Distribution of Primates' Habitat in Colombia and the Potential Impact of Oil Palm Expansion

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Abstract

Primates in Colombia play key roles in tropical ecosystems and face an increasing risk of extinction due to oil palm expansion which causes habitat destruction and fragmentation. Using species distribution models which are important tools to analyze and predict potential distributions of threatened species, eight primate species in Colombia which are particularly threatened by the oil palm expansion were modelled. The habitats of these primates are overlapping with current plantations as well as predictions of future expansion. In this study Maximum entropy species distribution modeling was used to (1) map potential distribution ranges of eight primate species in Colombia, (2) assess the potential impact of Colombian oil palm expansion on the distribution ranges, and (3) quantify the representativeness of the potential distribution ranges within protected areas of Colombia. Results show low index values in both of the latter objectives but reveal high absolute numbers of areas potentially impacted by oil palm expansion and large areas of the species' ranges being entirely unprotected. The results of this study allow the identification of the importance of coming up with strategies for conservation measures for these primate species.