

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Emanuel Lisichanets
Project title	Direct conservation activities for Imperial eagle conservation in Macedonia
RSG reference	18010-2
Reporting period	July 2015 – July 2016
Amount of grant	£5000
Your email address	e.lisichanets@gmail.com
Date of this report	September 2016

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
<ul style="list-style-type: none"> - Monitoring of the breeding pairs and their breeding success - Reciprocal exchange of knowledge of the conservation, feeding areas of the Imperial eagles and of their breeding habitats. - Information of number of birds, breeding pairs, data on productivity (egg laying, hatchling, fledgling). 			X	<p>Efficient bird protection is founded on three pillars: research, action and monitoring. Research sets priorities and identifies factors that affect the populations and monitoring is the way to track the efficiency of taken actions.</p> <p>The situation for Imperial eagles seems to be stable in Macedonia, however, a high level of uncertainty about the population trends, shrinking habitats, exposed crimes against raptors, including Imperial eagles, are warning signals that there is no room for complacency.</p> <p>During the monitoring mission, all known sites in the region of Ovce Pole and Povardarie have been monitored for the presence of birds, and every pair has been monitored since the start of the breeding season. The research began in mid-February 2016. We checked the nests known from the previous years and we visited those sites that seemed to be appropriate for the species. During the field survey more than 600,000 ha of the steppe region were explored. For the first time an area of 150,000 hectares was explored west of the town of Veles. This territory is ideal as a hunting ground and possibly breeding habitat for Imperial eagles but unfortunately nesting possibilities are limited because of a lack of suitable trees. Almost throughout this territory high voltage transmission lines</p>

			<p>pass that are ideal for setting artificial nests. Monitoring of breeding success was done directly on the nests of the imperial eagles (the location of all current and historical nests is well known to my team) from a safe distance (using telescopes and binoculars) to prevent any disturbance of the birds. Monitoring from high points (hilltops) was often included in our field methods. Field data about the imperial eagle's population, habitats and threats, as well as other relevant information were collected and processed. Using a standardised form, all observers gather the same type of data. During the breeding season, the breeding attempts were monitored until the chicks fledged. In 2016, 27 couples were formed of which 26 have bred. We found two new couples on the eastern border of the steppe region near the town of Stip, of which one used an artificial nest which was set in Autumn 2015. Fifteen nests are on trees and the other 12 are on power line pylons. Twenty couples had one chick and six had two chicks in the nest (Figure 1 and 2). So 2016 was a successful year for the Imperial eagles. All born chicks survived. Thirty-one young flew and left the nests but, unfortunately once again, one fledgling was stolen in mid-July just before first fly. The Inspectorate for living environment was officially informed about this theft.</p>
<ul style="list-style-type: none"> - Artificial nest - Increasing of nesting possibility. More new couples. - Increasing of Imperial eagle population. 		X	<p>During September 2015, 20 nesting platforms and artificial nests were constructed. Platforms were made from iron tubes and iron nets with dimensions and construction suitable for mounting on power lines (80x80 x18cm). Artificial nests were made from wooden</p>

			<p>branches and lianas. Local people and villagers were engaged in the construction of the wooden nests. This has helped to increase the knowledge of locals about Imperial eagles, but also has had an economic effect, for which the villagers were grateful. In cooperation with the authorities and workers from electro company A.D. MEPSO – Skopje, platforms with artificial nests for eagles were mounted on the power line pylons during several regular overhauls in October 2015 and April 2016. Five nests will be mounted after the end of project, in September 2016. Surprisingly, four artificial nests were occupied immediately during the breeding season in 2016. Two nests are occupied by imperial eagles and the other two by ravens. This proves that the lack of breeding opportunities is a significant issue, but also that artificial nests that are really well-constructed are acceptable to the birds. This first success encourages me to proceed with the placing of more nesting platforms which I hope will help to increase the population of imperial eagles, and also help with other birds that nest on power lines.</p>
<ul style="list-style-type: none"> - Prevent any risk for reduced breeding success through nest guarding. - Increasing of Imperial eagle population. 		X	<p>Even though the project started in late July 2015, I decided to try early (at the beginning of July 2015), the idea of the inclusion of local livestock breeders (shepherds) in the guarding of nests. I chose the vulnerable nest close to Mamutcevo village in the middle of steppe region, and engaged a local shepherd from there. After a short training I lent him binoculars and bought a cheap mobile phone with prepaid credit (even though this was not</p>

			<p>foreseen in the project). The results were highly encouraging. As well as guarding the nest, the shepherd provided a lot of useful and important information about what happens around eagles' nests and in the hunting territory of a couple during the whole season. During the breeding season in 2016, five nests were vulnerable and needed to be guarded. Three of the most vulnerable nests were guarded from the middle of May 2016 because of the poor condition of the trees and the risk of collapse or destruction of the nests by bad weather. These nests were guarded by locals (two shepherds and one farmer) equipped similarly to the shepherd recruited in 2015. The other two nests, of the five most vulnerable, were guarded by my team of volunteers from the second half of June to the end of July when fledglings left the nests. Even with proper nest guarding one fledgling (from an unguarded nest) was stolen in July. Unfortunately, the thief, not being able to climb to the nest, cut a whole branch together with the nest. Regrettably, the thief and the stolen bird were not found.</p>
<ul style="list-style-type: none"> - Meetings with stakeholders - Developing partnerships with organisations in order to assess the threats to IE inside and outside of breeding areas. 		X	<p>Starting from September 2015, three working meetings with stakeholders were organised. Participants in workshops included members of local hunting societies, local environmental NGOs and representatives from the electrical company MEPSO. Unfortunately, although they have been invited, local health authorities and vets did not come. During the workshops, using several PowerPoint presentations, I have presented the project, and discussed planned and already implemented activities and measures for conservation</p>

			<p>of Imperial eagles in Macedonia. All of the participants enjoyed the presentation and commented positively. The presentation consisted of an introduction which discussed the eagles, their ecology, as well as the threats to eagle conservation in Macedonia, the importance of conservation and the possible role of the participants in future eagle conservation. The goal of this training workshop was to build capacity in local people with skills in imperial eagles' identification and monitoring. All workshops were successful as could be seen from the long discussions after each presentation. For the purpose of the workshops were printed 150 t-shirts that were given to the participants along with printed informational materials and leaflets from project from last year. As well as workshops, I have conducted a lecture for hunters which took place at the local annual meeting of a hunting society. All of these activities should lay a good basis for successful implementation of the project and continued work towards conservation of Imperial eagles in Macedonia.</p>
<ul style="list-style-type: none"> - Educational lectures - Finding out local people interested in joining monitoring activities and becoming responsible for specific territories. 		X	<p>Public conservation lectures (six lectures) were conducted in villages in the Ovce Pole region (central steppe part of Macedonia), which have helped in identifying local people interested in joining monitoring activities and becoming responsible for specific territories. The same information shared with workshop participants was also provided to the general public. At the public lectures a range of issues were discussed, including the general importance of birds to the environment, and how human actions can negatively</p>

			<p>impact on the well-being of bird populations. Some of the data on existing and potential nesting territories is obtained from local people during the lectures. Data from local people was collected via inquiries and direct conversation with them. Interviewed villagers showed, on average, poor knowledge of bird ecology and conservation, but most of them stated that the birds have a positive effect on their life.</p> <p>During communication with local people the main factors that influence the population of Imperial eagles were identified. Although it was not previously planned, during late autumn of 2015 I prepared and printed two banners with information about then role and conservation activities of the project. I needed these banners (because lectures were held in open spaces on the village squares) in order to share information about our target species and habitats among the wide auditorium, especially among local communities in the vicinity of imperial eagle territories. Printed information materials and leaflets were thus shared with local participants.</p>
Public awareness.		X	<p>All actions were attended by journalists from several newspapers and TV stations and news items were published in 26 local and national media outlets. Here are links to some articles and TV news items:</p> <p>http://vecer.mk/makedonija/carskiot-orel-kje-se-gnezdi-na-dalekuvod http://www.sitel.com.mk/platforma-i-gnezdo-za-carskite-orli-vo-blizina-na-shtipskoto-selo-chardaklija</p>

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Involvement of local partners was not as easy as we expected. There are less conservation organisations in the area, we initially thought. Although at the workshops, many were willing to engage in the implementation of the project and volunteered to participate in guarding the nests, very few of them really were willing to help. It is disappointing that these initial volunteers very quickly concluded that the monitoring and nest guarding during the hot summer months was too hard, and soon gave up. As a result, much of the work I had to undertake myself with my small team. The only real nest guarding was undertaken by local shepherds some of whom followed through with their promises to undertake nest guarding duties. Thus, instead, more effort is needed to actively involve local farmers and livestock breeders throughout the breeding season.

Also, ensuring involvement of authorities and official bodies has not been easy. Although the destruction of the nest in July and the theft of an eaglet was duly reported to the Environmental Inspectorate, to this day I have not received any response from them, nor has any action towards finding the perpetrators been undertaken. This is the second time that an eaglet has been stolen without finding and punishing the perpetrators. It would therefore be advisable to develop a new strategy for these using contacts within the responsible ministry in order to ensure timely action in cases of violation of environmental protection laws. In my view, the constant presence of observers in the field will reduce the problem of destructive activities because people will know that someone is paying attention to the welfare of the eagles and that they can be punished because of their criminal activities.

Exchange rate for GBP was changed from 85 MKD per 1 GBP to 71.7 MKD per one GBP.

3. Briefly describe the three most important outcomes of your project.

1. During implementation of the project I have made a lot of contacts with various people in the field who could help with nest guarding and monitoring. These are people of different ages and levels of education. This year two shepherds were involved in guarding who kept their flocks in the area where there are vulnerable nests of imperial eagles. They are simple people who already spend all day in the pastures and field around the nest. They are both very well informed and already have solid previous knowledge about imperial eagles. Some basic lectures about eagles and

possible threats were enough. Similarly, like shepherds, one farmer who spends all day in the garden, and the orchard, at the end of which a vulnerable nest of an Imperial eagle pair is situated. All of them participate in guarding the nests. In these cases, it was only necessary to equip them with binoculars and mobile phones which are not such costly items. Because of their daily and all day presence in the territory, but also because of the relationship with their colleagues and friends from neighboring regions that share information with them, all are excellent guards and collaborators. This drastically decreases monitoring costs and also provides excellent and effective guarding. From other side the guardians are satisfied because, apart from the equipment they receive and free phone, they also feel that they do something important towards the conservation of eagles (something that other villagers don't). I am planning to continue with this, in my view, positive practice.

2. Twenty nesting platforms and artificial nests were constructed. In cooperation with the authorities and workers from electro company A.D. MEPSO – Skopje, platforms with artificial nests for eagles were mounted on the power line pylons during several regular overhauls in October 2015 and April 2016. Due to the losses of most natural nesting habitats this was a necessary and important measure which will increase the nesting opportunities for the eagles. The artificial nests have been installed in a favorable but otherwise nest-poor area, and where the most important areas for further conservation actions have been identified and surveyed.
3. The training workshop was carried out on ecology and possible measures to maintain the breeding population of the Imperial eagles. The goal of this training workshop was to build capacity in local people with skills in Imperial eagle identification and monitoring. During communication with local people, the main factors that influence population of Imperial eagle were identified. Some of the data on existing and potential nesting territories we get from local people. At the public lectures, the importance of birds to humans and the environment were discussed, and how humans have affected birds negatively. The participants will probably continue the work on conservation. All this, in its totality, should lay a good basis for successful implementation of future projects.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

Lectures were given in villages explaining the importance of the imperial eagle and its conservation, as well as the importance of nature conservation in general. In addition, local people have been contacted, to whom project objectives and activities were explained in detail and the possibilities for cooperation were discussed. They benefited from the project by learning more about Imperial eagles and nature conservation by lectures and receiving information materials (t-shirts, posters, leaflets).

Local people and villagers were engaged in the construction of wooden nests. This has helped to increase the knowledge of locals about Imperial eagles, but also has had an economic effect, for which the villagers were grateful.

5. Are there any plans to continue this work?

Yes, there is a plan to continue this work. One of the most important elements of the future work is to focus on the better involvement of police, the Environmental Ministry and authorities in the conservation work. Education of local staff working in the field in order to involve them more to in eagle conservation are the main objectives, besides the continuing work of regular monitoring of the population to identify actual trends and further threats. Secondly, I am planning to continue development of artificial platforms (nests) to encourage nesting of Imperial eagles and also plan to expand our work in to additional territories. Depending on available funds, the prevention of electrocution during insulating of danger wires, ringing of eagles and the use of satellite transmitters for following the eagles' movements and identification of important hunting and wintering grounds are among the main important future activities.

6. How do you plan to share the results of your work with others?

A detailed report of this project with photos from activities, tables and charts of breeding success will be prepared and shared with all interested stakeholders and on social networks like Facebook and imperialeagle@yahoogroups.com. The report and data collected will be available to all relevant authorities and other decision makers. Information collected during this project will enable the more accurate application and implementation of adequate conservation measures.

All data collected on this and former projects will be presented at the international conference about two important issues regarding bird conservation: poisoning and grid related bird mortality (electrocution and collision) that will take place in

Budapest – Hungary and are organized by: MAVIR Hungarian Independent Transmission Operator Company (<http://www.mavir.hu/web/mavir-en>), MME Birdlife Hungary (www.mme.hu) and Herman Ottó Institute (www.hoi.hu).

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The actual timescale was almost according to the planned timeframe. The field activities were carried out between July 2015 and August 2016. Also, some further activities will be carried out later this year, however these may be considered as part of the project (four nesting platforms will be set in September 2016).

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. Exchange rate were 1GBP = 71.7 MKD (<http://stb.com.mk/rate-list.nsp>)

Item	Budgeted Amount	Actual Amount	Difference	Comments
Monitoring of the breeding pairs and their breeding success	1250	1224	-26	Less pay off for per-diems
Artificial nest	860	870	+10	More pay off for per-diems
Prevent any risk for reduced breeding success through nest guarding.	900	900	0	
Meetings with stakeholders	540	569	+29	Less pay off for lunch and organization in hotel but more pay off for per-diems
Educational lectures	750	808	+58	More pay off for t-shirts
Vehicle Maintenance	650	622	-27	Less maintenance needed
Banking	50	43	-7	Less banking
Total	5000	5036	+36	

9. Looking ahead, what do you feel are the important next steps?

Depending on available funds, the next important steps will be:

1. To prepare a working plan for 2016-2017 and secure budget for the activities.
2. To involve authorities (environmental authorities, police and inspectorate) in field conservation of the species, because they seem to be reluctant to get involved.
3. Establishment of new artificial platforms in order to attract nesting species.
4. Monitoring of existing population of Imperial eagle.
5. Search for new individuals on new territories.
6. Ringing of fledglings in order to follow their movements.
7. Insulating of danger wires on 6-60Kv T-pylons.
8. Work with local communities on awareness raising and on current and additional monitoring territories.
9. Participation in international conference in order to share our findings and data with international scientific community.
10. Satellite telemetry.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

Yes, we used the RSGF logo on t-shirts, banners and leaflets. At each public presentation, I reported that this project was carried out with the support of the Rufford Fund Small Grants Foundation. In addition, RSGF has been mentioned in all our presentations and articles about the project. RSGF thus has received wide publicity because RSGF was mentioned in every lecture places as the organisation which funds our project, and the logo was placed in all publicity materials. Also, we mentioned RSGF as funding organisation in personal talks on TV stations and in conversations with journalists.

11. Any other comments?

I am grateful to all team members and representatives for helping with the organisation and success of training workshops and public conservation lectures. I am also grateful to all members of the team that successfully have carried out all field surveys and guarding of nests, although in many cases it was not easy to complete scheduled tasks.

I thank the Rufford Foundation for providing financial support for the successful implementation of the project.

Figure 1 & 2 (from question1)

Nr	Waypoint	Position			Site description	Status	Habitat
		N	E	Elevation			
1	AH001			155	Nest on 400 kv pylon	active	Rural area with agricultural land around
2	AH002			130	Former territory	old	Rural area with agricultural land around
3	AH003			550	Former territory	old	steppe/desert like plain
4	AH004			181	Former territory	old	agricultural land with steppe/desert around
5	AH005			158	Nest on 400 kv pylon	active	agricultural land with steppe/desert around
6	AH006			141	Nest on Poplar tree	active	agricultural land with riparian treeline
7	AH007			192	Former territory	old	agricultural land with riparian treeline
8	AH008			176	Nest on 400 kv pylon	active	agricultural land with steppe/desert around
9	AH009			172	Nest on 400 kv pylon	active	agricultural land with steppe/desert around
10	AH010			170	Former territory	old	agricultural land with steppe/desert around
11	AH011			270	Nest on 400 kv pylon	active	agricultural land with riparian treeline
12	AH012			292	Former territory	old	agricultural land with riparian treeline
13	AH013			238	Former territory	old	agricultural land with steppe/desert around
14	AH014			217	Former territory	old	rural area with agricultural land
15	AH015			327	Nest on Oak tree	active	hilly pastures, shrubs

16	AH016			349	Nest on Poplar tree	active	rural area with agricultural land
17	AH017			257	Nest on willow tree	active	agricultural land with steppe/desert around
18	AH018			427	Nest on Oak tree	inactive	hilly pastures, shrubs
19	AH019			283	Nest on Ulmus tree	inactive	agricultural land with riparian treeline
20	AH020			225	Nest on Poplar tree	active	agricultural land with riparian treeline
21	AH021			257	Nest on 110 kv pylon	active	agricultural land with riparian treeline
22	AH022			403	Nest on willow tree	inactive	agricultural land with riparian treeline
23	AH023			380	Nest on Oak tree	inactive	agricultural land with riparian treeline
24	AH024			283	Former territory	old	agricultural land with steppe/desert around
25	AH025			430	Former territory	old	hilly pastures, shrubs
26	AH026			390	Former territory	old	agricultural land with riparian treeline
27	AH027				Former territory	old	agricultural land with riparian treeline
28	AH028			580	Nest on Poplar tree	active	agricultural land with riparian treeline
29	AH029			318	Reserve nest	inactive	hilly pastures, shrubs
30	AH030			315	Former territory	old	agricultural land with riparian treeline
31	AH031			380	Former territory	old	hilly pastures, shrubs
32	AH032			210	Former territory	old	agricultural land with riparian treeline
33	AH033			155	Nest on Poplar tree	active	agricultural land
34	AH034			126	Reserve nest	inactive	agricultural land with riparian treeline
35	AH035				Former territory	old	agricultural land with riparian treeline

36	AH036			403	Nest on Oak tree	active	hilly pastures, shrubs
37	AH037			430	Nest on Oak tree	active	agricultural land with riparian treeline
38	AH038			290	Former territory	old	hilly pastures, shrubs
39	AH039			270	Nest on Oak tree	active	hilly pastures, shrubs
40	AH040			290	Nest on Poplar tree	active	agricultural land with riparian treeline
41	AH041				Former territory	old	agricultural land
42	AH042			390	Nest on Poplar tree	active	agricultural land
43	AH043				Former territory	old	agricultural land with steppe/desert around
44	AH044			176	Former territory	old	hilly pastures, shrubs
45	AH045				Former territory	old	agricultural land with riparian treeline
46	AH046			390	Former territory	old	agricultural land with riparian treeline
47	AH047			370	Former territory	old	agricultural land with hilly pastures, shrubs around
48	AH048				Former territory	old	agricultural land with hilly pastures, shrubs around
49	AH049			350	Nest on Poplar tree	active	agricultural land
50	AH050			279	Nest on Poplar tree	active	Rural area with agricultural land around
51	AH051			180	Former territory	old	agricultural land with riparian treeline
52	AH052			580	Nest on Poplar tree	active	agricultural land with riparian treeline
53	AH053				Former territory	old	hilly pastures, shrubs
54	AH054			330	Nest on Poplar tree	active	agricultural land with steppe/desert around
55	AH055			198	Former territory	old	agricultural land with steppe/desert around
56	AH056			270	Former	old	agricultural land

					territory		
57	AH057		370	Nest on 110 kv pylon	active	agricultural land	
58	AH058		430	Former territory	old	agricultural land with hilly pastures, shrubs around	
59	AH059		370	Nest on Acacia tree	active	agricultural land with hilly pastures, shrubs around	
60	AH060			Reserve nest	inactive	agricultural land with hilly pastures, shrubs around	
61	AH0061			Former territory	old		
62	AH062		400	Nest on 400 kv pylon	active	agricultural land with hilly pastures, shrubs around	
63	AH063			Former territory	old		
64	AH064		280	Nest on Poplar tree	active	Rural area with agricultural land around	

Fig. 1 Active nests and nesting territories of Imperial eagles in Macedonia 2016

Year	Breeding pairs	Occupied nests	Successful nests	Number of hatched chicks	Total number of fledglings	Number of nest with one juvenile	Number of nest with two juveniles	Productivity	Breeding success
2014	27	26	26	32	23	18	7	1,23	0,88
2015	25	25	24	31	30	17	7	1,29	1,25
2016	27	26	26	32	31	20	6	1,23	1,19

Fig. 2 Productivity and Breeding success of Imperial eagles from beginning of project until now