

Poland

  **esero** 

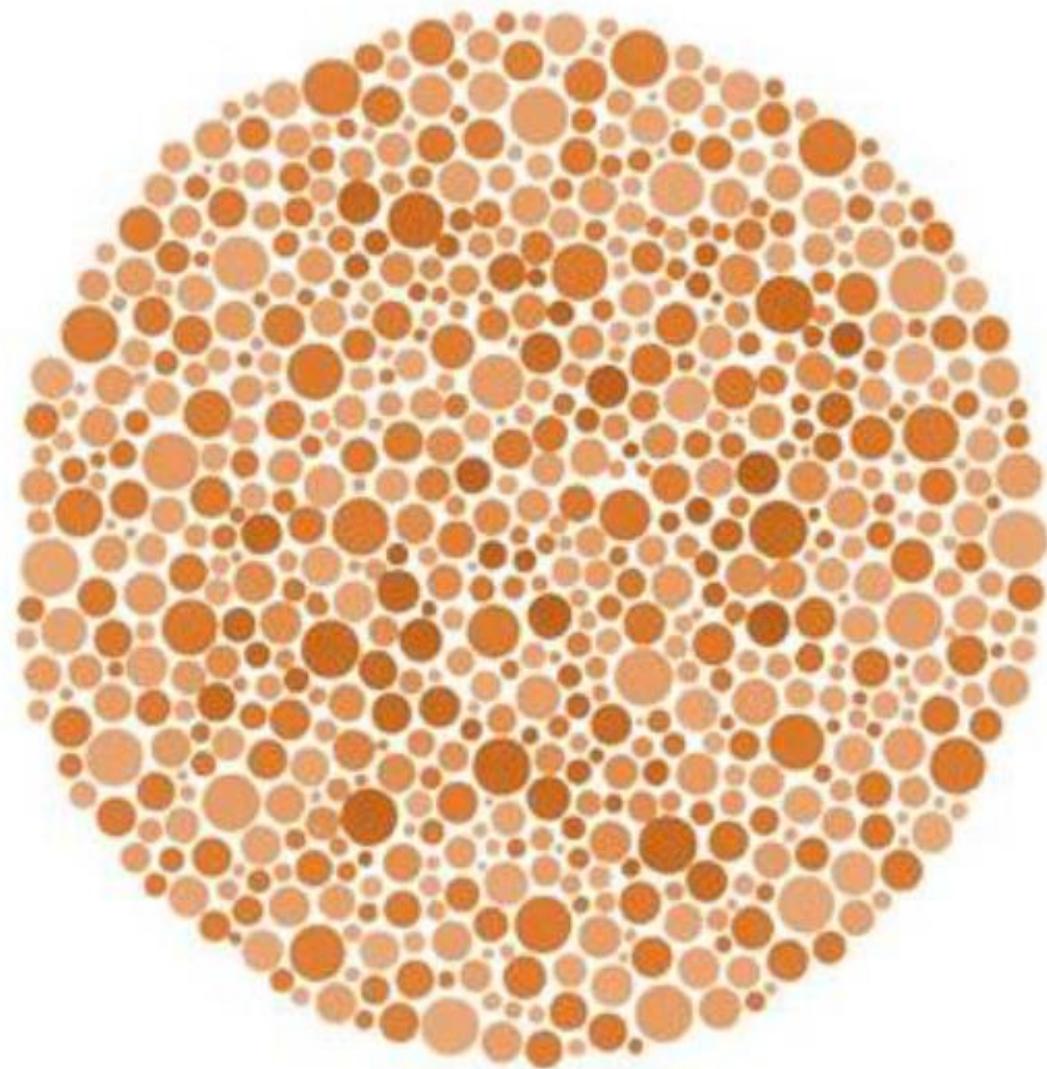
**Houston, mamy...  
obraz!**

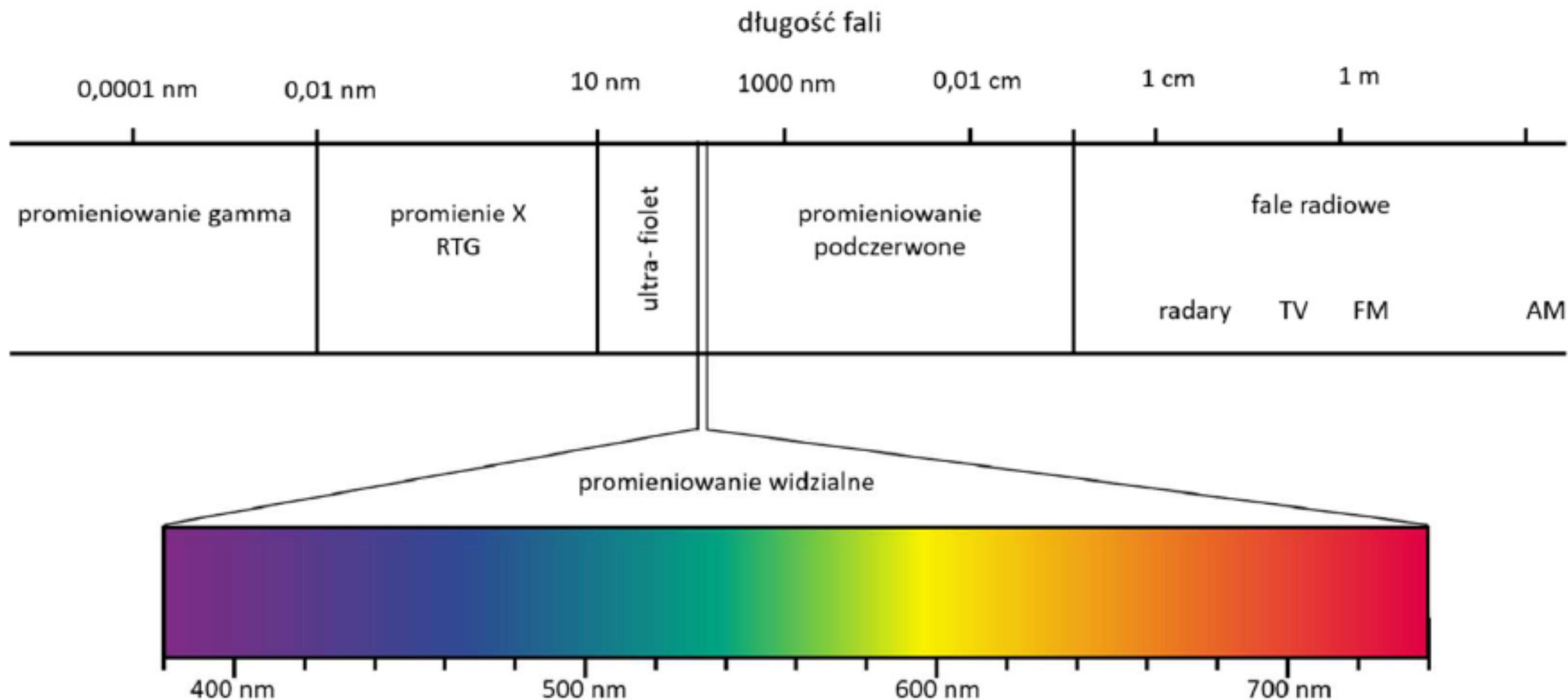




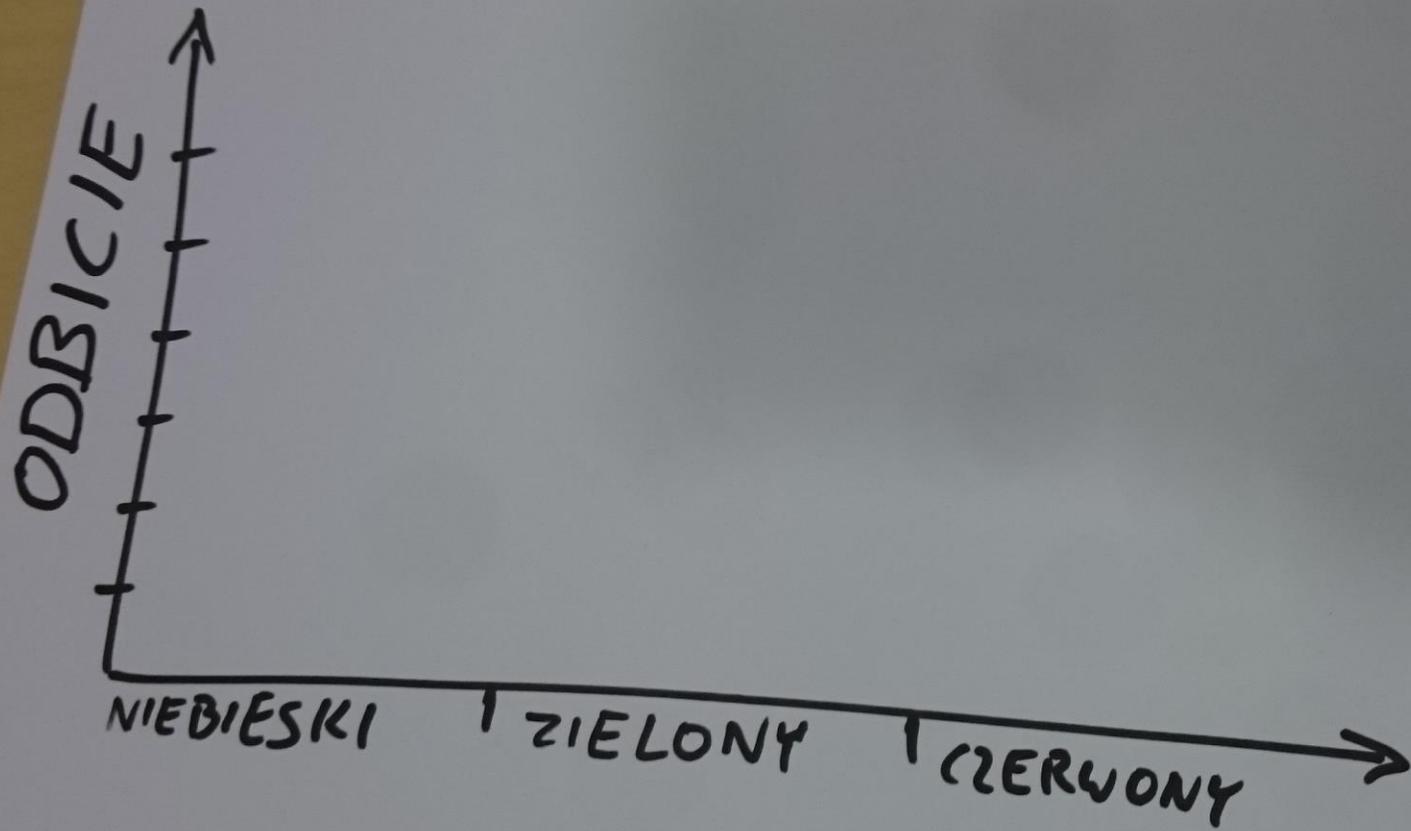
antafes  
antafes  
DARK BLUE FILTER  
DARK BLUE FILTER  
PLEASE  
REMOVE THE FILM  
BEFORE TURNING ON  
PLEASE  
REMOVE THE FILM  
BEFORE TURNING ON

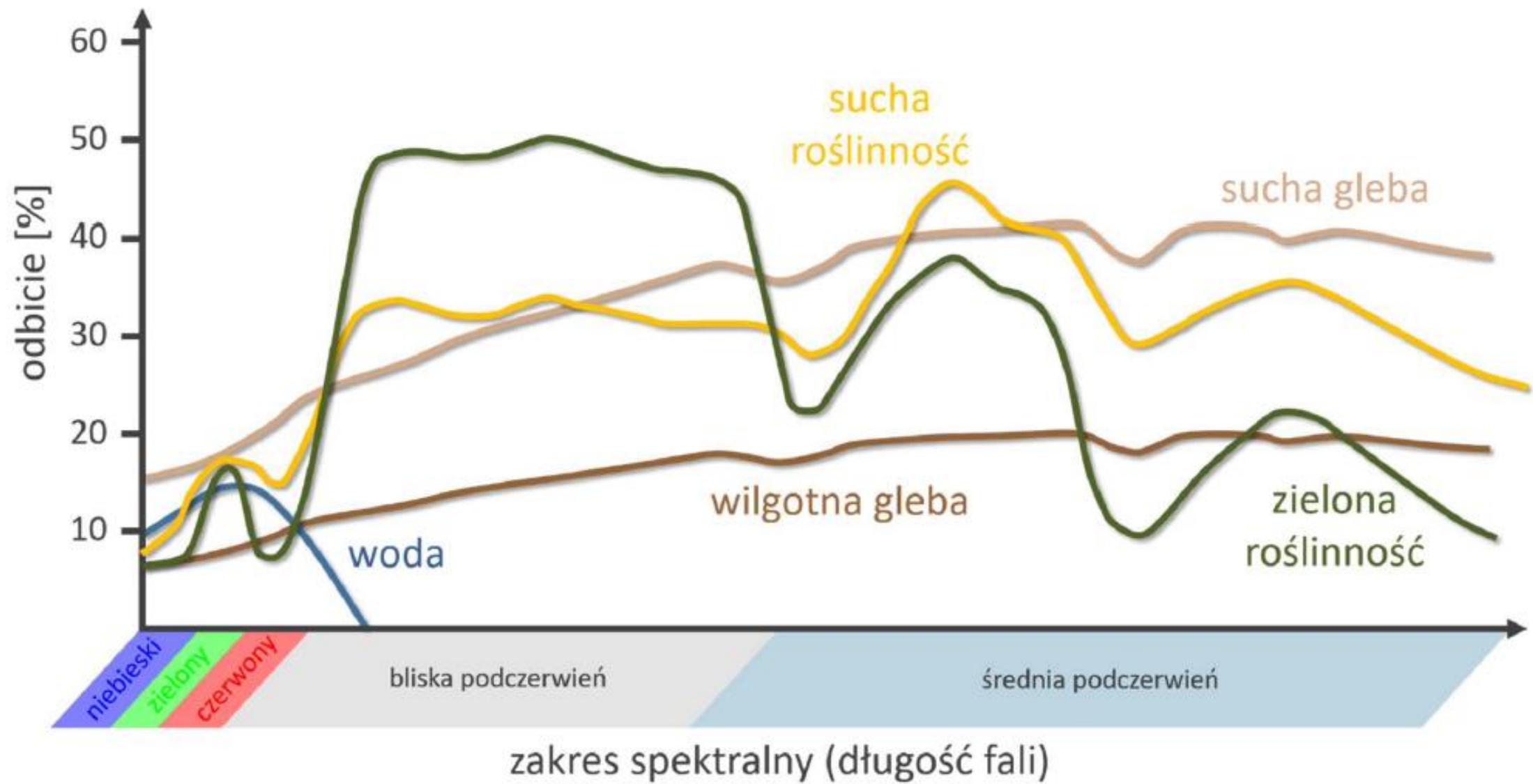
Widzenie barwne – jaka to liczba?

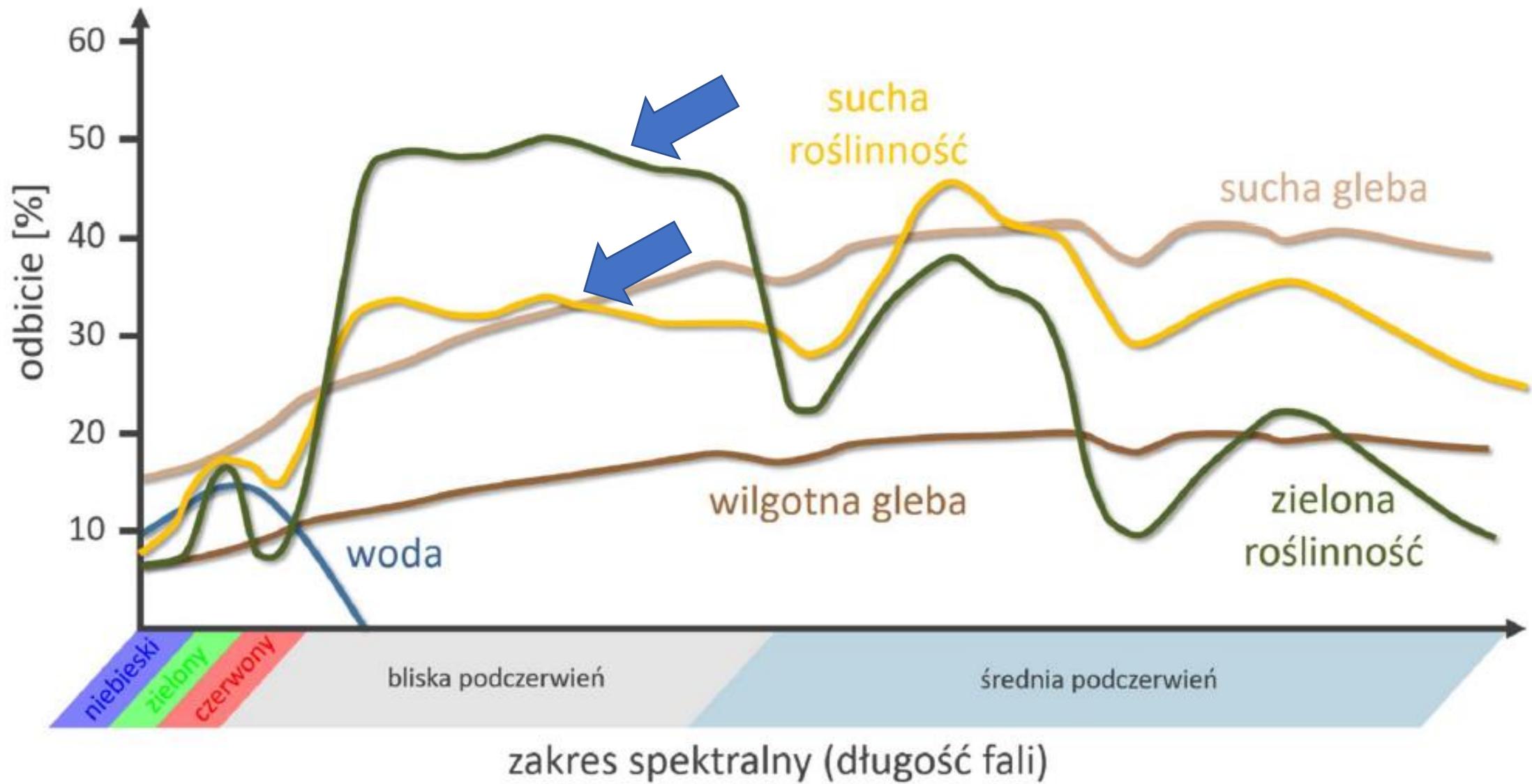




Rys. 2. Promieniowanie widzialne na tle szerszego zakresu promieniowania elektromagnetycznego









eo browser

All Images News Videos Maps More Settings Tools

About 189,000,000 results (0.41 seconds)

Sentinel-hub EO-Browser

https://apps.sentinel-hub.com/eo-browser/

You've visited this page many times. Last visit: 11/23/18

EO Browser | Sentinel

https://www.sentinel-hub.com/explore/eobrowser

EO Browser makes it possible to browse and compare full resolution images from the sources mentioned above. You simply go to your area of interest, select ...

You've visited this page 2 times. Last visit: 9/24/18

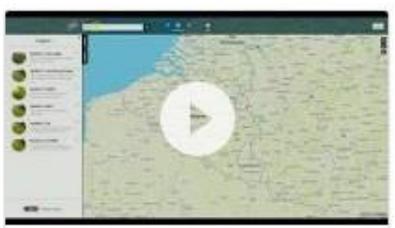
Videos



EO Browser Summer



ID 131 WebAssembly



Terrascope on Twitter:

Data sources:

- Sentinel-1
- Sentinel-2
  - L1C
  - L2A
- Landsat
- MODIS
- Proba-V
- GIBS

Max. cloud coverage: 100 %

Time range:

2018-09-24 - 2018-10-24

Theme:

Login to use custom configuration instances.

Search



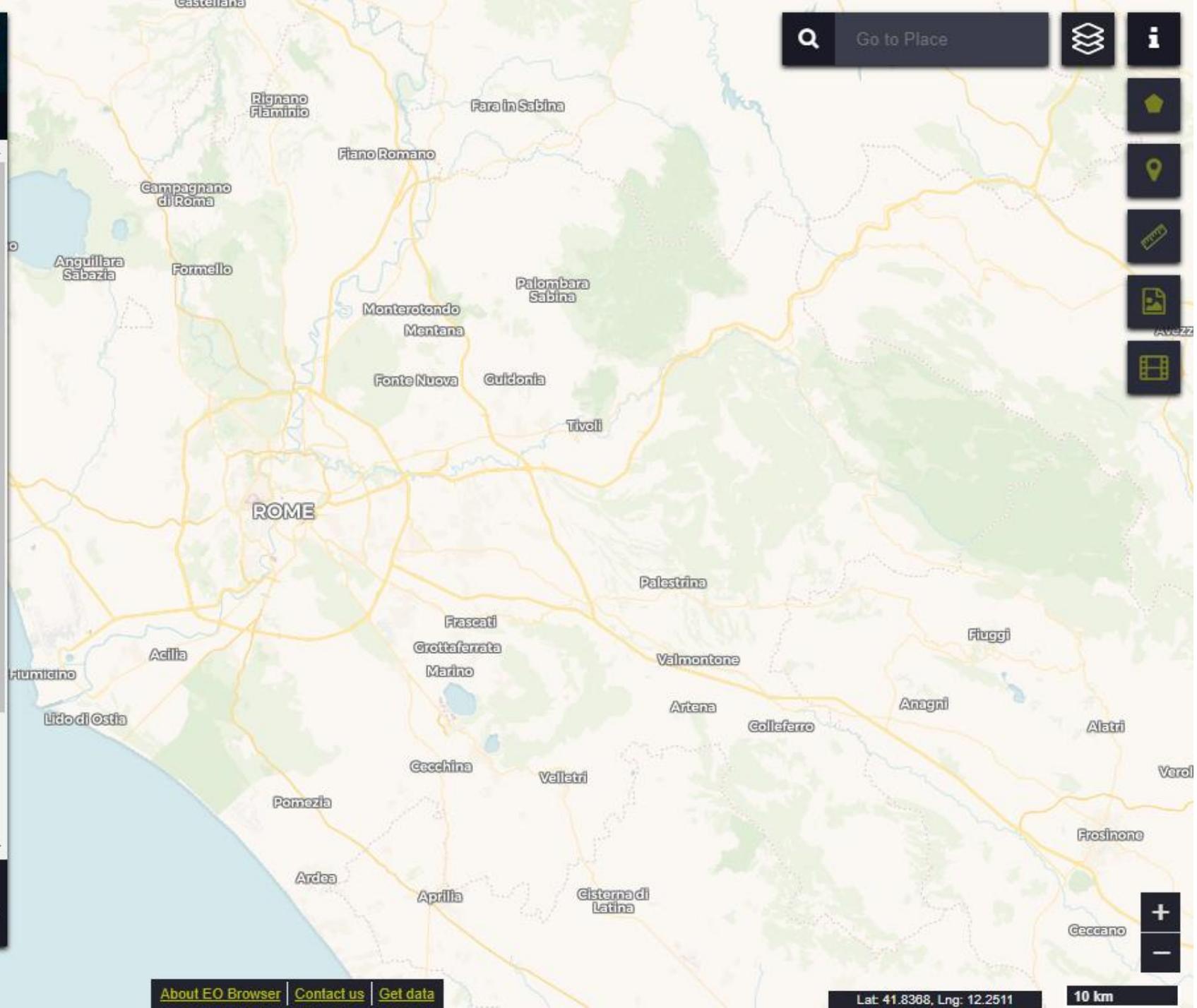
Error retrieving additional data!

These are theme parts which contain unavailable data sources:

- Landsat 5 ESA
- Landsat 7 ESA
- Landsat 8 ESA
- Sentinel-1 EOCloud GRD IW

Free sign up for all features

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- 
- 
- 
- 
- 
- 

Map navigation controls: zoom in (+), zoom out (-), and a 10 km scale bar.

Data sources:

- Sentinel-1
- Sentinel-2
  - L1C
  - L2A
- Landsat
- MODIS
- Proba-V
- GIBS

Max. cloud coverage: 100 %

Time range:

2018-09-24 - 2018-10-24

Theme:

Login to use custom configuration instances.

Search

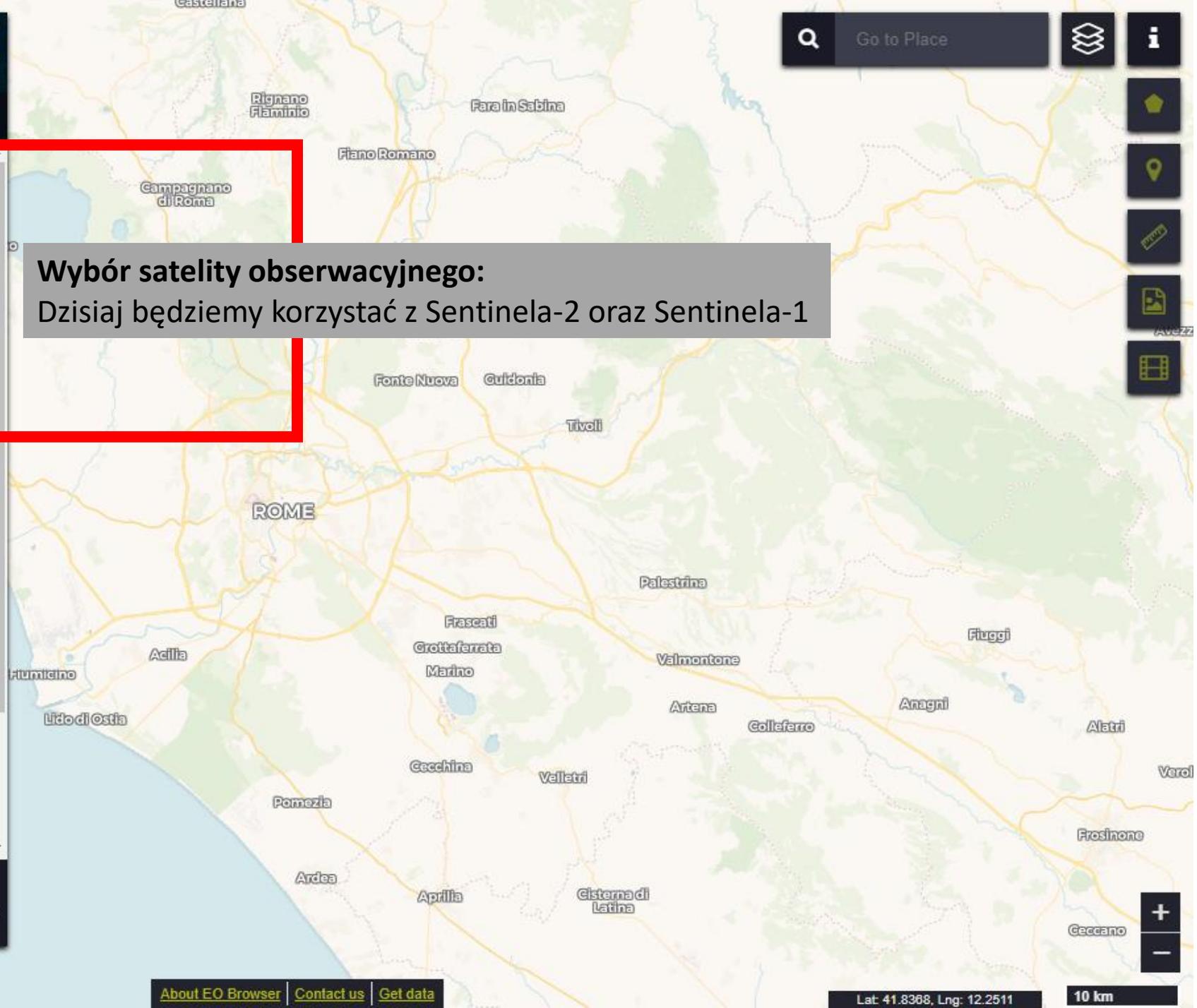
Error retrieving additional data!

These are theme parts which contain unavailable data sources:

- Landsat 5 ESA
- Landsat 7 ESA
- Landsat 8 ESA
- Sentinel-1 EOCloud GRD IW

Free sign up for all features

Wybór satelity obserwacyjnego:  
Dzisiaj będziemy korzystać z Sentinela-2 oraz Sentinela-1



Data sources:

- Sentinel-1
- Sentinel-2
  - L1C
  - L2A
- Landsat
- MODIS
- Proba-V
- GIBS

Max. cloud coverage: 100 %

Time range:

2018-09-24 - 2018-10-24

Theme:

Login to use custom configuration instances.

Search

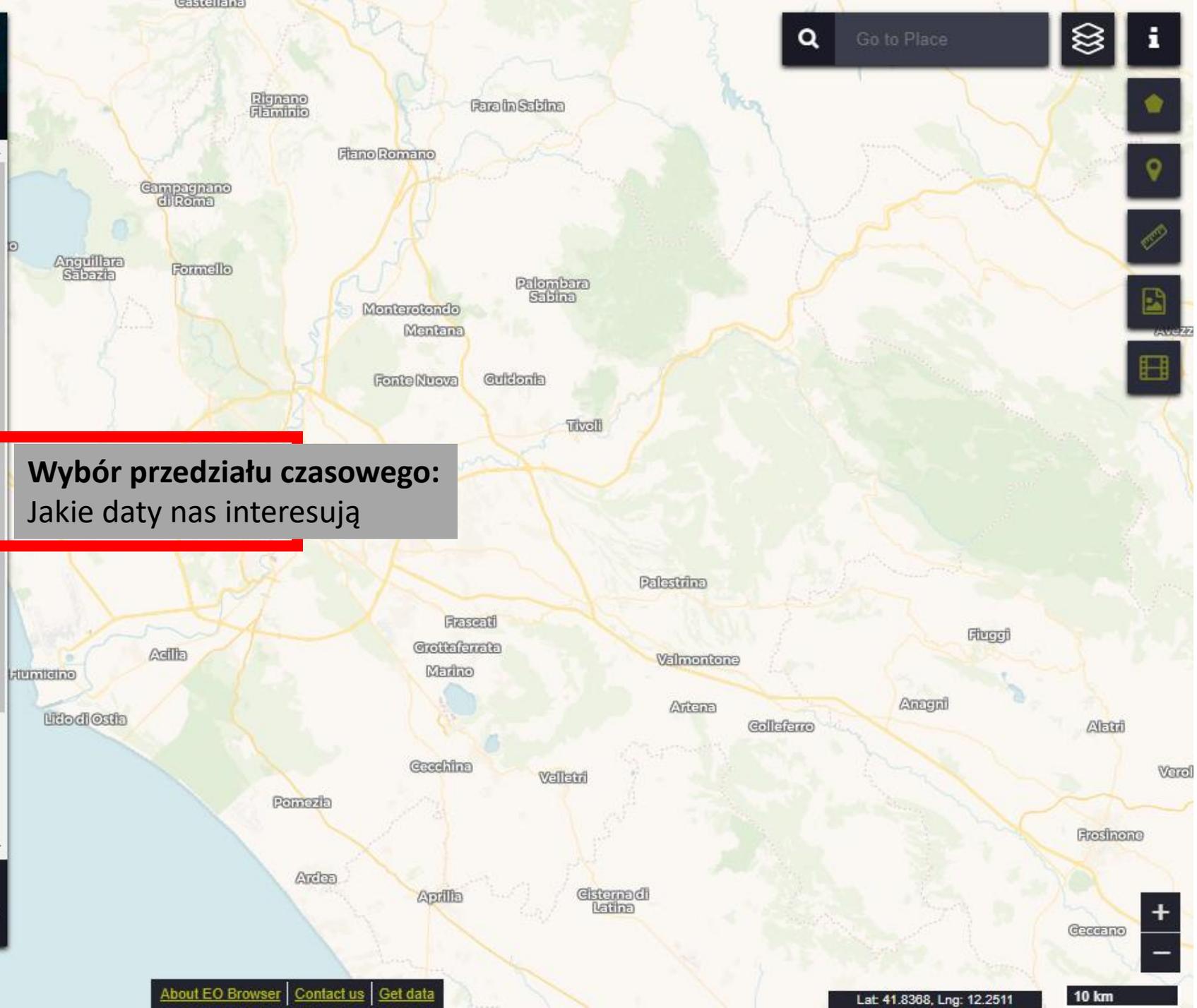
Error retrieving additional data!

These are theme parts which contain unavailable data sources:

- Landsat 5 ESA
- Landsat 7 ESA
- Landsat 8 ESA
- Sentinel-1 EOCloud GRD IW

Free sign up for all features

Wybór przedziału czasowego:  
Jakie daty nas interesują



Data sources:

- Sentinel-1
- Sentinel-2
  - L1C
  - L2A

Max. cloud coverage: 100 %

- Landsat
- MODIS
- Proba-V
- GIBS

Time range:

2018-09-24 - 2018-10-24

Theme:

Login to use custom configuration instances.

Search



Error retrieving additional data!

These are theme parts which contain unavailable data sources:

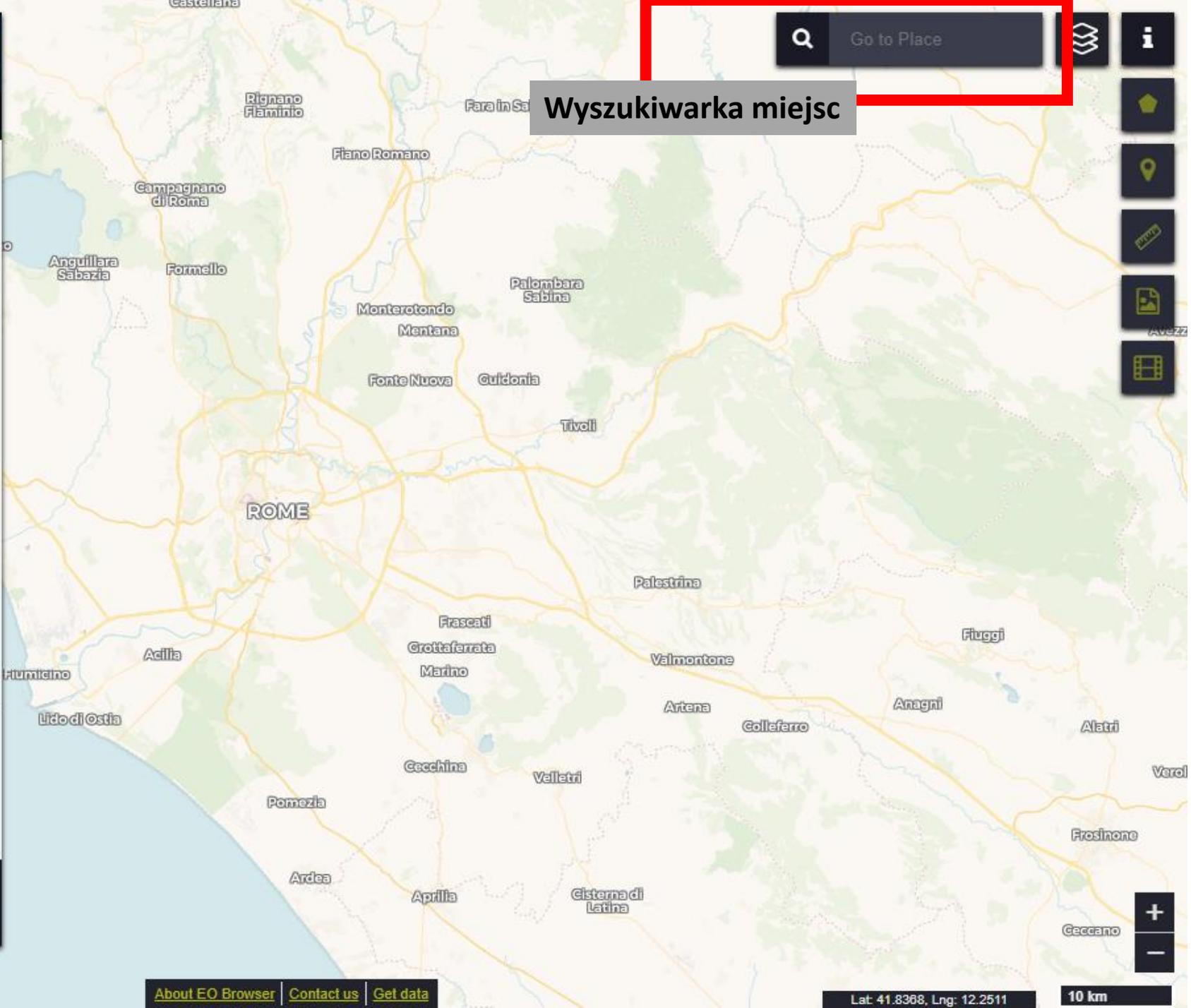
- Landsat 5 ESA
- Landsat 7 ESA
- Landsat 8 ESA
- Sentinel-1 EOCloud GRD IW

Free sign up for all features

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Wyszukiwarka miejsc



Results Clear data

Showing 50 results.



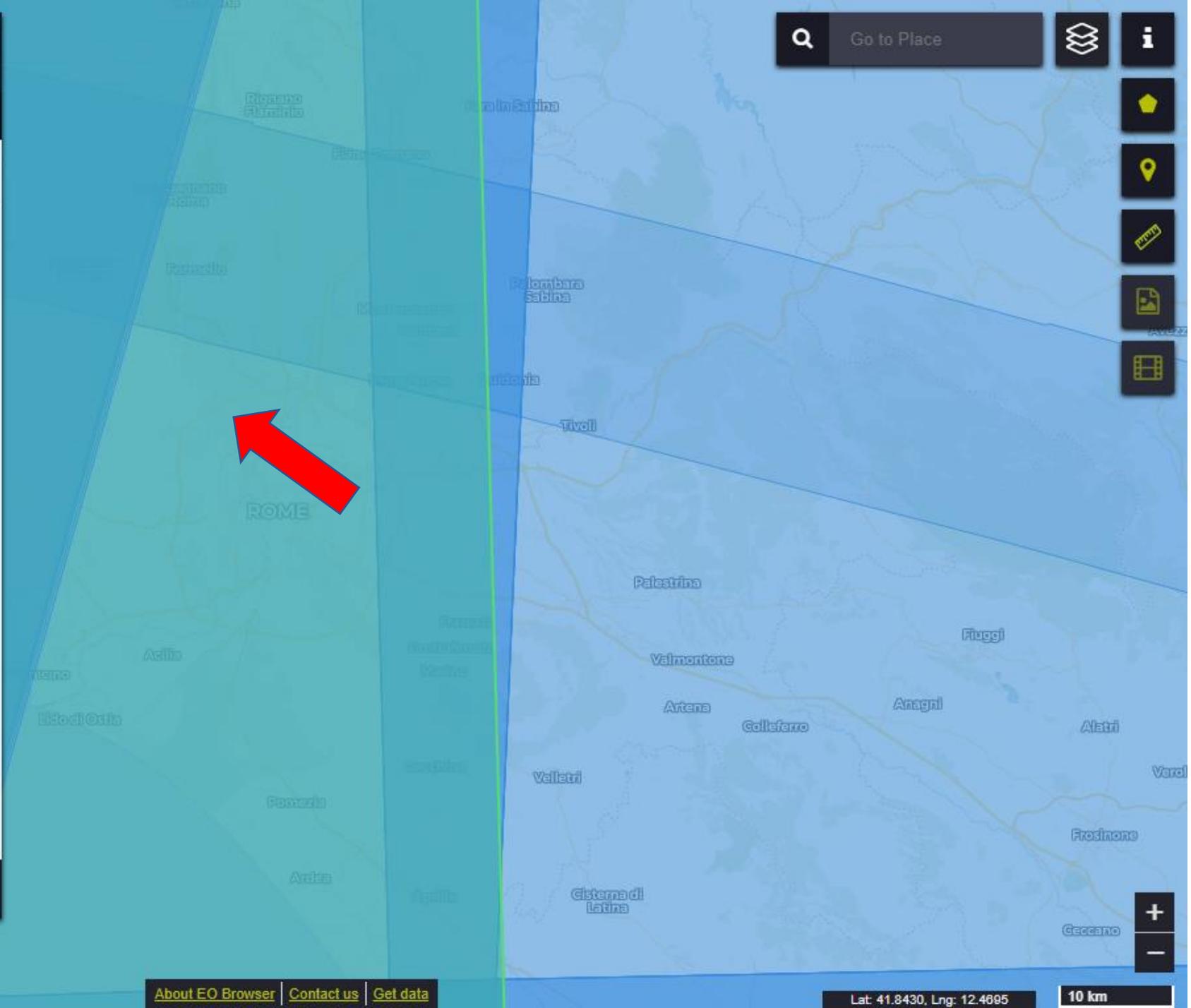
2018-10-23  
10:01:59 UTC  
3.42 %  
EPSG:4326  
33TUF  
[Visualize](#)



2018-10-23  
10:01:59 UTC  
20.74 %  
EPSG:4326  
33TUG  
[Visualize](#)



2018-10-23  
10:01:59 UTC  
0 %  
EPSG:4326  
32TQL  
[Visualize](#)



Map navigation and tool icons including Home, Location, Print, and Full Screen.

Dataset: SENTINEL-2 L1C

SHOW L2A

Date: 2018-10-23

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

False color (urban)  
Based on bands 12,11,4

NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands  $(R3 - R8V)/(R3 + R8)$

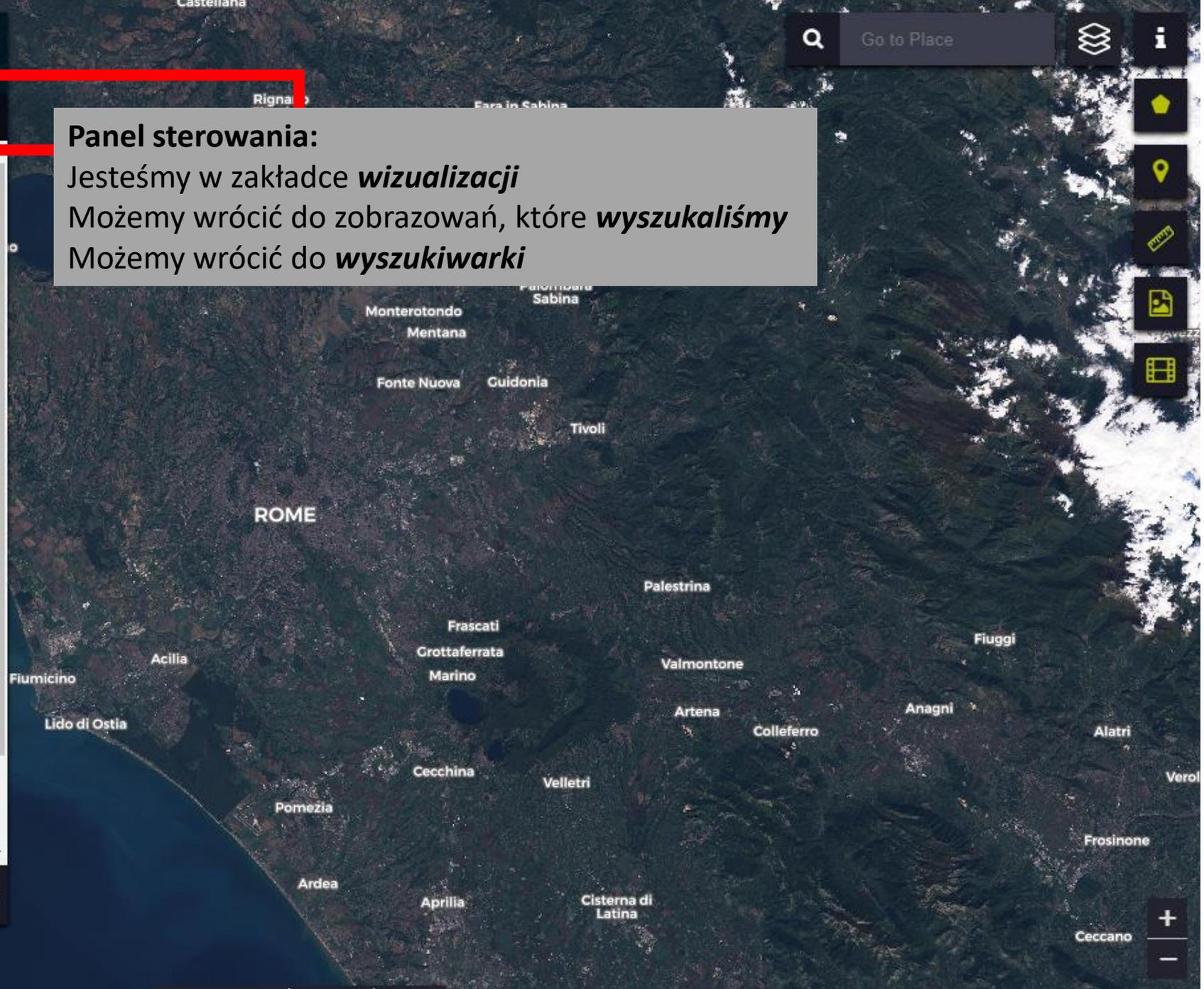
Powered by [Sinergise](#) with contributions from the European Space Agency v2.16.3

Panel sterowania:

Jesteśmy w zakładce *wizualizacji*

Możemy wrócić do zobrazowań, które *wyszukaliśmy*

Możemy wrócić do *wyszukiwarki*



Dataset: SENTINEL-2 L1C

SHOW L2A

Date: 2018-10-23

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

False color (urban)  
Based on bands 12,11,4

NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands  $(B3 - B8)/(B3 + B8)$

Możliwe opcje wizualizacji:

Dataset: SENTINEL-2 L1C

SHOW L2A

Date: 2018-10-23

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

False color (swirly)  
Based on bands 12,11,4

NDVI  
Based on combination of bands:  $(B8 - B4)/(B8 + B4)$

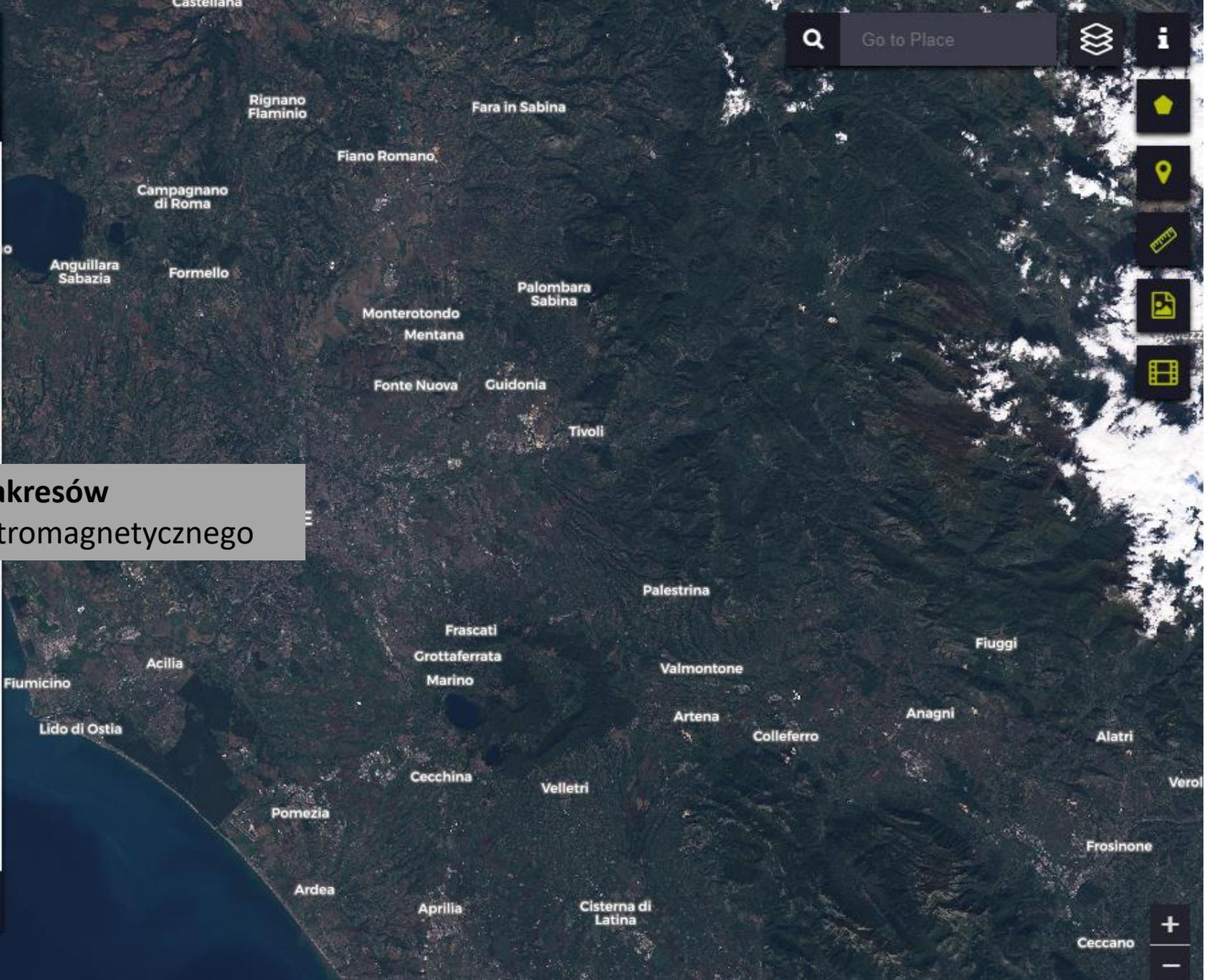
Moisture index  
Based on combination of bands:  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands:  $(R3 - B8V)/(R3 + B8)$

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Nalozenia zakresow  
widma elektromagnetycznego



Dataset: SENTINEL-2 L1C **SHOW L2A**

Date: 2018-10-23

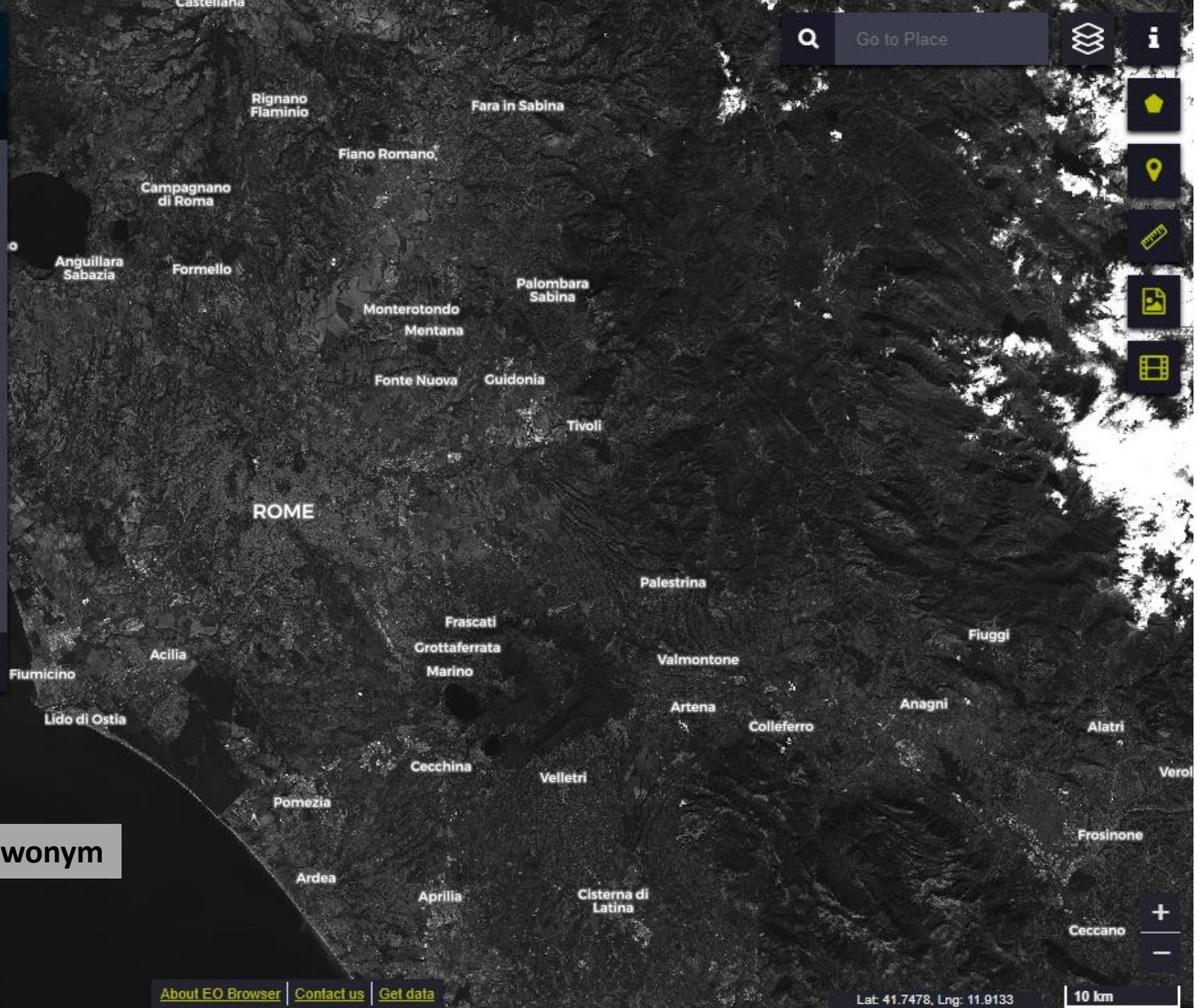
Back  

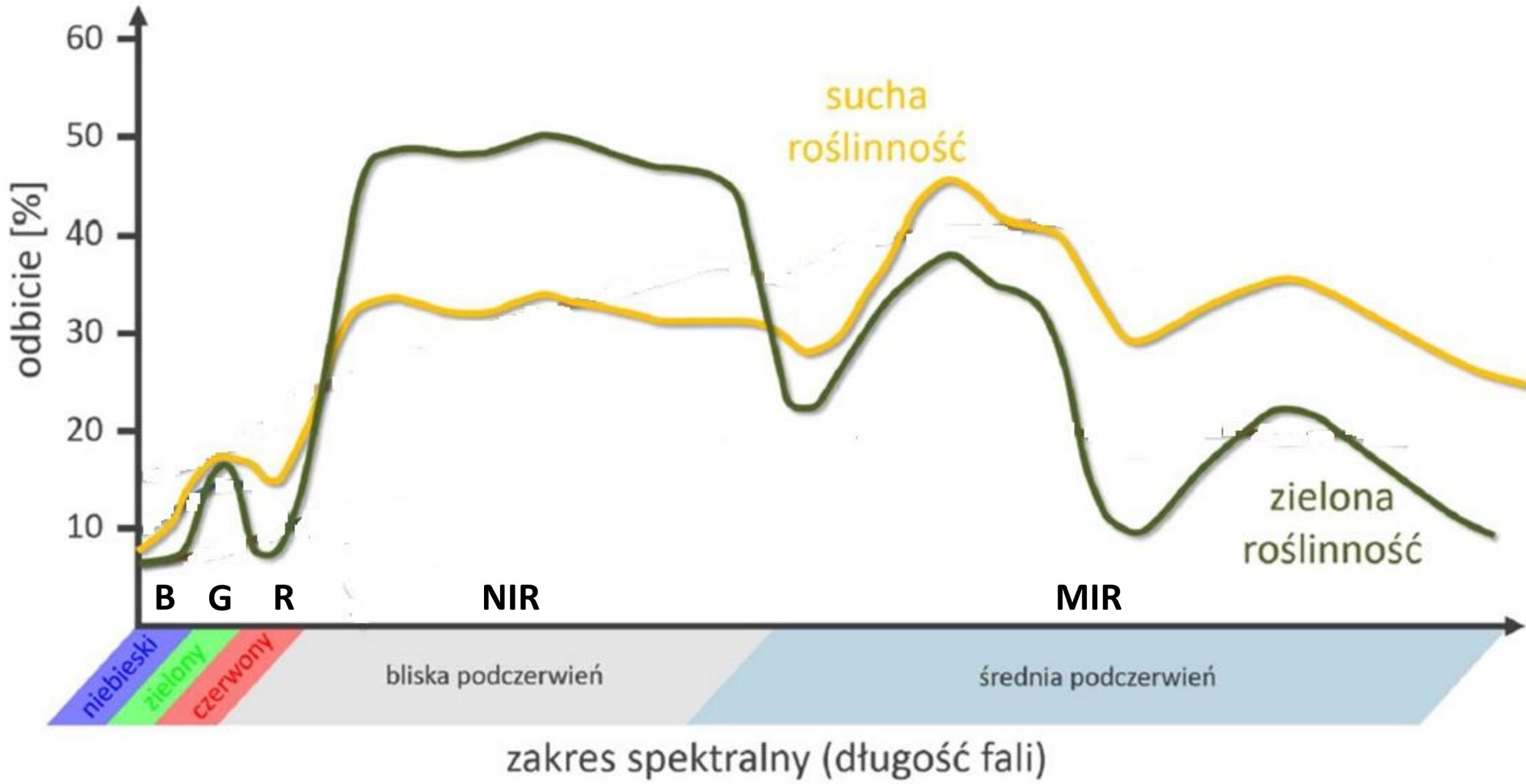
Drag bands onto RGB fields.

Band selection interface showing 13 bands (B01-B12, B8A) and RGB output fields (R, G, B) currently set to B04.

Powered by [Sinergise](#) with contributions from the European Space Agency v2.16.3

Zdjęcie w zakresie czerwonym

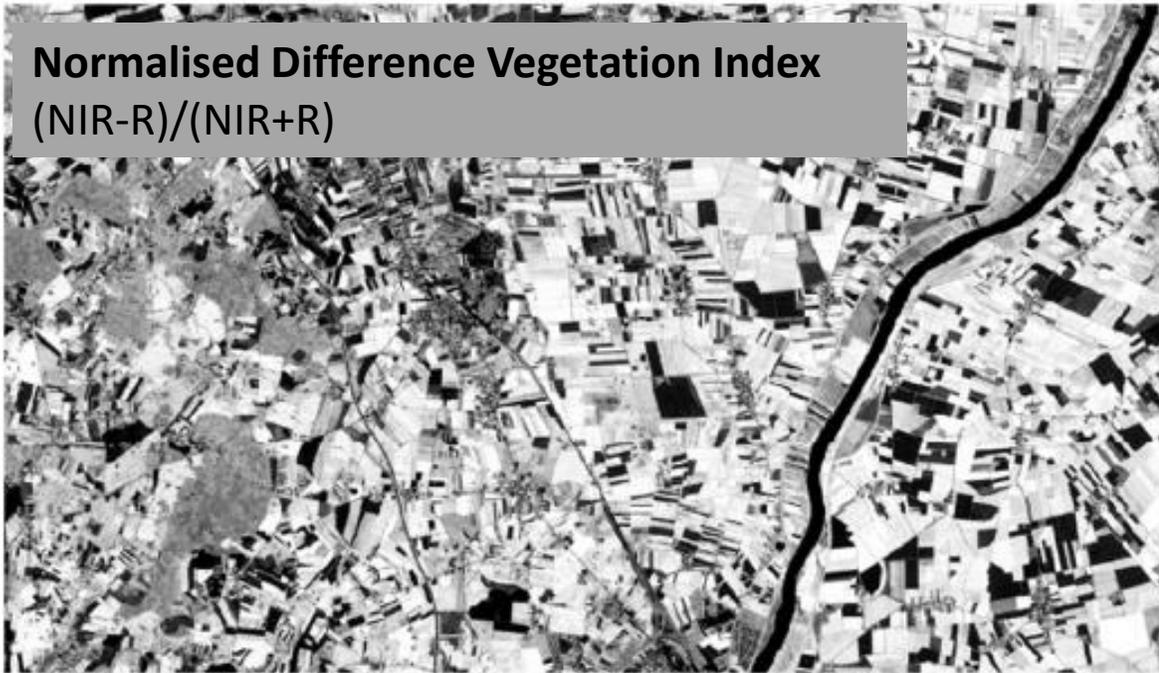




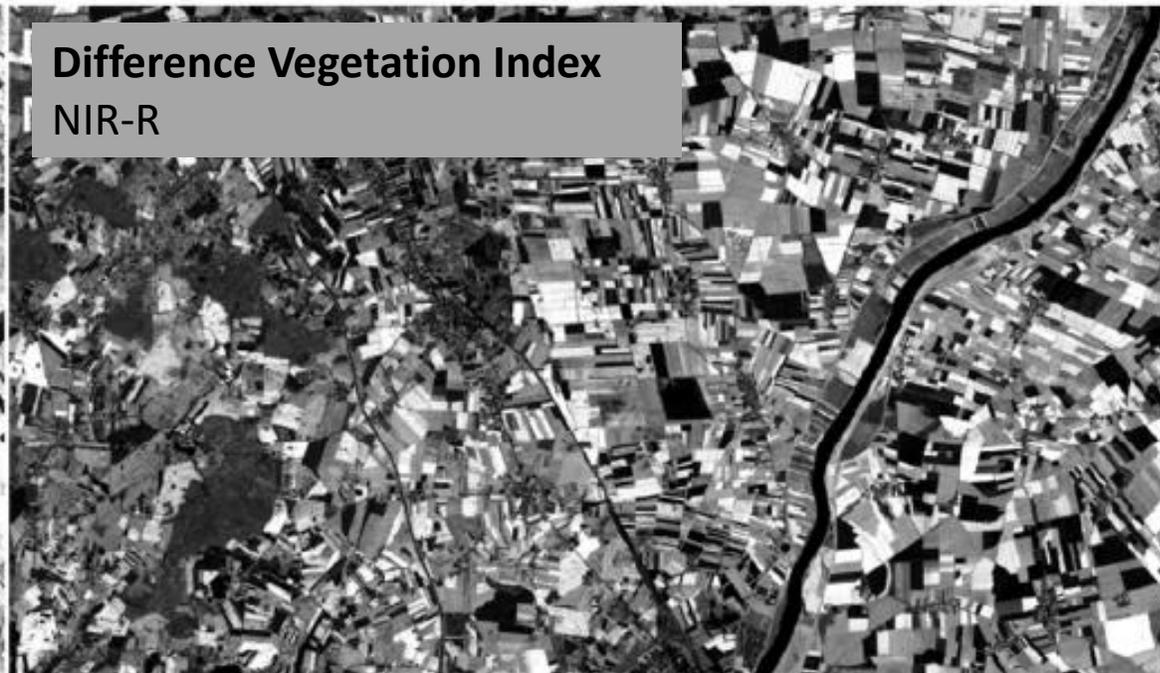
**NDVI – „znormalizowany różnicowy wskaźnik roślinności”**

$$\text{NDVI} = (\text{NIR} - \text{R}) / (\text{NIR} + \text{R})$$

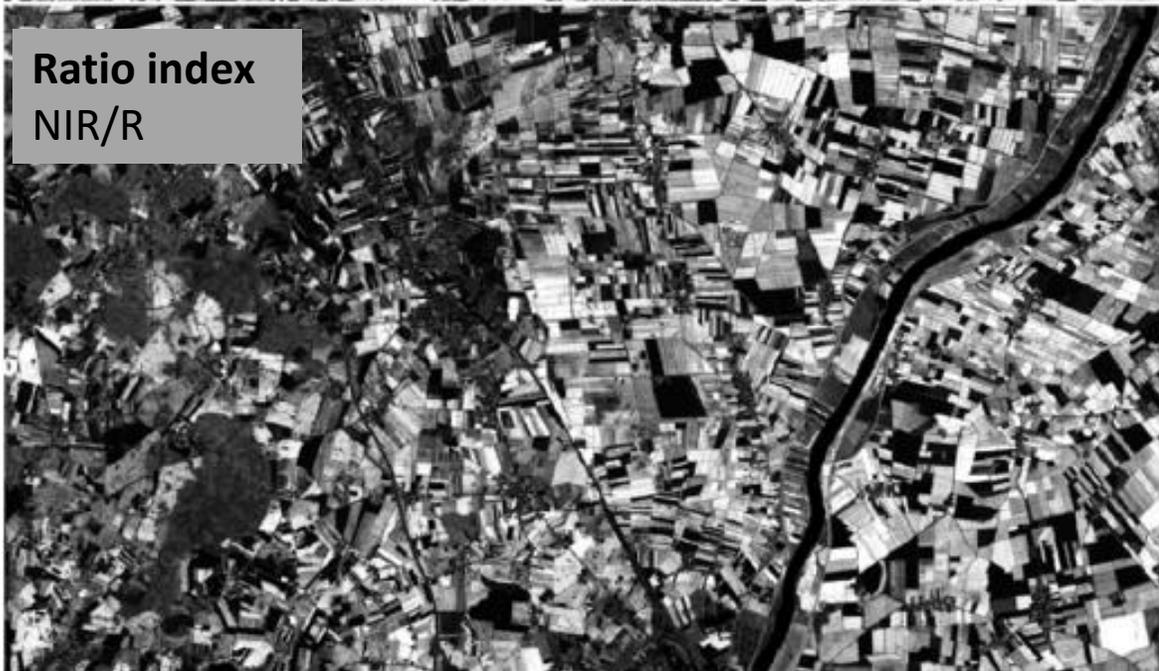
**Normalised Difference Vegetation Index**  
 $(NIR-R)/(NIR+R)$



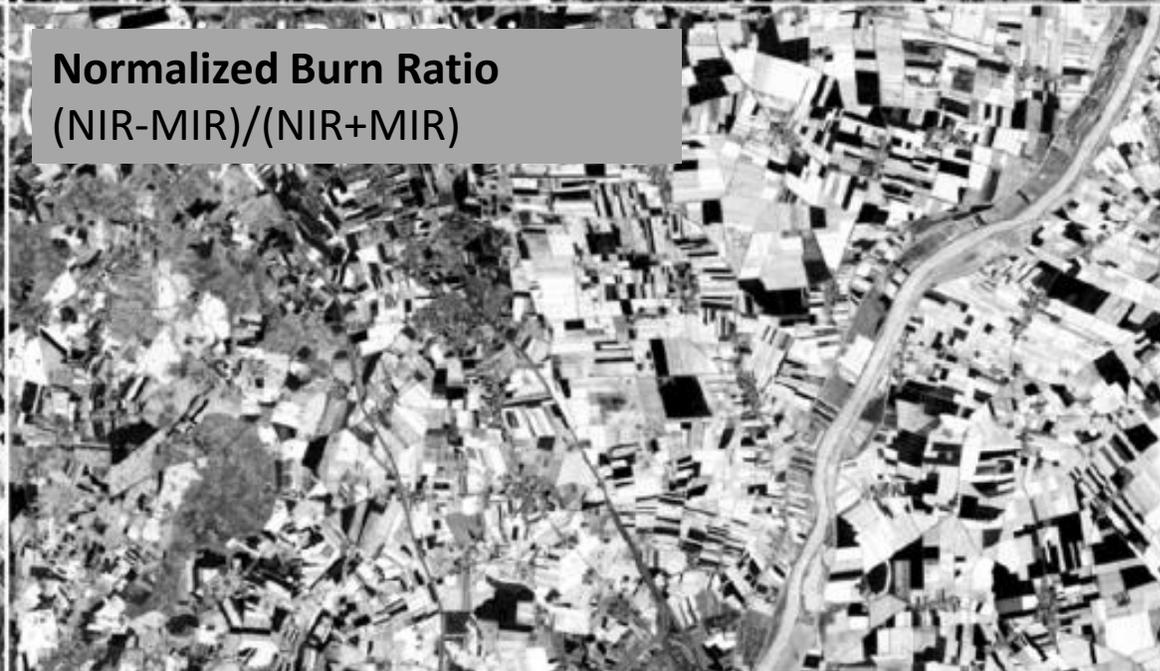
**Difference Vegetation Index**  
NIR-R



**Ratio index**  
NIR/R



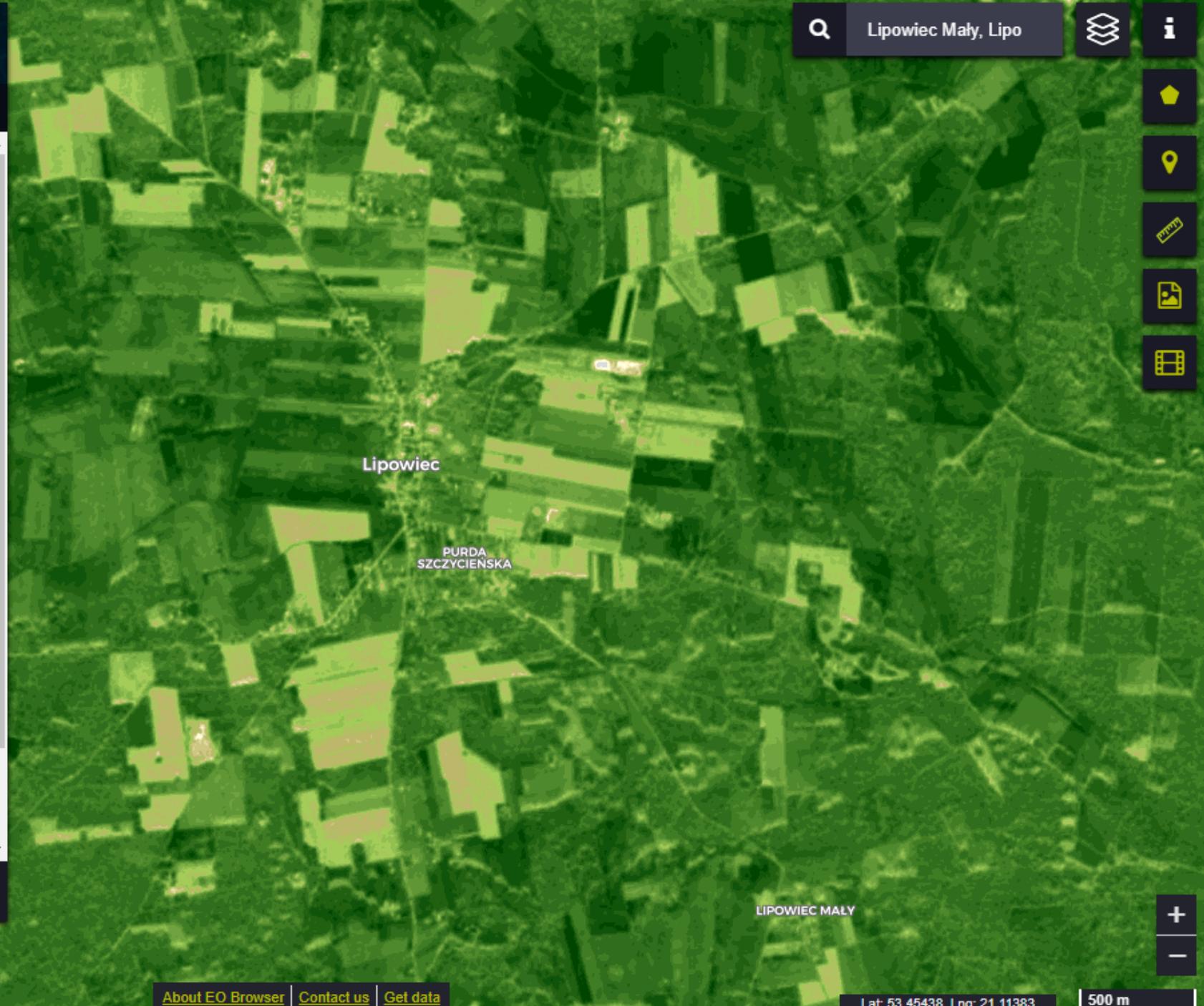
**Normalized Burn Ratio**  
 $(NIR-MIR)/(NIR+MIR)$



Dataset: SENTINEL-2 L1C **SHOW L2A**

Date: 2018-10-17

- Custom  
Create custom rendering
- True color  
Based on bands 4,3,2
- False color  
Based on bands 8,4,3
- False color (urban)  
Based on bands 12,11,4
- NDVI**  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$
- Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$
- SWIR  
Based on bands 12,8A,4
- NDWI  
Based on combination of bands  $(B3 - B6)/(B3 + B6)$

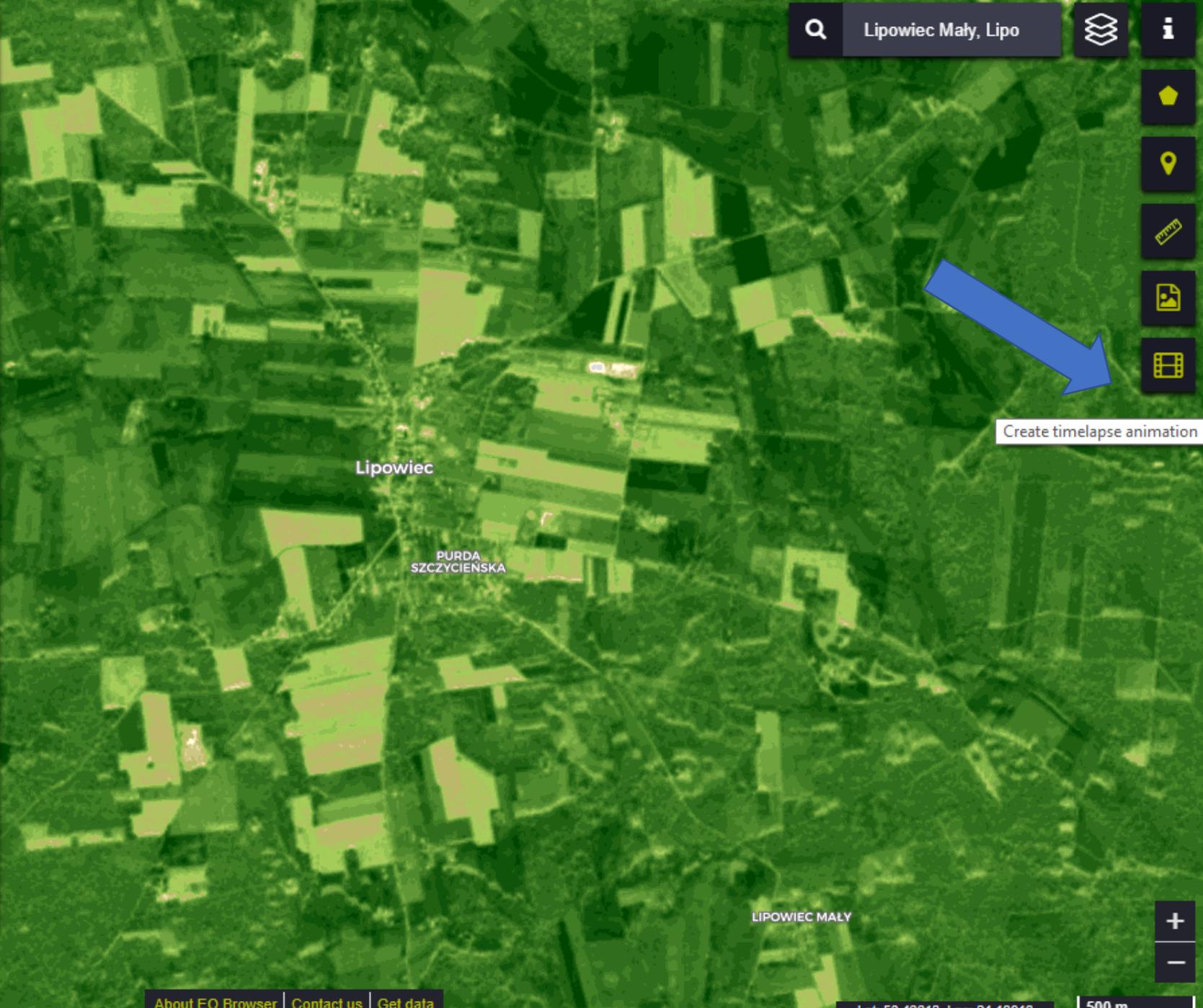


Dataset: SENTINEL-2 L1C [SHOW L2A](#)

Date: 2018-10-17

- Custom  
Create custom rendering
- True color  
Based on bands 4,3,2
- False color  
Based on bands 8,4,3
- False color (urban)  
Based on bands 12,11,4
- NDVI**  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$
- Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$
- SWIR  
Based on bands 12,8A,4
- NDWI  
Based on combination of bands  $(B3 - B6)/(B3 + B6)$

- Home
- Location
- Layers
- Full Screen
- Print
- Timeline



Create timelapse animation

WESOLY GRUNT

### Timelapse

Pożądzany przedział czasowy

2017-09-02 - 2018-10-17



Dopuszczalne zachmurzenie

☀️ 5% ☑️ Select All



2018-09-22



2018-09-25



2018-09-27



2018-09-30



500 m

OpenGIS SENTINEL Hub

Speed: 1 frames / s

1 / 7: 2018-09-20

Download

Powered v2.16.3

WESOLY GRUNT

Uzyskany obraz .gif



**EO Browser** Help: Aleksander Jasiak

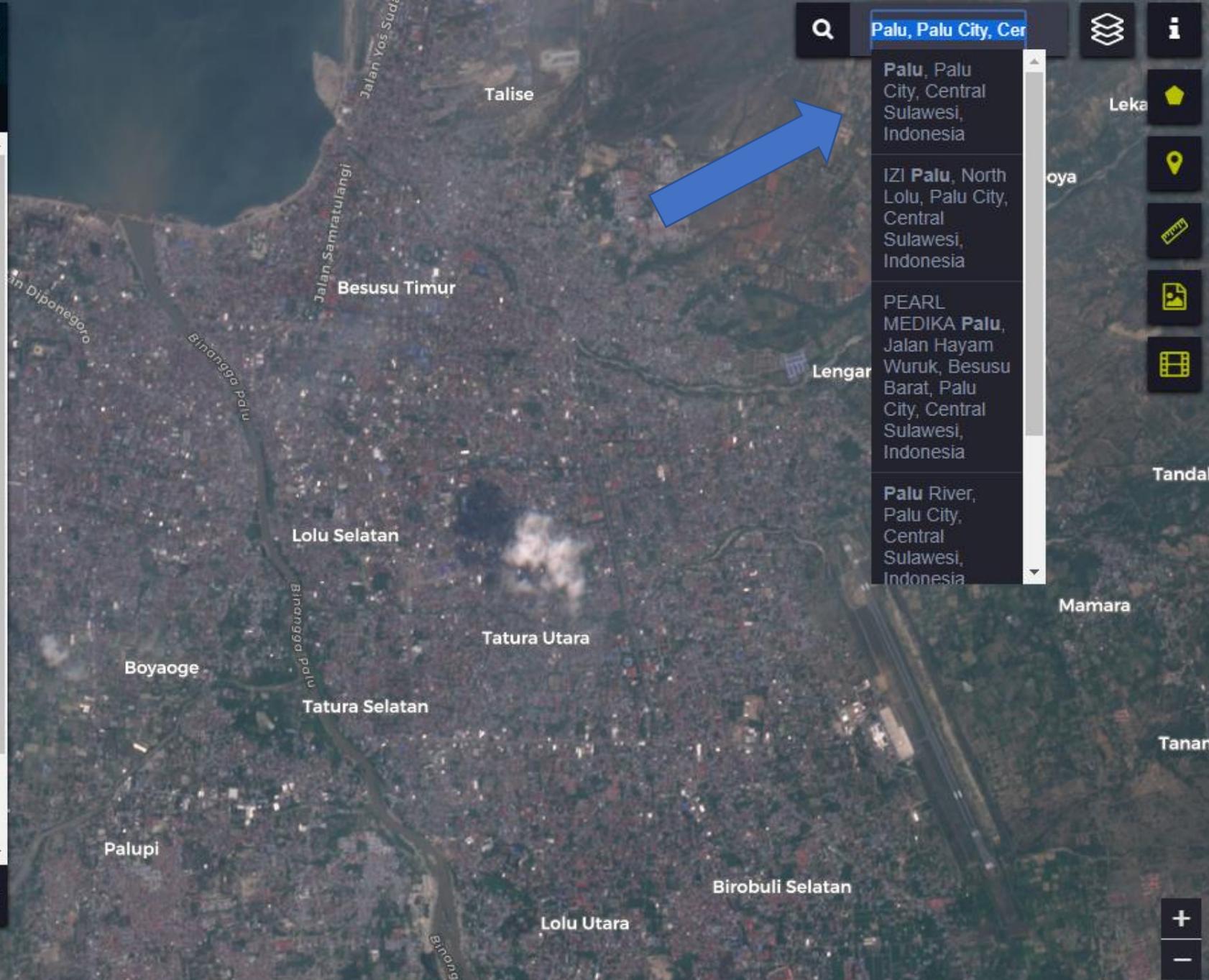
Search Results Visualization Pins

Dataset: SENTINEL-2 L1C **SHOW L2A**

Date: 2018-10-17

- Custom  
Create custom rendering
- True color**  
Based on bands 4,3,2
- False color  
Based on bands 8,4,3
- False color (urban)  
Based on bands 12,11,4
- NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$
- Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$
- SWIR  
Based on bands 12,8A,4
- NDWI  
Based on combination of bands  $(R3 - R8V)/(R3 + R8)$

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Dataset: SENTINEL-2 L1C

SHOW L2A

Date: 2018-09-27

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

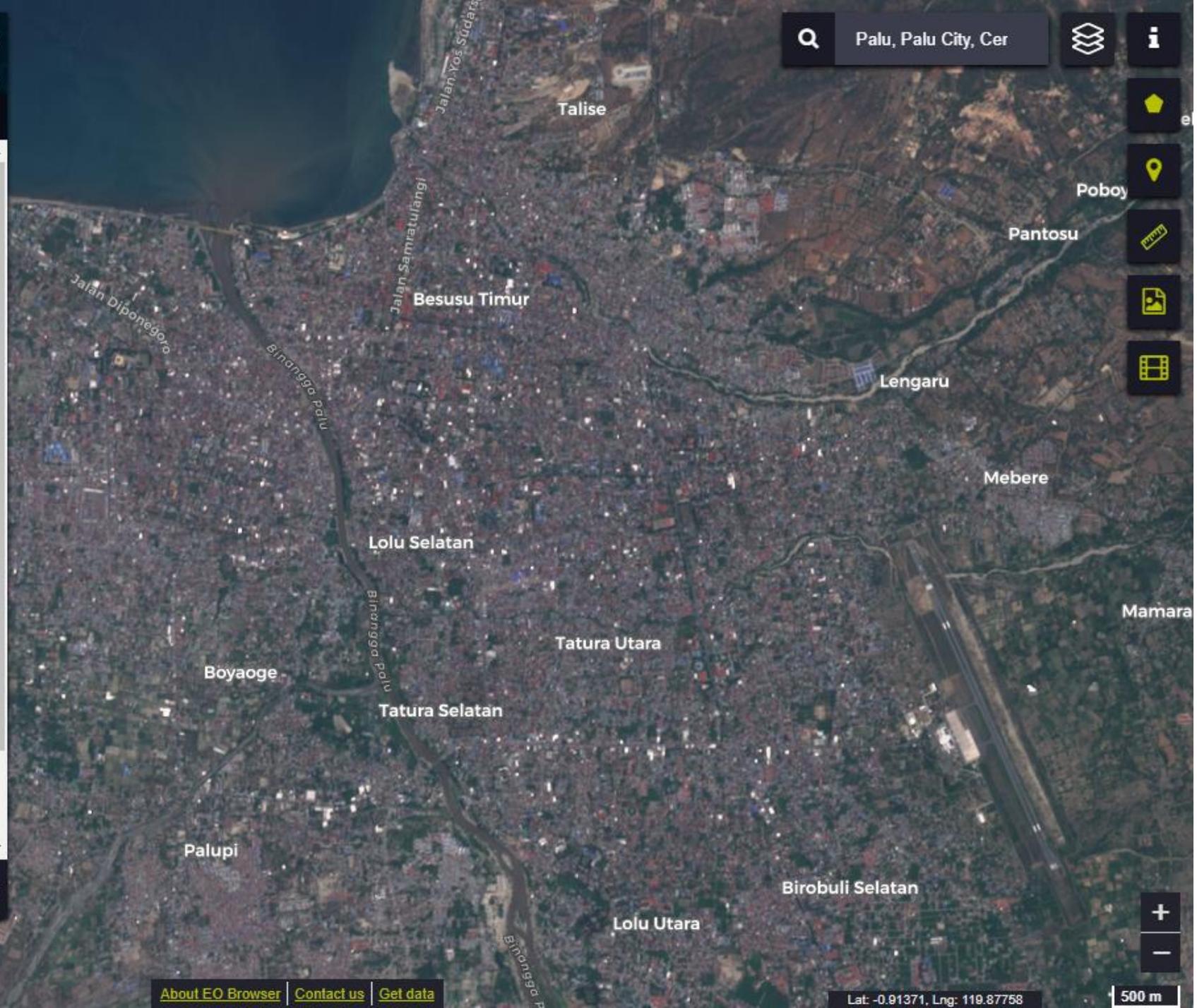
False color (urban)  
Based on bands 12,11,4

NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands  $(R3 - R8V)/(R3 + R8)$



Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

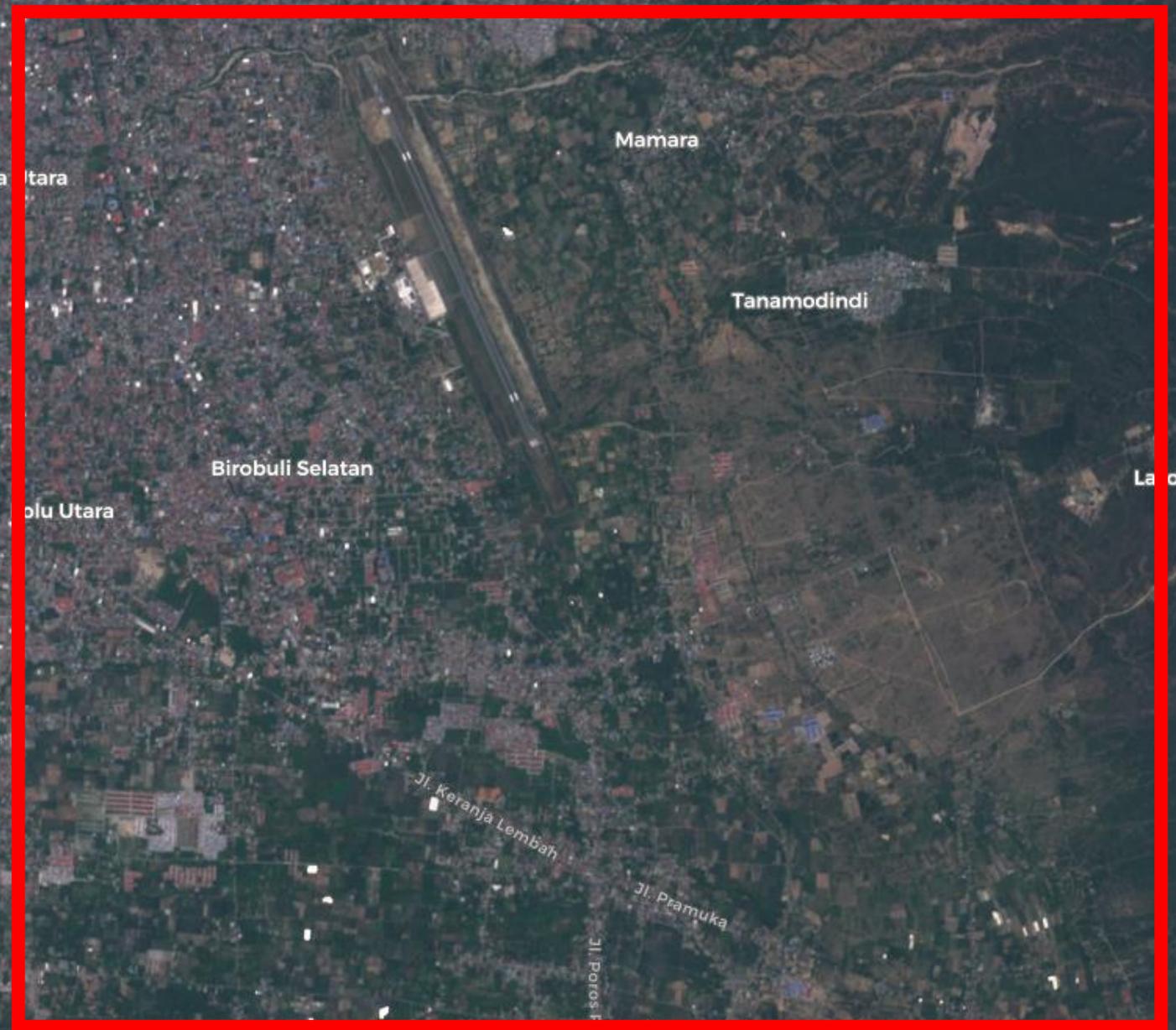
False color (urban)  
Based on bands 12,11,4

NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

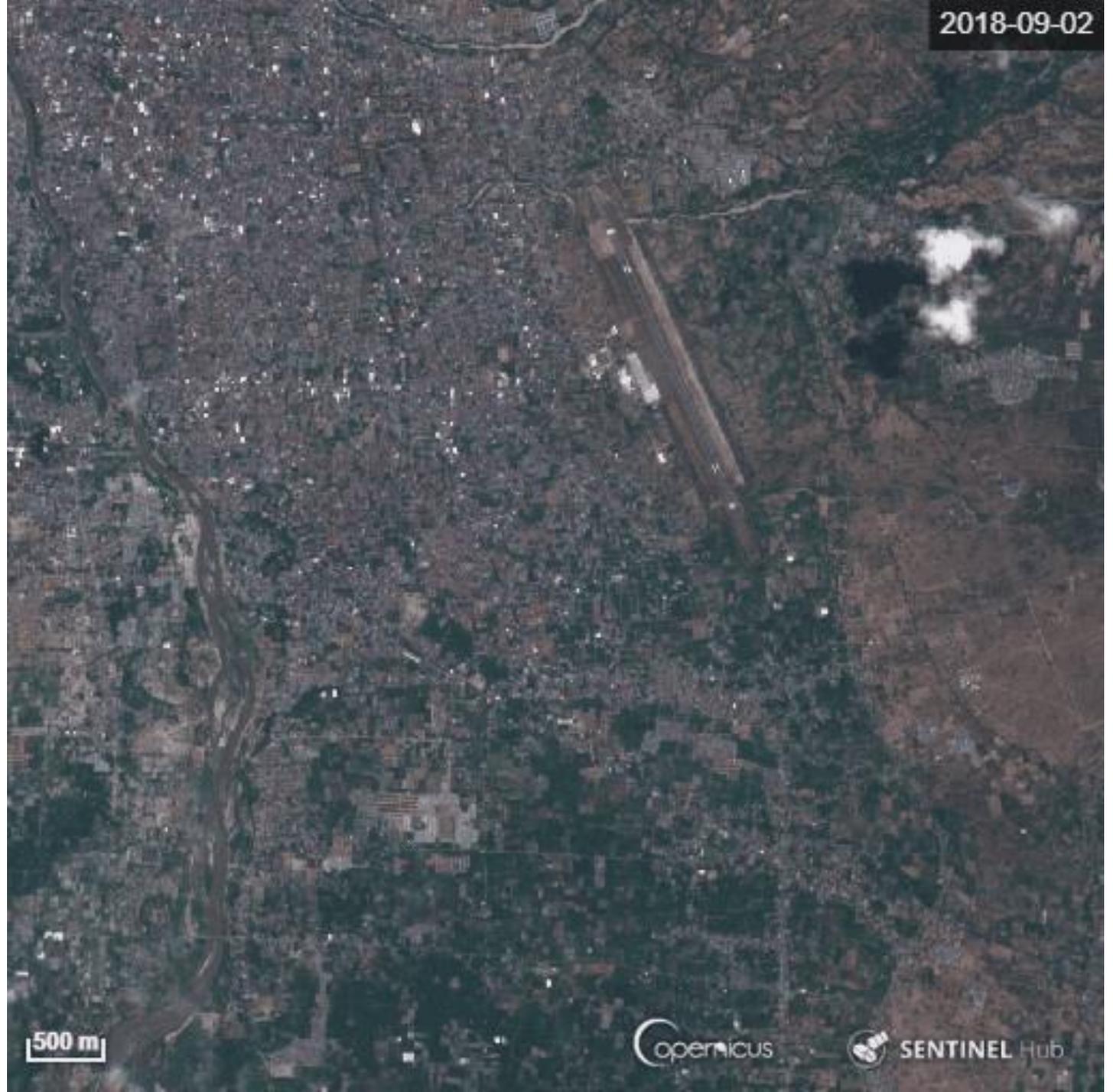
Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

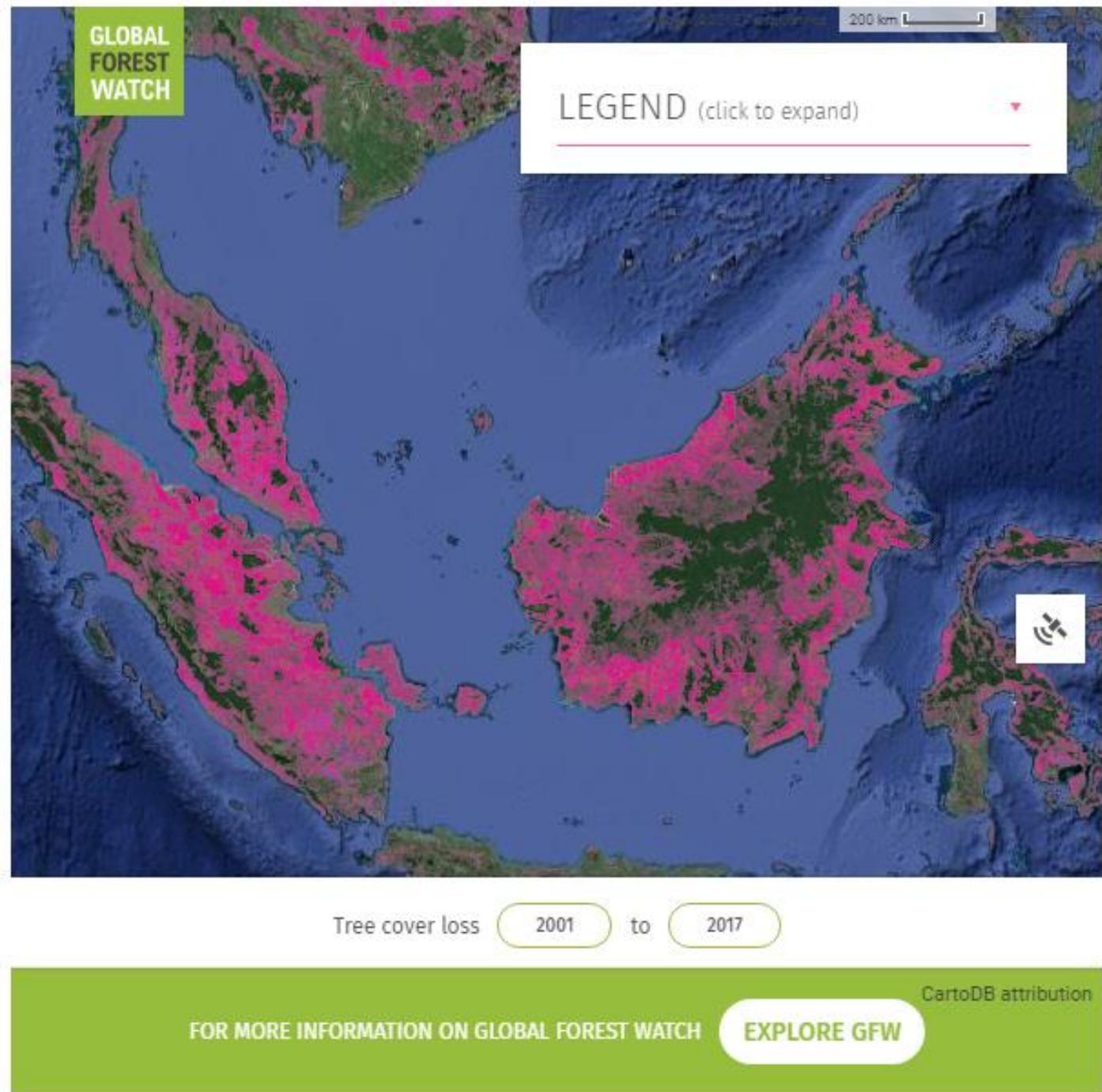
NDWI  
Based on combination of bands  $(R3 - B3)/(R3 + B3)$

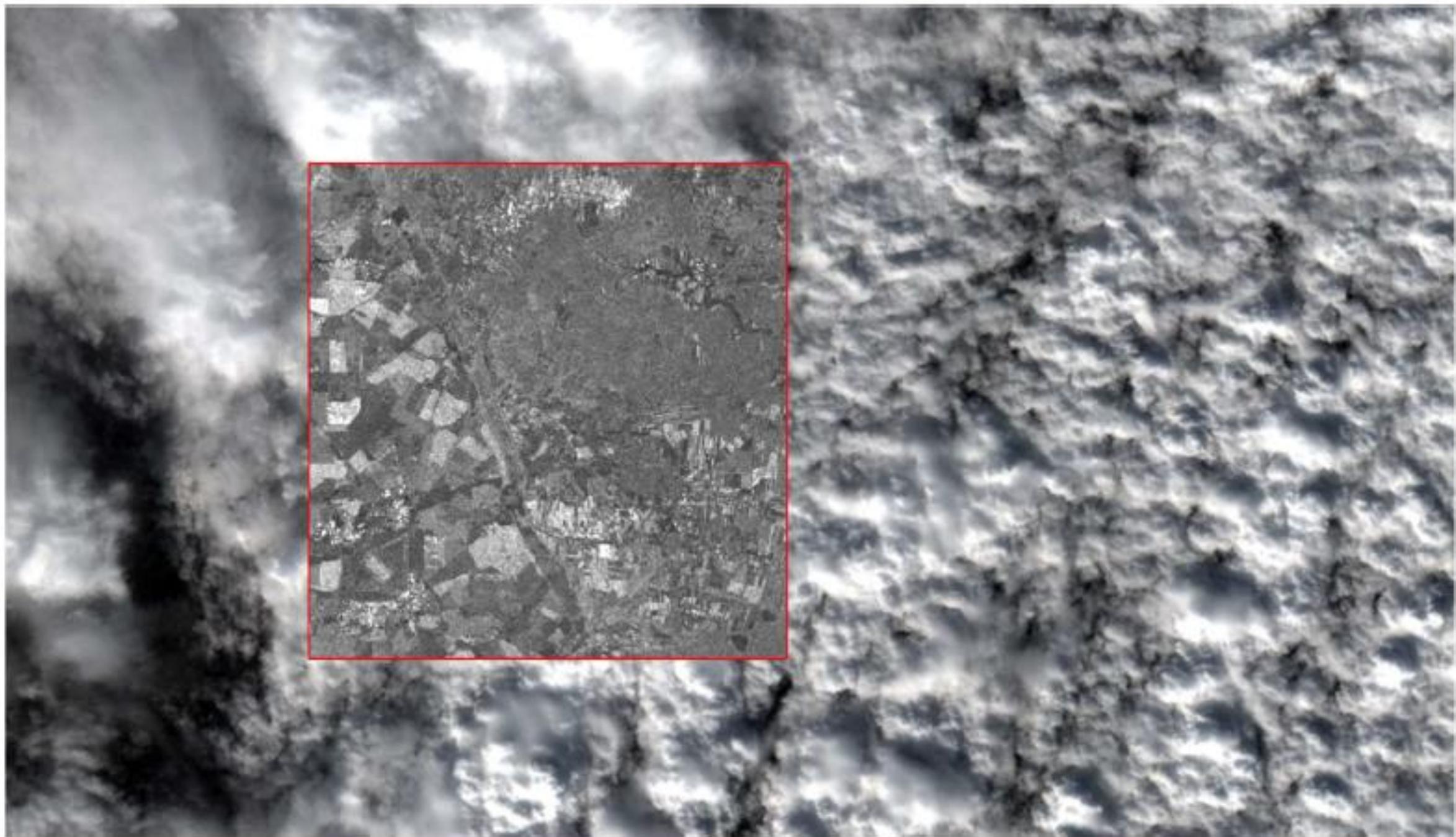


Uzyskany obraz .gif



Kolor różowy reprezentuje obszary poddane deforestacji w XXI wieku





EO Browser Help: Aleksander Jasiak

Search Results Visualization Pins

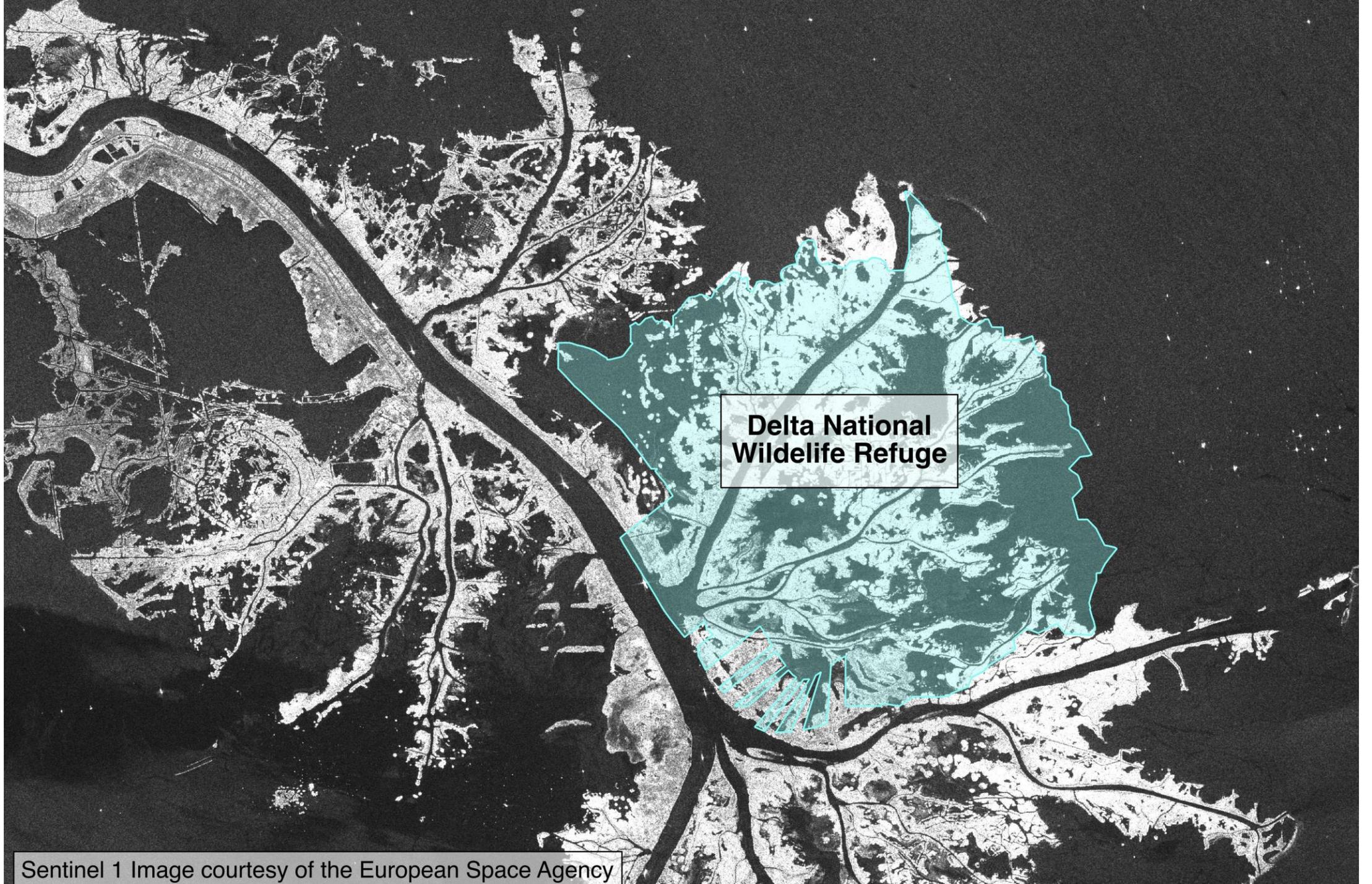
Dataset: SENTINEL-2 L1C SHOW L2A

Date: 2018-10-05

- Custom  
Create custom rendering
- True color**  
Based on bands 4,3,2
- False color  
Based on bands 8,4,3
- False color (urban)  
Based on bands 12,11,4
- NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$
- Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$
- SWIR  
Based on bands 12,8A,4
- NDWI  
Based on combination of bands  $(R3 - R8V)/(R3 + R8)$

Powered by [Sinergise](#) with contributions from the European Space Agency v2.16.3





**Delta National  
Wildlife Refuge**

Sentinel 1 Image courtesy of the European Space Agency

-  Custom  
Create custom rendering
-  Sentinel 1 - VV - orthorectified  
VV - linear gamma0 - orthorectified
-  Sentinel 1 - VV - non-orthorectified  
VV - linear gamma0 - non-orthorectified
-  Sentinel 1 - VH - orthorectified  
VH - linear gamma0 - orthorectified
-  Sentinel 1 - VH - non-orthorectified  
VH - linear gamma 0 - non-orthorectified
-  Sentinel 1 - RGB\_RATIO  
Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV /
-  Sentinel 1 - VV [dB] - orthorectified  
VV - decibel gamma0 [-20,0] - orthorectified
-  Sentinel 1 - VH [dB] - orthorectified  
VH - decibel gamma0 [-20,0] - orthorectified
-  Sentinel 1 - RGB-diff



Aby zamknąć pełny ekran, naciśnij **F11**

Dataset: SENTINEL-1 GRD IW



Date: 2017-12-12

Calendar interface showing December 2017. The date 12 is highlighted in yellow. The calendar is enclosed in a red border.

| <  |    | December |    | 2017 |    | >  |  |
|----|----|----------|----|------|----|----|--|
| Su | Mo | Tu       | We | Th   | Fr | Sa |  |
| 26 | 27 | 28       | 29 | 30   | 1  | 2  |  |
| 3  | 4  | 5        | 6  | 7    | 8  | 9  |  |
| 10 | 11 | 12       | 13 | 14   | 15 | 16 |  |
| 17 | 18 | 19       | 20 | 21   | 22 | 23 |  |
| 24 | 25 | 26       | 27 | 28   | 29 | 30 |  |
| 31 | 1  | 2        | 3  | 4    | 5  | 6  |  |

Sentinel 1 - RGB\_RATIO  
Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV / VH / 100.0] - linear gamma0 - orthorectified

Sentinel 1 - VV [dB] - orthorectified  
VV - decibel gamma0 [-20,0] - orthorectified

Sentinel 1 - VH [dB] - orthorectified  
VH - decibel gamma0 [-20,0] - orthorectified

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Dataset: SENTINEL-1 GRD IW



Date: 2017-12-12

Custom Create custom rendering

Sentinel 1 - VV - orthorectified VV - linear gamma0 - orthorectified

Sentinel 1 - VV - non-orthorectified VV - linear gamma0 - non-orthorectified

Sentinel 1 - VH - orthorectified VH - linear gamma0 - orthorectified

Sentinel 1 - VH - non-orthorectified VH - linear gamma 0 - non-orthorectified

Sentinel 1 - RGB\_RATIO Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV / VH / 100.0] - linear gamma0 - orthorectified

Sentinel 1 - VV [dB] - orthorectified VV - decibel gamma0 [-20,0] - orthorectified

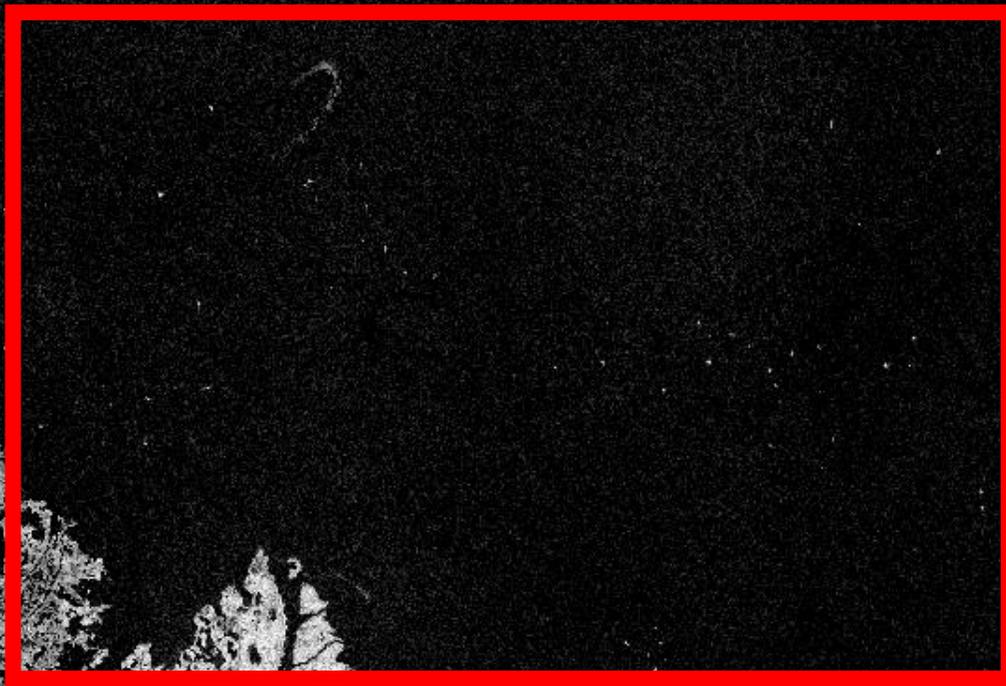
Sentinel 1 - VH [dB] - orthorectified VH - decibel gamma0 [-20,0] - orthorectified



Dataset: SENTINEL-1 GRD IW   

Date:  2017-12-24

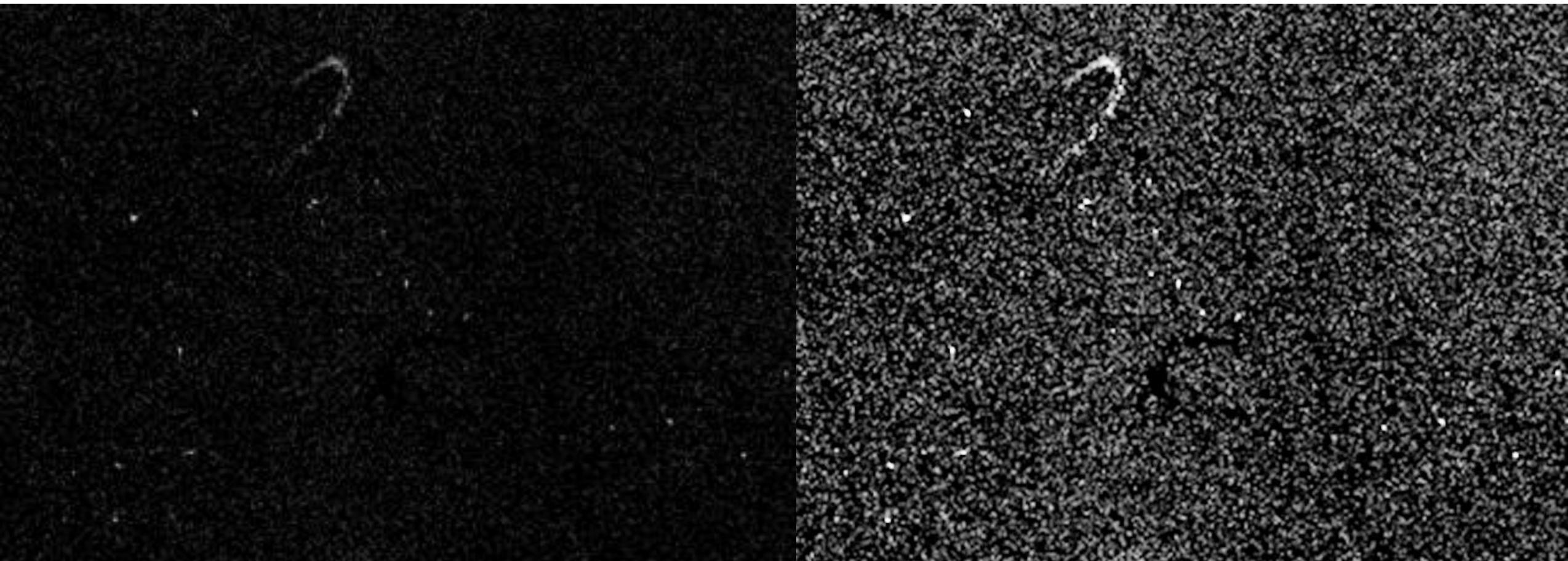
-  Custom  
Create custom rendering
-  Sentinel 1 - VV - orthorectified  
VV - linear gamma0 - orthorectified
-  Sentinel 1 - VV - non-orthorectified  
VV - linear gamma0 - non-orthorectified
-  Sentinel 1 - VH - orthorectified  
VH - linear gamma0 - orthorectified
-  Sentinel 1 - VH - non-orthorectified  
VH - linear gamma 0 - non-orthorectified
-  Sentinel 1 - RGB\_RATIO  
Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV / VH / 100.0] - linear gamma0 - orthorectified
-  Sentinel 1 - VV [dB] - orthorectified  
VV - decibel gamma0 [-20,0] - orthorectified
-  Sentinel 1 - VH [dB] - orthorectified  
VH - decibel gamma0 [-20,0] - orthorectified



- 
- 
- 
- 
- 

Po podrasowaniu kontrastu zdjęcia...



# Timelapse



2017-12-06 - 2018-01-30



Select All

- 2017-12-06
- 2017-12-12
- 2017-12-18
- 2017-12-24
- 2017-12-30



Speed: 1 frames / s

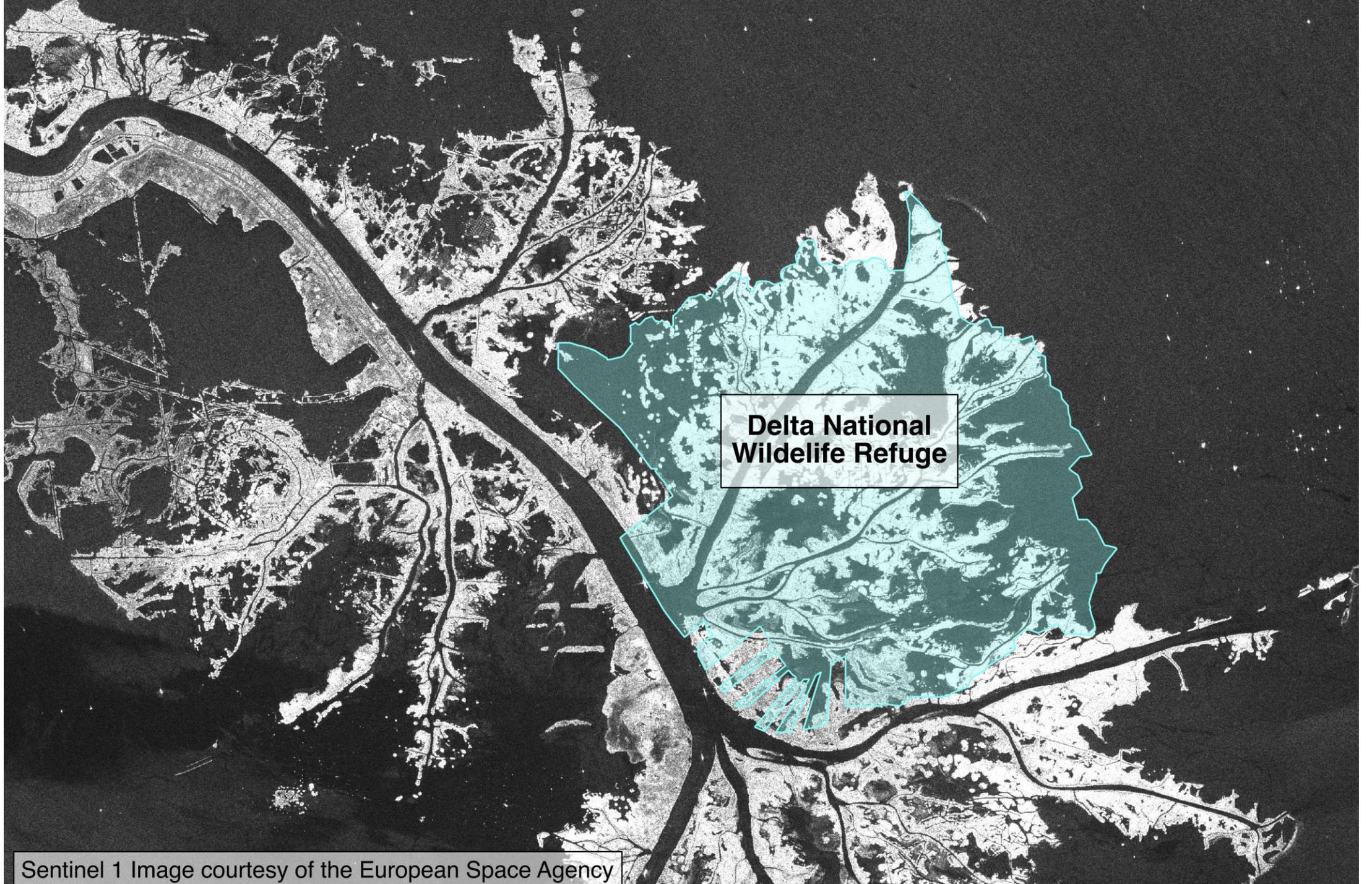
1 / 5: 2017-12-12

Download



Uzyskany obraz .gif





**Delta National  
Wildelife Refuge**

Sentinel 1 Image courtesy of the European Space Agency

Heater Plf Platform



Delta National Wildlife Refuge



Satellite  Light

### Companies

- Shell (Shell Petroleum Development Company)
- Eni (Nigerian Agip Oil Company)

### Year

 2011  2017

### Severity of spill



Small spill Large spill



EO Browser Help Aleksander Jasiak

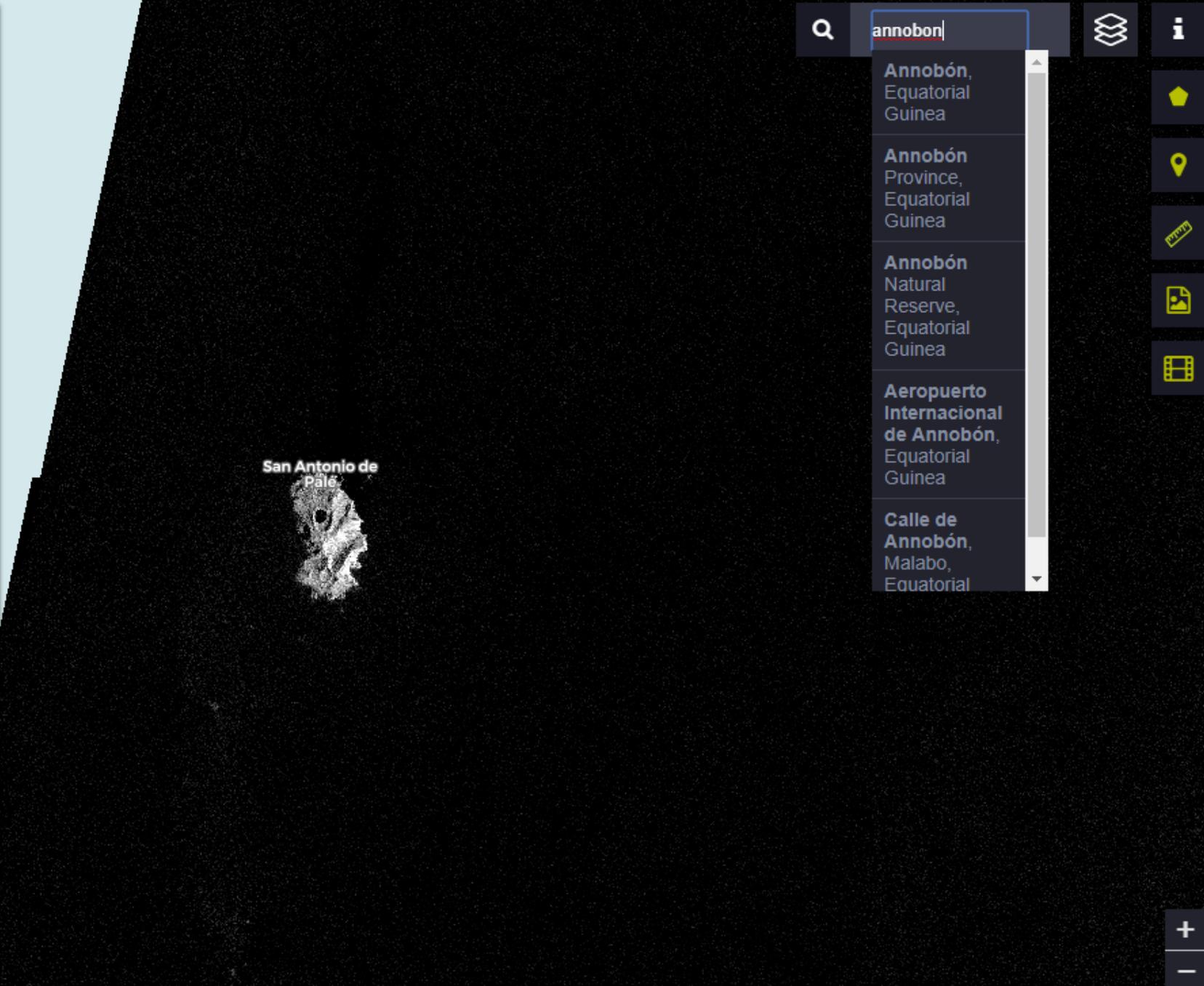
Search Results Visualization Pins

Dataset: SENTINEL-1 GRD IW

Date: 2018-10-05

- Custom  
Create custom rendering
- Sentinel 1 - VV - orthorectified  
VV - linear gamma0 - orthorectified
- Sentinel 1 - VV - non-orthorectified  
VV - linear gamma0 - non-orthorectified
- Sentinel 1 - VH - orthorectified  
VH - linear gamma0 - orthorectified
- Sentinel 1 - VH - non-orthorectified  
VH - linear gamma 0 - non-orthorectified
- Sentinel 1 - RGB\_RATIO  
Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV / VH / 100.0] - linear gamma0 - orthorectified
- Sentinel 1 - VV [dB] - orthorectified**  
VV - decibel gamma0 [-20,0] - orthorectified
- Sentinel 1 - VH [dB] - orthorectified  
VH - decibel gamma0 [-20,0] - orthorectified

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Search:

- Annobón, Equatorial Guinea
- Annobón Province, Equatorial Guinea
- Annobón Natural Reserve, Equatorial Guinea
- Aeropuerto Internacional de Annobón, Equatorial Guinea
- Calle de Annobón, Malabo, Equatorial

Lat: -2.6805, Lng: 5.9354

**Namierzmy takie współrzędne**  
*(są nieopodal!)*

Dataset: SENTINEL-1 GRD IW

Date: 2018-10-05

Custom  
Create custom rendering

Sentinel 1 - VV - orthorectified  
VV - linear gamma0 - orthorectified

Sentinel 1 - VV - non-orthorectified  
VV - linear gamma0 - non-orthorectified

Sentinel 1 - VH - orthorectified  
VH - linear gamma0 - orthorectified

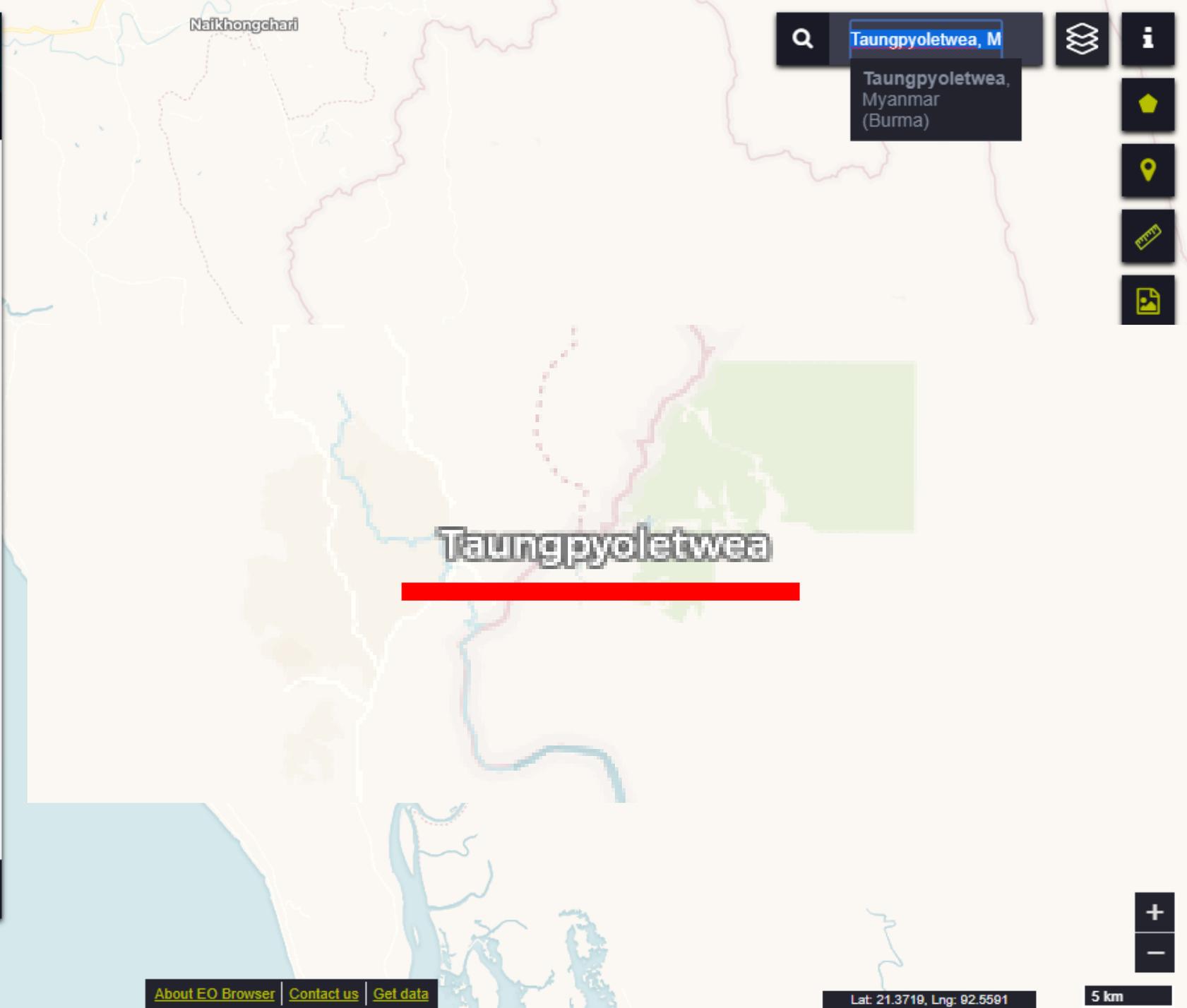
Sentinel 1 - VH - non-orthorectified  
VH - linear gamma 0 - non-orthorectified

Sentinel 1 - RGB\_RATIO  
Color image by mapping the input bands. Value [RGB] = [VV, 2 VH, VV / VH / 100.0] - linear gamma0 - orthorectified

Sentinel 1 - VV [dB] - orthorectified  
VV - decibel gamma0 [-20,0] - orthorectified

Sentinel 1 - VH [dB] - orthorectified  
VH - decibel gamma0 [-20,0] - orthorectified

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Dataset: SENTINEL-2 L1C

SHOW L2A

Date: 2018-10-16

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

False color (urban)  
Based on bands 12,11,4

NDVI  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

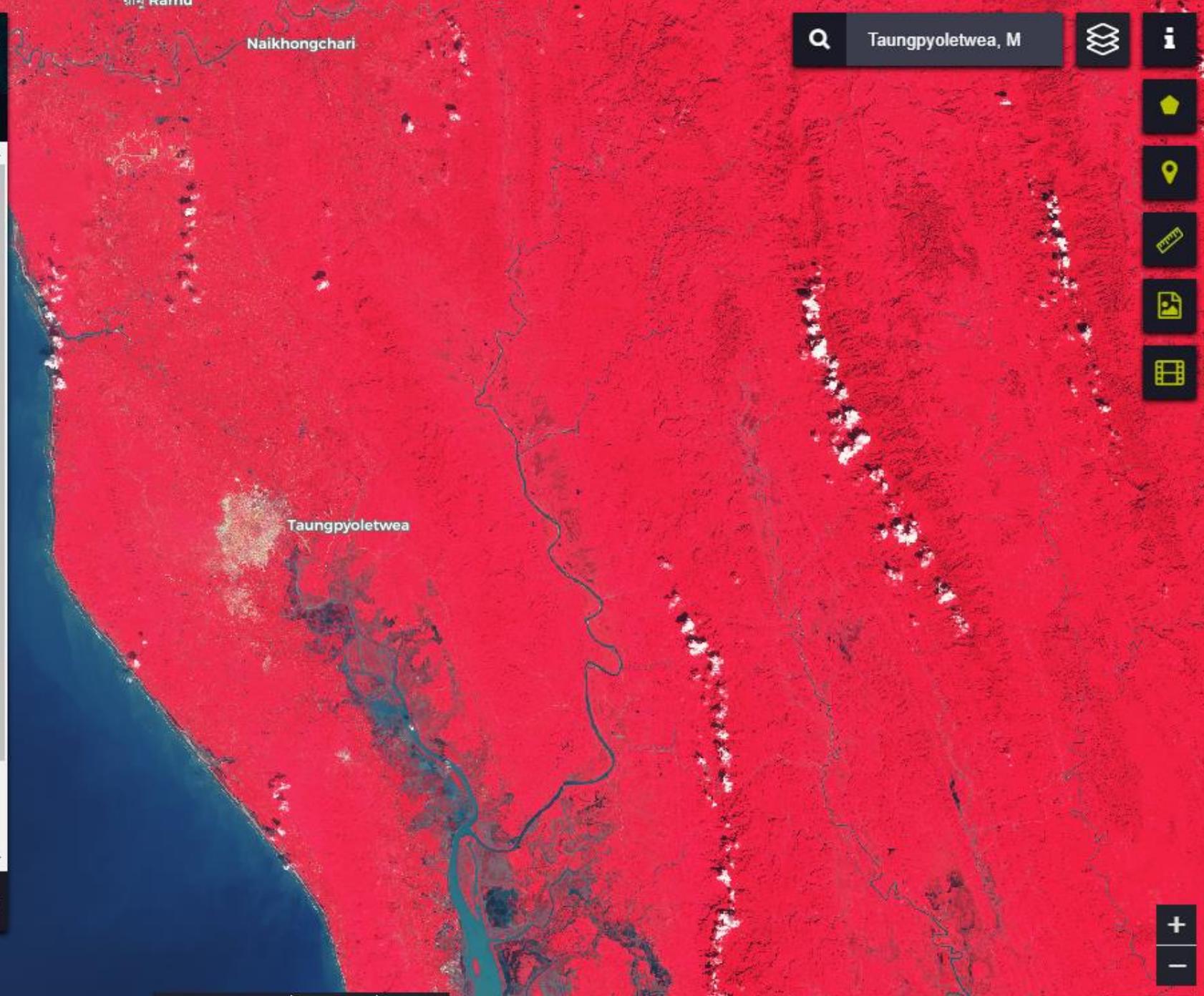
Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands  $(R3 - R8V)/(R3 + R8)$

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Taungpyoletwea, M



Dataset: SENTINEL-2 L1C **SHOW L2A**

Date: 2018-10-16

Custom  
Create custom rendering

True color  
Based on bands 4,3,2

False color  
Based on bands 8,4,3

False color (urban)  
Based on bands 12,11,4

**NDVI**  
Based on combination of bands  $(B8 - B4)/(B8 + B4)$

Moisture index  
Based on combination of bands  $(B8A - B11)/(B8A + B11)$

SWIR  
Based on bands 12,8A,4

NDWI  
Based on combination of bands  $(B3 - B8)/(B3 + B8)$

- Home
- Location
- Layers
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- Print
- Share
- Fullscreen



Map navigation controls: zoom in (+), zoom out (-)

Czas na artykuł

# Timelapse

2016-09-01 - 2018-10-16

10 % Select All

- 2016-09-01
- 2016-09-21
- 2016-10-11
- 2016-10-31
- 2016-11-20
- 2016-11-30



Speed: 1 frames / s 1 / 40: 2016-11-20 Download

Uzyskany obraz .gif



Uzyskany obraz .gif



Situations



📍 **21** Active situation views

📍 **3** Featured situation views

📍 **94** Countries covered