

Discussion of the Issue of Wolf Expansion with an Impact on Landscape Management and Farming

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Abstract: The coexistence of people and large carnivores, especially wolves, tend to have an adverse impact on regional sustainable development of ecosystems and rural areas, negatively influencing mainly traditional farming, sustainable tourism and other socioeconomic activities. Although the viewpoint on current situation is not quite clear from the conservative institutions' perspective, an increase in compensations and support of protective measures results in expenditure displacement instead of proper problem solution. The same displacement logic applies not only to livestock grazing subsidies in the open landscape but also to subsidies determined exclusively for the protection of the predator itself, the wolf. The paper aims to address the key impacts on cultivated landscape caused by a progressive spreading of the predator, focusing on the comprehensive perception of the issue as a whole while also using farming examples to highlight the main issues of gradual wolf spreading in the cultivated area. The research is based on the authors' monograph (2018) positively accepted by both politicians and specialists' community which promotes basis for further discussion across other interrelated sectors.

Keywords: subsidies · sheep breeding · wolf protection · regions · damage and their compensation in agriculture

JEL Classification: Q1 · Q14 · Q18

1 Introduction

The topic was developed on the initiative and needs of practice as farms lose their livestock as a result of an increase in attacks by specially protected predators. Since those surviving animals often die of agonizing death, farms are forced to spend unplanned disproportionate expenditure but at the same time, they have to meet certain conditions to be eligible for the grant of subsidies, e.g. they are required to use their sheep for grazing meadows. Conflicting aids, unfortunately, appear to have become increasingly prevalent. There are subsidies supporting livestock breeding and grazing in an open landscape on the one hand and the subsidies exclusively designed for the predator (wolf) protection, on the other hand. Subsidies are mainly based on public sources and therefore their use should be observed by the widest range of taxpayers as well as the experts and political community. If their effects are contradictory, their efficiency decreases. As a result, financial means will be sunk as subsidies for breeding the livestock contradict the subsidies for supporting the predator occurrence.

The context is being transmitted to economic relations. Livestock depredation by large carnivores entails economic damage to farmers in different parts of the world (Baker et al., 2008; Gren et al., 2018; Ramler et al., 2014; Sommers et al., 2010). Increased legal protection of large carnivores leads to larger carnivore populations in areas with high human and livestock densities (Linnell et al., 2001) and therefore higher risk, increasing depredation costs.

Human control represents another way of limiting most wolf populations. Once a wolf population becomes large enough, it can outgrow mortality factors that retard a lower population (Mech, 2017). Wolf recolonization of several European countries is currently underway as a result of the combination of decreased rural human density, restoration of wild prey, and protective legislation (Boitani, 2003; Chapron et al., 2014). Europe, although half the size of the 48 contiguous United States and twice the average human density, now hosts twice as many wolves, and European biologists have cited this fact to support the idea that wolves and high human densities can coexist (Chapron et al., 2014). The return of the wolf to areas from which it has been absent for more than a century will undoubtedly cause serious management problems (Boitani, 2003) and its return has provoked unease across Europe (Mech, 2017).

The paper is aimed to analyse impacts of both the subsidies spent on the promotion of livestock farming and the subsidies spent on the spread of wolves using the more comprehensively addressed issue of the farms and the attitudes of involved institutions. These subsidies are, in principle, of an antagonistic nature and their increase leads to the growth of other public funds spent on preventive measures and the damages caused by the wolves' attacks. The attention is also paid to the related, often overlooked aspects, such as the additional induced costs, behavioural factors, the suffering of animals and their stress.

The aim of the paper is to focus on the comprehensive perception of the impacts of supporting the gradual predator (wolf) expansion in the cultivated landscape using the example of farming. This means that it is necessary to describe the initial current situation and to prepare basic data for further analyses, especially those regarding the costs and realistic expectations. The economic situation of a group of farms suffering from wolf attacks has not been analysed yet; first, a methodology needs to be developed.

2 Methods

The paper is especially based on the monograph by Kouřilová et al. (2018), which was positively accepted by both the specialists' community and politicians and provided an impetus and basis for discussions in a few interrelated sectors (in this case, hunting). As sources of information for the monograph, a total of 127 Czech and foreign publications and 96 internet links were used and the results of public opinions about this issue were included. In addition to farming, the attention is paid to the sources of financing the nature conservation, compensation for damage, discussing the proposed measures to protect the livestock as well as to the results of related public opinion polls and surveys.

The paper is based especially on the initiative and needs of agricultural and regional practice. The landscape in densely populated agricultural areas fulfills several functions. If it is, however, inhabited by the predators, such as wolves, its production, recreational, as well as environmental function, reduces. The opinions of villagers and the people living in towns/cities are different. Conflict management requires parties to recognise problems as shared ones, and engage with clear goals, a transparent evidence base, and an awareness of a compromise. Whereas the subsidies, as a rule, come from the public finances and the losses, or more exactly, their compensations, are and will be increasing, the issue will become more up-to-date in the future. It is not only a question of financial aspects, but also about certain risks stemming from changing the landscape, its value for tourism and the impact of behaviour of entities involved in the process of promoting spread of predators in the landscape, in particular, the direct and indirect induced costs of farms and the effects of proposed measures.

The study area is Broumovsko where the representatives of breeders and municipalities first joined and started to solve the problem at the institutional level.

We analysed the impacts of this problem on financial and non-financial indicators. The economic evaluation is focused on the economy of sheep and goat breeding and the quantification of sector dependence on subsidies.

To quantify the relationship between damage caused by wolves and the number of wolves in the Czech Republic territory, a simple linear regression based on annual time series was used, in the form of

$$y = \beta_0 + \beta_1 \cdot x + \varepsilon$$

(1)

where y is the dependent variable,

$\beta_0; \beta_1$ are parameters of the regression equation,

x is an independent variable,

ε is a residual.

The article is focused on the comparison of various interest groups' opinions and the discussion on the public resources efficiency and the development of regions in the context of granting subsidies to contradictory measures. It deals with many questions that arise in the discussions and suggestions of their solutions, including the evaluation of the real possibilities of problem solving so as not to cause further problems.

3 Research results

3.1 Subsidies for Farmers

The subsidies paid out to farmers are cost-related. The planned reduction of agricultural subsidies from the EU does not offer a very optimistic view of promoting funding of the agricultural activities in the landscape.¹ No considerable increase in national aids can be expected.² All of this reinforces the need for monitoring of their effectiveness.

As apparent from Table 1 and Table 2, in 2016, an average farm specializing in the sheep and goat breeding obtained less than one-third of operating subsidies compared to an average farm, which is given by its size.

¹ <https://euractiv.cz/section/aktualne-v-eu/news/komise-navrhuje-omezit-dotace-pro-zemedelce-penize-chce-vyuzit-na-obranu/>

² <https://www.novinky.cz/domaci/458368-snemovna-schvalila-statni-rozpocet-na-rok-2018.html>

The farm specializing in sheep and goat breeding is 10 times smaller than an average farm in the Czech Republic both from the viewpoint of the total area of agricultural land and the economic size.

Table 1 Structure of subsidies for an average farm specializing in the sheep and goat breeding (EUR/farm)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Operational subsidies total	46902	79105	52764	40561	49342	33578	31786	34198	25748
Total subsidies on livestock	1755	2372	1268	614	1236	958	1895	2330	2073
- subsidies on sheep and goats	415	910	502	280	889	840	1778	2045	1917

Source: FADN

Table 2 Structure of subsidies for an average farm in the Czech Republic (EUR/farm)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Operational subsidies total	76866	76336	77152	81443	73159	83254	83465	83803	90994
Total subsidies on livestock	1427	1436	3079	2901	1801	1626	3035	4471	4520
- subsidies on sheep and goats	46	55	30	22	64	62	121	125	112

Source: FADN

The development of subsidies for animals is also interesting. The subsidies were higher for sheep farms until 2009, while in 2010, as a result of introducing the aids for dairy cows, the subsidies for animals on an average farm increased considerably. Subsidies for sheep and goats are, of course, considerably higher in the case of sheep farms; it is 9 to 17 times more in each year (Table 1). In light of the total development of subsidies between 2008 and 2016 by comparing an average farm in the Czech Republic and the farm specialized in sheep and goat breeding, we may see a significant decreasing trend in the case of sheep farms as opposed to the average Czech farm (Table 2). This trend is caused by an increasing number of small sheep farms. If we eliminate the size of the farm by converting the subsidies per hectare of the land used, the subsidies for sheep farms fluctuate (the growth rate is less than 0.5 %), while the average farm subsidies increase by an average of 3 % every year. The precondition for obtaining the subsidy for environmental measures including organic farming, the payment for areas facing natural or other specific constraints (LFA) and the voluntary coupled support – support for maintaining ewes or goats – is to comply with a minimum stocking density. Animals being killed by predators may result in the breach of the condition of the mandatory stocking density and the loss of subsidies (e.g. 1 sheep has a coefficient of 0.15 livestock unit).

3.2 Spreading of Wolf Population

According to the Czech Act on the Landscape and Nature Protection, a wolf is a protected species, classified as a critically endangered animal. In the Czech Republic, the packs of wolves inhabit the Kokořínsko-Máchův kraj Protected Landscape Area, Northern Bohemia, the district of Broumov, Krušné hory and Šumava. The individual wolves are observed in Beskydy, Bílé Karpaty, the district of Jeseník or Vysočina and other locations (e.g. recently observed wolves in the districts of Česká Lípa or Třebon).

According to the Czech Statistical Office (basic data on hunting grounds), the number of individual wolves in the Czech Republic territory has increased quickly. Between 2010 and 2014, the Czech Statistical Office registered the number of wolves up to 10 animals. In 2015, the number of wolves was 13, then 30, 61 and, in 2018, the number of registered wolves in our territory amounted to 118, which is an average growth rate of 45 percent a year. This leads to an increase in losses and a number of their compensations (Figure No. 1). The spread of predators in the landscape entails pleasure of the realisation of the intended action on the one hand, but also problems to those who share the space with the wolves, on the other hand. The farmers, hunting associations and villagers have to solve the biggest problems associated with wolves.

In this context, we can observe the spread of the wolf population in other European countries, too. The spread of wolves in Germany has damaged the livestock for a few years; the amount of damage grows twice

faster than the wolf population itself.³ If we count on the average annualised growth of wolves of 30 to 35%, the losses of livestock have increased by 50 to 90 % a year since 2013. Other information on the problem progress in Germany can be found on the website of Interessengemeinschaft der Weidetierhalter Deutschland (wnon.de), Landesjägerschaft Niedersachsen e.V. (www.wolfsmonitoring.com).

3.3 Subsidies to Protect Herds of Livestock against Predators

The reasons why the wolves were originally exterminated from most of the US states, parts of southern Canada and several European countries were mainly due to their depredation on livestock, although fear of wolf predation on humans continues (Mech, 2017). As the number and spread of wolves are increasing, livestock depredations is increasing as well (Mech, 1999; Bradley et al., 2015; Olson et al., 2015). Widman and Elofsson (2018), in their paper, analyse the cost of damage caused by the beasts of prey in Sweden. The compensations for livestock killed by large carnivores are provided for attacks by the brown bear (*Ursus arctos*), the wolf (*Canis lupus*) and the Eurasian lynx (*Lynx lynx*). According to the results, a 1% increase in carnivore density leads to an increase in compensation costs by 0.3 to 0.4 %, while a 1% increase in sheep population density leads to an increase in compensation costs by 0.8 % in case of the brown bear and by 1.1% in case of wolves.

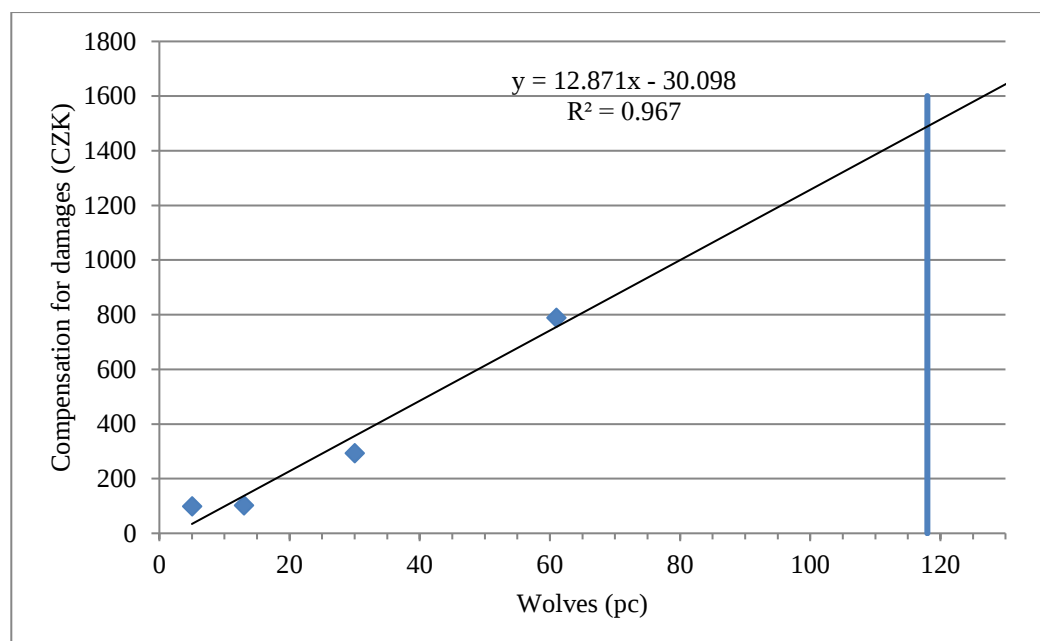
As the wolves have been spreading in our territory, the number of attacks on the livestock, especially the sheep and calves, has recently increased, which results in the conflicts between the interests of protectionists and the livestock owners (Dickman, 2010; Johansson et al., 2012; Naughton-Treves et al., 2003; Redpath et al., 2013; Young et al., 2010). The last-year amount of financial means in the declared 58th call increased by 40 million CZK to 120 million CZK. To secure their herds, the breeders may obtain up to 85 % of eligible cost. Money can be used, for example, on electric fences, complements to solid fences or for buying and training of sheepdogs. Funds from new calls are, however, designed for other projects as well, e.g. drought fighting. Eligible expenditure is defined in the Subsidy Verification Manual published by the Chamber of Auditors of the Czech Republic in 2014⁴; whether this type of subsidies is spent following the principles of economy, efficiency and effectiveness appears to be relatively questionable. Another problem is the economy in the form of establishing the maximum price limits in case of preventive measures.

The figure 1 based on available data of the trend in the wolf population on the Czech Republic hunting grounds (CSU, 2018) and the trend in the compensations of damage caused by wolves (Ekolist, 2018) proves the high statistical dependence between the trend of wolf occurrence in the Czech Republic territory and the trend in compensations paid for damage of the livestock caused by wolves (Figure 1). Considering the current amount of compensation for damage caused by wolves, an increase in the wolf population by 1 piece will result in the growth of compensations of damage by almost 13 thousand CZK a year. Based on the current data on the wolf population occurrence on hunting grounds (CSU), the prediction of compensations for damage caused by wolves in 2018 shows an increase of 89 % (Figure 1). Whereas the amount of compensations currently includes only the price of meat and the frequency of attacks increases, the amount of compensations in the future is very likely to grow even faster. In the field of preventive measure support, a new measure should be introduced under the next common agricultural policy allowing for the flat-rate subsidies for registered farmers in the territory with the occurrence of wolves, bound to livestock units. The subject of subsidy should be the compensation of increased cost defined as fulfillment of the minimum standard for securing the herd, i.e. higher standard of solid fences, more demanding organization of grazing, mobile elements, etc. This measure has not been specified in more detail yet and will be the subject of further debate.

³ <https://www.dbb-wolf.de/wolfsmanagement/herdenschutz/schadensstatistik>

⁴ <https://www.kacr.cz/file/2128/prirucka-final>

Figure 1 Link between the growth of compensations of damage caused by wolves and the number of wolves in the Czech Republic territory



Source: Authors' processing based on the Czech Statistical Office (CSU) data (occurrence of wolves in hunting grounds); Ekolist.cz, dated 5 April 2018 (trend in compensations of damage caused by wolves).

The case of France illustrates that the absolute protection of wolves has hit its limitations. The damage caused by wolves increases dramatically from 45 million CZK in 2004 to 544 million CZK in 2017, representing 2,176,800 CZK per wolf in France. Despite all protective measures recommended by those who favour an absolute protection of wolves, the numbers of killed livestock have been permanently growing. France reports the increase in killed livestock from 8,576 pieces in 2014 to 11,741 pieces in 2017⁵.

The situation is similar in Italy and Spain where the returning wolf population contributes to rural depopulation and elimination of traditional pastoral farming. In the Land of Saxony, Germany, which is set as an example by the wolf protection advocates, the damage reported in the last years increased three times (www.dbb-wolf.de). Paradoxically, the Kingdom of Norway, which provides our wolf protectionists with the generous aid using the Norwegian funds, decided to shoot to death 47 wolves out of 68 wolves living in Norway⁶. In this context, it is interesting to compare the area (385,203 square km) and the population density (14 inhabitants per square km) with the number of wolves in the Czech Republic (118 wolves) and the area of 78,866 square kilometres and the population density of 134 inhabitants per square kilometre.

As stated by Steele, et al. (2013), compensations of damage caused by wolves take into account only the direct effects of the attack by a predator. Indirect effects, such as the effect of the stress arising from the presence of a beast on the livestock acquisitions and pregnancy may also reduce profitability. Unless compensation programmes include indirect effects of the wolves' presence near the pastures, they may systematically discriminate against the farmers. Based on their results, indirect year-to-year financial impacts of wolf attacks may be as big or bigger as direct impacts.

3.4 Suggested Measures

Recommended preventive measures towards protecting the herd against attacks include especially fencing (AC electric fence, electric fence, deterrent fence), overnight housing of the herd and buying of the trained

⁵ <http://www.leseleveursfaceauloup.fr>

⁶ <https://www.theguardian.com/environment/2016/sep/16/norway-wolf-cull-government-wwf-friends-earth-environment-protest>

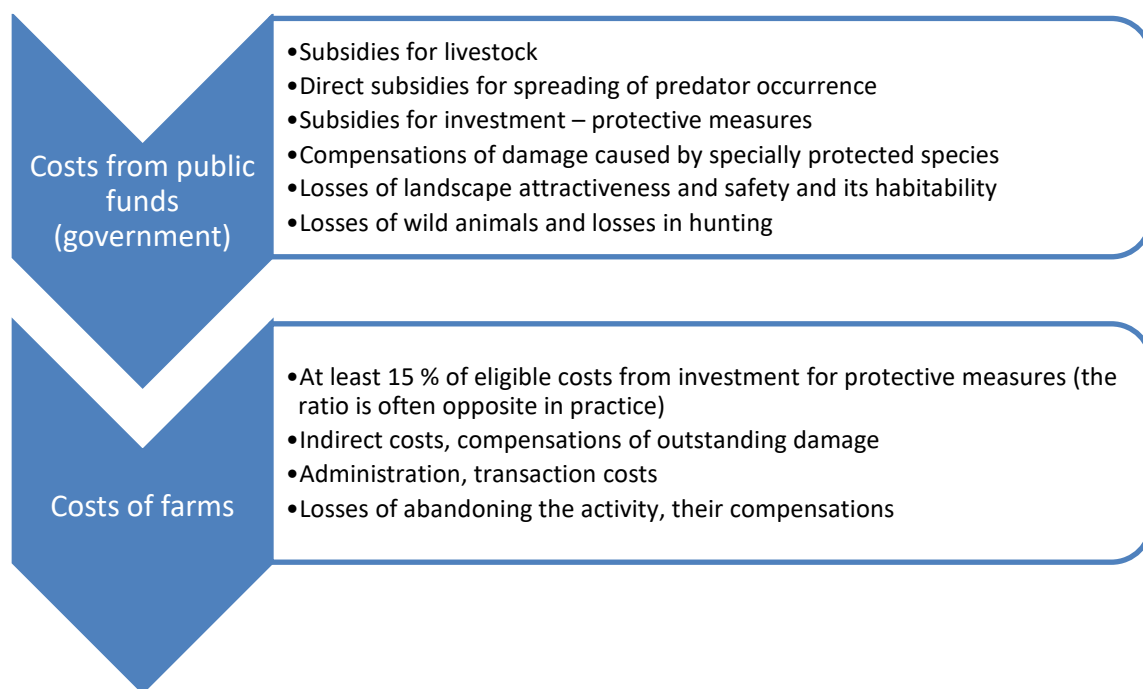
sheepdog. Procurement of electric fences and overnight housing are addressed as investment. This investment, however, cannot be considered cost-effective.

Extensive grazing has a big influence on maintaining biodiversity in given (mainly mountain) areas. It is also used for maintaining the downhill courses (e.g. Hinojosa, Lambin, Mzoughi & Napoléone, 2018). Reduction or elimination of sheep grazing in the Czech Republic will result in further deterioration of valuable grassland of biotopes and disappearance of a wide range of biotopes of rare plant and animal species of the European importance (Krahulec et al., 2001). Protectionists advise the farmers to protect their sheep with fences and, at the same time, they do not want to threaten the current appearance and landscape continuity and its role for tourism. Overnight housing prevents the necessary breeding work and requires the higher consumption of the feed. The animal welfare is difficult to keep in big herds and grazing of all needed areas is reduced. In case of the elimination of farming or leaving of wolves, the investment may become frustrated.

3.5 Costs of Abandonment of Farming

The breeding cost can be calculated. In context of the problem of increasing attacks by predators, also the costs related to the cessation or cancellation of animal breeding and the compensation for the landscape upkeep play a substantial role. The reason may also be the persistent problem which lies in the costs spent on maintaining the standard (desired) state of biodiversity, water management conditions, and soil as a potential production factor including the cost of production restoration under changing climatic conditions. In addition to that it is necessary to add the cost of buying the machinery (already owned by farmers), social costs (unemployment and related costs), loss of income of control institutions, loss of taxes (income tax, VAT or property tax), unregistered self-supply, loss of production, compensations arising from the cessation of continuity, subsidies (refund of excise duty on fuels), cultural heritage (breeds, varieties) conservation as well as indirect costs of supporting the spread of wolves which were not quantified (MF, Duha movement). If all of the above costs are identified, economic efficiency would be lower.

Figure 2 Diagram of costs induced by the predator attacks



Source: Authors

3.6 Institutions

The institutions related to this issue include the state institutions (Ministry of the Environment, Ministry of Agriculture, Nature Conservation Agency of the Czech Republic), mainly the farms (livestock breeders), non-profit organizations (Czech Union for Nature Conservation, Children of the Earth, Greenpeace CZ, Brontosaurus Movement, Duha Movement, Rosa, Zelený kruh), professional organizations (Association of Sheep and Goat Breeders, Czech and Moravian Hunting Union) and multinational organizations (EC, COPA-COGECA). As far as the subsidies for wolf spread support are concerned, only the DUHA Movement spent 5,656,820 CZK⁷ on the Šumava and the Czech Wilderness Conservation Projects in 2017. The involved institutions have different interests and backgrounds. Their powers are also different, which is given by their financial, competence and media support, different approaches to cruelty to animals, degree of responsibility and access to finances. Adverse impacts of the problem are borne especially by livestock farmers and hunting associations. Farmers do not suffer from financial impacts only; they have to cope with several psychological problems accompanied by many risk moments.

3.7 Risks

Genetically, approximately 60 % of the wolf population in Europe cannot be considered genetically pure as there are traces of distant cross-breeding with domesticated dogs in their gene pool. Potential impacts of this finding on the protection of wolves are described by Pilot, et al. (2018). This fact may also be a reason for the strange behaviour of the predator and the difficult protection of the pure animal gene pool.

Apart from attacks on the livestock, absolute protection of the predator and its uncontrolled expansion in areas where no wolves have been found for hundreds of years entails other risks, with a spread of rabies and other diseases being the biggest ones. The introduction of the missing carnivores in the areas where they did not live before will soon result in re-emerging of diseases and parasites that need both herbivores and carnivores to complete their cycles. The risk of attacks on humans is not negligible, either, although the protectionists strive to argue that the fear of wolves stems from the fairy tales and myths and that a wolf is an elusive animal that avoids the people and that healthy wild animals do not attack humans, only those that contracted rabies. As another argument, they use the fact that the man was last killed by the wolf in Europe in Spain in 1974.

Opponents claim that the myth about the shy wolf dates back to the time when the wolves were chased away to uninhabited areas and when the meeting of the wolf and the man resulted in the wolf's death. They also claim that the wolf is a very intelligent and adaptive animal. It will soon find out that the people do not represent any danger for it and as the wolf population will expand to the densely populated areas, the attacks, not only on the livestock, will be more frequent. A significant discrepancy among the institutions of conservationists, farmers, and hunters is logical. Many sources document the wolf attacks on not only the livestock and dogs but also the people and there are plenty of them. The documented attacks on the humans were compiled in the so-called Linnell's report (Linnell, et al. 2002) and other cases (although majority of them are outside of the EU), of course, still emerge (for example the latest attack on two children in Poland near the border with Slovakia)⁸.

3.8 Controlled Culling of Beasts of Prey

All (state and non-governmental) organizations dealing with nature conservation thoroughly refuse the debate about possible controlled culling of beasts of prey in the event of their outbreak and further expansion in the cultivated landscape. With the declared natality of 35 %, the expected development is alarming, let alone the migration from Poland, Germany and Slovakia. The Federal Agency for Conservation of Nature (BfN), for example, predicts that the wolf population in Germany will grow from current 1,000 animals to more than 4,000 in 2022, whereby the capacities of locations suitable for wolves will be exhausted

⁷ <http://www.hnutiduha.cz/o-nas/financovani>

⁸ http://www.tvnoviny.sk/domace/1925548_vlk-napadol-dve-deti-utok-sa-stal-v-polsku-nedaleko-slovenskych-hranic

(<https://wnon.de>). In this context, the issue of the speed of wolf expansion in the Czech Republic is alarming since, based on the current data, the wolf population in the Czech Republic amounts to already 118 animals, which significantly exceeds the natality. If we add the migration, this development will need an intervention of humans. Our landscape is not ready for such development.

As early as in 2003, Treves and Karanth published that the population of beasts of prey recovered in some areas to such an extent that the controlled hunting was considered. The reason for the culling of beasts is to prevent agricultural losses or to protect other species. In many areas, the controlled culling of beasts happens. The policy of controlled culling should include scientific monitoring using sensitive methods that would reveal a significant population decline. The duly performed regulation might contribute to the greater tolerance of the public towards the beasts of prey (Treves and Karanth, 2003). Tensions that have built up in connection with the occurrence of these beasts in Europe nowadays have reached a dangerous level. Sweden where the current wolf population is estimated to be 400 included wolves in the list of games in 2015. Finland, where the wolf population is estimated to 235 animals, has performed reduction culling for five years with 75 wolves killed in this period. In the last hunting season, 43 wolves were shot and the planned cull for this year is 53 wolves. Both countries explain that the reduction culling done by hunters is a necessary tool helping them maintain the limited wolf number. It is necessary to proceed in such a way that this indicator is acceptable both for local hunting grounds and local biotopes. Representatives of these countries, at the same time, warn that they will defend their opinion before the General Court of the European Union (taken from the magazine Myslivost, 2018).

An efficient livestock protection is so expensive and demanding that its price exceeds several times all profit from farming. Authors of the conservationist policy must understand that the densely populated parts of Europe are not permanently suitable for large predators. Unless the defence results in killing of wolves, the wolves will start to consider it a certain type of a game and become less shy when meeting the people and they will come closer to or directly enter the human settlements where they consider practically all domestic animals as their prey. The greatest misunderstanding between protectionists and farmers is that the former protects predators and the latter their animals.

4 Conclusions

This paper is aimed to point out the main impacts of the clash with the progressively expanding wild predator in the cultivated landscape. This problem may, for the time being, appear as marginal in the Czech Republic; however, it will undoubtedly become more and more serious shortly as indicated by experience from other European countries.

In connection with the analysed problem, the main trends were identified:

- The subsidies for the ovine and caprine animal breeding have increased, both in total and per farm.
- The future development of subsidies for animal farming will probably decrease, while the predator promotion will tend to grow.
- The damage of animals killed by predators, especially the wolves, have been increased significantly and this trend will continue its upward movement. The growing population of wolves will result in both the increasing number of harmful events and the amount of compensations for killed animals since the compensations currently paid out to the farmers cover only a part of their damage.
- The subsidies for preventive measures to protect the herds will grow; these measures are, however, not quite efficient and the arguments are not quite substantiated.

- Also, behavioral aspects of the problem on both sides are far from negligible.
- There are many risks generated by the above-mentioned trends.
- It is necessary to analyse the development of damage and compensation thereof in terms of the set of farms affected. This requires a specific approach. There is no access to the reported volume of damage, especially that which was recognized by environmental institutions. The compensations for damage in 2019 significantly increase and therefore the data for previous years need to be recalculated.
- The number of wolf population at the end of 2018 presented by the hunting organization was confirmed – in contrast to the nearly 50 % lower population stated by the environmentalists based on the prediction of compensations for harm caused by wolves.^{9 10}
- Damage has also been done to very valuable and irreplaceable animals of European importance, such as fallow deer.
- The existing problem is data accessibility. If the institutions in question grant or receive subsidies, they should also provide the necessary data on the activity being monitored.

It is necessary to realize especially the potentially significantly increasing expenditure from public funds giving rise to further expenditure. An increase in compensations and aids of protective measures result only in the expenditure spill-overs and not in solving the problems, whilst the target situation is not quite clear from the conservation institutions' viewpoint. The data and information on costs related to this issue should be made available without undue delay.

In November 2017, the European Parliament warned that certain animal species (in former Directive these species were ranked among the animals in need of extraordinary protection) have already achieved a good status of protection in some European regions. In this situation, they may endanger other wild species as well as the farm animals. The European Parliament, therefore, asks the European Commission to develop the procedure for assessment of the status of protection in particular regions to allow the change based on already achieved desirable level of protection (EP, 2017).

The livestock farmers insist that the wolves no longer need the degree of protection that is currently applied and that the wolves do not belong to the cultivated landscape, and ask for the establishment of areas where their presence will be tolerated and the areas where the wolf will be eliminated. Serious damages to the livestock are the result of the fact that wolves are not afraid of farmers and that their attempts to attack herds do not end fatally for them as documented by experience from other countries. The sheep breeders in the district of Broumov tried to draw attention to this plight even through the legal dispute, but with no success. The government so far does not seem to listen more attentively to the damaged farmers. The Broumov sheep breeders, however, managed to publicize this matter at least.

The multifunction effect of the pastoral farming of the livestock must continue as well as its production it generates. The development and sustainability of life in the country depends on them. Both the Czech and European legislation strictly protects wolves. Also thanks to this fact, the wolves expand throughout Europe and their populations increase not only in the Czech Republic but in all neighbouring countries, too. It appears that the nature conservation has its limits as well. It is up to individual countries what they will protect more. The claim that absolute protection of wolves is necessary for the inhabitants is questionable. Meaningfulness of laws should not be put in question, which is, however, not possible when all protective measures, projects and management are a product of the protectionist lobby that claims that the people have to get used to the

⁹ https://www.idnes.cz/zpravy/domaci/cesko-pribyva-vlku-myslivci-pastevci-chteji-omezovat-pocty.A190531_211033_domaci_zaz
¹⁰ https://portal.nature.cz/publik_syst/nd_nalez-public.php?idTaxon=34348

wolves coming and denies that the damaged farmers have the priority right to protect their livelihood, property and safety.

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