



## A Geographical Survey of the Wildlife Corridor in Elephants' Seasonal Movements between Wasgamuwa National Park and Maduruoya National Park in Sri Lanka

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### Abstract

A wildlife corridor is an area of habitat connecting wildlife populations separated by human activities or any other structures. Mega herbivores such as elephants are under great threat due to the habitat loss and disconnection of wildlife corridors. In Sri Lanka, as a result of the Mahaweli development project, most of the forested areas have undergone drastic changes mainly due to a huge amount of anthropogenic and developmental activities. In Mahaweli system C, two wildlife corridors connect Wasgamuwa National Park and Maduruoya National Park. Those are the 'Rathkidaoya' wildlife corridor and the 'Hungamalaoya' wildlife corridor. The Hungamalaoya wildlife corridor has been selected for this research. The overall objective of this research is to analyze the role of the Hungamalaoya wildlife corridor in elephants' seasonal movements between Wasgamuwa National Park and Maduruoya National Park. In this research, primary data were collected by using 50 questionnaires among the farmers and 5 key interviews and direct observations of the wildlife corridor. According to the analysis, it has been identified that the annual average elephant movements range from 60 to 80 elephants. Moreover, the movements of elephants based on a day through the Hungamalaoya corridor increase from 4.00 pm onwards. However, from 8.00 pm to 10.00 pm, movements are accelerated to a considerable level and the peak is identified between 12.00 - 02.00 am. Besides, Elephants' movements through corridors during January, February, March, November, and December are comparatively less and high between June to September while it peaks in August to around 15. In June, July, and September the number of average elephants' movements are 12. During May and October, it has been identified that average elephants' movements are 4-5. In contrast, it is clear that during the rainy season, elephants' movements are less while their movements are high during the dry season. According to the analysis, the highest number of elephants' movements were recorded during the month of August in the period 2000 - 2010. Meanwhile, from 2011-2020 highest elephants' movement was recorded in September. The average number of elephants that move through the corridor as a herd is 4. Elephants' movements through the Hungamalaoya Wildlife corridor vary according to rainy seasons, harvesting seasons, post-harvesting seasons, and land preparing seasons.

**Keywords:** National Park, Wildlife Corridor, Disconnection, Mega herbivores