ABSTRACT

Southern Western Ghats an extremely fragile, with resource rich ecosystem-is one among the 34 global biodiversity hotspots with several endemic and endangered species. This unique ecosystem has been threatened by ever increasing human pressure. One of the key threats to this landscape is the human-elephant conflicts, the aftermath of habitat fragmentation.

The underlying and proximate factors that determine human - elephant conflict (HEC) have been the focus of intense ecological work for several decades now. To date there has been comparatively little systematic research carried out to geospatially and ecologically investigate the human – elephant conflict intensity in the human dominated landscape and to put forward landscape level management strategies in an environmental perspective by considering the livelihood of the people inhabited in that area to have a co-existence between the people and elephants. Current study attempt to investigate the existing human - elephant interaction particularly the negative interactions leading to conflicts at Anayirangal in the fragmented Munnar landscape and to put forward landscape level management strategies in an environmental perspective to mitigate the conflicts and to conserve the magnificent Asian elephant, the National Heritage Animal.

A total of 1200 incidents of conflicts occurred either in the form of crop damage, property damage or attack on human beings between 2007 and 2009. Elephant raid in various settlements of Anayirangal had resulted with a net loss of ₹ 874752. A total of 164 property damage and 117 incidents of human casualties with 5 human deaths have been reported during this period. The over exploitation and habitat conversion into stepping stone habitats leads the local abundance of elephants and high conflicts with people at Anayirangal. Unscientific land allotment for landless tribal triggers the rate of conflicts. The highly preferred elephant habitats are outside the protected area which addresses the urgency for making immediate measures to protect those areas.

A corridor has been proposed as a recommendation of this study, the corridor has been generated using a combination of preference and impedance layers to elephant movement between Anamalai and Periyar. Anayirangal valley along with the remnant forest patches and montane shola grasslands and the attenuating scrub jungle in the eastern slopes of Western Ghats, along the track of proposed elephant corridor are the vulnerable links between Anamalai and Periyar. Managing these entire landscape as a matrix supporting the whole biotic community will ensure the conservation of Asian elephants which intern reduce the conflicts especially at Anayirangal and nearby areas.