



## Journal of Alpine Research | Revue de géographie alpine

95-3 | 2007  
Mélanges 2007

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A Comparison of Harmonised Agro-structural Indicators on a Municipal Level in the Alpine Convention Area

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#### Electronic version

URL: <http://journals.openedition.org/rga/295>  
DOI: 10.4000/rga.295  
ISSN: 1760-7426

#### Publisher

Association pour la diffusion de la recherche alpine

#### Printed version

Date of publication: 15 September 2007  
Number of pages: 41-52  
ISBN: 978-2-200-923300-3  
ISSN: 0035-1121

#### Electronic reference

Thomas Streifeneder, Ulrike Tappeiner, Flavio V. Ruffini, Gottfried Tappeiner and Christian Hoffmann, « Selected Aspects of Agro-structural Change within the Alps », *Revue de Géographie Alpine | Journal of Alpine Research* [Online], 95-3 | 2007, Online since 07 July 2009, connection on 19 April 2019. URL : <http://journals.openedition.org/rga/295> ; DOI : 10.4000/rga.295

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This text was automatically generated on 19 April 2019.



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# *Selected Aspects of Agro-structural Change within the Alps*

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## EDITOR'S NOTE

We wish to thank Bob Pyle from Mercury Translations for the English translation.

- 1 Since the '80s, the entire Alpine region has undergone a profound structural change with marked variations in the individual regions. This is due to the significant differences in national and regional framework conditions as well as family- and business-specific factors (Mann, 2003). Subsidies and protective tariffs are increasingly reduced in the course of the WTO negotiations and due to liberalised agricultural markets. European agriculture in the mountain areas is facing increasing competitive pressure as well as inner-European competition through the EU's eastern enlargement. Next to agro-political requirements, natural conditions and the increase in cost of production lead to a competitive disadvantage of the mountain regions. Due to attractive income opportunities outside the agricultural sector and the change of generations, farms are abandoned in large parts of the Alpine Arc (Giuliani, 2003; Mann, 2003; Tappeiner et al., 2003).
- 2 The change in the mode and intensity of land utilisation (farm abandonment in unfavourable locations versus intensification of farm operations in favourable site conditions) and the complete abandonment of farming has negative consequences for biodiversity and the characteristic landscape as well as for the protective function of managed areas (MacDonald et al., 2000; Tappeiner et al., 2003; Tasser et al., 2005). Since it operates a large area, the agricultural sector still performs ecological and socio-economic

functions with regard to the cultivation of natural resources, decentralised settlement, and the preservation of cultural heritage (MacDonald *et al.*, 2000). Hence, the multi-functional contribution of the agricultural sector to the development of rural areas is widely recognized<sup>1</sup>.

- 3 Due to the collection, preparation, and harmonisation of the data, comparative analyses of trans-Alpine structural changes are rather an exception (e.g. Sustalp by Tappeiner *et al.*, 2003; research carried out by Bätzing). Previous analyses merely cover specific aspects with regard to space, content, or time (Buchgraber, 2001; Flury *et al.*, 2004). This similarly holds true for projects such as Alpays, Dynalp, Diamont, Ecomont, Integralp, Mars, MovingAlps, Primalp, Raumalp, or Regalp.
- 4 Currently, the agro-structural change that has been going on in the Alpine Convention area<sup>2</sup>, i.e. in Germany/DE, France/FR, Italy/IT, Austria/AT, Switzerland/CH, Slovenia/SI, and Liechtenstein/LI<sup>3</sup>, since the '50s will be documented within the framework of a research project<sup>4</sup> aimed at outlining the causes and the future development of structural changes within the Alps. Meanwhile, the first significant, harmonised – and thus comparative – agricultural and socio-economic data for the period from 1980 to 2000 are available. The following questions are of particular interest:
  - Which diversities and/or similarities (models and types of development) within the Alps did the structural change between 1980 and 2000 show?
  - Which causes and factors lead to such similar and diverse developments?
  - Do more unfavourable site conditions lead to a difference between the agro-structural change of individual Alpine regions and the overall development in the respective Alpine countries?
  - What future developments of agricultural developments could be imagined in the Alps?

## The Harmonisation of National Agricultural Data for a Trans-Alpine Comparison

- 5 In order to compare data of official agricultural compilations and population censuses between 1979 and 2002 (Table 1), they needed to be thoroughly harmonised<sup>5</sup>. All national definitions of characteristics vary and needed, where possible, to be adjusted to the definition of the EU (farms with a utilised agricultural area/UAA of at least 1ha). Table 2 summarizes the main points within the harmonisation process. Where the definitions made a completely identical harmonisation of data impossible, quantitative information on the existing discrepancies is provided.

Table 1. Data Sources and Year of Compilation

Country	Survey, Year	Source
AT	Land- und Forstwirtschaftliche Betriebszählung 1980; Agrarstrukturerhebung 1999; Volkszählung 2001.	Statistik Austria
CH	Landwirtschaftliche Betriebsstrukturerhebung/ Betriebszählung 1980, 2000; Bodennutzungserhebung Volkszählung 2000; Arealstatistik der CH (Sommierungsflächen) 1979/1985, 1992/1997.	Bundesamt für Statistik
DE	Landwirtschaftszählung 1979, 1999; Bevölkerungsstatistik 2000; Alm-/Alpgerossenschaften, Gemeinde-/Genossenschaftsweiden.	Bayerisches Landesamt für Statistik; Technische Universität München/ Lehrstuhl für Wirtschaftslehre des Landbaus
FR	Recensement général de l'agriculture 1979, 1988, 2000; Recensement de la population de 1999.	Institut National de la Statistique et des Etudes Economiques
IT	Censimento generale dell'agricoltura 1982, 1990, 2000; Censimento generale della popolazione 2001.	Istituto Nazionale di Statistica
LI	Landwirtschaftliche Betriebszählung 1980, 1990, 2000; Bevölkerungsstatistik 2000.	Amt für Volkswirtschaft
SI	Agricultural statistics, 1981, 1990; Population Census, 1981, 1991, 2002; Census of agriculture, 2000.	Statistical Office of the Republic of Slovenia

Table 2. Overview on the main differences of the definitions and harmonisation steps

Country	Definition 1980	Definition 2000	Not included	Harmonisation/Quantitative difference (Alpine Convention Area)
AT	1ha total farmland	1ha UAA		10,288 farms (10.5%) with a total farmland of less than 1ha UAA are not considered. In the 1980 data a number of small farms that do not fulfil the EU criteria are still included.
CH and LI	0.25 ha farmland	1ha UAA	Summer-grazing areas	Data integrated from the land use statistics ("Arealstatistik"). 2,016 farms from CH and seven from LI were not considered in 2000 and 4,107 and/or 136 farms in 1980.
DE	1ha UAA	2ha UAA	Cooperative pastures	a) Relative data on cooperative pastures were integrated*. b) 2,565 (UAA of 2,948ha) and 384 (UAA of 766ha) farms with a UAA of between 1 and 2ha are not included. This leads to statistical gaps with regard to small part-time farms.
FR	1ha UAA	1ha UAA	Cooperative pastures	a) Data of cooperative pastures are not available. Ca. 280,000 ha Alpine pastures are not registered (Bazin, 1998). b) Possibilities for comparison are lowered because of the statistical secret (L. No 78-17 of 01/06/1978)**.
IT	All farms independent of their size registered	All farms independent of their size registered	---	According to the EU-definition only farms with at least 1 ha UAA are considered.
SI	0.1ha farmland	1ha UAA		No harmonisation is possible. Numerous small farms were not statistically recorded in the total number of farms anymore.

\* We wish to thank Mr. Dipl. Ing. N. Röder (Technical University of Munich) for the data provided.

\*\* Data is published only when a feature applies at least to three farms of a municipality. Hence, for 53 municipalities in 1979 and for 115 municipalities in 2000 no specification was given. Assuming two missing farms for each municipality in the French Alps as the largest possible statistical error, this only leads to a negligible error quote of maximal 0.8%.

- 6 Finally, as a reason of changes in the administrative and territorial structure of the municipalities, municipal figures were adjusted to the status of 2000 by taking into account any and all splits and amalgamations between 1980 and 2000 and updating the municipal territory correspondingly<sup>6</sup>.

## Farm Abandonment between 1980 and 2000

- 7 In 2000 a total of 290,000 farms were operated in the Alpine Convention area (Table 3), most of them are located in the Italian and Austrian arc of the Alps. Around 155,000 farms (-33%) within the Alps were abandoned between 1980 and 2000. What needs to be mentioned in this context is the significant difference between the German-speaking Alpine countries and the Romanic and Slovenian Alpine regions (Fig. 1). The abandonment of farms mainly affected the Italian and the Slovenian part of the Alps. In IT, the abandonment rate of -43.8% (72,600 farms) with regard to its Alpine provinces is considerably higher than the country's average abandonment rate (-20.7%). However, there is a huge contrast between the Italian regions of the Alps. While the Autonomous Province of Bozen recorded the lowest abandonment rate in the Alpine NUTS-3 areas with -6.3%, eight of those ten NUTS-3 areas with the alpine-wide highest abandonment rates are located in the Italian provinces of the Alps (Vercelli with -84.7%, Varese with -70.6% or Verbania with -59.2%, for instance). FR and LI recorded similarly high abandonment rates too. The structural change in FR, however, began at a much earlier time than in the other Alpine regions.

Figure 1. The relative change of abandonment rates (%) between 1980 and 2000 on the communal level (LAU 2).

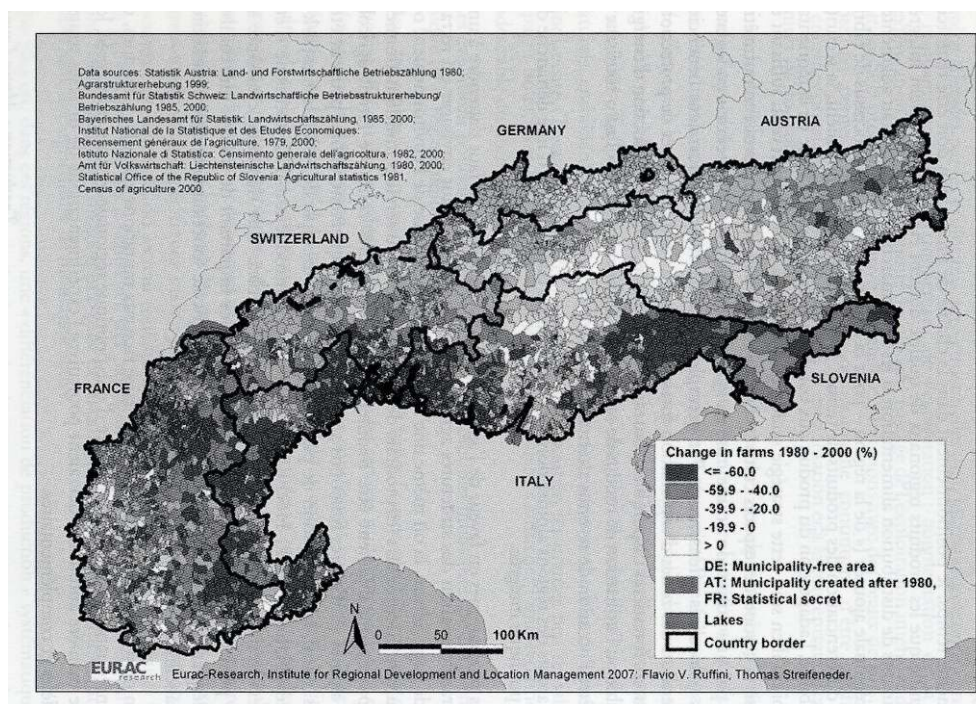


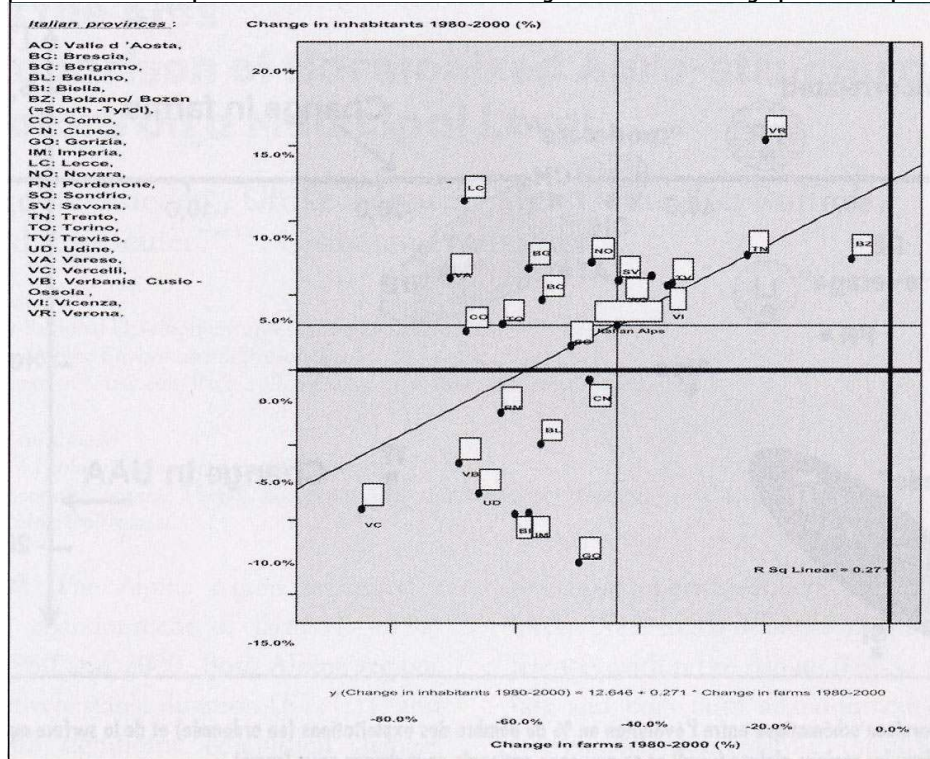
Table 3. Farms and their changing rates (UAA of > 1ha) in the Alpine part of the countries and the comparison with the total national-wide agricultural development (1980-2000)

Country	Number of farms Alpine part 1980		Number of farms Alpine part 2000		Change in number of farms Alpine part 1980-2000		Change in number of farms national figures 1980-2000	
	abs.	%	abs.	%	abs.	%	abs.	%
AT	88 052	20,7	96 205	33,5	-8 153	-9,3	-100 577	-31,6
CH	37 256	8,7	24 546	8,5	-12 710	-34,1	-31 786	-31,1
DE	29 041	6,8	22 017	7,7	-7 024	-24,2	-419 000 <sup>1)</sup>	-50,1 <sup>1)</sup>
FR	52 647	12,4	28 128	9,8	-24 519	-46,6	-598 865	-47,4
IT	165 607	38,9	93 046	32,3	-72 561	-43,8	-676 102	-20,7
LI	358	0,1	191	0,1	-167	-46,7	""	""
SI	53 089	12,5	23 149	8,1	-29 940	-56,4	-105 754	-51,4
Alps	426 050	100,0	287 282	100,0	-155 074	-32,6	---	---

<sup>1)</sup> 1980-2000 only the former federal states in West Germany.

- 8 The main cause of farm abandonment across the entire arc of the Alps is the retirement of farm managers (Mann, 2003). Potential successors and heirs are not interested in taking over the operation of a farm since the income thus generated is less than satisfactory and employment opportunities are more attractive in other sectors. Next to the change of the statistical threshold, the political change is another important cause of farm abandonment in SI. Farm operation in the Alpine parts of AT, DE, and FR, however, developed at a moderate rate. The national developments in AT, DE, and FR show that more unfavourable site conditions within the Alps do not necessarily have to lead to a greater extent of farm abandonment (Table 2).
- 9 Concerning the Italian part of the Alps, there seems to be a close interaction between agro-structural and demographic development (Fig. 2). Since potential successors move to regions with better employment opportunities, as already mentioned, regions with high migration rates often entail a decrease in the agricultural sector (UD, VB, VC). Regions with a sound regional-economic environment and, therefore, a relatively stable population trend on the other hand register lower rates of farm abandonment (BZ, TN, VR).

Figure 2. The regression analysis carried out on the basis of aggregated data from the Italian provinces of the Alps shows the interaction between agricultural and demographic development.



## Inconsistent Changes of the Utilised Agricultural Area (UAA)

- 10 In the previous decades, the UAA of farms with a size of more than 1ha decreased by 8.8% (-504,807ha). While the highest rates were recorded in IT (-18.7%) and SI (-37.0%), where UAA was mainly abandoned by small farms with a maximum size of 5ha UAA, the abandoned UAA increased by 12.0%.
- 11 FR on the other hand even recorded a slight increase in the UAA of 1.1% (although the overall rate in the country decreased by 9.8%). This is due to the consideration of previously-unregistered, cooperatively-owned Alpine pastures in the survey. Also the demarcation of new land, due to subsidies for extensive animal husbandry, contributed to this increase. In CH, the UAA hardly changed at all (-1.7%; national average: -0.1%) because the land is mainly taken over. The Alpine Convention areas in AT (-5.5%; total AT: -9.4%) and DE (-5.7%; total DE: -5.7%) similarly recorded only slight decreases compared to the respective national average. The reason for this could be a specific agro-environmental programme aimed at promoting the extensive cultivation of marginal productivity areas.

## The Continuous Growth of Farms

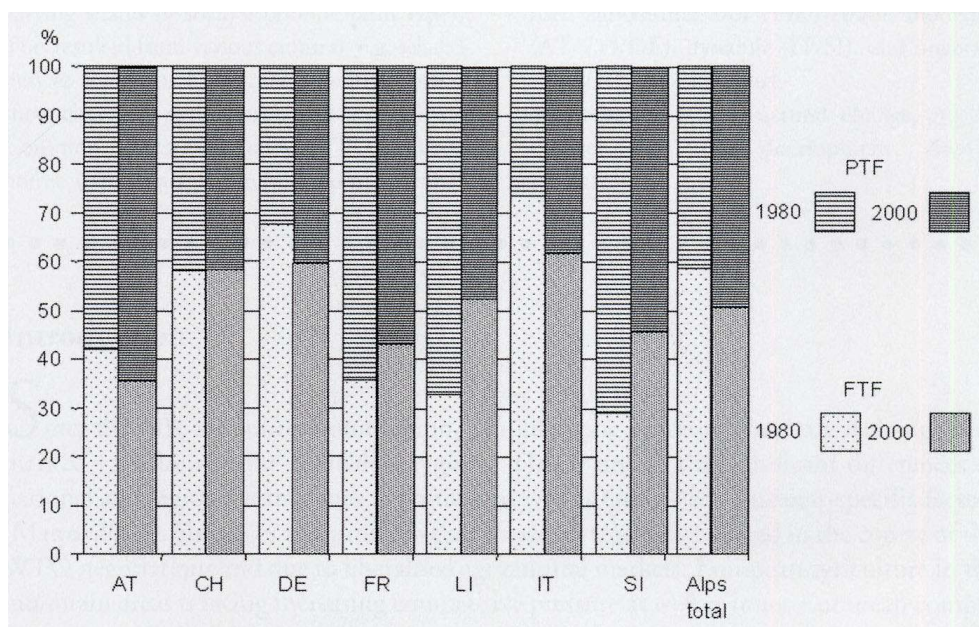
- 12 The average size of farms is growing outside as well as across the arc of the Alps, because the remaining farms mainly absorb the abandoned land in order to increase their

competitiveness. Across the Alps, small and medium-sized farms register the highest decreases both in absolute and relative terms. In the long run, they will only be able to survive if they specialise their operation on a large scale (by cultivating fruit or permanent crops) or generate additional income outside the agricultural sector. The “winners” of the structural change are large farms with a minimum UAA of 20ha. Compared to the average farm size (UAA = 18.7ha) in the EU-15 countries in 2000 (BMLFUW, 2004), the agricultural sector within the arc of the Alps is set up on a relatively small scale with a UAA per farm of 13ha (the sole exception being FR with an average UAA per farm of 30ha) and is therefore hardly able to compete on the international plane. The smallest farms are operated in IT (UAA per farm of 7.5ha) and SI (UAA per farm of 5.7ha).

## Farms with Full-time and Part-time Farming – a Sound Balance across the Alps

- 13 With its well-balanced ratio between farms with full-time farming (FTF) and farms with part-time farming (PTF), the Alpine region differs markedly from the EU-15 countries where less than a fourth of the farms are operated full-time (Fig. 3) (BMLFUW, 2004). In AT, the share of PTFs, which already had a higher-than-average ratio in 1980, increased yet again (total AT, 1999: 59.5%; BMLFUW, 2004). In the Swiss part of the Alpine Convention, FTFs still account for around 60% of all farms (total CH: 69.8%; BLW, 2004). In DE, the majority of the farms are still FTFs (59.1%; total Bavaria: 44%; STMLF, 2004). The same holds true for IT (total IT: 44%; INEA, 2001), while PTFs are the majority in FR (total FR: 38%) and SI (total SI: 52.3%) (Source: Table 1). However, if the working hours performed on the farm per year are compared, it turns out that the threshold value of a FTF is considerably lower in AT, CH, IT, LI and SI than in DE and FR. According to the authors' compilations, about 30-50% more farms are recorded as FTFs in the first group of countries.

Figure 3. Proportion of FTFs and PTFs within the arc of the Alps in 1980 and 2000.





## Diverging and Parallel Structural Changes

- 14 By comparing the two indicators “change in farm number” and “change in UAA”, the similarities and differences of structural change in specific parts of the Alps may be illustrated (Fig. 4). From this, four basic trends of agro-structural development differing markedly from each other may be identified in the Alpine countries (Table 4).

Figure 4. Schematic comparison of the relative change in farm number (ordinate) and in UAA (Abscissa) (1980–2000) in the relevant Alpine regions (●). The corresponding developments are pointed out for the national level too (■).

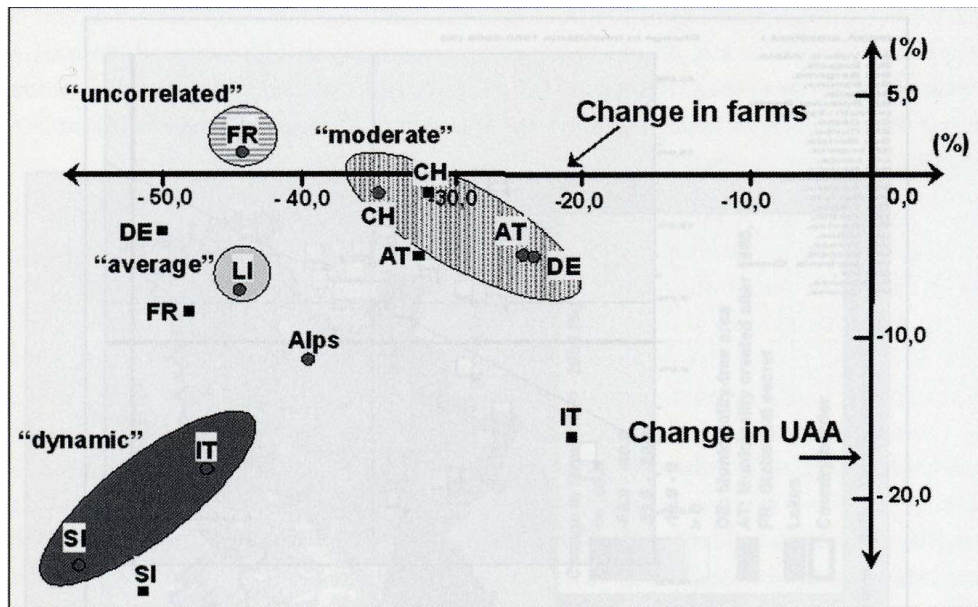


Table 4. Characteristics and driving factors of four agro-structural development types

Agro-structural group/ type	Country	Characteristics	Main causes and driving factors
"well-performing regions"	DE/AT/CH	a) Moderate structural change (slight decreases in farm abandonment rates and UAA). b) Secure income of mountain farms, economic survival guaranteed.* c) Number of farms operated in the mountain regions decreased less in relative terms than the number of farms as a whole. d) Ecologically-vulnerable areas do not become fallow (BMLFUW, 2004; Schöthaler et al., 2005). e) Structural adjustments obstructed (Flury et al., 2004; Ghiliani, 2003). f) Favourable age structure of farm managers (Schöthaler et al., 2005).	a) Compensatory allowances and subsidies within agro-environmental programmes (KULAP**, OPUL***). b) Strong relatedness of mountain farmers to their work. c) Acceptance of all the people in the respective region. d) Great importance of the preservation of the cultural landscape (tourism). e) Favourable income opportunities outside the agricultural sector. f) Motivation of the younger generation to take over the farm. g) Favourable structure of farms (many FTFs).
"average structural change"	LI	Generally conditions and agricultural structure similar to that of CH. a) Favourable structure (farm size of 18ha, = EU average; Avw, 2004). c) Farm managers > 65 and < 25 years increase. Positive agricultural development takes place (Avw, 2004).	
"Dynamic structural change"	IT	a) High abandonment rates with abandonment rates of UAA above Alpine-wide average. b) Future high farm abandonment, because of high obsolescence (60% of farm managers > 55 years; Charlier, 2003).	a) Small structure of farms (gavelkind tenure). b) Unfavourable income opportunities in a commuting distance. c) Attractiveness of the large economic centres (EURAC, 1996; INEA, 2001).
	SI	Strong structural change, that is expected to continue for some time as the high average age of the farmers above the age of 55 (2000) is increasing (Erjavec, 2005; Charlier, 2003).	a) Significant socio-political changes. b) The accessibility of the markets. c) Small farm structures. d) Migration to industrial locations. (Erjavec, 2005).
Exceptional development of the Autonomous Province of Bolzano/Bozen	IT	a) Extremely stable agricultural structures with low abandonment rates and unchanged UAA. b) Further relatively moderate change are expected due to favourable age structure of the farm managers.	a) Special autonomous statute. b) Political influence of the representatives of the agricultural sector. c) Infrastructural measures. d) The transport connection of farms. e) The selective decentralised settlement of industry and trade. f) Substantial amount of subsidies (2004: ca. 260m € incl. the EU structural funds; Autonomo Provoviz. Bozen-Südtirol, 2004).
"Unconcerned" structural change	FR	a) Despite high abandonment rates, the UAA is increasing slightly. b) The structural change started early and has progressed quite far. c) Farms switched from dairy to meat farming. d) Coexistence of large, modern and small, traditional farms. e) Obsolescence of farm managers (34.4% over 55 years). High farm abandonment will continue (Charlier, 2003).	a) Compensatory allowances and subsidies within agro-environmental programmes.**** b) Meat farming, whether it is beef or sheep, is subsidised to a considerably higher extent than dairy farming; all in all.

\*2003: 894m €; CH, 2003: 823.1m CHF (c. 527m €); DE (mountain area), 2003: 125.7m € (Blw, 2004; BMLFUW, 2004; STMLF, 2005).

\*\* Kulturlandschaftsprogramm (Cultural Landscape Programme).

\*\*\* Austrian programme to promote an extensive, environmentally-sound agriculture that conserves the natural environment.

\*\*\*\* Subsidies granted with regard to the size of the farm or the amount of cattle make a significant contribution to the agricultural income of the French mountain farms. In total subsidies in the amount of 127.3m € (2000) are granted in the French part of the Alps (Chatellier et al., 2004).

## Outlook

- 15 The future of the agricultural sector will depend to a great extent on
  - (a) the obsolescence of farm managers
  - (b) the liberalisation/globalisation of the markets (decreasing product prices)
  - (c) the lower amount of public funds for the agricultural sector. Especially the dairy-farming sector will be affected by
  - (d) saturated markets
  - (e) the localisation of production, processing, and trading structures (WIFO, 2004). Another factor is that
  - (f) the milk quota introduced in 1984 by the EU will expire in 2015 when the guaranteed-quantities are ending.
- 16 Considering the previous developments and the aggravating conditions a further decline of agriculture in mountain regions has to be expected. Thereby, it must be assumed that the different Alpine Regions will not be affected in the same dimension. Hence, agriculture will "not be distributed evenly across the whole mountain region" (Frey,

- 2006). The decrease will particularly pertain those locations already characterized by tendencies of farm decrease and emigration as well as those regions affected by the pull-effects of the large economic centers.
- 17 In Regions of the southern part of the Alps it is expectable that the previous agro-structural change will go on because of the high obsolescence, unfavourable region-economic environment, small farm sizes etc. Considering the farm types, modern, specialised farms (cultivation of fruit and wine, dairy farms with productive animals) in favourable locations will be less affected by the agro-structural change. Here, the structural change will lead to a reorganisation of farm operations (increase of farm-size, decrease in the stocking density of Alpine pastures, changeover from labour-intensive dairy farming to extensive meat production/farms with suckling cows). While these farms or regions only face a moderate change, the small-structured dairy-farm sector of the Alps continues to be under enormous pressure in favour of large, specialised dairy farms (WIFO, 2004).
  - 18 Thus, agro-structural change will affect the entire “Alpine region” as a living space, a recreation resort, and an economic region. The change in the utilisation of land will have a significant influence on the appearance of the landscape. This landscape change is on the one side driven by an intensification of accessible land that can be tilled with the use of machines and on the other side by extensification and abandonment in marginal soil areas, hillsides and slopes (Flury *et al.*, 2004; Tappeiner *et al.*, 2003). Abandoned land will be subjected to the natural process of succession. While the risk of natural disasters and erosion will increase, biodiversity will decrease (Tasser *et al.*, 2005). Rough pastures, meadows that can be mowed once or twice, and remote Alpine pastures with their great biodiversity may become fallow – a development that is quite undesirable from an ecological point of view. These developments could initiate innovative solutions for the economic future of the Alpine Regions.
  - 19 In regions with a moderate agro-structural change (“with agriculture”) food production will withdraw in favor of multifunctional services. The proportion of income generated from food production will therefore be shifted towards those generated from services for the society. Areas, which from a cultural, ecological and aesthetic point of view are relevant for the landscape and nature protection should be identified and specifically conserved. Consequently the character and the image of the farmer change towards a service provider who offers an intact cultural landscape. However, a certain amount of the agricultural income will still be based on agricultural subsidies and in particular on specific agro-environmental payments as well as on contributions from other sectors. For example from the tourism sector by regionally guaranteed contributions from the health sector [Kurtaxe] and incomes from landscape orientated offers. In fact, the touristy stakeholders are convinced that the image of an attractive mountain area is simply inconceivable without a functioning mountain agriculture.
  - 20 Furthermore, in these regions a systematic and comprehensive “product differentiation” will become more relevant. As the demands of the consumers for save and high quality products are rising, the mountain agriculture has to concentrate on production, processing and marketing of these products related to a certain region. This chain of custody has to guarantee the separation of products of different provenience and quality. By specializing on niche products the agriculture in the Alps may be able to stand out from the concurrence of the global food production sector. An essential basis for realizing this concept is the shortening of the distances between production, processing and

marketing. This strategy will succeed in regions with an innovative and efficient regional network of producers, processing, and marketing.

- 21 At the same time the product placement must be improved, that means regional quality products should be stronger integrated within the assortment of the large food supplier and supermarkets. This could increase the regional added value (“from the region – for the region”). Hence, the processing of products, the differentiation of products according to quality and region, the environmental friendliness, the product safety, and the adjustment of the product to the site conditions of the producing region are in the foreground of the reorientation. However, this strategy alone will not be enough in order to generate an adequate income and to maintain the management of cultivated areas.
- 22 The regional added value should be furthermore incremented by a systematic utilization and development of further alternative endogen potentials (“site offensives”). For example some regions could benefit from increasing forestry areas and the necessity of thinning the protection forest. These available timber resources could be used for the production of renewable energy or for sawmill products. Another example is the “agro-tourism” which could be an alternative income opportunity. Thus, the advantages of the Alpine regions need to be utilized within the framework of an integrated policy approach.
- 23 Independently from programmes in favour of agriculture in these regions, a certain agro-structural change has to be expected, too. In particular, where an environmental-friendly agriculture as well as an agriculture orientated on high quality products and/or providing multifunctional services cannot be maintained economically reasonable, a concerted spatial withdrawal of agriculture is necessarily to be accepted. In such agricultural retirement areas (“Alpine fallow”), other spatial functions could become more reasonable economic fields. The constitution of nature parks and landscapes (see example of “Wildernesspark” Val Grande National Park, Höchtl et al., 2005) and the introduction of a nature-orientated summer tourism could be possible strategies. This kind of tourism registers a growing demand. Thereby it is important to find a sound combination to those areas where the agricultural production is still operating (direct marketing and product labeling).
- 24 The implementation of single strategies will not be sufficient to face the expected agricultural changes and their consequences in an adequate manner. Thus in the sense of a comprehensive and integrated regional policy, the single regions should pursue an implementation of various parallel strategies.

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## NOTES

1. EU directives 1257/1999/EEC, No. 1698/2005, Section III-220 of the temporarily-suspended EU Constitution, protocol on "Mountain Farming" of the Alpine Convention, new CAP reform.
  2. This delimitation is based on a suggestion to define the Alpine Convention Units/ LAU 2 = 5,964 municipalities) prepared by Ruffini et al. (2004).
  3. No farms are operated in the Principality of Monaco (MC).
  4. gion.
  5. To facilitate better comprehension of this paper, references to 1980, 1990, and 2000 will be used synonymously, even when the compilations were not always done in the same year.
  6. The most significant changes are due to the formation of three new Italian provinces, Verbano-Cusio-Ossola, Biella, and Lecco, in 1992.
  7. Eurostat: Nomenclature des unités territoriales statistiques.
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## ABSTRACTS

The Alpine region registered a substantial abandonment of farms (-40%) between 1980 and 2000. Both Alpine regions with a relatively stable situation (AT, CH) and regions with significant agricultural changes (IT, SI) exist next to each other. The agro-structural change has led to profound changes in operational structures (enlargement of farms, abandonment of utilised agricultural areas, varying shares of socio-economic farm types). This resulted from various cultural (e.g. relatedness to agricultural traditions, identification of the society with agriculture), agro-political (e.g. Common Agricultural Policy/ WTO) and economic (e.g. non-agricultural income possibilities), and operational (e.g. farm-size) driving forces. Next to major national and regional differences within the Alpine Region (e.g. moderate and high farm abandonment), they also face parallels with regard to the change in their agricultural structure (i.e. farm abandonment and increasing farm-size of the remaining farms). Compared to the Alpine-wide average of the changes in the number of farms and the utilised agricultural area (1980-2000), moderate (AT/CH/DE), dynamic (IT/SI), and uncorrelated (FR) were observed.

La région couverte par la Convention alpine a connu un recul important des exploitations agricoles (- 40 %) entre 1980 et 2000. Des régions stables (Autriche, Suisse) côtoient des régions profondément transformées (Italie, Slovénie). Les modifications agrostructurelles ont conduit à des bouleversements majeurs dans les structures de fonctionnement (agrandissement des exploitations, abandon de surface agricole utile, partages diversifiés des types socio-économiques d'exploitations). Cela résulte de divers facteurs, qu'ils soient culturels (l'attachement aux traditions agricoles, l'identification de la société au monde agricole), politico-agricoles (Politique Agricole Commune, OMC) ou économiques (opportunités de revenus non-agricoles) et fonctionnels (taille des exploitations). Au-delà des différenciations nationales et régionales majeures au sein de l'arc alpin (abandon d'exploitations modéré à fort), les exploitations

agricoles affrontent les mêmes enjeux en ce qui concerne les transformations des structures agricoles (ex : abandon d'exploitation et augmentation de la taille des exploitations restantes). En comparaison avec la moyenne à l'échelle alpine de l'évolution du nombre d'exploitations et des surfaces agricoles utiles (1980-2000), on peut observer des tendances modérées (Autriche/Suisse/Allemagne), dynamiques (Italie/Slovénie) ou non corrélées (France).

## INDEX

**Keywords:** agro-structural change, Alpine Convention, driving forces, rural development

**Mots-clés:** convention alpine, développement rural, forces motrices, transformation agro-structurelle

**Geographical index:** Austria, France, Germany, Italy, Slovenia, Switzerland

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