

Final Evaluation Report

Your Details	
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Project Title	Assessment on the level of Human-Elephant Conflict and Possible mitigation measures in and Around Chebra Churchura National Park, Ethiopia.
Application ID	34094-1
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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
To determine the spatial patterns of human-elephant conflict in CCNP				The special patterns of human-elephant conflict showed high difference between different adjacent villages around the park. Out of the total 20 park adjacent villages only three (Chebra, Seri and Yora) reported and confirmed that they had severe human-elephant conflicts. The absence of buffer zones and barriers such as big mountains between the villages and the park in the other 17 villages, were the main factors affecting the spatial patterns of the conflict.
To determine group compositions of elephant herds involved in crop raiding				Elephants are grouped into bulls and female group with compromises females, juveniles and sub adults. Bull groups (adult males) were responsible for most of the crop raided. 61 sightings of crop damage were observed of which (96. 8%) of raid were made by bulls.
To determine crops commonly grown in the conflict areas and plant which are potentially damaged (Palatable) for by the elephants				Banana, maize and yam were the only crops reported to be palatable for the elephants and raided. The nutritive value of these crops and their palatability to the elephants may be the main factor for their preference.
To determine different techniques used by the local communities to protect their crop from elephants and the effectiveness of each of the techniques				The techniques used by the local communities are listed below with respect to their level of effectiveness. 1. Warning gun fired by the park scouts. 2. Using chillie fencing (19.7%), 3. Honeybee hive fence 4. Sound noise including the sound of barking dog and hammering materials made of metal. 5. Guarding 6. Smoking chillie and elephant dung.
To examine the perception of the local				Most of the local communities have positive attitude towards the

community for the elephant conservation and the park in general			conservation of the park and elephants. They believe that the presence the national park and the elephants in their locality as their symbol and unique emblem to their area, which attracted both national and international tourists, scientists and higher officials.
To investigate the relationship b/n distance from the park and the amount of crop damage			Distance from the park and the quantity of crop damage showed an inverse relationship in the three vulnerable villages. As the distance from the park boundary increased, crop damage, injury and death of human and livestock declined.
To investigate seasonal variations in human and domestic animal attack and crops raiding by elephants			Most of the attacks and damage were seasonal due to the seasonality in availability of cultivated crops on the farmlands. Out of the total three crop types raided by the elephant only banana was available during both dry and wet seasons. Except that of banana, all the damage was recorded only during the wet season due to the availability of cultivated crops only during the wet season.

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

a). This study showed that crop loss, injury and death of human and domestic animals were the main causes of human-elephant conflicts.

b). The spatial patterns of human-elephant conflict in and around CCNP were properly identified. Based on this out of the total 20 park adjacent villages it was confirmed that human-elephant conflict does not exist in 17. The existence of severe human-elephant conflict was confirmed in three park adjacent villages (Chebra, Seri and Yora). This is very important finding that indicated the specific places to be focused for all concerned bodies so that they can use their limited budget and time properly only in those specifically identified areas to minimise the existing human-elephant conflicts in and around CCNP.

c). All crop types commonly grown in the conflict area do not equally attract the elephants. Elephants showed high preference for mainly three crops among the wide varieties of crops commonly grown in those areas. The result is extremely important, it indicated that shifting the farming practices on crops commonly cultivated in this area to crops that are not palatable/avoided by the elephants can be effective in minimise the human-elephant conflicts in the area.

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

None.

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

The local communities were fully participated in every activity of the project including actual measurement of the damage on their farmlands, interviews, focal group discussions and identification of effective and appropriate human-elephant conflict mitigation measures and techniques. Moreover, the result of this project including recommendations of effective and appropriate human-elephant conflict mitigation and prevention measures for this protected area was communicated to the local communities, all concerned and responsible organisations and international community and scientifically acceptable and relevant inputs from the local communities were included in the document. Thus, awareness was created for the local communities so that they can implement those effective human-elephant conflict mitigation techniques in their localities to minimise the conflict and ensure long term co-existence between local communities and the elephants.

5. Are there any plans to continue this work?

Yes, we have a plan to continue our work especially in community education, demonstration and training on management of human-elephant conflict mitigation measures in particular and conservation of natural resources in general. Also, additional deriving factors of the conflicts will be investigated to ensure active participation of the local communities in the management and conservation of the wildlife resources of the park and ensure sustainable co-existence between the wildlife and the local communities around the park.

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

The result of this project was communicated to all concerned and responsible local regional and national governmental and non-governmental organisations including the local administrators, the national park and local communities on the regional and zonal level task forces quarterly evaluation workshop held in Hawassa and Ameya on March 27 and 29 2022 respectively. A formal report is also be submitted to be published on a webpage of The Rufford Foundation website (www.rufford.org). We also prepared and submitted a manuscript to Journal of Global Conservation and Ecology to be published as a peer-reviewed journal to make it available for the international and scientific communities.

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

The next steps will be provision of community education, training, additional research and support to enable the local communities properly understand and implement the effective techniques of human-elephant conflict mitigation measures, raise their level of awareness and tolerance for the conflict and ensure

long term co-existence between the local communities and the elephants. Enabling the local communities to properly understand the value of the wildlife resources, the economic and ecological values of the wildlife and actively participate in the conservation and management of the national park and conservation of natural resources in general.

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 during presentations/PPs, presented in training and workshops conducted with local communities and stakeholders at national, regional and local level. Awareness about the support from The Rufford Foundation was also made for stakeholders at all levels that participated in the project. It is also acknowledged on the manuscripts prepared for publications on international journals and different websites.

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

10. Any other comments?