

Gerhard Hovorka

Agriculture in the mountain areas of Austria in an international context¹

Mountains are fragile ecosystems of global importance

Mountain regions are fragile ecosystems and an important source of water, energy and biological diversity. Furthermore they are a source of such key resources as minerals, forest and agricultural products, as well as being landscapes for tourism and recreation. As a major ecosystem representing the complex and interrelated ecology of our planet, mountain environments are essential to the survival of the global ecosystem.

Occupying about one-fifth of the world's land surface area, mountains provide a direct life-support base for about one-tenth of humankind as well as goods and services to more than half the world's population (UNO-declaration of International Year of Mountains 2002).

Mountain ecosystems are, however, rapidly changing. The rapid pace of globalisation, urbanisation and mass tourism are threatening mountain communities and the resources they depend on. Worldwide, mountain areas face increasing marginalisation, economic decline and environmental degradation. On the human side, there is widespread poverty among mountain inhabitants and loss of indigenous knowledge. As a result, most global mountain areas are experiencing environmental degradation. Hence, the proper management of mountain resources and socio-economic development of the people deserves immediate action (United Nations, 1992, Agenda 21, Chapter 13: "Managing Fragile Ecosystems – Sustainable Mountain Development").

Mountains and mountain farming are of particular importance in Austria

Mountain regions are of great importance within the European Union (about 20 % of the utilised agricultural area is defined as mountain area and 27 % of all farms are situated in the mountain areas). In five member countries – Greece, Austria, Italy, Spain and Portugal – mountain areas comprise even more than 50 % of the territory. Mountains are of particular importance in Austria. According to the EU criteria for demarcation, the mountain area in Austria comprises 70% of the Austrian territory (58% of the utilised agricultural area) and is home to 36% of the Austrian population. About 50 % of all farms in Austria are situated in the mountain areas. It forms part of two of Europe's mountain massifs, the Alps and the Bohemian massif.

Cultural landscapes in mountain regions develop and change over time as a result of the interplay of socio-economic, cultural and natural factors and can thus only be understood as a process. Since changes are often irreversible, any change and interference demands careful consideration. The Austrian mountain area has long been more than just an agricultural region. Rather it is a fully integrated living and working space, whose geographical characteristics do not lead to separation in a structural economic sense. They express themselves much more in the limited space available for settlement and industry, the handicaps on agriculture and forestry, in an expensive infrastructure and a particularly sensitive landscape. However, the various component areas display great differences in structure and development. Policies to safeguard environmental and cultural achievements, as well as sustainable

¹ A first version of this paper was prepared for the International BOKU-Congress 2001 "Sustain life – Secure survival. Challenges, analyses and solutions", Hofburg Vienna; November, 18 – 21, 2001

rural development, can thus only be effective in the long term by the embedding of spatially oriented sectoral policies in integrated regional development strategies (sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs).

Agriculture and forestry are still pillars of mountain communities and mountain development. The importance of mountain agriculture and forestry lies increasingly in the fulfilment of multi-functional tasks. Mountain agriculture provides employment, essential goods and services for the quality of life in Austria and in Europe, through the production of high quality goods, maintenance of the cultural heritage, preservation of habitats and landscapes with high ecological and amenity values. Many of the services to society are not remunerated directly or through income from production.

The unfavourable natural situation of mountain farming is expressed primarily in the steep gradients of the farmed areas, the shorter growing season, the extreme weather conditions and an absence of alternative production possibilities. The often poor transport conditions and an inadequate and expensive infrastructure may also be added to this.

Mountain farms manage 49% of the agricultural area and 75% of the woodland. Austrian farm holdings are overwhelmingly family owned and operated by family labour input, characterised by a small-farming structure: the average size of mountain farms is only 13 ha utilised agricultural area (of which are 10 ha grassland) and 9.5 ha forest. Mountain farm holdings with cows have an average stock of only 8 units.

The maintenance of the living and working space in the mountain areas is hence conceived of as impossible without farming. Due to the dynamic development of agricultural methods, especially in lowland areas, the relative competitiveness of mountain agriculture is decreasing over time. Consequently, the incomes of farmers in mountain regions have lagged behind those of farmers in other regions, threatening the existence of many farms. Therefore it was the agricultural sector in which the first relevant mountain programme has been developed in Austria. In particular since the beginning of the 1970s support for mountain farming has been given high priority through the establishment of a specific support programme. This "Mountain Farmers Special Programme" was not just focused on site-specific farming difficulties but attached importance to the social situation of farm households and incorporated the regional dimension. Over time the priorities of the programme shifted. Its core measure, the direct payments for mountain farmers, has even been intensified since EU-accession. The agricultural policy, however, only partly succeeded in compensating for the income disadvantages in mountains areas.

Table 1: The economic situation of mountain farms in Austria, 1995-1998 (in 1,000 ATS per farm unit)

Indicator	Category of mountain farms							
	Austria	Mountain area	1	2	3	4	1-4	0
Output crops and live-stock	511	364	429	363	276	177	346	652
Total output	804	697	727	723	629	516	681	908
Family farm income	285	267	264	272	252	201	258	308
subsidies	196	181	190	186	175	179	183	206

Source: Hovorka 2001

Note: Category 0 is defined as all non-mountain farms of Austria. Category 4 is the category with the highest production difficulties.

With increasing production difficulties, both farm income levels and public support decrease. Market support is of the greatest importance for non-mountain farmers (in particular crop production in favourable areas), whereas mountain farmers receive highest support shares through the agri-environmental programme (ÖPUL) and compensatory allowances. These two account for 59 % of public support for mountain farms (and for mountain farms of category 4 even 75 %), whereas non-mountain farmers just receive 36 % out of these measures.

Table 2: Public support measures per farm unit in per cent (1995-1998)

	Austria	Mountain area	Category of mountain farms					
			1	2	3	4	1 - 4	0
CAP-payments	45	30	40	28	22	13	29	57
Agri-environmental programme (ÖPUL)	34	37	33	37	41	40	37	32
Compensatory allowances	11	21	15	21	26	35	22	4
Other subsidies	10	12	12	14	11	12	12	7
Total subsidies	100	100	100	100	100	100	100	100

Source: Hovorka 2001.

With Agenda 2000 reform, the agri-environmental programme will be prolonged in a similar manner and the less-favoured areas scheme, including mountain areas, has undergone some changes. The new payment will try to incorporate some of the advantages of the old system prior to EU-accession. In particular, small farms and farms with greatest difficulties should again be more strongly supported. These measures, together with a set of other agricultural structural measures have been integrated in the new concept of "Rural Development Plans" which are applied horizontally, and in practice have abolished any territorial programming (Reg. 1257/1999).

Raising international awareness of the importance of mountain ecosystems

The United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 started the long-term process of raising public awareness and ensuring adequate political, institutional and financial commitment for concrete action towards implementing sustainable mountain development (see Agenda 21, Chapter 13: "Managing Fragile Ecosystems – Sustainable Mountain Development"). The inclusion of this chapter meant that, for the first time, mountain regions were accorded equal priority in the global environment-development agenda with other global change topics such as climate change, desertification, or deforestation. In the years following Rio, a number of dynamic processes and activities related to mountain issues have been initiated.

In 1998 the General Assembly of the United Nations proclaimed the year 2002 as the International Year of Mountains (IYM) and the Food and Agriculture Organisation of the United Nations (FAO) was invited to act as the lead agency for the IYM. The IYM concept paper states that "sustainable mountain development includes a wide range of topics, calling for interdisciplinary, integrated approaches." IYM represents an important step in the long-term process initiated by the 1992 Earth Summit in Rio de Janeiro and provides a platform to reinforce these activities. Rather than a period of isolated events, it should serve as a springboard and catalyst for long-term, sustained and concrete action that will extend far beyond 2002. On 11 December 2001 the global launch of the International Year of Mountains took place at UN headquarter in New York. About 300 government leaders, representatives of

mountain people and NGOs, researchers and others attended. The final global event of the International Year of Mountains (IYM) will be the Bishkek Global Mountain Summit in Kyrgyzstan in October 2002. A wide range of information about the International Year of Mountains can be found at: www.mountains2002.org.

The coordination of the wide range of activities in Austria is carried out by the Forestry Department of the Federal Ministry of Agriculture, Forestry, Environment and Water Management. For information see: www.berge2002.at.

The year 2002 has also been declared the International Year of Ecotourism. Since a large portion of tourist activity occurs in mountain areas (also in Austria) this coincidence provides an important opportunity to create and benefit from synergies in the observance of both events. For information see: www.ecotourism-mountains.at.

The World Summit on Sustainable Development in Johannesburg, South Africa 2002 (also known as Rio + 10) in September 2002 will be a key event during IYM (a thematic report on sustainable mountain development was prepared for the first meeting of the Johannesburg 2002 Preparatory Committee and is available in French, English and Spanish on the Johannesburg 2002 web site).

Networks for mountain communities, environments, and sustainable development

Networking on mountains has advanced very significantly since the 1992 Rio Earth Summit. Some important examples are:

Mountain Forum:

The global Mountain Forum was founded in 1995 as a decentralised network of networks to provide mutual support, information-sharing and advocacy for mountain peoples, environments and sustainable development. Membership is voluntary, and the basic premise is that members benefit from each other through mutual support, exchange of information and advocacy. This network is composed of thousands of people, professionals and organisations from over 100 countries. To provide a basic level of communications services, a few organisations serve as nodes, or coordination centers, for each region. The Mountain Forum's electronic information services include global, regional and thematic e-mail discussion lists, focused electronic conferencing, a calendar of events, and a rapidly growing on-line library of mountain resources. It is divided into five regional networks. The co-ordination for Europe is in Switzerland. See the websites www.mtnforum.org and www.mtnforum.org/regions/europe or <http://mtnforum.org/europe>.

Alpine Convention (Convention on the Protection of the Alps):

The Alpine Convention was signed in Salzburg in 1991. The signatories are Germany, France, Italy, Liechtenstein, Monaco, Austria, Slovenia, Switzerland and the European Union. The Convention serves as a platform for a transnational policy covering joint ecological and economic problems. The goal of the Convention is a comprehensive policy on the protection and sustainable development of the Alps. The Alpine Convention has been supplemented by several implementation protocols: on land use planning, mountain forests, the protection of nature and landscape, tourism and leisure activities, soil protection, energy, and transport. Further information on the Convention as such (including the text) can be found on the homepage of the "System for the Observation of and Information on the Alps (SOIA)" established by the signatories, and on the relevant pages of the International Commission for the Protection of the Alps (CIPRA). CIPRA-International (Internationale Alpenschutzkommission) has its next annual congress "Die EU und die Alpen" in Chambéry, France, 25-26 October 2001. See: www.cipra.org.

Euromontana:

Euromontana is a European association for co-operation between mountain regions, founded 1974 by the European Confederation of Agriculture (CEA). Since 1996 it has had a legal identity in order to facilitate the efficient continuation of its action (14 European countries are founder members: Albania, Bulgaria, Scotland, the Spanish Basque country, France, Greece, Italy, Macedonia, Poland, Romania, Slovakia, Slovenia, Switzerland, and the Czech Republic). It brings together regional and national organisations of mountain people: social-professional organisations, in particular agriculture, rural development centres, associations, territorial authorities, research institutes, etc. It includes organisations from Western Europe as well as from Central and Eastern European Countries in an effort to develop international co-operation in anticipation of the enlargement of the European Union. Last thematic seminar: On the way to 2002, the International Year for the Mountains: "Mountain Agriculture Towards Sustainable Development. Which compensation to recognise the contribution of agriculture to mountain areas?" in June 2001. See: www.euromontana.org

Alpine Forum:

Every two years (since 1994) there is a scientific congress in connection with the Alpine Convention. The last Alpine Forum (2000) took place in Bergamo, Italy. At the Forum it was also clearly stated that scientific research in European mountain regions is not only useful but essential to guaranteeing a successful outcome of the celebration of the International Year of Mountains 2002. Opening up this type of conference for the first time to representatives of other important regional mountain organisations around the world via the special symposium "Moving toward worldwide cooperation in mountain research" has also been judged a productive and important innovation. See: www.montagna.org

The increasing importance of mountain issues in the European Union

In recent years some important international conferences regarding mountain regions have been organised in Europe. Some important comparative research projects in social science have also been supported by the EU Commission. Mountain development recently also seems to have become an important issue for the European Parliament and the Committee of the Regions.

Some conferences in Europe concerning mountain regions:

- European Inter-governmental Consultation 1996 on Sustainable Mountain Development "Towards sustainable mountain development in Europe" in Trento, October 1996 (consultation on follow-up to UNCED Agenda 21, Chapter 12 on mountain areas).
- European Conference on Environmental and Societal Change in Mountain Regions, December 1997 in Oxford
- World Mountain Forum and International Mountain Research Workshop "Mountain regions – a research subject?" in June 2000 in Paris, Chambéry and Grenoble.
- Preparatory Seminar to the Versailles Conference on Agricultural Research in the European Research Area. Science and Governance: The Common Agricultural Policy and the Multi-functionality of Agriculture in the European Research Area, October 2000, Montpellier
- Mountains of the World: Community Development between Subsidy, Subsidiarity and Sustainability. International Symposium in Preparation for the IYM 2002 in October 2001, organised by the Swiss Agency for Development and Cooperation (SDC) and the Centre for Development and Environment (CED) in Interlaken

Examples of recent research projects commissioned by the European Commission:

- Sustainable Agricultural Land Use in Alpine Mountain Regions (SAGRI-ALP). The overriding aim was to develop guidelines for proper land use in agriculture along the lines of sustainability. Five Alpine countries were involved in this project: Austria, France, Germany, Italy and Switzerland.
- A comparative analysis of the European Union's and Switzerland's instruments in terms of their influence on a sustainable agriculture in the Alpine arc (SUSTALP). The objectives of the project were to evaluate the effects of the EU Agricultural Policy, taking into consideration its directives and regulations, and to elaborate proposals for the future application of these instruments. Five European institutes were involved in this project.
- Integration of Environmental Concerns into Mountain Agriculture. The aim of the study was to identify the positive and negative environmental impact of Community policy instruments and present possible options. The study was co-ordinated by Eurromontana. It involved participants from 25 study areas throughout the European Union. Six regional groups were established within this research network. The Bundesanstalt für Bergbauernfragen was responsible for the co-ordination of the "Central and Eastern Alps" group comprising five different study areas in Austria, Germany, Italy, Slovenia and Switzerland.
- Implementation and Effectiveness of EU-Agri-Environmental Schemes established under Regulation 2078/92. FAIR 1. The title of the project highlights the two main issues under consideration. The project has been carried out by research teams from 10 countries: Austria (Bundesanstalt für Bergbauernfragen), Denmark, France, Germany (Project-Coordinator), Greece, Portugal, Spain, Sweden, Switzerland, United Kingdom. One of six theme groups were designed for cross-country comparison of agri-environmental programmes between Austria and Switzerland and some mountain areas were case study areas.
- Innovative Structures for the Sustainable Development of Mountainous Areas (IS-DEMA). The objectives of the project are to compare the evolution, current situations and trends in selected mountainous areas and to elaborate new research fields and policies that have the potential to contribute to the complex issue of sustainability in mountain areas. Team members come from Greece, France, Portugal, Austria (Bundesanstalt für Bergbauernfragen), Switzerland and United Kingdom.

The Bundesanstalt für Bergbauernfragen has participated in several core EU-projects and activities regarding socio-economically and environmentally sustainable development of mountain regions in recent years (see above). This also includes close integration with the international discussion of rural development and research and expert activities for the OECD, FAO and EU-Commission. Some recently published international expert reports by the Bundesanstalt für Bergbauernfragen concerning mountain areas are:

- The Cultural Landscape in the Mountain Area of Austria – Policies for the Environment and Rural Development. A national report for the OECD – Group of the Council on Rural Development for the document: Rural Amenity in Austria – A Case- Study of Cultural Landscape (1998).
- Evaluation of Compensatory Allowances for Farmers in Less-Favoured Areas (measures under Regulation (EC) No. 950/97. A national report for the EU-commission (2001).

- Biodiversity, Landscapes and Ecosystem Services of Agriculture and Forestry in the Austrian Alpine Region – An Approach to Economic (E)Valuation (carried out together with the Federal Environment Agency). A national report for the OECD – Working Party on Economic and Environmental Policy Integration/Working Group on Economic Aspects of Biodiversity 2001.

Other federal institutes in Austria are also integrated in international research projects dealing with mountain farming. Agricultural engineering in the Alps is one of the main research tasks of the Bundesanstalt für Landtechnik (Federal Institute of Agricultural Engineering) in Wieselburg. It is a centre of competence for this task and is member of two networks: the European Network for Testing of Agricultural Machines (ENTAM), <http://www.entam.com> and the European Network of Engineering for Agriculture and Environment (ENGAGE), <http://www.fal.de/ENGAGE>. Another reputed research institute for alpine agriculture is the Bundesanstalt für alpenländische Landwirtschaft in Gumpenstein (Federal Research Institute for Agriculture in Alpine Regions).

Mountain development research in the European Research Area

The European Conference on Environmental and Societal Change in Mountain Regions, in Oxford in 1997, stressed needs and opportunities for integrated interdisciplinary research and identified four sets of key issues for global change research in mountain regions:

- Inventory and collection of baseline data on global change
- Research on processes of change in interacting environmental and societal systems
- Research on global change and mountain communities
- Implementation of interdisciplinary research

In the past, research for rural areas has been dominated by agricultural research and less attention has been paid to the other economic and social dimensions of rural change and development, particularly in the mountain regions. The concept of the European Research Area may provide a chance for a greater support for integrated interdisciplinary research regarding mountain development and also for better consideration of the multifunctionality of mountain farming in research projects and in policies for a sustainable mountain-area development.

References

Alpine Forum (2000): Alpine Forum 2000 – Research and international collaboration, programme of the 4 th Alpine Forum in Bergamo

Bundesministerium für Land- und Forst, Umwelt und Wasserwirtschaft (2000): Österreichische Programm für die Entwicklung des ländlichen Raums (Rural Development Programme for Austria), Vienna

Bundesministerium für Land- und Forst, Umwelt und Wasserwirtschaft (2000): Die Alpenkonvention. Ein österreichisches Anliegen, Vienna

CIPRA Info (2001): 2002 – Internationales Jahr der Berge, No. 62

Dax, Th. (2001): *Endogenous Development in Austria's Mountain Regions: From a Source of Irritation to a Mainstream Movement*, in: Mountain Research and Development, Vol. 21, No. 3, pp. 231-235.

- Europäische Kommission (2000): Die Strukturpolitik und der Europäische Raum. Die Berge, Luxemburg
- European Conference on Environmental and Societal Change in Mountain Regions (1998): Global Change in the Mountains. Conclusions and recommendations, Oxford
- Hovorka, G. (1998), *Die Kulturlandschaft im Berggebiet in Österreich*, OECD-Fallstudie, Forschungsbericht Nr. 43, Bundesanstalt für Bergbauernfragen, Wien, 189 pp.
- Hovorka, G. (1999), (ex-ante) Bewertung der Beihilfen für benachteiligte Gebiete "Ausgleichszulage in Benachteiligten Gebieten und Nationale Beihilfe in der Programmplanungsperiode 2000 bis 2006 (AZ 2000)" gemäß VO (EG) Nr. 1257/1999 des Rates vom 27. Mai 1999, in: BMLF, Österreichisches Programm für die Entwicklung des ländlichen Raumes, Annex 1/2, Einreichversion, Wien.
- Hovorka, G. (2001), *Keine Berglandwirtschaft ohne Ausgleichszulage, Evaluierung der Maßnahme Ausgleichszulage in benachteiligten Gebieten und Nationale Beihilfe*, Forschungsbericht Nr. 47, Bundesanstalt für Bergbauernfragen, Wien, 168 pp.
- Mountain Agenda (1997): Mountains of the World. Challenges for the 21 st Century. A contribution to Chapter 13, Agenda 21, Bern
- Mountain Forum (2000): Networking for Sustainable Mountain Development. Annual Report 2000, Kathmandu
- OECD (1998), *Rural Amenity in Austria*, A Case Study of Cultural Landscape, Paris, 115 pp.
- Oesterreichischer Alpenverein (2000): Die Alpenkonvention – eine Dokumentation. Fachbeiträge des Oesterreichischen Alpenvereins, Serie Alpine Raumordnung Nr. 17, Innsbruck
- Schindegger, F., Zanetti, G., Deussner, R. and Doubek, C. (1997), *Regionalentwicklung im Alpenraum*, Schriften zur Regionalpolitik und Raumordnung No. 31, Bundeskanzleramt, Abt. IV/4, Vienna, 131 pp.
- United Nations, General Assembly (2000): Status of preparations for the International Year of Mountains 2002. Report of the Secretary-General, New York

Autor:

Dr. Gerhard Hovorka
Bundesanstalt für Bergbauernfragen, Wien
Federal Institute for Less-Favoured and Mountainous Areas, Vienna
e-mail: gerhard.hovorka@babf.bmlf.gv.at
<http://www.babf.bmlf.gv.at>

Appendix:

