

High Resolution Snow and Ice Monitoring: Aggregated River and Lake Ice Extent

The Copernicus Aggregated River and Lake Ice Extent (ARLIE) product is a spatially aggregated information on surface water conditions of rivers and lakes. ARLIE information is stored in a geodatabase, enriched every day from the River and Lake Ice extent products (RLIE S1, RLIE S2 and RLIE S1+S2) for the entire EEA38 and the United Kingdom. It provides percent coverage of snow-covered or snow-free ice on lakes and on 10 km river sections described by the EU-HYDRO river and lake network database.

The ARLIE products are stored in a PostGIS persistent geodatabase. They can be retrieved by using a specific REST API. Users can query ice sheet summary information of river segments and lakes (ARLIE statistics) together with the geometry and characteristics of the features on which these statistics were estimated. All geometry features are delivered in the ETRS89 LAEA (EPSG:3035) coordinate reference system.

ARLIE is one of the products of the pan-European High-Resolution Snow & Ice service (HR-S&I), which are provided at high spatial resolution (20 m x 20 m and 60 m x 60 m) from the Sentinel-2 and Sentinel-1 constellations data from September 1, 2016 onwards.

You can read more about ARLIE product here: <https://land.copernicus.eu/en/products/water-bodies/high-resolution-aggregated-river-and-lake-ice-extent> .

Simple

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	European Environment Agency		copernicus@eea.europa.eu	https://land.copernicus.eu	Distributor
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Point of contact

No information provided.

Maintenance and update frequency	Continual
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> Land cover
Keywords	
Continents, countries, sea regions of the world.	<ul style="list-style-type: none"> EEA38 (from 2020) United Kingdom
Keywords	
GEMET	<ul style="list-style-type: none"> snow land cover climate change impact

	<ul style="list-style-type: none"> • landscape alteration • ice • monitoring
Spatial scope	<ul style="list-style-type: none"> • European
Temporal resolution	<ul style="list-style-type: none"> • Irregular
EEA topics	<ul style="list-style-type: none"> • Land use
EEA Management Plan	<ul style="list-style-type: none"> • 2020 3.6.7
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".
Spatial representation type	Vector
Denominator	50000
Language of dataset	English
Character set	UTF8



Begin date	2016-09-01		
Coordinate reference system identifier	EPSG:3035		
Distribution format	<ul style="list-style-type: none">Postgis ()		
OnLine resource	Protocol WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link WWW:LINK-1.0-http--link	Linkage https://land.copernicus.eu/en/technical-library/hrsi-ice-pum/@_@download/file https://land.copernicus.eu/en/technical-library/hrsi-ice-s1-atbd/@_@download/file https://cryo.land.copernicus.eu/arlief/get_arlie https://cryo.land.copernicus.eu/arlief/get_geometries https://github.com/eea/clms-hrsi-api-client-python-arlie	Name Product user manual Algorithm theoretical basis document REST API to retrieve ARLIE data REST API to retrieve geometry data Python client to download ARLIE products Download (requires authentication)
Hierarchy level	Dataset		

Conformance result

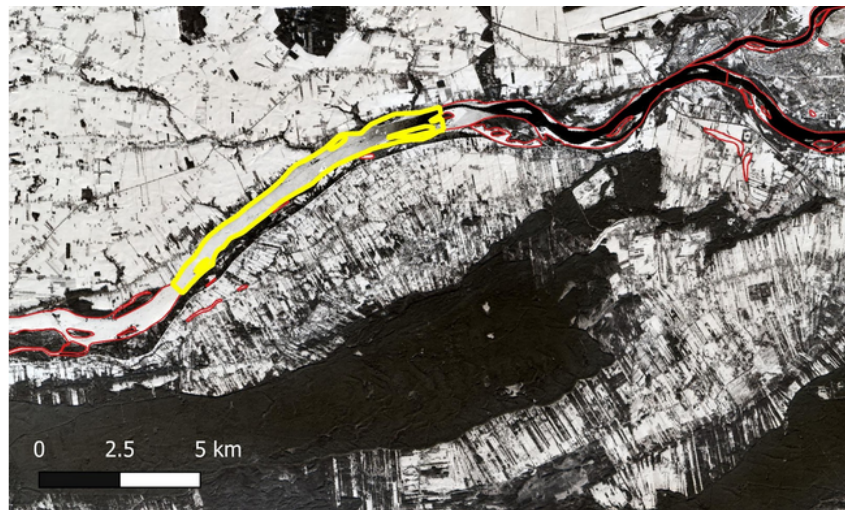
Date (Publication)	
Explanation	See the referenced specification
Statement	The algorithm for ARLIE retrieval is fully described in the Algorithm Theoretical Basis Document: https://land.copernicus.eu/en/technical-library/hrsi-ice-s1-atbd/@_@download/file . Its validation is described https://land.copernicus.eu/en/technical-library/hrsi-ice-qar/@_@download/file .
Source	<ul style="list-style-type: none">

Metadata

File identifier	219a6cd4-edfe-4982-8470-39b60421ed74 XML
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Metadata language	English		
Character set	UTF8		
Hierarchy level	Dataset		
Date stamp	2024-02-06T16:45:02.692Z		
Metadata standard name	ISO 19115/19139		
Metadata standard version	1.0		
Metadata author	Organisation name	Individual name	Electronic mail addressWebsite Role
	European Environment Agency		sdi@eea.europa.euPoint of contact

Overviews



id	object_nam	river_km	basin_name	eu_hydro_id	area
346527	Vistula	380	Vistula		5946111.52921436

id	river_km_id	datetime	water_perc	ice_perc	other_perc	cloud_perc	nd_perc	qc	type
100323	346527	2021-02-06T09:56:18.000	26	0	2	68	4	0	Sentinel-2
106629	346527	2021-02-11T09:56:16.000	5	9	9	74	3	0	Sentinel-2
116921	346527	2021-02-18T09:46:22.000	6	88	4	0	2	0	Sentinel-2
119869	346527	2021-02-20T16:19:25.000	10	88	0	0	2	0	Sentinel-1 Sentinel-2
120737	346527	2021-02-21T09:56:59.000	0	0	0	98	2	0	Sentinel-2
124492	346527	2021-02-22T10:15:59.000	21	76	0	0	3	0	Sentinel-1 Sentinel-2

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