

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	Farhad Ahsan Pavel
Project title	Conservation Planning of Globally Endangered Pallas's Fish Eagle in North-east Bangladesh
RSG reference	ID - 24680-1
Reporting period	May 2019 - June 2019
Amount of grant	£4035
Your email address	farhadahsanpavel@gmail.com
Date of this report	27/06/19

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
Nests survey and home range of Pallas's Fish Eagle in north-east Bangladesh				43 pairs has been found with 39 nests in nine sub-districts in Sunamganj district, one nest in Netrokona district and four different pairs of juveniles and one adult with one juvenile was found in Moulvi bazar district in north-east Bangladesh.
Study the breeding ecology and measure overall breeding success;				Breeding ecology data has been collected in following way - nest construction (20 days), incubation period (20 days), nestling period (20 days) and post-fledging (16 days) period data has been taken.
Breeding success in 2018 and 2019				<p>Breeding success in 2018: Sunamganj district – 83.33 % (breeding pairs 27, total pairs 36), tahirpur – 75% (breeding pairs six, total pairs 10), Dharmapasha – 82.35% (breeding pairs six, total pairs 10), Jamalganj – 100% (breeding pairs four, total pairs four).</p> <p>Breeding success in 2019: Sunamganj district – 87.75% (breeding pairs 23, total pairs 36), tahirpur – 66.66% (breeding pairs four, total pairs 10), Dharmapasha – 93.75% (breeding pairs – six, total pairs - 10) and jamalganj 100% (breeding pairs four, total pairs four)</p>
Describe and quantify diet component consumed by Pallas's Fish Eagle				Freshwater catfish, long-whiskered catfish, Indian mottled eel, grass carp, common coot, domestic duck, mouse have been found under the nestling tree. By doing direct observation eel fish, Boggut labeo, snakehead murrel, chicks of domestic duck and mouse have been seen. According to local people keelback, Indian rui, eel fish has been added during their

			interviews about feeding items of Pallas's fish eagle.
Determine factors driving land-use changes by different stakeholders and identify other threats to Pallas's Fish-eagle;			Factors that drive land use changes are: 1) High rate of population growth surrounding villages of haor basins. 2) Government false development policy like making lots of mud embankment to save crop land from flood which directly accelerate the land use change and shrink down the actual habitat of more than 20 migratory ducks and many native fish species habitat. 3) Over exploitation of fish makes lack of fish to feed Pallas's fish eagle in the winter. 4) Cutting down the old and mature nestlings trees of Pallas's fish eagle.
Awareness campaigning with local stakeholders about the conservation of Pallas's Fish Eagle			10 awareness programmes have been done including five schools and five community places to highlight the conservation importance of Pallas's fish eagle in Sunamganj district in Bangladesh.

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

Not relevant.

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

The three most important outcomes of the project are as follows:

- 1) We got 38 more nests (total found 43 pairs with 39 nests during survey in the year of 2018-2019) compared to nests that were found in the previous surveys. There were 13 nests found in Jamalganj sub-district during the survey 2001-2002 by the non-government organisation named Centre for Natural Resources Study and out of 13 nests only one nest is remaining now in Jamalganj sub-district and another survey was done by Sharif Hossain in 2009 and found 10 nests in Dharmapasha and South Sunamganj sub-district of Sunamganj district and one nest in Netrokona district (Sourav et al., 2011) and out of those 11 nests only four nests still remain in Dharmapasha, Jamalganj in Sunamganj and Netrokona district.

- 2) We got 2 years' data on breeding success of Pallas's fish eagle in nine sub-districts of Sunamganj district by my direct observations. Breeding success in Sunamganj district in 2019 is 87.75% (breeding pairs 23 where as total pairs 36) and in 2018 was 83.33 % (breeding pairs 27 where as total pairs 36). The breeding success of 2017 was I got out from the questionnaire of surrounding village people from the nestling trees of Pallas's fish eagle.
- 3) I have collected data on breeding ecology of Pallas's fish eagle this year. Number of days for nest construction and incubation, nestling, post-fledging period has been found. Average time for male and female participation in incubation, nestling and post-fledging period has been found. Incubation period (57 days for one pair and 58 days for another pair), nestling period (52 days) and post-fledging period (59 days) has been found. Male and female percentage of time in incubation and nestling period and male average spending time for hunting in nestling and post-fledging period and average prey brought by male (since male brought most of the prey) has also been found.

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

The local community get lots of knowledge about the conservation of Pallas's fish eagle which earlier they didn't get this message from anyone. My presence in the field for survey and also to know the breeding biology of Pallas's fish eagle lets to know lots of local people about the conservation message of this species.

Local people who are living close to Pallas's fish eagle become very encouraged towards recovering the juvenile Pallas's fish eagle which dropped from the nest when it did its first flight. Local people also provided various important information about the present and old nest occurrence, age of the nests, arrival and departure date of eagle, diet habitat and breeding success data in the last couple of years were found from local people.

They also said that they can help to preserve the nestling trees of Pallas's fish eagle if they are paid to a very small amount of money.

I have taken several students who are actually college students in the local areas who study and provide data on the breeding ecology of Pallas's fish eagle.

During awareness local stakeholders interaction among schoolchildren and also community people have got knowledge about the importance to presence this eagle in their village.

5. Are there any plans to continue this work?

I want to do nests survey in the remaining parts of the Sunamganj, Moulvi bazar and Netrokona district, breeding ecology and monitoring the breeding success in the upcoming season, find out new threats, tree plantation programme in surrounding

the nestling trees and also the possibility of migration ecology of Pallas's fish eagle from Bangladesh to non-breeding ground.

To build up capacity I want to take at least five university students in the upcoming season to know the breeding biology of this least known species.

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

I have already complete one paper titled nest survey and monitoring the breeding success of Pallas's fish eagle for the journal of FORKTAIL in this year and also hope fully another two publications on breeding biology and diet component of Pallas's fish eagle in the next year. I have already published three popular articles in our native language in a newsletter of Bangladesh Bird Club and also preparing 7 to 8 popular articles on Pallas's fish eagle in our native language soon.

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 Rufford Foundation grants have been used for April 2018 to June 2018. I have taken 2 months more to complete the awareness program because in May we have holiday because of holy Ramadan and Eid festival in the schools and colleges of our study areas.

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.

Item	Budgeted Amount £	Actual Amount £	Difference £	Comments
Nests survey in 9 sub-district of Sunamganj, 2 sub-district of Netrokona and 1 sub-district of Moulvi bazar district	1680	2321	+641	I have paid more time on nests survey this year since I didn't get enough nests of pallas's fish eagle in my study areas which I was anticipated that's why I covered whole areas.
Breeding ecology and monitoring the breeding success of Pallas's Fish Eagle in 2018 and 2019	1680	1606	-74	Studying breeding biology in a single year is very difficult to complete. Since I have another one year to complete I hope I can do it successfully in the next year.
Awareness meeting with local people (10 no's)	495	48	447	Since this year I have spend more time and money on

				nests survey so I couldn't utilize enough time and money on awareness program this year. I hope I can spend actual amount of money in awareness meeting in the upcoming year.
Bill board installation (2 no's)	180		-180	We can't install any billboard because most of the money has been used for nests survey and to know the breeding ecology.
Total	4035	3974	-61	

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

The next steps are followings:

1. Find out new nestling sites of Pallas's fish eagle since this year the nest surveys still remain some part of the areas.
2. Breeding ecology of Pallas's fish eagle because I want to take 1 year more data to analysis the breeding ecology of Pallas's fish eagle.
3. Tree ownership and tree plantation especially where there are no or very few trees beside the nestling tree of Pallas's fish eagle is needed to save the last remaining nests of Pallas's fish eagle. Because the most important threats so far is recognised and that is cutting down the nestling tree of Pallas's fish eagle in the whole north-east part of Bangladesh.
4. Satellite tagging of juvenile Pallas's fish eagle to know migration ecology from Bangladesh to their non-breeding ground.

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

I have used the logo of Rufford foundation during the awareness programme both with the school children and also community places. I have created a group and a page on Facebook where I have also mentioned about the financial support for Rufford Foundation.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Farhad Ahsan Pavel – Master's Thesis student of North South University on Pallas's Fish Eagle, did nests survey and collect data on breeding ecology and diet component consumed by Pallas's Fish eagle

Bashir Ahmed – Wildlife biologist of a renowned environmental conservation organization named Centre for Natural Resources Studies (CNRS) - did nests survey and collect data on breeding ecology

Sharif Hossain – An ecologist of Centre of Environment and Geographic Information Systems – provide valuable information's of his previous experience about nests survey and suggests how to find out new nests in Dharmapasha and south Sunamganj area

Khurshed Alom – A college student, who did nests survey and collect data on breeding ecology

Naim Ahmed - local enumerator, who collect data on breeding ecology

Hasan – Local enumerator, who collect data on breeding ecology

Kamal – Local enumerator, who collect data on breeding ecology

Polin - Local enumerator, who collect data on breeding ecology

Sumon mia - Local enumerator, who did nests survey and collect data on breeding ecology





