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Sustainable alpine sheep farming in Weiz, Austria

Preserving small-scale agricultural structures by fostering cooperation

In Weiz, alpine pasture management plays a vital role in maintaining grasslands, enhancing biodiversity, and boosting tourism. It also helps preserve the region's cultural heritage while demonstrating how agriculture can adapt to climate change through effective regional cooperation.

Key Learnings

- **Cooperation:** Farmer cooperatives can help lower the workload on individual farmers by bundling resources, saving time, and negotiating fair prices, which is particularly beneficial for small farms. This also enables their adaptation to changing climatic conditions.
- **Co-Creation:** Agricultural activities are highly embedded in regional development. Involving farmers or farmer representatives in the process of regional strategy development can especially foster agriculture in the region and better preparedness for agriculture under changing climatic conditions.
- **Sheep as alternative livestock:** Compared to cattle, sheep reduce soil erosion caused by climate change and need less water during water scarcity, making them a good alternative for pasturing at high altitudes and on steep meadows.

About the region

The Almenland Teichalm-Sommeralm Nature Park is located in the province of Styria, about 50 km away from Graz, the capital. It is one of the largest alpine pasture areas in Central Europe where traditional alpine pastoralism prevails. The Almenland Teichalm-Sommeralm Nature Park is part of the district of Weiz (Austria).

Climate Hazards

Droughts, Extreme Temperatures,
Flooding, Water Scarcity, Storms

Sector

Agriculture, Biodiversity, Mountain Areas,
Cultural heritage

Key system

Ecosystem and Nature Based Solutions,
Land use and Food systems, Local Economic System

Republik Österreich



Climate Threats

The climate in Weiz is marked by hot, dry summers and frequent storms. Climate change is expected to intensify storms, leading to more lightning strikes, hail, and floods, which can damage soil and vegetation through humus loss, landslides, and mudslides. Future threats include droughts that affect water availability and fodder production, increasing pest pressure. Altered precipitation patterns may result in heavier but less frequent rainfall and longer dry spells in summer, while winter rain instead of snow can destabilise pastures and disrupt tourist pathways.

Sustaining small part-time farms to face climate threats through a cooperative

Traditional alpine pasture management characterises the [Almenland Teichalm-Sommeralm Nature Park](#) representing one of Central Europe's largest alpine pasture areas. Small family farms and extensive part-time farming dominate the region, with 84% practising alpine agriculture and pasture management. Preserving these small family farms is crucial for the region's economic situation and food production and contributes to protecting biodiversity, which helps buffer environmental shocks. Furthermore, tourism benefits from the conservation of the cultural landscape.

Sheep farming is particularly effective for maintaining steep meadows, as sheep require less water, are lighter, and have distinct grazing behaviours compared to cattle. However, their selective grazing can lead to the overuse of certain areas without proper pasture management. To enhance biodiversity, it is essential to implement extensive and thoughtful grazing practices, such as regularly rotating grazing areas, which decrease selective grazing and avoid over-fertilisation but lead to a higher workload compared to standing pastures, where the sheep graze the same plot for a long time. During droughts heat and scarce precipitation reduce the regeneration potential of the grass, making thoughtful pasture management even

more important to ensure required regeneration times. Extensive farming helps buffer climatic shocks, with biodiversity-rich meadows ensuring more reliable yields. In times of fodder shortage farmers reduce herd sizes, rotate animals through small pastures or restore humus.

Areas managed by part-time farmers, especially challenging ones like alpine pastures, are at risk of intensification or abandonment driven by economic factors. To counter this trend, initiatives like the "Weizer Schafbauern" cooperative help farmers reduce their workload by outsourcing processing and marketing while ensuring fair product prices, thus minimising the risk of abandonment and promoting sustainable management practices. The cooperative was founded in 1995 when the local dairy was supposed to close and now includes 150 sheep farmers as members. Its foundation was crucial for the survival of the sheep farmers in Weiz for the following reasons:

- a) The cooperative-owned dairy and co-owned slaughterhouse allow farmer independence and ensure fair prices.
- b) Joint marketing and introducing their own brand increased their market power compared to being a single farmer.
- c) The cooperative has a diversified marketing strategy, including the ongoing development of new products.

Thanks to the cooperative farmers can sell their products directly to consumers, local restaurants, and food retailers, alleviating their workload while ensuring high-quality goods and fair prices. This arrangement enhances the appeal of alpine farming, despite its lower yields compared to other production systems.

In addition to the cooperative, establishing the Almenland initiative further fostered cooperation between farmers, restaurants, and other touristic facilities and thereby further supported the viability of sheep farming in this region. This initiative also provided the basis for the development of the [Almenland Nature Park](#), contributing to landscape preservation and biodiversity protection.

A regional community initiative to stimulate Climate Adaptation

Climate change will cause new challenges for the sheep farmers in Weiz and increase farmers' workloads due to necessary adaptation measures, such as mob grazing. Making the possibility of outsourcing other tasks along the value chain to the cooperative even more beneficial. Additionally, the cooperative facilitates shared investments in processing plants, photovoltaics, and wood chip heating systems, reducing reliance on fossil fuels. Most importantly, the cooperative fosters knowledge exchange and builds a knowledge base on feasible on-farm adaptation measures. As confirmed in the [MOVING project](#), knowledge exchange is crucial to support alpine farmers in developing and applying adapted practices to become more resilient to expected future challenges. This project analysed 23 mountain value chains with local stakeholders in Europe regarding future developments, needs and opportunities, also focusing on sheep farming and lamb production in the region of Weiz. Results from the project suggest that further adaptation measures on the production site should include building a knowledge base and cross-disciplinary knowledge, fostering the exchange between farmers and external experts and providing tailored consulting services.

"We are convinced that sheep will continue to gain importance in our region because they help to maintain and preserve the beautiful, small-scale landscape through extensive farming."

Weizer sheep farmer at [Klimabündnis](#)



Figure 2: Typical landscape in Almenland region of Weiz. Image Credit: Sandra Karner.



Figure 1: Sheep grazing on an alpine pasture. Image Credit: Sandra Karner.

Summary

The preservation of small-scale sheep farming in Weiz enhances climate change adaptation and biodiversity, creating high-nature-value farmland. Cooperatives bolster economic resilience by enabling farmers to market high-quality products and buffer against market fluctuations, making sheep farming more appealing. These practices benefit biodiversity, support regional value-added initiatives, and promote tourism. Farmers have adapted their pasture management in response to climate impacts on natural resources. Future support for small farmers could include frameworks for knowledge exchange, contextualised consulting, and institutionalised educational measures.

Further information

The “Regional Initiative Almenland” (“Regionale Gemeinschaftsinitiative Almenland Teichalm-Sommeralm”) was founded in 1995 under LEADER II. The local action group comprised seven regional municipalities and all major agricultural and tourism organisations. Cooperation between farmers, gastronomy, and other tourism facility providers was established to foster the region by cross-linking different sectors, such as agriculture, forestry, gastronomy, tourism, business, and culture. Many regional activities are embedded in a well-structured regional development initiative (built around the Almenland Nature Park), and key actors and the local action group are (quite well) networked. In 2014, the Almenland LEADER region was extended and merged with the Energieregion Weiz-Gleisdorf following the Motto “Urban space meets alpine freshness”, and now it embraces 18 municipalities.

- https://www.moving-h2020.eu/reference_regions/austrian-alps-austria/
- <https://www.klimabuendnis.at/mitglieder/weizer-schafbauern-egen/>
- <https://www.weizerschafbauern.at/>
- <https://www.almenland.at/naturpark/projekte-strategie/>
- <https://www.almenland.at/region/leader/>

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