Land Monitoring

Copernicus Land Monitoring Service in support of SDGs

Earth Observation and Geospatial Data for SDG and environmental indicators: Practical examples

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23.05.2023

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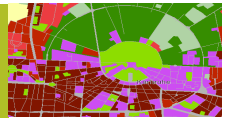
The Copernicus Land Monitoring Service in a nutshell

https://land.copernicus.eu

copernicus@eea.europa.eu

Priority Area Monitoring



Land Cover & Land Use mapping

Biophysical Parameters

European Ground Motion Service

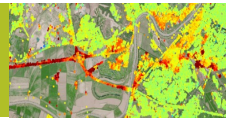


Image mosaics, In-situ, Reference data

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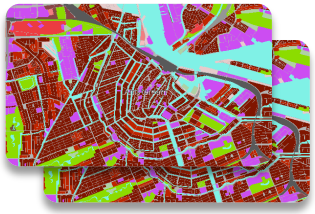
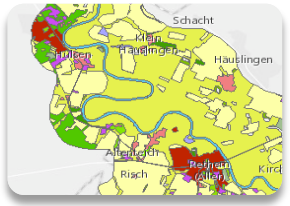
The CLMS product portfolio

Local

Urban Atlas
2006-12-18



Riparian Zones
2012-18



N2K
2006-12-18

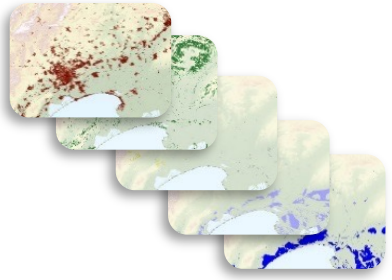
Coastal Zones
2012-18

Pan-European

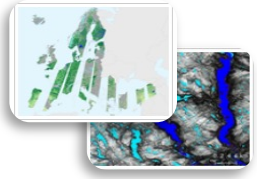
CLC & CLCC
1990-2000-06-12-18

CLC+ Backbone
2018

High Resolution Layers
2006-09-12-15-18



Biophysical parameters



European Ground Motion Service

Imagery and reference data

EU-DEM

EU-Hydro

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Copernicus contribution to the SDGs

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EU trend of SDG 15 on Life on Land

SDG 15 seeks to **protect, restore and promote** the **conservation and sustainable use** of **terrestrial**, inland-water and mountain **ecosystems**. This includes efforts to sustainably manage forests and halt deforestation, combat desertification, restore degraded land and soil, **halt biodiversity loss** and protect threatened species

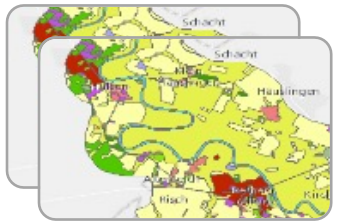
Sustainable development in the European Union, Monitoring report on progress towards the SDGs in an EU context, 2022 edition, Eurostat

CLMS: Priority Area Monitoring

Copernicus: a tool for monitoring and reporting

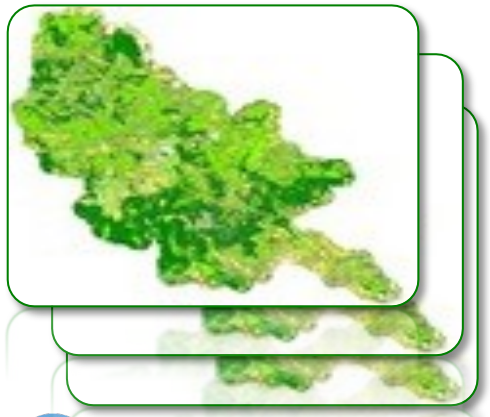
Urban Atlas
2006-12-18

Riparian Zones
2012-18

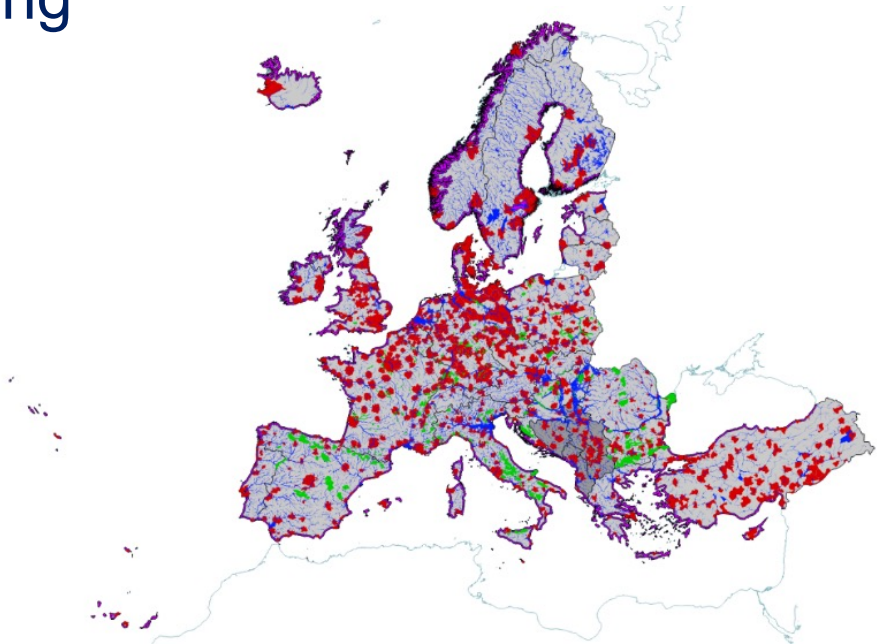


Coastal Zones
2012-18

N2K
2006-12-18



- Vector based LC/LU mapping of priority areas
- MMU 0.5 ha
- Tailored nomenclature
- 6/3 year cycles: status and change mapping



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Why are grasslands important?

State of nature in the EU — European Environment Agency (europa.eu)

Report highlights:

- land cover changes are less within Natura 2000 than outside, but habitats are still being **lost**
- dominant land cover changes within the Natura 2000 network occurred for grasslands
- a noteworthy portion of the reported information comes from expert opinion and partial surveys, due to incomplete monitoring schemes in some Member States
- Almost **half of the grasslands assessed recorded a 'bad' conservation status with over a third assessed as being 'poor'. Only 7 %** of grasslands assessed showed an **improving trend**, while nearly **51 % of grassland trends** were classified as **deteriorating**.

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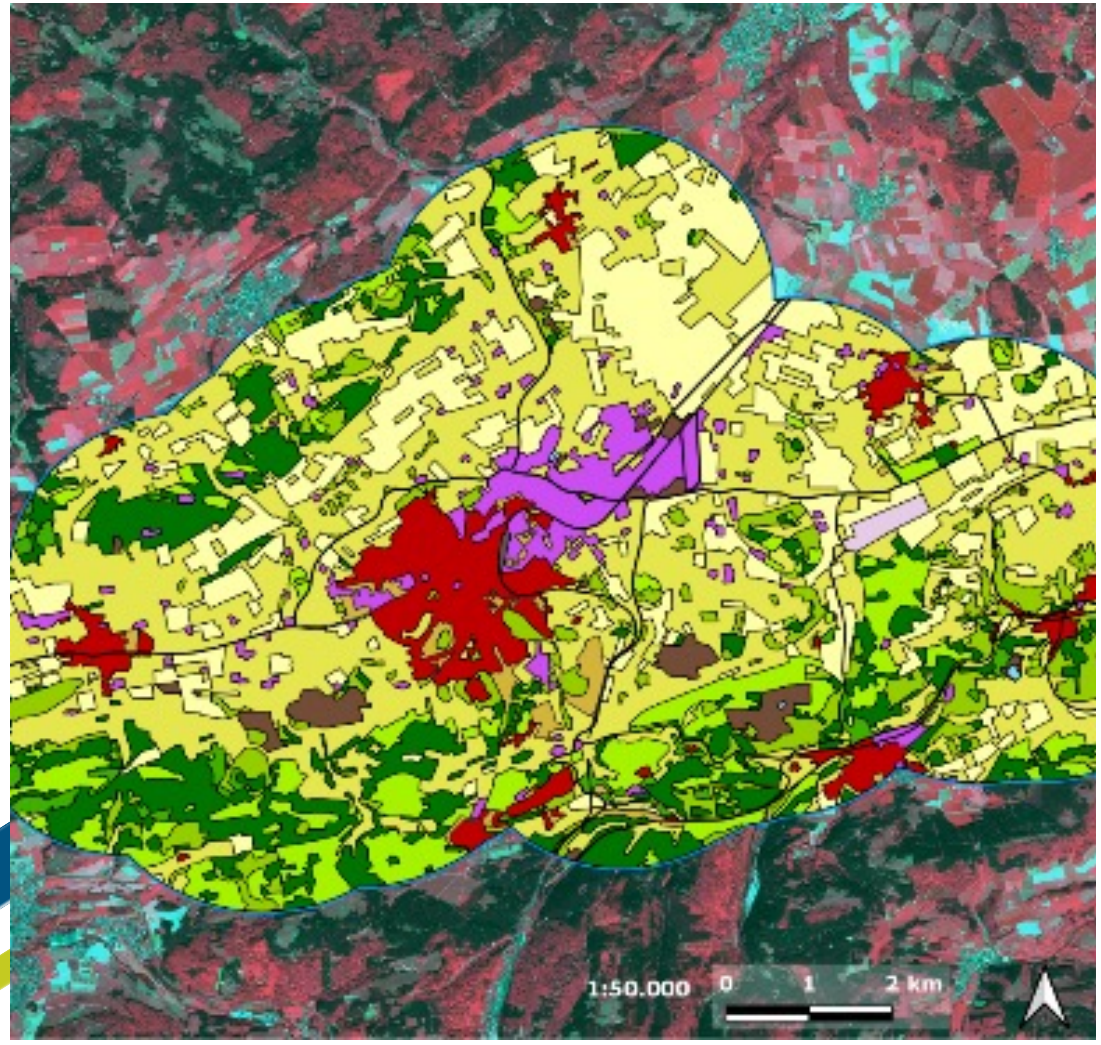
CLMS N2K LC/LU product (2006, 2012, 2018)

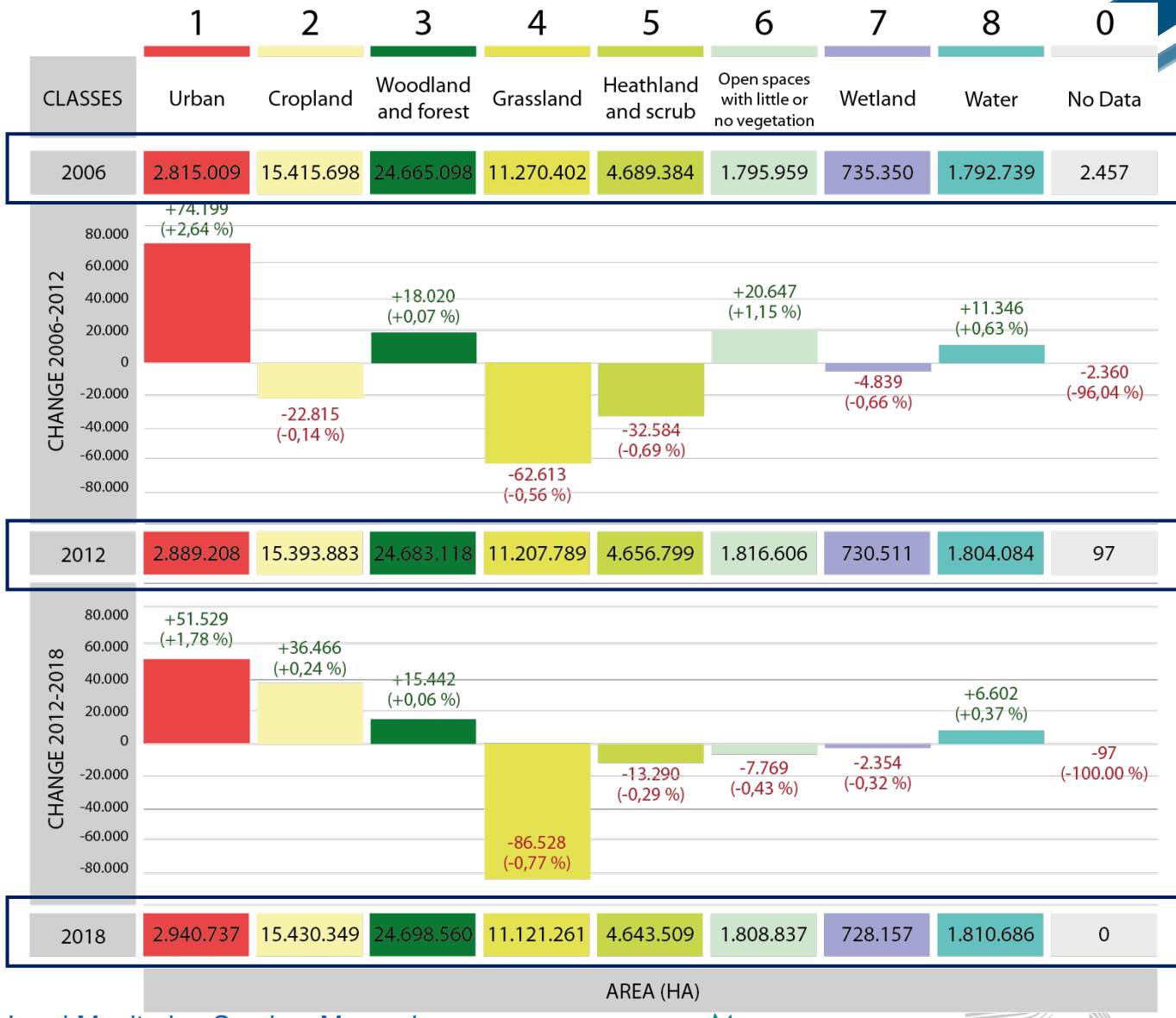


Assessment of changes between 2006 – 2012 & 2012 – 2018

- High dynamics in the Urban and Grassland classes
- Urban areas show the highest growth and Grassland is lost over both reference periods, mainly due to (2012-2018):
  - Agricultural conversion to cropland (36%)
  - Urbanisation (22%)
  - Tree encroachment (14%)

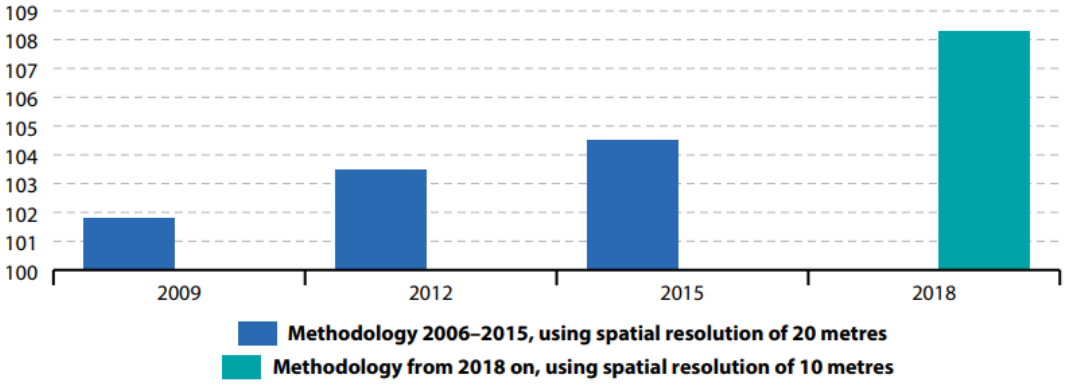
CONCLUSION:

- Good work is being done within Natura 2000 areas to lessen the decline of grasslands areas
- However **more work** is required to protect these valuable areas.



Indicator measuring progress towards SDG 15, EU: Soil sealing index

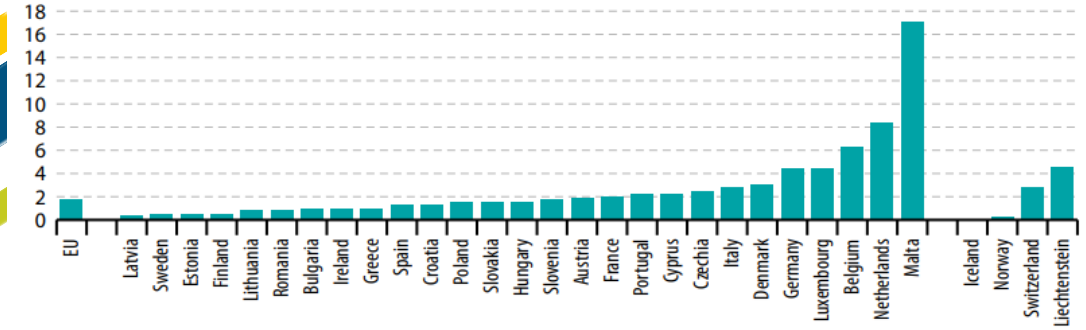
Figure 15.3: Soil sealing index, EU, 2006–2018
(index 2006 = 100)



Note: Break in time series in 2018.

Source: EEA (Eurostat online data code: sdg_15_41)

Figure 15.4: Soil sealing, by country, 2018
(% of total surface)



- This indicator (built on data from the Imperviousness High Resolution Layer) estimates the increase in sealed soil surfaces with impervious materials due to development and construction. It provides an indication of the rate of soil sealing.

Extracted from: Eurostat, 2022 edition of report "Sustainable development in the EU, monitoring report on progress towards SDGs in an EU context

Note: Assessment of progress not possible due to break in time series in 2018

Soil sealing index

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