Final Project Evaluation Report

Your Details	
Full Name	Sunil Khatiwada
Project Title	Community Engagement for conservation of endangered Ganges River Dolphin outside Protected Area in Karnali River, Nepal
Application ID	25507-1
Grant Amount	£5,000
Email Address	Sunilkhatiwada@gmail.com
Date of this Report	02/12/2018

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
Estimate the number of dolphin visiting Mohana river.		☑		Census was performed during the pre-monsoon period, so full extent of dolphin estimation could not be achieved.
Determine ecological quality of habitat through water quality assessment			☑	
Enhance Community engagement and awareness			☑	It was successful to attract the attention of policy makers which can help to focus on designing sustainable infrastructure needed for habitat management.

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

It was most challenging to perform three censuses as predicted. The first census was carried with ease but remaining two censuses could not be carried mostly due to the ongoing programme, "dolphin festival "carried by stakeholders with support from local representatives. It was a month-long festival, so lots of disturbance was created. Also for the third time due to harvesting season people could not be gathered so we were not able to carry the census as expected.

Also, for sampling habitat, boats were very few and the available boats were mostly scheduled for transporting people. These boats could not be used for our need. With few limited boats we carried water and fish sampling.

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

A. Estimation of dolphin number

Total of 48 dolphins were record for the pre-monsoon period. Though monsoon record was not successful the data from 2016 can assist in analysis. High density of dolphin was sighted in straight channel compared to meander and confluences in pre-monsoon period whereas density was high in meander habitat in monsoon season (data from 2016). Also there is positive co-relation (r=0.57) of dolphin availability in different habitat type across different season.

Dolphin Census in July 2018

B. Ecological Sampling

1. Fishes were sampled in different site. Altogether 49 fish species were recognised based on local name provided by local fishing community. However, this does not necessarily mean that dolphin feed on every species of the fish. Still, it cannot be said with certainty on which species dolphin depend the most.

2. Water Quality Assessment
The details of water quality sampling have already been updated in previous progress report. From the analysis it has been clear that the tested water samples were slightly alkaline in nature with high turbidity and low vulnerability to acid deposition. Also total phosphorous was higher which indicated the high eutrophication productivity range for both season (pre-monsoon and monsoon). We cannot say at this point if this type of water quality affects positively or negatively to the dolphin. But the study from other areas have highlighted the accumulation of toxicity in dolphins (Kannan, 1997).

C. Mass awareness

Students (high school and undergraduate) from Kathmandu were given infographic session on dolphin and its status. Along with that community in the river area were made aware on the importance of wildlife such as dolphin and its importance to help promote tourism in the region. Also, this work helped to bring much needed concern among the local authorities for the need of building safe habitat for the dolphins. Not only, young children were focused but the officials of major developmental project occurring around the region were informed and made aware to design dolphin friendly infrastructure. Also, it was brought to their attention to rethink about the consequences of any activities in future.

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

The sustainability of his project rests on the local community. The community were involved with the first day of the project and is continuing even after completion of the project. From carrying out dolphin census to local discussion the community were represented in every step. Involving community helped us to assess their views towards conservation of habitat and dolphin.

This project has assisted in activities related to publication of dolphin related material through dolphin conservation centre. Also, different outreach activities with young children, youth as well as with old people has been beneficial to attract the needed attention. Our project helped them about the causes and consequences of dolphin sustainable environment and the importance of wildlife for developing tourism industry in the area.

5. Are there any plans to continue this work?

Yes. I plan to compare these data in river segment in which people have reported rare and occasional sighting of dolphin. Also, building on from this result,

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

Parts of the result has been shared through newspaper and radio programmes. Detail report of the project will be disseminated to the concerned authority. Also, I plan to publish the outcome of this project in a journal.

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

The overall time was as designated in proposal (July- October). Only difference was census could not be carried in August, 2018 and September, 2018.

8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Transportation	1632	1225	407	Flight transportation was used. For 1st visitation, expenses was covered for 4 people (two way):10,178*4*2 =nrs 81,424 2nd visitation- expense was for 2 people (two way):nrs 9,500*2*2 =nrs 38,000 Total amount in pound sterling 812. Plus addition transportation cost to reach the study site amounted to be 413.
Accommodation and Food		1000		As stated in proposal food was covered with the help of NEBORS.
Conservation Awareness and outreach programmes	1700	1700		Same as stated in proposal. In addition, Vehicle hired through Dolphin Conservation Center, Thapapur, Kailali Support for continuation publication

				of dolphin related material through Dolphin conservation centre.
Field Supplies	36	100	64	
Allowances for field assistant	1020	1020		3 people were used as field assistant which amount to: 3* 30000= nrs 90,000 Also, 3 local partners were used whose allowances was 20,000 per person. Expense: nrs 3*20000 = 60,000 Total expense:1,50,000
Allowances for data collector	612	755	143	37 observation spots was selected, with 3 person per spot. Census was carried only once. So, nrs = 1,000*37*3 =1,11,000 (pound sterling 755) The difference was due to increase in observation spot and more involvement of people.
Lab Analysis		680	680	Initially this amount was not accounted for. The water sample from dolphins habitat were analysed from NESS- 2 times analysis for 13 parameters.
Hiring boat		364		
Total	**5,000**	**6844**		

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

Due to various activities the area has been highlighted as dolphin habitat. Community and local politician have come together to promote the river as prime habitat for dolphin. This study has helped in gaining baseline information on dolphin and habitat status. This is valuable since this study will help to build future conservation strategy.

However, important questions are still unanswered, such as "do the same group of dolphin individual keep revisiting the river segment?" Also, questions such as "does breeding pressure and the need of mother-calf learning push dolphin to move upstream into Nepal?", have not been addressed. These questions will help to address the purpose of dolphin's visitation, either as a breeding site or just exploratory behaviour for feeding. It will help to reinforce our understanding on why dolphins move back. Also it helps to find which type of individual continuously prefers to move in the river. However, the future works deals with tagging dolphin individual with GPS which seems expensive.

10. 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, the logo was used in printed material

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

Sunil Khatiwada: Team leader

Bhojhraj Dhungana (Local partner/Area coordinator): Mr Dhungana is a local people and conservationist. He helped in communication with local community. He was important member as he helped to navigate in the area and determine the observation spot. He helped in carrying outreach activities in the area.

Bijay Shrestha (Local partner): Mr Shrestha is a local leader and conservationist. He helped in communication with local community. He was important member as he helped to bring community together and determine the observation spot. He helped in carrying outreach activities in the area.

Hirulal (Local partner): Mr Hirulal is a local people and conservationist. He helped in communication with local community. He was important member as he helped to monitor census activities and navigate the area.

Shailendra Sharma (Field assistant): He is an undergraduate- Zoology student, from Tri-Chandra Multiple campus. His responsibility was to assist in water sampling and population census.

Smriti Shrestha (Field assistant): She is undergraduate- Zoology student, from Tri-Chandra Multiple campus. Her responsibility was to assist in water sampling and population census.

12. Any other comments?

The work was also in support with NEBORS and Dr Chalise helped as advisor for successfully completing the work.