

Opportunities for wildlife habitat connectivity between Kanha National Park and Pench National Park in Madhya Pradesh

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The project aimed at exploring possibilities of finding out potential corridors that can connect the Kanha and Pench national parks over a large landscape area between the two. The focal species for this study was tigers. The project used a Geographic Information System to model potential Tiger movement routes across the landscape between the two national parks. Variables that impede or augment tiger movement were holistically integrated in a cost-path movement model that weighed costs of movement for tigers from one end of the landscape to the other. Key variable included in the movement model were suitable cover and forest edge, habitat quality and prey density, availability of water, presence of roads, presence of railway tracks and presence of human habitation. Suitable weights were assigned to each of these variables in consultation with leading tiger experts and most probable routes based on model assumptions were predicted across the landscape using GIS raster analysis. These routes were overlaid on forest compartments across various forest ranges in the landscape such that clear ground reference of corridors path can be understood by field staff. It was found that wildlife migration corridors between these two areas were very much possible both in terms of physical connectivity and land availability. Most land in the proposed migration routes is with the forest department and as such needs to be developed to meet animal migration requirements. Specific recommendations for the design of suitable corridors along the entire proposed route have been provided. Bottleneck areas have been identified and flagged for special attention. Areas in the landscape that have high ecotourism potential have also been identified and catalogued with their biodiversity values.