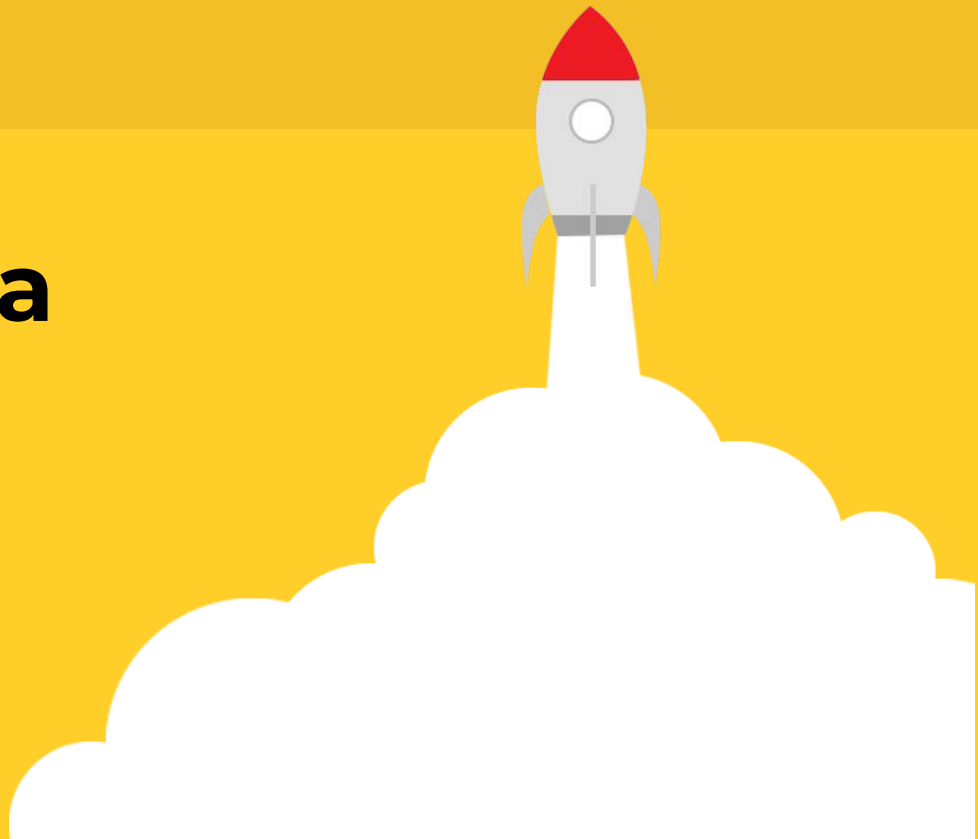




From startup idea to global service based on EO

World from Space, s.r.o.
Mgr. Roman BOHOVIC, Ph. D.
CTO



World from Space



- Start-up from Brno, 2017
- 12 people
- Experts on EO data, GIS & Copernicus
- DynaCrop - agricultural API
- Working for ESA
- Adaptation strategies for climate change
- RB - co-founder, CTO



esa

business incubation centre

Brno

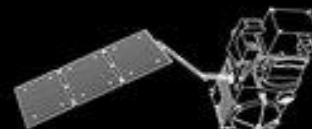




FULL

FREE

OPEN







DynaCrop

Frontend application

<https://farm.dynacrop.space/>

PRECISION FARMING MADE EASY

Increase farming productivity with satellite monitoring

Unlock benefits up to €100/ ha

TRY DEMO 

BOOK A MEETING



Science-based products
Free expert support for customization



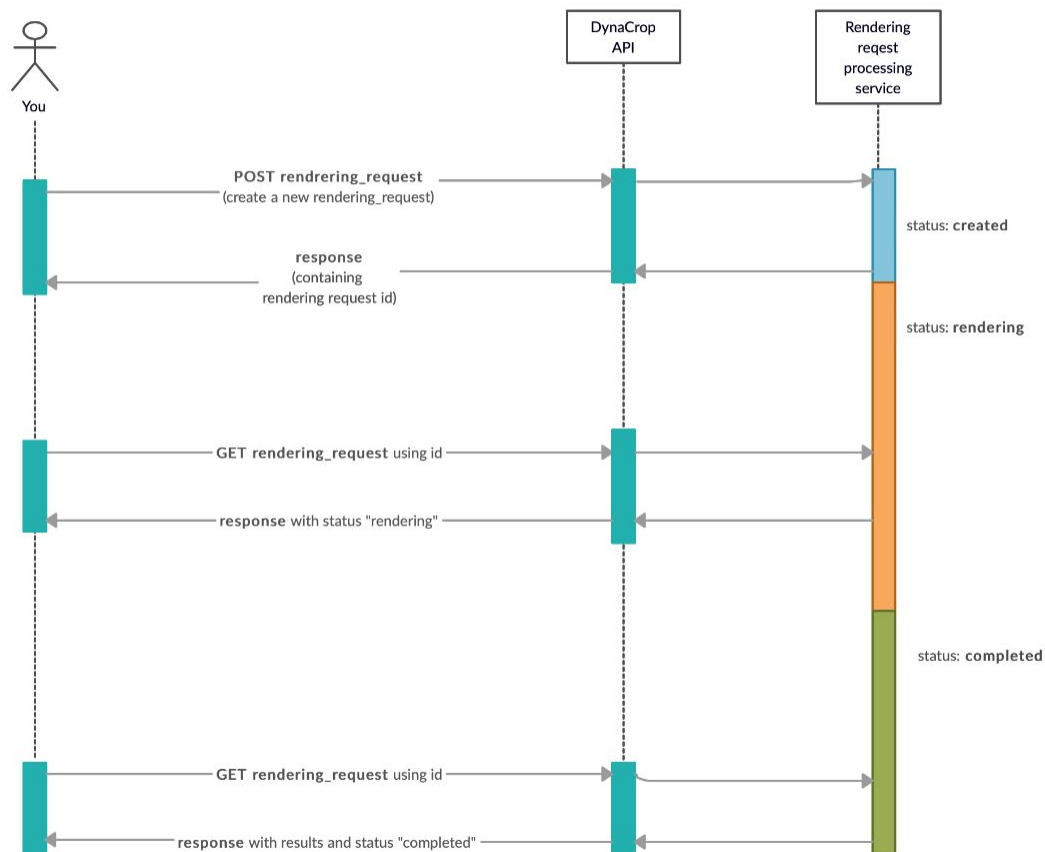
Pay-as-you-go
No risk, no minimum order



Full global coverage
For fields anywhere in the world



processing_request `id` to check, whether our task is still being processed or whether the results are already available. This can be done by calling `GET /processing_request/{id}` and checking the value of `status` attribute. If the `status` is `completed`, you can get your results (results are stored under the `result` attribute). If the `status` is still in `rendering` state, you have to wait a little bit and try to check `GET /processing_request/{id}` later.



Interface for polygon management

Processing request interface

Creating a processing request f...

Creating a processing request f...

Retrieving the results

Advanced zonaton

Rendering status - Asynchronous ...

Dynacrop API ^{v2}

[Base URL: api-dynacrop.worldfromspace.cz/]

<https://api-dynacrop.worldfromspace.cz/swagger/?format=openapi>

DynaCrop is an API service aiming to serve agriculture-related information for a defined area (field). Information is computed and served on-the-fly, thus is available just after defining your field boundaries.

[Contact the developer](#)

Schemes

HTTPS

[Django Login](#)

[Authorize](#)

Filter by tag

JWT Auth

POST </api-token-auth/> API View that receives a POST with a user's username and password.

api-token-auth_create

POST </api-token-refresh/> API View that returns a refreshed token (with new expiration) based on existing token

api-token-refresh_create

POST </api-token-verify/>

api-token-verify_create

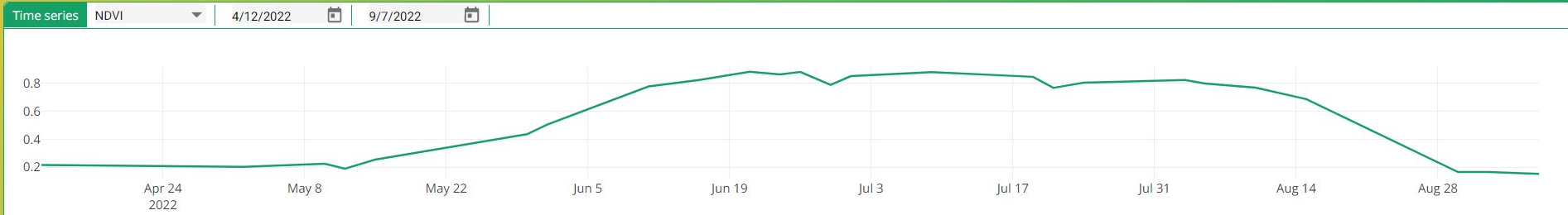
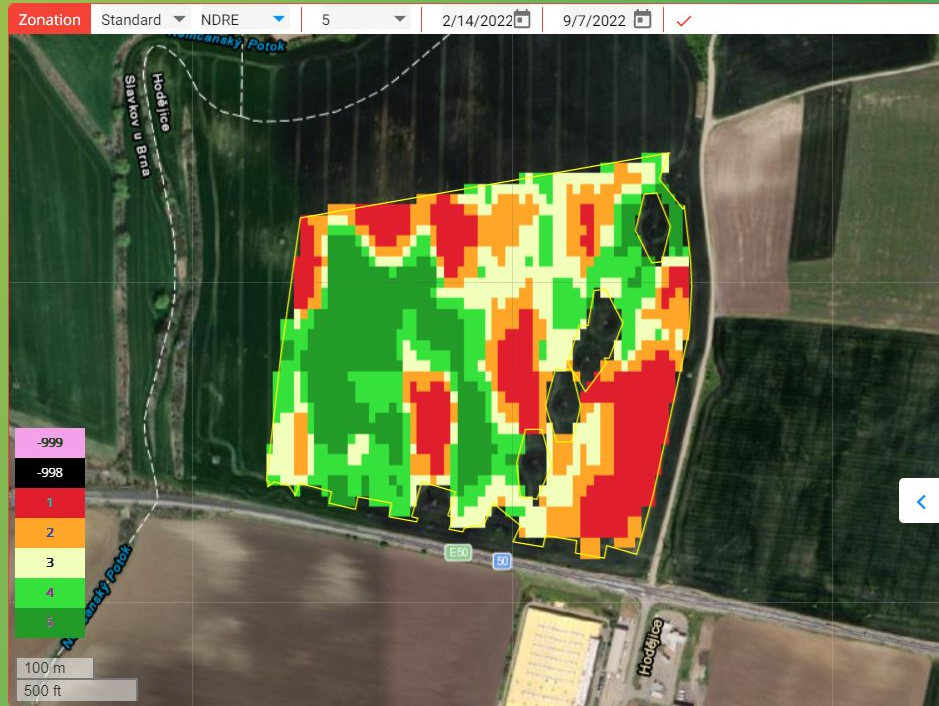
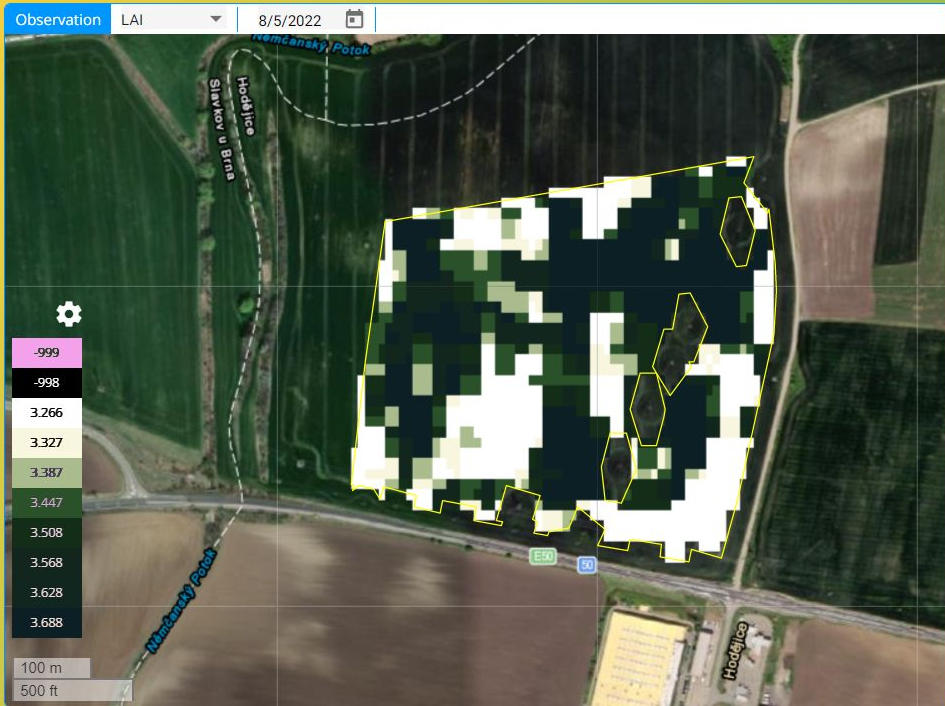
Enums

GET /api/v2/available_layers/ list layers

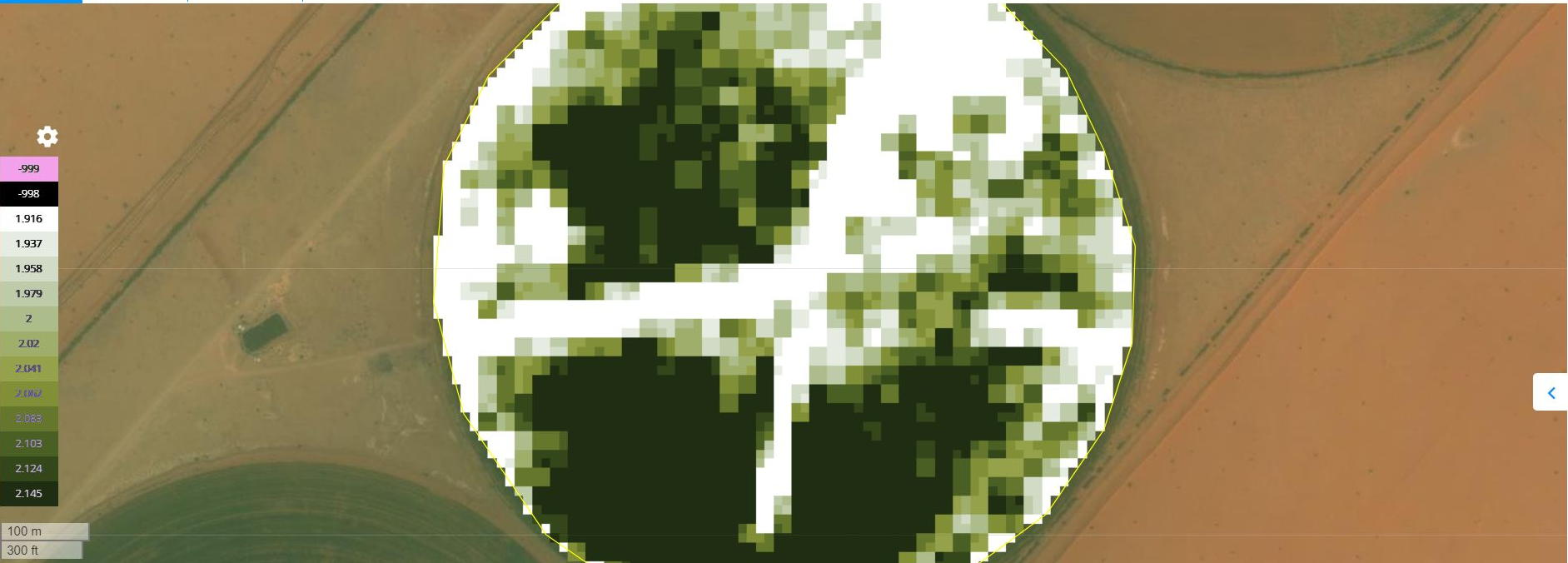
api_v2_available_layers_list

GET /api/v2/available_rendering_types/ list rendering types

api_v2_available_rendering_types_list



Observation IRECI 8/28/2022



- 999
- 998
- 1.916
- 1.937
- 1.958
- 1.979
- 2
- 2.02
- 2.041
- 2.062
- 2.083
- 2.103
- 2.124
- 2.145

100 m
300 ft

Time series LAI 9/12/2021 9/2/2022





Web app

For smart city Pilsen

<https://plzen.worldfromspace.cz/>



Zelení



Tepelný ostrov



Vlhkost



Ovzduší

Zelená Plzeň

Indikátory kvality životního prostředí ve městě Plzeň.

Zeleň

Zdravotní stav vegetace je stěžejní pro well-being obyvatel města. Zelené prvky zadržují vodu, ochlazují městské prostředí a zachytávají látky znečišťující ovzduší. Zároveň tvoří příjemnou krajinu jak na pohled tak skrze možnosti volnočasových aktivit. Náš indikátor zobrazuje kvalitu a hustotu zeleně.



52%

Zastoupení aktivní zeleně



772 m²

Stromů na 1 obyvatele

Celé město

Konkrétní oblast

Aktuálně zobrazené datum:



od: 05/09/2022

do: 25/03/2017



česky

English



O aplikaci



©2022 World from Space
v. 0.0.1

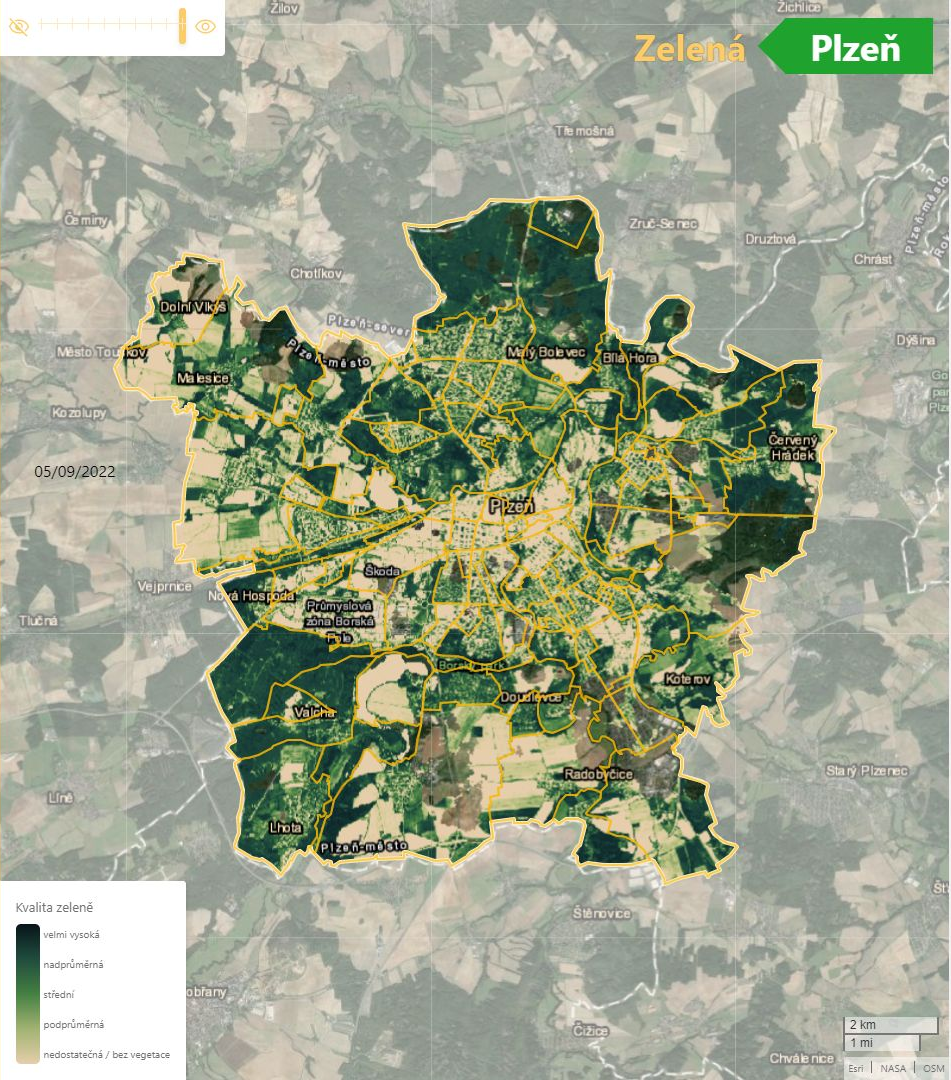
Tepelný ostrov

Rozsáhlé umělé povrchy jako střechy továren, supermarketů nebo parkoviště absorbují nejvíce tepla. V létě mohou jejich teploty snadno nastoupat k 70°C a tím dělají i své okolí nesnesitelné. Na druhou stranu i drobné zelené prvky uprostřed betonové džungle mají významný ochlazující vliv.

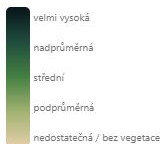


Zelená

Plzeň



Kvalita zeleně





ESA EO clinic

Agricultural census in Cook Islands

Everis, Greenspin, WfS, 2022

RAROTONGA

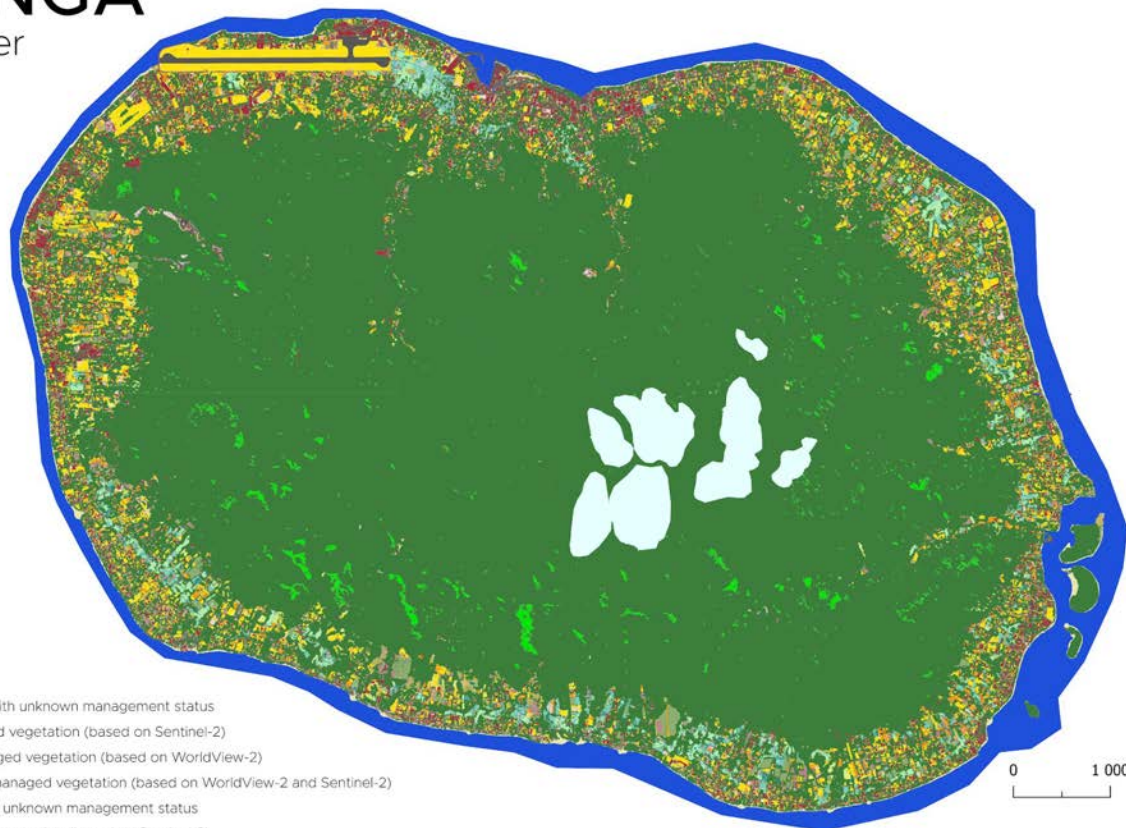
land use / land cover
20.8.2021

cloud / cloud shadow

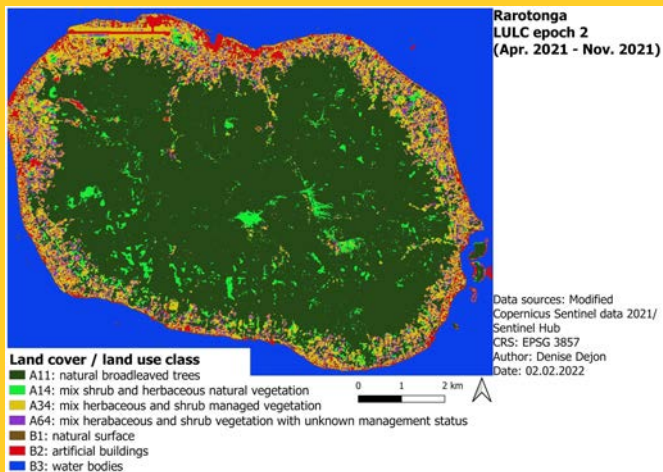
land use / land cover class

- A11 - Broadleaved evergreen forest
- A12 - Broadleaved shrubs
- A13 - Grassland
- A31 - Tree plantation
- A63 - Terrestrial herbaceous vegetation with unknown management status
- A33_S-2 - Terrestrial herbaceous managed vegetation (based on Sentinel-2)
- A33_WV-2 - Terrestrial herbaceous managed vegetation (based on WorldView-2)
- A33_WV-2_S-2 - Terrestrial herbaceous managed vegetation (based on WorldView-2 and Sentinel-2)
- A73 - Aquatic herbaceous vegetation with unknown management status
- A43_S-2 - Aquatic herbaceous managed vegetation (based on Sentinel-2)
- A43_WV-2 - Aquatic herbaceous managed vegetation (based on WorldView-2)
- A43_WV-2_S-2 - Aquatic herbaceous managed vegetation (based on WorldView-2 and Sentinel-2)
- B11A43_S-2 - Temporarily bare managed land (based on Sentinel-2)
- B11A43_WV-2 - Temporarily bare managed land (based on WorldView-2)
- B11A43_WV-2_S-2 - Temporarily bare managed land (based on WorldView-2 and Sentinel-2)

- B11 - Bare soil
- B12 - Sand
- B21 - Paved surface
- B22 - Building
- B3 - Water bodies



Data sources: Contains modified Copernicus Sentinel data [2020-2021]; WorldView-2 © [2021] Maxar Technologies
Land cover mapping: Denise Dejon (GREENSPIN), Matúš Hrnčiar (World from Space)
Cartographic production: Matúš Hrnčiar (World from Space)



	A11	A12	A13	A31	A33	A43	A63	A73	B11	B11A34	B12	B21	B22	B3	Total
A11 - Broadleaved evergreen forest	304	2	6	0	0	0	7	1	2	0	0	0	1	0	323
A12 - Broadleaved shrubs	0	28	0	0	0	0	1	1	0	0	0	0	0	0	30
A13 - Grassland	6	0	23	0	0	0	0	0	0	0	0	0	0	0	29
A31 - Tree plantation	0	1	0	29	0	1	0	0	0	0	0	0	0	0	31
A33 - Terrestrial herbaceous vegetation - managed	0	0	0	0	22	0	9	0	0	1	0	0	0	0	32
A43 - Aquatic herbaceous vegetation - managed	0	0	0	0	0	26	0	1	0	0	0	0	0	0	27
A63 - Terrestrial herbaceous vegetation - unknown management	1	0	0	0	9	0	33	0	0	0	0	0	0	0	43
A73 - Aquatic herbaceous vegetation - unknown management	0	0	0	0	0	5	1	24	0	0	0	0	0	0	30
B11 - Bare soil	0	0	0	0	0	0	1	0	21	0	0	2	9	0	33
B11A34 - Temporarily bare managed land	0	0	0	0	0	0	0	0	6	22	0	1	3	0	32
B12 - Sand	0	1	0	0	0	0	0	0	0	0	30	0	0	0	31
B21 - Paved surface	0	0	0	0	0	0	0	0	3	0	0	27	2	0	32
B22 - Building	0	0	0	0	0	0	0	0	2	0	0	0	35	0	37
B3 - Water bodies	0	0	0	0	0	0	0	0	0	0	0	0	0	54	54
Total	311	32	29	29	31	32	52	27	34	23	30	30	50	54	764
Producer Accuracy [%]	99.63	33.22	30.53	100.00	45.93	52.31	61.96	81.60	36.33	95.08	100.00	94.03	80.13	100.00	
User Accuracy [%]	94.12	93.33	79.31	93.55	68.75	96.30	76.74	80.00	63.64	68.75	96.77	84.38	94.59	100.00	



ESA EO clinic

Impact of volcano eruption at St. Vincent

Everis, Greenspin, WfS, 2022

SAINT VINCENT

land use / land cover and impacts of 2021 La Soufrière eruption on vegetation

land use / land cover class

- Elfin, Evergreen and Sierra Palm tall cloud forest (above ~550m)
- Evergreen forest
- Seasonal Evergreen forest
- Drought deciduous, coastal evergreen and mixed forest or shrubland
- Semi-deciduous forest
- Mangrove
- Blue Mahoe plantation
- Woody agriculture (e.g. cacao, coconut, banana)
- Montane non-forested vegetation (e.g. high altitude pastures)
- Pasture, cultivated land and herbaceous agriculture
- Bare ground
- Quarry
- Sanitary fill
- Roads and other built-up structures
- Buildings
- Airport
- Water

The land use/land cover map represents an updated version of the 2014 land cover map generated by the British Geological Survey for the ESA EarthWatch project through image classification, visual interpretation, and field checks. The map has been updated by adding buildings, amenities, and selected roads from the pre-event version (05/01/2020) of the Open Street Map database.

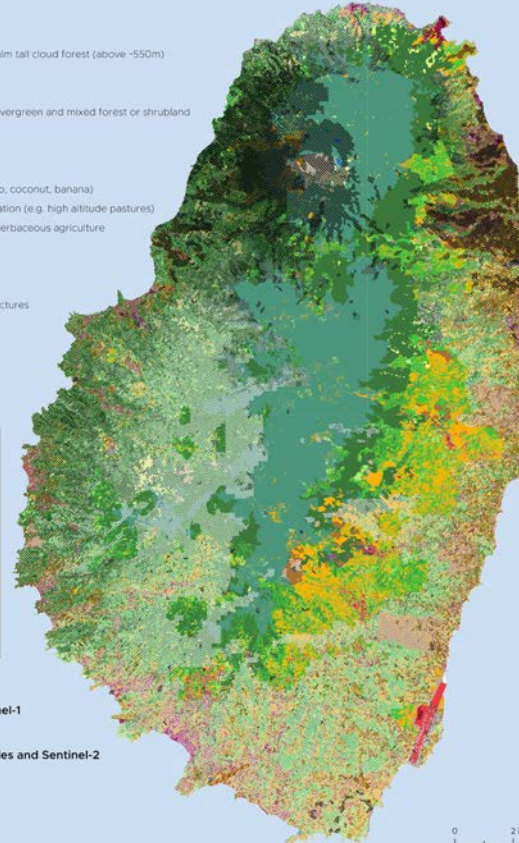
The levels of the impact of the volcanic eruption are based on the interpretation of changes in the vegetation states before (03/07/2019) and after (03/05/2021 - 02/06/2021) the eruption. The changes were assessed using the vegetation index (NDVI) calculated from the Sentinel-2 and Pleiades data and the reflectivity of the Sentinel-1 radar signal.

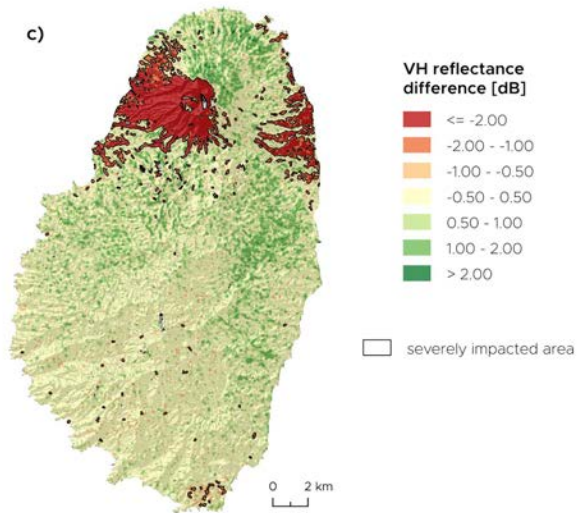
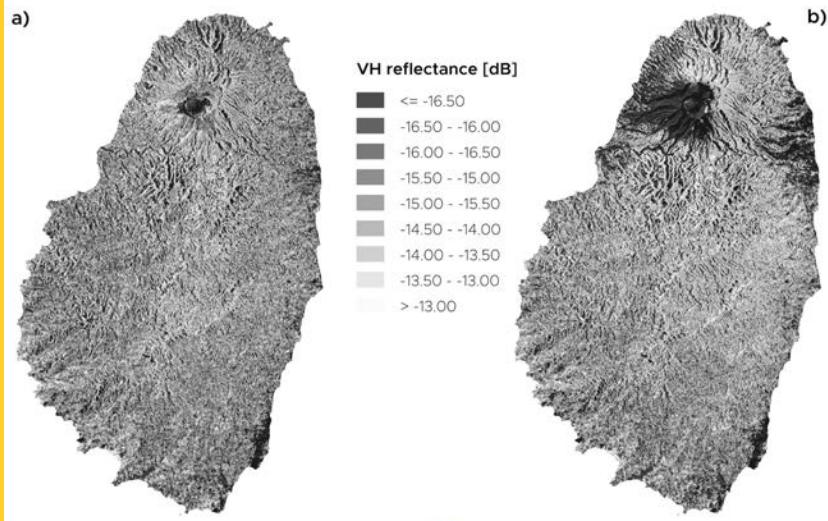
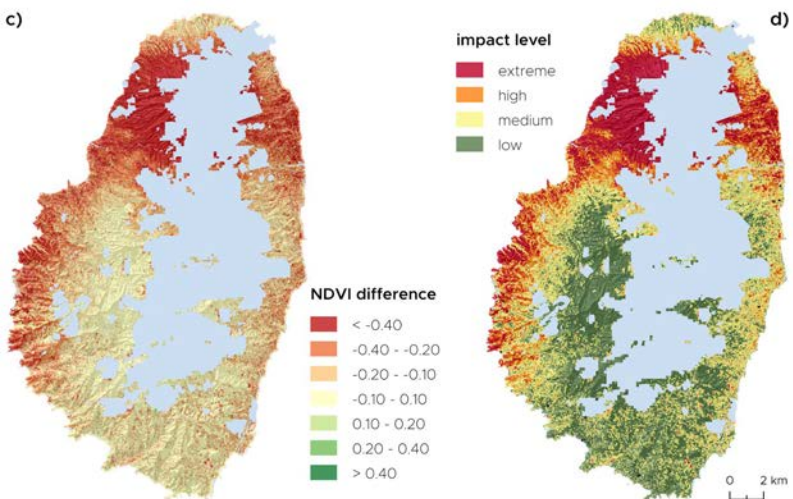
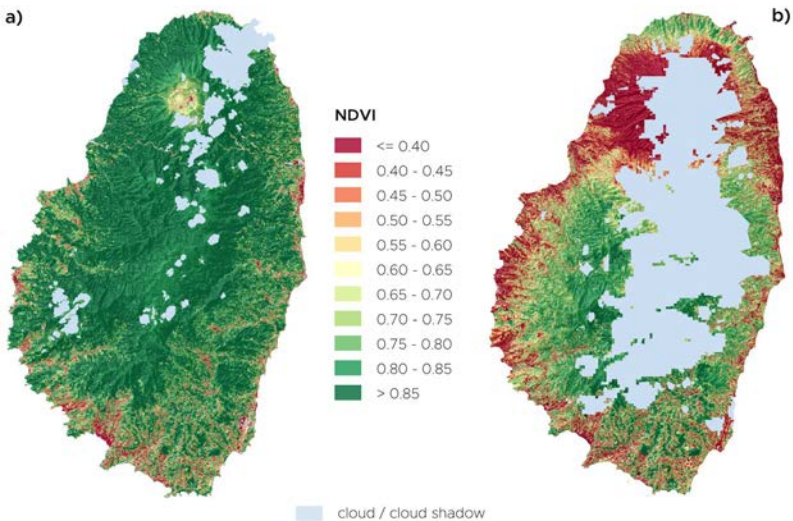
impact level - based on Sentinel-1

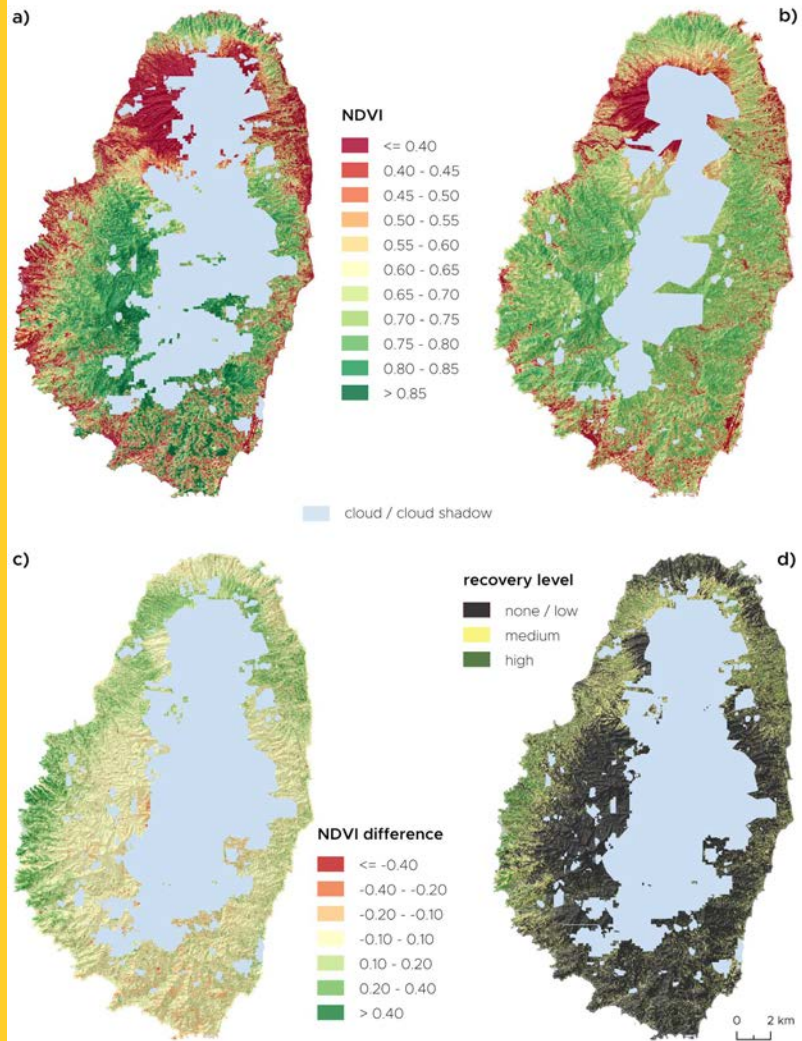
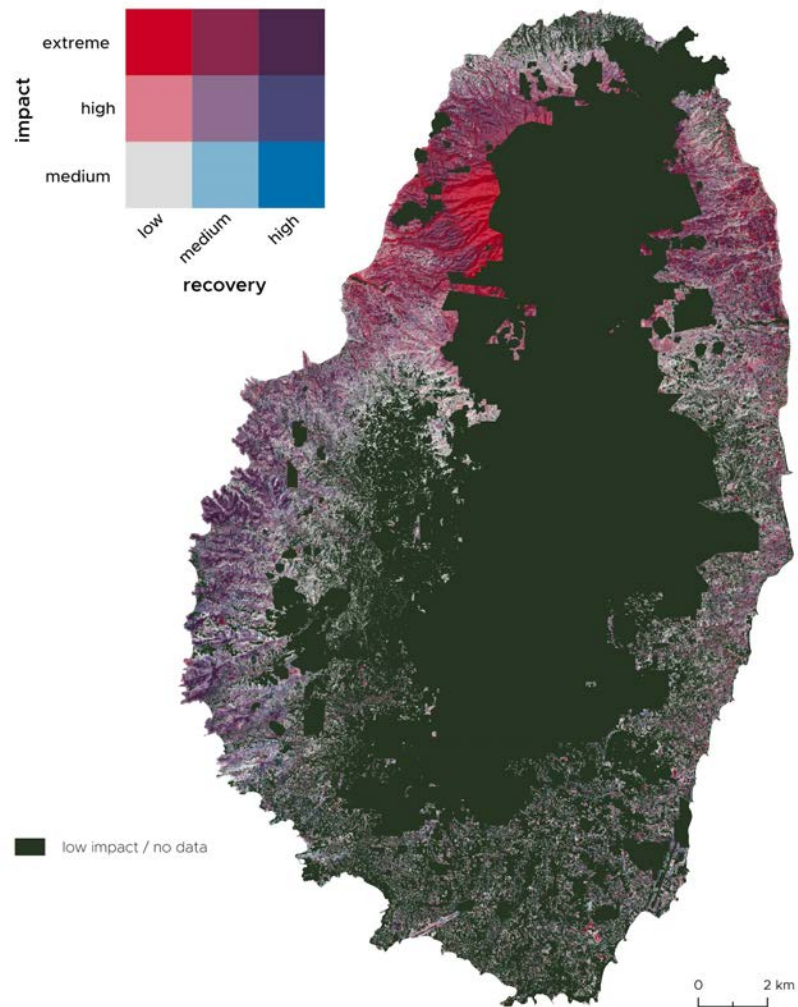
- extreme

impact level - based on Pleiades and Sentinel-2

- extreme
- high
- medium
- none / low





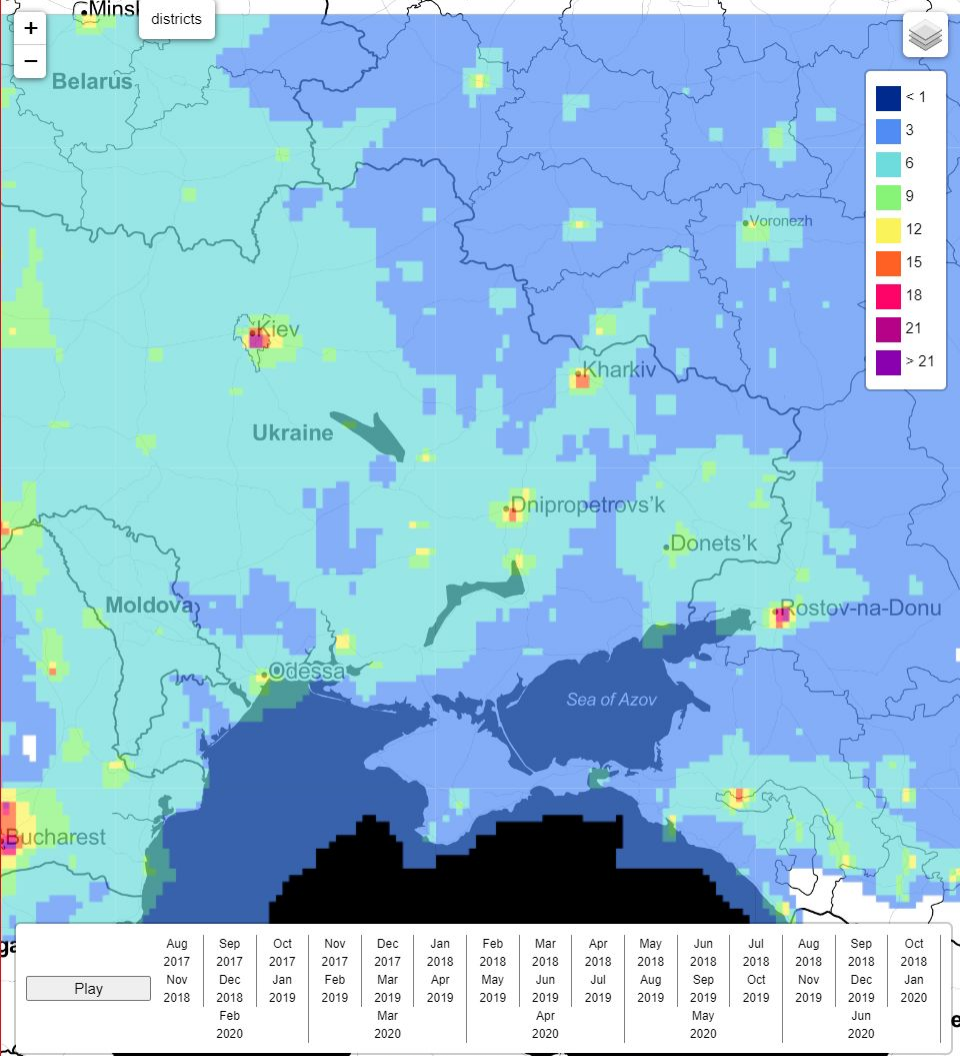
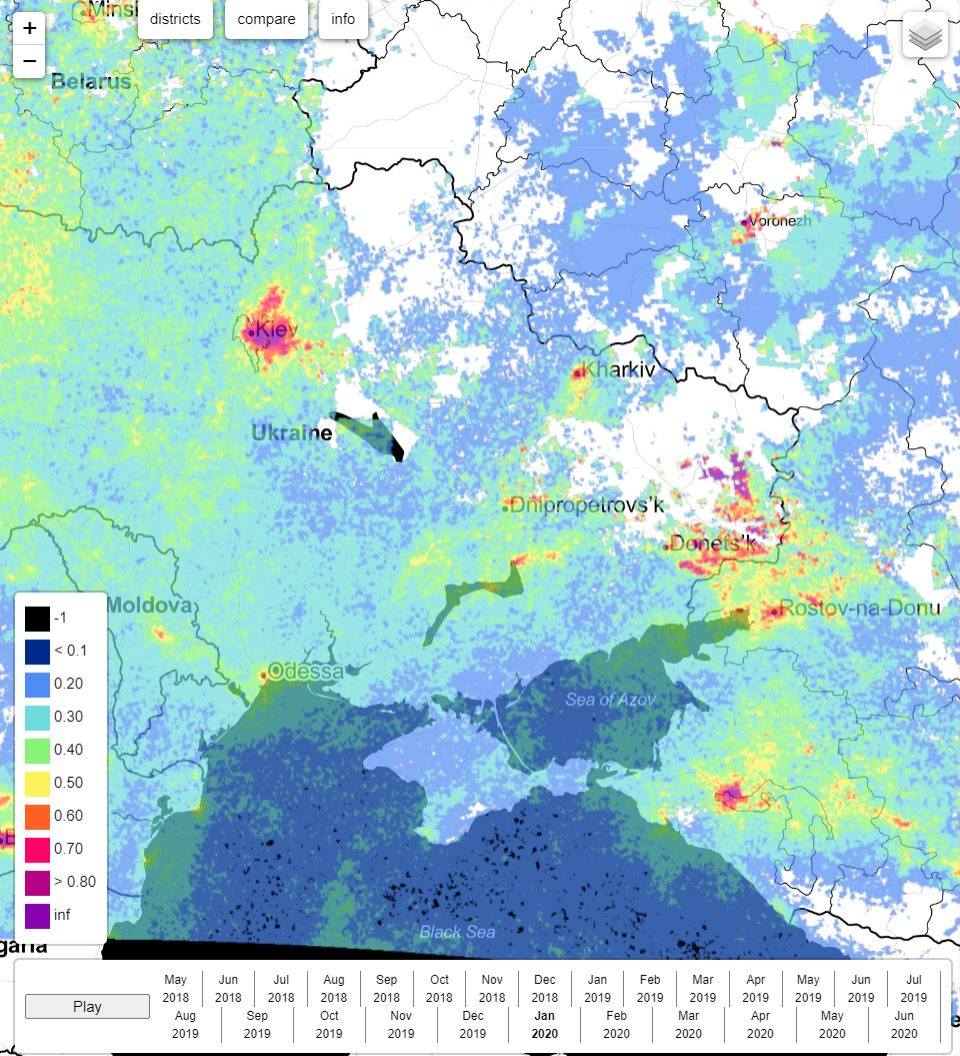


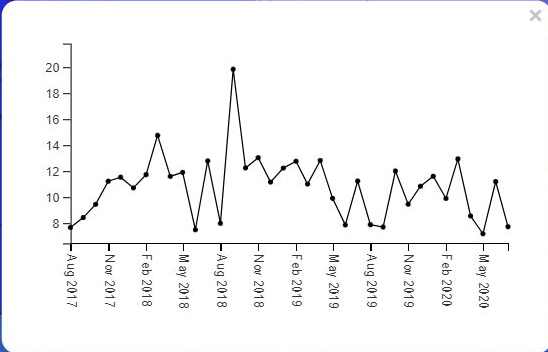
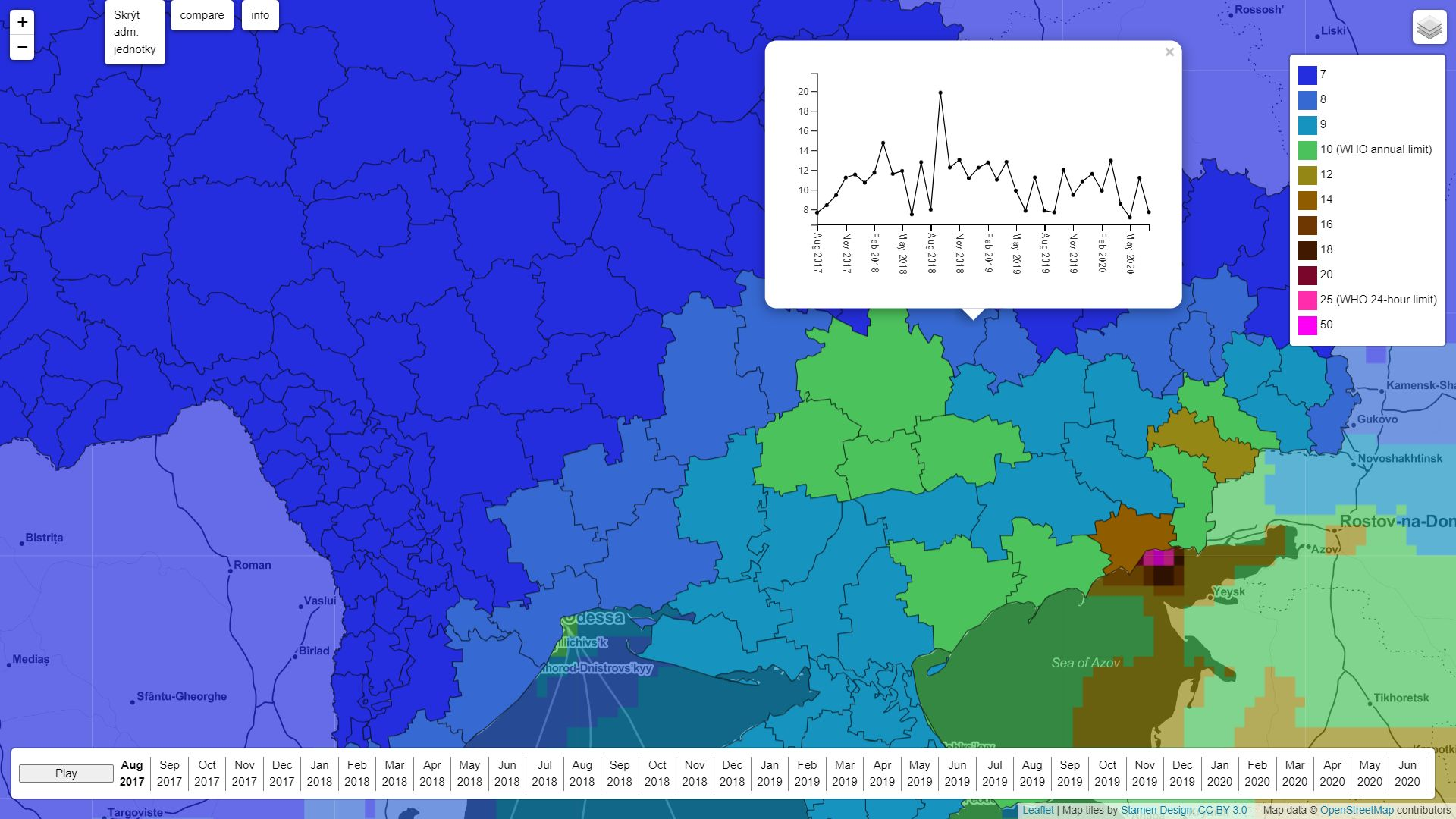


Web app

Air quality in Ukraine and Moldova
ESA for UNDP

<https://air.worldfrom.space/>







Greenery

Report for Prague

SATELITNÍ MONITORING VEGETACE

SHRNUTÍ POZNATKŮ



PRAHA A JEJÍ BLOKOVÁ ZÁSTAV

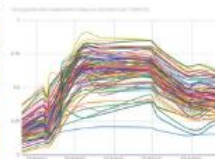
Thrombolytic treatment is indicated in patients with acute myocardial infarction (AMI) who are treated with aspirin and/or beta-blockers.



ROK 2018 A
DYNAMIKA VEG

VÝSTUPY

- V roce 2018 vykrmíme Prahu pomocí
- krmiva zelené b
- začátku května
- Lotošské suchy p
- vegetace v zář
- obnovit



JAKÉ JSOU HLAVNÍ ZAJÍMAVOSTI



NEJSUŠŠÍ ROK
ROK 2018 BYL PRO ZELEŇ
NEJNÁROČNĚJŠÍ OD ROKU
2015

**MACHAROVO
NÁMĚSTÍ**
JE NEJZELEŇŠÍM
NÁMĚSTÍM VE
SLEDOVANÉM ÚZEMÍ

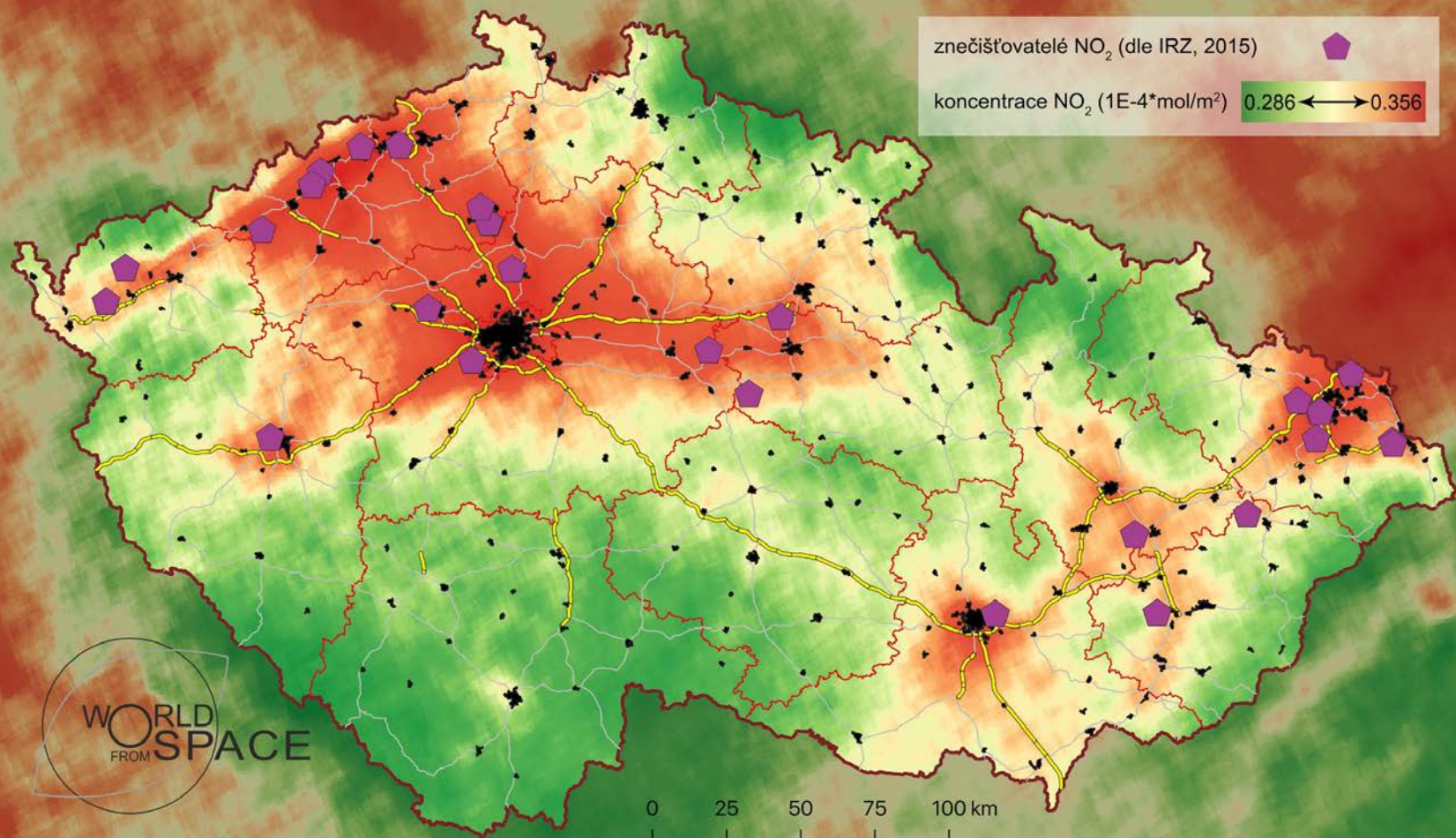
Wzrostki by być zdolne przetrwać w gołotyście oświetlonej przez 1 minutę każdego dnia. Wzrostki, których wyżyłki karmiono roztworem, do którego nie dodano jodu, nie przetrwały.



Air quality

Analyses of long term Sentinel-5p
measurements

PRŮMĚRNÉ KONCENTRACE NO₂ V ČESKÉ REPUBLICE (1/1/2019–30/6/2019)





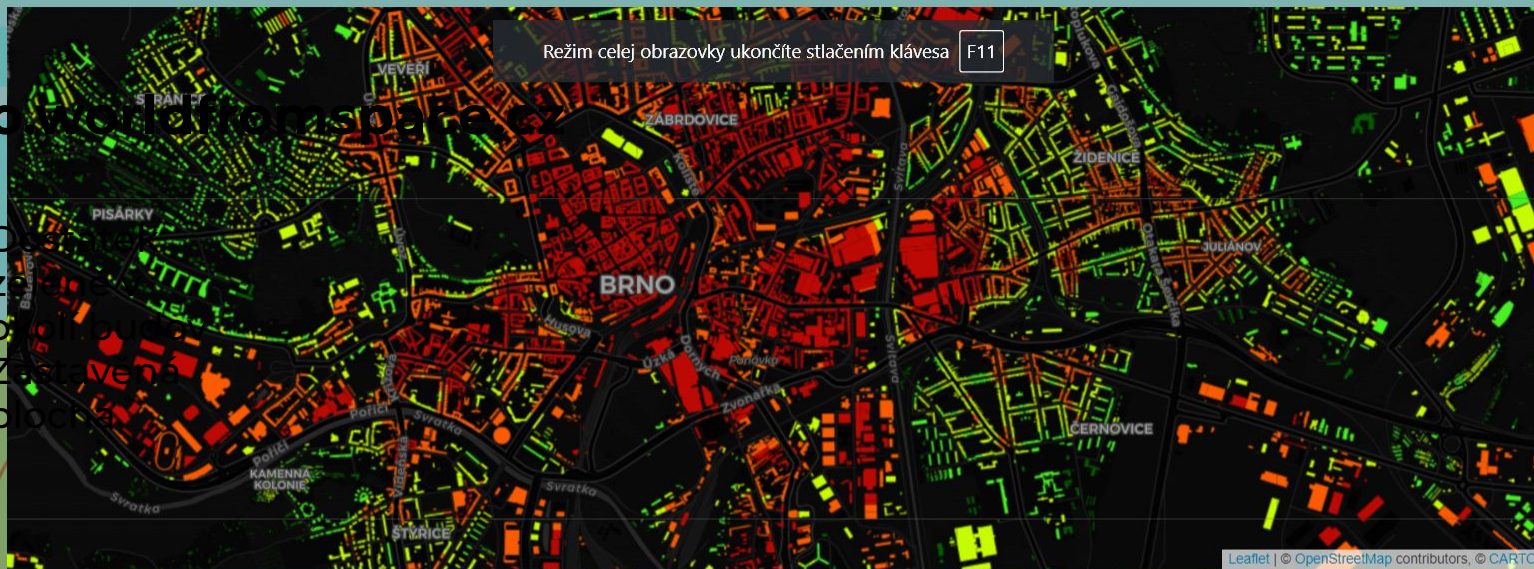
Dashboard

Greenery in Brno

<https://brno.worldfromspace.cz/>

brno

- D
- Z
- O
- Z



12,607
houses with enough greenery around

25,038
houses with a lack of green areas





Roman BOHOVIC

bohovic@worldfrom.space



**WORLD
FROM
SPACE**



**DYNA
CROP
SPACE**

