EEA geospatial data catalogue

Lake Surface Water Temperature 2016-present (raster 1 km), global, 10-daily - version 1

Lake surface water temperature (LSWT) describes the temperature of the lake surface, one important indicator of lake hydrology and biogeochemistry. Temperature trends observed over many years can be an indicator of how climate change affects the lake. The LSWT observations (every 10 days) are available at global scale at spatial resolution of ~1 km and with the temporal extent from 2016 to present.

LSWT is recognized internationally as an Essential Climate Variable (ECV) and complements the water quality information, in environmental monitoring of a large number of lakes globally.

Simple

Identification info

Date (Creation)	2019-02-12
Date (Publication)	2019-02-12
Edition	1
Edition date	2023-09-25T00:00:00
Citation identifier	clms_global_lswt_1km_v1_10daily-nrt

Title	VITO NV
Date (Revision)	2019-02-12

Identifier

Code	10.2909/711e5cf8-b0dd-4e34-9814-b7b60aba109f

Other citation details	https://land.copernicus.eu/en/products/temperature-and-reflectance/lake-surface-water-temperature-near-real-time-v1-0-1km
Purpose	This product is first designed to fit the requirements of the Global Land component of Land Service of Copernicus. It can be also useful for all applications related to the environment monitoring.
Credit	The products were extracted from land service of Copernicus, the Earth Observation program of the European Commission. The research leading to the current version of the products has received funding from the UK NERC (GloboLakes).

Point of contact

Organisation	Individual	Electronic mail address	Website	Role
European Commission			https://commission.europa.eu	Owner
Copernicus Land Monitoring Service		JRC-Copernicus-Land@ec.europa.eu	https://land.copernicus.eu	Custodian
European Commission's Joint Research Centre			https://joint-research-centre.ec.europa.eu/	Publisher
Copernicus Land Monitoring Service helpdesk		JRC-Copernicus-Land@ec.europa.eu	https://land.copernicus.eu/en/contact-service-helpdesk	Point of contact

Spatial representation type	Grid

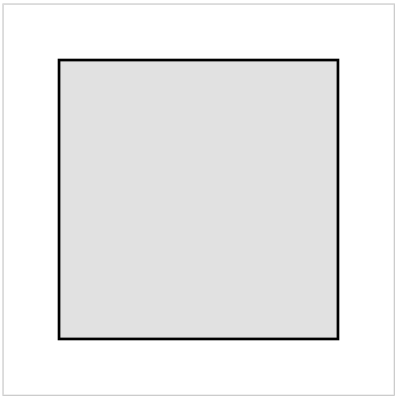
Spatial resolution

Spatial resolution	0.00833129882812 deg

Topic category	• Environment • Inland waters • Geoscientific information

Extent

90.00	N	-90.00	S	180.00	E	-180.00	W



Extent

Temporal extent

Time period	9 days, 0:00:00 composite dekad 2016-11-01
Maintenance and update frequency	As needed
mmi:updateScope	Series

Resource format

Title	netCDF
Alternate title	Network Common Data Form
Date	
Edition	4
EEA topics	• Water
Spatial scope	• Global
Continents, countries, sea regions of the world.	• World
GEMET - INSPIRE themes, version 1.0	• Orthoimagery
GEMET	• inland water • temperature • climate • hydrology • limnology • environmental data • environmental monitoring • monitoring • remote sensing
Theme	• LAKES/RESERVOIRS
Place	• GLOBE
Temporal	• Dekad • 10 days, 0:00:00 composite

Resource constraints

Access constraints	Other restrictions
Other constraints	no limitations to public access

Resource constraints

Use constraints	Other restrictions
Other constraints	The Copernicus component is governed by Regulation (EU) No 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU. Within the Copernicus component, a portfolio of land monitoring activities has been delegated by the European Union to the European Environment Agency (EEA) and the DG Joint Research Centre of the European Commission. The Copernicus land monitoring products and services are made available on a principle of full, open and free access, as established by the Commission Delegated Regulation (EU) No 1159/2013 of 12 July 2013. Free, full and open access to the products and services of the Copernicus Land Monitoring Service is made on the conditions that: 1. When distributing or communicating Copernicus Land Monitoring Service products and services (data, software scripts, web services, user and methodological documentation and similar) to the public, users shall inform the public of the source of these products and services. 2. Where the Copernicus Land Monitoring Service products and services have been adapted or modified by the user, the user shall clearly state this. 3. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the European Union.
Language	English
Character encoding	UTF8

Distribution Information

Distribution format	• netCDF
Fees	Free for HTTP download and EUMETCast; cost of medium by DvD or tape
Ordering instructions	Products can be downloaded online via HTTP or can be received through EUMETCast satellite reception in Europe, Africa and Latin-America.
Units of distribution	Per product
OnLine resource	
OnLine resource	OGC WMTS
OnLine resource	Copernicus Data Space Ecosystem download services
Units of distribution	Per product
OnLine resource	Copernicus Browser

Data quality info

Hierarchy level	Dataset

Report

Result

Title	Validation results conform CEOS LPV guidelines
Date (Publication)	2010-12-01
Explanation	https://land.copernicus.eu/en/products/temperature-and-reflectance/lake-surface-water-temperature-near-real-time-v1-0-1km
Pass	1

Report

Result

Title	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
Date (Publication)	2010-12-08
Explanation	This data set is conformant with the INSPIRE Implementing Rules for the interoperability of spatial data sets and services
Pass	true

Report

Result

Title	INSPIRE Data Specification on orthoimagery - Guidelines
Date (Publication)	2010-04-26
Explanation	See the referenced specification
Pass	true

Resource lineage

Statement	The input data are the 10 days level-1b observations from the Sentinel-3 SLSTR sensor.
Hierarchy level	Dataset

Spatial representation info

Number of dimensions	2
Cell geometry	Area
Transformation parameter availability	false
Check point availability	true
Check point description	Upperleft corner tiepoint
Description	Upperleft corner tiepoint
Identifier	upperLeftTiePoint

Name	Tie Point in upper left corner
Pixel orientation code	

Reference System Information

Reference System Information

Code	EPSG:4326
Maintenance and update frequency	As needed

Metadata

Metadata identifier	711e5cf8-b0dd-4e34-9814-b7b60aba109f
Language	English
Character encoding	UTF8

Contact

Organisation	Individual	Electronic mail address	Website	Role
Copernicus Land Monitoring Service		JRC-Copernicus-Land@ec.europa.eu	https://land.copernicus.eu	Point of contact

Type of resource

Resource type	Dataset
Metadata linkage	https://sdi.eea.europa.eu/geonetwork/srv/api/records/711e5cf8-b0dd-4e34-9814-b7b60aba109f
Date info (Creation)	2024-12-17T06:50:32.496284Z
Date info (Revision)	2025-10-09T10:57:12.766732Z

Metadata standard

Title	ISO 19115/19139
Edition	1.0

Overviews

Lake Surface Water Temperature

Provided by