

Rapid Change Detection of Forest Cover Disturbances in the Ukrainian Carpathian

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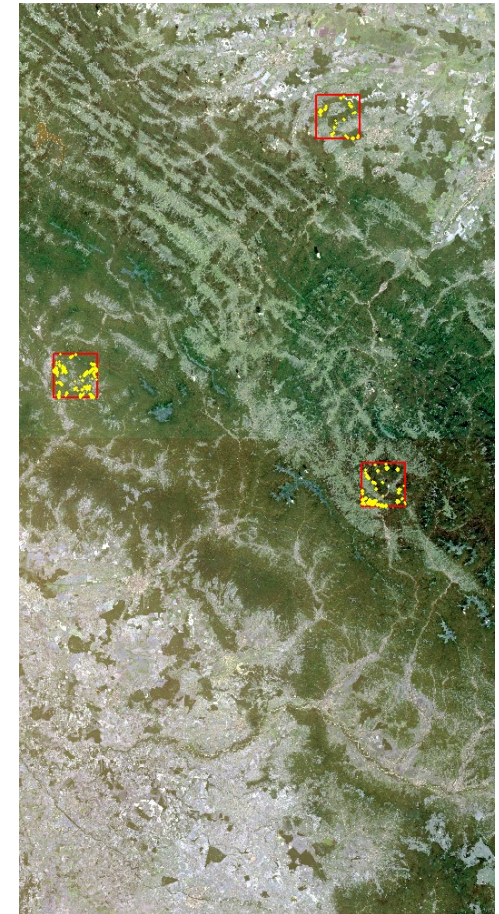
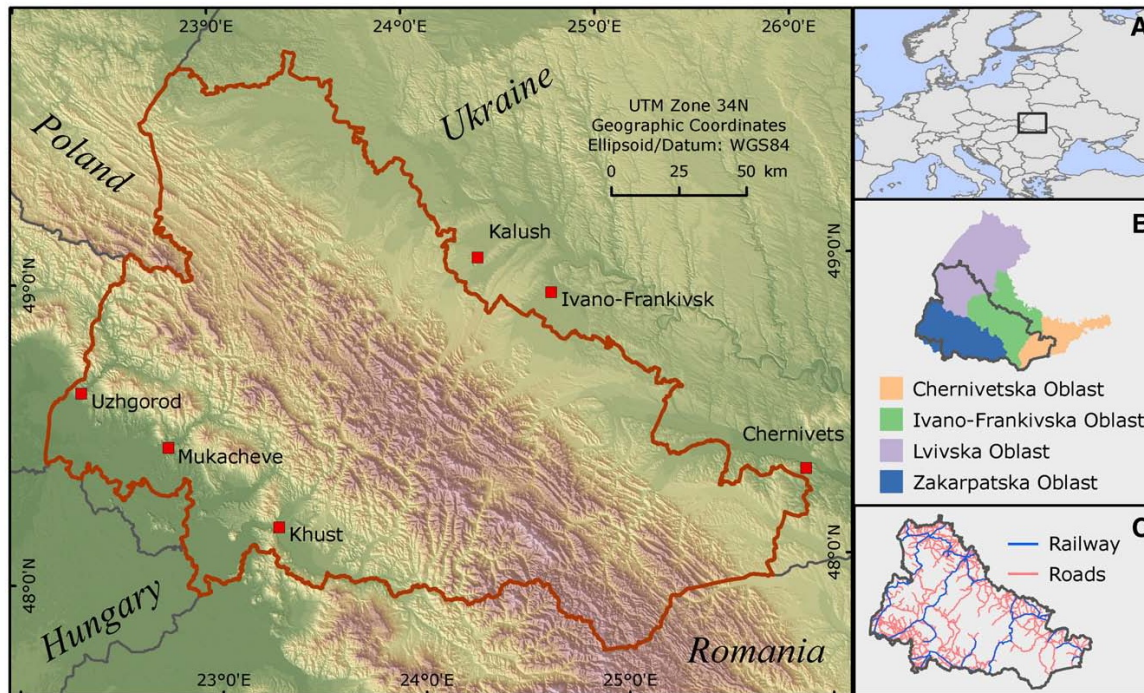
Objective

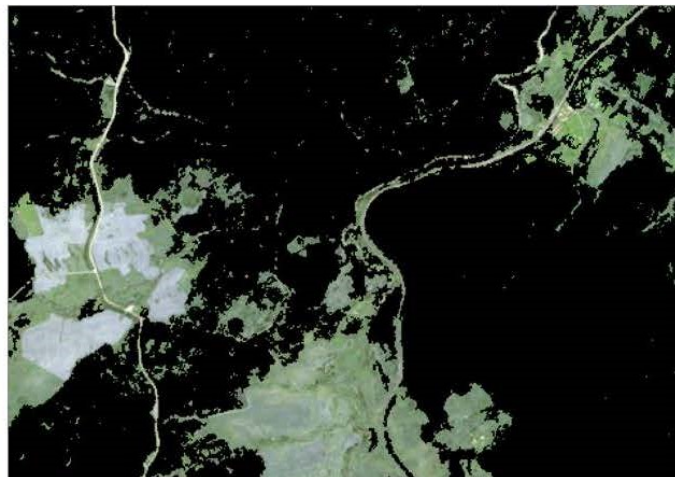
Design, develop a methodology and demonstrate a **European Forest Disturbance Monitoring System**

a. near real time forest disturbance monitoring by providing disturbance indication maps in a user accessible web portal immediately after image acquisition by automated pre-processing, change detection and visualization.

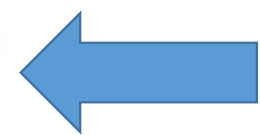
b. annual disturbance maps with thematic parameters

Service primarily focused on Sentinel-2 satellites from the Copernicus programme





Forest



Forest masking based on Random Forest Classification

Plot: 1001 / SEN2_2018317_1200

External sources
 Show Chips Show Bing
 Show Planet.com Show Sentinel-Hub
 Reset Position

Tools
 Copy coords to clipboard

Time Series
 index - Open Trajectory
 19_000_47-2_018m - Open Menu

Band selection / stretch
 R G B
 red - red - red
 index -
 0.2765 0.0765 77.737

Image chips
 SEN2_201704L_100.jpg SEN2_201814C_100.jpg SEN2_201804L_100.jpg SEN2_201811_100.jpg

Classify

Forest	17	12
Non-Forest	03	03
Human-induced disturbance	03	03
Storm	03	03
Fire	03	03
Special ice break	03	03
De-forestation	03	03
Biotic Damage	03	03
Disturbance / Unknown type	03	03
Stratland	03	03
Flooding	03	03
C12	03	03
C13	03	03
C14	03	03
C15	03	03
C16	03	03
C17	03	03
C18	03	03
C19	03	03
C20	03	03

Select reliability (old)
 Low Medium High
 0

Select reliability (new)
 Low Medium High
 0

Select plausibility (old)
 ref both map none
 0

Select plausibility (new)
 ref both map none
 0

Comment

Save and Proceed Save and Goto Overview
 Don't save and goto next Cancel

Based on NDVI approach and time series forest masks, for the quantitative validation of the Annual Forest Disturbance Mapping products, the following categories are assessed:

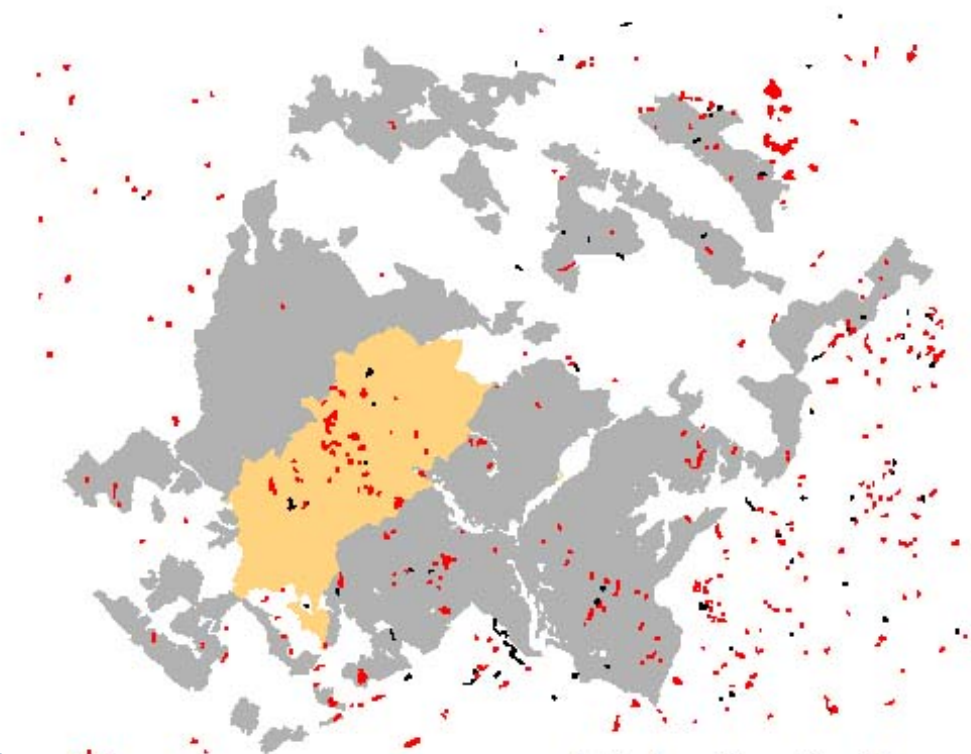
- .. Stocked areas / Forest
- .. Unstocked Areas / Non-Forest
- .. Disturbances



Webtool implemented for validation main window



← Confirmation of Disturbances



Detected Disturbances in region of Skole administrative district



Legend

- Forest Disturbances 2016-2017
- Forest Disturbances 2018
- National Park & Forest Enterprise
- MFE Skole

0 2 4 8 12 16 Kilometers

<https://diabolo-nrtm.ign.fr/> - Near Real Time Disturbance Mapping