THE IMPACT OF THE POLICY FRAMEWORK ON DYNAMICS OF MOUNTAIN FARMING IN AUSTRIA

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Abstract

Mountain areas have, in general, to overcome farming difficulties and handicaps of geographical peripheral location and low competivity.
As the agricultural sector is of significant relevance for land use in these areas the different farm management sytems have considerable implications on the regional environment and the rural economy.
Mountain farming has been a policy subject since the 1970s. However, the effects of the application of less-favoured areas policy has hardly been analysed for EU countries, and also the achievement of Austrian mountain policy have been addressed mainly in close relationship to existing policies. The impact of differencies of intensity within mountain farming and its implications for the provision of central non-market benefits of agriculture have only been reflected recently. This conceptual shift has been brought about primarily by the challenge to investigate and foster the multiple functions of agriculture, particularly in the context of less-favoured areas. Mountains are seen in many respects as regions where the ecological sensitivity is extremely high and limits of intensification occur much earlier than elsewhere.
The paper notes the differences of regional developments of mountain areas and calls for an analysis at a low scale level, the inclusion of considerations on structural development and an integrative concept for regional development in mountain areas. This last point seems extremely important for the future of small scaled farming structure since only the combination of farm and off-farm work and appropriate regional initiatives might be seen as effective strategies against detrimental tendencies for the environment and marginalisation of mountain regions.

Keywords: mountain farming, LFA policy, farming systems, agricultural structures

1. Introduction

The new attention attached to mountain issues is specifically related to the high ecological sensibility of mountain areas and its impact on global change (Price 1999).
The inclusion of Chapter 13 “Managing Fragile Ecosystems: Sustainable Mountain Development” in the “Agenda 21” document, endorsed by the UN Conference on Environment and Development (UNCED 1992) in Rio de Janeiro, signifies the priority of the theme. What is more, the process initiated by that document and numerous other activities at different levels have pushed the discussion, preparation and implementation of integrated policies further.
The issue reached particular attention at the European level (European Inter-governmental Consultation on Sustainable Mountain Development 1997) and has been underlined by the discourse arising from various resolutions and charters in favour of mountain area support in 1996/1997 (c.f. mountain memoranda by national governments of Italy, Austria, France and Portugal, and Charters of the Council of Europe and the Committee of Regions). The conflicts

between environmental, developmental and societal changes often occur earlier in mountain regions than elsewhere. Mountain regions like the Alps are therefore called upon to find ways to preserve their highly valued landscapes and resources. The resulting challenges underline the general thrust for integrated policies. By adding the dimension of extreme topography, often resulting in low population densities, the need for such policies even becomes more acute.

Cultural landscapes are important elements of social identity and contribute to political cohesion. They are, however, not only public interest goods and services that directly affect the social well-being of individuals but also represent important rural development assets. Cultural landscapes are part of a region's capital stock and for the development of an area, their quality is as important as the local road network, communication or education facilities (OECD 1998, p. 102f.). They 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 demand 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 (Dax and Hovorka 2000a). The experience of mountain policies is very diverse between mountain regions of Europe and has been driven in the past by different sectors (Barruet 1995). In great parts of the Alps agriculture has been the dominating sector and kept the economic importance and political influence as land use practices and settlement structures have favoured a rather intensive utilisation of resources, in general sufficiently adapted to the natural conditions. With rising market integration competititive structures became more important in agriculture, too. The gap in productivity of mountain farming was particularly experienced as a threat due to the limits imposed by the high ecological sensitivity of the area.

The focus on particular policies supporting the small scale structure and its resulting cultural landscapes with a bundle of non-market benefits from mountain agriculture have been important to Austrian agrarian policy since three decades. Earlier than in other regions local and national authorities were concerned with the future of mountain farming and these regions.

Policies to safeguard environmental and cultural achievements, as well as rural development, can thus only be effective in the long term by the embedding of spatially oriented sectoral policies in integrated regional development strategies (Dax and Wiesinger 1998, Buckwell et al. 1997). The paper will particularly look into the trends of mountain farming and the policy mix affecting mountain development.

2. Mountain areas and high nature value (HNV) farming system

Mountain areas comprise about 20% of total UAA in the EU-15. Some Member States, though, have a particularly high share of mountain areas, and their productions patterns are dominated by less favoured areas (LFA) land use systems (going back to the original Council Directive 75/268/EEC). The actual extent of mountain areas is much greater since such areas usually also have a high share of forest cover and unproductive areas.

Until recently only very crude statistical data on LFA and even more for mountain areas was available. What has always been clear is that due to the topography and the difficult accessibility of mountain areas regionally diverse development took place at a low geographical level. These differences have only recently been seen as an emerging strengths (2^{nd} Cohesion report, CEC 2001) and not any more addressed as a disadvantage and backwardness.

Mountain areas comrise about 20% of total area in the EU-15. Some Member States, though, have a particularly high share of mountain areas, and their production patterns are dominated by LFA land use systems. The actual extent of mountain areas is much greater since such areas usually also have a high share of forest cover and unproductive areas. (The Directorate General Regio is actually launching a study with regard to provide a thorough basis on the measurement of mountain areas and aiming at an "analysis of the mountain regions of the European Union").

However, the diversity of LFAs in the EU is even more striking when analysing the agricultural income disparities between LFAs and non-LFAs. The differences within Member States are much smaller than thise between "northern" and "southern" countries. The unfavourable income situation for southern countries generally and their LFAs in particular is increasingly taken into account by policy analysis (Bazin and Roux 1992, Frisio 1997, University of Athens 1999). Concern for the environmental impact of agricultural methods and the threat of land abandonment particularly in these countries will necessitate an increased awareness of the problem at the European level.

Extensive farming regions and regions with small-scale farming are most susceptible to marginalisation, with major environmental consequences (Baldock et al. 1996). As mainstream Common Agricultural Policy (CAP) support is not oriented to these farming systems, expenditures per farm are especially low in small-scale farming regions and cannot suffice on their own to counteract marginalisation. At the same time, the widespread occurrence of low agricultural incomes and of less developed regional economies in LFAs (CEC 1994) points to the need for a broader policy perspective. It underlines the requirement to integrate future rural policies in general and to adopt a common strategy across different policy sectors in order to combat the marginalisation tendencies in regional development. In particular, the income gap between normal areas and LFAs points to the need for specific and enhanced support for LFAs.

The land use of LFAs is largely characterised by the limits imposed by the naturally adverse conditions. Present farming systems have developed over many centuries and are usually well adjusted to the specific set of restrictions. To a large extent they have shaped much of the cultivated landscapes of Europe. The continuity of these farming systems is therefore seen as central to the preservation of these cultural landscapes and as a precondition to avoid erosion, desertification and land abandonment. In recent years there has also been growing interest in the relationship between LFA policies and nature conservation. The low intensity farming systems typically found in LFAs are associated with a diversity of wildlife and semi-natural habitats. Amongst conservationists there has also been increased understanding that species cannot be protected by site-specific measures alone, but depend on the integrity of ecological networks and sympatheric land uses in surrounding areas.

A series of recent studies have evoked the existence of high nature value (HNV) farming systems in Europe and their beneficial role for nature conservation and biodiversity (Baldock and Beaufoy, 1993; Beaufoy et al., 1994: Hellegers and Godeschalk, 1998). They have also highlighted the imminent threat to those farming patterns by impending marginalisation processes in the regions where they occur, which are mainly LFAs.

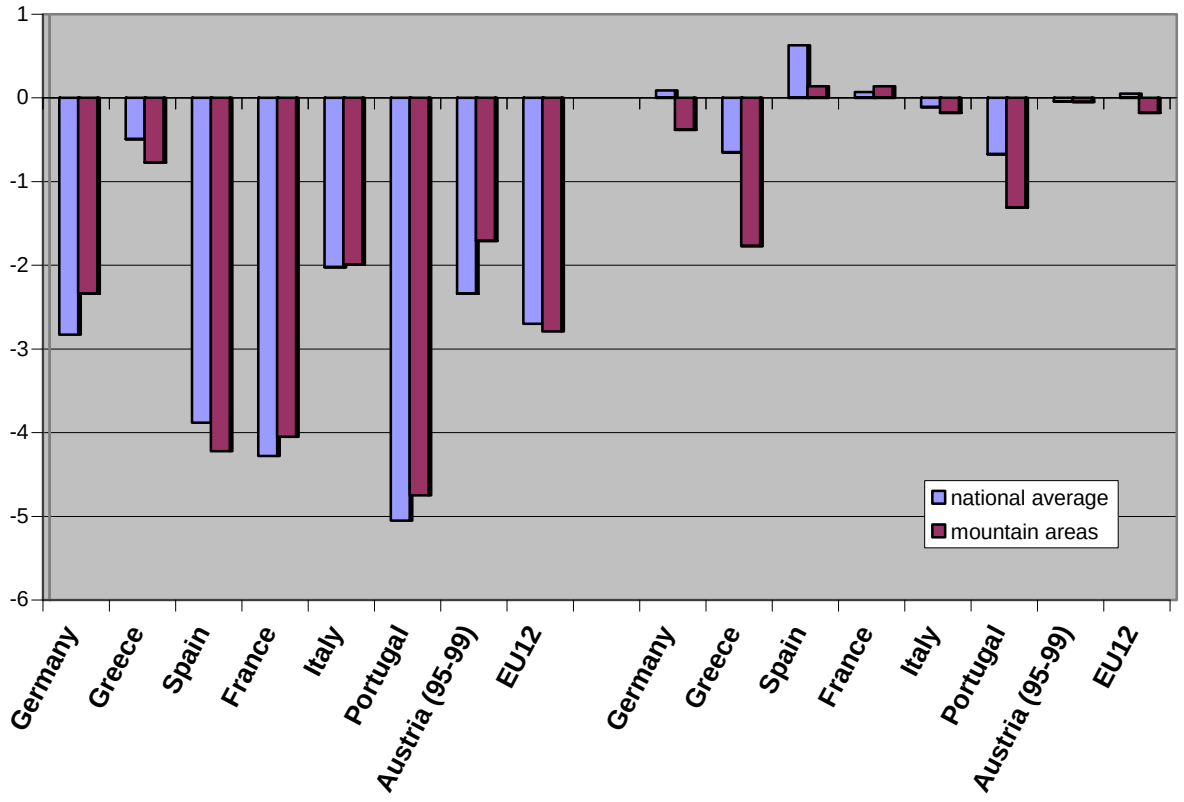
Although many of these HNV farming systems can be found in non-mountainous LFAs the overlap of mountain areas with low intensity farming systems and nature protection areas underpins the argument that mountain farming has a particular role to play by offering services in this field going far beyond agriculture (Dax and Hellegers 2000). In such areas, an appropriate land management is required to maintain the existing biodiversity. Marginalisation with ensuing land abandonment that is not properly managed might lead to a great loss of biodiversity. However, agricultural policy requires achievement of a balance

between the provision of support for traditional husbandry and cultivation practices, and an approach relying more on ecologically sound processes.
The long-standing discussion on mountain issues initially had focused on the *preservation* of natural habitats and esthetical values. In this regard the origin of the Alpine Convention and its basement with the ministries of environment is a quite clear example. As further discussion on the applicability of ensuing documents has shown the future of the Alps can not be developed just along environmental policies. However, there is still a lack of policies in these regions which relate to all territorial concepts and political measures relevant.

3. Regional trends of mountain farming

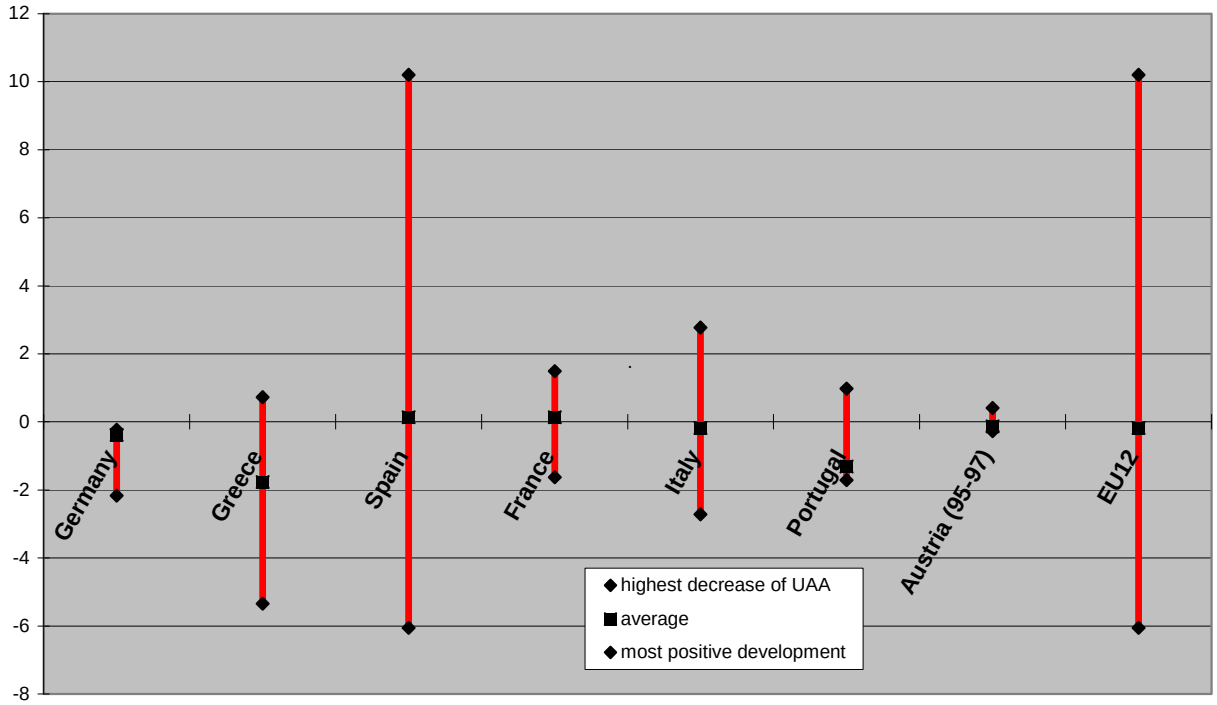
A provisional analysis of mountain farming across regions of Europe presents a rather diverse picture. Many of the open questions arising from data partly reflect the low quality of respective data, the lack in comparability of different contexts and rather short time series available.

Figure 1: Change of farm units and utilised agricultural area (UAA), 1990-1997 in % p.a.



Source: Eurostat

Figure 2: Change of UAA in mountaina reas, 1990-1997 in % p.a., regional extremes



Source: Eurostat

Figure 1 shows the change in farms and Utilised agricultural area (UAA) for mountain farms and total agriculture over the period 1990 – 1997 for EU-countries. It suggests that the national influence on farm structure development is particularly strong and divergence between the overall national changes and development in mountain areas is low. Higher differences mainly occur in countries with small-scale structures (like Greece and Portugal). It is apparent that the situation for Austria is slightly different as the reduction of mountain farmers is slower than for total Austrian agriculture. This coincides with national disaggregation of farm development which will be discussed more in-depth in the following section.

Figure 2 is on the variance of UAA development in mountain areas in the different nations. Being concsious of the methodological difficulties of the comparison it seems interesting to analyse the reasons of apparent regional differences. In Southern European countries, like Spain, Greece and Italy the regional variation is particularly high. Moreover, several regions in Spain and Italy show a substantial increase of UAA in mountain areas. One has to look very carefully into the policy implications affecting these trends which drastically divert from the overall tendencies of mountain farming regions. However, the opposite trend, a fairly high decrease of UAA is more widespread in mountain areas of Europe. The development in these regions underpins the threat of land abandonment in many parts of Southern Europe and peripheral mountain areas already at the regional level. If we disaggregate to more local situation small scale problem areas would become visible to a much greater extent (Schindegger et al. 1997).

Another interesting issue is found through the comparison of farm numbers and UAAs development. Whereas, in general, structural adjustment leads to a markedly higher decrease of farmer numbers, in Greece (at the national average, but particularly relevant on the Aegean Islands, Crete and the Peloponisos) and in specific other regions (like the Val d'Aosta in Italy and Scotland and the Northern and South West part of England) the existing farm structure has remained more stable than land use, which implicates that land use has been abandoned at a faster pace than farm structural adjustment takes place. These tendencies are of high impact on land use systems in many parts of mountain areas and add to the ecological sensitive situation in mountain areas. Land abandonment might be viewed under the specific contexts of low intensive systems as detrimental to ecological performance and increase ecological and economic problems of those regions.

4. Differentation of mountain farmers required

The above analysis at the regional level provides just a crude picture of mountain farming structural development. Considering the information for Austrian regions, one can realise easily that behind these regional averages outstanding variations at more small scale regional levels and for types of individual farmers are concealed. The experience that farming difficulties are not equal within the mountain area has lead since long to in-depth considerations how to classify mountain farmers. Since the early 1970s this has been the base for mountain farmers support in Austria, like in Switzerland and shortly afterwards in the introduction of LFA policy for EU-countries (Hovorka 1998). From that time there was the policy focus on compensating mountain fares for their production difficulties, supplying additional policy instruments within agricultural policy (to raise infrastructural level and access of farmers) *and* on developing integrated regional strategies. Such an approach had a series of practical and institutional difficulties to overcome, and in effect largely meant a shift of paradigm towards "bottom-up" approaches. The effect of this regional policy focusing particularly on mountain areas was only accessed in a more systematic way recently (OECD 1998, Dax and Hovorka 2000b, Gerhardter and Gruber 2001). The integretative effect and its impact on mountain farmers can be seen for example through the tremendous rise of integration of farming households into the local and regional economy. In the montain areas most farm households are linked to off-farm work and pluriactivity is the rule.

This has of course implications for the perspectives of land use and farming systems. The differentiation of mountain farms using the classification system which was in place until 2000 is meant to reveal part of the diversity of mountain farming systems and also its tight relationship to off-farm or/and non-agricultural work.

The new classification for mountain farms responds to the demand to address more clearly the positive externalities of mountain farming. A detailed system attributing up to 570 points to mountain farms allows to clarify and make explicit the different dimensions of difficulties of mountain farms. In addition, the system allows for annual changes through linkages to software accounting for the actual land use of mountain farm. There is also the expectation from this system that non-market benefits could be targeted more directly and the positive effects of mountain policy of the last 3 decades to be continued. Depending on the future of WTO negotiations development such strategies might become decisive to avoid marginalisation of mountain farming in many regions (Crabtree et al 2001).

Figure 3: Mountain farms according to categories of difficulty

	Mountain Farms				total	non-mountain farms in mountain area	Mountain area sum	Austria
	Group 1	Group 2	Group 3	Group 4				
Number of farms in % of Austria	11.4	9.9	12.1	2.6	36.0	16.6	48.6 (1)	100
Share of UAA (in %)	15.3	12.0	13.8	3.0	51.7	8.6	48.8	100
Share of livestock units (LU, in %)	19.3	14.3	15.1	2.5	51.2	7.3	52.3	100
SGM per ha farm area [2)]	94	73	59	48	73	60	67	100
Change of SGM per ha farm area, 1990-1995 in % p.a.	-2.5	-2.4	-3.0	-4.5	-2.7	-1.7	-2.4	-2.1
Farm income level per labour unit (Austria = 100)	87	84	78	61	82	-	85	100
Household income level per labour unit (Austria = 100)	92	88	85	79	88	-	90	100
Livestock units per ha UAA	1.03	0.97	0.89	0.67	0.95	0.69	0.87	0.81
Livestock density change 1980-1995 in % p.a.	0.5	0.9	1.4		0.9	0.4	0.8	0.4
Farm units 1980-1995 in % p.a.	-2.1	-1.4	-0-8	-	-1.4	-1.1	-0.7	-1.0
Share of part-time farmers, in %	56.3	59.8	61.4	72.1	60.1	87.3	69.1	68.1
UAA 1980-1995 in % p.a.	-0.6	-0.4	-0.6	-	-0.5	-0.5	-0.5	-0.4

1) 10.141 mountain farm units are not situated in the mountain area but in general in adjacent less-favoured areas.
2) Standard Gross Margin (SGM) in relation to sum of UAA and forest area

Source: ÖSTAT, Dax 1998

5. Conclusion

The long-standing discussion on mountain issues initially had focused on the *preservation* of natural habitats and esthetical values. In this regard the origin of the Alpine Convention and its basement with the ministries of environment is a quite clear example. As further discussion on the applicability of ensuing documents has shown the future of the Alps can not be

developed just along environmental policies. However, there is still a lack of policies in these regions which relate to all territorial concepts and political measures relevant.
The analysis of mountain farming reveals substantial scope of development and considerable peculiarities at and variation at low geographical level. The specificity of the Alpine area can only be sensed through the analysis of regional data. However, it becomes clear that at the European level mountain development is characterised by its diversity and its insertion in the regional economy and society. It is argued nowadays that the topographical situation underpins the problems of ecological sensitivity much earlier and in a more acute manner than elsewhere (Schindegger 1999). In some regions tendencies of intensification of farming systems in mountain areas pose a significant threat, whereas in other regions marginalisation processes of mountain farming are more widespread (MacDonald et al. 2000). In this context it is important to put attention to both, the devlopment trends of agricultural practices in mountain areas, with particular concern on low scale investigation, and the inter-relation of mountain farming to rural economy. This linkages are particularly dependent and responsive to the local and regional institutional structures in place and their organisational rules evolving under the specific contextual situations (Ceccato and Persson 2001).
The Austrian experience shows that successful policies to safeguard environmental amenities and the cultural landscape while promoting regional development in the mountain areas call for the incorporation of spatially oriented sectoral policies in integrated regional development strategies. The most important arising tasks are as follows (OECD 1998, p. 61f.):

- To strengthen endogenous regional development through integrated regional policy approaches in order to support the realisation of innovative, ecological and socially acceptable projects in the mountain areas, and help to extend development potential.
- To maintain a multi-sectoral economic structure and prevent mono-sectoral tourist use of the mountain area.
- To safeguard and support the sustainable use of natural resources (in particular water and woodland) which is due to the high level of ecological sensitivity of the mountain area of particular importance. The clear targeting of environmental objectives for mountain farming and the integration of ecological prescriptions is of high priority in these areas and guarantees a high level of social acceptance.
- Owing to its above-average costs, to make provisions in order to safeguard and operate the social and economic infrastructure in the mountain area which requires continued attention and support from the public authorities.
- To allocate support payments in such a way that they are sufficiently based on permanent natural cultivation disadvantages and indicators on regional living conditions calculated according to objective criteria. In Austria this is targeted through the enterprise-specific graduation of the mountain farms according to categories of difficulty. An even more accurate graduation system (new mountain farm registry) has been put in place in 2001.
- To support small-farming structure in the mountain areas, taking notice of their particular tasks with regard to natural elements and landscapes of the regions which go far beyond its agricultural significance. It is of great importance to the maintenance of farming and its socially desirable “side-effects” in providing amenities and therefore has to be supported by specifically designed production-neutral direct payments.
- To reward tasks fullfilled by full- and part-time farmers equally both in regard to direct payments and investment and infrastructure subsidies.
- To install an ecological orientation as the fundamental principle of agriculture and forestry accounting for the implications of diverse farming systems and structural development on environmental performance in mountain areas.

- To enlarge policy approaches on mountain development with an orientation towards sustainable economic systems to include in the longer term all economic and policy areas (e.g., environmental, regional and transport policy).

The long-term provision of the public environmental amenities and the cultural landscape in the mountain areas can only be ensured through the maintenance of settlement, the conservation and shaping of the cultural landscape and the maintenance of social and economic activities in the mountain area. The quality of land use devlopment is, in general, not possible without mountain agriculture addressing issues of farming systems and intensity. Mountain areas seem a good case to show that a targeted and co-ordinated regional, spatial planning, economic, environmental, technology, transport, structural and agricultural policy is called for at the different territorial levels. The outstanding resource demands in these regions imply that the high degree in regional problems only can be addressed via the permanent search for integrated policies.

References

BALDOCK D, BEAUFOY G. 1993. *Nature conservation and new directions in the EC Common Agricultural Policy*. IEEP: London/Arnhem.

BALDOCK D, BEAUFOY G, BROUWER F, GODESCHALK F. 1996. *Farming at the Margins, Abandonment or redeployment of agricultural land in Europe.* IEEP and LEI-DLO: London and The Hague.

BARRUET J. 1995. Politique de la Montagne, L'enjeu européen et transfrontalier, in : Barruet J. (ed.) : *Montagne, Laboratoire de la diversité.* Cemagref . Grenoble : 227-238.

BAZIN G, ROUX B. (EDS.) 1992. Les Facteurs de Résistance à la Marginalisation dans les Zones de Montagne et Défavorisées Méditerranéennes Communautaires (MEDEF-network) : Paris.

BEAUFOY G, BALDOCK D, CLARK J. 1994. *The Nature of Farming, Low Intensity Farming Systems in Nine European Countries*. Institute for European Environmental Policy: London.

BUCKWELL A. ET AL. (1997) *Towards a Common Agricultural and Rural Policy for Europe.* Report of an Expert Group to CEC DG VI: Brussels.

COMMISSION OF EUROPEAN COMMUNITIES CEC. 1994. The agricultural income situation in less-favoured areas of the EC. Brussels/Luxembourg.

CEC. 2001. *Einheit Europas, Solidarität der Völker, Vielfalt der Regionen, Zweiter Bericht über den wirtschaftlichen und sozialen Zusammenhalt.* Brüssel.

COUNCIL DIRECTIVE 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas. *Official Journal* L128, 19/5/1975.

CECCATO V, PERSSON LO. 2001. Dynamics of Rural Areas (DORA): The Swedish Case Studies. paper presented at the 41st Congress of the European Regional Science Association: Zagreb, Croatia, 29 August – 1 September.

CRABTREE R, HANLEY N, MACDONALD D. 2001. Non-market Benefits Associated with Mountain Regions. CJC Consulting: Aberdeen, (forthcoming).

DAX T. 1998. *Räumliche Entwicklung im Berggebiet und benachteiligten Gebiet Österreichs.* Facts&Features Nr. 18 der Bundesanstalt f. Bergbauernfragen: Wien.

DAX T, HELLEGERS P. 2000. Policies for Less-Favoured Areas, in: Brouwer F, Lowe P.(eds.): *CAP Regimes and the European Countryside, Prospects for Integration between Agricultural, Regional and Environmetnal Policies.* CAB International, Wallingford: 179-197.
http://www.cabi.org/bookshop/ReadingRoom/0851993540/3540Ch11.pdf

DAX T, HOVORKA G. 2000A. Mountain policy and its contribution to the sustainable development of cultural landscapes in Austria. paper at the 3rd Conference of the European Society for Ecological Economics (ESEE): Vienna, Austria, 3-6 May 2000. http://www.wu-wien.ac.at/project/esee2000/PapersPDF/A310.pdf

DAX T, HOVORKA G. 2000b. A policy package for Austria's mountain areas? Results of various evaluations and perspectives for mountain policy. paper at the 6th Regional Science Association International (RSAI) World Congress: Lugano, Switzerland, 16-20 May 2000.

DAX T, WIESINGER G. (EDS.) 1998. *Mountain Farming and the Environment: Towards Integration.* Research Report No. 44. Bundesanstalt für Bergbauernfragen: Wien.

EUROPEAN INTER-GOVERNMENTAL CONSULTATION ON SUSTAINABLE MOUNTAIN DEVELOPMENT. 1997. Proceedings of the Final Trento Session, 7 – 11 October 1996: Trento.

FRISIO D. 1997. Presentazione di primi risultati della ricerca, relazione al seminario ”Quale futuro per l’agricoltura montana in Europa: politiche di sviluppo, di sostegno o di tutela? Milano, 7°ottobre 1997.

GERHARDTER G, GRUBER M. 2000. *Förderungsaktion eigenständige Regionalentwicklung (FER): Außenseiter oder Mitspieler in Österreichs Regionalpolitik?* Evaluation der FER-Projektförderung 1979 bis 1999. JOANNEUM RESEARCH - Institut für Technologie und Regionalpolitik. commissioned by the Federal Chancellery: Graz-Wien.

HELLEGERS PJGJ, GODESCHALK FE. 1998. *Farming in High Nature Value Regions*, The role of agricultural policy in maintaining HNV farming systems in Europe. LEI-DLO,Onderzoekverslag 165: The Hague.

HOVORKA G. 1998. *Die Kulturlandschaft im Berggebiet in Österreich.* OECD-Fallstudie. Forschungsbericht Nr. 43. Bundesanstalt für Bergbauernfragen: Wien.

MACDONALD D, CRABTREE JR, WIESINGER G, DAX T, STAMOU N, FLEURY P, GUTIERREZ LAZPITA J, GIBON A. 2000. Agricultural abandonment in mountain areas of Europe: Environmental consequences and policy response. *Journal of Environmental Management* 59: 47-69.

OECD. 1998. *Rural Amenity in Austria, A Case Study of Cultural Landscape.* Paris.

PRICE M. 1999. *Global Change in the Mountains.* The Parthenon Publishing Group: New York – London.

SCHINDEGGER F. 1999. Gefahren und Chancen in ökologisch sensiblen Gebieten – der Fall Berggebiet (anhand des Alpenraumes). Referat an der CIPRA-Jahresfachtagung “Auswirkungen der Agenda 2000 auf den Alpenraum”: Wien, 22. Juni.

SCHINDEGGER F, ZANETTI G, DEUSSNER R, DOUBEK C. 1997. *Regionalentwicklung im Alpenraum.* Schriften zur Regionalpolitik und Raumordnung Nr. 31. Bundeskanzleramt, Abt. IV/4: Wien.

UNIVERSITY OF ATHENS, DEPT. OF ECOLOGY. 1999. Determination of support mechanisms and structures towards sustainable development: The case of regions with administrative gaps and discontinuities. final report: Athens.