

THE “SAFE SHEEP” INITIATIVE IN LITHUANIA: OVERVIEW AND FIRST RESULTS

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1. Wolves and sheep husbandry in Lithuania

The wolf (*Canis lupus*) was never eradicated from Lithuania, even when its range in Europe was drastically reduced by human persecution. However, this does not mean they were welcome and cherished guests. Wolves in Lithuania were also subject to unlimited hunting, removal of pups from dens, bounties and other means of persecution, and the lowest point was reached in 1965–1970 when only 34–56 animals were left (Prūsaitė, 1988).

The new millennium has brought changes: in 2004

Lithuania joined the European Union (EU), bounties for wolves were abolished in 2002 and the wolf hunting season was limited with quotas designed to let the population recover. During the following 10 years the population successfully expanded its distribution and increased in numbers. The latest official census in winter 2015 estimated wolf population size to be at least 292 individuals (MoE, 2015). Combined spatial data of tracks, depredation and hunting from 2015 indicate that wolves occur in almost the whole country (Fig. 1).

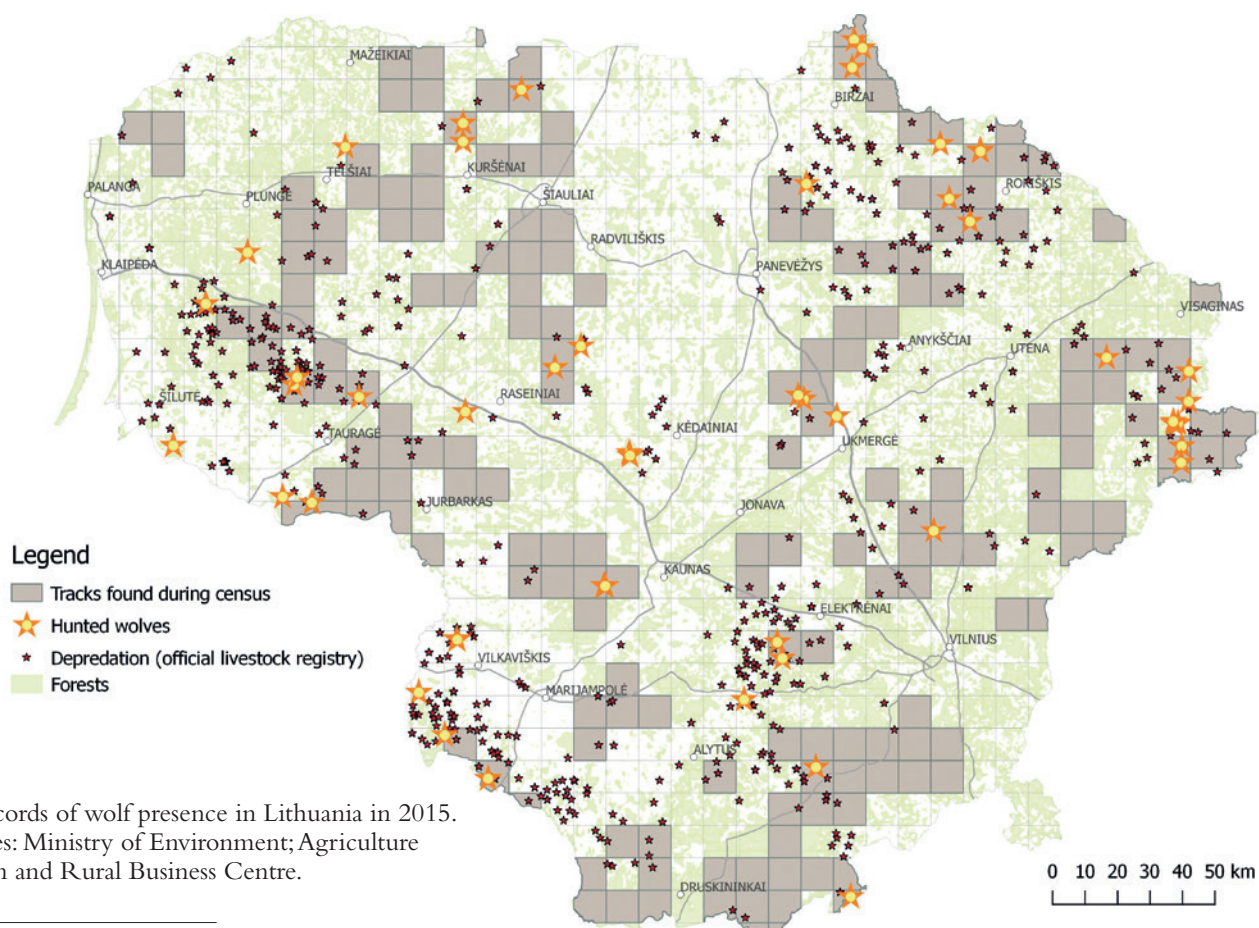


Fig. 1. Records of wolf presence in Lithuania in 2015. Data sources: Ministry of Environment; Agriculture Information and Rural Business Centre.

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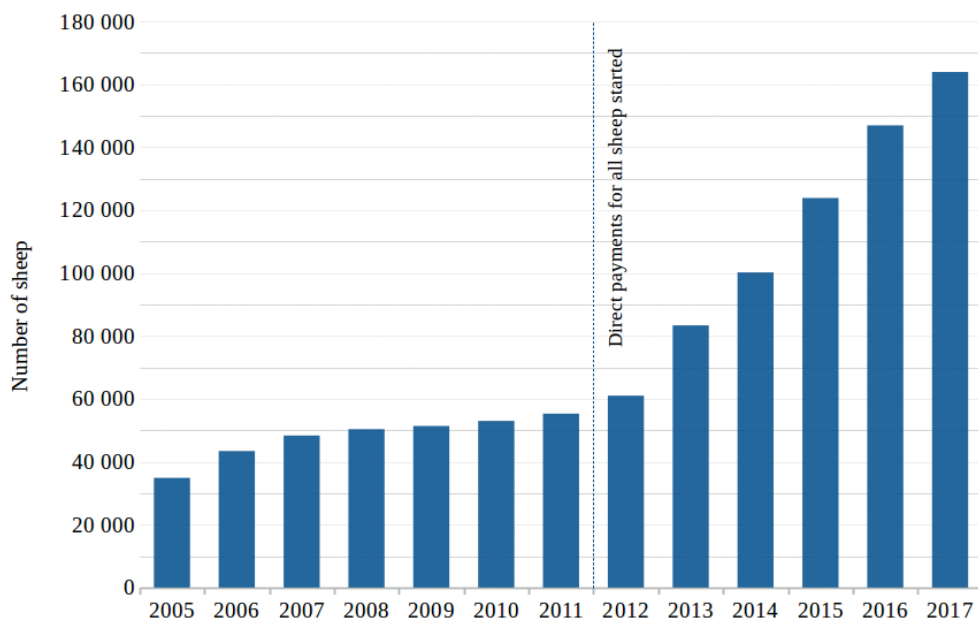


Fig. 2. Sheep numbers in Lithuania in 2005–2017. Numbers are from the 1st of January of each year. Data source: Agriculture Information and Rural Business Centre.

Wild ungulates and beavers form the basis of wolf diet in Lithuania (Špinkytė-Bačkaitienė and Pėtelis, 2012). Official game statistics for 2017 estimated there to be 140,000 roe deer (*Capreolus capreolus*), 40,000 red deer (*Cervus elaphus*), 15,000 moose (*Alces alces*), 19,000 wild boar (*Sus scrofa*) and 40,000 European beaver (*Castor fiber*) (MoE, 2017). Populations are stable or increasing with the exception of wild boar, which for the last three years has been affected by African swine fever and consequently increased hunting pressure.

Immediately before the Second World War there were hundreds of thousands of sheep in Lithuania. With the war came 50 years of Soviet occupation which saw a decline in sheep farming. As a result, in the early 21st century there were only around 10,000 sheep. However, direct payments from EU regional development funds fuelled a new growth in sheep numbers. Especially after 2011, sheep numbers increased by as much as 15–20% per year, and by the end of 2014 there were more than 120,000 (Fig. 2).

Currently, there are c. 10,000 sheep farmers, the majority of whom (80%) raise less than 20 animals (SEAIRBC, 2017). Flocks are grazed in enclosed pastures during the vegetation season, lasting from March/April to October/November. Sheep are left unattended but are regularly visited to check or relocate them. Enclosures are designed to limit sheep movement, not to protect them from predators. The most common type of enclosure is a low electric fence of one to three wires.

Wolves and sheep are distributed throughout the country with no natural barriers separating their ranges. Together with a mosaic of forests, meadows

and agricultural lands, this puts the majority of sheep within reach of wolves.

Beef cattle and goats have also increased in numbers and fall prey to wolves. Nevertheless, sheep are the main prey (75% of kills), and the depredation causes around 30% of sheep mortalities, as opposed to only around 5% of mortalities for cattle. Therefore, while wolf and livestock conflict in Lithuania is not limited to sheep, this species was chosen as the main target and a symbol of the initiative.

2. “Safe Sheep” initiative

Wolf recovery and the huge expansion of livestock – especially sheep – farming led to increased depredation and growing conflicts between predators and farmers (Figs. 3, 4). The national agriculture strategy to prioritize sheep and beef cattle farming and encourage them with direct payments meant that with each year even more potential wolf prey would graze Lithuanian pastures. It became clear that livestock breeders did not know how to protect their animals.

Moreover, protection was not recognized as needed or useful, while intensive wolf hunting was promoted as the only solution. Regular heated discussions about hunting quotas and depredation was a clear indication that the situation was not going to improve, as no governmental institution was willing to take responsibility for helping farmers with damage prevention or other non-lethal methods.

All this meant that Lithuania was on track towards ever increasing depredation and more severe conflicts between rural communities and wolves. In the long

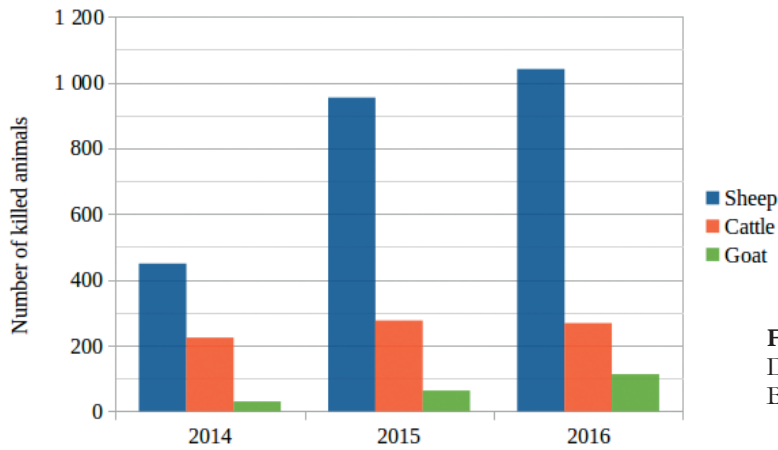


Fig. 3. Wolf depredation on livestock in 2014–2016. Data source: Agriculture Information and Rural Business Centre.

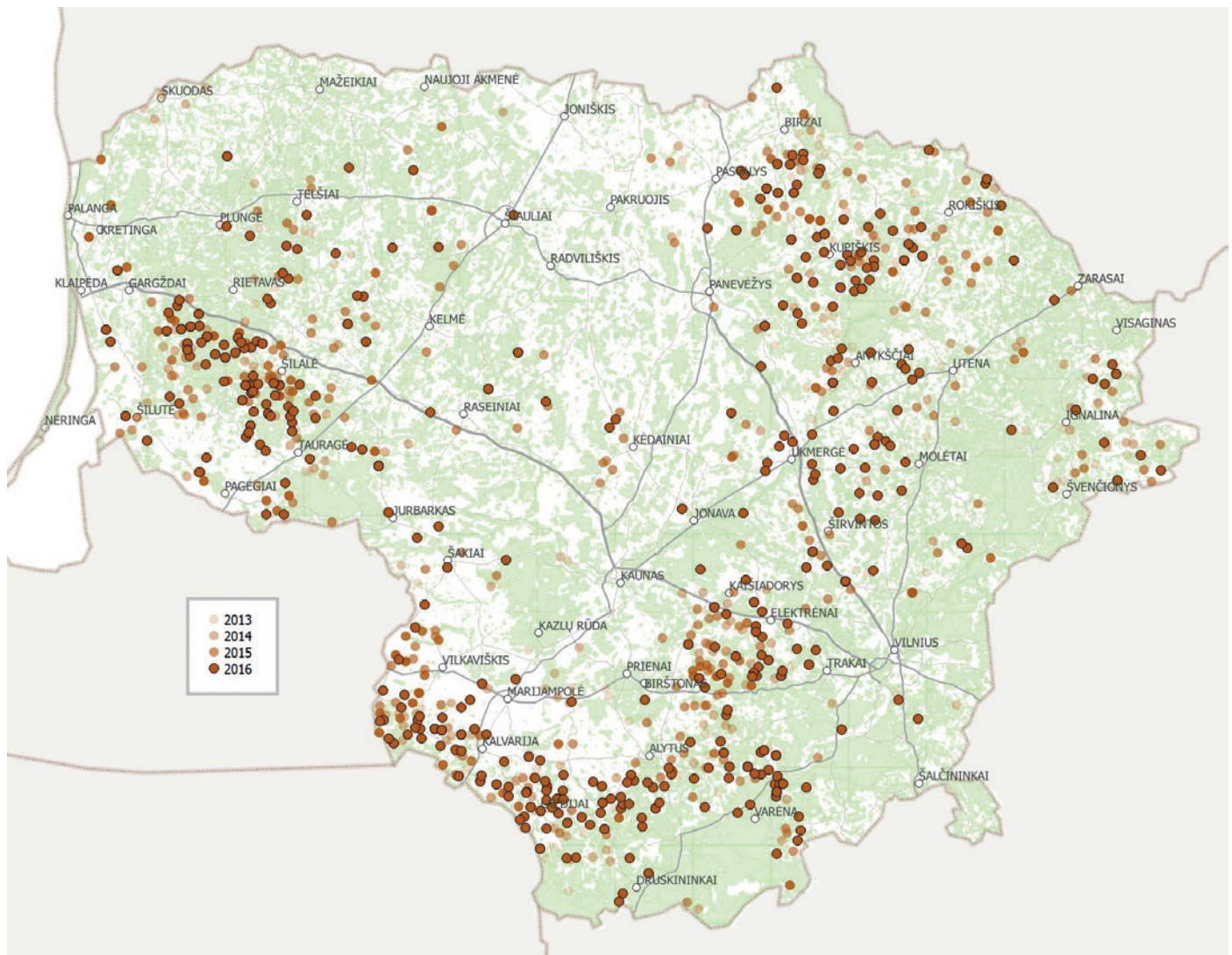


Fig. 4. Reported cases of wolf depredation on livestock in 2013–2016. Data source: Agriculture Information and Rural Business Centre.

run this was likely to be detrimental to both wolves and farmers. In the wake of these realizations, the “Safe Sheep” initiative was started in January 2015 by environmental non-governmental organization “Baltijos vilkas” with the aim of promoting extensive use of non-lethal protective measures in Lithuania. Three main goals were formulated: i) to provide information about the means of protection; ii) to promote the es-

tablishment of locations where farmers could acquire protection equipment; and iii) to prompt government institutions to support the acquisition and installation of protective means.

We wanted to be flexible at the start, to be able to adapt and respond to the changing situation by modifying activities as needed. Therefore, we decided not to apply for any funding, which would have added addi-

tional bureaucracy and restrictions. Up until now the initiative has been based entirely on voluntary work. While this has had certain advantages, public funding or other options will be considered in the near future to ensure sustainability and expansion of the initiative.

3. Activities and their results

3.1. Website

The cornerstone of the “Safe Sheep” initiative is its website: <http://www.saugiavis.lt> (Fig. 5). This serves as a platform to collect and provide up to date and relevant information to farmers about protecting livestock from wolves: installation of various fences and enclosures, use of livestock guarding dogs (LGDs), temporary solutions such as fladry, changes to husbandry practices such as confining small flocks in sheds at night, among others.

Initial information for the website came from our NGO’s previous experience with promoting protective measures, discussions with farmers and various other existing information sources, mostly in Europe (e.g. Nowak and Mysłajek, 2006; Reinhardt et al., 2012). The idea was not to try to provide the most accurate and definitive data from the very first moment but to progressively update it, gathering knowledge and experience, especially specific to Lithuania.

On the website, farmers can easily find descriptions of protective measures, information about what to do in case of depredation, about financial aid for damage prevention measures, wolf depredation maps, among other type of information.

The website was designed to be simple, intuitive and mobile-friendly, having in mind three observations: i) farmers are pragmatic users that need information, not fancy designs; ii) many farmers are middle aged or elderly; and iii) smartphones are increasingly used to access online content.

There is no meaningful way to assess the impact of the information provided in the website after such a short period of time. However, it is possible to assess the usage of the website itself, which may be indicative of its effectiveness. Google Analytics usage numbers for the last two years are not very impressive, bearing in mind that there are 10,000 sheep breeders, 4,000 goat breeders, and 45,000 cattle breeders in the country and not all the visits are from the target group: around 510 sessions a month; average session length of 1 minute 50 seconds; around 10,000 unique users, 80% of them from Lithuania. To achieve higher usage of the website, research into its usage patterns and shortcomings is needed. The effectiveness of communication and dissemination must also be improved.

3.2. Seminars and meetings with farmers



Fig. 5. Home page of the “Safe Sheep” website (English translation). The Lithuanian version has additional material, not available in English.

We expected direct communication with farmers to be a good way to promote protective measures and reduce conflicts by listening to farmers' problems and providing relevant information. We have tried three models of communication: i) seminars with local farmers (two seminars, very low attendance of on av-

erage five farmers); ii) seminars with local farmers and participation of administrative officials (four seminars, on average 50 participants); and iii) personal meetings with single farmers (eight meetings). Seminars of both types were organized in hot spots – locations with high depredation rates – with open invitations



Fig. 6. Seminar with farmers and administrative officials.



Fig. 7. Seminar with farmers in a more informal setting, without administrative officials.

disseminated online and via the local administration.

In our experience, seminars with participation of administrative officials proved to be the most hostile and frustrating. When officials were present, farmers tended to shout all their problems at them. On the other hand, officials did not want to be unpopular, so they turned to various forms of populism and blame shifting. Usually there were no constructive outcomes except for hope that someone may have heard something new. The presence of a skilled, unbiased moderator might improve the situation.

Meetings with individual farmers, for example who had just lost livestock to depredation, have been the most effective form of communication and information exchange. In some cases, farmers contacted us, in others we were able to contact them after reports in the media. This format reduced the risk of outright hostility and the personal nature of the conversation allowed discussion of specific situations. Unfortunately, this format is limited in extent as only a small fraction of farmers can be reached in this way.

Outcomes of seminars with local farmers without administrative officials present lay somewhere between the previous two formats. However, one unexpected issue became apparent: currently there are so many projects with seminars for farmers that there are clear signs of over-saturation and a drop in attendance.

3.3. Work with governmental institutions

A compensation system for wolf depredation was introduced in 2013. Compensation is paid by municipality from special environmental funds. In each depredation case, a veterinarian must first confirm the case, the affected animals (only officially registered ones) and the predator species. The sum to be paid is calculated according to a nationwide official dam-

age assessment protocol, based on the market value of meat of animal. All livestock species are eligible for compensation, but dogs are not. In theory, payment of compensation is conditional on the use of suitable protection measures but, in practice, almost anything resembling protection is deemed suitable. While this system is far from perfect, it partially reduced the financial strain on farmers, with a positive side-effect of improved quality of depredation statistics. However, there are still at least two major tasks for official institutions: i) dissemination of information about depredation and protection; and ii) financial aid for implementing preventive measures.

Over the last five years the Ministry of Environment considerably changed its approach to communication regarding wolves and depredation. Now, they always remind farmers that they should protect their livestock. Since we presented “Safe Sheep” to ministry specialists, they refer to the initiative and its website as a source of information in their messages. However, these communicative messages reach only a fraction of livestock breeders and probably are not perceived as coming from a reliable and relevant source due to prevalent distrust and opposition to all kinds of “environmentalists”, including official ones.

The first attempts to introduce “Safe Sheep” to the Ministry of Agriculture started in May 2015 and looked promising. Officials seemed happy to fill the information gap in their communication with livestock breeders. They also started referring to the initiative website in their messages. Unfortunately, by the end of July of the same year the official attitude abruptly changed to aggressively hostile towards wolves and wildlife in general. Most likely, this happened due to recognition that the main target groups – rural communities in general, and farmers



Fig. 8. A good example of protection. A livestock guarding dog and electric mesh protect sheep on a Lithuanian farm.



Fig. 9. A young livestock guarding dog being raised to protect sheep on a farm in Lithuania.

in particular – were getting increasingly angry about depredation by wolves, while conflict was being aggravated by regional media. Thus, today the Ministry of Agriculture does not provide any information for livestock farmers about wolves, depredation or livestock protection. Changing this situation remains one of the most important goals for the initiative.

Information about preventive means is crucial, but in the end farmers have to acquire and install the equipment. Effective means do not come cheap, thus financial aid is very important. According to legal regulations, the environmental funds of municipalities may be used to finance acquisition of protective measures. Each municipality has to decide how it wants to use its funds and, so far, the majority of them have chosen only to pay compensation. In the communication of “Safe Sheep” we constantly encourage municipalities to direct part of their funds towards protection and inform farmers that they should request such aid.

The Ministry of Agriculture is responsible for distributing financial support from the European Agricultural Fund for Rural Development. Each year around two million Euros are paid to sheep breeders and 13 million Euros to cattle breeders as direct payments (for comparison, depredation damage is estimated to be around 150,000 Euros per year). Several measures in the rural development programme could provide financial support for protection (Marsden et al., 2017), but up until 2015 protective means were not considered eligible for support in Lithuania. Only

after intensive work by the “Safe Sheep” team and experts from the Ministry of Environment protective means were listed as eligible for support under measure 4.1 Support for investment in agricultural holdings. Requirements for applicants are still rather restrictive (e.g. farm production value per year must exceed 8,000 Euros) and the possibility to get support for protection is not articulated or communicated enough, therefore in practice this support does not work well if at all.

3.4. Improving access and promoting good practice

From the start, we were confronted by an unexpected problem: there was almost nowhere in Lithuania to buy equipment such as electric fences suitable for protection against wolves, while the closest breeders of LGDs were located in Poland. We contacted several sellers and distributors of equipment for livestock breeders. Some of them did not know about protection against wolves, others knew but had nothing in stock. The main reason was that there was no demand from farmers for such equipment. After two years of collaboration with businesses, the situation improved: some have electric fences and meshes together with generators, batteries, voltage indicators, in supply and they can also provide information about installation and farmers are increasingly inquiring about these solutions. As demand for LGDs is also slowly increasing, there is at least one farmer that we know of who has just started breeding Tatra sheepdogs in the expectation of selling them to other livestock breeders (Figs. 8, 9).

Providing examples of good practice is a powerful tool to encourage other farmers to follow. Therefore, we have tried not only to consult or visit farmers but also to share some of their success stories. There are a handful of such stories on our website (in Lithuanian), and we hope to add more in the future.

There is a “demonstration” farm in one of the regions of Lithuania that is within the range of high depredation intensity. A farmer who had lost some of her then unprotected calves to wolves asked us for help. We found a willing distributor who agreed to participate in a three-way experiment: they provided equipment, we provided knowledge, physical help with installation and publicity, and the farmer also provided publicity in case of success. A 4-wire electric fence (with wires from 20 cm to 130 cm) was installed around a 0.6 ha pasture (Fig. 10). Signal

Fig. 10. A newly installed electric fence.

lamps and a voltmeter were used to ensure that the fence was operational. Additionally, cattle were tethered in the enclosure to prevent them from panicking and breaking out. So far, this solution has proven to be reliable protection, while neighbouring farms continued to be attacked by wolves.

3.5. Communication

The key factor for success of such an initiative is an effective communication strategy. Unfortunately, this was one of the weakest points, mainly because it requires professional planning and extensive resources that were simply not available.

Our principal target group is farmers, therefore the most important communication channels include regional and local media, official information outlets of agriculture and local administration institutions, businesses providing farmers with equipment and the farmers' community itself. Businesses and certain groups of farmers are rather supportive of damage prevention ideas. For example, the Association of Sheep Breeders endorsed "Safe Sheep", protective measures are discussed in farmers' online forums and businesses are slowly starting to provide the means of protection against wolves. However, the main channels of communication are not supportive or even oppose the ideas promoted by "Safe Sheep". In particular, regional and local media are dominated by sensationalized and hostile attitudes towards wolves. The main relevant official institution, the Ministry of Agriculture, showed only limited and temporary support.

Last year one technique was tested to address the problem of one-sided reports in the regional media. First, we prepared a concise summary with key facts and ideas about depredation and protection; this summary is accessible on the Lithuanian version of our website. Then, during the summer season, we monitored portals for publications about depredation cases. In each case, we (i) wrote a short situation-specific comment with reference to "Safe Sheep"; and (ii) contacted the authors or editors of publications and sent them our prepared information asking them to refer to it in the future to represent both sides. Some responded positively but results will be visible only when the main season of depredations starts in the late summer.

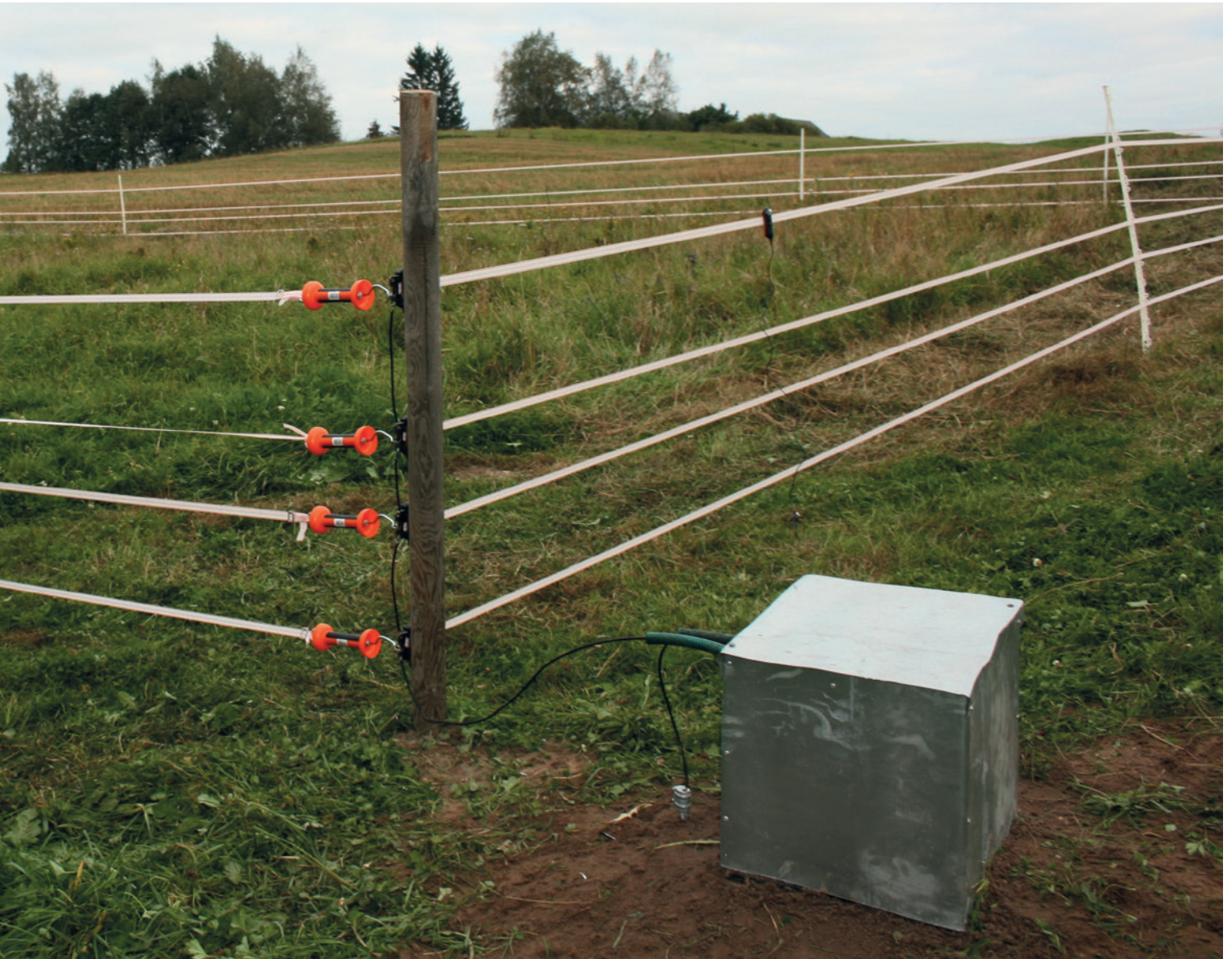
4. Conclusions



More than two years of the "Safe Sheep" initiative have passed and the first results can be considered. We think that so far the initiative has been a moderate success.

Up to now "Safe Sheep" has been fully voluntary work driven by enthusiasm. This has its strengths as proven by the results achieved so far, but there are also obvious weaknesses. Therefore, a decision about the format of the initiative will have to be taken soon which will influence the shape and pace of "Safe Sheep" in the future.

It is clear that a shift towards new ways of dealing with conflicts is much more than a technical or financial matter. First and foremost, it is a question of a change of mindset, and such a change will not happen overnight. Therefore, we see our initiative not as a short project but as a platform to support and drive long years of work towards achieving our vision of making livestock safe even when wolves live nearby.



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