

## 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>	Mani Raj Rai
<b>Project title</b>	"Study on Natural Habitat of Globally Endangered Golden Mahseer ( <i>Tor putitora</i> ) and its conservation for ecological, economical, and cultural importance"
<b>RSG reference</b>	19791-1
<b>Reporting period</b>	May 2016-May 2017
<b>Amount of grant</b>	5000 Pounds Sterling
<b>Your email address</b>	Manirai342@gmail.com
<b>Date of this report</b>	22 <sup>nd</sup> May, 2017

**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
<p>1. Study the natural habitat of Golden Mahseer</p>				<p>In order to determine the habitat of the target species, 20 km stretch of the project site, Jiti and Sibsoo rivers under Samtse District, was taken. Then, the exploration of the golden mahseer was carried out by catching the species using the cast net. In shallow water, electro fishing techniques was adopted to catch the fish.</p> <p>During the entire course of the project, about 15 golden mahseer (photos submitted with the quarterly reports) were caught.</p> <p>The study site was divided into 02 sections and 100 sample plots. From 100 sample plots, golden mahseer was caught from 10 sample plots. Out of 10, eight sample plots fall within the altitudinal range of 350 to 450 m asl.</p> <p>One sample plots fall at 500 m asl, and one at 600 m asl. This indicates that, the golden mahseer is confined to the lower altitude regions, and occasionally migrates toward the upstream.</p>
<p>2. To evaluate the social perception on ecological, and economical importance of conservation of Golden Mahseer</p>				<p>As submitted in the 2<sup>nd</sup> quarterly report, individuals and institutions ranging from local fisher men to local leaders, riparian communities and school children were interviewed to better understand the social perception on economic and ecological importance of the target species. About 90% of the interviewee feels that, golden mahseer is ecologically important species. About 10% of the interviewee says that, they</p>

			<p>don't have any idea (mostly school children).</p> <p>Local fishermen states that, in absence of the target species, there would be the population explosion of other fish species on which golden mahseer feeds.</p> <p>Likewise, riparian communities and local fishermen says that, if the law allows them to harvest the target species on sustainable manner, it would greatly enhance their livelihood by increasing the income level.</p>
3. To assess the current status of the natural habitat of Golden Mahseer in Jiti and Sibsoo rivers in Samtse			<p>Empirical field observations were carried out in order to achieve this objective. The assessment of some activities at the sample plots where the target species caught were conducted in order to understand the status of its habitat.</p> <p>Activities like extraction of sand, stone, and boulder, and any signs of illegal fishing were observed and recorded.</p>

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

It was completely unexpected to find that majority of the riparian communities were not interested in the project at the initial stage despite the awareness programme been delivered to them. Later, it was discovered that, they were afraid of losing their traditional rights of fishing.

This hurdle of the project was addressed in the following manner:

- Elites of the riparian community was identified and then, convinced to participate in the project for the greater cause of the community and the species of conservation importance.
- The assistance from local leaders and district administration, Samtse, was sought to convince the local communities on the importance of their involvement in the project.
- The riparian communities were promised that their traditional rights of fishing will not be taken away with the commencement of the project.

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

Three most important outcomes of the project are:

- I. Though it was believed that, golden mahseer thrives in the project sites, scientific explorations were never taken up. With this project, the existence of the target species is confirmed in the project site. Likewise, the habitats of the species in the study area are also identified.
- II. The ecological and economical importance of golden mahseer was evaluated involving the participants from wide range of backgrounds.
- III. The study on the current status of the natural habitat of the target species was done at the project site. In due course of assessing the status of the habitat, several anthropogenic stressors like extraction of sand, boulder, and stones from the project area was taken into considerations.

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

Local riparian communities were involved at every stages of the project. For instance, local communities attended the advocacy on the golden mahseer advocacy focused on the importance of the conservation of the golden mahseer and its current global status and distribution. They were also involved in the field data collection and habitat evaluation. Local fisher men played key roles in capturing the live specimen of the golden mahseer.

Before the implementation of the project, no one knew that, golden mahseer is found in the project site, except few fisher men from the riparian communities. However, after the commencement of this project, agencies involved in the project came to know about the golden mahseer and its existence in the project site.

Likewise, communities didn't know the importance of the conservation of the target species. Due to this ignorance, rampant extraction of sand, stones, and boulders was taking place before the conduct of the project. With this project and advocacies, extraction of sand, stones, and boulders have come to an end. Local leaders have already issued a letter to all the construction companies to stop this activity at the project site. This would expand the fishing grounds for the local riparian fisher men, hence, enhancing their income generations.

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

To work on species like golden mahseer is truly a blessing. Soon after the completion of this project, I am planning to replicate the similar study in Toorsa River (one of the five major rivers of Bhutan). I am left quite motivated by this current project to pursue deeper studies on the species.

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

Firstly, the basic findings of my project will be disseminated to the mass through the Rufford website. Secondly, I have already printed the pamphlets on the species and distributed it to the local leaders, local forest offices, and District Administration office.

Most importantly, the discovery of the golden mahseer at the project site for the first time was shared with the general public through the Samtse District webpage.

**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 grant was utilised within the period of 12 months following the timescale as below:

1. Literature review and sampling designing – Refereed papers and publications: May, 2016.
2. Requested for approval from relevant agencies like department, district and block administration for execution of field research: June, 2016.
3. Developed formats for field data collection: June, 2016.
4. Trained the team members and field assistant in data collection methods: July, 2016.
5. Phase one fieldwork of data collection (peak monsoon): August, 2016.
6. Compiled the data: August, 2016.
7. Submitted the 1st quarterly progress report to the Funding agency: August, 2016.
8. Phase II: field data collected for winter: December, 2016.
9. Compiled the field data for second phase: January, 2017.
10. Submitted 2nd quarterly progress report to the Funding agency: March, 2017.
11. Advocacy on importance of conservation of golden mahseer to all the stakeholders involved and riparian communities: March, 2017.
12. Data analysed and result interpreted: April, 2017.
13. Final report submission to donor agencies, Rufford Foundation: May, 2017.

**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
<b>1) Procurement of field equipment, printing of survey forms, and Questionnaires</b>				
1.1) Purchase of fish-cast net, spoon hook, single head hook, rope, thread, gumboot, hand gloves, raingears, and ruck sacks	300	300		
1.2) Purchase of OHP (Over Head Project) for advocacies and awareness creating programs. And Purchase of field survey tents and field gears.	350	350		
1.3) Purchase of GPS (Map60 CSX), digital camera, guide books, tight lid jars for water sample collection, equipment for electro- fishing, and torch.	400	400		

1.4) Purchase of printer for Printing of survey forms/questionnaires, and pamphlets, and other advocacy aids.	150	150		
<b>Sub-Total (A)</b>	<b>1200</b>	<b>1200</b>		
<b>2) Daily Allowance payment to forestry staffs from Samtse Divisional Forest Office for field survey and assistance in implementing the project in the field</b>				
2.1) Riparian biodiversity assessment survey and conservation awareness program (3 days X 5staffs X£5.37)	80.55	80.55		
2.2) Field survey, empirical observations, and data collection for assessing the depth of the conservation threats of the target species (15 days X 10staffs X £5.37)	805.5	805.5		
2.3) Charges for potters and ponies while shifting camps and stations in study area where there is no motor-able roads	250	250		
2.4) Training of field staffs on survey method using data sheet/questionnaires, survey protocols, and research objectives presentations	250	250		
2.5) Purchase of training materials (Charts, White Boards, Markers, and other materials, if required)	250	250		
2.6) Group catering ( Lunch and refreshment) during the field survey and advocacies/awareness creating programs (10days x 20 heads x £ 3.95)	790	790		
<b>Sub-Total (B)</b>	<b>2426.</b>	<b>2426.0</b>		
<b>3) Transportation of survey team and materials</b>				
3.1) Vehicle rental and hiring charge (during the entire course of the project travelling from one county to another).	500	500		
<b>Sub-Total (C)</b>	<b>500</b>	<b>500</b>		
<b>4) Design, production and printing of posters and models for conservation awareness creating programs/advocacies</b>				
74.1) Posters and Banners on Golden Mahseer information and conservations to be displayed and distributed to the participants and other agencies	210	210		
4.2) Pamphlets, badges, brochures and stickers for awareness creating programs	300	300	100	Incurred higher than anticipated
<b>Sub-Total (D)</b>	<b>510</b>	<b>510</b>		
<b>5) Data compilation/analysis, and report writing</b>				
5.1) Data compilation/analysis, report writing and presentation on findings to the stakeholders involved in the project. Exit meetings with the forestry officials involved in the project and the concerned stakeholders (Working Lunch and	200.95	200.95		

<b>Sub-Total (E)</b>	<b>200.95</b>	<b>200.95</b>		
<b>6) Publication and printing of report</b>				
6.1) Payment for report publication(10 copies X £ 16.3) for distribution to relevant institutions/organizations, or individuals (submitted reports to Local leaders, Representative of Member of Parliament and District Administration Offices)	163	163		
<b>Sub-Total (F)</b>	<b>163</b>	<b>163</b>		
<b>Grand Total (A+B+C+D+E+F)</b>	<b>5000</b>			

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

It is important to expand the similar study to other parts of the country, identify the habitat of golden mahseer, and then, protect the areas where the golden mahseer is found. Such steps would benefit the conservationists as well as the local communities whose source of livelihood comprises of fishing.

**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?**

Yes. The logo of Rufford Foundation was used in the publication of the report on "discovery of golden mahseer" in Samtse District Webpage. Similarly, the foundation received the publicity during the commencement of the project through the involvement of various stakeholders.

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

**12. Any other comments?**