## Wolf Damage Compensation Schemes in Spain

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With over 2,000 wolves spread over 120,000 km<sup>2</sup>, especially in its north-western quadrant, Spain is the Western European country with the most wolves. Unlike in countries of Central and Northern Europe, Spain's wolves never died out, and stock farmers of many regions regard them as something natural as snow or drought. The fact that wolves have always caused damage to livestock forced stock farmers to improve stock protection measures. The wolf has never been fully protected in Spain, and the wolf populations that cause the most damage have always been controlled by means of hunting or culling.

Nevertheless, wolves are now more numerous than at any other time in the last forty years, their range having increased very considerably. Their appearance in new areas and the better protection by law today throughout their range have led livestock farmers in several parts of Spain to express their unease.

For this reason, most regional governments compensate livestock kills due to wolves. In Spain, the power for wildlife management is falling to the regional governments. They decide if and how compensation is paid.

Generally speaking, three compensation models are applied in Spain:

- 1 some regions compensate wolf damage only in protected areas;,
- 2 some provide compensation throughout their territory;,
- 3 others only reimburse farmers who have taken out private insurance on their stock.

## 1 Regions that only pay compensation in protected areas

The Galicia region at the north-western end of Spain, which hosts around 700 wolves over about 26'000 km<sup>2</sup>, only pays compensation in a hunting reserve that accounts for a tiny part of the wolf range; in the rest of the region, livestock owners must assume the losses themselves. There are no accurate damage statistics for Galicia, but I roughly estimate that it may amount to as much as  $\notin$ 200,000 to 400,000 per year (US\$ 200,000 to 400,000). Nevertheless, it does not appear to generate any particularly great social conflict, perhaps because there

have always been wolves in Galicia and farmers have never received compensation. Here, the wolf is a game species, and hunting permits are issued when damages are high. Furthermore, as in the rest of Spain, illegal hunting seems to be a common occurrence.

### 2 Regions that pay compensation for all damage

Policy in the neighbouring region of Asturias is just the opposite to that of Galicia. With about 200 wolves in little more than 5,000 km<sup>2</sup>, the Asturian regional administration directly compensates all livestock damage whether it is in Somiedo Natural Park, which is subject to strict regulations, or in the region's less protected areas. In Asturias, the wolf is no game species, but they are culled by regional government rangers when the damage rate is high, and new packs are not allowed to get established in overpopulated areas.

Between 1991 and 1999, the annual number of attacks increased by 22.9% (from 959 to 1'179) and the amount of losses by 51.4% (from  $\leq 225,275$  to 341,041). Most of the damage occurs between spring and autumn to free-ranging livestock grazing in open countryside. When a farmer discovers that an animal has been killed by wolves, he must inform an official ranger (employed by the regional administration), who checks the remains *in situ* and takes the appropriate steps so that within a few months the farmer is reimbursed to the value of the dead animal.

In many cases it is difficult to decide whether animals were actually killed by wolves or died from other causes and their carcasses subsequently eaten by them; most dubious cases are resolved to the farmers' advantage. However, compensation is not paid for animals that disappear. In the range of the brown bear, rangers are usually more benevolent when assessing wolf damage in order to avoid discontent among farmers as illegal poison put down for wolves is a major cause of mortality in this small population of Cantabrian brown bear.

The system of direct compensation is very time consuming for the rangers. In Asturias, rangers devote about 1,000 days a year (the equivalent of 5 people-year) to assessing wolf damage. This is, however, the method that farmers prefer.

Other autonomous regions with few wolves also compensate all damage although their management objectives are different. For example, on the private estates (ranches) of Sierra Morena in Andalusia, where there is an isolated population of about 5 wolf packs, the policy is also to pay for all damages with the aim of fostering their recovery as far as possible. On the other hand, in the Basque Country, with only two packs shared with the neighbouring province of Burgos, all damages are paid in spite of the fact that the management aim is to prevent new packs becoming established; in this case, the object of the compensation payments is not to promote wolf recovery, but rather to ease social friction.

It is important to note that in no case the payment of compensation is dependent on how livestock is managed; in other words, farmers who leave their stock unattended in the countryside and visit it once a week have the same right to compensation as those who watch over their stock with dogs by day and shut them in at night.

# **3** Regions that only compensate owners of insured livestock

This other model is adopted by Castilla y León (the region with the most wolves in Spain - between 1,000 and 1,500 in about 75,000 km<sup>2</sup>) and Castilla-La Mancha (with a small population of less than 5 packs in Guadalajara province, but rapidly increasing). In the hunting reserves and the natural parks (for example, in the famous La Culebra Reserve in Zamora) compensation is paid directly, as in Asturias. In the rest of the country, however, i.e., most of the wolf's range, given that the policies, although very cheap, do not cover all financial losses, the administrations pay the difference between the amount covered by insurance taken out by livestock farmers and the real cost of the damage. If the farmers have not insured their livestock, they are not eligible to receive the shortfall amount. Again, compensation payments are made regardless of how livestock is protected.

Besides making shortfall payments, the regional governments occasionally offer livestock farmers other kinds of help. In Zamora province, for example, a technical team visits farmers who wish to put in a damage claim and helps them fill in the insurance claim forms and the administration's shortfall payment forms. This help with the paperwork makes the farmers more aware that the administration is concerned about them, which apparently leads to a considerable improvement in their attitude. The Regional Government of Castilla y León wishes to extend this service to other provinces in the region.

In Guadalajara province in the Castilla-La Mancha region, besides insurance shortfall payments, the administration provides an annual budget to help stock farmers adapt to the presence of the wolf, which has recently reappeared after an absence of almost 50 years. The money is used to fence in traditional pens, which were not built to be wolf-proof, and also to provide farmers with mastiff dogs free-of-charge.

In these regions, farmers whose livestock has been attacked must inform the insurance company representatives, who pay most of the damages, as well as the official (administration) rangers so that they set in motion the payment process.

No qualitative studies have been carried out to ascertain farmers' opinions regarding the different methods of payment, but the farming unions usually prefer direct compensation payment, as in Asturias. This allows them to receive the government payments and the insurance from private companies if their livestock is insured.

Obviously, the greatest discontent amongst livestock farmers occurs in areas where wolves have reappeared after being absent for decades even though the regional government pays for all the damage. The wolf's return requires a complete change in stock raising techniques and far greater dedication to livestock. In such recolonisation areas, many people who combine livestock husbandry with other businesses end giving up the former because it is not profitable.

Stock farmers' unease is growing in areas where neighbours are more generously treated. This commonly occurs on the boundary between autonomous regions operating different compensation schemes or in the environment of nature parks or hunting reserves where substantial aid is offered to livestock owners. For example, farmers living in the part of Castilla y León that comes within the territory of the Cantabrian Mountains look with envy upon their Asturian counterparts, as do Castilian stock farmers living along the boundary with the Basque Country. Likewise, the excessive delay in making the payments also gives rise to a lot of tension.

Colonisation of new regions by wolves often reopens the eternal debate about which is the best way to compensate damage. Should farmers be required to provide their herds with suitable protection in order to be eligible for compensation? Isn't it perhaps more important to regulate the astronomical grants they receive before embarking on wolf-damage compensation?

The complexity of natural environments, the diversity of social and political circumstances, the influence of pressure groups in the different regions – farming unions, environmental groups- and the caprices of public opinion make it very difficult to decide which is the best method in the long term to

compensate damages as theoretical decisions are not always easy to carry out in practice. Many managers make do with applying methods that keep the peace in the countryside in the short term and prevent a climate of hate towards wolves from developing, and they maintain that there is no such thing as a perfect method. They may be right.

# Snow Leopards and Local Livelihoods: Managing the Emerging Conflicts through an Insurance Scheme

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#### The global and local contexts

The snow leopard, *Uncia uncia*, is widely but thinly distributed throughout the Central Asian mountains. Globally, the snow leopard is listed as Endangered in the *Red List of Threatened Species* (IUCN 1996) and as Appendix I species in the Convention on International Trade in Endangered Species (CITES) checklist. One of the most severe threats for the snow leopard is the retaliatory killing by local people in response to livestock predation. In this situation the local farmers perceive the snow leopard without economic value, or rather, it is perceived as having a negative value since it threatens their livelihoods (Pearce 1996).

In order to reduce the retaliatory killings of the snow leopards, an innovative project, Project Snow Leopard (PSL) was initiated in 1999 in the community of Skoyo in the Baltistan region of northern Pakistan. The objective of PSL is to resolve the conflict between local farmers and the snow leopard through safeguarding the livelihoods of the farmers and providing them with an incentive to conserve the snow leopard. Since 1999, PSL has successfully tested a community based approach in achieving this objective. The main components of the PSL are a community managed and community run insurance scheme and an ecotourism company based around snow leopards.

#### Geographical and economic background

Baltistan – a high mountain environment area of significant conservation value – in the Northern Ar-

eas of Pakistan spreads over 26,000 km<sup>2</sup> and supports a population of approximately 300,000 people. The region is very poor especially when put in the context of one of the poorest regions in one of the poorest countries in the world. The region harbours some of the world's highest mountain ranges – Western Himalayas, Karakoram and Hindu Kush – with several peaks over 8,000 metres. The flora and fauna of the region are diverse with several globally significant species represented, including the snow leopard (*Uncia uncia*), markhor (*Capra Falconeri*), Himalayan ibex (*Capra ibex siberica*), blue sheep (*Pseudois nayaur*), musk deer (*Moschus moschiferus*), and a range of avifauna (Roberts 1997).

Local people extensively use the biological resources in the wild through complex institutional arrangements<sup>1</sup>. Access to markets and other institutions (state or civil society) are minimal. Livestock, therefore, represents a major source of income, and is an essential technology and a vital form of security to the locals<sup>2</sup>. Local farmers often invest surplus income in livestock, which they can sell in times of need. In difficult economic circumstances, local farmers cannot be concerned about the survival of snow leopards, which are seen to be destroying their security base. The PLS bears in mind the livelihood issues of the local people.

## The idea behind the insurance scheme – institutions, incentives and collective action

When PSL proposed the idea of an insurance scheme to help to compensate the farmers for their losses of livestock from snow leopard predation, obvious doubts regarding the sustainability and management of the scheme were raised. Several experts pointed towards some of the inherent dangers associated with an insurance, for example, asymmetric information, moral hazard and cheating through fraudulent claims can be overcome. They claimed that in most cases compensation schemes have failed, apparently for lack of an effective mechanism to overcome these problems.

PSL overcame these problems through its emphasis on community participation and innovative financial design. PSL integrates local institutions in the management and operation of the scheme. Farmers pay premium contributions to a fund, Fund 1, per head of livestock. Fund 1 is managed and administered by the community of Skoyo, who also keeps a record of individual premium contributions to Fund 1. A second fund, Fund 2, is established, organised and operated jointly by the community of Skoyo and PSL

<sup>&</sup>lt;sup>1</sup>Local livelihoods tend to rely on a variety of resources such as agriculture for production of vegetables and grains, fruit trees, forest and livestock products. Recently reliance on migration and credit is also a part of local livelihood strategy.

<sup>&</sup>lt;sup>2</sup>Draught cattle, in this context of subsistence communities, are a technology that can be substituted for.