



Dane satelitarne Copernicus

Piotr Szuster, MSc



KRAKOWSKI
PARK
TECHNOLOGICZNY

A long time ago, in a galaxy far,
far away

Not a long time ago, quite nearby...



European
Commission







European
Commission



European Space Agency





- ▶ Program ciągłego monitorowania ziemi
- ▶ Wprowadza politykę otwartego, darmowego dostępu do danych
- ▶ Jest narzędziem rozwoju ekonomicznego



▶ 3 komponenty



▶ 3 komponenty



▶ 3 komponenty





▶ 3 komponenty





▶ 3 komponenty



Sentinel

- ▶ Sentinel 1:
- ▶ 1A, 1B (2014, 2016)
- ▶ Radar z syntetyczną aperturą, pasma C (mikrofale)



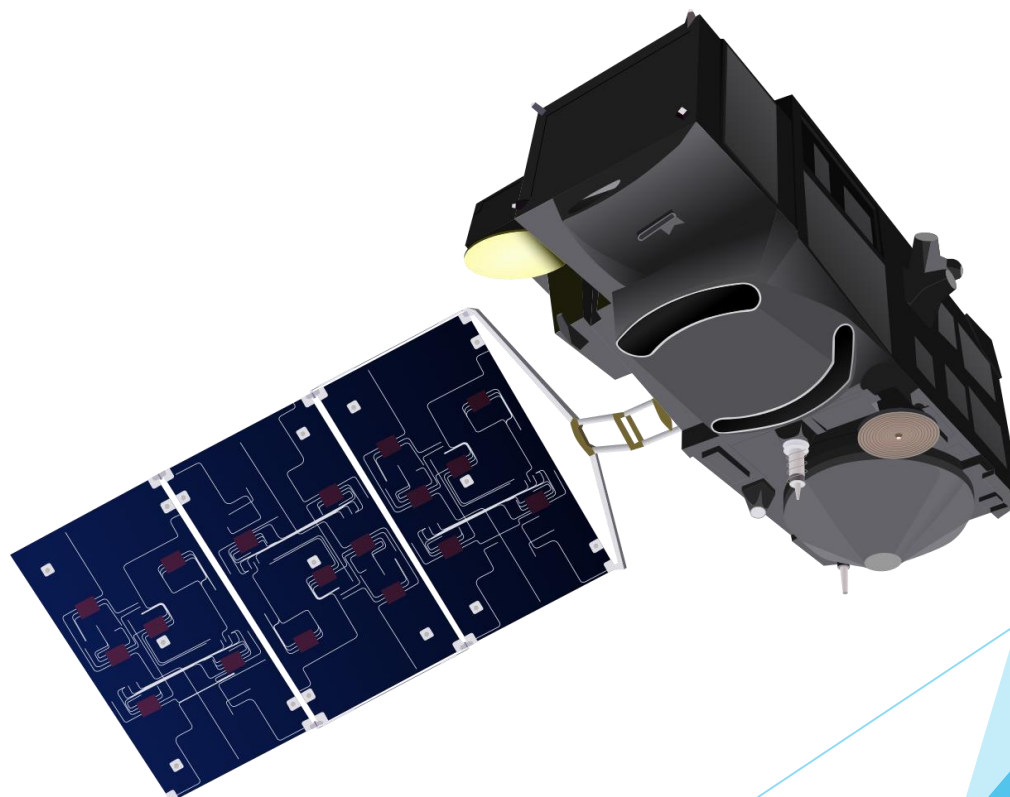
Sentinel

- ▶ Sentinel 2:
- ▶ 2A, 2B (2015, 2017)
- ▶ Obrazowanie w wielu spektrach
- ▶ Duża rozdzielczość (10m)
- ▶ Pole widzenia 290km



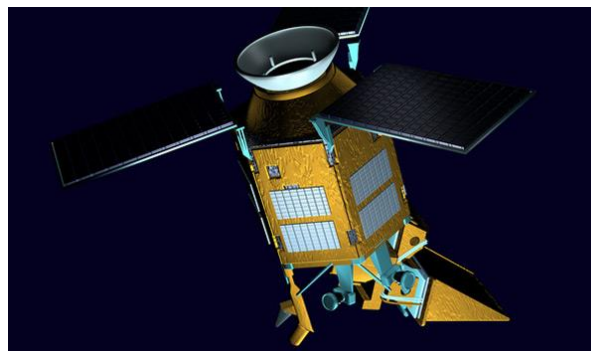
Sentinel

- ▶ Sentinel 3:
- ▶ 3A (2016)
- ▶ Monitorowanie oceanów
- ▶ Duża rozdzielczość (10m)
- ▶ Pole widzenia 290km



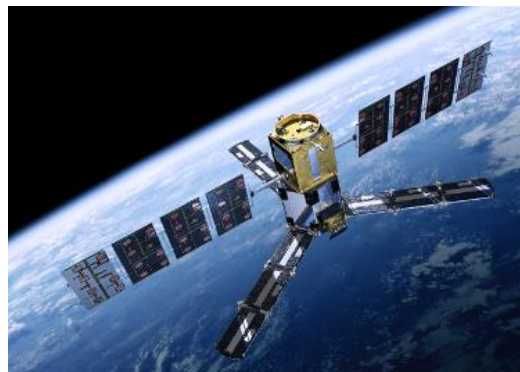
Sentinel

- ▶ Sentinel 5-Precursor:
- ▶ 2017
- ▶ Monitorowanie zanieczyszczenia powietrza, klimatu, koncentracji ozonu, radia
- ▶ Spektrometr
- ▶ Pole widzenia 290km



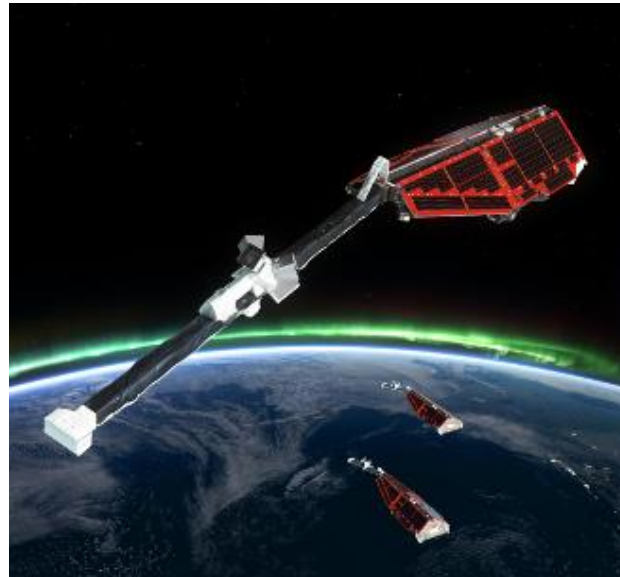
SMOS

- ▶ Soil Moisture and Ocean Salinity
- ▶ 2009
- ▶ Pomiar wilgotności gleby oraz zasolenia



SWARM

- ▶ 2013
- ▶ Pomiary charakterystyki pola magnetycznego ziemi
- ▶ Magnetometry i akcelerometry
- ▶ Dynamika jądra ziemskiego
- ▶ Oddziaływania jądro - płaszcz ziemski

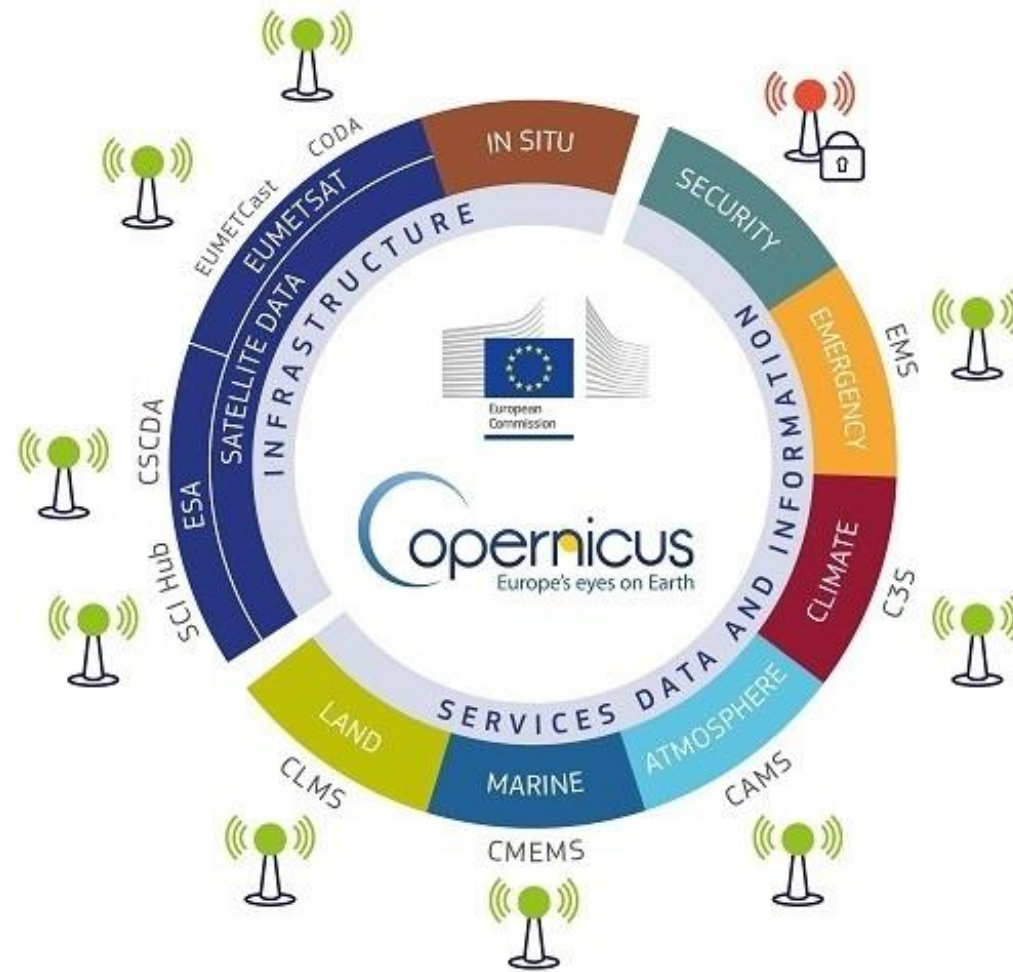


Jak to ugryźć?



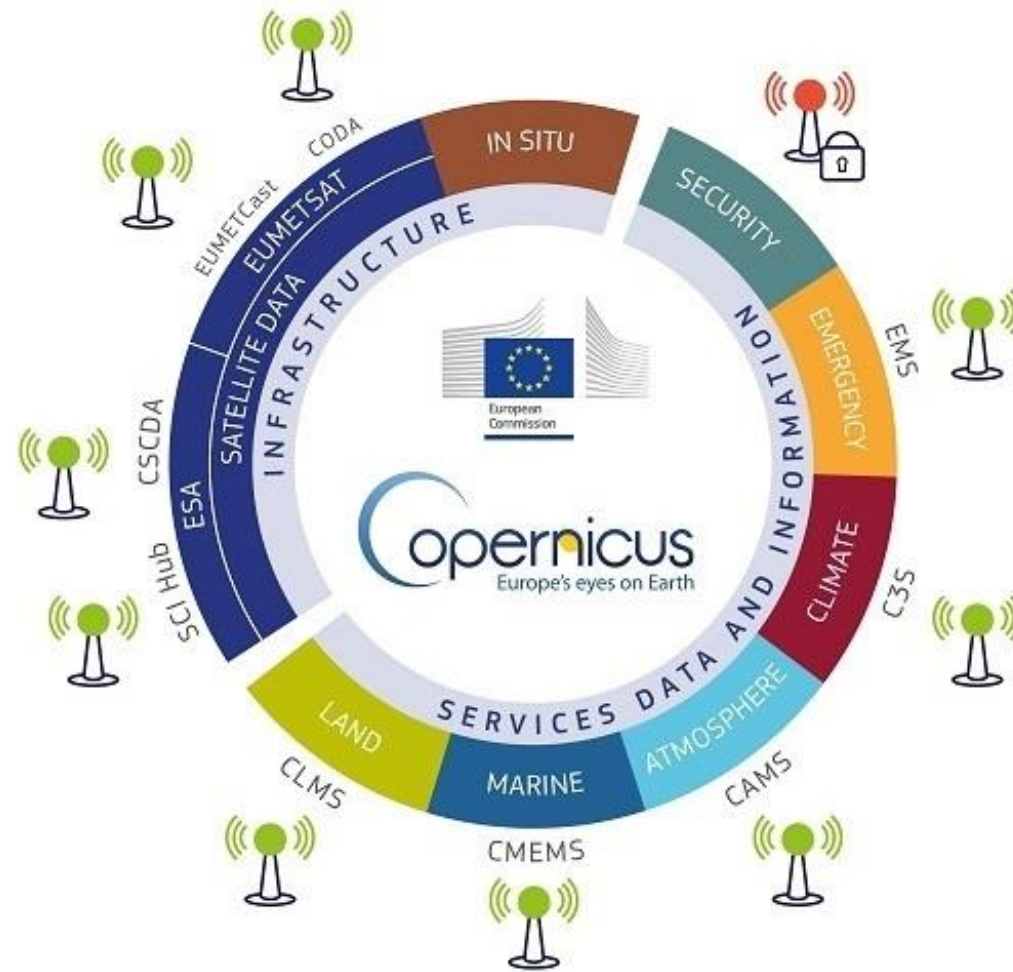
Jak to ugryźć?

- ▶ Dziesięć punktów dostępowych



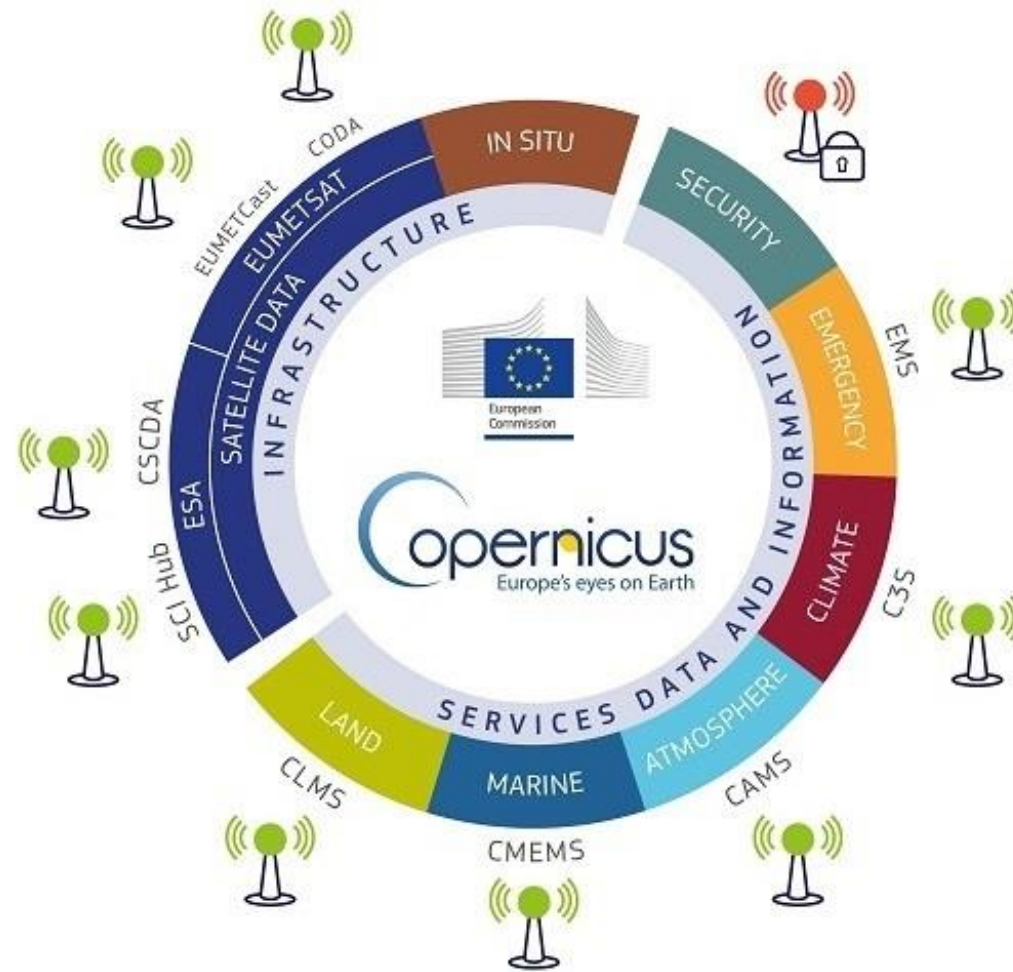
Jak to ugryźć?

- ▶ Dziesięć punktów dostępowych



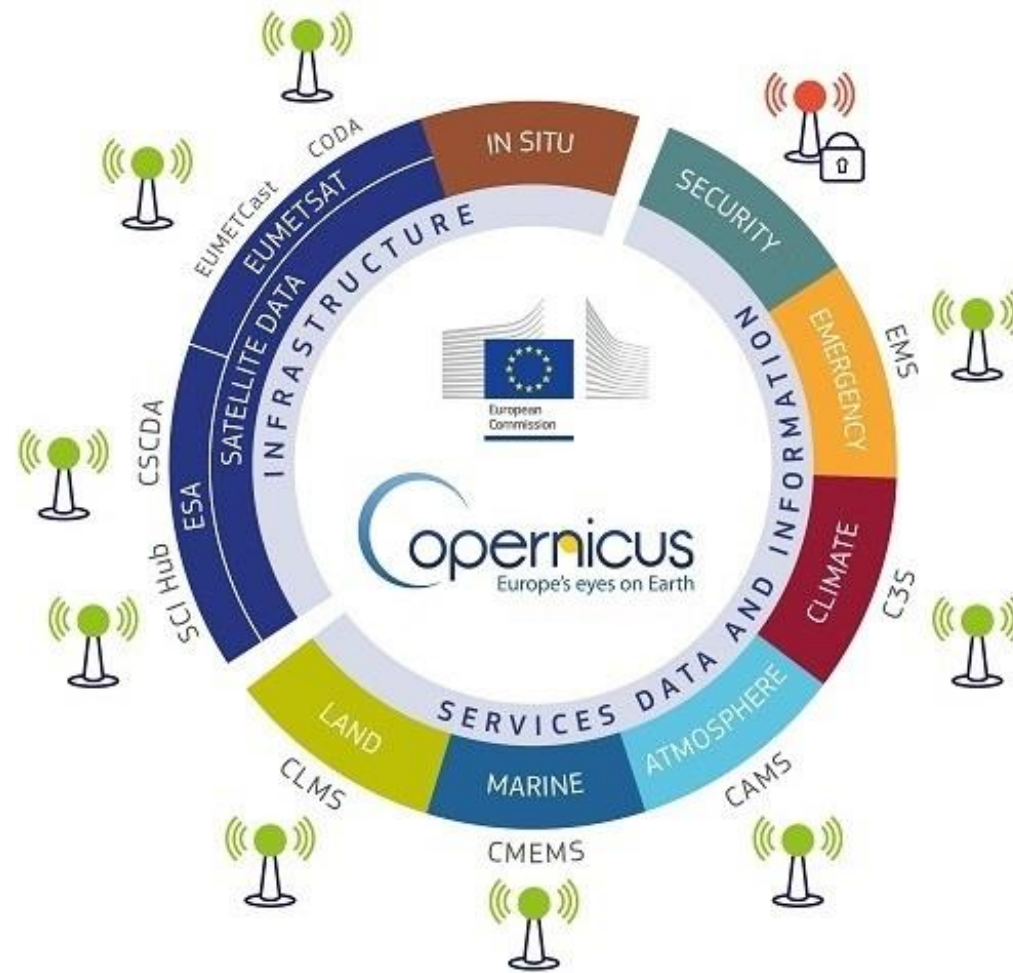
Jak to ugryźć?

- ▶ Dziesięć punktów dostępowych
- ▶ 4 do danych satelitarnych



Jak to ugryźć?

- ▶ Dziesięć punktów dostępowych
- ▶ 4 do danych satelitarnych
- ▶ 6 do usług



Jak to ugryźć - dane satelitarne

- ▶ 4 punkty dostępowe
- ▶ 2 ESA:
 - SCI Hub
 - Copernicus Space Component Data Access



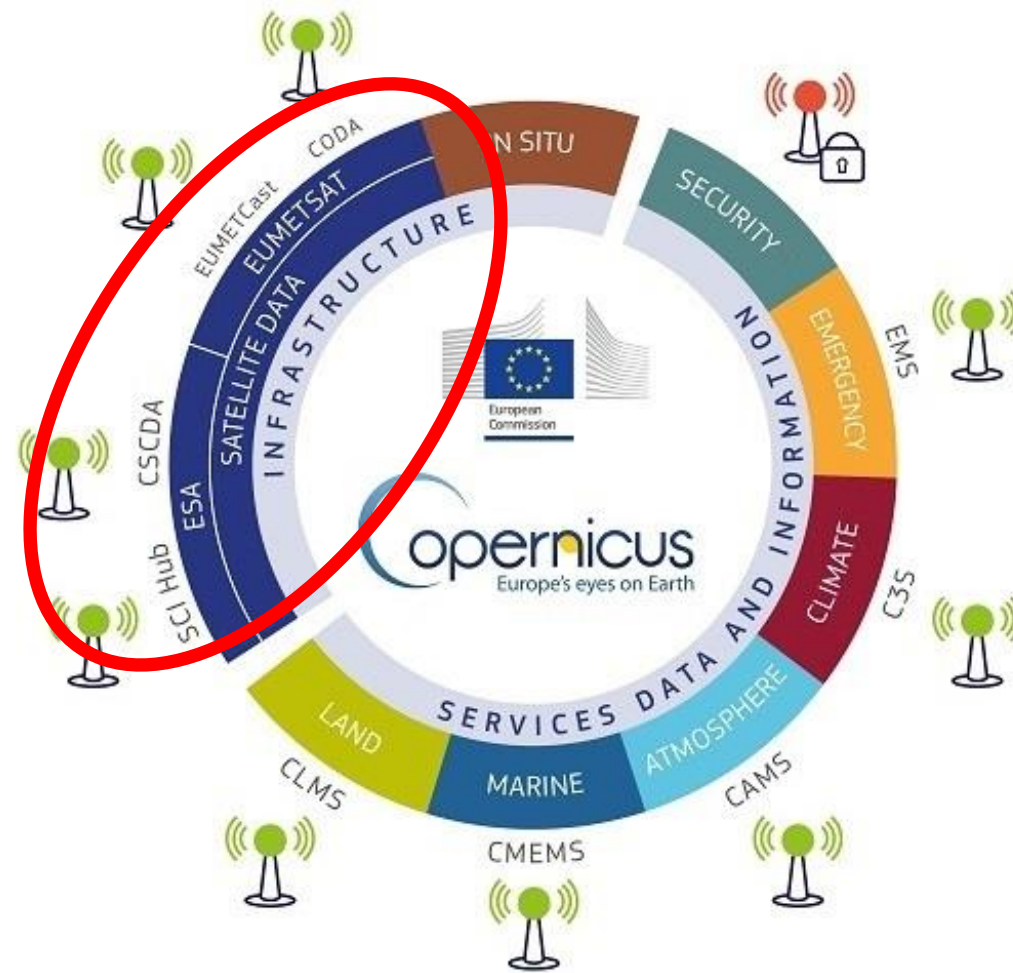
Jak to ugryźć - dane satelitarne

▶ 4 punkty dostępowe

▶ 2 EUMETSAT:

EUMETCast

Copernicus Online Data
Access



SCI Hub: www.scihub.copernicus.eu

▶ Pełny dostęp za darmo

SCI Hub: www.scihub.copernicus.eu

- ▶ Pełny dostęp za darmo
- ▶ Dostęp do danych za pomocą
Aplikacji webowej z GUI
Interfejsu programistycznego (API)

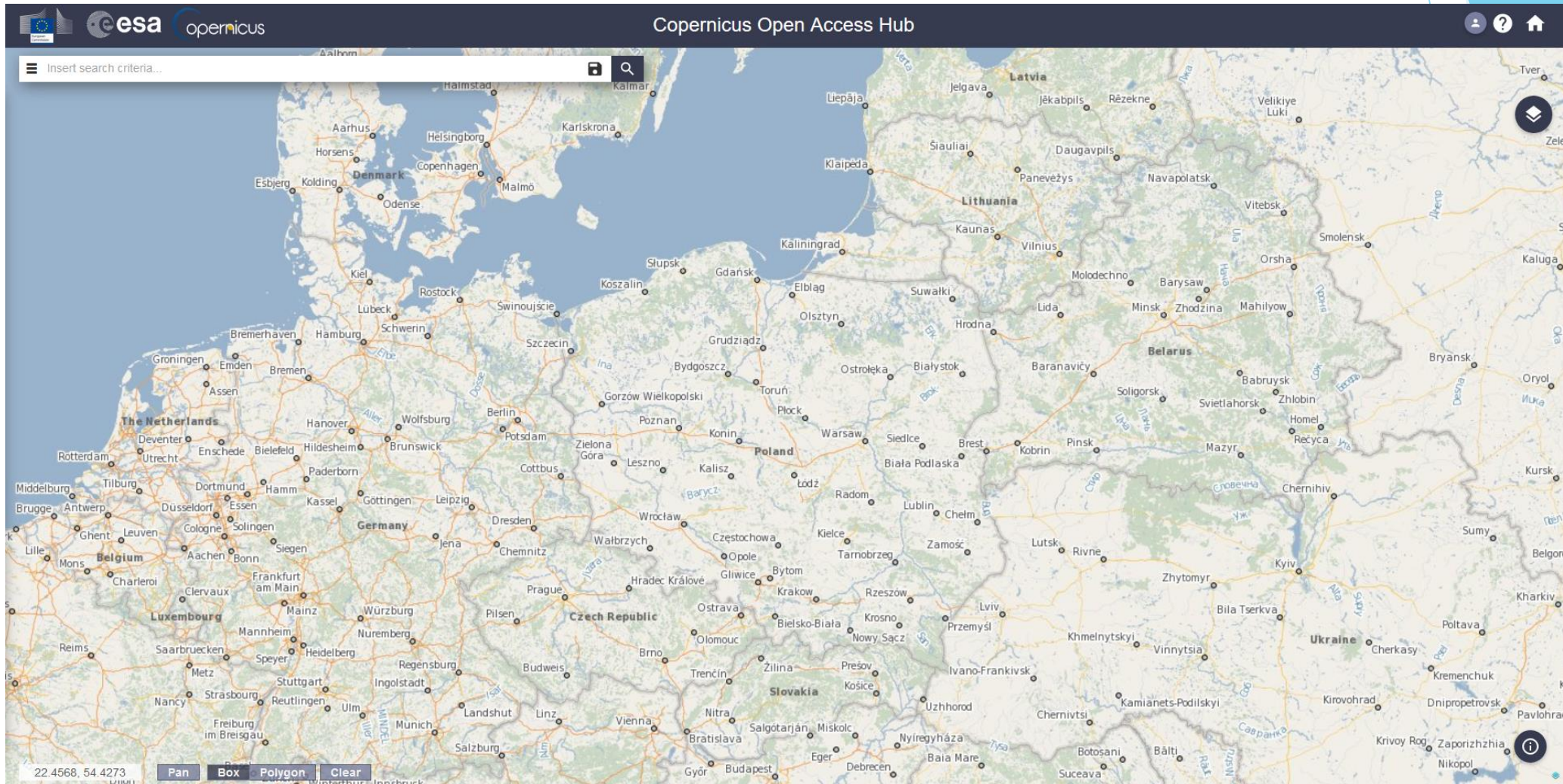
SCI Hub: www.scihub.copernicus.eu

- ▶ Pełny dostęp za darmo
- ▶ Dostęp do danych za pomocą
Aplikacji webowej z GUI
Interfejsu programistycznego (API)
- ▶ Pobieranie danych wymaga rejestracji
użytkownika

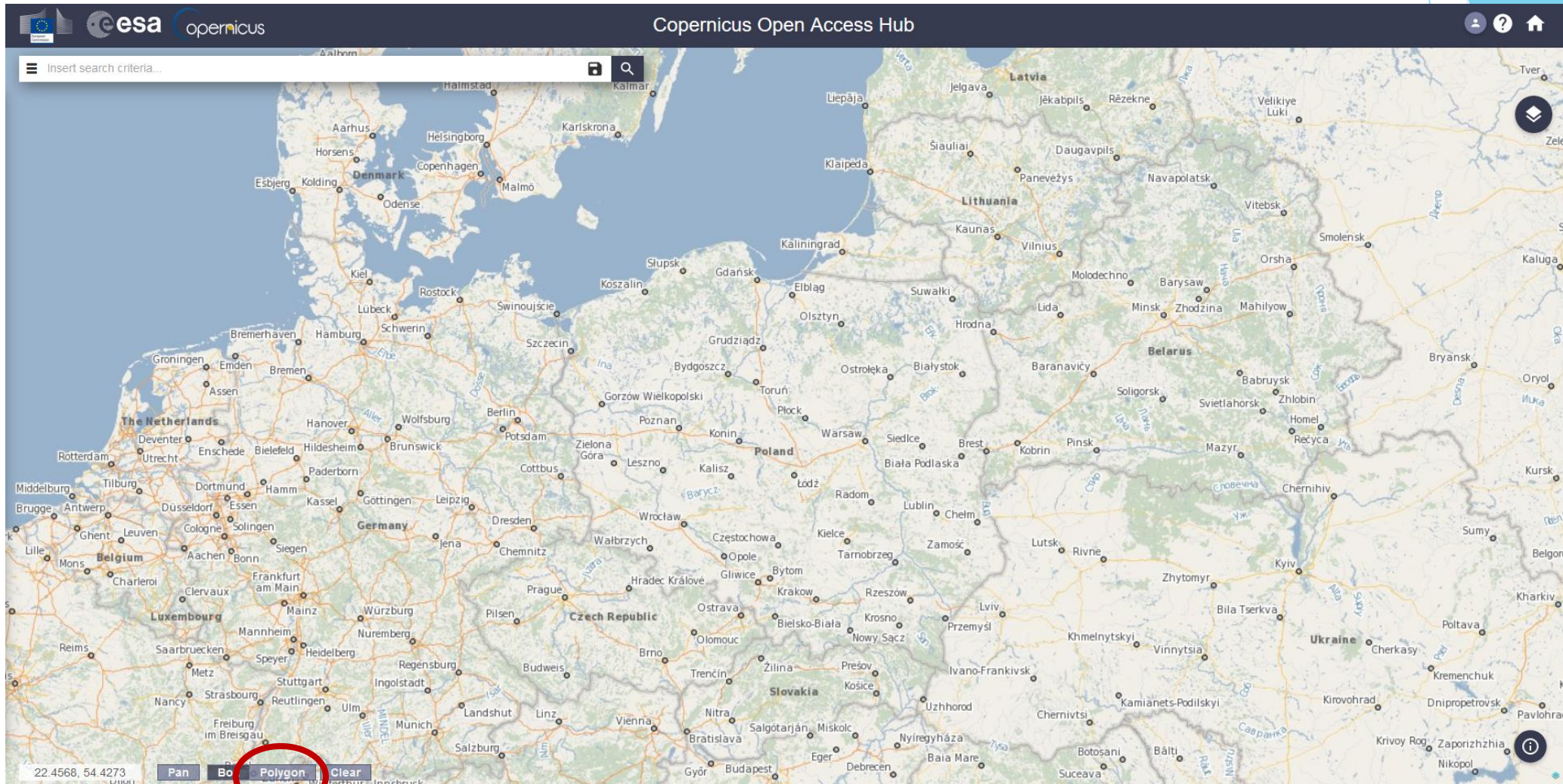
SCI Hub: www.scihub.copernicus.eu

- ▶ Pełny dostęp za darmo
- ▶ Dostęp do danych za pomocą
Aplikacji webowej z GUI
Interfejsu programistycznego (API)
- ▶ Pobieranie danych wymaga rejestracji
użytkownika

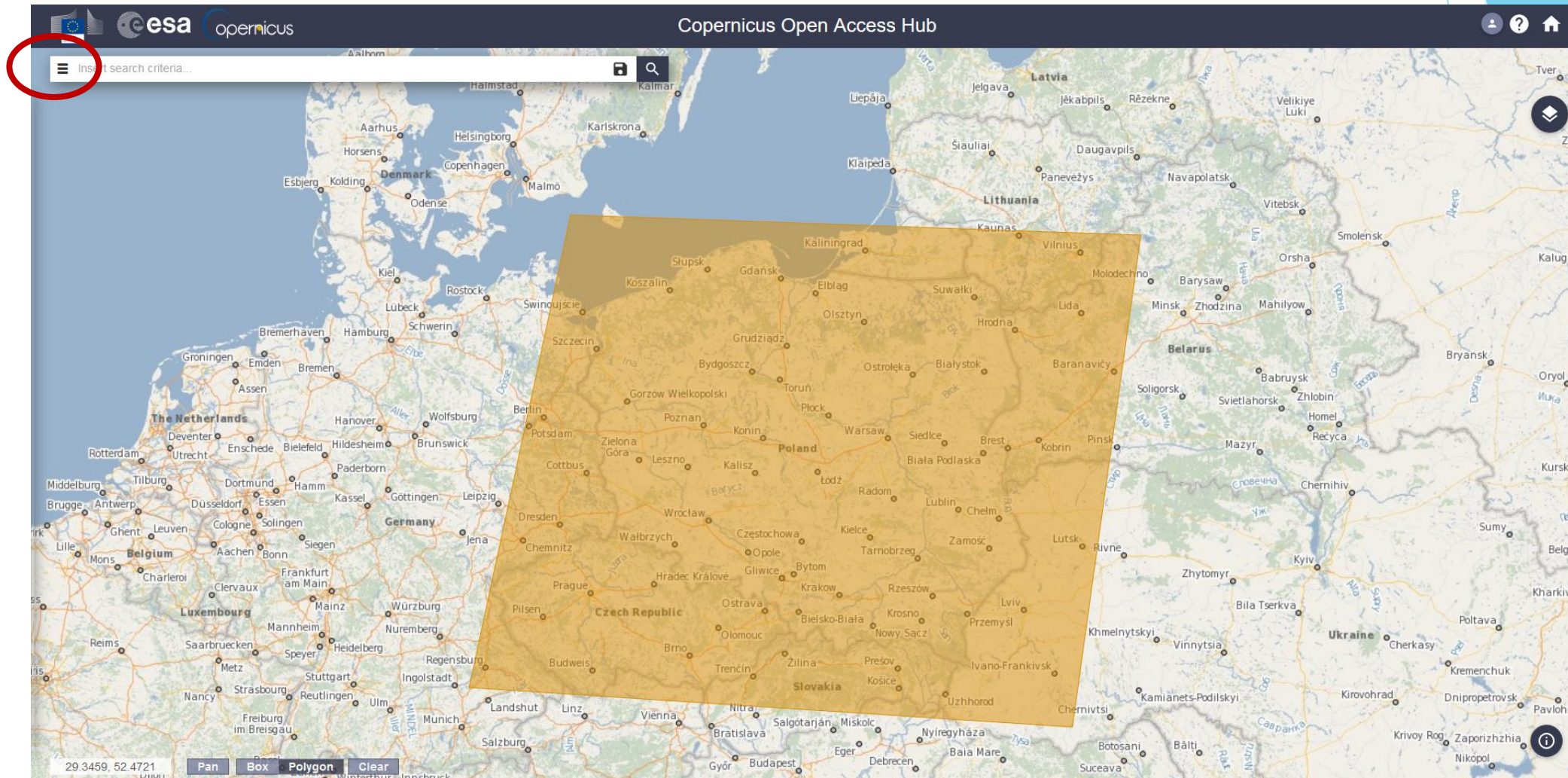
<https://scihub.copernicus.eu/dhus/>



<https://scihub.copernicus.eu/dhus/>



<https://scihub.copernicus.eu/dhus/>



<https://scihub.copernicus.eu/dhus/>

The screenshot displays the Copernicus Data User Interface (DUI) search panel. At the top, the ESA and Copernicus logos are visible. Below the search bar, the 'Advanced Search' section is expanded. The search criteria are as follows:

- Sort By:** Ingestion Date
- Order By:** Descending
- Sensing period:** From: 2018/03/12 (circled in red) to: 2018/03/15
- Ingestion period:** From: [empty] to: [empty]
- Mission:** Sentinel-1
- Satellite Platform:** [empty]
- Product Type:** [empty]
- Polarisation:** [empty]
- Sensor Mode:** [empty]
- Relative Orbit Number (from 1 to 175):** [empty]
- Collection:** [empty]
- Mission:** Sentinel-2
- Satellite Platform:** [empty]
- Product Type:** [empty]
- Cloud Cover % (e.g.[0 TO 9.4]):** [empty]

At the bottom of the panel, there are navigation buttons: Pan, Box, Polygon, and Clear.

<https://scihub.copernicus.eu/dhus/>

esa copernicus

Insert search criteria...

Advanced Search Clear

» Sort By: Ingestion Date

» Order By: Descending

» Sensing period From: 2018/03/12 to: 2018/03/15

» Ingestion period From: to:

Mission: Sentinel-1

Satellite Platform Product Type

Polarisation Sensor Mode

Relative Orbit Number (from 1 to 175) Collection

Mission: Sentinel-2

Satellite Platform Product Type

Cloud Cover % (e.g.[0 TO 9.4])

Pan Box Polygon Clear

<https://scihub.copernicus.eu/dhus/>

esa copernicus

Insert search criteria...

Advanced Search Clear

» Sort By: Ingestion Date

» Order By: Descending

» Sensing period From: 2018/03/12 to: 2018/03/15

» Ingestion period From: to:

Mission: Sentinel-1

Satellite Platform Product Type

Polarisation Sensor Mode

Relative Orbit Number (from 1 to 175) Collection

Mission: Sentinel-2

Satellite Platform Product Type

Cloud Cover % (e.g.[0 TO 9.4])

Pan Box Polygon Clear

<https://scihub.copernicus.eu/dhus/>

The screenshot displays the Copernicus Data User Interface (DUS) search panel. At the top, there are logos for the European Union, ESA, and Copernicus. Below the logos is a search bar with the text "Insert search criteria...". A red circle highlights a small icon in the top right corner of the search bar area. The main search panel is titled "Advanced Search" and includes a "Clear" button. The search criteria are organized into several sections:

- Sort By:** Ingestion Date
- Order By:** Descending
- Sensing period:** From: 2018/03/12 to: 2018/03/15
- Ingestion period:** From: to:
- Mission: Sentinel-1** (selected):
 - Satellite Platform
 - Product Type
 - Polarisation
 - Sensor Mode
 - Relative Orbit Number (from 1 to 175)
 - Collection
- Mission: Sentinel-2** (not selected):
 - Satellite Platform
 - Product Type
 - Cloud Cover % (e.g.[0 TO 9.4])

At the bottom of the interface, there are navigation buttons: Pan, Box, Polygon, and Clear.

https://scihub.copernicus.eu/dhus/

The screenshot displays the Copernicus Data User Interface (DUI) for Sentinel-1 SAR data. On the left, a search results panel shows a list of products, with the third entry circled in red. The map on the right shows a red polygon overlaid on a satellite image of Eastern Europe, covering parts of Lithuania, Poland, and Belarus. The interface includes a search bar, a list of products with download URLs, and a map with various navigation and selection tools.

Search Criteria: Insert search criteria...

Display 1 to 25 of 465 products.
Order By: Ingestion Date ↓

Request Done: (footprint:"Intersects(POLYGON((13.961483255834564 55.16805280574886,26.59740188274358 54.91239014265943,25.080377753806765 48.156674172823415,11.712718076469402 48.73674865319347,13.961483255834564 55.16805280574886)))")

Product 1: S1A SAR-C S1A_IW_SLC__1SDV_20180315T160941_20180315T161008_021028_0241CC_08DF
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(747c9b8f-f2a9-48b9-9d03-107671fb09db](https://scihub.copernicus.eu/dhus/odata/v1/Products/(747c9b8f-f2a9-48b9-9d03-107671fb09db)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:09:41.489Z Size: 7.68 GB

Product 2: S1A SAR-C S1A_IW_SLC__1SDV_20180315T161031_20180315T161058_021028_0241CC_8110
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(1c86d5dd-2ba1-4c6e-a8e0-d60375b8711](https://scihub.copernicus.eu/dhus/odata/v1/Products/(1c86d5dd-2ba1-4c6e-a8e0-d60375b8711)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:10:31.139Z Size: 7.68 GB

Product 3 (Circled): S1A SAR-C S1A_IW_SLC__1SDV_20180315T161146_20180315T161213_021028_0241CC_2DD3
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(e273179c-7e6f-4dd1-93ed-d6b04de193a](https://scihub.copernicus.eu/dhus/odata/v1/Products/(e273179c-7e6f-4dd1-93ed-d6b04de193a)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:11:46.559Z Size: 7.68 GB

Product 4: S1B SAR-C S1B_IW_SPP__1SDV_20180315T165951_20180315T170016_010045_012278_2102
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(529e0de6-e2cf-4f40-8c85-7b06409d1b2f](https://scihub.copernicus.eu/dhus/odata/v1/Products/(529e0de6-e2cf-4f40-8c85-7b06409d1b2f)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:59:51.580Z Size: 1.66 GB

Product 5: S1A SAR-C S1A_IW_SLC__1SDV_20180315T161055_20180315T161123_021028_0241CC_4884
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(727ab625-3c77-4eff-aa62-760c071f6940](https://scihub.copernicus.eu/dhus/odata/v1/Products/(727ab625-3c77-4eff-aa62-760c071f6940)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:10:55.966Z Size: 7.68 GB

Product 6: S1A SAR-C S1A_IW_SLC__1SDV_20180315T161120_20180315T161148_021028_0241CC_2EFD
Download URL: [https://scihub.copernicus.eu/dhus/odata/v1/Products/\(34a85b9b-76b7-4086-a90b-e67ef84da1a](https://scihub.copernicus.eu/dhus/odata/v1/Products/(34a85b9b-76b7-4086-a90b-e67ef84da1a)
Mission: Sentinel-1 Instrument: SAR-C Sensing Date: 2018-03-15T16:11:20.791Z Size: 7.94 GB

Product 7: S1A SAR-C S1A_IW_OCN__2SDV_20180315T161147_20180315T161212_021028_0241CC_6292

Products per page: 25 << < page: 1 of 19 > >> CLOSE

Map navigation: Pan, Box, Polygon, Clear

<https://scihub.copernicus.eu/dhus/>

S1A_IW_SLC__1SDV_20180315T161146_20180315T161213_021028_0241CC_2DD3

[https://scihub.copernicus.eu/dhus/odata/v1/Products\('e273179c-7e6f-4dd1-93ed-d6b04de193d1'\)/\\$value](https://scihub.copernicus.eu/dhus/odata/v1/Products('e273179c-7e6f-4dd1-93ed-d6b04de193d1')/$value)

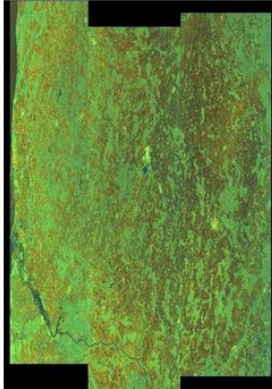
Footprint



Attributes

The footprint map shows a red rectangular area over a satellite map of Lithuania. The map includes labels for cities like Kaunas, Vilnius, and Klaipėda, and geographical features like the Baltic Sea and various rivers.

Quicklook



Inspector

The Quicklook image is a vertical strip showing a top-down view of the terrain within the footprint, displaying a mix of green and brown colors. The Inspector panel is currently empty.

Summary

Date: 2018-03-15T16:11:46.559Z

Filename: S1A_IW_SLC__1SDV_20180315T161146_20180315T161213_021028_0241CC_2DD3.SAFE

Identifier: S1A_IW_SLC__1SDV_20180315T161146_20180315T161213_021028_0241CC_2DD3

Instrument: SAR-C

Mode: IW

Satellite: Sentinel-1

Size: 7.68 GB

S1A_IW_SLC__1SDV_20180315T1611...213_021028_0241CC_2DD3.SAFE

annotation

measurement

preview

support

S1A_IW_SLC__1SDV_20180315T161146_20180315T161213_021028_0241CC_2DD3.SAFE-report-20180315T161756.pdf



Copernicus Space Component Data Access: spacedata.copernicus.eu

- ▶ Wysokiej jakości zobrażenia satelitarne
- ▶ Dane z Sentinela oraz innych programów
- ▶ Wiele poziomów dostępów
- ▶ Wymaga rejestracji
- ▶ Konto użytkownika zostaje wewnętrznie zweryfikowane (do 72 godzin)

EUMETCAST

- ▶ Dostarczane przez EUMETSAT
- ▶ Push dissemination system działający w czasie bliskim do rzeczywistego
- ▶ Wiele różnych produktów
- ▶ Dane z Sentinel 3 dostępne

EUMETCAST:

<https://eoportal.eumetsat.int/>

EUMETSAT MONITORING WEATHER AND CLIMATE FROM SPACE

EARTH OBSERVATION PORTAL - MY ACCOUNT

- MY DATA ACCESS [RETSUZ]
- MY PROFILE
- MY DATA LICENCES
- HELP
- LOGOUT

My Data Access

EUMETCAST SATELLITE
Access to near real-time data through DVB satellite with a guaranteed service level.
Available data: Meteosat, Metop, Jason, Copernicus Sentinel-3 marine data and third party products.
[Subscribe](#)

COPERNICUS ONLINE DATA ACCESS
Download service via Internet for Copernicus data.
Available data: Sentinel-3 marine data.
[Access](#)

DATA CENTRE
Ordering and delivery service for historical and long-term archive data.
Available data: Meteosat, Metop, Jason and Copernicus Sentinel-3 marine data.
[Access](#)

EUMETCAST TERRESTRIAL DEMONSTRATION
Access to near real-time data through terrestrial networks. Restricted to agencies only.
Available data: Meteosat, Metop, Jason, Copernicus Sentinel-3 marine data and third party products.
[Subscribe](#)

EUMETSAT FTP DATA ACCESS
Download service via Internet for EUMETSAT data.
[Subscribe](#)

DIRECT DISSEMINATION
Metop Direct Readout and Meteosat Direct Dissemination services.
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EUMETCAST:







<https://eoportal.eumetsat.int/>

EUMETSAT MONITORING WEATHER AND CLIMATE FROM SPACE

EARTH OBSERVATION PORTAL - MY ACCOUNT

- MY DATA ACCESS [RETSUZ]
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 <p>EUMETCAST SATELLITE Access to near real-time data through DVB satellite with a guaranteed service level. Available data: Meteosat, Metop, Jason, Copernicus Sentinel-3 marine data and third party products. Subscribe</p>	 <p>COPERNICUS ONLINE DATA ACCESS Download service via Internet for Copernicus data. Available data: Sentinel-3 marine data. Access</p>	 <p>DATA CENTRE Ordering and delivery service for historical and long-term archive data. Available data: Meteosat, Metop, Jason and Copernicus Sentinel-3 marine data. Access</p>
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EUMETCAST:

<https://coda.eumetsat.int/#/home>

The screenshot displays the Copernicus Online Data Access (CODA) interface. At the top, the EUMETSAT and Copernicus logos are visible, along with the text "Copernicus Online Data Access". Below the logos is a search bar with the placeholder text "Insert search criteria...".

The main content area is divided into two sections. On the left is the "Advanced Search" panel, which includes the following filters:

- Sort By: Ingestion Date
- Order By: Descending
- Sensing period: From: [calendar icon] to: [calendar icon]
- Ingestion period: From: [calendar icon] to: [calendar icon]
- Mission: Sentinel-3
- Product Type: [dropdown menu]
- Timeliness: [dropdown menu]
- Instrument: [dropdown menu]
- Product Level: [dropdown menu]
- Cycle Number: [input field]
- Orbit Number: [input field]
- Relative Orbit Start [1-385]: [input field]

On the right is a satellite orbit map showing the Earth with a purple satellite orbit line and an orange grid representing the satellite's ground track. The map is centered on Europe and Africa.

At the bottom left of the interface, the coordinates "58.5650, 50.5871" are displayed.

EUMETCAST:

<https://coda.eumetsat.int/#/home>

- ▶ Dostęp do danych Sentinel 3 - Marine & Atmosphere Data
- ▶ Bufor 12 miesięcy
- ▶ GUI
- ▶ Dostęp FTP

EUMETCAST:

<https://coda.eumetsat.int/#/home>

- ▶ Dostęp do danych Sentinel 3 - Marine & Atmosphere Data
- ▶ Bufor 12 miesięcy
- ▶ GUI
- ▶ Dostęp FTP

Jak to ugryźć - usługi

▶ 6 punktów tematycznych o pełnym, swobodnym dostępie

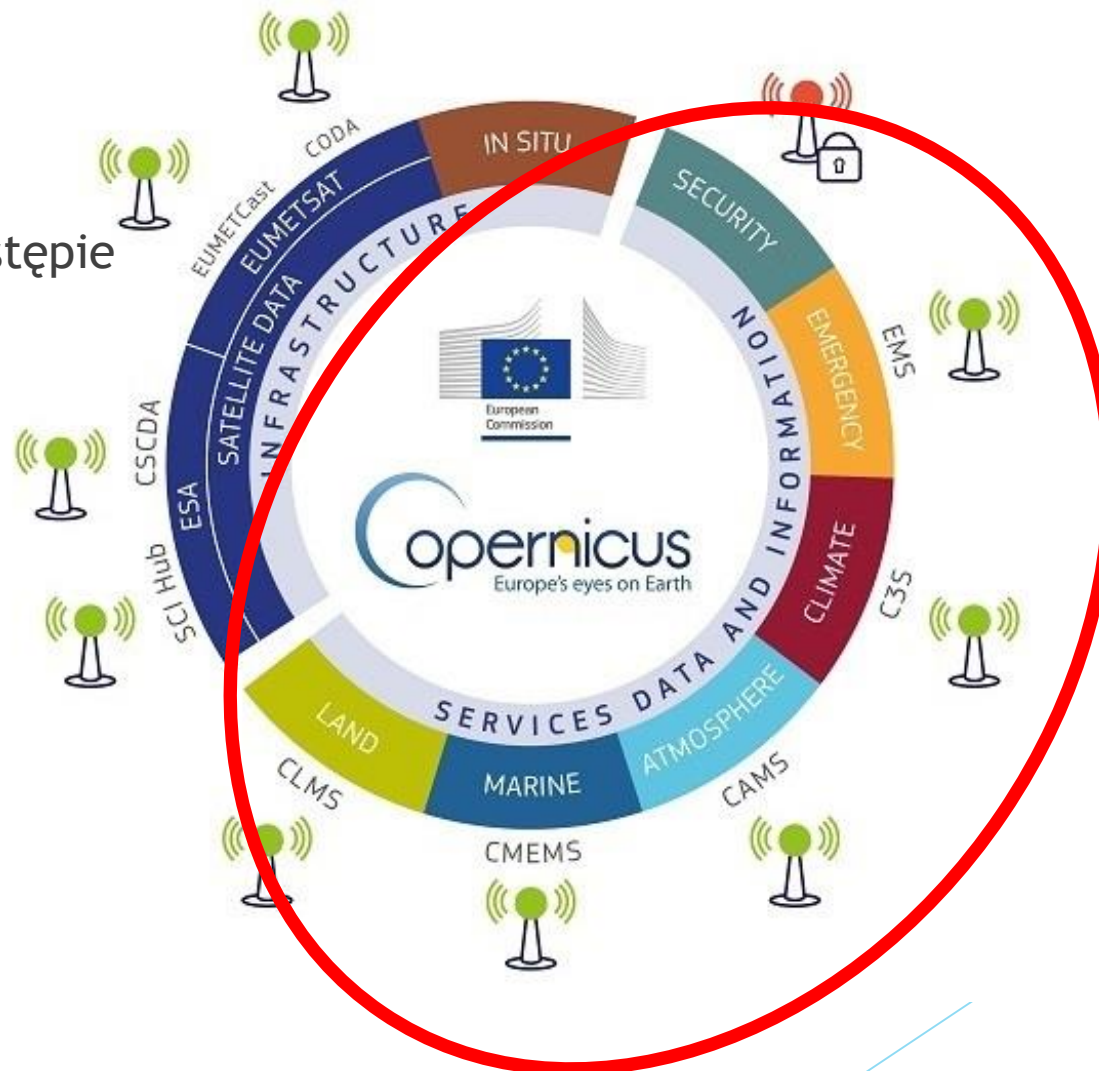
▶ LAND

▶ MARINE

▶ ATMOSPHERE

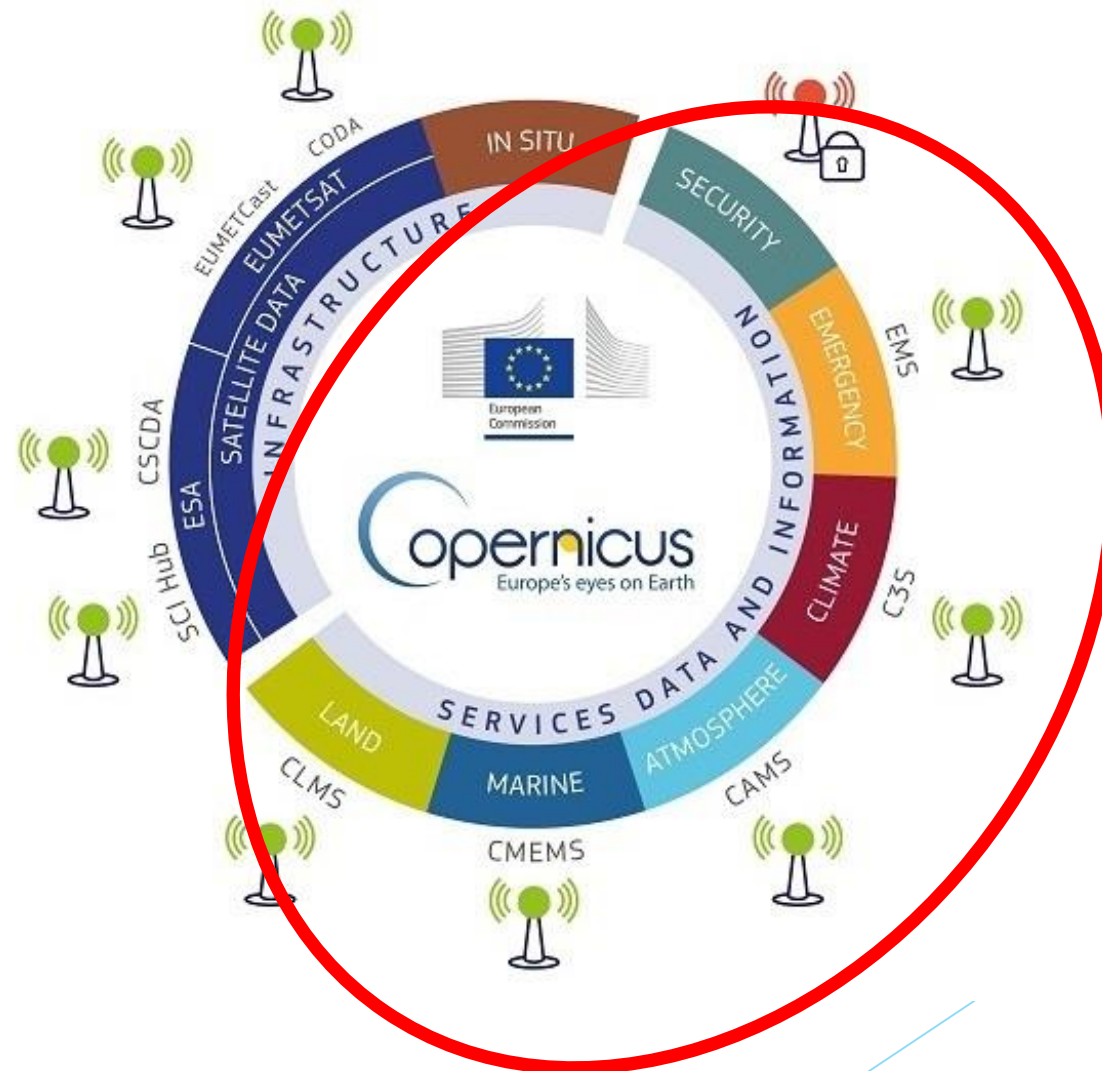
▶ CLIMATE

▶ EMERGENCY



Jak to ugryźć - usługi

- ▶ 1 punkt tematyczny o ograniczonym dostępie
- ▶ SECURITY



Copernicus Land Monitoring Service

► Dostępne dane:

Land User/Land Cover

Hydrology

Digital Elevation Model

Urban Atlas

Natura 2000

etc...

<http://land.copernicus.vgt.vito.be/PDF/port al/Application.html#Home>

Copernicus Global Land Service

Providing bio-geophysical products of global land surface



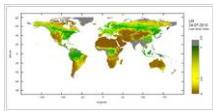
[Login](#) | [Register](#)
[Help](#) | [FAQ](#)
[Contact](#)

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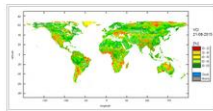
Vegetation State

VEGETATION PROPERTIES



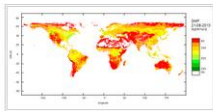
[Collections](#)

VEGETATION INDICATORS



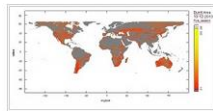
[Collections](#)

DRY MATTER PRODUCTIVITY



[Collections](#)

FIRE DISTURBANCE



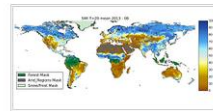
[Collections](#)

DYNAMIC LAND COVER



[Collections](#)

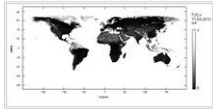
SOIL WATER



[Collections](#)

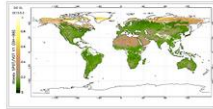
Energy Budget

TOP OF CANOPY REFLECTANCE



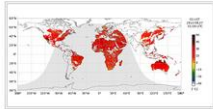
[Collections](#)

ALBEDO



[Collections](#)

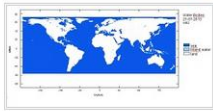
LAND SURFACE TEMPERATURE



[Collections](#)

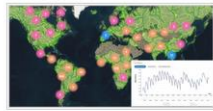
Water Cycle

WATER BODIES



[Collections](#)

WATER LEVEL



[Collections](#)

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Copernicus Global Land Service

Providing bio-geophysical products of global land surface



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Soil Water

Help

Collection

- Daily Soil Water Index V3 (4092 products)
- 10-daily Soil Water Index V3 (403 products)
- Soil Water Index static layers (4 products)
- Soil Water Index Time Series V3 (1 product)

Basic

Search Reset

Number of results per page 20

1000 km
1000 mi

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Soil Water - Daily Soil Water Index V3

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- Daily Soil Water Index V3 (4092 products) [Info](#) [View](#)
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Basic

Date	Slot
Start date: 01/01/2007	
End date: 15/03/2018	
<input type="text" value="11.9826"/>	<input type="text" value="59.1316"/>
<input type="text" value="46.8885"/>	<input type="text" value="24.2257"/>

Advanced

Number of results per page

47.40955, 77.62063

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Product details

Product Type (Collection) BioPar_SWI_V3_Global
Product ID SWI_201802260000_GLOBE_ASCAT_V3.0.1
Parent ID urn:cgl:global:swi_v3_0.1degree
File ID urn:cgl:global:swi_v3_0.1degree:SWI_201802260000_GLOBE_ASCAT_V3.0.1
Start Date 25/02/2018 12:00:00
End Date 26/02/2018 12:00:00
Polygon -90.00000000 180.00000000 90.00000000 180.00000000 90.00000000 -180.00000000 -90.00000000 -180.00000000 -90.00000000 180.00000000
Size 15.1 MB
Platform METOP A+B
Instrument ASCAT
Projection information EPSG:32662 WGS84
Production date 26/02/2018

Thumbnail

Close Download INSPIRE compliant metadata

legend Soil Water - Daily Soil Water Index V3

0 products selected on a total of 4090 20 Per << < 1 of 205 >>

Select all 4090 products

Download	Product ID	Start Date	End Date	Size
<input type="checkbox"/>	SWI_201803150000_GLOBE_ASCAT	12:00:00	12:00:00	
<input type="checkbox"/>	SWI_201803140000_GLOBE_ASCAT	13/03/2018 12:00:00	14/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803130000_GLOBE_ASCAT	12/03/2018 12:00:00	13/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803120000_GLOBE_ASCAT	11/03/2018 12:00:00	12/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803110000_GLOBE_ASCAT	10/03/2018 12:00:00	11/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803100000_GLOBE_ASCAT	09/03/2018 12:00:00	10/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803090000_GLOBE_ASCAT	08/03/2018 12:00:00	09/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803080000_GLOBE_ASCAT	07/03/2018 12:00:00	08/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803070000_GLOBE_ASCAT	06/03/2018 12:00:00	07/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803060000_GLOBE_ASCAT	05/03/2018 12:00:00	06/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803050000_GLOBE_ASCAT	04/03/2018 12:00:00	05/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803040000_GLOBE_ASCAT	03/03/2018 12:00:00	04/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803030000_GLOBE_ASCAT	02/03/2018 12:00:00	03/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803020000_GLOBE_ASCAT	01/03/2018 12:00:00	02/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201803010000_GLOBE_ASCAT	28/02/2018 12:00:00	01/03/2018 12:00:00	
<input type="checkbox"/>	SWI_201802280000_GLOBE_ASCAT	27/02/2018 12:00:00	28/02/2018 12:00:00	
<input type="checkbox"/>	SWI_201802270000_GLOBE_ASCAT	26/02/2018 12:00:00	27/02/2018 12:00:00	
<input checked="" type="checkbox"/>	SWI_201802260000_GLOBE_ASCAT	25/02/2018 12:00:00	26/02/2018 12:00:00	
<input type="checkbox"/>	SWI_201802250000_GLOBE_ASCAT	24/02/2018 12:00:00	25/02/2018 12:00:00	
<input type="checkbox"/>	SWI_201802240000_GLOBE_ASCAT	23/02/2018 12:00:00	24/02/2018 12:00:00	

1000 km | 1000 mi

48.45152, 1.56295

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Copernicus Marine Environment Monitoring Service

- ▶ 140 produktów
- ▶ Dane z oceanów oraz mórz Europy
- ▶ Analizy, prognozy
- ▶ Modele i obserwacje

- ▶ Ma zostać dodane falowanie

<http://marine.copernicus.eu/>

The image shows the homepage of the Copernicus Marine Environment Monitoring Service. The header features the European Commission logo and the service name: "COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE". Below the header is a navigation menu with categories: ABOUT US, MARKETS & BENEFITS, NEWS, SCIENCE & MONITORING, TRAINING & EDUCATION, and SERVICES PORTFOLIO. A search bar is located in the top right corner. A "SHORT-CUT TO SERVICES" sidebar is open, listing options like REGISTER NOW!, SCIENTIFIC QUALITY, ONLINE TUTORIALS, and COLLABORATIVE FORUM. The main content area is titled "ACCESS YOUR OCEAN INFORMATION" and includes a "FIRST VISIT?" button. It offers filters for "AREA", "PARAMETERS", "TEMPORAL COVERAGE", and "DEPTH". A list of oceanic regions is provided, including Global Ocean, Arctic Ocean, Baltic Sea, and others. A "LATEST NEWS FLASH" section highlights a release on the RRS dataset of product OCEANCOLOUR_BAL_OPTICS_J. A "PRODUCT SERVICE RELEASES & UPDATES FROM FEBRUARY TO APRIL 2018" section features a world map and a "READ MORE" button. The footer contains a site map notice and a navigation bar with "ANY QUESTIONS?" and a contact icon.

COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE
Providing PRODUCTS and SERVICES for all marine applications

Search terms **OK**

ABOUT US | MARKETS & BENEFITS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO

ACCESS YOUR OCEAN INFORMATION **FIRST VISIT?**

Select your:

AREA
PARAMETERS
TEMPORAL COVERAGE
DEPTH

- ▶ GLOBAL OCEAN
- ▶ ARCTIC OCEAN
- ▶ BALTIC SEA
- ▶ EUROPEAN NORTH WEST SHELF SEAS
- ▶ IBERIA-BISCAY-IRELAND REGIONAL SEAS
- ▶ MEDITERRANEAN SEA
- ▶ BLACK SEA

2018
14
MAR.

LATEST NEWS FLASH
CMEMS-7476
Issue on RRS dataset of product OCEANCOLOUR_BAL_OPTICS_J IN PROGRESS

[ALL NEWS FLASH](#)

28 MONDAY **EVENTS AGENDA**

PARTNERS AND STAKEHOLDERS

FOCUS ON

TRAINING AGENDA

PRODUCT SERVICE RELEASES & UPDATES FROM FEBRUARY TO APRIL 2018

The Copernicus Marine Service is pleased to deliver New Service Releases on 28 February, 22 March, 26 April 2018. These releases offer several improvements related to the Product Portfolio and Service Portfolio.

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SITE MAP - ALL RIGHTS RESERVED

ABOUT | PARTNERS & BENEFITS | **ANY QUESTIONS?**

http://marine.copernicus.eu/

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CATALOGUE PDF

FIRST VISIT ?

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1

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YOUR SEARCH



Search by keyword

REGIONAL DOMAIN

Baltic Sea

PARAMETERS

TEMPORAL COVERAGE

From 1992-01-01 To 2018-03-25

If checked, the search results will only show products containing the whole selected time range

PRODUCT WITH DEPTH LEVEL

Found 25 ocean products matching your criteria.

Export results

BALTICSEA_ANALYSIS_FORECAST_PHY_003_006
BALTIC SEA PHYSICS ANALYSIS AND FORECAST

MODEL	X X X X	BAL
T bottomT S SSH UV MLD SIC SIT		
2 km x 2 km (25 depth levels)		
From 2015-04-01 to Present		
daily-mean, hourly-instantaneous		
MORE INFO	ADD TO CART	WMS Sub-setting

BALTICSEA_ANALYSIS_FORECAST_WAV_003_010
BALTIC SEA WAVE ANALYSIS AND FORECAST

MODEL	X	BAL
SWH MWP VMDR VSDXY WW SW1 SW2		
2 km x 2 km (Surface only)		
From 2015-04-06 to Present		
hourly-instantaneous		
MORE INFO	ADD TO CART	WMS Sub-setting

BALTICSEA_ANALYSIS_FORECAST_BIO_003_007
BALTIC SEA BIOGEOCHEMISTRY ANALYSIS AND FORECAST

MODEL	X X X X X X	BAL
CHL O2 NO3 PO4		
2 km x 2 km (25 depth levels)		
From 2015-04-01 to Present		
daily-mean, hourly-instantaneous		
MORE INFO	ADD TO CART	WMS Sub-setting


http://marine.copernicus.eu/

PRODUCT IDENTIFIER	BALTICSEA_ANALYSIS_FORECAST_PHY_003_006
OVERVIEW	
Short description:	<p>This Baltic Sea physical model product provides forecasts for the physical conditions in the Baltic Sea. The Baltic forecast is updated twice daily providing a new two days forecast with hourly data for sea level variations, ice concentration and thickness at the surface, and temperature, salinity and horizontal velocities for the 3D field. The product is based on the 3D ocean model code HBM developed within the Baltic ocean community.</p>
Detailed description:	<p>The Baltic Sea physical model product provides information for the physical conditions in the Baltic Sea on a product grid with horizontal resolution of 1 nautical mile and with up to 25 vertical depth levels. The area covers the Baltic Sea including the transition area towards the North Sea (i.e. the Danish Belts, the Kattegat and Skagerrak).</p> <p>The product provides:</p> <ul style="list-style-type: none">Hourly instantaneously model data for sea level variations, ice concentration and thickness at the surface, and temperature, salinity and horizontal velocities for the 3D field. The bottom sea temperature from the lowest model grid cell is included as a 2D field; as well as a calculation of the mixed layer depth.Daily mean values (25 hours average) of the same variables. <p>The Baltic forecast product is updated twice per day with a new forecast simulation for the next two days. The hindcast data are available online in the CMEMS Catalogue for the latest 2 years. Data older than this can be requested by contacting the CMEMS Service Desk.</p> <p>The Baltic Sea physical model product provides results from simulations with the HBM model applied on a two-way nested grid set up covering the North Sea - Baltic Sea area. The North Sea is covered by a grid with 3 nautical miles horizontal resolution, two-way nested to a grid covering the transition area through the Danish straits with 0.5 nautical miles resolution, which is two-way nested to a 1 nautical mile grid for the whole Baltic Sea area. The native model grid has up to 122 vertical layers.</p> <p>HBM is an operational three-dimensional, free-surface, baroclinic ocean circulation and sea ice model that solves the primitive (Navier-Stokes) equations for horizontal momentum and mass, and budget equations for salinity and heat on a spherical grid that co-moves with the Earth's rotation. The vertical transport assumes hydrostatic balance and incompressibility of sea water. Horizontal transport is modelled using the Boussinesq approximation, where density differences are neglected in all but gravity terms.</p> <p>Higher order contributions to the dynamics are parameterized following Smagorinsky (1963) in the horizontal direction and a $k-\omega$ turbulence closure scheme, which has been extended for buoyancy-affected geophysical flows in the vertical direction. The turbulence model includes a parameterization of breaking surface and internal waves. Stability functions from Canuto et al. (Carnuto part III) for the vertical eddy diffusivities of salinity, temperature and momentum have been applied. The model allows for fully two-way nesting of grids with different vertical and horizontal resolution, as well as time resolution. The numerical model implementation uses a staggered Arakawa C-grid and z-level coordinates, a flux-corrected horizontal advection scheme and free-slip conditions along the coastlines.</p> <p>For details on the HBM ocean code please see: Berg, P, 2012. "Mixing in HBM". DMI Scientific Report No. 12-03. http://www.dmi.dk/fileadmin/Rapporter/SR/sr12-03.pdf Berg, P., and Jacob Weismann Poulsen, 2012. "Implementation details for HBM". DMI Technical Report No. 12-11. http://beta.dmi.dk/fileadmin/Rapporter/TR/tr12-11.pdf Poulsen, J.W., and P. Berg, 2012. "More details on HBM - general modelling theory and survey of recent studies". DMI Technical Report No. 12-16. http://beta.dmi.dk/fileadmin/Rapporter/TR/tr12-16.pdf Poulsen, J.W., and P. Berg, 2013. "Thread scaling with HBM". DMI Technical Report No. 12-20. www.dmi.dk/fileadmin/user_upload/Rapporter/tr12-20.pdf</p>
GEOGRAPHICAL COVERAGE	66.0 Areas: 9.0 Loading preview ... 30.0 baltic-sea 53.0
OBSERVATION/MODELS	numerical-model
PRODUCT TYPE	forecast near-real-time
PROCESSING LEVEL	L4
DATA ASSIMILATION	None
VARIABLES	sea_water_potential_temperature (T) sea_water_potential_temperature_at_sea_floor (bottomT) sea_water_salinity (S) sea_surface_height_above_sea_level (SSH) eastward_sea_water_velocity (UV) northward_sea_water_velocity (VU) ocean_mixed_layer_thickness_defined_by_sigma_theta (MLD) sea_ice_area_fraction (SIC) sea_ice_thickness (SIT)
SPATIAL RESOLUTION	2km x 2km

Copernicus Climate Change Service

- ▶ Informacje o globalnym ociepleniu
- ▶ Prognozy sezonowe
- ▶ Analizy, mapy, animacje

http://apps.ecmwf.int/datasets/data/interim-full-daily/levtype=sfc/

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ERA Interim, Daily

Please login before retrieving data from this dataserer.

Please note that the fields shown on this interface are a subset of the ERA Interim dataset. The complete dataset (including wave fields) is available via the batch access. The full list of fields can be found [here](#).

Select a month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1979	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1980	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1981	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1982	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1983	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1984	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1985	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1986	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1987	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1988	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1989	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1990	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1991	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1992	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1993	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1994	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1995	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1996	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1997	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1998	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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2005	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2006	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2007	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2008	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2009	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2010	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2011	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2012	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2013	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select time

00:00:00 06:00:00 12:00:00 18:00:00

Select All or Clear

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 - Tsunami
 - Trzęsieniach ziemi
 - Osuwiskach
 - Pożarach
 - Burzach
 - Kryzysach humanitarnych
 - Erupcjach wulkanicznych
- ▶ Autoryzowani użytkownicy mogą dać wsad
- ▶ Każdy może uzyskać dane

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 - Powodziach
 - Tsunami
 - Trzęsieniach ziemi
 - Osuwiskach
 - Pożarach
 - Burzach
 - Kryzysach humanitarnych
 - Erupcjach wulkanicznych
- ▶ Autoryzowani użytkownicy mogą dać wsad
- ▶ Każdy może uzyskać dane

Copernicus Emergency Management Service



COPERNICUS

Emergency Management Service



LATEST NEWS : 2018-03-14 | The Copernicus Emergency Management Service Monitors the Floods in North Western Albania

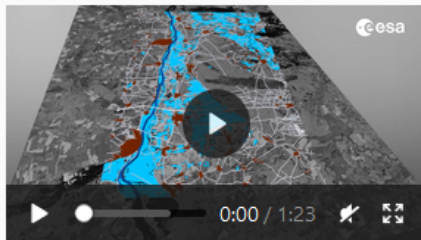
Copernicus Emergency Management Service

Copernicus Emergency Management Service (Copernicus EMS) provides information for emergency response in relation to different types of disasters, including meteorological hazards, geophysical hazards, deliberate and accidental man-made disasters and other humanitarian disasters as well as prevention, preparedness, response and recovery activities. Three modules constitute the Copernicus EMS:

Copernicus EMS - Mapping

The Copernicus EMS - Mapping addresses, with worldwide coverage, a wide range of emergency situations resulting from natural or man-made disasters. Satellite imagery is used as the main datasource. The service covers in particular:

- Floods
- Tsunamis
- Earthquakes
- Landslides
- Fires
- Severe Storms
- Volcanic eruptions
- Technological disasters
- Humanitarian crises



Copernicus EMS - Mapping

European Flood Awareness System

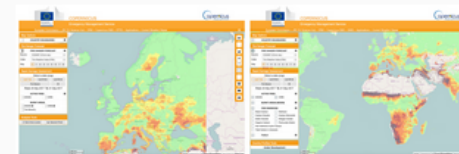
The European Flood Awareness System (EFAS) is the first operational system that monitors and forecasts flood events across Europe. It provides its partners (national/regional authorities, as well as the European Commission's Emergency Response Coordination Centre) with a wide range of complementary, added value flood early warning information including related risk assessments up to 10 days in advance.



European Flood Awareness System

European Forest Fire Information System (EFFIS) and Global Wildfire Information System (GWIS)


The European Forest Fire Information System (EFFIS) monitors forest fire activity in near-real time and archives historical information on forests fires in Europe, Middle East and North Africa. The Global Wildfire Information System (GWIS) is a joint initiative of the Copernicus EMS and the Group on Earth Observations (GEO) work programs aiming at monitoring wildfire occurrence and impact at the global level. Both, EFFIS & GWIS, support wildfire management at national, regional and global levels.



Access to EFFIS and GWIS application are available at:

EFFIS and GWIS Systems


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Copernicus EMS » Copernicus Emergency Management Service

Home | What is Copernicus | EMS - Mapping | EMS - Early Warning System News 

LATEST NEWS · 2018-03-09 | [The Copernicus EMS Monitors the Rohingya Refugee Crisis in Bangladesh](#)

EMS - MAPPING

- Service Overview
- Who can use the service
- How to use the service
- Products: Rapid Mapping
- Products: Risk and Recovery
- Quality control / Feedback
- User Guide

RAPID MAPPING

- List of Activations
- Map of Activations
- GeoRSS Feed

RISK AND RECOVERY

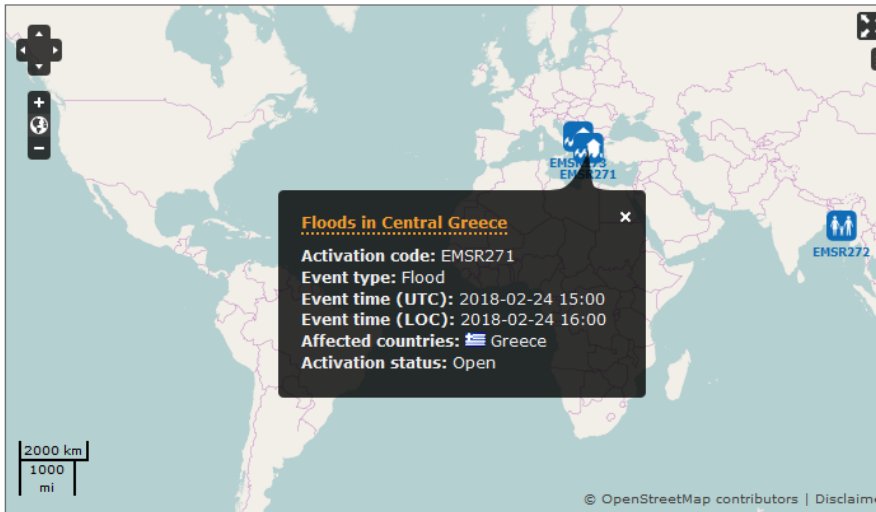
- List of Activations
- Map of Activations
- GeoRSS Feed

OTHER

- Map of Activations of Other Organizations
- Map Coverage Planner
- Meetings, Workshops
- Citation Guidelines
- Citations
- Calls for Tender

Copernicus Emergency Management Service - Mapping







A service in support of European emergency response



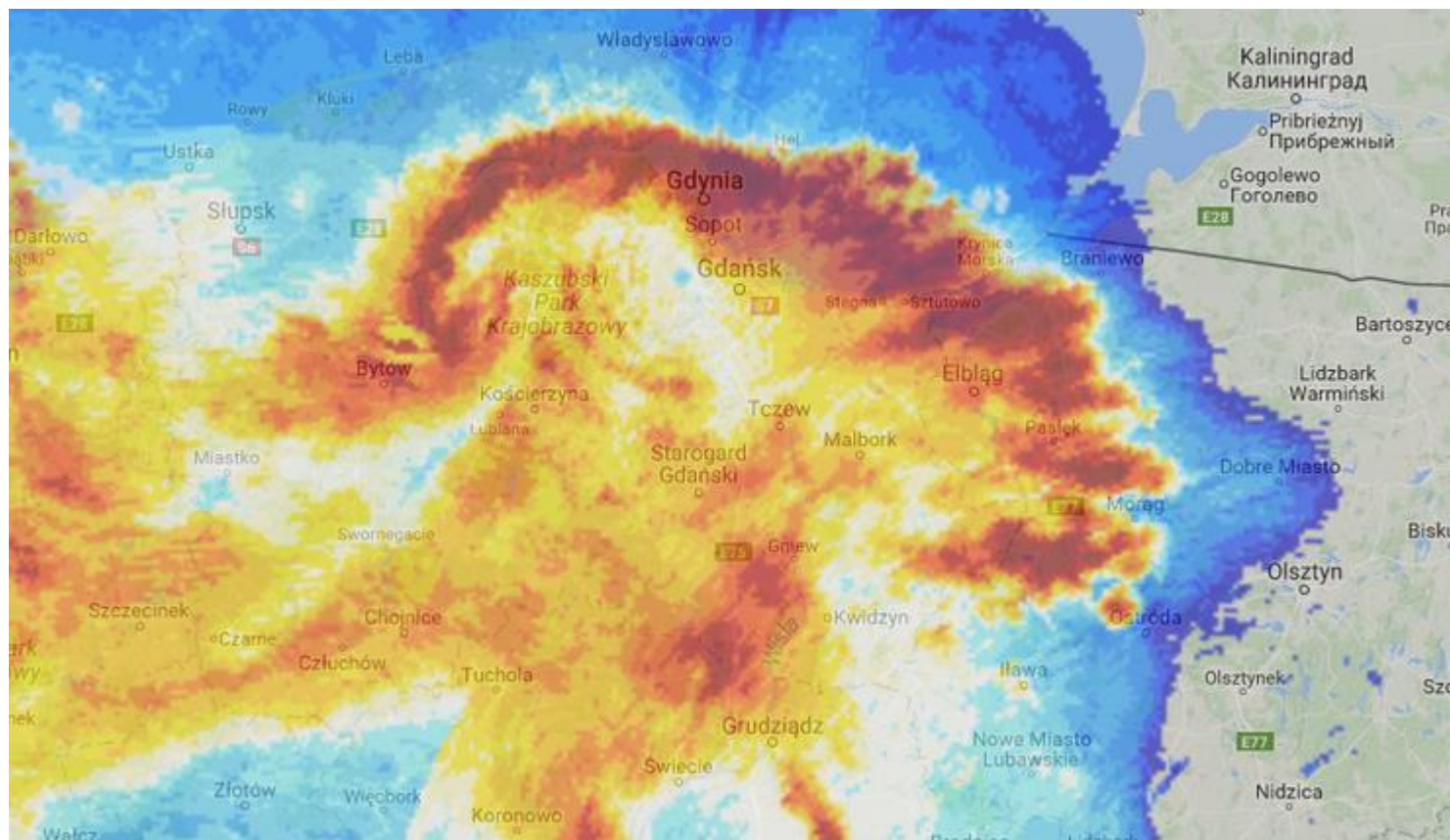
© OpenStreetMap contributors | Disclaimer

Map above displays only latest Copernicus EMS - Mapping Activations. To see a Map of All Activations, go to section Map of Activations in Rapid Mapping or in Risk and Recovery Mapping sub-menus respectively.

Latest Copernicus EMS - Mapping Activations

Act. Code	Title	Event Date	Type	Country/Terr.	Feed
EMSR273	Flood in North Western Albania	2018-03-14	Flood	Albania	 
EMSR272	Reference maps in Bangladesh	2018-03-08	Humanitarian	Bangladesh	 
EMSR271	Floods in Central Greece	2018-02-24	Flood	Greece	 

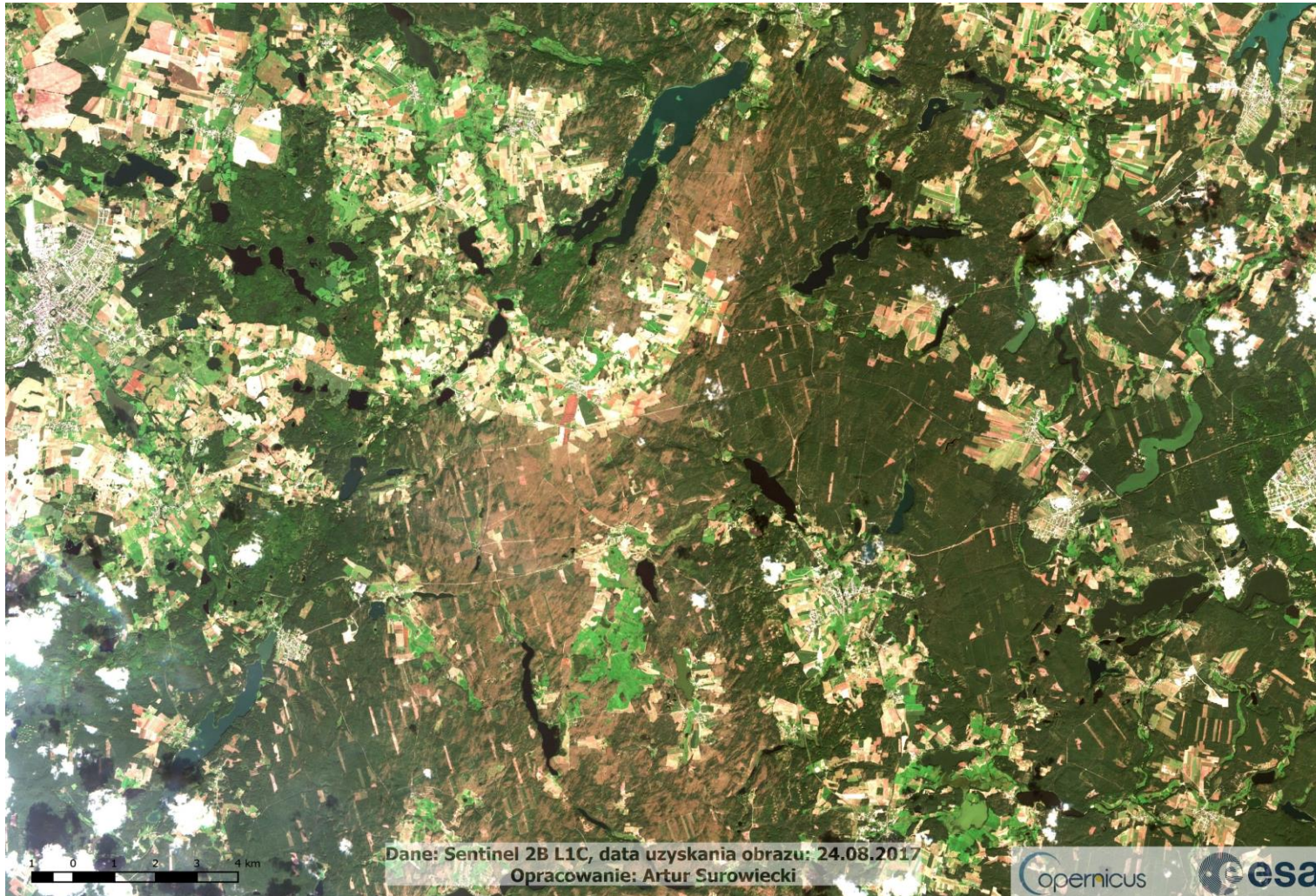
Przykład użycia



Przykład użycia



Przykład użycia



Dane: Sentinel 2B L1C, data uzyskania obrazu: 24.08.2017
Opracowanie: Artur Surowiecki

Copernicus

esa

Przykład użycia



Bilans

- ▶ 6 osób zabitych
- ▶ 62 ranne
- ▶ 8,2 milionów metrów sześciennych drewna szkód w drzewostanie
- ▶ 26 tysięcy interwencji PSP
- ▶ 3 miliardy złotych szkód

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