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AGRICULTURAL REWILDING, A PERSPECTIVE FOR LIVESTOCK FARMING SYSTEMS: LIFE TRANSILVACOOPERATION CASE STUDY IN VISCRI AND ANGOFA AREAS, TRANSYLVANIA

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Abstract: . *The paper analyzes the concept of agricultural rewilding and its relevance for the development of sustainable livestock systems, capable of harmonizing biodiversity conservation with the maintenance of traditional agricultural activities. The principles of agricultural rewilding, the ecological and economic benefits of this approach, as well as the role of agrobiodiversity in maintaining the functionality and resilience of ecosystems are examined. The case study concerns the LIFE TransilvaCooperation project, implemented in the Viscri and Angofa areas of Transylvania, regions characterized by the presence of high natural value grasslands and traditional agricultural practices. The objectives of the project were to conserve and restore habitats, improve land management and support local agricultural communities. Among the measures applied were the restoration of degraded or abandoned grasslands, the removal of shrubs, the implementation of local management plans and the promotion of rotational grazing. The results of the monitoring highlighted the increase in the richness of plant species in properly managed hay meadows, as well as the association of butterfly diversity with the state of habitats and the management practices used.*

• Introduction

Biodiversity is one of the most important components of the natural environment, playing an essential role in maintaining the ecological balance and ensuring the proper functioning of ecosystems. In the agricultural field, the diversity of plant, animal and microorganism species contributes to soil fertility, pollination, the natural regulation of pests and the maintenance of land productivity. Agrobiodiversity is thus an important resource for the development of sustainable agriculture, being influenced both by natural conditions and by the way agricultural land and livestock systems are managed.

• Material and method

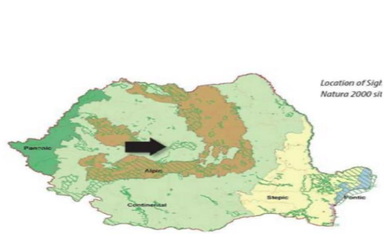
The case study concerns the Viscri and Angofa areas, located in the Transylvania region, within the Sighișoara–Târnava Mare rural landscape. The choice of this area is determined by the ecological value of the grasslands and the importance of traditional agricultural practices for the maintenance of semi-natural habitats. The analyzed territory is of interest for studying the relationship between human activities and natural processes, especially in terms of pasture use, hay maintenance and conservation of biological diversity. The object of the research is the management measures of agricultural land and livestock breeding systems, analyzed from the perspective of the principles of agricultural rewilding.

• Conclusions

In conclusion, the LIFE TransilvaCooperation case study in Viscri and Angofa highlights the potential of an integrated approach, in which grassland management, extensive livestock farming and biodiversity conservation are treated as complementary objectives. The main elements that emerge from the project's analysis are the importance of adapting grazing to local ecological conditions, the need to monitor plant resources, the role of adequate infrastructure and the value of cooperation between farmers and conservation organisations. These elements can be benchmarks for other territories where traditional livestock activities contribute to the maintenance of agricultural landscapes of high natural value.

• Results and discussions

A 'LIFE programme' most commonly refers to the European Union's funding instrument for environment and climate action, which has been operating since 1992 to support sustainability, biodiversity and clean energy projects. The LIFE TransilvaCooperation project is located in the Sighișoara-Târnava Mare site of community interest, part of the EU's Natura 2000 network of protected areas. Târnava Mare is a high-biodiversity lowland area of 89,000 ha, cultivated by 5,000 families from 24 small-scale farming communities. Târnava Mare is made up of permanent grasslands rich in wildflowers, managed by farmers in an agricultural landscape of high natural value.





Direct restoration improved more than 400 ha of grassland habitats, exceeding the target of 240 ha, including: 102 ha of abandoned meadows in Angofa, 290 ha of pasture in Viscri, 28.6 ha of pasture in Angofa. Abandoned land was restored and plots were fenced off to reduce overgrazing. These efforts were supported by equipment such as a tractor, mulcher and grass harrow. Two communal boreholes, one in Viscri and one in Angofa, were installed to support rotational grazing. The restored grazing in Angofa and water troughs installed under the project allow for the improvement of rotational grazing (avoids the need for cattle to return to the central location for water).





A customized software program was created to visualize the impact of management decisions, facilitating community consultation by generating future land use scenarios.

