TAKE THE LEOPARD HOME
A Suitability and Connectivity Analysis of North Chinese Leopards

NORTH CHINESE LEOPARDS...

... (Panthera pardus japonensis) used to be distributed across northern and eastern China. Because of human disturbances, habitat loss, and reduced prey abundance, the number of the species has drastically declined, and the remaining populations are usually present in small, isolated areas.

TAIHANG MOUNTAINS ARE...

... a mountain range extending along the northeast to the southwest, stretching along provinces Henan, Shanxi, and Hebei. Although leopards are generalists adaptable to multiple habitat types, the current leopard populations are only found in the forests in the Taihang Mountains, to avoid human activities.

CHINESE FELID CONSERVATION ALLIANCE...

... launched an initiative in summer 2017 to reintroduce North-Chinese leopards to more areas in the Taihang Mountains and connect the isolated habitats. This project will assess the potential habitats and corridors for the leopards, and the results will be presented to CFCA as a reference to their field research area selection.

METHODS

Suitability Analysis: Factors critical to leopard habitat suitability are identified from peer-reviewed literature. Spatial analyst tools were used to perform a weighted suitability analysis. Weight and reclassification criteria are listed in the reclassification table below.

Connectivity Analysis: Least-cost tool was used to identify corridors between habitats.

CONCLUSIONS

Leopard habitats and corridors are restrained to the west of the Taihang Mountains. Although there are protected areas located around the extant leopard habitats, they are too small and scattered, and only Lingquanguan Nature Reserve is suitable for connecting the habitats.

Leopards can potentially be reintroduced into protected areas of southern Henan, but must pass a low suitable area, and natural dispersal may not be feasible. If leopards are reintroduced to Luanchuan, Henan, however, viability of population is high due to many protected areas in a highly suitable region. Reintroduction to the eastern Henan and Hebei is unlikely due to urbanization.

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Data Sources: Global Administrative Area (GADM), International Union for Conservation of Nature (IUCN), WorldPop, Global Forest Watch, Protected Planet, Moderate Resolution Imaging Spectroradiometer (MODIS), Digital Chart of the World (DCW), Harvard Chirnside, Consortium for Spatial Information (CSII-A-CSI), NASA, ERI Datamaps 10

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