

Final Evaluation Report

Your Details	
Full Name	Onolragchaa Ganbold
Project Title	The initial genetic investigation of Saker Falcon in Mongolia and its electrocution in southern Mongolia
Application ID	30787-1
Date of this Report	27 April 2020

1. 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
Objective-1. Contribute to the better understanding of genetic diversities of Globally threatened Saker Falcon.				During June and October 2020, we conducted field surveys at Ikh Nart Nature Reserve to check saker falcon nests (n = 10) and at Munkhkhan Village of Sukhbaatar province, to check electricity lines. From these surveys, we collected 14 genetic samples with FTA card and tissue samples. Additional 17 (electrocuted bird samples) and five (blood samples) genetic samples were collected from field surveys that were conducted in May and June 2021 from southern Mongolia. We extracted gDNA from these samples and perform PCR with desired primer. We are recently working on analysis.
Objective-2. Initiating conservation genetics in threatened birds in Mongolia. It				We are trying to achieve our objective during this and other related projects. Because of this project, we applied such genetic studies for some wild animals in Mongolia at the same time. Publishing our article with saker falcon genetics (probably in 2023), our objective is completed, at least for our target species.
Objective-3. Estimating electrocution rate of Saker Falcon in southern Mongolia and raise suggestion to reduce it.				During the project, we conducted three surveys for electricity distribution lines in southern Mongolia to check any electrocuted birds, mainly threatened saker falcon. This survey yielded for a total of 93 electrocuted birds, dominated by birds of prey. Of these, 27 were threatened saker falcon. This number of saker falcons found from short distance of electricity line, i.e., line between Uulbayan and Munkhkhan is ~50km. So, we calculated that mortality rate is ~1 bird for every 10 km for each day.

<p>Objective-4. Conservation capacity building: We will work for build strong relationships of the communities to make nature conservation more efficiently in Mongolia.</p>				<p>As one of our main objectives, we organised three workshops for high-school children, including two rural and one urban area. During our workshops, we have introduced biology and ecology of saker falcon, its conservations and threats (mostly focused on electrocution). For each workshop, we organised a painting competition with children with the topic of conservation of saker falcon.</p>
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2. Describe the three most important outcomes of your project.

- a) Now, we had genetic sample/gene stock (mtDNA) of saker falcon which will be used for our local genebank.
- b) We initiated conservation genetic study for Mongolian wildlife. Now, we are working on several species' genetic studies under framework of our conservation genetic study (initiated from this project).
- c) We conducted first electrocution survey of birds in southern Mongolia. Now, we know that that majority of electrocuted birds in southern Mongolia are saker falcons.
- d) We noticed that school children have enough interest to listen/participate for workshops of nature conservation, at least schools we visited. We hope that we make them more familiar with saker falcon, even with nature conservation.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Collecting enough genetic samples of saker falcon was challenging for us. Additionally, we had no company who provides DNA sequencing, primer synthesising, etc. So, we asked for some genetic samples (e.g., feather, tissue) from some closely related researchers to increase our samples. We ordered kits from another country, and we are using also a foreign company for DNA sequencing.

4. Describe the involvement of local communities and how they have benefited from the project.

We organised our workshops for local communities, especially for school children, because we were identifying them as the most important part of any community. For example, the Eco-Club children (n= 25) of Middle School of Dalanjargalan Village of Dornogobi province participated. For this area, one of our study sites, namely Ikh Nart Nature Reserve located within this village. Also, some of the eco-club children were participated field survey for collecting samples.

5. Are there any plans to continue this work?

Yes, for example genetics, we will use our samples for further genetic study using different markers such as Short Tandem Repeat. For field survey, we are planning to do field survey for estimating density of small mammal (may particular species) and occurrence of birds of prey, including saker falcon. Then, test to know is there any relationships between them. After knowing this, we will work on constructing artificial nest for saker falcon (indeed other birds).

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

We are going to share our findings using our article, which would be publish by 2023. With social media, we are currently using Facebook and other social networks to share our photos, or other media. We have presented our results at conference of Mongolian National University of Education. We will do it again in the future.

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

Important next step is more friendly designed electricity distribution line. Also, artificial nesting boxes for the target species.

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

Yes, we are used loge of Rufford for our workshops, and our presentation. Not yet, we will submit our article to the foundation when it publishes.

9. Provide a full list of all the members of your team and their role in the project.

Onolragchaa Ganbold (project leader): Designed all field surveys and participated. Write progressing and final reports.

Ariunbold Jargalsaikhan (project member): He participated field surveys.

Chimedbat B (project member): He participated workshops, and field surveys in 2020.

Otgontsetseg Khuderchuluun (project member): She participated workshops, preparation of field surveys. Getting related permission from administration office of National Park, and Government Agencies.

Erdenetushig Purevee (project member): He participated all field surveys in 2020, 2021 and workshops. Collecting genetic samples from birds.

Soddelgerekh Bayargur (project member): He participated workshops, and field surveys in 2020.

10. Any other comments?

We hope that conservation action of threatened species saker falcon was increased due to funding opportunities of The Rufford Foundation.

