

Nature and Magnitude of Human Wildlife Conflict and Coping Strategies among Major Grain Farming Communities in Ampara and Moneragala Districts

D.M.A.C. Dissanayake*, I.V. Kuruppu, D. Rathnayake and T. Dharmawardane

Hector Kobbekaduwa Agrarian Research and Training Institute, Colombo 07, Sri Lanka

Abstract

In the recent past human wildlife conflict (HWC) have brought conversation in its entirety due to its wider prevalence, dominance and related consequences in the agrarian sector of the country. Evidences show that there is no doubt that it causes economic, social and environmental damages. This study focused on identification of economic, social and environmental impacts of HWC on paddy, maize, groundnut, green gram and cowpea farming families in Moneragala and Ampara Districts. This is a multi-method study and interviewed 243 farmer families who were selected by using stratified random sampling technique for questionnaire survey. In addition, focus group discussions (n=39) with 720 farmers, key person interviews (n=25), direct observations (n=39) and participatory observation (n=01) and transect walks were carried out in the selected villages (n=39). Villages were purposively selected based on the expertise knowledge where HWC was prevailing in the highest degree. Annual yield/crop damage due to wildlife was calculated by authors using the formula constructed through intensive literature review. However, calculations were mostly based on assumptions of the farmers. Accordingly, annual average yield loss is 30% and it extends as paddy 19%, maize 21%, groundnut 38%, green gram 35% and cowpea 36%. Composition of total damage is divided into three major groups such as wild elephants (38%), birds (36%) and other animals (26%). The average annual costs for protecting one acre of crop from wild animals were in between Rs.2,361.00 and Rs.33,830.00, respectively for materials and labor whilst the average crop protection duration is 34 days annually. The night protection is mostly conducted (89%) by male household heads. Less protection for family members, accidents for humans, travelling and sanitation concerns can be identified as social issues. Small or medium electric fences, thunder flyers, crackers and electric torches are the most prominent control measures. Sound pollution, mixing chemicals to environment and life risks for threatening animals are identified as significant environmental issues. Cost of production increases while decreasing the quantity of harvest. Consequently, farming communities are living under pressure and practice legal protection methods as well as illegal methods. Cultivating non-food crops such as medicinal, flower and foliage, some spices etc. and directing to off-farm occupations were identified as major coping strategies in dealing with those socioeconomic issues. Prompt actions such as improving the quality, food, water and habitat availability of forests while promoting electric fences and air rifles as protection measures.

Keywords: Coping strategies, Environmental issues, Farming community, Human wildlife conflict, Socioeconomic issues

***Corresponding Author:** amal0055@gmail.com