EFFECTIVENESS OF MITIGATION MEASURES OF THE

HUMAN ELEPHANT CONFLICT IN SRI LANKA

by

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ABSTRACT

Sri Lanka is an island with diverse set of eco systems that are home to a large number of faunal and floral species of which many are endemic to the country. Currently, Sri Lanka faces a human elephant conflict referred to as a negative interaction between people and elephants, with consequences for people, their resources and elephants. This conflict caused by competition for shared natural resources between people and elephants, influences livelihood of people and the well-being of both people and elephants. Approximately 70% of Sri Lanka's elephants live outside DWC's protected areas, creating a natural arena for intense human-elephant conflict that annually kill about 327 elephants and 113 people. In many regions these conflicts have intensified over recent decades as a result of human population growth and the transformation of land use. The Department of Wild Life Conservation practices four techniques to mitigate human elephant conflict namely, electric fence, elephant drives, capture and translocation and vigilance method. However, effectiveness of above four methods has not been tested significantly. Therefore, this study examines the effectiveness of current mitigation measures of the human elephant conflict in Sri Lanka with special reference to North Western Province, North Central Province, Eastern Province and Southern Province.

According to both quantitative and qualitative data analysis, It is observed that effectiveness is either high, or medium in electric fence. For elephant drive and capture and translocation the effectiveness is small. It is also indicated that vigilance method effectiveness is very small. Therefore, this study identified electric fence is the most effective mitigation measure out of all four current HEC mitigation measures. However, electric fence maintenance has more issues than the construction plan. Even though, Department of Wildlife Conservation staff and Civil Security Department staff involved in maintenance of electric fence officially; it is observed that, North Western and North Central region and Eastern region indicate poorest involvement of CSD staff regarding electric fence maintenance. From qualitative analysis and quantitative analysis it is observed that implementation of elephant drives is not effective at all since sendoff elephants will come back to the particular village again. Implementation of capture and translocation is not much effective. There are evidences to prove that capture and translocated elephants are entering to new villages near translocated jungle. Vigilance method is also very effective mitigation measure of HEC, but it is needed to formalize with combining new technology of sound systems and more encouragement by providing thunder flashers to villagers.

Finally, this study recommends using comprehensive digital solution for electric fence strategy and vigilance method as main mitigation measure to control HEC in Sri Lanka. Electric fence construction plan should be implemented with village fencing and bio fencing strategies to maximize the performance of electric fence to deliver long term higher effectiveness in mitigation of human elephant conflict in Sri Lanka at a reasonable cost, minimizing wastage of money spending on elephant drives and capture and translocation.

Key Words

Human Elephant Conflict, Electric Fence, Elephant Drives, Capture and Translocation, Vigilance Method