Abstract

The paper analyses the implementation of contracts between stockbreeders and the Ministry of Agriculture in order to lead livestock farming towards the protection of forest against fire in the Mediterranean area.

The contracts are on individual basis and relate to precise land parcels of the farms.

At the farm's level contract deals with individual land mobilisation. Most of the time it develops property rights rather than ownership.

Through this process the farmer also leaves the individual dimension of his farm for a social service.

The link between private and common property leads to the study of countryside management. Contracts promote individual purchase of means of production. This is a way to have sustainable farms. The tool also can be alternatively used in the maintenance of rural areas. The contracts thus entitle the society to control the farmer's way of production. His decision of using the productive factors is then no more personal, but has also to deal with collective concerns.

Countryside management moves from an individual process (private concern of keeping the productive factors) to a collective one (maintaining the integrity of common resources). The public asset (the protection of countryside's qualities as a final service) is added to the private good (the plot as a mean of production).
The immediate effects of depopulation were scrub encroachment and an increase in the biomass of combustible fuel, that was no longer being harvested. Depopulation also led to a change in vegetation dynamics leading in the long term to uniformity of the natural environment. In the last few decades these effects have been reflected by a decrease in the number of small fires and also the increased occurrence of fires covering large areas.

[Rovira, 1993] explained how this phenomenon has assumed a major social importance. [Turlan et al., 1992] stated that "although this is not a recent problem, the attention which it is given by constant media coverage and the fact that blame is put upon the central and local government, make it a question of general interest"; fires are seen as a curse.

1.2.- Fire prevention

There are three main aspects of fire prevention:
- reducing the causes of fires, involving informing the public and making it aware of fire hazards;
- promoting surveillance and rapid intervention on fires as soon as they start (patrols, watchtowers);
- developing appropriate structures, equipment and land management to aid in firefighting and reduce the flammability and combustibility of vegetation stands, particularly by installing fire hydrants, water cisterns and access roads to areas susceptible to fire.

On the basis of previous experience, the work of [Cochelin, 1992] has shown the value for more effective firefighting of creating strategic fire breaks. These help divide forested areas into compartments, are designed to prevent the spread of fire, and to provide access for firefighters, while at the same time supporting permanent agricultural activities: it is a question of restoring some form of land use on this land in order to reduce its susceptibility to fire.

1.3.- Management contracts

Countryside can be thought of as a resource in the sense of [Montgolfier, 1987], if like him we consider that "a natural environment becomes a resource as soon as man extracts from it objects or uses which in human eyes have a value." The quality of this resource is endangered by any problem qualified as an environmental problem (forest fires), whose origin is related to "human abandonment" of the environment.

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1 Form of use that help controlling the plant succession.
One of the solutions chosen to limit the importance of this phenomenon and install strategic firebreaks is the signing of management contracts between livestock farmers and government authorities, either at a local level or according to procedures drawn up at the level of the EEC.

1.3.1.- A local initiative

At first, contracts in the study area were the fruit of a local initiative. Following a fire in 1985 in a Pilot Zone for the Defence of Forests Against Fires (DFCI), a technical working party was set up to consider what new land management structures should be created in this zone.

One of the ideas that was adopted was that livestock farmers should be given the responsibility for managing sensitive areas; it was therefore essential to maintain the production potential, since the quality of the preventive measures depends in part on their survival [Hubert et al., 1986].

A zonation of the region was carried out. Depending on their geographical location, farmers were invited to sign grazing agreements under certain conditions [Guérin et al., 1991], in exchange for subsidies allowing them to manage their herds in the desired manner, and eventually improve the production conditions on their farms. Farmers thus received capital sums for creating enclosed fields, for renovating some fields, for initial scrub clearance, for purchasing stock and for building or improving livestock housing.

The experience gained in the fire-damaged zone was extended to the rest of the forested area in the département. Outside of the fire-damaged zone, livestock farmers could also benefit from subsidised sylvo-pastoral improvements (at a reduced scale of payments), even if they didn't sign a management agreement.

1.3.2.- A Community instrument

In 1985, the European Community gave member States powers to sign agreements with farmers in specified areas to encourage agricultural practices which were favourable for the environment; such agreements are commonly known as "section 19 agreements". The principle of these contracts was based

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2 Or more exactly the local reappropriation of a request from a government institution [AME, 1994].

3 Refer to [Thannberger, 1994] for a more complete description of how this procedure was set in place.

4 The name of the section in the community directive 797/85 in which this procedure was proposed for the first time.
on experience gained in managing the natural environment over many years in the United Kingdom (on Sites of Special Scientific Interest and then on Environmentally Sensitive Areas).

Farmers undertake for a period of at least five years to use certain practices stipulated in the specifications, on specified plots of land, in exchange for a payment whose amount is fixed locally in relation to the contract requirements. This payment is intended as a compensation for loss of income or excess costs incurred by following the recommendations.

In France, each Département liable to implement this procedure has set up a steering committee, whose role is to define the area in which the measure is to be applied and to monitor the conduct of the operation. A technical working party is also created, with the responsibility of examining applications and deciding which ones to accept, of drawing up individual management prescriptions for eligible plots and for making annual checks on compliance with these prescriptions.

This measure has particularly been used with the aim of defending forests against fires. It was thus applied in the forested study area, inspired by contracts that had already been signed in the fire-damaged zone. The technical working party was in this case composed of two types of partners, called upon for their knowledge of the environment, each representing one of the two constraints related to the instrument: foresters and grazing management specialists.

*In summary the farmers questioned received the following benefits:*
- in the fire-damaged zone, two signed a DFCI contract as part of a local restoration project, involving the payment of subsidies for capital investments;
- outside the fire-damaged area, four farmers signed contracts within the framework of section 19 (management subsidies),
  - two benefited from sylvo-pastoral improvements, not involving contractual formalization of practices,
  - two received subsidies within the framework of a contract (of the same type at those in the local restoration project in the fire-damaged zone).

These procedures, drawn up with the intention of protecting areas threatened by forest fires, aim at maintaining viable agricultural enterprises on this land. The problem is therefore one of maintaining a local community in order to conserve a resource.

We will examine what the effects of this solution are on the ownership of the resource.
2.- Management contracts and property right of the countryside\(^5\): a strengthening of the individual dimension (from the common to the individual dimension)

2.1.- Changes in the legal status of the land

DFCI contracts are signed at the individual level with farmers using the land covered by the contracts. None of the farmers in the study area were owners of the land in question, but were either tenants, had annual verbal agreements, or exercised *de facto* use without any explicit agreement from the landowner.

The land was mainly privately or state owned, with a small proportion belonging to local authorities.

Control over land ownership is an explicit (section 19) or implicit (local restoration project) condition for contracts. If it cannot be fulfilled, this requirement makes land ownership a factor restricting the extent of the areas concerned by the contract. General procedures (Grazing Land Associations (AFP)\(^6\)) or more specific processes (Land Management Regrouping Operations (OGAF)\(^7\)) [Thannberger, 1993] have been brought into play with the agreement of landowners, but have met with very modest success. Land ownership problems are more easily solved on a case-by-case basis than by the setting up of these types of procedure.

But when the problem of land ownership is settled it can be factor stabilising the farm holding. It can even be factor for creating new production units, since two of the six farmers encountered were involved in the sylvo-pastoral improvement schemes from their outset; the aid was therefore inherent in the establishment of these two units. Such actions are therefore truly part of the approach of promoting the viability of a local agricultural community.

\(^5\) This ongoing study is based on observation of six farms and is therefore unable at the moment to quantify the phenomena observed.

\(^6\) The aim of AFPs, instituted by the law of 3 January 1972, is to make landowners who are members of the association allow graziers with *de facto* access to continue their grazing activities, in payment of a rent. This is a very restrictive system for landowners, since if they withdraw the land from the AFP, they are forbidden from renting it to another person. There is thus very little incentive to join this form of association.

\(^7\) The aim of OGAFs, created in 1970, is to favour the creation of AFPs, to make it easier to exchange landholdings (to carry out small-scale consolidations), and to encourage the signing of long-term grazing agreements. Finance is available to compensate landowners accepting constraints.
To the extent that these contracts did just require control over the use of the land, the result was that there was little change in the legal ownership of the land by the farmers; for example there was only a single case of land being purchased (in a situation where this procedure was the most effective means of controlling land use). Several of the farmers took advantage of signing the contracts by changing an annual oral agreement into a long-term written grazing agreement, thus changing the means by which the land was granted by landowners and restricting the landowners' degree of freedom in exercising their rights.

The situation is therefore not one of the standard optimal allocation of property rights, but of a positive approach to understanding the mechanisms of appropriating land rights.

2.2.- Changes in farming practices: major alterations in the appropriation of use

The changes in the exercise of property rights on the land in question, brought about by the contracts, favoured the appropriation of land use by the farmers.

In practice these changes legitimised grazing on this land, which is subject to multiple uses\(^8\) (hunting, public access, mushroom gathering, etc.). This legitimization was reflected by land enclosure (a condition for signing contracts in the fire-affected zone, and recommended in contracts falling within the section 19 provisions).

Enclosure, by its symbolic as much as its physical presence, confirms the rights of graziers to this land, prevents free-access and can be a source of conflicts with other users (particularly hunters who are hindered in hunts involving beaters and feel dispossessed of this land which they have taken over since the decline in agricultural activity). Studies have however shown that enclosure can be favourable for hunting (particularly for "small game": rabbits and birds).

On the whole, conflicts were resolved on an individual basis, after negotiations with hunters. Negotiations were easier when the farmers were themselves hunters (two cases). These ended in reciprocal agreements by the two parties on how to operate: the hunters would give notice of hunts and their location and the farmers would keep their animals indoors on those days, or would keep them away from the hunt area and would switch off the electric fences.

\(^8\) Uses which have been maintained despite rural depopulation without a sufficient human pressure on the land to prevent fires (hunting), or which developed as a result of the fire prevention measures (tracks improving access for walkers).
It took longer for the general public to learn (keep dogs on leads near animals, close gates afterwards) but this was easier for walkers in organised parties.

Conflicts occurred more frequently between those direct users of the land in question who were not represented by either of the parties signing the contracts.

2.3. Increasing the production capacity of the farmholdings

The contracts not only changed land use rights in favour of livestock farmers, but were also either preceded by or gave rise to subsidies which increased the potential for action on the land by these farmers.

The sylvo-pastoral improvement works, from which the farmers benefited, were aimed at increasing the farmers' profitability and ensuring their survival; the overall project was only viable if the economic units involved were sustainable. These subsidies took the form of capital injections (help in purchasing production tools: purchasing livestock and operating equipment; improving or building animal housing and capital improvements: initial scrub clearance, improvements to grazing land, installing fencing), these subsidies being compensation for the livestock farmers for the undertakings to which they were subjected.

These capital investment works resulted in a lowering in shepherding man-hours and a change to a new form of grazing management. They were designed taking into account the special features of each farm and were thus a significant means of agricultural development.

This type of contract was signed on an individual basis and was not restricted to granting the means of controlling scrub encroachment to livestock farmers (such as mechanical means or herbicides). It did however favour the private acquisition of the means of agricultural production, while ensuring that this production allowed the land to be maintained. This individual appropriation of the means of land management ensured that the viability of the farms exercising this activity was no longer in question.

We have seen that the changes in legal ownership status and land use were at an individual level, since they occurred at the level of the individual farm. In this case, they were not equivalent to any of the types of common resource exploitation classified by [Sandberg, 1994], since they consisted neither of non-appropriation, neither of appropriation entirely by the State, nor of common land status.

Nevertheless, since these management contracts had to be designed to take into account the different partners involved in them, the representations that the partners had of the land in question and of the expectations with respect to the contract, it seems pertinent to take an interest in land management, which in this case took on a collective dimension.
3.- Joint countryside management (towards a new collective status)

The appropriation of land use in the Cevennes following management contracts, took the form of private, individual appropriation. Nevertheless public authorities, in order to ensure effectiveness, retained a say in the choice of land use and of the management tools.

3.1.- Management guidance

By making land and equipment available and by providing capital investment subsidies, public authorities retained a right to oversee the use that farmers made of the land and therefore of their production tools: control over agriculture was therefore by means of control over its practices.

This right of supervision was exerted particularly at the time when a check was made on compliance with the contract specifications and was often seen by farmers as an interference with their status as private entrepreneurs. This supervision sometimes dissuaded farmers from becoming involved in the procedure, but for others it was seen as a means of making the contracting parties responsible for their undertakings.

In addition to the fact that the management contracts resulted in a change in land ownership, they also had the effect of making the farmers' practices contractual.

- In the case of the restoration project on the fire-affected zone, the farmers' maintenance contracts in the areas considered as being strategic for the aims of the DFCI, had specifications which prescribed the undertakings for which the individual farmers were held responsible. These described the state that the vegetation must have at the start of the fire risk season in order to ensure effectiveness, which had to be achieved by grazing within enclosures (number of animals present at any given time during the desired period).

- In the case of section 19 agreements, the individual specifications "defined the management constraints imposed [on the farmer] in developing grazing practices within the strategic areas in terms of fire hazards in the lower Cevennes chestnut forest zone". They provided technical prescriptions for each level of aid, defining the area in question, the location of the farm, the initial state and the desired final vegetation.

The new situation changed the rules of the game for the farmer: the decision to use agricultural practices was no longer a strictly individual process, but was oriented towards collective aims (constraints imposed from outside the farm on the location and timing of grazing). In this case, the new orientation was manifested by the use of inducement mechanisms encouraging
farmers to use agricultural methods judged by public authorities to be more favourable for the environment. The contract also introduced a value judgment on the impact of agricultural activity (recognition of the role of "countryside gardener").

In the end, although the sylvo-pastoral improvements increased the farmers' means of production, the contractualization put constraints on the methods of production.

The awareness by public authorities of an environmental hazard resulted in aid being given for the individual acquisition of the means to manage the environment, and also in direction being given to its use.

3.2. The justification for guidance of farm activities by public authorities: the common good

It was decided that a resource (the countryside) should be managed by farmers who would be provided with the right of land use and the means to exercise it. This resource had always belonged to someone, usually private individuals or the State. In addition to checks on compliance with the undertakings, questions may also be asked on the legitimacy of management having a common character.

If such a management system could be set in place, it was because there was a dimension other than land (or forestry) ownership in the countryside. In the case of State property, it can be assumed that this was not thought of as the private property of the State, but as a public asset. Procedures for protecting forests against fires did not in fact originate from foresters, but from a demand by society to protect human life and values, rather than to safeguard the forest itself. This results from the fact that forests have more of a social, cultural and ecological function than an economic value [Hétier, 1993].

Thus, the land has a value not only as a private factor in production but also as a public asset. the quality of the countryside being the final service provided. This quality is judged by standards determined from outside (reflecting society's requirements) and justifies public expenditure on countryside management to maintain it.

If we consider that the resource in question is not just the countryside, but the quality of the countryside, we are faced by a resource that cannot be appropriated, which cannot be taken away, nor regulated by market forces, thus justifying the private appropriation of the means of management, itself regulated for the common good.

However, taking into consideration the quality of the countryside leads us to question whether we are still dealing with a resource in the sense of
[Montgolfier, 1987], to the extent that there is no extraction from use. This leads us to consider the « option value », or the value of legating the succession or ownership of land and its qualities [Desaigues & Point, 1990], the low market value not justifying the expenditure needed to maintain it.

This thinking leads us to enlarge the approach to the countryside in terms of ownership or land use, to an approach that includes its heritage value, heritage being extended to the sense of [Montgolfier, 1987] in its economic definition (an asset liable to retain potential for adaptation in the future to uses that cannot be foreseen at present), and its socio-political definition (that set of material or non-material entities which work towards safeguarding the autonomy and identity of the society to which they belong and help ensure society's adaptation in the course of time in a changing world).

3.3.- Towards a heritage management

The heritage aspect of countryside quality gives legitimacy to concerted management by the various parties involved.

Observation of the current state of affairs shows us that we are in an intermediate situation between collective management and common management in the sense of [Ollagnon, 1989]. It is in some ways a state of collective management in which the manager (the technical working party) is a "collective or corporate body, i.e. a body with decision-making powers delegated to it within the framework of laws governing public and private property"; but as the law expresses itself in the form of drawn up contracts, it is almost a state of common management, where the manager is an "assembly of acting units who apply negotiated rules of behaviour with respect to an asset", in their individual heritage management of that collective appropriated asset.

The intermediate position exists because we not quite in a situation where "the identity of the manager is clearly established and is an undisputable presupposition of the action, in which only the organization and the functioning of the action system are involved", since the contracts are entered into voluntarily and the project promoter does therefore not have complete control over whether the farmers participate or not. But, neither are we truly in a situation where "the action and the negotiation also has the role of defining the parties taking part and admitting an interest in the quality of the environment and in the solution to the problems that it poses", to the extent that the involvement of the farmers in the negotiation is limited to stating whether or not they will participate in the operation, to choosing the plots in question (provided they have an interest for DFCI, determined by foresters), and to drawing up individual specifications acceptable to the programme and compatible with their practices.

11
The restriction on negotiating points and the hedging in by standards (amounts of grants and subsidies) is intended to reduce the costs of the transaction and to prevent strategic behaviour (such as overestimation of the excess costs brought about by changes in practices).

Countryside management contracts thus promote the private acquisition and use of a tool with the aim of maintaining a public asset, by ensuring a transfer from private management of this tool and of the land, to a joint management.

**Conclusion**

The interest of this case study is that it shows how the management of a shared resource (the collective heritage of the countryside), to meet a social need, can involve an individual appropriation of the management tool under joint control and does not require appropriation by local authorities (there is no difference in contracts depending on the ownership status of the land to which they apply).

The contractualization of countryside maintenance calls into question its mode of management, by introducing a collective implementation of the private means of management. The common ground is therefore shifted from the quality of the countryside (resource) to its management tool (control of agricultural practices).

Agro-environmental contracts are therefore a collective method of managing a fire risk implying a collective means of land management involving local authorities.

This procedure is carried out in a dialectical fashion at the level of the individual farm, the basic unit for this management:

- firstly, by favouring the appropriation of the countryside by the farmers (ownership or land use) and therefore extending the scope of private property and of individual responsibility by changing the exercise of property rights;
- secondly, by bringing farmers out of the strictly individual dimension of their farms to take into account a service for the local community.

**References**


