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Policy Brief

SLOVAK CARPATHIAN MOUNTAINS | Bio-honey from Slovak Carpathians

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MOUNTAIN VALORISATION THROUGH INTERCONNECTEDNESS AND GREEN GROWTH

Bio-honey from Slovak Carpathians

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Summary

Honeybees are an essential component of the environment as pollinators of several food-producing plants and as contributors to biodiversity. Their disappearance would significantly threaten the food supply and human health. Honeybees are kept by beekeepers in Europe mainly to produce honey and other bee products that have been in demand for human consumption since ancient times. Due to the growing consumer demand for healthy foods, high-quality mountain honey is a popular product. Honey production is a traditional activity in Slovak rural areas and brings monetary and non-monetary benefits to local communities and society.

However, honey production is susceptible to climate change and other ongoing changes. Solutions to these growing problems should include innovative and long-term strategies on the side of beekeepers and at multiple territorial and political levels. The MOVING project, located in the Slovak Horehronie region, helped identify numerous policy recommendations that could increase the sustainability and resilience of the high-quality mountain honey value chain.

1. *Bio-honey – a sweet challenge*

Slovak Carpathians are part of the Carpathian region, Europe's second most extensive mountain system besides the Alps.

Figure 1: Slovak Carpathian Mountains

Key Policy Messages

- ☞ Specific “mountain” policies
- ☞ Support biodiversity, ecological systems and practices
- ☞ Territorial planning
- ☞ Multi-sectorial, multi-level and long-term collaboration
- ☞ Innovative solutions for resilience and sustainability of mountain value chains
- ☞ Awareness

The Carpathians in Slovakia form a living environment for unique wildlife with vital biodiversity, important freshwater sources, and human culture. Agriculture and forestry, mainly, play a substantial part in the landscape of this region. Over the last decades, crop and livestock production has declined, and abandoned cropland lies fallow. Pastures in the Carpathians are especially vulnerable to the combined impacts of climate change and socioeconomic dynamics. Forests cover a large part of the Slovak Carpathians and are susceptible to drought and windstorms, triggering pest outbreaks. In this region,

drought-induced problems can be expected to increase, adversely affecting agricultural and forest production, biodiversity, and other ecosystem services.

The value chains related to the Slovak mountains include mainly agricultural products such as cheese and meat, forest wood and non-wood products, medicinal herbs, horse breeding, and beekeeping. From the non-production economic activities, tourism and recreation are vital in the region. Apart from the popular active winter tourism, other recreational activities report an increasing demand all year round.

Honey production in the Slovak mountains and other rural areas is a long tradition. Compared to lowlands, the honey in the mountains gets higher quality due to extensive agriculture, pastures, meadows, forest land covers, clean water, and rich diversity of autochthonous plants, flowering in different periods of vegetation time and not being chemically treated. Bio honey production involves manual bee panel preparation from local resources, bees' winter feeding by their honey, and natural medicines for bees instead of conventional ones. These conditions result in lower honey yields than conventional production, making bio-honey relatively expensive and rare. All these specificities simultaneously bring less intensive practices of honey production and higher quality of all honeybee products.

One of the specificities in the Slovak mountains is honeydew honey, produced only in years with specific weather conditions, on average every five years. Its exclusivity allows the higher price of this honey on the market.

The Honey value chain faces multiple challenges affecting bees' health and production. These challenges include drought, extreme weather, land use, and land management changes linked to socio-demographic changes, global biodiversity decline, and pollinator decline, among others.

2. *Value chain contribution to resilience and sustainability*

Bio-honey or high-quality mountain honey from Slovak Carpathians contributes to resilience and sustainability in multiple ways, among others:

- Presents a demanded quality product based on high-quality local environmental conditions.
- Represent a short supply chain due to direct sales from producers to consumers, involving a beekeeper and his family.
- Provides additional income to mountain rural families.
- Helps promote mountain rural localities for tourism and recreation.
- Maintain local skills and traditions and development of new knowledge and skills adapted to local conditions.
- Main actors of the value chain are small – and medium-sized beekeepers, which contribute, among others, to the territorial spread of beehive colonies across a territory.
- Ensures lifelong environmental education and awareness about territorial interconnectedness between biodiversity, bee health, and environmental changes.

- Allows feelings of close contact with nature (e.g., positive effects on mental health) and valuable “way of life”.
- Safeguards the local genetic basis of bees.
- Contributes to multiple essential ecosystem services, particularly pollination and biodiversity.

3. *Policy experiences*

Some of the already existing and successful strategies in beekeeping in Slovakia are:

- National plan for beekeeping support.
- Registration of bee colonies.
- Production control and product quality control, compensations for damages on beehives caused by wild animals.
- Education of beekeepers - beekeeping journals, seminars, and workshops.
- Beekeepers’ associations helping with educational activities and administration work regarding some subsidies for beekeepers.

Unsuccessful experiences mainly relate to agricultural legislation created without consultation with beekeeping experts. For example, rules for meadow moving procedures and time schedules often go against bee-friendly practices.

Occurring climate and other global and local changes bring new challenges to beekeeping and require new approaches and practices that beekeepers need to adopt if they want to succeed.

4. *Recommendation for future policies*

Future policies should:

- Recognize the specific environmental, economic, and social conditions for living and producing in mountain territories. Mountain areas offer conditions for multiple high-quality products, services, and benefits valuable to society. At the same time, the quantity of production is often lower than in the lowlands.
- Develop strategies for water retention in the landscape, e.g., slowing down water outflow from slope areas, creating water reservoirs, etc.
- Attract all generations and diverse professions to live and produce in mountain areas and support communities' creation and maintenance.
- Support biodiversity and monitor its quality and efficiency; support landscape diversity through small-scale farming, ecological farming, pastures, meadows, and nature-close forest management, resulting in rich undergrowth for bee pasture.
- Encourage multi-sectoral and multi-level collaboration to increase mountain dynamics.
- Support public awareness about bees, beekeeping, local quality products, and their certification, and build consumers' trust in local products.
- Support elaborating on a national "help scheme "for periods of drought or other unfavourable conditions causing insufficient forage for honeybees. These extreme conditions are expected to be more frequent due to climate change. Like agricultural production, honey production depends on weather conditions; not all years are favourable for honey production.

- Progress in certification of honeybee products, create regional brands, fair trade practices including small producers, bio-production, and fair prices.
- Support multi-functional, ecological, and small-scale beekeeping. Small-scale beekeeping, in practice, better adapts to an ecological way of beekeeping, can also contribute to more evenly distributed bee colonies across a territory, and can be favourable also for the cultural ecosystem services, such as an increase of public awareness about the bees' importance, by activities involved in agrotourism, bee-farm educational visits, workshops and so on.
- Territorial planning and management should collaborate with beekeepers to choose adequate locations and density of honeybee hives according to forage availability for bees. A good collaboration between farmers, foresters, and beekeepers to achieve accessible and diversified fields for bees would be helpful locally. For this goal, all involved actors need to be educated about the importance of bees.
- Encourage local beekeepers' cooperation in simultaneous medical treatment of bee colonies to avoid the transfer of diseases.
- Create a collective brand that guarantees quality, distribution, marketing, and fair price.
- Support direct sales and short supply chain – "traditional" breakfasts (local honey, butter, and bread) in kindergartens and schools – joining consumption with education.
- Veterinary assistance and frequent health checks of bee colonies during the summer
- Safeguard the genetic adaptation of honeybees by allowing only local bee mothers.
- A preparation of new legislation (e.g., agrotechnical practices) that could somehow interfere with honeybees or other pollinators should involve beekeeping experts.
- Improve awareness of existing supports and subsidies for all beekeepers; simplify administration.
- Support advances in beekeeping to be resilient to climate and other changes - International collaboration in research and practice in eco-beekeeping; tutor young beekeepers; monitor bee pasture quality.
- Set rules for honey origin indication on products to safeguard consumers' awareness and to prevent the transfer of adulterated and imported honey to the market.

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