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Can Rubber Cultivations Serve as Wildlife Habitat? A Case Study from Tai Rom Yen National Park, Thailand

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ABSTRACT

Expanding rubber plantations and diminishing natural forests pose great challenges for wildlife conservation throughout Southeast Asia. In addition to habitat loss, arising conflicts with wildlife coming into farmland in search for food and water further jeopardize people's tolerance towards wild animals. Elephants (*Elephas maximus*) in particular can cause substantial damage to crops. Using the example of Tai Rom Yen National Park, Southern Thailand, we investigate the wildlife presence in the transition zone between the park and its surrounding plantations. We used sign-based occupancy surveys and camera trapping and assessed damage caused by wildlife through interviews with 180 farmers around the Park and through direct observations. Squirrels (*Sciuridae* spec.), rats (*Rattus* spec.) and elephants were the most common visitors to the farmland (reported by 56%, 47% and 42% of respondents, respectively). Preliminary data showed elephant presence in 17% of cameras installed at the farm-forest boundary and on 33% of transects within cultivations compared to almost 70% in protected forest. While elephants seemed to frequently visit farmland, signs of their presence were hardly found further than 600 meters from the forest boundary and generally wildlife signs were few in the farmland. Although elephants were mentioned to be the species causing most damage (18% of farmers experiencing crop losses), they only caused damage in less than half of all their visits to farmland and mainly on young rubber trees (78% of damaged trees were not yet tapped). Diseases, insects or rain were perceived as larger threats than wildlife. Our results show that plantations were used by wildlife, albeit by fewer individuals and species than in forests. Hence, rubber plantations might have the potential to provide mitigating buffer zone habitat if managed appropriately. Additional protection of particularly young rubber plants can help reduce conflicts and facilitate a joint utilization by wildlife and humans.

Keywords: Buffer zone, Conflicts, Elephants, Wildlife conservation, *Hevea brasiliensis*

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