

A Socio-Anthropological Study of the Relationship Between Changes in Traditional Village Structures and Human-Elephant Conflict.

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1. Introduction

In recent decades, the escalation of human-elephant conflicts (HEC) has become a pressing issue in Sri Lanka (Köpke et al., 2021; Köpke et al., 2023). Historically, Sri Lanka has been known as a country with a large population of elephants. While HEC is a current challenge in Sri Lanka (Köpke et al., 2021; Köpke et al., 2023), there was a time in the past when humans and elephants coexisted peacefully. The Asian elephant holds a special place among elephants, which are some of the most captivating mammals on land. Additionally, elephants in Sri Lanka possess significant biological and cultural value. Due to various religious beliefs, elephants are considered sacred by many villagers and have come to play a key role in guiding human lives. The coexistence of elephants and humans in shared landscapes (Fernando, 2015) has led to increasing confrontations, resulting in property damage, crop raiding, and loss of life on both sides. While several factors contribute to the occurrence of human-elephant conflicts (HECs), including habitat loss, human encroachment, and agricultural expansion (Anuradha et al., 2019), the interaction between these factors and socio-cultural dynamics remains understudied.

2. Research Problem

Environmental and social factors have both played a significant role in escalating elephant-human conflict. Environmental causes include water scarcity, inadequate space for elephants, and insufficient food resources. On the social side, factors such as overpopulation, development projects, village construction obstructing elephant migration routes, deforestation, and the release of cattle into reserves exacerbate the issue. In the past, traditional rural social structures helped prevent elephants from entering villages, as their primary needs were met within forests and thickets. However, it raises the question of whether other elements of the old rural social systems actively deterred elephants or displaced them from villages. Based on this, the central research question for this study is: *“Has the breakdown of traditional village social structures contributed to the escalation of elephant-human conflict?”*

3. Research Objectives

Main Objective of the research was to study how changes in traditional village structure have affected elephant-human conflict. To achieve the above objective, sub-objectives have been outlined as follows:

- Identifying the factors that kept the elephant away from the traditional production social structure
- Identifying the factors that have influenced the elephant’s attraction to the village
- Identifying the social impact of elephant-human conflict
- Identifying measures that can be taken to reduce human-elephant conflict

4. Research Methodology

This study employed a qualitative research approach to gain an in-depth understanding of the human-elephant conflict and its implications. The case study method was adopted as the primary research strategy, allowing for a focused exploration of the issue within a specific geographical and social context. To gather the necessary data, structured interviews were

utilized as the primary data collection technique. This method facilitated the collection of detailed and consistent information from participants. Both primary and secondary data sources were incorporated into the research to ensure a comprehensive understanding of the phenomenon.

The research sample consisted of 20 families directly affected by human-elephant conflict. These families were selected from the 540 Mahakanumulla Grama Niladhari division, located within the Tirappane Divisional Secretariat Division of Anuradhapura District. This area was chosen due to its significant experience with human-elephant conflict, providing a rich context for the study.

5. Data Analysis, Result and Discussion.

Maha Kanumulla Grama Niladhari Division is a traditional village in the dry region belonging to the ancient irrigated civilization. In the past, the village was also home to the main features of a village called Tank (Wewa), paddy field (Kuburu Yaya), Village residential place (Gammedda), Cannel (Ela), Temple, Chena cultivation could be identified in the traditional village. In that traditional village, the quality of the sustainable economy, physical, mental, social, freedom, security, all the necessary factors for the well-being of a society help. According to the research data providers, it could be identified that short-term and long-term social discriminating factor was the change of traditional village that led to elephant-human conflict.

[1] The people who living in the Village residential place was structured in the natural protection system

People living together in the village and the village being structured in a natural and protected system. A village residential places was established below the Tank and it was a protected natural site with multiple purposes. Due to the settlement of the villagers in the same place, their inter-relationships were established, cooperative lifestyle, communication of accidents became easier in this. At present, elephants have been reported to have damaged many properties and stored them in places. In the past, the damage from elephant was minimized due to the fact that the harvest storage places (Vee Bissa) was located outside the house. But due to the epidemic of malaria and other infectious diseases, the villagers were re- settled in deferent places in the village with the distance. In addition to this, the village expanded due to the second and third generations occupying land elsewhere in the village. These cases mostly affected to the elephant residences pleases and elephant corridors.

[2] Changing the Chena cultivation Patterns

Chena cultivation in a traditional village varies from season to season depending on the crop being grown. In the old Chena farming, the cultivation of all the villagers was farmed together. There, the big land which had been too prepared for Chena cultivation was surrounded by one big fence at the same time by farmers. Harvesting also was done at once. Villagers collectively looked after the plants and fruits growing in the Chena. Even at night, when they gather together, the elephants do not come to the village because of the human voice. At the mid night also, farmers made noise with nice lyrics and we called it as a Jana Kavi. Elephant has not come to village, because of the human voice. There the elephant-human conflict was minimal.

[3] The collapse of the traditional village water management system

There was a very advanced water management in the old village, it is known as Ellangha system and this is a successful pattern of water consumption among the villagers. Accordingly, the water needed by the elephants was obtained from the small tanks (Kulu Wewa) in the forest

and the other small tanks located near Chana, and the water consumption needed by the elephants was prevented from reaching the main tank used by the villagers in the village. But today these small tanks have been destroyed and due to this, elephants come to the main tank inside the village for the water needs of the elephants.

[4] Today, there is no natural protective fence around the traditional villages or settlements. However, around the old village settlements, there was a natural fence with citrus plants and spices.

[5] Traditional crop protection strategies, mysticisms were practiced among the villagers which prevented elephants from invading the village.

Today, the natural control strategies used to prevent elephants from entering the village in the aforementioned traditional village have changed. Green revolution, environmental protection measures taken to control the spread of infectious diseases, development projects from the government and private sectors changed the traditional rural structure. Accordingly, the village of 540 Mahakanumulla has changed a lot today. Today, the traditional settlements below the lake have been located close to the other road from that place.

The change in the distribution of Chena cultivation and the pattern of cultivation can be clearly identified here. Except for the main tank in the old village, all other water flow patterns have changed today. There are no small lakes near the forest today. The traditional path of the elephant has been crossed and new development activities have been done. Due to that the traditional path of the elephant has been closed. The villagers also said that elephants will come to the village due to the above facts. In addition, the research revealed that the behavioral patterns of elephants have also changed. They mention that the elephant likes the fruits and nuts like jackfruit and mango grown in the village and eats them by attacking the places where rice is stored.

6. Conclusion.

According to above matters, the habitats of elephants and the small forests where elephants used to eat have been destroyed and constructions have been carried out crossing the traditional route used by elephants. The absence of natural protective fences in villages and Chena has led to changes in the collective lifestyle, and elephant-human conflict has become a social problem. Accordingly, loss of human lives, loss of social security, disruption of normal activities, and this situation leads to an insecure lifestyle in the area where elephant-human conflict exists.

7. Keywords

Human-Elephant Conflicts, Traditional Village Structures, Chena cultivation Patterns.

8. References

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