Selected Aspects of Agro-structural Change within the Alps
A Comparison of Harmonised Agro-structural Indicators on a Municipal Level in the Alpine Convention Area

Thomas Streifeneder, Ulrike Tappeiner, Flavio V. Ruffini, Gottfried Tappeiner and Christian Hoffmann

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
ISSN: 0035-1121

Electronic reference

This text was automatically generated on 19 April 2019.

La Revue de Géographie Alpine est mise à disposition selon les termes de la licence Creative Commons Attribution - Pas d'Utilisation Commerciale - Pas de Modification 4.0 International.
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).

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 multifunctional contribution of the agricultural sector to the development of rural areas is widely recognized.

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.

Currently, the agro-structural change that has been going on in the Alpine Convention area, i.e. in Germany/DE, France/FR, Italy/IT, Austria/AT, Switzerland/CH, Slovenia/SI, and Liechtenstein/LI, since the ’50s will be documented within the framework of a research project 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

In order to compare data of official agricultural compilations and population censuses between 1979 and 2002 (Table 1), they needed to be thoroughly harmonised. 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

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey, Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>Land- und Forstwirtschaftliche Betriebszählung 1990; Agrarstrukturerhebung 1991; Volkszählung 2001.</td>
<td>Statistik Austria</td>
</tr>
<tr>
<td>DE</td>
<td>Landwirtschaftszählung 1979, 1999; Bevölkerungsstatistik 2000; Amt für Agrarwissenschaften, Grundfläche, Genossenschaftswesen.</td>
<td>Bayerisches Landesamt für Statistik; Technische Universität München; Lehrstuhl für Wirtschaftswissenschaft des Landbaus</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Definition 1980</th>
<th>Definition 2000</th>
<th>Not included</th>
<th>Harmonisation/Quantitative difference (Alpine Convention Area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>1 ha total farm</td>
<td>1 ha UAA</td>
<td>19,288 farms (10.3%) with a total farmland of less than 1 ha UAA are not considered, in the 1980 data a number of small farms that do not fulfill the EU criteria are still included.</td>
<td></td>
</tr>
<tr>
<td>CH and LI</td>
<td>0.25 ha farm</td>
<td>1 ha UAA</td>
<td>Summering area</td>
<td>Data integrated from the land use statistics (&quot;Arealstatistik&quot;), 2,016 farms from CH and seven from LI were not considered in 2000 and 4,157 and 136 farms in 1980.</td>
</tr>
<tr>
<td>DE</td>
<td>1 ha UAA</td>
<td>2 ha UAA</td>
<td>Cooperative pastures: a) Relative data on cooperative pastures were integrated, b) 2,565 (UAA of 2,948 ha and 384 (UAA of 766 ha) farms with a UAA of between 1 and 2 ha are not included. This leads to statistical gaps with regard to small part-time farms.</td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td>1 ha UAA</td>
<td>1 ha UAA</td>
<td>Cooperative pastures: a) Data of cooperative pastures are not available, e.g. 286,000 ha Alpine pastures are not registered (Buzin, 1998), b) Possibilities for comparison are lowered because of the statistical error (e.g. No. 5617 of 1/6/1998).</td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>All farms independent of their size registered</td>
<td>All farms independent of their size registered</td>
<td>----</td>
<td>According to the EU definition only farms with at least 1 ha UAA are considered.</td>
</tr>
<tr>
<td>SI</td>
<td>0.1 ha farm</td>
<td>1 ha UAA</td>
<td>---</td>
<td>No harmonisation is possible. Numerous small farms were not statistically recorded in the total number of farms anymore.</td>
</tr>
</tbody>
</table>

* 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 quotient of maximal 0.8%.

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.

Journal of Alpine Research | Revue de géographie alpine, 95-3 | 2009
Farm Abandonment between 1980 and 2000

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 NUTS³-3 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)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>88,052</td>
<td>90,205</td>
<td>-2,153</td>
<td>-100,577</td>
</tr>
<tr>
<td>CH</td>
<td>31,256</td>
<td>24,546</td>
<td>-6,710</td>
<td>-51,786</td>
</tr>
<tr>
<td>DE</td>
<td>29,841</td>
<td>22,017</td>
<td>-7,824</td>
<td>-419,000</td>
</tr>
<tr>
<td>FR</td>
<td>52,647</td>
<td>28,128</td>
<td>-24,519</td>
<td>-598,865</td>
</tr>
<tr>
<td>IT</td>
<td>65,672</td>
<td>93,046</td>
<td>-27,374</td>
<td>-636,102</td>
</tr>
<tr>
<td>LI</td>
<td>588</td>
<td>61</td>
<td>-167</td>
<td>-467</td>
</tr>
<tr>
<td>SI</td>
<td>53,089</td>
<td>23,149</td>
<td>-30,940</td>
<td>-365,754</td>
</tr>
<tr>
<td>Alps</td>
<td>426,050</td>
<td>287,282</td>
<td>-155,074</td>
<td>-51,4</td>
</tr>
</tbody>
</table>

1) 1980-2000 only the former federal states in West Germany.

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).

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

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%.

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

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**

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

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

<table>
<thead>
<tr>
<th>Agro-structural group</th>
<th>Characteristics</th>
<th>Main causes and driving factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;low-performing&quot; regime (LKR)</td>
<td>- Moderate investor change; might invest in farm abandonment or cattle. - Sectors with a low specialization index or more &quot;sensitive to change&quot; suffer from a lack of investors. - Cattle losses in the mountain regions have led to a decrease in the number of farms and a decrease in the amount of research and development. - Sheep and goats are more profitable than cattle.</td>
<td>- Compensation allowances and subsidies in the agro-structural programmes (ERAP2; ORSP). - Financial means are available for the farmers. - Strategic location of the producers in the respective region.</td>
</tr>
<tr>
<td>&quot;average structural change&quot;</td>
<td></td>
<td>- Economic conditions and agro-structural changes are related to that of LKR.</td>
</tr>
<tr>
<td>&quot;saturated structural change&quot;</td>
<td></td>
<td>- Sectors with a high specialization index or more &quot;resilient to change&quot; were more successful in finding solutions for the current crisis. - Cattle losses in the mountain regions have led to a decrease in the number of farms and a decrease in the amount of research and development. - Sheep and goats are more profitable than cattle.</td>
</tr>
<tr>
<td>&quot;resigned structural change&quot; (RSC)</td>
<td>- Sectors with a high specialization index or more &quot;resilient to change&quot; were more successful in finding solutions for the current crisis. - Cattle losses in the mountain regions have led to a decrease in the number of farms and a decrease in the amount of research and development. - Sheep and goats are more profitable than cattle.</td>
<td>- Compensation allowances and subsidies in the agro-structural programmes (ERAP2; ORSP). - Financial means are available for the farmers. - Strategic location of the producers in the respective region.</td>
</tr>
</tbody>
</table>

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

*** 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).

** Kulturlandschaftsprogramm (Cultural Landscape Programme).

Outlook

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.

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,
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.

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).

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.

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 touristic stakeholders are convinced that the image of an attractive mountain area is simply inconceivable without a functioning mountain agriculture.

Furthermore, in these regions a systematic and comprehensive “product differentiation” will become more relevant. As the demands of the consumers for safe 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.

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.

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.

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).

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.

BIBLIOGRAPHY


BAZIN G., April 1998. – Agriculture de montage et soutiens publics à la gestion de l’espace – les résultats d’une simulation. Le Courrier de l’environnement 33.


NOTES

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. 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.
5. The most significant changes are due to the formation of three new Italian provinces, Verbano-Cusio-Ossola, Biella, and Lecco, in 1992.

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/SL), 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

AUTHORS

**THOMAS STREIFENEDER**

Eurac Research. Institute for Regional Development and Location Management.
thomas.streifeneder@eurac.edu

**ULRIKE TAPPEINER**

Eurac Research. Institute for Alpine Environment, Drususallee 1, I-39100 Bozen/University of Innsbruck, Institute of Ecology.
ulrike.tappeiner@uibk.ac.at

**FLAVIO V. RUFFINI**

Eurac Research. Institute for Regional Development and Location Management.
flavio.ruffini@eurac.edu

**GOTTFRIED TAPPEINER**

gottfried.tappeiner@uibk.ac.at

**CHRISTIAN HOFFMANN**

Eurac Research. Institute for Regional Development and Location Management