

EEA

Statement on Agroforestry



Agroforestry

State of the art of monitoring tools

- EEA coordinates the **COPERNICUS Pan-European component**, including **CORINE** and **high-resolution products (HRL)**
 - **CORINE**: 2.4.4 Agroforestry: incl. Mediterranean agro-forestry systems, agricultural land shaded with forestry trees with a crown coverage 10-30%, areas of forest trees intermixed with fruit trees/olive trees; MMU 25ha.
 - Individual **land management practices** within such land cover units cannot be spatially separated due to the coarse resolution
 - **CORINE 2.2.2**: incl. complex cultivation pattern mosaics where fruit parcels cover at least 50 % of the area
 - **HRL**: grassland, forest, nomenclature follows CORINE; in preparation: crop types
- New developments: 2nd generation CORINE Land Cover (CLC+ MMU raster: 100 m²): vector: CLC-core: 1ha grid cells, combined with complementary LC and LU information (e.g. CLC+LULUCF)

Overview: Copernicus Land Monitoring Services (CLMS)

Geographical information on land cover

Copernicus themes

I. Global Products

Fraction of Green Vegetation Cover, leaf area index, (10-daily, 300m/1km)

II. Pan European Component

- a) CORINE Land Cover 25 ha MMU (change, 5 ha) 6 yr cycle
Equiv. scale: Status: 1:250k, Change: 1:1Mio; linear: min 100m
1990-2000,
2000-2006,
2006-2012,
2012-2018
- b) High resolution layers (HRL)

III. Local Component

Hot Spot Monitoring: e.g. “Urban Atlas”, (0.5 ha MMU) 6 yr cycle 2012,
“Natura 2000” and “Riparian Zones” e.g. Green linear elements

Pan-European component: HRL

Coordinated by the European Environment Agency (EEA)

HIGH RESOLUTION LAYER (HRL)

GRASSLAND 2015, and 2018

Grassland/non-grassland 10m (2018)/20m (2015)

Grassland Ploughing Indicator

Grassland Vegetation Probability Index

FOREST 2012, 2015, and 2018 reference years

Tree Cover Density (20m, 100m)/change layer (20 m),

Dominant Leaf Type (20 m) MMU of 0.5 ha, 10% tree cover density threshold

Forest Type **FAO forest definition excludes** land predominantly used for agricultural practices (fruit trees, olive groves, gardens and parks)

Forest support layer, incl. trees under agricultural use

broadleaved (from CLC class 2.2.2 (fruit trees, berry plantations & 2.2.3 Olives)

tree cover in traditional agroforestry systems such as Dehesa/Montado

SMALL WOODY FEATURES 2015, 2021

linear structures such as hedgerows, as well as patches ($200 \text{ m}^2 \leq \text{area} \leq 5000 \text{ m}^2$) of woody features

CROP TYPES (in preparation)

Pan-European component

Reliability and granularity

- Confidence Layers (CL): per pixel, prediction interval at 95% confidence: 2nd confidence layer with uncertainty of the classification
- Data calibration, validation, QA/QC
- EIONET National Reference Centres Land Cover
- COPERNICUS in-situ component: enhance availability of (national) interoperable monitoring data

Monitoring C farming and ecosystem types

- Make the case, and specify needs for CLC+ development process
- Analyse usability of current HRL products, and refinements of CLC monitoring (e.g. change manual 2012), refinements of HRL products (e.g. forest biomass derived from tree height and/or crown size)
- Utilize recommendations from feasibility studies: combined GIS analysis with LPIS (R&D), Mapping and Assessment of Ecosystems and their Services (MAES), others

Link: GHG inventories

- MRV system for implementing the LULUCF regulation is in development (EEA, JRC); links with QA/QC and methodological choice (higher Tier...)
- Support national reporting with RS data (harmonization)
- Offer continental wide harmonized component (MRV)
- Enhance stratification of national inventories based on management types
- Enhance synergies with various monitoring activities