

## The Rufford Foundation

### Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Dorji Wangchuk
<b>Project title</b>	Evaluating threats and its impact on the current distribution of Golden Langur in Bhutan
<b>RSG reference</b>	13086-1
<b>Reporting period</b>	August 22, 2013 to September 30, 2014
<b>Amount of grant</b>	£ 6000
<b>Your email address</b>	dwang1970@gmail.com
<b>Date of this report</b>	September 30, 2014

**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
Mapping current distribution of golden langur in Bhutan			achieved	After one decade of its initial assessment, the golden langur distribution across its habitats were assessed using line transect. One time survey in the entire habitat using the same transect for initial study (1999 - 2003) was carried out. The study found out that there is no significant difference in terms of habitat expansion. The distribution map as of 2014 is produced based on the current data.
Comparison of past and present distribution.			achieved	Using the GPS coordinates from past and current study the comparative distribution has been mapped. No significant difference in terms of habitat expansion has been observed during last one decade. However, with more hydropower projects coming up within and adjoining langur habitat and with more construction of cross bridges across major rivers especially Punatsangchhu, Mangdechhu and Chamkharchhu, we can expect its movement in next 10 years.
Assess infrastructure development			Achieved	Within the golden langur habitat the major infrastructure that are constructed in last one decade include 36 km of Mangdechhu project areas, 16 km of road bypass between Tingtibi and Wangdigang, and 35.5 km road widening between Tingtibi and Praling and 25 km new road between Praling and Pantang. These infrastructures pass through the golden langur habitat.
Assess impacts of infrastructure on golden langur		Partially achieved		Although the infrastructure development has been assessed, we have not been able to assess the quantification of impacts from different development parameters. Such assessment would require long term observation and use of advanced GIS application to model threats. Our observation shows that low vehicular traffic except few cases of road kills impose very negligible disturbance to this arboreal species.

Group size and composition			Achieved	In Bhutan the current study showed significant increase in mean group size (11) from 7 in 20013. However when we compared with the study from neighbouring states of Assam (10.8 in disturbed areas and 10.1 from undisturbed areas), we found very negligible increase in mean group size. The exact cause of such increase is not known and it is subject to verification with more scientific study.
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

The assessment of distribution across entire habitat in Bhutan was too large to cover within the proposed duration of the project. The involvement of different stakeholder across the study areas complicated the work process as cooperation were not rendered as expected. The southern belt of the study areas (bordering India) fall within security risk areas and had to involve large numbers of staff from RMNP thereby escalating the cost of travel for researchers.

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

**The three most important outcome of the projects are:**

1. Update of the golden langur distribution map: With the GPS coordinate collected during the current study, the distribution has been updated.
2. Inventory of new infrastructure development: The project documented 36 km of hydropower construction areas and 76.5 km of road construction and widening works in the golden langur habitat areas
3. Policy influence: with report submitted to Park managers of Royal Manas National Park and Phipsoo Wildlife Sanctuary where major habitat of golden langur fall, the park authorities have assured to bring this species under transboundary species conservation programme. As such, it has become one of the priority species for Royal Manas National Park (RMNP), Bhutan and Manas National Park (MNP), India under transboundary initiatives.

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

Since the golden langur habitat are found excluding major settlement areas, communities were not actively involved in the project. However, few individuals were involved as porters and benefitted from labour charges.

**5. Are there any plans to continue this work?**

With the species listed under transboundary conservation initiative, the concern park authorities will carry out joint conservation interventions whereby the lead researcher from this project would become the focal person for those programs. At the individual level, we would continue monitoring their distribution range through our routine programme.

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

The immediate plan to share our result is to submit detail report to all the park authorities with a set of recommendations. The report on the preliminary findings was presented to PWS and RMNP in the first week of September 2014. We have also submitted to detail project reports to all the park authority. This reports will be shared through social media and some official media. If possible, a paper will be published in one of the local or international journals.

## 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 project is completed in 13 months as against the anticipated completion period of 12 months.

## 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
Transportation/mobility cost	1417	1158	+ 259	The transportation cost was reduced as the staff from the locality were deputed for the survey.
Daily subsistence cost for researchers	1870		1870	The daily subsistence cost is managed as proposed. However, the cost has been shared with RMNP office in few instances where the field work was carried out in conjunction with office duty.
Purchase of research equipments	2097	2422	- 325	The additional cost was incurred due to market fluctuation. Also one additional lens is procured to increase efficiency of digital camera in the field
Stationery and publication of report	616	550	+ 66	The saving from stationeries is used to cover fund deficit in office equipments
<b>Total</b>	<b>6000</b>	<b>6000</b>	<b>00</b>	

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

As indicated by Wangchuk in 2003, we have observed some physiological differences in the individual of the same group in the form of hair colours. This could be due to possible cross breeding between golden langur and capped langur. In view of this, the study on the overlapping of two species across its natural barrier through construction of bridges needs to be monitored. This could invariably contribute to the genetic loss of golden langur in the near future.

**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?**

We have used RSGF logo on the presentation slide of the preliminary report submitted to the park authorities. The logo has also been used in all the maps produced for the current study. The only publicity RSGF got during this study is during the transboundary coordination meeting between the manager of Royal Manas National Park, Phipsoo Wildlife Sanctuary, Khaling Wildlife Sanctuary and WWF Bhutan.

**11. Any other comments?**

Although there is no immediate threat to this species at large, the construction of hydropower plants and bridges along Mangdechhu and Chamkharchhu might accelerate habitat destruction and possible cross breeding with the capped langur in the near future. This might require some policy intervention from the government to secure the pure gene golden langur that is endemic to Bhutan and Assam, India.