

Spatio-Temporal Pattern, Displacement Reasons, and Outcome of Asian Elephant (*Elephas maximus*) Emergencies Attended in Assam, India

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ABSTRACT

Only limited information is available on the factors associated with the displacement and outcome of Asian elephant (*Elephas maximus*) emergencies attended in India. This study aims to enumerate the reasons for intervention, spatio-temporal pattern and the outcome of these so called ‘rescue’ cases attended in the state of Assam, India. Data of wild elephant cases handled since 2000 by the Center of Wildlife Rehabilitation and Conservation (CWRC) in Central Assam (CA) and its four satellite units (in Karbi Anglong-KA, Western Assam-WA, North Bank-NB and Eastern-EA) was collected and analyzed. The causes of displacements were categorized as 1) Human induced (conflict, caught, injuries, etc.), 2) Natural (diseases, floods, falls, injuries, etc.) and 3) Unknown (found alone, unknown injuries, etc.).

In 15 years from 2000 to 2015, 134 calves and 87 adults were handled (n=221), with the number of elephant emergencies attended increasing every year. The number of displacements due to human induced causes (46.60%), unknown reasons (34.38%) and natural causes (19%) was significantly different. Most of the 57.01% cases that died during intervention or care were calves, while the rest 30.76% was released. Mortality among apparently healthy calves was primarily due to milk-formula intolerance, trauma of separation, infectious diseases (like EEHV, Salmonellosis & enteritis of unknown origin) and on rare occasions aspiration pneumonia. Spatially, CA accounted for 74.66% of the cases, followed by KA 8.59%. EA and WA accounted for only about 6.7% each, while 2.16% cases came from NB. Among croplands, tea estates accounted for the most number of elephant displacements. Falling into tea garden trenches and injury caused by humans (spikes/gun-shots) were the two single-most anthropogenic causes for the displacement of calves and adults respectively. Reuniting the separated calf with the natal herd is an important measure to be taken to ensure immediate return to the wild, but its success rate was only one in every 10 calves intervened. With the Karbi Anglong landscape in the Kaziranga-Karbi Anglong Elephant Reserve getting altered and fragmented due various developmental activities including tea plantations, the number of elephant related emergencies in Assam is only bound to increase in future.