

AN ECONOMIC ASSESSMENT OF HUMAN ELEPHANT CONFLICT IN HAMBANTOTA DISTRICT, SRI LANKA

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Human elephant conflict (HEC) is a major issue in Sri Lanka, threatening rural livelihoods and the elephant survival. It is particularly prevalent in Hambantota district, where expanding unsustainable agriculture and development projects have intensified human-elephant interactions. This study aimed to quantify the economic impact of HEC by estimating monetary losses from crop and property damage, as well as human and elephant deaths. Data were collected using a mixed-methods approach, combining primary data from 236 respondents in the most impacted areas of Hambantota, Tissamaharama, Sooriyawewa and Lunugamwehera, with secondary data from Department of Wildlife Conservation and Agricultural and Agrarian Insurance Board. Primary data were analysed by using SPSS, and “the Value of Statistical Life” was used to monetise human fatalities. Between 2018 and 2024, the estimated value of human deaths was 12.2 billion LKR, the value of elephant deaths was 551 million, and agricultural damage cost was 11.6 million LKR. During this period, the government spent 423 million LKR on Electric fencing. The cumulative monetary loss from 2018 to 2024 was 12.8 billion LKR. Descriptive statistics showed that 70% households experienced moderate to severe financial losses, and lower income households bore the highest median losses indicating an inverse relationship between income and impact. HEC can be reduced sustainably through land use planning that balances human needs and the ecological and spatial needs of elephants for movement. Overall, the results showed that human-elephant conflict causes a significant monetary loss in rural communities, which eventually affects the national economy. Future strategies must prioritise strong, government-regulated electric fencing, promote affordable non-lethal alternative repellent methods, establish well-planned elephant corridors, reinforce institutional frameworks for immediate compensation, and commence effective awareness campaigns to ensure long-term human-elephant coexistence in Hambantota.

Keywords: Coexistence, Cost reduction, Mitigation strategies, Sustainable solutions