at 1/3 km. The calibrated reflectances are used to calculate instantaneous estimates of the products using a neural network trained with MODIS and CYCLOPES products, removing outliers as clouds and their shadows and atmospherically corrected (SMAC). In a second stage these instantaneous first guess of products are composited using an asymmetric period. The compositing is performing a temporal smooth and gap fill operation based on the land cover type (Evergreen Broadleaf Forest or not).

### gmd:MD\_Metadata

File identifier

urn:cgl:global:lai300\_v1\_333m [XML](#)

Metadata language

English

Character set

UTF8

Hierarchy level

Series

Date stamp

2020-03-31T18:54:48

Metadata standard name

ISO19115

Metadata standard version

2003/Cor.1:2006

### Point of contact

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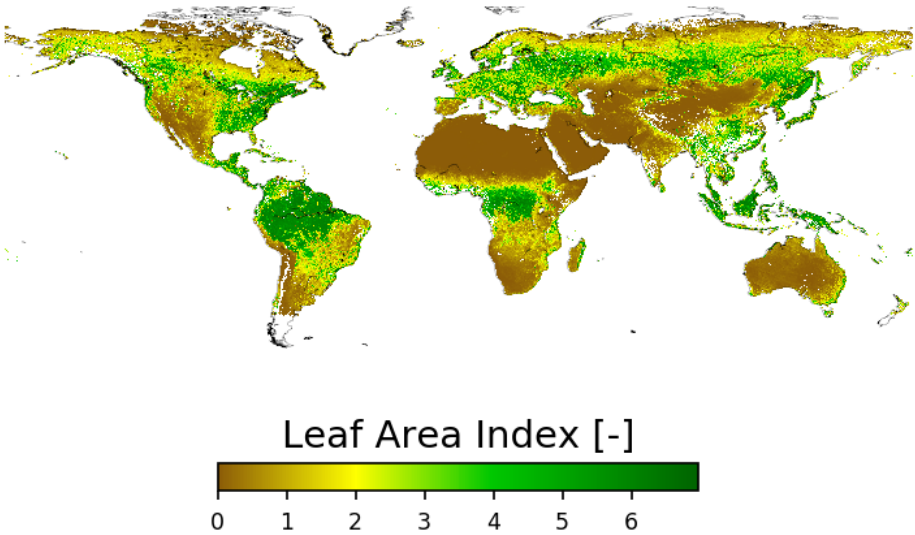
Preferably by e-mail

Website

[Copernicus Global Land service](#)

Copernicus Global Land website

Aperçus



Global Leaf Area Index, June 2017

Fourni par



Partager

Ressources associées

Not available