

**THE SOCIO-ECONOMIC IMPACT OF HUMAN-ELEPHANT
CONFLICT IN *THIRAPPANE* DIVISIONAL SECRETARIAT
DIVISION IN *ANURADHAPURA*, SRI LANKA**

U.B. Dayarathna, N.M.K.C. Premarathne and A.M.K.R. Bandara

*Department of Agricultural Systems, Faculty of Agriculture,
Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka*

Human-elephant conflict (HEC) is a critical social issue in Sri Lanka. The North Central province has been experiencing this struggle to a greater extent with 17% of human deaths and 11% of elephant deaths in *Thirappane* Divisional Secretariat Division (DSD). Therefore the study was carried out in *Thirappane* DSD with the objectives of identifying the factors affecting the HEC, quantifying the socio-economic damages on rural livelihood, and finding the practically possible strategies to mitigate HEC. Primary data were collected from 50 randomly selected households using the pretested structured questionnaire. Secondary data were collected using published literature. Data were analyzed using regression analysis and descriptive analysis methods. Results revealed that 74% of respondents have recognized the HEC problem has been increased than in the past. and 98% of crop damages, 14% of property damages, 4% of human casualties, 2% of human deaths were reported in the recent period. As people were not compensated for their crop damages, management actions such as explosives locally known as *Hakka patas*, electricity, and poisons have been used. Farmers reported that inappropriate electric fences (92%) and destruction of elephant corridors (90%) are the main activities to increase HEC in this area. The ordinal regression results revealed that significant factors to HEC are, the distance from drinking water sources to farmland ($p=0.04$) and rainy season ($p=0.09$). The binary logistic regression revealed that practically possible strategies to reduce HEC are electrical fences ($p=0.03$), saving the remaining forest cover, minimize the human settlements in elephant corridors, and proper management of electric fences can be used to solve the existing problems with the participatory decision making.

Keywords: Crop damage, Electric fence, Elephant corridor, Human deaths