

Final Report to Rufford Small Grants, 2006

Booster Grant

Development of the FWFF's Compensatory Programme for Livestock Losses Caused by Predators and Restoration of the Transhumance as Traditional Nature Friendly Livestock Breeding Practice in Southwest Bulgaria and East Macedonia.



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BULGARIA



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1. Summary

During 2005 FWFF directly compensated 48 farmers, and indirectly about 200 have received support from the program. 24 sheep, 7 goats and 31 guarding dogs were given as compensation. Thanks to FWFF the "HDI" Insurance Company has sell over 200 insurance policies for livestock with total number of 1341 animals and over 500 livestock owners insured. These facts help for reduction of the Man/predator conflict and reduce the eventual poison baits use. Taking of dead animals by FWFF team is also preventing the poisoning. Any time the team receives a call for available depredated animals the carcasses are taken and transported to the feeding site of vultures. This way 76 potential poison accidents were prevented.

Poster for the Compensation program has been printed in 2000 copies. Almost everyone livestock breeder in the SW Bulgaria has heart for the Program. All regional forestry and veterinary services are aware for the FWFF's Compensation program and its goals.

Thanks to Rufford Small Grants FWFF bought and renovated two sheep shelters in lowlands and in the high mountainous areas. This is very important step to restoration of the Transhumance in the area.

2. Background

During the implementation of the previous RSG the FWFF team provided measures to stop the illegal use of poisoned baits in the natural environment. A unique Compensatory Program for livestock damages caused by predators has been designed and established by the team. Damages compensation of one for one sheep has been provided. The FWFF established its compensatory herd of sheep and managed it by sustainable way, so to be able to compensate yearly about 30 sheep and this to be long lasting practice. But the team discovered that the compensation would not totally solve the problem as a single measure. The shepherds should be trained and new or return of the old traditional livestock management practices should be promoted and applied. The lack of experience in most of the local sheep owners causes easy access of the predators to their livestock.

The predators form the main problem for the livestock breeders in SW Bulgaria and East Macedonia. But the livestock losses caused by predators appeared also hundreds of years ago. Why now the problem is bigger? The truth is that the traditional defensive practices have been forgotten during the Communistic period. In that time the livestock breeding have been a state property and the wolves were almost extirpated thanks to the official and mass use of poisoned baits (mainly strychnine).

Now the livestock is returned to the private owners. They have not knowledge on how to keep the livestock and moreover how to protect it by predators. In the same time the ban of poisoned baits use according to the Bern Convention helped the wolf population number to grow. Today there are very good wolf population in Bulgaria and Macedonia as well as a lot of not experienced shepherds often loosing their livestock from predator attacks.

In 2005 the Fund for the wild Flora & Fauna (FWFF) has been granted Rufford Small Grant for the project "Development of the FWFF's Compensatory Programme for Livestock Losses Caused by Predators and Restoration of the Transhumance as Traditional Nature Friendly Livestock Breeding Practice in Southwest Bulgaria and East Macedonia." The project is in accordance with the most urgent measures necessary to be taken underlined in the Action Plan for recovery and conservation of vultures on Balkan Peninsula and adjacent regions (Balkan Vultures Action Plan). In the project activities were involved 15 FWFF's members and activists. Also invited to participate were Strumyani Municipality, Pirin National Park and other local institutions and NGOs.

3. Methods

Methods chosen were in accordance with the previous activities of FWFF concerning the compensation of killed by predators livestock.

- Collection of information for killed animals due to predators' attacks in the region from farmers visiting each village and inquiring the farmers and the local people, etc.
- Setting up a list of requirements for the farmers how to keep their herds in order to be compensated for livestock kills due to predators.
- Visiting all reported cases for killed livestock and investigating the cases.
- Collecting information for the level of Man/Predators conflict and possibility of applying poison baits.
- Compensation of farmers for killed livestock providing a live one from the FWFF Compensation herd.
- Collection of information through observation and monitoring of some species considered to be indicators for poisoning: Ravens (*Corvus corax*), Egyptian Vulture (*Neophron percnopterus*), Griffon Vulture (*Gyps fulvus*), Golden Eagle (*Aquila chrysaetos*) – for wolf poisoning and poison baits setting for predators; Jackdaws (*Corvus monedula*) and other Corvidae as well as Turtle Dove (*Streptopelia turtur*), Starling (*Sturnus vulgaris*) and others – for insecticide and other pesticides uncontrolled use. In all cases the presence of the Fox (*Vulpes vulpes*) is also indicative for both poison baits use for control of predators and uncontrolled overuse of pesticides in the agricultural lands.
- Collection of information for all kind of poisoned (dead) animals e.g. dogs, cats, mice, rats, as well as wild species. Taking samples for toxicological analyzes and sending them to the FWFF-Sofia and NVI Sofia for analyzing.
- Using mass media for raising the public awareness for predators and the alternative ways of preventing livestock kills and reduction of Man/ Predators conflict intensity.
- Keeping of own sheep and goat herd by FWFF using it for direct compensation of killed by predators livestock.
- Nature friendly stock breeding practices application with the compensation herd (e.g. grasslands management, Transhumance restoration and dog guarding)
- Raising the public and the local livestock breeders' awareness for proper livestock defensive practices against predators' attacks.
- Involvement of local and national institutions to cope with poison baits use and man/predator problems.

4. Results and analyzes

Action 1: Compensation of livestock losses caused by predators

a) Description:

Development and maintenance of the Compensation herd in order to provide animals for compensation and compensation of farmers that have lost their livestock due to predator attacks.

b) Methods:

The FWFF is raising two herds of about 250 sheep and goats in total and use the alive animals to provide direct replacement of dead ones killed by predators as compensation to their owners. The owner, which livestock animals have been killed by predator should inform FWFF in 24 hours period. FWFF team visits the place and investigates the case. If eligible for compensation the owner would be compensated by FWFF. The three basic rules for that are: the herd to be always accompanied by a shepherd; the herd to be always guarded by well trained guarding dogs; the herd should not spend the night out of the corrals or village.

c) Participants and cooperation:

Dobri Berov, Milcho Stanoev, Ivan Radkov, Yordan Sapundjiev, Stamen Stanchev, Emilian Stoynov, George Kochev as well as about 11 volunteers were involved in collecting hay and forage, cleaning the sheep shelters etc.

d) Results:

The Compensation herd of FWFF is now consisted of 256 sheep 9 rams and 34 goats. The herd is divided on two equal parts situated in Boboshevo and Kotel. It is expected that after the reproduction period there will be at least 150 newborn lambs and 40 goat kids. The total number of the animals in the compensation herds is expected to be over 400 animals in April 2007. The need of provision of Karakachan Dogs first, instead of sheep or goats has been found priority action in 2006-2007. That is why part of the sheep and lambs that were planned to be provided as compensation were sold and with the money were bought Karakachan Dogs. They were provided as compensation and this way the owners have got eligibility for compensation (with alive sheep) for the next time when predator kills their livestock. It was decided the two herds to be formed in Kotel and Boboshevo for the moment due to the following reasons:

- The divided herd is less exposed to common mistakes and problems with the breeding. For example in 2003 the herd in Boboshevo has had a lot of problems that did not appeared in Kotel in 2004, but now in 2005 the problems in Kotel are bigger than those in Boboshevo. So dividing the herd is ensuring that in any case there will be enough lambs raised to keep the program running.
- There is a possibility FWFF to receive subsidy from the government, because is a livestock breeder in Kotel region. This preliminary program is running in few municipalities in Bulgaria as Kotel is one of them.
- The livestock breeding conditions are better in Kotel for the Karakachan Sheep than in Boboshevo.
- When the herds are divided it is possible to raise Karakachan sheep in the one herd with Karakachan rams and another more productive breed in the other herd. The herd in Boboshevo is consisted mainly of Plevan Black-headed Sheep that is more productive.
- One of the employed people in Kotel is working in the FWFF Eco-farm maintaining the sheep herd, but the same person is also the caretaker for the vultures in the aviary in Kotel.

During the period of January 1, 2005 to November 1, 2006 156 cases of killed livestock from predators have been reported in SW Bulgaria. In all these cases the wolf (*Canis lupus*) caused about 87 % of the livestock kills. About 700 sheep and goats and 67 donkeys, 23 horses and 52 calves were killed in area of 350 sq.km. We assume the information that reached us is about 40 to 50 % of the real number of the victims, especially concerning the large livestock (cattle, donkeys and horses). This is due to the still big number of people that are unaware about the Compensation program of FWFF.

In almost all these cases the predators' kills became possible due to shepherd's mistakes and wrong way of keeping livestock. In some other cases sheep and goats were killed in the corrals during the night but these were kept neither from dogs, nor from a man. But the number of the cases with well

organized livestock defence against predators is raising. This is caused partly due to FWFF campaign for Karakachan Dogs distribution. Although there are dogs in the herds in some cases they are not enough and the livestock breeders ask us to provide them more dogs (at least one or two more). In any case the existence of the Karakachan Dogs is minimizing the number of the victims in the herd to acceptable numbers 2-5 animals per year in herds of 80 to 150 animals.

During project period 422 owners have lost their livestock units. All they were compensated in one way or another. Directly compensated by FWFF were 109 owners (they received alive sheep, goat or Karakachan dog) and about 700 are beneficiaries due to provision of Karakachan Dogs in the common village herds.

As the main problem for compensation of the livestock breeders that lost their animals due to predator attacks is the lack of guarding dogs with the herd (so they are not eligible for compensation by FWFF) the FWFF team decided to provide as much as possible Karakachan Dogs for compensation. This way FWFF has achieved the following goals: improvement of the herds' defence; compensating the shepherds so the conflict Man/Predator is reduced; Making the shepherds eligible for future compensation- they like this; Reducing the probability of poison use at least because of the presence of very lovely and valuable Karakachan Dogs, that could become victim of the poison as well.

For the project period 31 Karakachan Dogs, 17 goats and 74 sheep were provided as compensation in the Municipalities of Sandanski, Strumyani, Kresna and Simitli. Compensation of another 28 livestock breeders with one goat each is approved, but preventive measures for stopping the problem with depredation in this village is underway. Two Karakachan Dogs were provided for the common village herd. Insurance was paid at HDI Insurance Company for the rest of the goats in the village. And when the dogs become ready to guard the herd in the late winter FWFF will provide 28 goats- one for every one affected owner.

Relatively good TV and newspapers coverage has been established for the FWFF compensation program and activities. Two national TV (bTV and BNT) presented the program in the news emissions. At least 22 publications have taken place in the regional and national newspapers.



Picture 1. A poster for the Compensation program has been edited and distributed in most of the villages in the target region.

e) Discussion and conclusions:

FWFF team is accepting the provision of Karakachan Dogs to the livestock breeders as very much important step. Now knowing about the compensation program of FWFF and willing to become eligible for compensation with alive sheep and goats, more and more livestock breeders are willing to have Karakachan Dogs guarding their herds. As they are still too expensive for most of the livestock owners in Bulgarian south-west, one of the best solutions is FWFF team to provide the dogs as compensation instead of sheep. Our team did it in 2005 and at the moment this practice is showing satisfactory results. This way the contact of FWFF with the compensated owners gets deeper and long lasting. FWFF is receiving information for the dogs' raising and training results, and for any dog's success in the struggle against predators. The dogs' owners are stating against use of

poison as their dogs could be the next victims. They inform us when their dog is poisoned and thus we are informed for any poisoning in the area. The livestock breeders are grateful and become good friends of FWFF.

It is obvious that FWFF have wider influence over local livestock breeders and achieves good results when requires something, but also help to the local people to solve their problems.

It seems that provision of Karakachan Dogs as single activity is not as effective as when combined with provision of alive livestock and insurance as compensation in full spectrum program.

Concerning the sustainability of the Compensation Program:

With the help of the Rufford Small Grants (RSG) FWFF succeeded to buy its own sheep shelter in Kotel and to enlarge and repair it as well as the one in Boboshevo. Also more sheep were bought thanks to the RSG and Vienna Zoo. In 2005 FWFF has received governmental subsidy for land use and sheep grazing in Kotel Mountain of about 14 000 BGN. The incomes from the two herds, from selling the milk, lambs and old sheep is about 6 000 BGN and we should consider as reinvestment the female lambs (~4000 BGN). The outcome for land renting (4 000 BGN), documentation (800 BGN), veterinary care (690 BGN), shepherds salaries (10 800 BGN) and forage (4 300 BGN), providing sheep for compensation (~4000 BGN for a year) and shelter purchase, reconstruction and repair in Kotel (12 000 BGN) is about 26 500 BGN and is still bigger than the income although we do not calculate the fuel used for permanent visits for control. So even with the BVAP and the governmental subsidies the herds are still not sustainable. But we should consider some facts as:



not reached optimum number of the herds (about 150 sheep are lambing in total); not well established infrastructure and not well working business part of the project.

We would consider 2006 for the test year - is it possible the Compensation program to be self funding and sustainable in recent circumstances? Even we believe it is possible, we still do not know what to expect in 2007 when Bulgaria will join the EU.

Picture 2. FWFF's volunteers are cleaning the barn of the Compensation sheep and goat herd.

Activity 2: Wolf and bear activities study in SW Bulgaria and East Macedonia

a) Description:

Special research of the wolf and bear activities and the number of killed livestock was conducted in SW Bulgaria by FWFF team. Also the attitude of the local people towards the predators was studied.



b) Methods:

The project team has provided several visits in the villages of SW Bulgaria and East Macedonia to inquire the local stockbreeders about large carnivores presence and about predator attacks over livestock. Standard questionnaires with 12 questions were used. The problems of the local people with wildlife species and potential conflicts were also in focus of the inquire.

Picture 3. FWFF team is visiting shepherds, collects information and presents the Compensation program.

c) Participants and cooperation:

Stamen Stanchev, Emilian Stoynov, as well as about 12 volunteers were involved in collecting data for predators attacks and killed livestock.

d) Results:

The results are showing that the level of the conflict in the areas where wolves exist is very high. The farmers believe that the wolves are increasing and that more and more livestock kills are appearing. The data collected from our team shows that the problem with predators exists in the farms and areas where no guarding dogs were used. In many cases breeding of guarding dog with the herd would solve the problem. But the problem is that there are no suitable dogs available and the ones from the breeding centers are quite expensive for the farmers. For example one dog costs about 100-200 Euro while the shepherd's salary is less than 100 Euro per month. In 70% of the cases with big number of killed livestock, the wolf is entering the barn during the night.



Picture 4. Sheep killed by wolves in the barn during the night in the village of Palat, SW Bulgaria.

In cases when wolves enter the barn they kill big number of sheep or goats (5 to 10 and more). On the pastures they usually kill single sheep and goats in rare cases 2-3 and more. In all these cases the predators kill became possible due to lack of good guarding dogs.



Picture 5. The good guarding dogs could be found mainly in the Dog breeding centers in the towns and on Dogs exhibitions.

About 100 owners have lost their livestock units with the Compensation program area in 2005. Approved for compensation were about 51 owners, as most of them received Karakachan Dogs they will also receive one sheep or goat (even some of them lost 2 or 3 and more). The FWFF campaign for providing Karakachan Dogs

farmers, but FWFF position is as compensation for predator kills is quite well accepted by most of the farmers, but FWFF position is that the dogs should be given preventively as well.



Picture 6. More than 20 Karakachan Dogs were provided by FWFF to farmers as compensation for livestock losses caused by predators in SW Bulgaria

Action 2: Providing clear food for vultures and other carcass eating birds of prey in SW Bulgaria

- a) Description: Supplementary feeding was provided at four feeding stations – "Ilindentsi", "Kresna Gorge", "Zemen Gorge", "Rila". Our team is bringing the victims of the wolves and transports them to the feeding sites in the area. By this way we help the carcass eating birds providing them extra food as well as we take away the possible bait in which the owner could place a poison. Most of the feedings were made by killed by wolves sheep, goats, donkeys etc., which we bring after investigation of wolves' kills.

- b) Methods: The food – mainly whole carcasses of livestock animals, have been provided thanks to the compensation program. Also local people called the FWFF team when a dead animal appeared. FWFF team transported the carcasses to the feeding places according to the scheme. Also in some cases slaughter offal taken from the Blagoevgrad slaughterhouse was used for feeding, when no carcasses appeared.
- c) Participants and cooperation: Emilian Stoynov, Stamen Stanchev, Strumyani Municipality, RIEW – Blagoevgrad, Blagoevgrad Slaughterhouse.
- d) Results: In regard of this subject FWFF team provided research on all known rubbish dumps in the region as well as all known slaughterhouses and large pig farms. It was confirmed carcass depositing (illegal) next to two of the largest pig farms in SW Bulgaria as well as from five illegal slaughterhouses. These are marked with GPS and are integrated in the monitoring of the feeding places. The number of ravens and other birds of prey is monitored as well as the number of the dogs using these places for feeding.



Picture 7. The killed animals are taken by the FWFF team and it brings them to the feeding site for vultures

Being aware that this kind of carcass disposal is playing an important role for vultures and imperial eagles conservation in Macedonia, FWFF is now asking other organizations to find all such places in their areas too and to integrate them in their monitoring schemes. 64 feedings have been made on the main feeding places as 6468 kilos of carcass have been deposited.



Picture 8. Sheep killed by wolves taken by FWFF and set for food to the vultures' restaurant.

e) Discussion and conclusions:

Probably it will be better the FWFF team to make feeding of only two (Kresna and Ilindentsi) regular feeding places but with bigger quantity of food disposed and long-lasting observations. Also in the high mountains will be provided mainly bones with 2-

3 days observations on permanent 3-4 places. This will probably improve the monitoring and the knowledge for the existence of the large vultures and their status in the area. The National Park authorities should be involved in the feeding and monitoring schemes.



Picture 9. Egyptian Vulture is flying over FWFF's vulture feeding side (vulture restaurant) in SW Bulgaria

Action 3. Insurance companies involvement in the man-predator reduction process

- a) Description: To meet Insurance companies in the region and negotiate with their agents in order to find best insurance scheme for livestock for the farmers. After that to convince the Insurance Companies to enlarge their activities in the rural areas, where is not enough attractive place for such business. At last, to persuade local farmers to insurance the livestock for predator attacks if they don't want to fulfil Program's requirements.
- b) Methods: Our objective was to find the Insurance Company that is enough stable and hopeful, at the same time to insurance livestock, to have limited requirements as preconditions for farmers and to provide cheap insurance tax for predators' attacks. Secondly, we insisted to become a partner of chosen company and to lead insurance agents accept our recommendations, expertise and, most important, to call us every time there is a case for investigation of predators' attacks. Thus we could be always updated with fresh information, monitoring the contemporary situation and be able to act in the case of potential poisoning. What we did more is to attract mayors of small villages to become free contract workers of the Insurance Companies and to become personally interested in insurance of livestock of the local people.
- c) Participants and cooperation: Emilian Stoynov, Stamen Stanchev, HDI Company, Mayors of the villages of Strumyani, Razdol, Brezhani, Senokos, Mechkul and others
- d) Results: At first search of the most suitable for our aims Insurance Company we found out there are only three companies that provide insurance for livestock in Bulgaria, these are the former Governmental Insurance Agency/GIA, Alliance Insurance Company and Hanover /HDI Insurance Company. Being already much time in the region and big structured, so with many employees with unclear responsibilities the GIA and Alliance didn't pay us much attention. So we started to negotiate with Hanover/HDI agent, as it was new at the insurance market of our region. At that moment our interests coincided and we started to work together. At the moment there are two mayors free contracted workers of HDI and the interest for insurance is growing. Thus they deal as a local office of the Insurance Company. In the other villages the sheep and other livestock owners should be invited on a meeting with the insurance agents and so to be paid more insurance at once. In some cases the FWFF team needed to transport the insurance agents just to let them start to cover the remote areas with their insurance program.
- e) Discussion and conclusions: The problems with insurance of livestock in Bulgaria at the moment is very complicated. On one hand, the Insurance Companies find it very difficult and expensive to insurance livestock of too many farmers (more of farmers have about 5-20 sheep and the globalization in the business is still far), because they need to travel a lot in the rural areas and the insurance taxes for livestock are very low. So it is equal worth for them to make insurance of one apartment in the city and 100 sheep from predators' attacks. But the second task is going to waste their time 10 times more and much more money for travelling.

Action 4: Transhumance study and implementation

a) Description:

Studying the recent problems for applying the Transhumance in Bulgaria has been provided.

b) Methods:

Interviews with local livestock owners that have ever practiced Transhumance were provided. The National parks' management plans have been reviewed and the legal status of the Transhumance was studied.

c) Participants and cooperation:

Emilian Stoynov, Stamen Stanchev the National Park administrations participated in the study.

d) Results:

About 120 interviews with local livestock owners that still practice Transhumance or that practiced it in the past were provided. Short distance Transhumance is still practiced in Rila, Pirin, Ograzhden, Maleshevska and Osogovo Mountains.

The following regions and specialization have been found:

- On the western slopes of Rila about 1200 – 2100 sheep and about 800 cattle and 500 horses are grazed up in the mountain during the summer.
- In eastern Rila the number of sheep is about 3000-4000 grazed up in the mountain during the summer and also about 2000-2500 cattle, and 400-600 horses.
- In western Pirin there is the bigger number of sheep- 4000 - 5000, also 2000 cattle and 1200 horses.
- In eastern Pirin there is about 2000 sheep and 600 horses but cattle is also presented.
- In Ograzhden and Maleshevska Mountains small herds of sheep are grazed in the higher places during the summer about 1000 animals in each mountain.
- In Osogovo very few cattle (150-200) and horses (200-300) are grazing during the summer.

The official information from the National park administrations shows:

- 1157 cattle and horses and 886 sheep have been grazed in the Pirin National Park in 2004
- 851 cattle and horses and 1782 sheep have been grazed in Rila National Park in 2004

The real number is probably bigger.

The average altitude to which the most of the transhumant herds are grazed in the summer is 1600 m.a.s.l. for the sheep and 1900 m.a.s.l. for the cattle and the horses. While the winter grounds are situated in the Struma and Mesta rivers next to or inside the villages at altitude of about 200- 700 m.a.s.l.

The main problem for the recent reduction of the Transhumance is the lack of milk dairies in the mountains and the lack of will of the local businessmen to buy the milk from high mountainous areas due to difficulties in the transportation for relatively small amounts of milk. Only livestock breeders that make cheese for their own use are continuing to move up the livestock in the mountains. In a conversation with Rigas Tsiakiris from HOS Greece he stated that the same problem exist in Greece too. This especially concerns the sheep breeding.

The second biggest problem is the lack of large private holdings. Almost all sheep herds that are moved up to the mountains are cooperative village herds. And if one or few owners are not agree this year the herd to be moved up, than the entire herd is staying in the lowland. This is because the owners are grazing the common herd for several days or a week and after that the next takes the turn.

The third main obstacle for restoration and future existence of the Transhumance is caused by the bad conditions for living of the shepherds in the mountains. The people in the 21 Century would like to have at least the minimum of the basic advantages of the recent times. Fresh food, roof, walls, bed, heater, shower, minimum electricity, radio and or TV are the basic things. Phone and possibility for fast transportation to the nearest town in case of emergency is also required.

From legislative point of view the short –distance Transhumance is not restricted unless the animals should pass from one municipality into the other. But even for longer distance Transhumance permission would be obtained by the veterinary authorities. The National parks' Management plans are restrictive to the livestock breeding although it is obvious the lack of enough livestock grazing in the mountains. This lobby is still strong and the restrictions are still in charge, even there are ideas for total ban of livestock grazing in Rila National Park. In the same time even if all restrictions are followed the potential of the pastures in Rila National Park are calculated able to host 35 000 sheep and 10 000 cattle and horses according to the actual management plan. Comparing with the numbers above it is obvious that the recently grazed animals in the park are far less this number and not restrictions but stimulation of livestock breeders is needed at the time.

Comparison with Macedonia is impossible, because there are big state or private holdings traditionally raising their livestock using the Transhumance method. If there are not milk diaries (although there are) in the high mountains in Macedonia the holdings are allowed to produce cheese and to sell it on the market. In Bulgaria very strong restrictions are set on this matter and it is almost impossible.

A booklet "the past and the present of the Transhumance on the Balkan Peninsula is in preparation, but due to the bigger size of information collected it would be necessary the edition to be co-financed. FWFF has received a small grant by Small Grants Program of Global Environmental Facility for restoration of the Transhumance in Bulgaria and co-financing of the above mentioned edition is planned. It will be printed until the end of the year 2006.

e) Discussion and conclusions:

The good new is that the Transhumance is not totally lost for the SW Bulgaria. However the trend still shows decreasing of the interest of the livestock breeders to practice it. The other good point is that it is now known what is needed to be done to restore it.

- Firstly it is needed the livestock breeding to become a business and more money to be invested in it. This will increase the number of livestock and the need of finding solutions and increasing the effectiveness. Hopefully this process is ongoing and will be continued in the next decade.
- The National Parks administrations should accept the need of livestock grazing in their areas as very important and should support it.
- One or few demonstrative projects should be implemented by NGOs and Park administrations to develop the infrastructure and shepherds cooperation in the high mountains. For example small hut with several rooms could be built and personnel could be employed to maintain it during the summer as several shepherds would live in it and to graze their herds in the area around. Signing a contract with a milk diary to buy and transport the milk form this "consortium" would be possible. Also common dining room could exist and breakfast and dinner could be proposed to the shepherds as well as a package for the lunch. Such place would be very much suitable for education and training of young shepherds etc. The good working conditions and organisation will hopefully attract more people to choose this kind of work as their job.

The training of young people to become shepherds and to make the seasonal migration of their herds is very much important. As FWFF is doing Transhumance with the Compensation herds in Pirin probably it would be possible to organize trainings for shepherds.

The FWFF team has got a contact with few private sheep holders that are interested to practice Transhumance and are even able to take more sheep from the villages and to move them up in the mountain. This will reflect with our goals from point 3 below. But their problem is again the lack of organization of milk sell.

Action 5: Helping the improvement of livestock breeders' co-operations

a) Description:

Organizing local cooperatives of sheep holders to raise their sheep together so to improve the defence against predators.

b) Methods:

FWFF established common sheep breeding cooperatives with the local people and is paying the half of the salary of the shepherd. The other part is paid by the involved co-operators. This way FWFF is ensuring that permanent well trained shepherd is taking care for the sheep and also two to three well trained Karakachan Dogs are introduced into the herd. This way FWFF is solving the problem with incompetent grazing of sheep in regard of defence of predators and also is taking care for the dogs. The both problems lack of guarding dogs and the lack of experience of the shepherds were found crucial for the reduction of depredation of livestock. These two things combined with the compensation of the killed by predators livestock units is almost fully solving the Man/Predator conflict.

c) Participants and cooperation:

Emilian Stoynov, Stamen Stanchev, Mayors of the villages, the local livestock owners and the employed shepherds were participating in the action.

d) Results:

The first cooperative has already been established in the village of Boboshevo. There 7 local people



cooperate with us in grazing their sheep. They are well protected against predators as we keep three good Karakachan dogs and a paid shepherd is guarding the sheep herd. This is valid only for the summer grazing period as every one is willing to feed its own sheep during the winter. However as they do not graze them during the winter they are not exposed to predator attacks.

Picture 10. FWFF co-operates in sheep breeding with seven livestock breeders and help them to improve their livestock defensive system against predator' attacks in village of Boboshevo, SW Bulgaria

During the summer period the well guarded FWFF herd have not had predator attacks, while the other herd of the rest of the sheep owners in the village lost 3 sheep due to wolf attacks. FWFF still does not compensate the owners in Boboshevo as it is situated out of the target area and because the people there have the opportunity to get in cooperation with it.

We consider the co-operative created in Boboshevo as a partly successful we believe that more people will join the initiative next year.

e) Discussion and conclusions:

It is essential the requirements for defence of the livestock to be widely distributed. Most of the people are agree to take the due measures to stop the predator attacks. FWFF team will support them, providing shepherd dogs, consulting them how to improve their corrals etc. But there are also a lot of small holders that are not able to stop the predator attacks to their livestock and very serious work with them should be planned. The main activity should be the cooperation of many small holders in cooperatives and than to be employed a permanent shepherd. Also shepherd dogs for such a cooperative should be provided. It is believed this will be a good tool for improvement the defence of the livestock from predators. Also the FWFF herd could be integrated in such a cooperative and also FWFF to be the main co-operator.

5. Problems encounter

The biggest problem is the lack of good organization of the sheep and other livestock breeders in order to reduce the predator kills. This includes lack of good shepherd dogs or the lack of will in the owners to keep dogs, because of the unsuccessful cooperative way of keeping herds.

The second biggest problem is that also because of this kind of cooperative breeding the insurance of sheep and goats is very difficult.

When mass killing of livestock appear it is not possible to reject requirement for compensation. In these cases when almost all villagers have lost their livestock units are the cases when everyone is against the predators and is not against any kind of revenge including use of poison.

6. Future work

The further work on the same issues of FWFF is in three directions:

- Continuing implementation of Compensatory Program.
- Providing of as much as possible fertile couples of Karakachan Dogs in the areas with high wolf density and predator kills over livestock.
- Improvement of the livestock defensive practices against predators (improvement of the herding methods, establishment of electric fences of sheep barns, improvement of the corrals etc.)
- Continuing the collection of data for the number of the bear, the wolf, the jackal as well as the local people's attitude to them.
- Continuing collection of recent data about status of poisoning in the natural environment.
- Continuing feeding and monitoring of carrion – eating birds

7. Expenditures

Breakdown of costs			
Item	Unit cost	Total Cost in GBP	
		RSG	FWFF
Sheep purchase	100 sheep * 30 GBP	3,000	150 sheep available

Transportation to the farm		50	-
Salaries for two shepherds, social and medical insurance	12 months * 2 person * 100 GBP	-	2,400
Purchase and reconstruction of two barns for FWFF Compensation sheep herds	2 barns * 1800 GBP	3,000	1,400
Vaccinations of the sheep for two years	3,2 GBP * 250 sheep	400	400
Taxes for pasture for two years	250 sheep * 1,4 GBP	175	175
Newsletter publishing	4 editions * 50 GBP per edition	200	-
Booklet for the Transhumance publishing (in preparation)	1000 copies * 2,02 GBP	1,080	940 by SGP-GEF
Poster with the photos on which the local people should call the FWFF when predator kill exists	2000 copies * 0,15 GBP per piece	300	Photographs
Meetings with local people in 30 villages	30 days * 2 person * 4 GBP per diem per person	240	-
Per diem for expert team for checking of livestock's victims and compensation of the farmers	Approx. 100 cases* 2 people* 4 GBP per day	800	-
Research through inquiry among local people for the predator kills in the whole territory of the SW Bulgaria and Eastern Macedonia	Per diems for 20 days * 4 person * 4 GBP + fuel 2000 km * 0,07 l gas * 0,4 GBP per liter	376	-
Transportation of the expert team for compensation cases investigation	Approx. 5000 km * 0,07l gas* 0,4 GBP per liter gas	140	-
Administration up to 10%	Includes banking, report provision, telephone, e-mail, office, overhead etc.	220	-

TOTAL		9,981	5,315
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ANNEXES

1. Report – a hard copy
2. Newspapers copies, presenting the project
3. Informational materials printed in the frame of the project – poster, leaflet,
4. CD with pictures by project activities