

## **Monitoring and assessment of agroforestry systems: sustainable land use systems to mitigate climate change and building for greener rural development**

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Agroforestry is the land use management system, practices or technologies which integrate trees /shrubs, crops and/or livestock on the same plot of land. Agroforestry systems are today a significant innovation trend in the agricultural sector in Europe. Effectiveness of these systems is based on reducing external inputs and offsetting them by better management in the area of ecological links. Agroforestry systems will play a key role in solving the current problems, especially in marginal areas, where they can provide diversified, and higher incomes to farmers. Among other things, they can offer job opportunities for inhabitants of rural areas, and thus also help to solve the negative consequences of the persistent trend of "rural depopulation". At the same time, they represent a significant mitigation measure towards climate change.

Traditional agroforestry systems in the Southern Moravia region represent traditional land use systems with a high environmental and cultural value. This region also has a high potential for establishment of modern agroforestry systems.

The main objective of the short scientific visit was to monitoring and inventorying of agroforestry systems in the Southern Moravia region according to different typology, function and historical background of agroforestry systems and simultaneously to try a practical and relatively easy method through personal inventorying to identify agroforestry systems on agricultural land.

Direct research activity was conducted predominantly in the field. Monitoring and inventorying of agroforestry systems was realized by personal reconnaissance primarily on agricultural land blocks, where these land use systems were expected to occur. Survey was supported by pre-printed orthophotomaps of examined area.

The 10 working days of the short scientific visit was used for consultation and study of agroforestry materials (reports, articles, methodological approaches), field work preparation, field monitoring and inventorying of agroforestry systems and finalizing the first results. During the field monitoring was identified a various types of agroforestry systems. Windbreaks and alley cropping including silvoarable systems were the most common agroforestry systems in the Southern Morava region.

Finally, monitoring and assessment of agroforestry systems and their remains showed relevancy in terms of its preservation as traditional practices with innovative and sophisticated approach to mitigate current ecological hazards.