THE RUFFORD FOUNDATION SMALL GRANTS PROGRAMME

Evaluating the Efficacy of Beehive Fences in Mitigating Human-Elephant Conflicts and Improving Farmers' Income around the Digya National Park of Ghana

Project ID: 39738_1

Principal Investigator: Ishmael Hashmiu

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This progress report covers major activities carried out from April 2024 to September 2024. These activities include monitoring of crop raiding by elephants, beehive fence maintenance, and radio education. Crop raiding incidents were monitored at and around the beehive fence at Nsogyaso. The monitoring exercise was primarily aimed at comparing crop raiding incidents between the intervention site (*Aburokyire*) and the control sites (*Nsarie* and *Osompa*). To have a fair idea about the distribution of human-elephant conflicts around the park, additional information on crop raiding incidents in neighbouring elephant hotspots around the park were also obtained from wildlife officials. One farmer provided fresh elephant dung to serve as additional evidence of farm invasion by elephants (Plate 1).



Plate 1. Ishmael Hashmiu inspecting fresh elephant dung presented by a farmer as additional evidence of elephant invasion. Credit: Ishmael Hashmiu

Another key activity carried out was beehive fence maintenance. The beehive fence line was weeded by members of the Beehive Fence Stewardship Committee to minimise the risk of wildfires and pest infestation. Other maintenance activities carried out by the members were the elimination of insect pests that invaded some of the hives. The most problematic insect pests eliminated were reddish bees (Plate 2) locally known as *Mpeniwa*. These reddish bees were notorious for attacking and killing honeybees.



Plate 2. Reddish bees notorious for attacking and killing honeybees. Credit: Ishmael Hashmiu

The last major activity carried out was a radio education programme that was designed to share key lessons from the project with a wider audience. Using a landscape approach, the programme targeted farmers in other forest-fringe communities that are historically known to be hotspots for human-elephant conflicts. The radio programme was broadcasted live on Nkwa FM (Plate 3) for about one hour. The radio station covered three administrative districts with an estimated total farmer population of 131,080. A staff of the radio station disclosed that the station had a high listenership of approximately 70% of farmers in the area. Thus, the radio education provided was expected to reach more than 90,000 farmers.



Plate 3. Radio broadcast on beehive fence and elephant conservation by Ishmael Hashmiu. Credit: Ishmael Hashmiu.

The radio discussion covered various topics including: (i) agricultural expansion into forests as a key driver of human-elephant conflicts, (ii) economic and ecological benefits of elephants and the need for elephant conservation, (iii) effectiveness of beehive hive fencing versus other human-elephant conflict mitigation strategies, (iv) step-by-step procedures for installing beehive fencing, and (v) multi-dimensional benefits of beehive fencing. The programme attracted several questions. The most dominant question was whether beehive fencing could be afforded by resource-poor farmers. In view of the high market value of honey, farmers were urged to look for capital to invest in beehive fencing as an alternative incomegenerating venture. Other questions also centred on the safety of farmers that farm close to beehive fences. It was clarified that minor physical contacts with beehive fences are unlikely to cause honeybees to fly out in defence. It was added that it is the intense shaking or excessive disturbance of the beehives that would normally cause honeybees to fly out in defence. Farmers who intended to install beehive fences were therefore advised to avoid intense physical contact with the fences as much as possible. They were also advised to wear protective clothing when working on the hives or fence.