

Human presence found to influence overall mammal abundance in northern Myanmar

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Myanmar forest. Credit: CC0 Public Domain

Understanding the factors that influence large mammal habitat use and their spatio-temporal response to human disturbance plays a crucial role in wildlife conservation and management. However, this knowledge is

still limited for most mammals.

In a study published in *Biological Conservation*, researchers from the Xishuangbanna Tropical Botanical Garden (XTBG) of the Chinese Academy of Sciences (CAS) sought to determine species habitat occupancy and the potential influence of [human presence](#) on the spatio-temporal distribution pattern of large mammals in a given area, especially in data-poor regions.

Using 174 [camera traps](#) from 2015 to 2019, the researchers conducted a long-term survey of large mammals both in protected areas (PAs) and outside of PAs (non-PA) in the Northern Mountain Forest Complex (NMFC), Myanmar.

They assessed the spatio-temporal response of [mammals](#) to human disturbance, their predicted potential distribution, and highlighted the priority region in the remaining poorly understood intact subtropical forest of Myanmar's NMFC. They also examined the influence of anthropogenic and environmental variables on mammal abundance.

They found that human presence was not a focal threat to mammal species habitat occupancy, but it did influence the overall mammal abundance and activity pattern. Mammals avoided humans on a temporal rather than a spatial scale. Other human-related variables and invisible factors, such as distance to water and [forest cover](#) related to deforestation, had a notable influence on mammal species habitat occupancy and diel activity patterns.

In addition, the priority analysis showed that the non-PA also contained a priority region for mammal conservation, particularly in the southeastern part of the current PAs. "Therefore, conservation of both PAs and non-PAs is crucial for maintaining biodiversity," said Prof. Quan Ruichang of XTBG.

The researchers recommended that the southeastern region of outside of the current PA network should be prioritized. To ensure the efficacy of PA networks and [biodiversity conservation](#) in NMFC, community-based conservation strategies should be adopted.

More information: Ye Htet Lwin et al, Where do we manage? Uncovering the hidden impact of human presence on mammal conservation in northern Myanmar, *Biological Conservation* (2023). [DOI: 10.1016/j.biocon.2023.110188](#)

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