

living planet symposium | BONN 23–27 May 2022

TAKING THE PULSE
OF OUR PLANET FROM SPACE



Using Earth Observation data to support German sustainable land use targets

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25.05.2022

- About incora, background, research goal
- Method
- Result



About incora (Inwertsetzung von Copernicus Daten für die Raumbeobachtung)



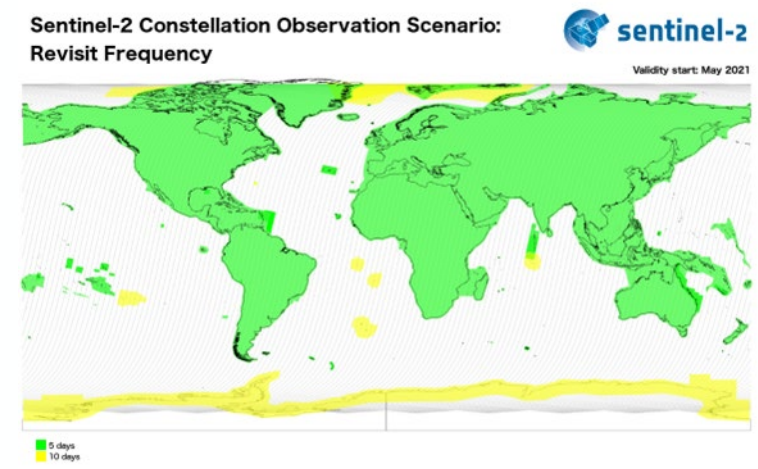
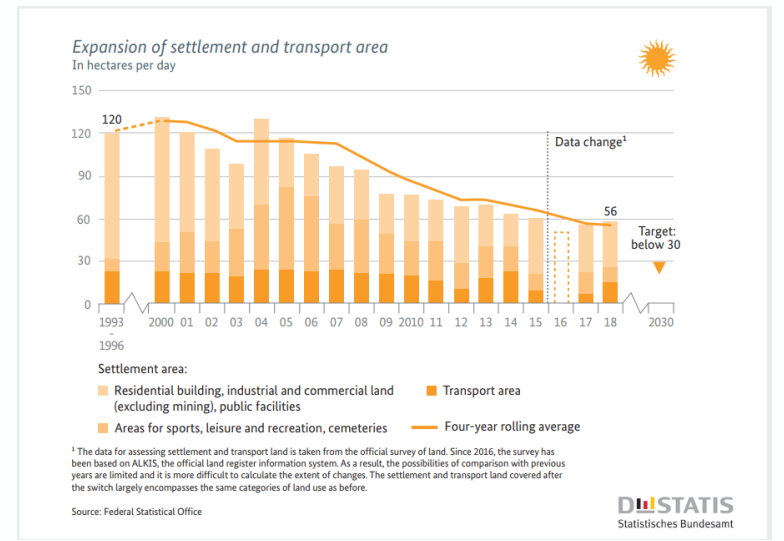
- Added values of Copernicus data for spatial monitoring
- mFund project
- Project Partners
- Project duration: 01.11.2018-28.02.2022



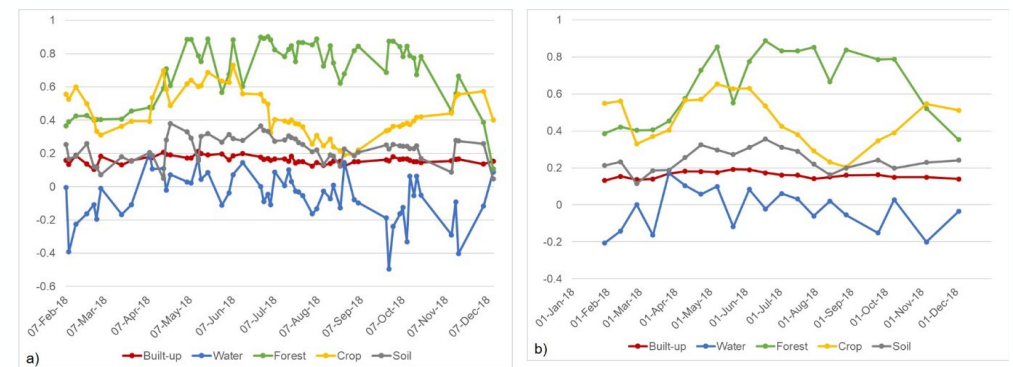
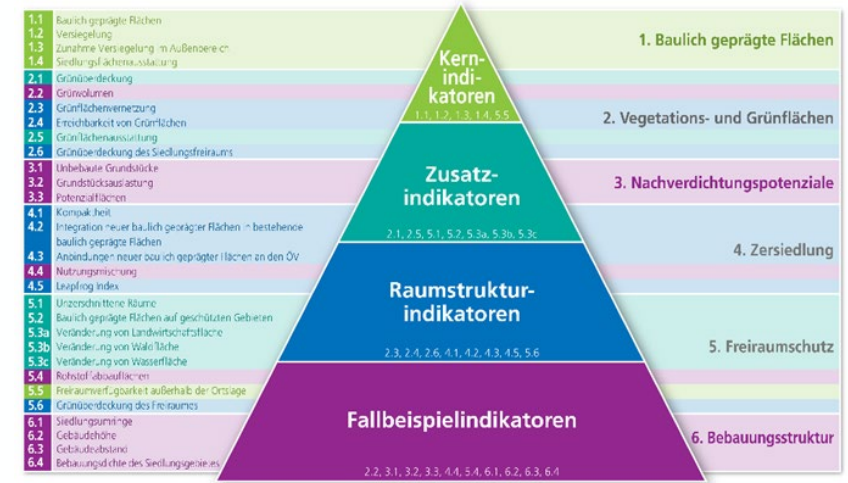
Background and research goal



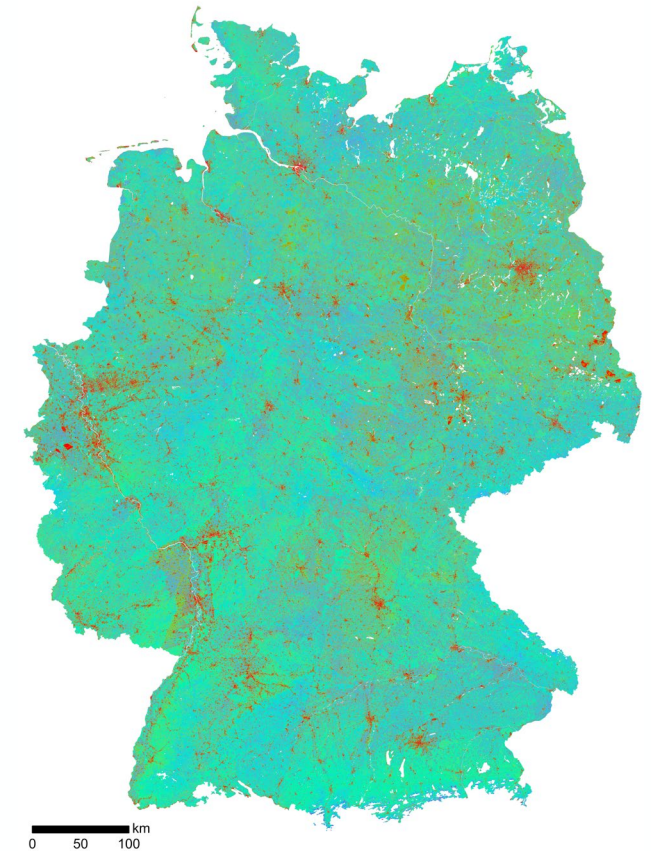
- German sustainable strategy
 - Urban land take
 - Loss of open space
 - Density of settlement
- Challenges
 - Consistent measurement
 - Monitor the progress
- Research goal
 - Using Earth Observation data
 - Support sustainable land use targets



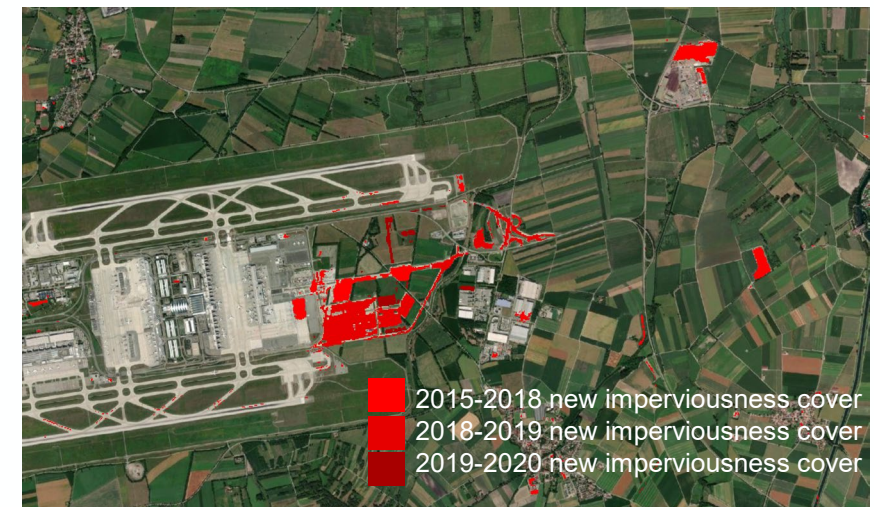
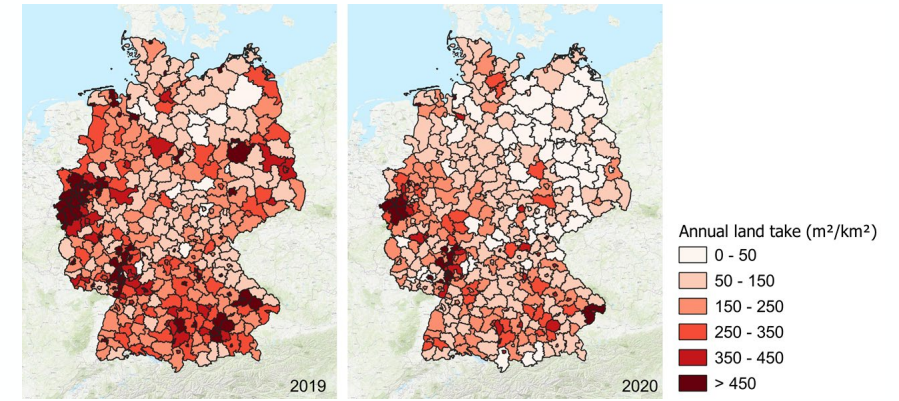
- Indicator system
 - Urban
 - Vegetation
 - Urban structure
 - ...
- Earth Observation techniques
 - Big data
 - Machine learning
 - Time series analysis
 - Spectral unmixing
 - ...



- Annual land cover mapping
- Annual imperviousness/soil sealing mapping
- Annual change detection

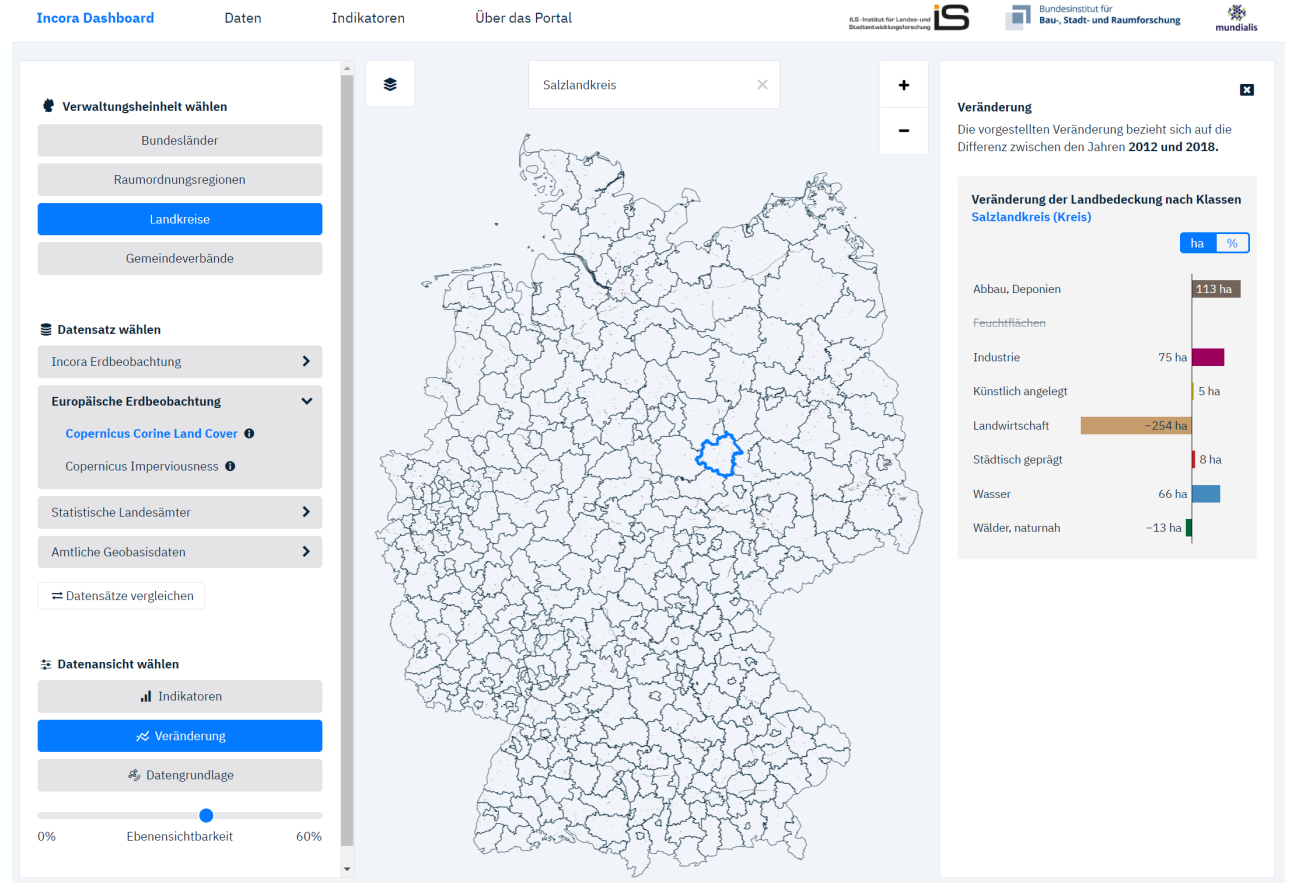


- Quantitative measurements
- Geographic display
- Geo-object / spatial feature

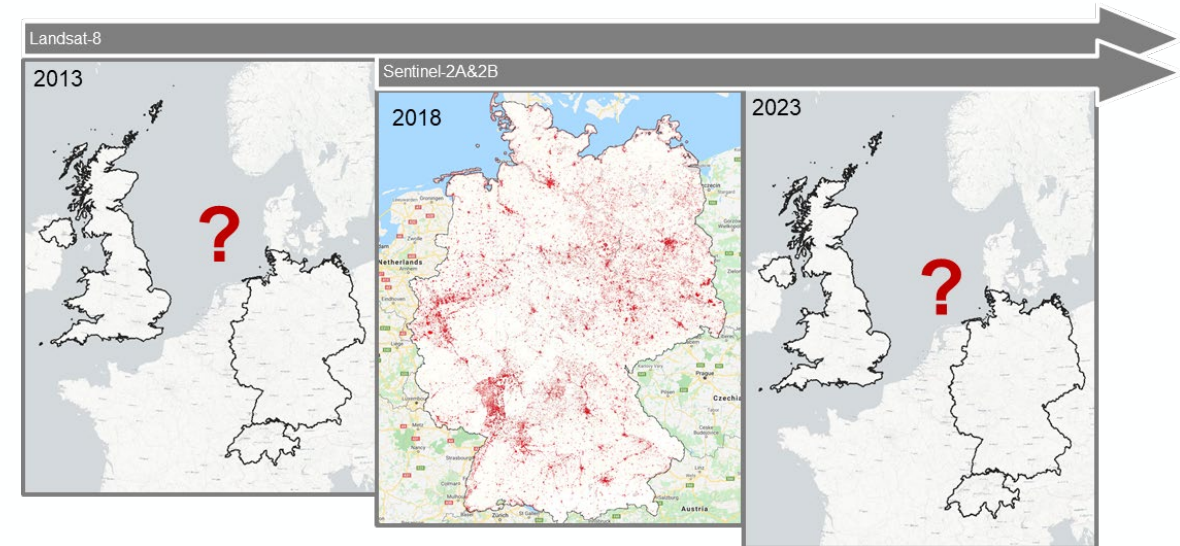


Research result part 3: incora dashboard

- Cross different administrative levels
 - Bundesländer
 - Raumerdnungsregionen
 - Landkreise
 - Gemeindeverbände
- Datensatz wählen
 - Incora Erdbeobachtung
 - Europäische Erdbeobachtung
 - Copernicus Corine Land Cover
 - Copernicus Imperviousness
 - Statistische Landesämter
 - Amtliche Geobasisdaten
- Datensätze vergleichen
- Datenansicht wählen
 - Indikatoren
 - Veränderung
 - Datengrundlage
- Ebenensichtbarkeit (0% to 60%)

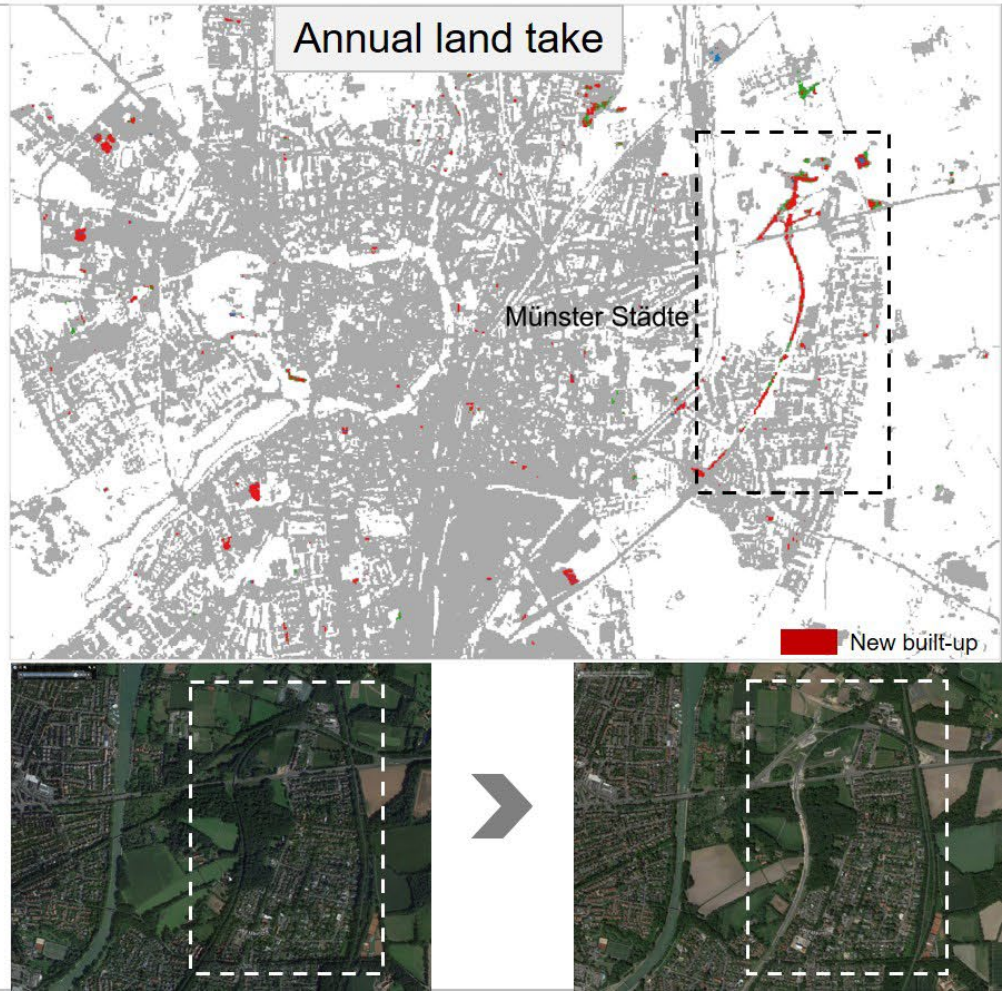
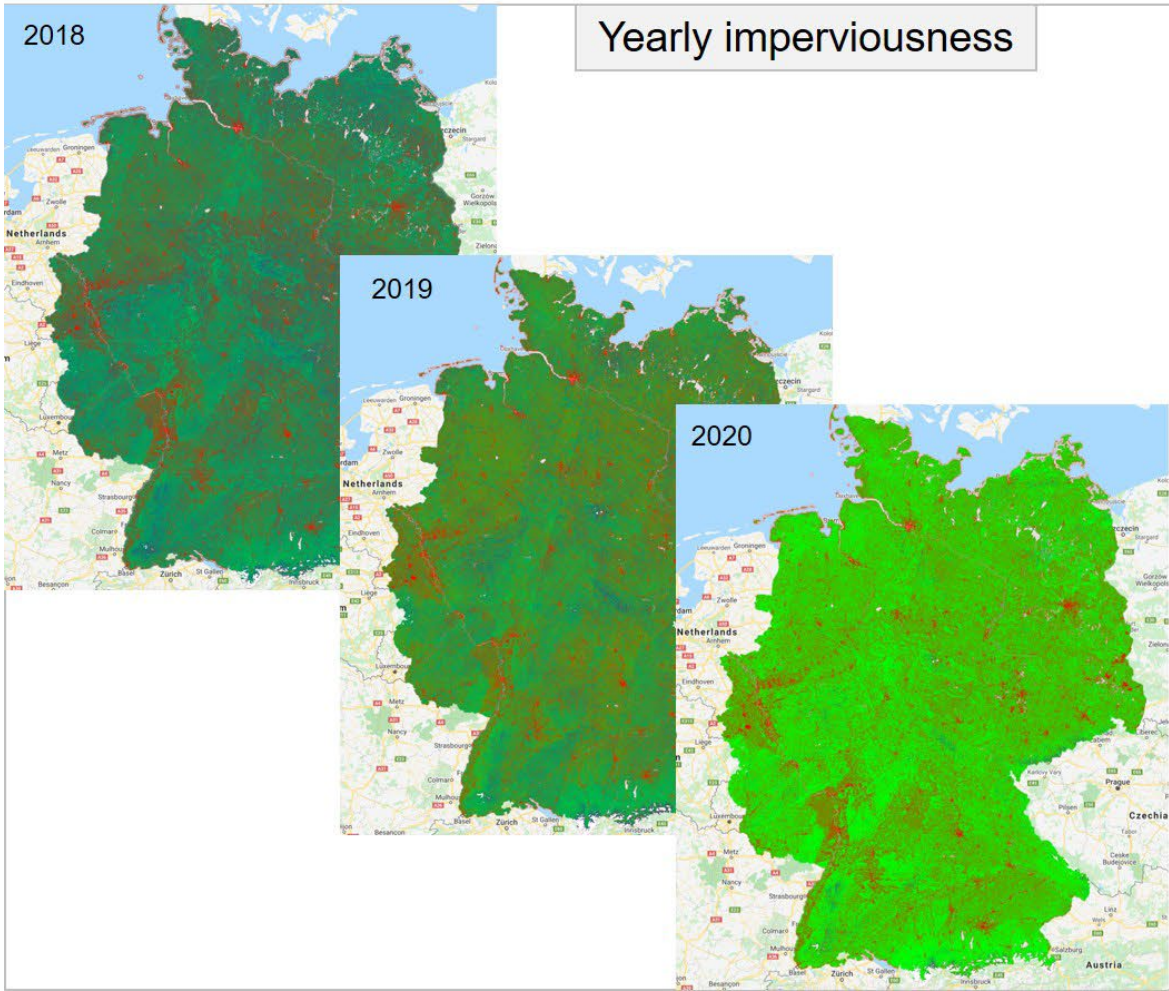


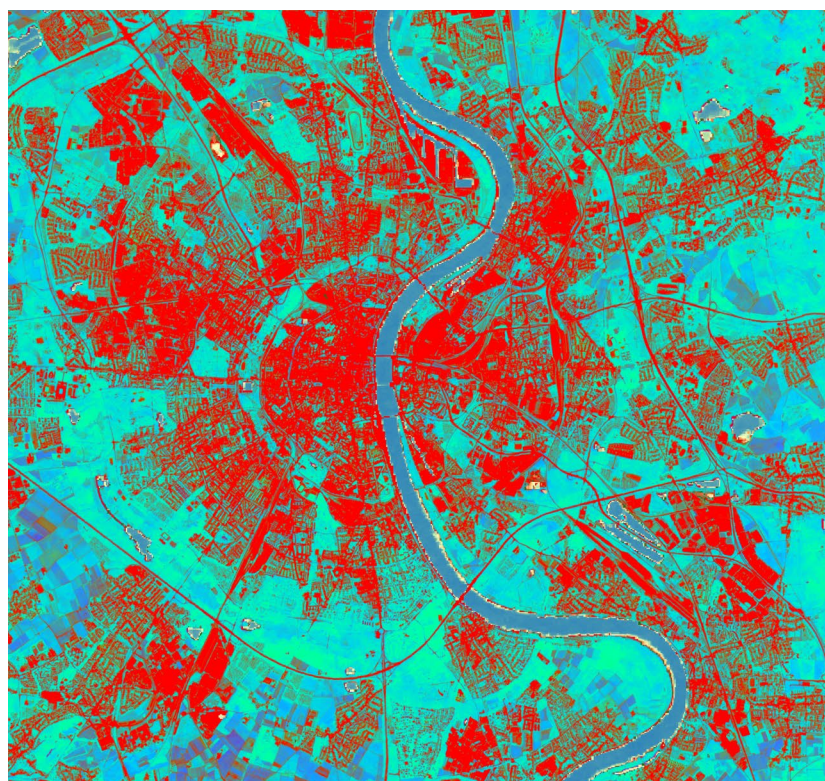
- Practical, problem-solving
- Added values of EO products
 - Consistent in time series and at geographical scales
 - Up to date
 - Time and energy saving
- Outlook
 - Larger scale
 - Longer period



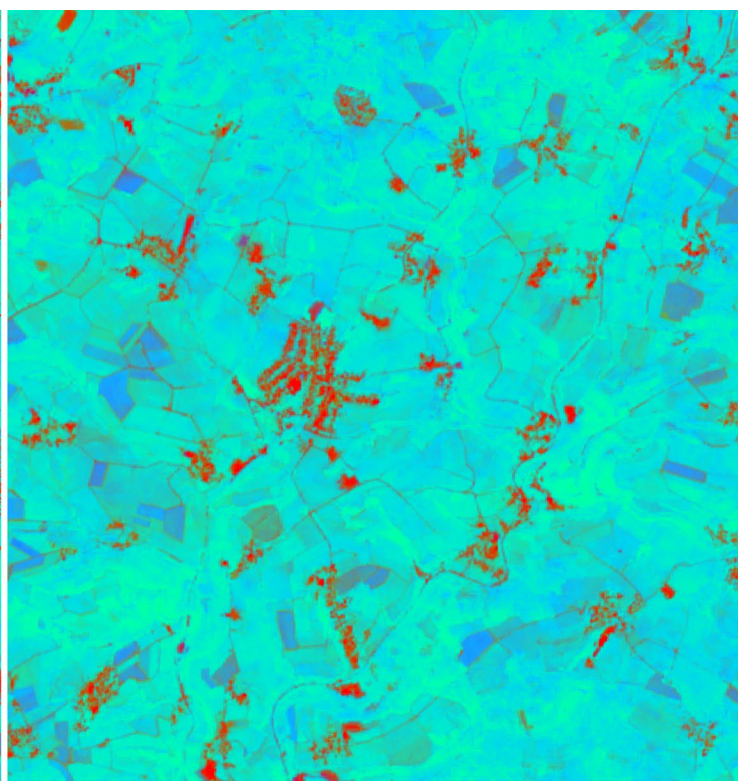
Thank you!







1: 150000 0 1 2 km



1: 50000 0 0.5 1 km

Imperviousness: 100%
Greenness: 0%
Temporal variation: 0%

Imperviousness: 0%
Greenness: 76%
Temporal variation: 23%

