

Final Evaluation Report

Your Details	
Full Name	Ravinder Kaur
Project Title	The conservation of endangered hornbills in Kenyir Malaysia
Application ID	33656-2
Date of this Report	14/04/2022

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
Objective 1: Establish baseline data on hornbills and about the locals around Kenyir.				<p>This was achieved through interviews. Firstly, we visited the land office to meet with the heads of the Village Community Management (Penghulu) to obtain permission to meet locals and to obtain number of people in each village surrounding the Kenyir lake. We also visited Community Development Department (KEMAS) to obtain basic information about the local communities (e.g., religion).</p> <p>Then, the managed to conduct interviews with the local villagers in the selected local villages around Kenyir to assess willingness to participate in nest guardian programme and we were able to identify candidates. We interviewed locals and local birders to obtain general information on hornbills (e.g., breeding season) and location of nesting sites. We have identified four hornbill hotspots. All nine species of hornbills have been seen and photographed within these areas.</p> <p>We prepared a poster of all nine species of hornbills for these interviews (please see 'Hornbills of Terengganu' attachment).</p> <p>We also conducted meetings with the House-boat association head to identify activities conducted on and around the Kenyir lake.</p>
Objective 2: Identify and appoint five local nest guardians from selected local village to protect hornbill nests.				<p>We worked with a local Malay named Dome, and he has good relationship with the indigenous people. He helped us identify and appoint nest guardians Azi, Akeb and Jai, Bateq people from Kuala</p>

				<p>Koh.</p> <p>We ran a on the ground training for the guardians, but it was more of a two way learning experience because the indigenous people are very well versed with the forest. We learnt the local names of the hornbills, their feeding and nesting behaviours. They were given hornbill guardian t-shirts.</p>
Objective 3: Locate natural nests of hornbills; particularly the species listed as critically endangered and vulnerable hornbills.				<p>We organised three forest expeditions to locate nesting sites of hornbills (target species; critically endangered and vulnerable hornbills) with enforcement officers of Kenyir State Park and the nest guardians.</p> <p>The hornbill nest observation task was given to the nest guardians and they discovered several nests. We have been monitoring their reports.</p> <p>We can now estimate the breeding season for several hornbill species to be in Feb - June based on the new nests we discovered.</p> <p>1)Great hornbill 2)Rhinoceros hornbill 01 3)Rhinoceros hornbill 02 4)Wreathed hornbill 5)White-crowned hornbill 01 6)White-crowned hornbill 02</p>
Objective 4: Establish hornbill preferred food plant nursery within the selected local village by the second half of the project year.				<p>We have set up a plant nursery within a village and have planted various species of figs using stem cuttings, 70 plants.</p>

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

Building relationships with the local community is important when it comes to successful long term conservation projects. We have built a relationship with the villagers and the village heads now. With their support, we discovered many nests such as the nest of a vulnerable rhinoceros hornbill nest. We identified several key local community people that are interested to become nest guardians, this marks the first ever hornbill guardianship programme in Terengganu. They are keen to continue nest monitoring work, thus reducing the chances of poaching by others,

and helping collect more data on our endangered birds. We have also planted several food plants for the hornbills in the plant nursery.

Finding hornbill nests (seven discovered). It is a difficult activity; nests are high up and obscured by the thick canopy. The terrain is challenging, and we definitely need indigenous people as the hornbill guardians because they know the forest best. Hence, once we locate a nest, this is a significant achievement for our team. Hornbills will reuse the same nests, yearly. Finding a nest opens the door to more research; we can collect the fallen seeds under the nest to learn more about the plant food preferences and we can also grow these plants. Aggregated seeds under nest trees have little survival chances if left under the nest tree.

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

The pandemic made it difficult for travel as the country went into lockdown. Then when the country was open again, and we were allowed to travel with police permission, we were concerned about meeting the indigenous people, as we come from the city, an area of high Covid cases. We tried our level best to follow the standard operating procedures to minimise any spread.

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

We hired the locals for this project, and they conducted the scientific expeditions, to locate hornbill nests. They benefited financially, but also, we took the opportunity to learn from them and this gives them a sense of our appreciation towards their vast local knowledge.

5. Are there any plans to continue this work?

Yes of course! It is imperative to continue this work because we are getting closer to the locals and gaining their trust. We wish to continue the nest guardian prog and keep searching for more nests.

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

We have presented our findings to the Terengganu State Park in the form of reports. We also use social media to share our findings. Dissemination of posters to government offices and local eateries.

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

We are building trust with the locals and as we work with a handful of people, we anticipate that more locals would be inclined to work with us and step forward. We can expand the field team and thus, do more in terms of locating hornbill nests in the forest. Once we find nests, we can offer some level of protection by being present at the nest during nest monitoring and there is a wealth of information to collect e.g., the fallen seeds which give us insights into the hornbill diet. Moreover,

we can pick up these aggregated seeds and grow them, to increase their chances of survival. We have nine species of hornbills in Kenyir and most species nests are yet to be discovered, e.g., endangered wrinkled hornbill, white crowned hornbill, and wreathed hornbill.

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?

Yes, please see the poster attached.

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

Ravinder Kaur – writing, scientific direction, trainer for guardians.

Sanjitpaal Singh – photography, videography, and design.

Suzairi bin Zakaria – local Malay contact between Ravin and the local Bateq people, the leader of the nest guardian project during forest excursions.

Jai, Akeb and Azi – three local Bateq (the nest guardians) from village Kuala Koh.



From left; the Gaia team (Sanjit and Ravin), nest guardians and volunteers.

Hornbill preferred food plants



(A) Local name *Temarih bukit*, (B) *Psydrax nitidum*, (C) Local name *Buah Medang*
(D) Local name *Buah Kaltong* (*Aglaia* sp).

Interviews with Local Malays



Meeting with the village head in the District Office to seek advice & permission to meet locals.





Ravin and Sanjit meeting with the local Malay people to interview them about hornbills.



Meeting with the local indigenous people, the Bateq. They have received their nest guardian t-shirts.



Left: Establishing plant nursery with hornbill preferred food plants. Right: Ravin training the nest guardians (and receiving training) about hornbills with Jai, an experienced Bateq local.



From left; Kenyir State Park (Wan), nest guardian leader (Dome), Ravin and university intern (Zikry). On right, Dome leading the Bateq team into the forest.

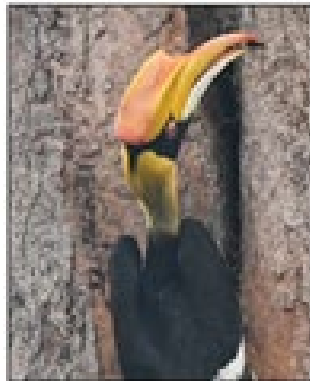
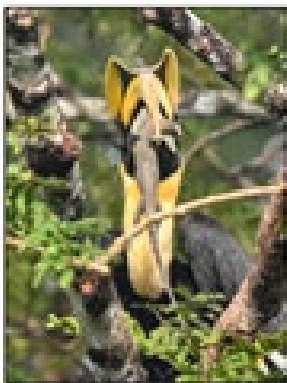
Hornbill nests located



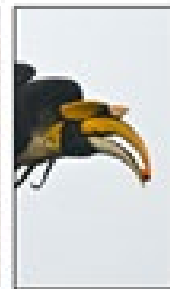


A possible Wreathed nest (based on the fallen fruits left on the ground) and vulnerable Great hornbill nest located.

PHOTOS BY SANJITPAAL SINGH/JITSPICS.COM



The great hornbill supplied protein rich foods such as a young monitor lizard, beetles and a young squirrel.



The Great hornbill consumed a variety of fig and non-fig fruits, including oil palm fruits.

During nest observations, many interesting observations were made on the feeding behaviour of the Great hornbill pair.