



# Attitude of Local Communities Towards Human-Wildlife Interactions and Wildlife Conservation in the Peechi-Vazhani Wildlife Sanctuary, Thrissur, Kerala

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**Abstract:** A questionnaire survey was carried out among the local people and tribal communities in and around the Peechi-Vazhani Wildlife Sanctuary in the Thrissur District of Kerala to understand the attitude towards human-wildlife interactions and wildlife conservation. A total of 60 respondents were interviewed, and the responses were recorded. Crop raiding was the most important result of the conflict, followed by cattle depredation. Conflicts in the study region were driven mainly by increased food availability in the forest fringes. The most conflicting animal was the wild boar (*Sus scrofa*), followed by the giant squirrel (*Ratufa indica*). Proper awareness programs, interactions among stakeholders, and participatory maintenance of mitigation methods are essential for the coexistence on the fringes of this protected area.

**Keywords:** Human-wildlife Interactions, Attitude, Crop raid, Livestock depredation, Mitigation measures

The phrase "Human-Wildlife Conflict"(HWC) has gradually evolved through time into "Human-Wildlife Interactions" by gaining several dimensions. One of the most challenging issues conservationists face today is handling human-animal interactions. Local communities suffer enormous economic losses due to crop destruction, livestock loss, and human-animal confrontations that result in either life loss or injury. Retaliation against animals occurs from this, which causes animal lynching or herbivore poisoning. Resolving the problem of human-animal interactions in India is difficult because many human settlements are near protected areas which make conservation efforts difficult (Karanth et al 2008). There are many causes for HWC. Due to urbanization, intensified agriculture, and increased human population, wild animals are experiencing habitat loss and degradation (Nyhus 2016). Despite decades of research and significant financial effort, it is still unknown what ecological and social factors contribute to human-wildlife interactions (Dickman 2010). Protecting biodiversity is not just about advocating for cohabitation as we understand it with wildlife. Prior studies on quantifying the damage arising from conflicts are popular. However, the public's attitude towards conflict and wildlife, an essential factor in mitigation programs, still needs to be examined (Rohini et al 2018, Govind and Jayson 2018). This paper outlines the attitude of local communities living in and around the Peechi-Vazhani Wildlife Sanctuary towards the effects of human-wildlife interaction.

## MATERIAL AND METHODS

Peechi-Vazhani Wildlife Sanctuary, the research area, is located between latitudes 10°28' and 10°38'N and longitudes 76°18' and 76°28'E. This sanctuary is bordered to the north and west by the Thrissur Forest Division, to the east by the Nenmara Forest Division, and to the south by the Chalakkudy Forest Division and the Chimmony Wildlife Sanctuary. The sanctuary covers roughly 125 Sq.km of land. It is the watershed area for the Peechi and Vazhani reservoirs. The region comprises Tropical evergreen forests, Tropical semi-evergreen forests, and Moist deciduous forests which support diverse fauna and flora. Human settlements in Olakara, Maniyankinar and Jandamukk regions, falling under the Peechi forest range, were chosen for the study (Fig. 1).

A questionnaire survey, with open and closed-end questions, was used from May to July 2022 to examine the attitudes toward human-wildlife interactions. The study was conducted in three selected human settlements in the sanctuary, Olakara, Maniyankinar, and Jandamukk. Interviews were conducted among 60 individuals residing in tribal settlements and forest fringes. In-depth data on the scope of human-wildlife interactions, the most significant type of conflict, its pattern, and attitudes toward forest and conservation efforts were collected. The data was compiled, and the responses to different questions were evaluated using percentage analysis.

**RESULTS AND DISCUSSION**

**Extent of conflict:** The major consequence faced by the residents was crop raiding (93%), followed by livestock loss, habitat destruction and human property damage (21%). Injury and loss of life of humans are faced by 18% of the people. All the residents faced difficulties in cultivation due to wild animals. The top five conflicting animals were wild boar (82%) followed by Giant squirrel, Elephant, Monkey, and Peafowl (35%). About 70% of the people had an opinion that conflict occurred during night hours (18:00 to 6:00), while 14% during day time (6:00 to 18:00) and 15 % during both. While rating the fear of conflict (from 0 to 5) most people fell under the rating of 2. 88 % of the individuals haven't faced attacks from wild animals.

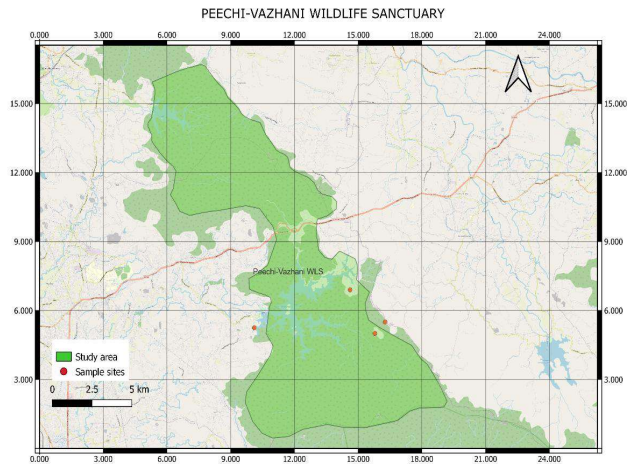
Most individuals (96%) believed that the interactions have increased compared to the last decade. However, 4% respond that no change has happened in the intensity of the interactions. 72 % of respondents believe that increased availability of food is the cause of increased conflicts, followed by habitat degradation (15 %) and fragmentation (13%) (Fig. 4). Furthermore, 58 % of the people believed that most conflict incidents occur during the rainy season, while 25% throughout the year and 17% in the non-rainy season (Fig. 5).

The cultivation status of various crops was examined without regard for the area of land owned by individuals. Coconut was the most widely cultivated among all the cash crops followed by rubber and ginger (Fig. 6).

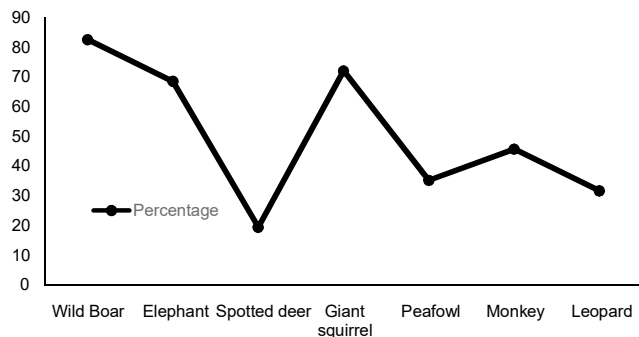
**Attitude toward the conservation of wildlife:** Compensation for wildlife damage is a prominent tool for resolving human-wildlife conflicts (Ravenelle and Nyhus 2017). However, 86 % of the individuals do not receive proper compensation for the losses due to conflict. Only 14% of the respondents have received the compensation in which 65.5% of them are satisfied with the amount. 61% were not ready to migrate from their place, while 39% of the people were willing to relocate if the government gave proper alternatives. When the effectiveness of the mitigation strategies was examined, 69% of the respondents claimed they were effective in controlling the conflicts, while others stated they were ineffective. When the perception on the forest department and officials was analyzed 56% of the individuals responded that they were helping, 32% said it was not helping, and 12% responded as strictly avoiding.

Various studies on human-wildlife interactions in different regions made similar conclusions. However, significant variations can be seen in the responses to the conflict. The attitude to interactions frequently seems out of proportion, and even minor wildlife harm might result in violent reactions (Dickman 2010). Most studies report that crop raiding is an

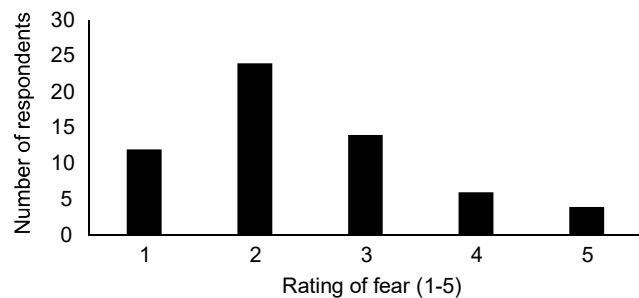
assured outcome of the conflict (Easa and Sankar 2001, Nair and Jayson 2016, Rohini et al 2016). The increased



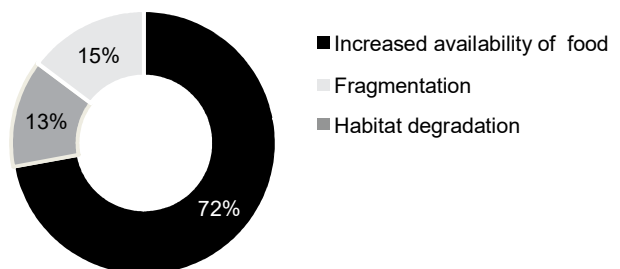
**Fig. 1.** Peechi-Vazhani wildlife sanctuary



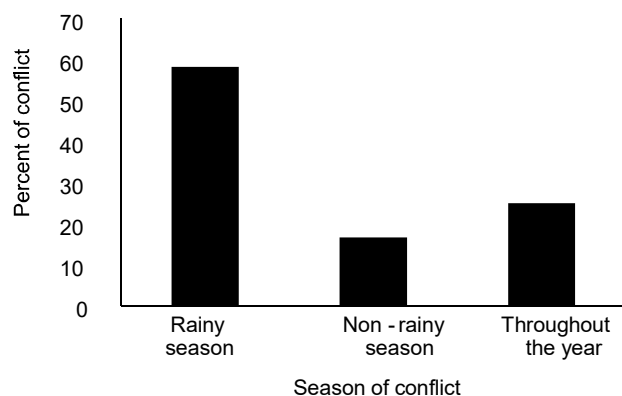
**Fig. 2.** Status of conflicting animals



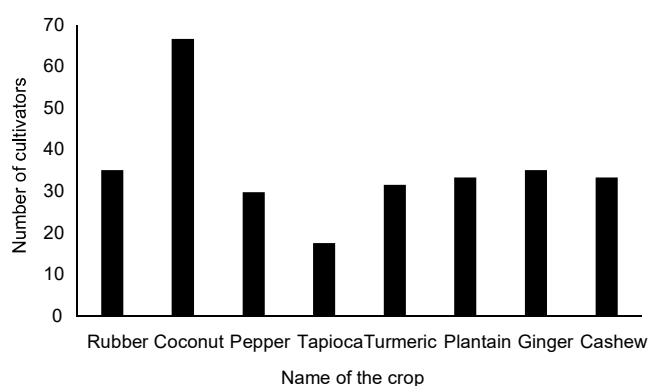
**Fig. 3.** Fear of wild animals



**Fig. 4.** Causes for the conflict in the study area



**Fig. 5.** Season of conflict in the study area



**Fig. 6.** Cultivation status of different crops

availability of food was identified as the key driver of the conflicts. The diverse cropping systems in the forest fringes attract wild animals. Previous studies also provide similar observations (Rohini et al 2018, Karanth et al 2019). Wild boar (*Sus scrofa*), followed by Malabar giant squirrel (*Ratufa indica*) and Elephant (*Elephas maximus*) were the top most conflicting animals. Similar studies also identify the conflicting status of different animals (Easa and Sankar 2001, Karanth et al 2013, Govind and Jayson 2018). The 81% responded that wildlife should be conserved, while 19% were not interested in wildlife conservation. Comparable results were obtained by Rohini et al (2016) when the attitude towards elephants in the southern western ghats of Kerala was analyzed. Perceptions of people about the lack of proper compensation and long-term procedures for the same from the forest department were close to previous studies (Gubbi 2012, Karanth et al 2013). Intensive crop damage and the

increasing frequency of animal attacks have created distressed conditions among the residents. This situation has also affected people's tolerance towards wildlife. Collaborative efforts with a long-term vision must be designed to mitigate the impacts of human-wildlife interactions in this region.

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