

## **Les pasteurs et la propriété commune en évolution: un exemple d'Italie centrale**

Les pasteurs des Abruzzes dans l'Italie centrale pratiquent la transhumance depuis l'époque préromaine grâce à la complémentarité entre les pâturages de hauteur pour l'été et les pâturages des plaines en hiver. Le système de production se basait dans le temps et se base toujours sur la disponibilité de pâturages en commun où l'accès est ouvert à tous les résidents et la gestion est commune. L'État, sous ses différentes formes, a soutenu ces régimes de gestion communautaires en assurant la sécurité des parcours de transhumance et l'accès aux terrains des plaines, mais a aussi perçu des impôts de la part des bergers. L'interaction entre ces régimes communautaires et l'État, ainsi que les systèmes d'utilisation du terroir, ont évolué dans le temps, tandis que l'importance des réseaux sociaux des pasteurs diminuait. Toutefois l'accès aux terres communes est resté la raison d'être des profits actuels de l'élevage transhumant. Mais des politiques plus claires, au niveau national ainsi qu'à celui de l'Union européenne (EU), concernant les gestions communautaires et l'élevage transhumant seraient bien utiles pour encourager la complémentarité traditionnelle entre les régions européennes et pour permettre la création d'un réseau européen des gestions communautaires, qui pourrait offrir des exemples utiles dans d'autres parties du monde.

## **Pastores y propiedad comunal en evolución en Italia central**

Los pastores de las montañas de los Abruzos en Italia central practican el pastoreo trashumante desde épocas prerromanas explotando la complementariedad entre los pastos de altura en verano y los de los llanos en invierno. El sistema de producción se basa en la disponibilidad de pastos comunales abiertos a todos los residentes bajo administración común. El Estado, en sus diferentes formas, ha respaldado a estos regímenes de gestión controlando la seguridad de las rutas de trashumancia y el acceso a la tierra para el pastoreo invernal, percibiendo a cambio impuestos de los ganaderos. Las interrelaciones entre los sistemas de gestión y el Estado, así como el conjunto de la utilización de la tierra, han cambiado en el tiempo, mientras que la importancia de las redes sociales de los pastores disminuía. Sin embargo la disponibilidad y el acceso a las tierras comunales continúa siendo la razón principal de la rentabilidad de la producción ganadera trashumante. Unas políticas más claramente definidas respecto a las tierras comunales y a la ganadería trashumante, tanto a nivel nacional como europeo, serían esenciales para fortalecer la complementariedad tradicional entre algunas regiones de Europa, y para formar una red europea de gestión comunal cuyos patrones podrían ser válidos en otras regiones del mundo.

# Herders and common property in evolution: an example from central Italy

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Since pre-Roman times, herders in the Abruzzo highlands of central Italy have practised transhumant pastoralism based on the complementarity between high-altitude summer pasture and low-altitude winter pasture. This system of production depended, and still depends, on the availability of communal grazing areas where access is open to all local residents and management is joint. The State in its various forms supported these common property regimes by providing security on the transhumance routes and monitoring access to land, but it also collected taxes from the herders. The interaction of common property regimes and the State evolved over time, as did land use systems, but access to the commons remained the basis for the continuing profitability of herding, in spite of the weakening of local networks. Clearer national and European Union (EU) policies concerning communally managed systems of production and mobile herding would go a long way towards encouraging traditional complementarity among European regions, promoting a European network of common property regimes and providing useful examples of joint management for other parts of the world.

## INTRODUCTION

This article is based on research conducted for a thesis completed in 1998 (Forni, 1998). The thesis focused on common property management systems in the Abruzzo highlands of central Italy, the changes they have undergone over centuries and the basis for their continuity. In this area, herders have always made optimal use of high mountain areas, for which there is no alternative productive use, through communal herding. Since ancient times, Abruzzo pastoral economies have rested on complementarity between the commons in the highlands for summer grazing and the plains of Puglia, to the south, for winter grazing. Pastoral production has developed over centuries of communal resource management interacting with the State and its institutions, which intervened from early on to regulate and control herders' movements and production. Common property regimes (CPRs) thus

provided the basis for a transhumant pastoral production system that was also a major source of state income – through taxation – from Roman times until the nineteenth century, with only brief interruptions.

Community aspects of collective rights are rooted in the pre-Roman heritage. However, it was the Romans who introduced State control over winter pastureland and livestock drove-roads. Throughout, the major institutions of the local CPRs – those dealing with access to land and organization of transhumance – have adapted to changing situations. Thus, the persistence of the system over more than two millennia and its documented evolution over time offer a unique historical insight into its economic and legal pattern. Furthermore, an understanding of the system and the adaptation processes involved can be of value as a model for commons elsewhere.

More generally, the value of documented European experiences could also be an asset in other continents as a contribution to the evolution of production systems and the definition of suitable policies.

The study of common property in selected areas of the Abruzzo highlands has had many fascinating results, but this article will underline a few issues only, with some contextual information to place the arguments in perspective. These issues are:

- *Communal management with attention to specific production systems, such as mobile herding.* Research in the geographical area of the study showed that mobile herding through communal land management is far from an anachronism: it is a living system ensuring relatively high levels of income and making use of ecological complementarities.
- *The role of the State with reference to the commons.* Experience showed that the State was instrumental in protecting large-scale movements of livestock, by providing security during the journey and guaranteeing access to suitable winter grazing. As the conditions for mobile herding change, the State has different roles to perform through more decentralized organizations.

The following section of the article recalls some of the outstanding issues of the theoretical debate on the commons. This is followed by a section that concentrates on the role played by the State in this part of Italy; a section introducing Abruzzo and the ancient but still practised system of herding, with transhumance from communal summer pasture in the mountains to rented winter pasture in the lowlands; a section that summarizes the findings of fieldwork conducted with selected communities jointly managing the commons for herding; and, finally, a section highlighting conclusions drawn from the field research, and their relevance to discussion of the commons at large.

### THE THEORETICAL DEBATE

CPRs can be defined as management systems where resources are subject to individual use

but not to individual possession or disposal and where access is controlled. In a CPR, resources are accessible to a group of rights-holders who have the power to alienate the product of the resource but not the resource itself. A group of traditional rights-holders manages the resources so as to preserve their productive capacity for the benefit of current and future members of the group. Resources managed under CPRs differ from private goods, where access is limited to the owners, and also from public goods, where access is open to all (see the article by Oakerson in NRC, 1986).

However, Hardin's theory of the tragedy of the commons (Hardin, 1968) has won consensus in political circles that hold common property to be synonymous with open access and no property. In this connotation, the commons would lead inevitably to abuse, because each individual user looks for private gains, which leads to the destruction – the tragedy – of the commons.

However, most current theorists (e.g. Runge, 1986; Wade, 1987) doubt the inevitability of the tragedy of the commons because of the nature of village-level societies. In these, locally enforced rules and reciprocity among groups and communities also regulate individual conduct.

Hence the importance of institutions, i.e. the rules of the game in a society: the efficiency of CPRs depends on the norms that the members give themselves and on their ability to monitor them. Success or failure depends on social organization, as stressed by the “new institutionalism” (North, 1990; Ostrom, 1990).

In the 1990s, the role of institutions was increasingly recognized as the key to the functioning of society and to the formation of its social capital, where the latter develops over time through the interplay of overlapping groups and organizations that influence each other (Granovetter, 1985). Among the organizations that throughout history have interfered with the functioning of local groups and the development of their social capital, the State, in its various forms, has played a very special role.

## **THE STATE: HINDRANCE OR SUPPORT TO THE FUNCTIONING OF THE COMMONS?**

The role of the State and the nature of its interference with CPRs are viewed differently by different schools of thought: the new institutional school, for instance, stresses its negative effects in terms of hindrance to local initiative and bureaucratic harassment. However, recently there has been increasing recognition of the value of passive State support which indirectly facilitates the operation of CPRs (Stewart, 1996).

To identify where and when State and CPR complement each other it is necessary to recall the most important traditional institutional functions of CPRs, namely: organization of access to land, organization of transhumance and organization of labour. Particularly in the case of the first two, interaction with the State tends to increase, as confirmed by field research conducted in the Abruzzo highlands, as self-contained local-level CPRs managed by relatively homogeneous customary groups give way to more complex regimes where many actors and geographical areas are involved.

There are cases where the State has disrupted local initiative and cases where it has played a positive role. Examples of the latter can be found in several European countries, particularly around the Mediterranean, where the State has effectively and successfully interfered in defining access rights to agricultural and pastoral land. Historically, Spain and central-southern Italy are among the regions where State interference has had substantial effects on the functioning of transhumance and, by implication, on the continuation of common property management (Klein, 1920; Marino, 1988). Examples from other parts of the world include the Near East, where Bates (1971) stressed the importance of the State for the balance of power in ensuring mutualism and cooperation in land use between peasants and nomads, particularly in systems involving movements across large areas.

More generally, it appears that the State has an important role to play in decreasing the transaction costs associated with

information and coordination of highly complex, often international, transhumance systems.

On the other hand, in the Alpine areas, where for a long time no strong State evolved to replace the Roman Empire after its collapse, CPRs had a more local outreach. The Alpine system is a coherent use of limited resources in a closed environment, where rights-holders protect their resources from having too many users. The situation in the Swiss Alps as described by Netting (1981) is similar to that in the Italian Alps where each household has its allocation to the commons estimated on the basis of its private access to farmland.

## **ABRUZZO, ITS COMMONS AND ITS HERDERS**

The Abruzzo region, geographically located in central Italy, is historically and socially part of southern Italy. It is one of Italy's 20 administrative regions and has a population of about 1.3 million (late 1990s). It is a predominantly mountainous territory. About one-quarter (25 percent) of its agricultural and forest areas are classified as pasture, and slightly more (28 percent) as forest (ISTAT, 1991; 1994). The Abruzzo region is mainly sheep country, with a few cattle and horses.

In the Abruzzo highlands there are three main types of commons: forest areas, croplands and, most important, grazing land. Each of the three common property regimes differs in terms of modalities of management and State intervention, which is indirect in the case of grazing and cropping and more direct in the case of forests. However, although such separation exists in principle, it becomes rather artificial within each community and from the point of view of the local population. Traditionally, there was only one constituency of mountain households who needed access to forest land for wood, cropland for subsistence production and grazing land for livestock. CPRs are open to individual use but are inalienable. Access, whether for forest use, grazing or cropping, is linked to local residence only. Access to grazing does not require any evidence of access to cropland for

winter feed, as is the case in the Alpine system, thus facilitating the survival strategies of the poor.

The total sheep and goat count for the region, at about 400 000 head (mid-1990s), has not changed substantially for 50 years; the size of individual flocks and herds has increased while the number of herders has decreased. However, while the majority of sheep used to be engaged in long-distance transhumance, by 1995 only 75 000 were (ERSA, 1996). Today, a large proportion of the regional flock is either engaged in short-distance transhumance or belongs to small farmers and grazes on private land.

The practice of using the commons for summer grazing, coupled with transhumance in search of winter grazing, is rooted in history. An Appenninic civilization with pastoral characteristics has been identified from the end of the second millennium BC in the centre and south of Italy (Puglisi, 1957). Later, Samnites and related Sabellic tribes occupied this territory and may be considered to have laid the foundations of the tribal organization which relied on CPRs for resource management and that predominated in the area for many centuries to follow (cf. Salmon, 1967; Giammarco, 1979; Tagliamonte, 1996). Archaeological evidence suggests a transhumant mode of production (Guidobaldo in Guzzo *et al.*, 1995) while use of drovers' trails for the circulation of livestock, people and merchandise is documented since the second century BC. The livestock droves converge towards the Pugliesi plains, known as the Tavoliere, which are the major winter pasture of the Italian peninsula.

As a consequence of the Romans' defeat of the Samnites, much of the lowlands winter pastureland was taken over by the State and distributed for cultivation by Roman settlers. A law regulated access to the livestock drove-roads, which eventually were turned into the main Roman roads (Archeoclub d'Italia, 1990). The fiscal importance of flocks, particularly in view of their wool production, was recognized and a system of tax collection at prescribed points along the transhumance routes was established (Paone, 1987). Fees

were due only on herds containing more than a certain number of animals, with free passage for the owners of few head (Di Cicco in Archeoclub d'Italia, 1990). This is possibly one of the earliest recorded cases of an attempt by government to control, regulate and extract income from herders, with exemption for the poor.

The breakdown of State power at the end of the Roman Empire corresponded to a decline of transhumant pastoralism, which continued until mediaeval times. Only much later, in the fifteenth century, were pastoral production and pastoralists given, once again, substantial and long-lasting support through State intervention, by the Spaniards, and the Aragonese in particular. Pastoral land use was codified by decree and pastoral royal domains in the Pugliesi flatlands were put at the disposal of herders. Thus, the State resumed the functions of control and intervention in pastoral organization that had existed in Roman times.

Control was exercised through a general administration organization called the *dogana* (see Marino, 1988). From the late fifteenth until the nineteenth centuries, transhumant herders were allowed to use public pastureland along the livestock drove-roads, called *tratturi*. The *dogana* intervened in both herd organization and transhumance calendars, as well as in pasture allocation on arrival at winter grazing areas. A fee was paid for the latter. Transhumance was made compulsory for all flocks with 20 or more merino-hybrid sheep. Merino wool marketing was concentrated in Puglia near the winter grazing areas where shearing took place. The wool was graded, stored and then marketed nationally and internationally.

The government did not, however, intervene in the land tenure and management organization of the mountain commons managed by local CPRs. It only assisted rights-holders of the commons in obtaining access to pastureland outside the CPRs in order to improve their economic performance, and thereby government income as well, through taxation and better quality products. The *dogana*, thus, preferred to rely on pastoralists' own institutions where

these were sufficient to monitor land management.

After Italian unification in 1861, State support to pastoral transhumance in the central-south of the country came to an end and the privatization of State land, previously assigned to pastoral use in the Pugliesi plains, started. Already at the beginning of the nineteenth century the difficulties in finding winter pasture led to a relative increase of short-distance vertical transhumance and stationary livestock raising. The mountain commons, for climatic reasons used only in summer, maintained their importance, however.

The Second World War interrupted long-distance transhumance altogether and many herders never returned to it. After the war, recovery plans were basically industry-oriented and heavy population losses were experienced in the pastoral areas. Furthermore, pastureland in the Pugliesi Tavoliere was rented with difficulty, particularly after the agrarian reform of the 1950s and the consequent intensification. Pugliesi landowners often refrained from leasing to take advantage of heavily subsidized wheat cultivation, even though productivity was low (Sprenkel, 1971).

The propensity to continue long-distance transhumance was also affected by the increasing difficulty in organizing livestock movements – *tratturi* were encroached and transhumance on foot was hardly practicable so was replaced by train and, later, lorry transport.

As the State defaulted, whole sections of the pastoral economy adapted to the new situation by reverting to a more locally based system of production. In the meantime, the basis for the profitability of herding had also been changing: from wool in ancient times until the mid-nineteenth century, when Australian wool came forcefully on to the market, to meat and cheese.

With the disappearance of State intervention, the organization of transhumance became a private matter. In this situation only the larger herders resisted, while for many smaller Abruzzo herders vertical short-distance transhumance

became the only alternative, allowing the continuing use of the commons.

## MAIN FINDINGS OF THE FIELD RESEARCH

### Land use and land tenure in the study area

The interaction of CPRs and the State in the 1990s, in terms of access to land and organization of the transhumance system, was analysed in the field in a selected area of the Abruzzo highlands. The study concentrated on two *Comunità Montane* (CM – groups of municipalities established as public organizations in the 1970s to address the special problems of high-elevation areas) in the Gran Sasso massif bordering the Campo Imperatore plateau: CM Campo Imperatore and CM Vestina. The two areas were selected because they are geographically close but strongly contrasting.

CM Campo Imperatore contains a series of high mountain municipalities with low agricultural potential, where summer grazing in CPRs was traditionally coupled with long-distance transhumance to the Pugliesi Tavoliere. Its population was engaged in extensive and long-term movements and depended on the outside for markets, information and protection. For centuries, transhumant herding over long distances was the major activity, and today even people who are not herders stress their herding origins. This is now being replaced increasingly by shorter-distance vertical transhumance. Winter feed still remains a problem, but the social and personal costs of long-distance transhumance with no institutional support tend to encourage relatively sedentary practices.

CM Vestina contains a series of municipalities with higher agricultural potential and some winter grazing areas and fodder production possibilities for stable feeding in winter. Herders have no family tradition of long-distance transhumance. Herding concerns a limited and well-defined group of households living in the higher-altitude belt.

The commons in Campo Imperatore are used mainly for sheep. Cattle are extremely rare, while horses are increasingly present because of their ability to withstand cold

weather when other animals are forced to leave. In Vestina, both cattle and sheep profit from the commons. There are few goats in either CM.

There is also a contrast in terms of land use: in Campo Imperatore almost half the area is under pasture and meadows, while in Vestina only 11 percent is. In Vestina, on the other hand, over half the area falls into the cropland category, which accounts for less than 22 percent of the total in Campo Imperatore. In both cases forests cover about 20 percent of the area.

In Campo Imperatore, well in excess of 70 percent of the total territory is managed under CPRs, including most of the pastures and forests and some of the cropland. In Vestina, on the other hand, most cropland and some pasture and forest are under private regimes. The proportion of land managed under CPRs in Vestina is estimated to be no more than 20 to 25 percent of the total territory.

A variety of different systems of tenure are possible, covering the whole range from completely private to communal. The lower the risk from the climatic point of view, and consequently the higher the value for crop production of a given piece of land, the closer the tenure system gets to full private possession.

In general, in the study area the proportion of area managed under CPRs increases with altitude. At higher altitudes agriculture becomes more marginal and farms smaller. At altitudes of 500 m above sea level and higher, operators become agropastoralists and use of the mountain commons is an essential part of the production system. Agropastoralists are close to self-sufficiency in food, but exchange cheese for olive oil and wine from lower-altitude farmers. Cattle herds raised in pastoral conditions belong to a specific altitude area, of between 400 and 600 m above sea level, where extensive fodder production for winter feed is still possible. At higher altitudes, the raising of sheep and goats dominates.

In the more mountainous areas of Abruzzo, and this applies to the higher-altitude zones of both the CMs analysed in the field

research, pastoral sheep production has always prevailed, for ecological reasons, and the high-altitude grazing areas managed as commons are the wealth of the community. From June to October, all flocks are on the high-altitude commons, after which long-distance transhumance herders travel by lorry with their flocks to Puglia, some 250 km away, and those who remain, whose transhumance covers only short distances of about 10 km, resort to marginal grazing and supplemental fodder feeding near their permanent homes.

CPR institutions intervene in the following functions:

- For *summer grazing* institutions ensure that rights-holders have access to communal grazing. This includes modalities of access, its monitoring and decisions regarding exclusion. Summer grazing is conducted in traditional pastoral commons. Substantial areas of marginal cropland, whether classified originally as communal or private, are also, de facto, included in the total land pool. On the other hand, many areas that were traditionally considered as grazing commons are nowadays officially classified as forest by forest organizations and other State authorities, thus bypassing herders' customary institutions.
- For *winter grazing* the performance of CPR institutions can be summarized as follows:
  - For access to winter grazing in the lowlands, CPR institutions have ceased to perform any duty in the identification of grazing land for their rights-holders and in bargaining with landowners.
  - For access to winter grazing in the highlands, although winter commons are very limited, the same functions apply as for summer commons, and CPRs control access.
  - For access to farmland for fodder production, CPRs intervene in ensuring access to communal cropland.

### **Herders and their production systems**

In Campo Imperatore there are long-distance transhumants and so-called *stanziali*,

sedentary pastoralists engaged in shorter-distance transhumance; both have their permanent homes in the village. Herding is the predominant activity and flocks are large. For example, in the main herding community the average size of the flocks transhuming to Puglia is consistently more than 500 sheep, and even the *stanziali*'s flocks are increasing in size, usually containing an average of more than 300 sheep in the mid-1990s. Small stock owners have practically disappeared from both groups. *Stanziali* are upwardly mobile, they are no longer the small herders of the community and their average flock size is constantly increasing.

In the past, in Campo Imperatore only poor herders considered the alternative of remaining in the highlands throughout the winter by supporting a small flock with limited amounts of hay. Nowadays, however, much of the lower-altitude marginal cropland is no longer cultivated and is available for grazing, so that *stanziali* can lengthen the duration of grazing and engage in fodder cultivation, thus making long-distance transhumance less essential. This change in land availability for grazing in the highlands, coupled with increasing difficulties in locating winter grazing areas in Puglia at acceptable prices, also induces larger market-oriented herders to consider the alternative of staying in the highlands, and therefore the proportion of *stanziali* is increasing: from 43 percent of herders but only 13 percent of sheep in 1980, to 58 percent of herders and 45 percent of sheep in 1995.

In Vestina, there are only agropastoralists, herders who are based on farms, which are isolated, with related nuclear households living in adjacent quarters. Herders are almost self-sufficient in terms of food and fodder. The more substantial users of the commons normally have between 100 and 300 sheep. The average flock size is, however, much smaller because of the presence of many tiny flocks, which continue to be kept because of labour sharing and reciprocity mechanisms. The individual cattle herd is in the order of ten. Use of the commons is restricted to those agropastoralists living in

the higher-altitude areas with only limited marginal, cultivable land.

In the lower-altitude hill areas a 5 ha mixed farm with diversified terrain offers enough variety of grazing and stubble, in addition to some winter fodder, for a subsistence flock of ten sheep. Such farmers do not make use of the commons, graze their livestock on their own land and take advantage of crop by-products.

As far as gender is concerned, women in Campo Imperatore tend to concern themselves mainly with cheese marketing, while in Vestina both men and women are heavily engaged in farming and herding, although women are rarely seen in the communal grazing areas performing supervision tasks. Among agropastoralists, stables and cheese processing facilities are located near the homestead. Women engage in the care of lambs and lactating ewes as well as in the processing of cheese (performed by men only in Campo Imperatore a few kilometres away).

### **Cooperation and labour sharing**

In the past, labour was an important function of CPRs; communities had to coordinate the use of all human resources while in the mountain commons and define the role of each herder during transhumance to the lowlands. But this is no longer the case. The point at which individual strategies appear more attractive than group strategies is changing, as many enterprises are large enough to internalize costs.

Only in the case of agropastoralists is labour provided by the household and shortages coped with through joint herding. The demand for labour concerns relatively small village flocks which are communally herded and lend themselves to labour sharing. Members of CPRs find it useful to pool their labour in the communal regime so as not to be obliged to devote one person full time to a small flock. They therefore optimize the use of labour through joint supervision.

In Campo Imperatore, labour demand is linked to the supervision of large flocks, grazing separately from one another. Such activities are characterized by continuity and

are easily assigned to one or more individuals, with units of 200 to 300 sheep in the care of one hired shepherd.

However, if cooperation in herd supervision is restricted to small flocks, cooperation in terms of modalities and the monitoring of access to the commons continues to be important for all herders, and a strong element of social reciprocity permeates all aspects of life.

### Summary of field research findings

The research conducted in the herders' commons showed the continuing profitability of pastoral production. Pastoralism is profitable and market-oriented: the largest transhumants are the most market-oriented. Market-orientation is thus directly related to mobility and sedentarism is not caused by decreasing financial profitability. Rather it is a response to risk connected to movement without secure access to land. Most of the poorer herders of the past have migrated out, causing a shortage of labour that has only partly been filled by the hiring of foreign workers – mainly from former Yugoslavia. However, where necessary, CPRs can still function as safety nets for the poor. Redistribution mechanisms, such as the allocation of communal cropland to those with no other source of income or access to grazing areas, are meant to ensure that nobody falls into absolute poverty.

The current obstacles to the expansion of herding in the study area are, therefore, the changes that are taking place in the conditions of access to private land for grazing, rather than the communal system of management. The spontaneous emergence of new customary groups and the return of herders to the commons after years of absence testify the local appreciation of the CPR as a system of management.

However, the findings also point to CPRs' decreasing ability to represent herders' objectives beyond their community and, more particularly, *vis-à-vis* new policies designed at the level of the EU. As for the State, its role appears to be related to scale; it becomes more important when local systems have been scaled up to become more complex. The

rest of this section of the article gives a synthesis of the major issues.

### **Sedentarization as a response to the risk of insecure access to lowlands.**

Pastoral production based on the use of communal grazing areas that, for climatic reasons, are accessible only in summer relies on secure access to winter grazing. Changing conditions, particularly those concerning contract insecurity, lack of information and the disappearance of powerful kinship networks, have had a negative effect on the herders in the study area, especially in the case of long-distance transhumants. In the case of short-distance transhumants, these factors are not irrelevant, but they are easier to monitor through local CPR institutions.

Regarding access to land, the problem is not only the availability of land for winter grazing, *per se*, but also the opportunity cost, both economic and social, for herders to gain access. This includes the costs of land rents, labour and transhumance, and also substantial transaction costs in terms of information and organization. These costs are higher in the case of long-distance transhumance, where the transfer is more complex. However, long-distance transhumance also provides the greatest financial returns because of ecological complementarity.

Herders' access to the large winter grazing areas in Puglia was first altered by the breakdown of State-CPR interaction as vested in the Neapolitan *dogana*, which came to an end when the Neapolitan State ceased to exist, in the late nineteenth century. Organization of transhumance by the herders' community itself slowly gave way, in the course of the twentieth century, to an individualized system. The absence of information networks, which helped during the bargaining of favourable agreements with landowners and the organization of migration and product marketing, was reported as a powerful motivation for adopting shorter-range vertical transhumance. Furthermore, an individual's isolation from other group members can be perceived as risk (cf. Runge, 1981) while, as the group of herders

practising a certain type of transhumance becomes smaller, return home to the highlands becomes more desirable.

This was facilitated by the changes in land use throughout the Abruzzo highlands brought about by the lowering of the maximum altitude at which cropping is performed and the subsequent freeing of marginal, high-altitude cropland for grazing. Thus, availability of winter grazing in the highland areas, even though it is of lower quality, has reduced the comparative advantage of long-distance transhumance in the study area.

State-CPR interaction obtained historically when the central State coordinated its actions with CPRs in order to control and regulate large-scale movements of livestock and people. The withdrawal of the State made transaction costs intolerable for uncoordinated CPR rights-holders. Most herders in the study area proved unable to control complex migration processes through their CPRs' institutional mechanisms, while concentration of wealth took place, as only the rich could face risk. Therefore, as the State withdrew from active intervention in pastoral production, herders modified their livelihood systems emphasizing types of organization where the State is less essential, such as vertical short-distance transhumance, in spite of higher climatic risk, and forgoing long-established ecological complementarities. Although the optimal combination of resources could not be adopted, what was adopted was the best solution in the absence of State protection.

***Decreasing role of CPRs and herders' representation.*** Pastoralists' inability to control the institutional process beyond the local level is both an outcome and a cause of their limited impact on the policy debate. In spite of the decentralization of many State functions, mainly in favour of regional governments, policies affecting pastoralists are often elaborated with limited information from the field. As a consequence, general policy guidelines are not always compatible with the local organization of production. This applies, for instance, to proposals to link

EU subsidies to the availability of individual forage production and, more generally, to the adoption of carrying-capacity measures based on herders' access to private land. Such measures would be suitable in Alpine areas, where the commons are accessible only on proof of fodder production potential, but not in the south, and threatens the very essence of southern commons, which are open to all resident herders.

The weakness of herders' impact on policy-making is partly explained by the ambiguities of their current representation and the unclear definition of CPRs within the legal system. Rights-holders in the southern Italian tradition are represented by municipalities which act as their organizing structures in all dealings with external groups. However, municipalities also have other duties and represent groups other than herders. In addition, there are cases of municipalities that include several subconstituencies such as cattle and sheep herders who come from different hamlets and have conflicting interests. Bargaining among these groups within the local communities may lead to conflicts that not all municipalities are equipped to resolve.

Bargaining among communities may entail further conflicts. In the study area, one CM has developed into an efficient mediator for helping municipal groups of herders to gain access to summer grazing on a plateau where the areas of several municipal commons meet. This shows the potential roles of such organizations and of municipalities federated into CMs. In general, however, although municipalities can be efficient in conflict resolution, there is a strong need for closer consultation with the grassroots level, in this case the herding communities, if more appropriate policies are to be elaborated: appropriate mechanisms have to be identified for consultation and participation from the municipal level through the CMs to the regional, national and, ultimately, EU levels.

## CONCLUSIONS

The results of the field research conducted in the Abruzzo highlands on the basis of both historical material and current investigations

support some generalization to other geographical conditions in both developed and developing countries. There are two main areas worth highlighting. The first concerns the State and CPRs: the types, levels and conditions that make their interaction profitable. The second concerns the importance of information and networking and the essential role of local-level consultation and participation in decision-making.

### **Interaction between the State and CPRs**

It can be inferred from historical evidence that, as a system increases in complexity from self-contained CPRs to outward-looking ones with movable assets such as flocks grazing extensively across large territories with undefined borders, transaction costs increase. Costs are lower when access to pasture is under community control than it is when the community has to negotiate its members' access to areas managed by other communities or under private control. In these cases, the State, through its various organizations, can be of assistance in lowering transaction costs. However, in those activities where it appears that CPR rights-holders can achieve effective collective action on their own, such as in the marketing of livestock products, State intervention may remain marginal and be limited to the setting and monitoring of laws.

Areas of intervention by the State can include: provision of information and an enabling environment, coordination between communities and their CPRs, intervention on land use, and conflict resolution mechanisms. Specific types of interaction are: land use monitoring and codification such as to define the limits of the commons against threats of privatization; coordination and bargaining between CPRs and other regimes such as by setting up clear and secure mechanisms to negotiate land access; and conflict resolution mechanisms and mediation between lowlands and highlands, herders and farmers.

State action can take place at different levels. For instance, reforestation policies can be carried out by the State forest

organization, natural resource protection can be delegated to national parks, agriculture and livestock production and marketing to regional governments. At each level of government, the organizational structure needs to be identified to allow herder CPRs to interact with them and influence policies.

The conditions of interaction are also affected by administrative costs: when the State has to perform a variety of duties for small decentralized constituencies it can only be cost-effective if there is an organization or network connecting several CPRs in order that they function as a partner to State action.

Finally, at the intercountry level, in the specific case of Europe, the EU has a potential role as coordinator among those European regions that have an interest in an ecologically compatible and complementary use of their territories. The monitoring of seasonal livestock migration in consultation with herders could be a practical example of this.

### **The importance of information and networking**

Effective grassroots participation in decision-making is a prerequisite for any effective networking. In the modern world, CPRs cannot function as independent islands in an ocean, they need to achieve an improved capacity to participate in decision-making, both locally and beyond the local scene.

The more complex the political and economic situation, the more necessary it becomes to have a web of information and mutual support stretching over the territory, and this is usually beyond the capacity of a single CPR. A network of CPRs in Europe could be a starting point for the sharing of information on Europe's herding systems and CPRs, experimenting on innovative cooperation structures and offering examples for consideration and possible application in other world regions.

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