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AGRICULTURE & INNOVATION



EIP-AGRI Focus Group

Wildlife and agricultural production

MINI-PAPER: EFFECTIVE INSTRUMENTS TO REDUCE CONFLICTS BETWEEN FARMING AND WILDLIFE

Coordinator: Alessandro Triantafyllidis

Contributors: Mugurel Jitea, Catherine Keena, Spyros Psaroudas, José Fernando Robles



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1. Introduction

In farming, prevention or/and compensation measures to restore wildlife damages are essential: interaction of wildlife with agriculture implies often damages, while certain species have become protected and are since *res omnium*, common good. Therefore, elimination of damage risks through eradication of the species considered responsible is unacceptable by a large part of the society.

Legal protection does not necessarily imply real protection: poaching and illegal practices are still serious threats present in Europe, especially for certain species like large carnivores who create significant damages. Besides, given the modernisation of rural lifestyles, the tolerance limits of rural people for damages caused by wildlife species have lowered.

While the share of rural population is decreasing in modern societies, it is up to the farmers, breeders, or beekeepers to apply "in vivo" (real-life situations) methods of coexistence with wildlife, or, on the contrary, to apply the "right of self-defence". Consequently, understanding the viewpoints of agricultural professionals, the provision of advice and practical support as well as development of innovative solutions are of crucial importance.

Provision of support by public institutions and funding programmes especially, promotes the message that wildlife, biodiversity and, especially, protected species should be treated as "*res omnium*" (property of all), not as "*res nullius*" (property of nobody). Moreover, financial and practical support by national governments and the EU attach a *tangible value* on wildlife conservation objectives, as well as aesthetic, moral and social values.

Compensation or prevention?

In general, compensation is a passive strategy, in the sense that does not create incentives for the reduction of damage and does not include other educational and policy tools. On the contrary, implementation of preventive methods aims directly at the reduction of damage. Consequently, prevention is preferable to compensation and public funds should mainly support adoption of prevention measures.

However, there are situations where damages cannot be avoided through application of prevention measures alone. There are areas where wild prey or other food resources are scarce or absent, so large predators' survival depends on access to domestic animals, crops, orchards, or beehives. In addition, prevention measures can be overcome by animals that have a formidable capacity for learning, and are well motivated by the prospects of an "easy" meal. Last but not least, in mountainous, marginal and less favoured areas low intensity farming systems may be incompatible with the high cost of implementing some of the preventive measures.

Consequently, co-financing compensation or insurance premia to certain farmers should *not* be conditioned exclusively on the existence of preventive measures.

Finally, it is important to underline that *combination of compensation and insurance systems with prevention methods have a cumulative effect*, increasing the rural people's resilience towards wildlife.

This short paper is aimed to **explore the introduction of effective support measures of active prevention to reduce or minimise the conflict with wild fauna.**

2. Existing good prevention practices in the EU and beyond




The establishment of hedges, the creation of islands and enclaves of natural vegetation or the planting and maintenance of isolated trees, in groups or in rows, are undoubtedly elements of landscape improvement that contribute to improving biodiversity in agricultural spaces by providing refuge for the wildlife. While they can help promote a natural balance by specially increasing the presence of birds of prey and other natural predators for the control of rodents and lagomorphs, that may also become possible source of damages to crops.


The implementation of these measures require a multi-year commitment, and an appropriate framework for their development can be found in **agri-environmental schemes**. These have provided a suitable framework through the implementation of commitments that - in a win-win approach - deliver positive effects for the fauna while remunerating farmers for costs incurred and income foregone by dedicating a part of the agricultural area to measures for the prevention and control of damages or the conservation and improvement of habitats.

Often the agricultural areas most susceptible to damage by wildlife are transition zones adjacent to wetlands or watercourses, or other natural or semi-natural elements of the landscape. In these cases, farmers may minimise the impact of the damages caused by wildlife by declaring such lands as fallow, which are eligible for income support as Ecological Focus Area (EFA).

Examples of projects addressing conflicts between wildlife and farming and forestry:

Focus on Ireland

Project	Description	Photo(s)	Website
NPWS Farm Plan Scheme in Ireland	Ireland is of international importance for Greenland White-fronted Geese <i>Anser albifrons flavirostris</i> and Whooper Swans <i>Cygnus cygnus</i> that visit every winter and feed on improved grassland, resulting in reduced grass and compacted field surface. The Scheme remunerates farmers to facilitate significant numbers of geese and swans.	 	https://www.npws.ie/sites/default/files/publications/pdf/ffn-ebook-chapter-07.pdf
Curlew EIP (European Innovation Partnership) project in Ireland	This is an example of where farmers are trained and undertake predator control for payment to protect the curlew <i>Numenius arquata</i> which is threatened by predation by foxes, American mink, corvids such as the grey crow and magpie, which impacts their breeding success.		https://birdwatchireland.ie/our-work/species-habitat-conservation/countryside-wetlands/curlew-eip/
Woodlands of Ireland: Management of Deer in Native Woodlands	There is no predator of deer in Ireland so sustainable management involves some degree of control of numbers where necessary, both from the viewpoint of deer welfare and for the avoidance of conflict		http://www.woodlandsofireland.com/sites/default/files/No.%207%20

	<p>with human economic interests. <i>'Of all the components of deer management, the human dimension is the most problematic. Many deer management initiatives are compromised due to a failure to reconcile different objectives, stakeholders' attitudes and subsequent responses towards deer. Very often, 'deer problems' are as much about human problems, politics and stakeholder communication deficits as they are about animal behaviour or impacts (Native Woodland Information Note No. 7, September 2018)'.</i></p>		<p>%20Deer%20NWS%20InfoNote.pdf</p>
<p>The Irish Deer Management Forum</p>	<p>Where control of numbers is necessary - for example to prevent excessive damage to forestry or to agricultural crops, or to prevent the spread of disease such as Bovine Tuberculosis - the Irish Deer Management Forum policy is that culling can be carried out according to best practice guidance on the management of wild deer. These best practice guidelines have been adopted internationally, and control is carried out only by licensed hunters who are themselves certified as competent at national level.</p>		<p>http://idmf.ie/best-practice-guides/</p>
<p>County Wicklow Deer Management Project in Ireland</p>	<p>A County Wicklow Deer Management Project commenced in August 2018 to address an 'unsustainably high deer population' found in Co. Wicklow. This project will put sustainable deer management professional basis and facilitate and promote knowledge transfer within the county and wider.</p>		<p>https://wicklowuplands.ie/projects/sustainable-deer-management-project/</p>
<p>SUstaining and Enhancing RESilience of European Forests (SURE)</p>	<p>Damage caused by game is identified as a major obstacle to natural forest regeneration in Europe. The SURE project, coordinated by EFI, established the secretariat for the European Forest Risk Facility</p>		<p>https://resilience-blog.com/wp-content/uploads/2018/07/forest-risk-facility-flyer.pdf</p>
<p>The Vincent</p>	<p>Practical steps have been devised</p>		

<p>Wildlife Trust in Ireland</p>	<p>to protect game and domestic fowl from pine martens <i>Martes martes</i>, which is protected in Ireland by both national and international legislation.</p>		<p>https://pinemarten.ie/wp-content/uploads/2018/11/How-to-exclude-pine-martens-from-game-and-poultry-pens.pdf</p>
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Title: The Liguria Region (Italy) approved in 2016 the legislation on the defence of the fund



The law allows professional farmers, owners of farms and holders of hunting weapon licenses, the possibility of culling ungulates in their plots, after having communicated it and after verification of the regional supervisory body. Culling is allowed only in case the cultivation is close to the harvesting period. This regulation that was also subsequently adopted by the Lombardy Region.

The use of the law is rather limited due to the restrictions of the person allowed to cull and for the bureaucratic process to obtain the required authorisation.

Source: www.regione.liguria.it

3. insurance schemes

Insurance schemes are an alternative to compensation: usually, they cover part of the cost of damages incurred for minimising uncertainty and risks. Despite the risk of frauds and other illicit behaviours, compared with “ex post” compensation, insurance encourages farmers to apply prevention methods.

Co-financing insurance systems with public funds, can be a valuable tool for increasing the rural people's tolerance towards wildlife. Special incentives and additional support could be provided for achieving specific conservation and social objectives.

State operating insurance systems, or subsidising farmers for paying the premia to private companies are both acceptable. However, in both cases, the compulsory character of insurance for damages caused by protected species is of crucial importance.

Case study: The Greek Agricultural Insurance Organisation

ELGA, the Greek Agricultural Insurance Organisation, was created in 1963 to undertake compensation of damages on agriculture by all kinds of natural causes (weather, wild animals, sickness, etc.). The Organisation is today a private legal entity, equivalent to a public body (public interest organisation), supervised by the Greek Ministry of Rural Development and Food, whose financial sources come mainly from the obligatory insurance premia of all Greek farmers and livestock breeders (see www.elga.gr)

From 2001, to comply with EC Directives, ELGA collects insurance premia and compensates only natural disasters and damages from wild animals. Insurance for other risks, besides natural disasters and wild animals, is not obligatory. Farmers are free to get insured in private insurance companies. ELGA is therefore considered to be a self-financed body and receives funding from the Greek State (annual grants) only in the extreme cases of financial deficits.

In terms of prerequisites for compensation, ELGA demands proper safekeeping of the livestock, crops or beehives in cases where repeated previous damages have been recorded. Based on this system, Environmental NGOs have achieved to enforce special rules and to provide additional support for large carnivore conservation.

In general, damages caused by protected species, such as bears or wolves, are better compensated (90%-100% of actual cost), while other damages are treated differently (compensated at 75%-80% of their actual cost).

Although in Europe there are different public systems providing compensation to farmers that suffer damages by wild animals, as well as private insurance schemes, the Greek Agricultural Insurance Organisation represents the only known case of universal and obligatory insurance system for farmers.

4. HWC in marginal areas

The issue of marginal areas or Less Favoured Areas (LFAs) is widely addressed within the CAP and the rural development programmes. These areas, when it comes to conflicts between farmers and wild fauna, take on a very delicate role.

Very often LFAs are areas where agriculture and livestock breeding are facing the higher level of conflicts with wildlife. We do not want to say that other, more intensive farming areas, are free of the problem, but in mountain and marginal areas the magnitude and the effects of human-wildlife conflicts (HWC) is often more severe. The problem is not only economical but also social and in some cases could contribute to the abandonment of agricultural activities by some farmers.

On the other hand, we have also to recognise that in the last half a century, the role of farmers as sustainable food producers and environment wardens, has never been so popular among civil society.

Why the Human and Wildlife conflict in rural marginal areas is so delicate? For several reasons, the most important are:

- ▶ Scarce population, including farmers: the farmer is very often trying to (or is forced to) solve alone the problem.
- ▶ Depopulation trend going on from decades.
- ▶ These areas often include, or border with, semi-pristine habitat, HNV areas (High Natural Value), Natura 2000, protected areas, where wild fauna is obviously in higher concentration.
- ▶ Poor infrastructures (roads, fiber internet connection, 4G, roads, etc.), that makes farm logistic difficult and time consuming.
- ▶ Presence of the few pastoralist communities left in Europe.
- ▶ Extensive livestock breeding systems, extensive use of pastures: free animals, shared pastures with large carnivorous species.
- ▶ Lack of cooperation attitude between farmers.
- ▶ Very poor political representation of the farmers' needs, where the wishes of civil society, hunters, and environmentalists are always above them.
- ▶ Long distances to the offices of the complex (in many Member States) administration dealing with compensation schemes that undermine the reporting of damages or losses (e.g. most of predation damages in Italy are not reported to the authorities).

Many of these reasons makes prevention of HWC in a private farm a problem. When a predation to livestock, or a damage to the field, occurs, the bureaucratic procedures and the time spent to accomplish them, do not compensate for the real economic loss suffered by the farmer.

It is not an extreme statement that in some marginal areas pressure from wild fauna (although not the only cause) is pushing out from business many small farmers, accelerating the process of depopulation of the farming community.

There is the need to put in place support measures for farmers in LFAs to adopt prevention measures such as proper electric fences, dogs, nets and other means of bollard, since are all measures that needs a lot of maintenance work (i.e. electric fences, mowing, repairing, mobilizing internal fences, logistics, passages for bikers/hikers etc.).

Annual support measures linked to the quality and quantity of land protected (ha) and/or to the metres of fence managed are necessary. These would aim to compensate the increase of costs and the economic losses derived from the set-up of one or more prevention means and to assure – until a certain limit – the coexistence of farming and wild fauna. They would be paid by hectare and linked to the type of farming/breeding.

5. Bureaucracy and compensation measures

Bureaucracy can act as a strong barrier for farmers in the process of accessing the compensation measures to mitigate agriculture-wildlife conflicts. From the farmer side, the process and the documents involved in the compensation payments system should be as fast and as easy as possible. On the other hand, Member States establish specific measures in order to avoid the incorrect use of funds. In addition, the complexity and the type of documents vary greatly according to different concerned wild-animals species. Usually for the protected species (bears, wolf, lynx etc.), a national/regional institution body responsible for the management of losses and the compensation funds is established by law. For other types of predators, there can be a local committee at the level of the administrative-territorial unit where damage occurred, which makes the compensation process somehow faster and easier.

The administrative burdens faced by the farmers are also influenced by the type of losses (agricultural and forestry crops versus animal breeding) and the different stages created in the compensation mechanism. In the national legislation, there are different steps in accessing the compensation mechanisms like for example in the Romanian case:

1. **Prevention** – minimum mandatory obligations for farmers before claiming any types of compensations represented by: written notification to the hunting fund manager about the existence of wild animals (notification to be registered also at the territorial unit administration); to place accepted means to discourage the wild animals attacks; to guard the domestic animals and to shelter them, at night only in fenced and guarded places. The bureaucratic burden is high because usually there is no on-line possibility for notifications and it is also difficult for farmers to have access to information about how to prove their good intention to adopt measures to discourage the wild animals attacks.
2. **Damage notification** – maximum deadlines for submitting the attacks notification; documents attesting the ownership rights of the agricultural / forestry / domestic animals to which the application refers. Usually there is no on-line possibility to notify the damage and the period for official notification is generally too short.
3. **Damage evaluation** - supporting documents for the expenditure incurred. In this case, the process is not controllable by the farmer & sometimes the farmers have difficulties in proving with documents the damage claims.
4. **Payment** – the payment decision comes after a relatively long period of time (minimum 30 days).

For the small-size farmers located in the marginal areas, such bureaucratic burdens leave them without compensations especially since farmers' associations cannot go through this process on their behalf.

6. Synergy with the Common Agricultural Policy

The EU Common agricultural policy (CAP) for the period 2021-2027 plans to increase the contribution of the agricultural sector to the achievement of the environmental and climatic objectives of the European Union. Traditional CAP tools, such as conditionality/cross-compliance and agri-environment climate measures, along with other elements of the new CAP green architecture, such as eco-schemes, could play a relevant role in the development of new approaches and in the search for solutions that resolve the conflicts produced by wildlife in agricultural production.

On the other hand, the new CAP intends to work in tandem with the new EU Biodiversity Strategy for 2030. In addition to promoting eco-schemes and result-based payment schemes, the Biodiversity strategy aims that at least 10% of agricultural area is under high-diversity landscape features. For the achievement of these objectives, it is important that the measures designed to promote biodiversity can be adequately adapted to the different situations and territories in which the work of farmers is carried out. Therefore, it is essential that the measures designed to boost biodiversity can be adapted adequately to the different situations and territories in which the work of farmers is carried out.

The different instruments provided for under the CAP could be useful for the design of measures that make productive activity compatible with the conservation of biodiversity and the prevention of damage caused by wildlife.

A large part of the measures developed under the CAP **enhanced conditionality** aimed at improving biodiversity and reinforcing green infrastructure should explore the integration of elements that can prevent damage caused by wildlife or at least reward farmers who suffer these damages.

New **eco-schemes** and **agri-environmental schemes** aimed at increasing biodiversity can be an opportunity to include certain measures that serve to prevent and compensate for damage caused by wildlife. The creation of vegetation margins and buffer bands in transition zones between natural elements of the landscape such as rivers and watercourses, wetlands or forest areas, can be relevant measures in order to remunerate farmers in areas of greater exposure to damage from wildlife.

Finally, a better knowledge of successful cases developed at the European level, as well as the integration of scientific knowledge and the experience of the farmers themselves, should be a sound basis for the development of new results-based agri-environmental measures that can integrate different good practices to improve biodiversity while compensating producers for lost income and increased costs.

7. Recommendations for research and innovative projects

7.1 Research needs

1. Creating a supply chain based on wildlife-friendly agricultural products - produced under specific requirements and production methods, respecting wildlife and mitigating wildlife-farmers conflicts - could potentially contribute to improvement of the conditions of coexistence between wildlife and agricultural activities. However, success and sustainability of labelling and food quality schemes depends mostly on improving the promotion of the relevant products and on securing better prices for them. Therefore, market research and investigation of the needs and possibilities for establishing special marketing channels for promotion of these products to European and international markets are crucial for the success of relevant efforts.
2. Investigate the type, the budget size and the success of measures included in rural development programmes, across EU, promoting the coexistence of agricultural activities with wildlife: type of measures (prevention, non-productive investment, agri-environment scheme etc.). Analyse the results of implementing these measures based on real data regarding damages reduction, costs, level of satisfaction of farmers. Finally identify the reasons of success or failure, in relation to geographical areas, and wildlife species.
3. Study on the existing damage compensation schemes, and insurance-based compensation systems at European and international level: what kind of damages are compensated? What kind of organisations pay for compensation? How much do they pay per category of damage and under what conditions, or terms? Where do the financial resources come from? Existing studies only partially cover this need.
4. Investigate and consider the farmer's perspective and needs on the conflicts with wild fauna. Prevention, compensation measures and policies to avoid or minimise conflicts with wild fauna should origin from this information, which can also foster better cooperation between farmers, and subsequently with the other stakeholders, in respect to this conflict. Most of the times farmers face/suffer this situation in solitude, which increases mistrust. Define the knowledge gaps of the professionals working in marginal agricultural areas in preventing wild animal damages. Investigate designed knowledge exchange and innovation measures to better respond to such needs.
5. Mapping areas at risk of livestock losses from protected species (bear, wolf, etc.) by region and by producer, based on the estimated predation risk. This risk assessment tool could be used to differentiate insurance rules / compensation rates by region and by producer in order to optimise the prevention-active protection policies. The identification of key parameters, losses and interaction, and the creation of geographical risk maps can predict losses in areas where no incidents have occurred in the past. Improve the system of insurance, custody and management of livestock capital, with the aim of better and more targeted allocation of available resources and efforts to mitigate the conflict.

7.2 Ideas for Operational Groups

- Following the results and findings of the research need on promotion of wildlife-friendly agricultural products at European level (7.1.1), an Operational Group could undertake the task to promote efficiently these products. Cooperatives, enterprises and producers, as well as Natural Parks, environmental agencies and NGOs could participate in the Operational Group project.
- Investigate the possibility of common prevention measures (such the Cooperation measures included in the Rural Development Plans) meant to ease co-management of active prevention tools (electric fences, guarding dogs, selective culling, etc.) in large areas, with the help IT tools such as remote control systems and drones.
- Create knowledge repositories as support in the prevention of wild animal damage. Farmers can benefit in real time from access to information related to the management of public & private compensation schemes, technical innovations, knowledge etc.

Annex

References Promoting best practices addressing conflicts between large carnivores and farmers

In order to encourage the adoption of best practices that promote coexistence with large carnivores the Commission has been funding a number of projects associated with large carnivores (see https://ec.europa.eu/environment/nature/conservation/species/carnivores/promoting_best_practices.htm)

By far the largest such mechanism is the LIFE programme. Between 1992 and 2012 the LIFE programme funded 78 projects dealing with brown bear, wolves and Eurasian lynx.

Report: LIFE and human coexistence with large carnivores: https://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/life_and_human_coexistence_with_large_carnivores.pdf

Report: Large carnivore conservation and Management in Europe: the contribution of EC co-funded LIFE projects: https://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/task_2_life_and_lc.pdf

Carnivore Damage Prevention News

CDPNews is a professional newsletter focused on the complex challenges presented by the coexistence of large carnivores and human activities. It acts as a forum to raise awareness of practical solutions, to facilitate collaboration among researchers, policy makers, agricultural consultants, hunters and farmers and to improve knowledge exchange between countries as well as across the boundaries of traditional disciplines. See: <http://www.protectiondestroupeaux.ch/en/cdpnews/>

The secretariat of the “EU Platform on Coexistence between People and Large Carnivores” (see https://ec.europa.eu/environment/nature/conservation/species/carnivores/coexistence_platform.htm), has coordinated the gathering by the members of Platform of case studies that document how cohabitation between people and large carnivores can be supported are engaged in gathering.

These case studies present lessons learned in one location that can be applied in other situations or member states. The cases have been grouped according the following categories: “Provision of Advice/Awareness Raising”; “Provision of Practical Support”; “Understanding Viewpoints”; “Innovative Financing”; “Monitoring”.

The case studies collection is available at: https://ec.europa.eu/environment/nature/conservation/species/carnivores/case_studies.htm