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Connect elephant habitats in Asia

The Aichi Biodiversity Target 11 called for 17% of terrestrial land and inland waters to be designated as connected protected areas by 2020. Some countries in Asia have made progress toward this goal (1). However, because the established protected areas are not well connected (2), the Endangered Asian elephant (Elephas maximus L.) remains at risk (3). To protect Asian elephants, South and Southeast Asian countries must protect and restore ecological connectivity between elephant habitats and accelerate transboundary conservation networks through international cooperation.

A keystone species with wide-reaching influence on ecosystem functions (4), Asian elephants reside in fragmented pockets with low levels of gene flow between them (5, 6). Transboundary movement is increasingly difficult (7), and fences around elephant protected areas further impede gene flow within and outside reserves (6). Regionally, deforestation, linear infrastructure, and poor connectivity near protected areas create conditions that elevate the risk of negative interactions between humans and elephants (8).

The Kunming-Montreal Global Biodiversity Framework calls for protecting the "integrity, connectivity, and resilience" of 30% of land and inland waters by 2030 (9). The Convention of Migratory Species includes Asian elephants in Appendix 1, which promotes transboundary cooperation and protection of long-range movement (7). Protecting, restoring, and connecting elephant habitats locally, regionally, and continentally would facilitate elephant movement, increase the species' genetic diversity, and help Asian countries meet the 30% conservation target (9). Better habitat connectivity would also protect other species and preserve ecosystem functions and services under conditions of anthropogenic global warming. Protected natural habitats would benefit humans as well, given evidence that leaving 40% of land to nature would allow sustainable agricultural productivity (10).

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