

## **Landscape maintenance and farming in the Alps: from family firms up-keeping to inter-institutional arrangements**

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### **Abstract**

This contribution discusses assets and limits of the local/territorial level as a core level to improve the sustainability of agriculture. The focus is on the issue of rural landscape maintenance through farming. Some possible institutional solutions to overcome the difficulties of family farms are examined.

New institutional settings such as the “local group”, constituting an interface for the negotiation among different local stakeholders, seem to effectively facilitate the stipulation of local contracts for landscape management. The participation to these contracts requires a change in farmers’ identity and a more general re-conceptualization of agricultural and environmental problems as community problems.

*Keywords:* Land use, Participatory approach, Rural development

## 1 INTRODUCTION

In the last decades, among other relevant social and economic changes that have involved Alpine areas, a general abandonment of the traditional agricultural land use has taken place. Consequently the mosaic structure of the mountain landscape, resulting from the interchange and the intersection of open and closed areas, has been modified with a loss in aesthetic and environmental landscape quality (MacDonald *et al.* 2000).

In relation to these problems, an approach based on a set of standard measures adopting the individual farm level as the privileged scale has largely been dominant in the European Union. The paradigm of these policy interventions, the “paid stewardship”, states that society must compensate farmers for the major costs imposed by environmentally sensitive practices (Potter 2002).

Some criticisms has been raised towards this model of policy intervention. Limits have been found, for instance, in the high transaction costs of the schemes, “borne to a non-trivial degree by the participants themselves” (Falconer 2000, 392), while other research found out empirical evidence of opportunistic behaviour in farms engaged in reform measures (Walford 2003). More generally there is an increasing awareness of the relevance of factors like knowledge, values, beliefs, the relational model<sup>2</sup> in the process of change towards more sustainable practices. Furthermore, the focus on interactive and non-linear models of knowledge formation (Röling and Jiggins 1998, see Fig. 1) lead to an increasing attention to the role of institutional factors in promoting ecologically sound agricultural practices (Lowe *at al.* 1999, Brunori *et al.* 2001).

This contribution discusses the assets and the limits of the local/territorial level as a core level to foster participative processes aimed to improve the sustainability of agriculture. The focus is on the issue of rural landscape maintenance through farming. Some possible institutional solutions to overcome the difficulties of family farms in responding to the new social demands towards agriculture are analyzed on the basis of the evidence from a European research and demonstration project. The Imalp project, which started in January 2003, has a 3-year duration and it is now in the final stage.

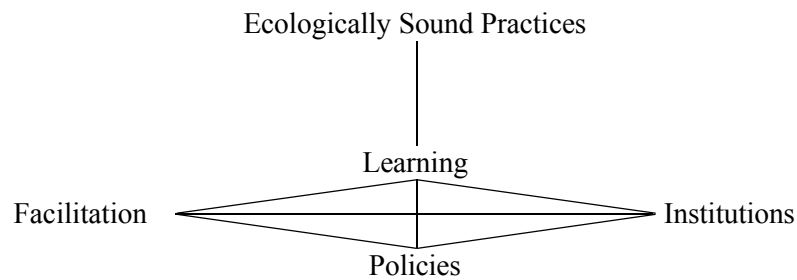
## 2 PARTICIPATIVE LAND MANAGEMENT IN THREE ALPINE AREAS

### 2.1 The Imalp project

IMALP is a combined research and demonstration project (Fleury *at al.* 2004) carried out according to the principles of research intervention (Hatchuel 2000). Its demonstration phase involves four pilot areas in France, Switzerland, Italy and Austria, where action plans in favour of sustainable agriculture have been designed and implemented.

The first step has been the constitution of local working groups representing the different actors concerned with the rural development of the areas (in particular farmers, elected officials and NGO members) and willing to participate in a long-term project. Through the use of participative, bottom-up tools, and with the help of an activator, the groups elaborated “actions plans” consisting in concrete innovative actions addressing the sustainability of local agriculture on three levels: farm and farming practices, farmers’ collective organizations, and local/territorial level. Among the different actions implemented, landscape management emerged as a common concern among the local groups of French, Swiss and Italian pilot areas.

Fig. 1 – The Ecological knowledge System



Source: Röling and Jiggins, 1998.

A crucial part of the project consists in the scientific evaluation of the impact of the adoption of a participative approach to sustainable agriculture. Differently from other studies on partnerships in rural development (see Moseley 2002), the scientific evaluation in IMALP is not an *ex post* analysis, but it accompanies the demonstrative actions during all the phases of the project. This is mainly done through a sociological analysis exploring:

- the increase in awareness of local people and especially farmers concerning social demands such as environmental concerns and new agricultural functions before, during and after the implementation of the action plans;
- the progress concerning the management of new relationships between local people and between different stakeholders (different productive sectors, public institutions, NGOs). By means of multi-actors local groups, contracts and charters, a new local governance process linking agriculture and the local society is enacted.

Therefore two are the main levels of analysis:

- individual farms: here the focus is on the socio-economic characteristics of the farmers involved in the action and on contracts between farmers and the local society
- multi-actors local groups: it is the key level of this new governance mechanism. The success or failure of the implementation of contracts depends upon the capacities of local people to negotiate in a collective way a broad agreement about the goals, the rules, and the means of change.

## 2.2 Landscape maintenance actions in Moyenne Tarantaise, Val di Sole and Val d'Héréns

Landscape maintenance actions were implemented in: Moyenne Tarantaise located in Savoie (France), Val di Sole in the Autonomous Province of Trento (Italy), Val d'Héréns located in Canton Valais ion Switzerland. In Table 1 some basic data about these three areas are shown.

Tab. 1 – Some characteristics of Moyenne Tarantaise, Val di Sole and Val d'Héréns

<b>Criteria</b>	<b>Moyenne Tarentaise (F)</b>	<b>Val di Sole (I)</b>	<b>Val d'Hérens (CH)</b>
Altitude (min – max)	400-3800	540 - 3600	600 – 4357
Total surface (2001)	87 400 ha	58.648 ha	41 500 ha
Municipalities (nr)	26	14	8
Number of inhabitants (2001)	25 000	14.997	6.327
Δ number of inhabitants (1991-2001)	7%	3,7%	8,1%
Agricultural employees (2001)	2%	4,5%	5,2%
Number of farms (% part time)	230 (40%)	324 (45%)	170 (48%)
Yearly overnight stays	9.700.000	1.700.000	45.000

In Moyenne Tarentaise the first phase of local group work was aimed at setting the conditions for concrete feasibility of contracts for landscape up-keeping. Accordingly the efforts of the team have focused on:

- identifying the areas where landscape was defined as a key challenge by previous studies;
- finding volunteer farmers to clean and maintain open the areas;
- getting the approval of landowners for clearing bushy or woody vegetation from their land.

A second phase was devoted to the preparation of the contracts and their negotiation with local municipalities. In this phase an important work of mapping was done in order to locate precisely the area concerned by each contract and to evaluate the situation and the work to be done to improve the situation.

Finally, 10 contracts for landscape recovering were signed by a group of municipalities of Aigueblanche valley and the municipality of Saint-Martin de Belleville. The negotiation with the municipalities was largely managed by farmers involved in the local group and the actions were funded jointly by farmers, the municipalities and the IMALP project fund. The contracts involved two phases of action: the phase of cleaning woody vegetations and shrubs; the phase of landscape up-keeping to maintain land open for the two years following the cleaning. The latter included hand made cleaning works and the re-organisation of grazing patterns in order to increase grazing pressure on the concerned areas.

In the case of Valle di Sole (Italy) the input for starting the discussion about landscape maintenance initiatives came from one mayor of the valley. In the first local group meeting he expressed the will to recover an abandoned area (about 1,6 ha) next to a peripheral village of his municipality, Commezzadura. Finding a farmer belonging to the same municipality and willing to cooperate with the local public administration proved initially difficult. After contacts and meetings<sup>3</sup>, an agreement for a three year contract was eventually reached with a farmer residing in another municipality.

Following the discussion of the action in the local group two additional farmers showed their interest to repeat the action in two other municipalities of the valley.

The process of implementation in the municipality of Pellizzano, facilitated by the close relation between the local authority and the interested farmer in his role of municipal councillor for agriculture, developed along the following steps:

- the municipal authorities identified three abandoned areas suitable for intervention.
- the municipal authority contacted the landowners of the parcels included in the areas in order to obtain their approval for recovering their land to the original grassland use. Most of the about 30 landowners interested by the action gave their consent, but an important denial came from the owners of the biggest central piece (4 old brothers engaged in pre-existing conflicts with the municipality) of one of the three areas;
- at the same time the four full time farmers of the municipality were contacted and a two-year contract for land recovering was proposed. It included the clearing of shrubs in the first year and a differentiated management in the following year: hay making for the flat area and grazing animals for the steep areas. Three farmers demonstrated interest in the action, one resigned after the denial of landowners and two started the implementation.

The implementation process in the third municipality, Vermiglio, was followed a slightly different path:

- in an meeting organized by the local activator the interest of a farmer for an abandoned area not far from his farm and the interest of the local mayor for an area next to a tourist settlement were discussed and an informal agreement was reached on the inclusion of both areas in the action for land recovering;
- the municipality informed the landowners about the action and established a strict deadline for them to express any objection. No objection was received by the given time and thus the contract was signed.

In conclusion, in the first two years of the project four contracts interesting a total surface of 14 ha have been signed.

In the Swiss pilot area land management participative processes have been implemented in Vex, located in the lower valley, and in Evolène, located in the upper valley.

The land management action in Vex focused on the objective of preventing the forestation of landscape around the village. The action involved the following steps:

- the action was presented by public administrators in a meeting with all the farmers operating in the municipality, 5 farmers showed their interest in clearing the shrubs and maintaining the agronomic use of the land;
- in two other meetings, together with forest officers, the punctual location of the land plots was decided and a subsidy was asked to competent cantonal offices;
- the subsidy was lower than expected (1.000 Euro per ha), but most farmers were willing to renew their commitment, if landowners would let them sell the wood. Contacts are actually on-going.

As regards to Evolene, there the aim of the action group was to find new solutions for cattle breeding in the intermediate pasture, a site with a high interest for its typical landscape. Discussions started around the proposal of some farmers to organise a collective management by

gathering their cattle and their plots. On one hand, this solution would reduce the high workload linked to the individual management of cows on intermediate pastures, on the other hand, it would require the building of a collective structure for cattle and milking. Since the cantonal office for agriculture refused to fund a new building given its high cost, alternative solutions have been searched.

Financial support has been offered by the cantonal office for a mobile milking machine but no consensus has been so far reached among the farmers. In some cases farmer's family members refuse to put their Hérens cows in a collective herd before the alpine pasture season because it would reduce the interest of cow fighting, a traditional occasion of social interaction and identification for the community. Another problem is represented by the necessity to keep the cattle outside as required by the use of the mobile milking machine. The agreement of the family members is of crucial importance to the farmers since they are largely dependent of family voluntary workforce for different tasks such as haymaking or cattle breeding.

Given these difficulties with farmer's families, the action group is now working only on the first step of the innovation process that is to gather together the cattle for grazing during the year 2005 while keeping individual milking inside the old buildings.

### **3 THE ROLE OF MULTI-ACTORS LOCAL GROUPS**

The comparative analysis of land maintenance actions confirms that the success of a project aimed at sustainable rural practices requires an investment of resources on both levels: the level of individual farm through public support and the local level through the constitution of multi-actors local groups.

The experience of landscape management done in the three areas here concerned shows that the individual farmer economic support is not sufficient to implement practices of sustainable development. First of all, the adoption of sustainable development actions requires the cooperation among multiple actors of the local society who can be either homogeneous or different in relation to their social role. As a general rule we noticed that the social diversity of the stakeholders concerned by an action increases the difficulty to negotiate and to implement that action.

Indeed in all the three areas we faced this situation in relation to actions for landscape maintenance. The low percentage of land-owner farmers common to the areas here investigated means that actions aimed at the recovery of abandoned grasslands are difficult to be implemented because of the multiple and heterogeneous social actors involved namely farmers, land owners and local administrations. As a consequence the mediation offered by the local group as a structure facilitating the communication between different social categories and actors involved in land management has been crucial to reduce the risk of failure of the action.

Moreover, sometimes the obstacle is not represented by the lack of economic incentives or the involvement of different social actors but rather the introduction of a collective action seen as producing social and individual risks (Swiss case). Here the role of the local group is crucial to favour the re-elaboration of individual perceptions linked to the new action by providing knowledge support and redefining the individual risk as a collective gain.

Furthermore, once an innovation has been adopted by some on the basis of economic incentives, the local group plays a crucial role in bringing it to the attention of other possible adopters. In turn the multiplication of the adopters can increase the impact of the initiative and favours its consolidation over time.

Finally, linked to the above issues a fundamental function of the local group is to allow a management of the innovation process as a learning process. Thanks to the collective setting of the local group the process of individual innovation can become a collective process where local stakeholders become actors responsible for the local development. All stages of the participative process, from

- (i) the phase of shared diagnosis of the agricultural situation to
- (ii) the phase of envisaging practical and feasible solutions to
- (iii) the phase of choice-making to
- (iv) the phase of engaging directly in the adoption of the actions,

can be managed as different learning times enhancing the capacity of all stakeholders as individuals and as a group through exchanges of ideas and knowledge during the elaboration and implementation of action plans.

#### **4 CONFLICT AND CONSENSUS**

The local group is also as a device to manage interaction between interest coalitions and to maintain the conflict within an area of possible re-composition. In our research we adopted a methodology of observation of multi-actor groups dynamics based on concepts derived from the sociology of translation and actor network theory (Callon 1986, Latour1999)<sup>4</sup> like: consensus, controversy, agreement, conflict. Using these concepts we can describe the different paths that the implementation of landscape maintenance actions has followed in the three areas and see how the participative tool of the action group eventually helped the process of interests re-composition and the final adoption of the action:

In Moyenne Tarantise the implementation path has gone from controversy as regards to objectives, to consensus on the means to action implementation. Here an initial controversy opposed the members of the local group in relation to the issue of the economic support to municipalities in order to stipulate contracts with farmers. In this situation a competition on financial help emerged between rich municipalities and poor municipalities interested in the action but unable to contribute financially. Finally the group reached a consensus on the basis of the common recognition of the general interest lying in the demonstration of feasibility of farmers-municipalities contracts. In this situation the controversy was eventually overcome by a consensus on means since the stakeholders did not expect major negative impact for them as individuals while they could see possible collective gains.

In Val di Sole an initial situation of consensus on objectives and means has led to the implementation of this action in a quite linear and smooth way. However, also in this case different views sometimes emerged among mayors and farmers during the meetings organised for action implementation<sup>5</sup>.

In Val d'Hérens the action implementation path has moved from consensus as regards to the objectives to controversy as regards to means to agreement on action implementation with some modifications. A general consensus between farmers, inhabitants and municipalities on the importance of recovering abandoned land could be noticed in each of the areas of Val d'Hérens involved in the action. However the implementation phase generated a new

conflictual situation between municipalities, some benefiting from subsidies, other having little success in finding financial support for the action. Eventually the action was implemented but with modifications in comparison with the initial discussion.

From our comparative study emerges that both consensus and controversy can lead to agreement or conflict and consequently have a positive or a negative impact on the implementation of the action. On one hand consensus on objectives does not imply consensus on means. The stage of translation of the general objectives into an operative definition of the specific means to obtain them is a crucial stage where consensus can turn into controversy then conflict and block actions. Indeed often a consensus on general objectives can hide a latent conflict on the means.

On the other hand, controversy can sometimes create the conditions for the emergence of new solutions. Controversy can stimulate a re-organisation of the balance of interests involved in an action resulting in the exclusion of some of the stakeholders. This can eventually lead to the success of the action even if in a different form from its initial formulation.

## **5 DISCUSSION**

The research here presented highlights that land management in Alpine mountain is a more complicated problem than financial support between the public administration and the individual farmers. The financial support, by the mean of the direct payment system, is a pillar of the farm income in alpine area and then a prerequisite for the landscape maintenance. But this support does not imply automatically a satisfactory landscape management from a global point of view. On one hand, individual practices and strategies do not directly result in collective management at a larger scale. Each farmer will choose according to his own situation, not considering the results of his choice on the local scale. Moreover, often the farmer's objective is not explicitly related to landscape even if it can have landscape effects. On the other hand, national support is no longer important enough to counterbalance the increasing costs of work necessary to keep all the cultivated plots. Therefore, land management of mountain areas is threatened by the decrease of the available farm workforce due to the reduction of the family size and by the evolution of the social behaviour of the farmers' children (greater mobility, high-graduate schooling). In the agricultural sector, especially in mountain agriculture it is also difficult to hire salaried workers, due both to the heavy workload and to the housing problems that low-waged workers face in a tourism area. To overcome these constraints, the farmers need to develop technical and organizational changes to maintain extensive practices with lower workforce availability or to improve the work conditions in order to attract skilful salaried or family workforce.

Moreover, these changes meet the social demand of the municipalities to maintain the acreage of cultivated land while the number of farms and farmers is decreasing. While direct payments can be an adequate system to support these changes at the farm level, nonetheless they fail to make sense of these changes on the local and territorial level. This requires a socio-institutional process accompanying the direct payment system and supporting the farmers, the municipalities and the interested local actors. The Imalp project demonstrates that, with only three years of local activation based on a participatory approach, some innovative and interesting results could be obtained, even if the innovation process at the local level requires a longer time than the three-year project time. The development of such participatory projects targeted at the implementation of innovative actions on the local level, combined with the direct payment system on the short-term, seems to be an answer for the maintenance of alpine farms, products and landscapes.

On one hand, the participation to these contracts and the possibility for them to have lasting results requires a change in farmers' identity and the reconfiguration of their role as "land managers". On the other hand, it also requires a more generalized re-conceptualization of agricultural and environmental problems as community problems by all the different local stakeholders. These cognitive changes call into question non-material resources such as human and social capital. As stressed by most of the relevant sociological literature, social capital is not a given asset, but the result of long-term learning processes derived from interactions producing common meanings out of individual experiences. The participative approach adopted in the IMALP project can offer a valuable contribution in that direction through the creation of new institutional settings such as the "local group", constituting a privileged interface for the negotiation among different local stakeholders.

In conclusion, the different paths of implementation have all lead in the three regions here analysed to the implementation of innovative actions of sustainable agriculture. On the local level the adoption of actions for landscape maintenance has meant the creation of new partnerships between agriculture, public institutions and local communities. On the farm level it has marked a step towards a change in farmers' definition of sustainability from a mere economic issue to a more complex concept involving also environmental aspects. These changes can be properly described as learning: here we are not much concerned with tangible changes (the contracts) but rather with changes in organisational set-up as well as in values and perceptions.

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<sup>2</sup> These factors could explain the reasons why, in a study carried out in the Netherlands to elicit a Willingness To Accept compensation for an hypothetical biodiversity conservation programme, 40% of respondent farmers were unwilling to participate “despite high monetary compensations” (Wossink and van Wenum 2003, 483).

<sup>3</sup> “Recovering abandoned grassland is not entrepreneurial” was one of the comments heard during this phase.

<sup>4</sup> ANT was recently used to analyse some organic farming study cases (Midmore *at al.* 2004). For an overview about different network theories see Murdoch 2000.

<sup>5</sup> Different points of view, hidden by an apparent consensus, among local administrators and farmers about rural landscape maintenance were also found in a French study (Guisepelli 2002).