

Final Evaluation Report

Your Details	
Full Name	Sushmita Kar
Project Title	Building Road to Recovery of Asian Brown Tortoise (Manouria emys phayrei) in Nagaland, Northeast India
Application ID	33929-1
Date of this Report	17/06/2022

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
Documenting potential habitats and extant population/individuals of <i>M. e. phayrei</i> near the identified locations.				A total of 60 days were spent on field survey covering 1161 ha in and around the lower range of Wokha district (Baghty, Upper Baghty, Soku, Makharong, Sanis, Bhandari, Yimparasa, Yimza, Mongphio, Lishiyo, Roni, Okotso villages). Indirect evidence of recent presence of <i>M. e. phayrei</i> recorded from both Niuland and Wokha localities. Report of an adult wild tortoise has been received from Intanki National Park. However, no <i>M. emys</i> individual found yet in the field sites. Potential reintroduction site has been assessed between Bhandari and Baghty, a 135 ha patch of forest, based on habitat characteristics such as elevation, slope, vegetation structure including the availability of preferred food plants and historic presence.
Ameliorating the threats from selected potential release/supplementation sites through participatory awareness campaigns and capacity building.				Conservation agreement signed with four native village committees (Baghty, Upper Baghty, Soku, Makharong) around the determined reintroduction site, 15 community interactions and awareness programmes in 12 villages to sensitise over 500 community members and five educational campaigns involving over 300 students conducted. Three rescue calls were received, one of which resulted in publishing the first state record of the peacock softshell turtle (<i>Nilssonina hurum</i>) from Nagaland. Local youths will be trained and hired to watch the soft-release enclosure and track the animals at the end of this year. We had also participated at the 22nd

				Hornbill Festival in Kohima from 1-6th December 2021 in collaboration with Nagaland Forest Department to promote and raise awareness on <i>M. e. phayrei</i> . Over 400 signatures were received from more than 600 people who visited the stall in support of the conservation of Asian brown tortoise in Nagaland.
Conducting pilot release of the tortoises attached with VHF transmitters and PIT tags.				Due to COVID-19 disruptions and delay in procuring federal government permits, pilot release has been postponed till November 2022. However, 10 VHF radio transmitters (RI-2B) have been procured from Hohill, weighing 15 g (25 x 13 mm) and having a battery life of 24 months and frequency in the range between 150.060-150.840 MHz

2. Describe the three most important outcomes of your project.

Although the project has finessed toward long-term grassroots level conservation and research through numerous activities, the three most important outcomes of my project would be:

a). Attitude and perception of communities (Baghty, Upper Baghty, Makharong, Soku) was assessed along the potential release site. This exercise finally culminated into a Memorandum of Association between the project team and local communities. The document was signed on 23rd October 2021 with four village committees under Baghty Division, in Wokha district, Nagaland, where 40 community members pledged towards conservation of turtles and tortoises and their habitats. They promised to support the forthcoming tortoise release and monitoring.

b). Establishing current presence of *M. e. phayrei* in both the study sites, i.e., Niuland and Wokha districts through indirect evidence. Four recently (3 months to 3 years) discarded shells of the focal species were recorded from the local communities who kept them as house decor. During the survey, a hill in Baghty area of Wokha district, named as 'Lishyomo hill' was also discovered, which translates to 'Manouria hill' in English, having significant historic and current presence of the species.

c). Habitat evaluation and selection of potential release site at Lishyomo hill, Baghty, Wokha. Vegetation sampling was done in 20 quadrats which revealed a total of 60 species of plants of which 21 species of trees belonged to 18 genera and 15 families, 22 species of shrubs belonged to 20 genera and 16 families, and 18 species of herbs belonged to 18 genera and 11 families. Apart from dense bamboo stands across the hill (*Dendrocalamus strictus*), the plant species found in Lishyomo Hill such as *Syzygium cumini*, *Prunus serotina*, *Asimina triloba*, *Frangula alnus*, *Passiflora edulis*, *Rhus chinensis* Mill., *Ficus* spp., pineapple, wild mushroom and wild banana, etc., are

preferred diet of *M. e. phayrei* and this information helped us to choose a suitable spot for the tortoises to be released.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Habitat documentation for *M. e. phayrei* had started in February 2021 which had to be continued till October in both Wokha and Niuland areas of Nagaland. However, due to second wave of COVID-19 pandemic in India and subsequent lockdowns and travel restrictions, field activities were largely disrupted from April to July 2021. Complying with government guidelines, field research was again resumed in August till October 2021, limited only to Wokha district, maintaining social distancing and necessary hygiene measures.

4. Describe the involvement of local communities and how they have benefited from the project.

A volunteer from the project site, (Tsonchumi Odyuo) was recruited to assist in field data collection and collation. The local hunters were sensitised following which they assisted in fieldworks as field guides where they were also incentivised through daily wages. Indigenous plant samplings were distributed during the village meetings. Youths from the local communities will be trained and employed prior to the pilot release to carry out post release monitoring and data collection.

5. Are there any plans to continue this work?

Yes, the work has been continuing even after the project period with broader perspectives. With ongoing field surveys and community interactions, I look forward to apply for Rufford Booster Grant and raise support towards community incentivisation, besides conducting the "soft" release of ten captive reared tortoises by November 2022. The work is also being expanded to other sites such as Intanki National Park and other states of northeast India, viz. Manipur and Mizoram, with the intent of building a regional conservation network for target species.

Moreover, this grant helped me to register for pursuing a PhD programme on freshwater turtles and tortoises of north-east India. The preliminary run down has been really helpful for me asking research questions, hypothesis and study design besides logistics challenges being a woman researcher in north-east India.

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

I had presented a speed talk at Rufford India Conference, Mumbai on 7th December 2021 on the progress of the project 'Building Road to recovery of Asian Giant Tortoise (*M. e. phayrei*) in Nagaland, NE India' (Abstract Attached).

An open-source publication on perception of local communities towards chelonian conservation in Nagaland with special reference to *M. e. phayrei* is soon to be published.

I will be speaking about the project results at the annual workshop of TSA IUCN TFTSG 2022 Symposium in Arizona, USA.

Other than that, news and popular articles have been published from time to time over TSA India's social media platforms, imparting information on the ongoing work and special events.

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

Considering the project's advancements, it is important to raise zest among local communities and involve them further into participatory conservation processes. These involvements warrant feasible community incentivisation methods which shall not involve direct (financial) but indirect benefits so they can come on-board through not hunting the remaining turtles and tortoises and support the conservation activities. Also, it is necessary to train more and more local volunteers for the project to sustain for a long term on its own.

8. 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?

The Rufford Foundation logo was used in all projects related activities such as awareness campaigns, leaflets, posters, banners, etc. (copies attached).

'Turtle Trail – A guide for trainers on freshwater turtles and tortoises of Northeast India' has been released on 2nd February 2022, authored by PI and her supervisor (Shailendra Singh), used the Rufford Foundation logo. This was released by Honourable Minister for Environment and Forests for state of Assam on World Wetland Day, 02 February 2022 (copy attached).

9. Provide a full list of all the members of your team and their role in the project.

Sushmita Kar (Ms), Project investigator

Tsonchumi Odyuo (Ms), Project volunteer

Lalit Mohan Budhani (Mr), Field assistant

Chandrapal Panika (Mr), Field assistant

Johnny Tep Rengma (Mr), Forest Guard, Nagaland Forest Department, a local from Wokha district who assisted in field surveys and community interactions

10. Any other comments?

Photographs along with a blog from the pilot release programme will be submitted towards the end of November 2022.