

CONSERVATION OF ASIAN ELEPHANTS (*ELEPHAS MAXIMUS*) IN SOUTHERN INDIA: A GIS ANALYSIS OF THE ANAMALAI ELEPHANT LANDSCAPE

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The Anamalai Elephant Landscape (5700 km²) in the Western Ghats of southern India is one of the potential areas for the long-term conservation of the Asian elephant. This population is genetically more diverse and distinct from the much larger elephant population further north in the Ghats. This area is also known for its rich biodiversity along a rainfall and topographic gradient that supports natural vegetation ranging from tropical montane stunted forest and grassland to lower elevation evergreen, deciduous and thorn forest. Through extensive field surveys we assessed elephant habitats, mapped elephant distributions, land-use patterns and corridors, estimated elephant population size and documented elephant-human conflict. We identified several barriers to the movement of elephants arising mainly from developmental activities and topographic constraints. The mean density of elephants was estimated to be ~1 elephant/km² at a moderately skewed ratio of adult male to female (1:9). Elephant-human conflict was much higher along the eastern than the western part of the landscape, possibly due to different cropping patterns, greater fragmentation by non-forest activities and degradation of habitats. Based on our surveys and GIS analysis we make recommendations for the long-term conservation of this flagship species.

