

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	Boni Amin Laskar
Project title	Threat identification and population assessment of <i>Neolissochilus hexastichus</i> - an endemic mahseer fish in North-East India vis-à-vis conservation actions
RSG reference	13963-2
Reporting period	One Year
Amount of grant	£6000
Your email address	aminboni@rediffmail.com
Date of this report	10 th November, 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
Assessing population status of <i>Neolissochilus hexastichus</i>		Yes		The survey on population status is progressing well during this winter season. At initial phase of the project we missed the favourable season and we got less time to complete the survey. Simultaneously, the on-going developmental activities like, construction of broad gauge railway and four line highway in the region has hindered our survey works.
Identification of potential spawning grounds			Yes	In river Diyung, we have surveyed the head streams and identified some potential spawning grounds of <i>Neolissochilus hexastichus</i> (copper mahseer). Some of the spawning grounds have been badly damaged due to withdrawal of stones and gravels for commercial purpose.
Identification and collection of seeds			Yes	Previous experience of the team leader has greatly helped to identify the young fries of the species. Most remarkably We have collected a good numbers of seeds. Some of the local youths were trained to identify the mahseer fries and their habitats. Sharing of such information has sprouted a strong feeling among the local inhabitants to care and protect the spawning grounds as well as the spawns and fries of mahseer in rivers.
Identification of different threats			Yes	We have identified different threats in the rivers. The most devastating threats are use of chemical poison (e.g. thiodine, thiophane, some pesticides, etc.) in river, hand-made dynamites for fish harvest. Besides these, the unprecedented rate of soil cutting on the riparian area and its consequential soil erosion in rivers are the worst anthropogenic effects which have greatly threatened the lives of mahseer in such rivers.
Knowledge sharing with local stake holders			Yes	An exhibition stall was set during the state level 1 st ever Arunachal Meen Mahotsav in Northeast India. Different

				posters and reading materials were displayed to the visitors of various categories. Interaction with visitors including Chief Minister, Fishery Minister and other top officials has greatly highlighted the Mahseer Conservation efforts under the Rufford project. Wide range of visitors including school children to farmers have gathered in the festival for two days. The team leader was awarded with a memento for the Mahseer conservation campaign under the Rufford project. The team leader has also written an article in the souvenir book of the festival. Further, an article has been sent for publication in the book to be released on Mahseer in the upcoming event of Mahseer workshop in Assam to be held from 22nd-23rd December 2014; where the Rufford grant is duly acknowledged
Awareness about different threats in river bodies		Yes		Different awareness program were held with the villagers, youths of local NGOs, and the students reading in the class V to Viii. We could cover mostly the areas on the river bank for such programme, however, such programme in and around the district locality is urgent. A leading daily newspaper in the region has covered the details of the activity which is available online at the link below. http://www.assamtimes.org/node/12282
Rearing of seeds and raising brooders			Yes	We have developed good collaboration with two prominent NGOs in the locality in order to develop the brood stock of the species in captivity. At present, seeds have been stocked in Dibarai in Haflong and in Jasingfa Aqua Tourism and Resort at Nagaon. In due course, the species will be reared with care.
Linking collaboration with government officials and NGOs		Yes		WAIMIJING being the prime collaborator of the project has developed linkage with other smaller group of NGOs in the locality to carry forward the Mahseer conservation programme. We are trying to link up with the potential anglers in the region to form an association. The government officials like, District

				Fishery Development Officer of the Dima Hasao District has already assured his assistance in Mahseer Conservation Program in the hill district. More collaboration with the Law enforcement agencies is urgent for the cause.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The most unfortunate to work in the project area is the problem arising out of militancy. However, before visiting to any village area we used to keep contact with the village Gaon Bura (Village Head Man) and the Teaching Fraternity in each village. Suggestions from them have greatly helped to stay secure. We have mostly stayed in the house of villagers and avoided to roam around singly. In such situation, we could work smoothly perhaps due to the collaboration with local NGOs.

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

Characteristic identification of breeding grounds and potential habitats of mahseer seed resource:

Physical survey in the rivers led to identify the micro habitats inhabited by the fries of mahseer. Mahseer supposed to breed twice in a year, first during February and second during September. Although, we could not identify any seed during February to March season, but we could successfully identify the seeds as well as their congregation sites during September to October season. We trained the people, living along the river line, about the microhabitat requirements of the mahseer at early life stage. We practically demonstrated them how to identify the fries of mahseer. Unfortunately, the quarrying activities at some sites have destroyed such habitats. Such quarrying also affected the surrounding area particularly the downstream where no any seed of mahseer encountered. This knowledge of bad impact of quarrying has greatly evoked the local youths who have come forward with a view to appeal to the administration to declare ban of quarrying in some selected sites where the mahseer seeds are presently available.

Knowledge sharing about Mahseer and awareness workshop for reduction of different threats to Mahseer:

An exhibition stall was set during the state level 1st ever Arunachal Meen Mahotsav in northeast India. Different posters and reading materials were displayed to the visitors of various categories. Some reading materials were distributed among the visitors. Interaction with visitors including Chief Minister, Fishery Minister and other top officials has greatly highlighted the Mahseer Conservation efforts under the Rufford project. Wide range of visitors including school children to farmers have gathered in the festival for two days. The team leader was awarded with a memento for the Mahseer conservation campaign under the Rufford project. The team leader has also wrote an article in the souvenir book of the festival. Different awareness program were held with the villagers, youths of local NGOs, and the students reading in the class V to Viii. Posters were displayed in the hall of workshop, and one A3 size hard paper poster along with four pages A4 size leaflets about mahseer were distributed to the participants and delegates. We could cover mostly the areas on the river bank for such program, however, such programme in and around the district locality is urgent. A leading daily newspaper in the region has covered the details of the activity which is available online at the link below. <http://www.assamtimes.org/node/12282>

Linkage with local stake holders and broodstock development: We have developed good collaboration with two prominent NGOs in the locality in order to develop the brood stock of the species in captivity. Under the second RSG, seeds of mahseer have been stocked in Dibarai Lake in Haflong which will be taken care by WAIMIJING and in the farm of Jasingfa Aqua Tourism and Resort at Nagaon. In due course, the brooders will be ready for artificial breeding trial. Importantly, a national level workshop for two days is going to be held in Assam from 22nd-23rd December 2014 organized by the Directorate of Coldwater Fisheries research (ICAR), which invited the team leader to present a talk on issues of mahseer conservation in northeast India.

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

A part of the local communities, particularly the dwellers on the river bank have been benefitted from the project. The team leader has taken pain to visit most of such villages and interacted with the villagers. At every station, the team has developed friendly environment with the people therein and tried to educate them regarding the importance of mahseer fish and its habitat. The youths have been employed for survey works and have been paid more than their expected wages. High remuneration was paid in order to make them feel comfortable and to establish good relationship.

The knowledge materials in the form of four pages A4 size leaflets and hard paper A3 size posters were distributed to the villagers, participants and delegates in the workshop. At the least more than half of the villagers where the team has visited during the project period (both 1st and 2nd RSG) have received knowledge about mahseer. We are hopeful that the rest of the villagers will be personally met by the team in future programme. The villagers have shown great interest to join with the team for the noble cause to eradicate threats in river ecosystems.

Awareness programme was organised in different schools. The school teachers as well as the local villagers were so keen to hold such programmes. The students have gained knowledge and have shown willingness to take responsibility for nature conservation activities in future. The knowledge materials have greatly enriched the students and the educated youths. The government officials and the responsible persons in the district headquarter were gathered in seed stocking programme. The team leader and the resource persons have spoken on such occasions which attracted the audience.

In this way, the project has greatly linked the stakeholders and set them at common platform to go ahead with the objective of mahseer conservation in northeast India.

5. Are there any plans to continue this work?

Yes, the activities under this project have greatly evoked the youths and local NGOs who have taken great interest for mahseer conservation in Northeast India. The identification and collection of seeds of *N. hexastichus* (copper mahseer) has been achieved successfully and the rearing of the seeds is continuing in two different centres for broodstock development which would be utilised in near future for artificial seed production. Discussion is continuing with government organisation as well as the local stakeholders to develop a mahseer centre in northeast India. We are progressing well to eradicate anthropogenic threats in river ecosystems.

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

- Publication of leaflets and posters.
- Oral presentation in seminars/ conference (one seminar is scheduled to be held from 22nd-23rd December 2014)
- Publication of articles in local newspapers.
- Publication of final report in Rufford website.

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 fund of this second RSG was received on 12th November 2013. Accordingly the project was started with immediate effect. One of the prime objectives of this long term project is to develop artificial seed raising unit in northeast India which has been initiated with this grant. We are now proposing government agencies to create a dedicated centre for research and conservation of mahseer in northeast India. We are in great hope to get continuous support from the Rufford Foundation in this regard. The team leader will submit a proposal for the third RSG to come up with a bigger effort and visible out results on mahseer conservation in northeast India.

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
Travel	1500	1600	+100	Hiring of vehicle cost high expenditure, further travelling to meet with different agencies was expensive
Fixed remuneration for Project Assistant (PA) @Rs.8000/- p.m. for one year	1140	1140	0	
Daily wages for multiple labourer	300	500	+200	Besides, regular employment of a project assistant, we required to multiple labourers for various activities which cost more than the proposed budget
Consumables including sampling nets	600	500	-100	We limited the consumables in order to balance the extra expenditure incurred in other items
Awareness programmes/ meetings etc.	1080	1100	+20	A very little extra expenditure incurred
Remuneration to resource persons	456		-456	None of the invited resource persons were not willing to accept any remuneration
Material production for information of the species	500	600	+100	Printing cost of the materials were higher than presumed

and awareness campaign				
Preparation of earthen tank and recurrent feeding and management of mahseer seeds in the tank	500	600	+100	High expenditure incurred for protection of seeds in the tank, disinfecting the tank and supplying of nutrients in the tank
Total	6076	6040	-36	

*total fund granted GBP6000

Local exchange rate at the time of fund receipt was GBP1.00=INR100.98

Forex Txn deducted was INR434.00+25.00= GBP43.17

So, total fund in hand was **GBP5956.83**

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

A flow through hatchery is essential to be established urgently for carrying out artificial breeding of mahseer. A proposal for a hatchery unit is prepared and hoping to avail grants from agencies for the same. Hatchery unit will be set up in Dibrari Lake in Haflong. This will lead to establish a mahseer seed bank in northeast India which will facilitate mahseer ranching in nearby water bodies. This plan was conceived from the successful establishment of mahseer breeding centre at Lonavala by Tata Electric Farm in Maharashtra, India.

Conservation of mahseer in the natural system is needed to be more facilitated. In some selected water bodies

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, the RSG logo is duly used in the materials produced under the program which includes

1. The reading materials on mahseer.
2. The posters on mahseer conservation campaign.
3. The banners for the awareness programme.
4. The banners displayed in the exhibition stall.

Further, the grant of RSGF is duly acknowledged in publication of popular articles, power point slides in oral presentation and the news items published in daily newspaper.