

# COMBINING COPERNICUS AND IN-SITU DATA FOR BETTER INVENTORY

## Gaining Insight into High Nature Value Farmland



Although experts are making a considerable effort to provide a clear definition of high-nature value farmland (HNVF), its complex nature prevents the establishment of a straightforward approach to inventory and change-monitoring in such areas. The recently developed approach to generating detailed land cover information by integrating Copernicus Earth observation data with national in-situ datasets, such as the Land Parcel Identification System, enables a more rigorous description of HNVF areas, from their decomposition down to the land cover features they contain.

Nowadays, citizens in Europe are confronted with various terms and concepts used in European environmental policy, many of which are linked with agriculture. Expressions such as 'high nature value farmland', 'ecosystem services', 'areas with natural constraints', and the newly defined 'ecological focus areas' are key terms aimed at providing experts with modelling instruments for comprehensive characterisation of the agricultural landscape in Europe and enabling accurate and effective monitoring of land change and impact assessment in support of EU policies. Due to the interdependency and cross-connection of different policy areas, the applied indicators are rather composite and complex, which presents challenges in terms of their measurability and traceability.

### Land Cover and Land Use

Most of the definitions related to agro-environment can be considered a combination of land cover and land use concepts. Land cover is the biophysical substrate of the Earth's surface, while land use expresses the socioeconomic and functional aspect of a given territory. As land cover can be regarded as the easiest indicator of the human intervention on land and can be efficiently observed and qualified, it is the core element of all strategies and methods for inventory and monitoring-related agro-environmental parameters. There have been numerous projects and initiatives at EU level for the elaboration of monitoring approaches in that respect. Most of them have relied on the future extensive use of remote sensing data from the Copernicus programme. However, the combined use of in-situ information has remained rather limited and unexplored.

### High Nature Value Farmland

The HNVF concept is designed to describe a specific type of agriculture land that holds certain environmentally valuable properties. A high nature value farmland is an area in Europe where agriculture is usually the dominant land use. Furthermore, the area supports, or is associated with, high species and habitat diversity or the presence of species of European conservation concern. Generally, HNVF can be recognised from its small-scale mosaic of low-intensity agriculture and natural and structural elements – such as field boundaries, hedgerows, stone walls, patches of woodland or scrubland and small rivers – or by its diverse, often semi-natural, land cover. Such land is subject to specific policy measures that support the farming of the lands while simultaneously ensuring that valuable environmental features and characteristics will be maintained.

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