

Predicted distribution of the Sunda clouded leopard *Neofelis diardi* (Mammalia: Carnivora: Felidae) on Borneo

Abstract

The Sunda clouded leopard *Neofelis diardi* is a medium sized (15–25 kg) cat, found only on the Sundaic islands of Borneo and Sumatra. In recent years intensive camera-trapping surveys in Borneo have begun to shed light on the habitat associations and basic ecology of this elusive wild cat, but its distribution on an island-wide scale remains very poorly known. Such information is an essential element in the assessment of the Sunda clouded leopard's conservation status and in the development of conservation action. In this paper we use MaxEnt niche distribution modelling to make predictions regarding the current distribution of this cat on Borneo. We collected a total of 259 occurrence records for the Sunda clouded leopard, stemming from all Bornean regions apart from Brunei and South Kalimantan, of which 48 (Balanced Model) or 94 (Spatial Filtering Model) were used in our modelling. Our habitat suitability model suggests that this species has a widespread distribution over a large contiguous portion of Borneo. The only exception is South Kalimantan, which is predicted largely to comprise unsuitable habitat. The predicted distribution closely follows the current distribution of little-encroached forest on Borneo (including selectively logged and unlogged areas). The species is notably predicted to be absent from the extensive areas of oil palm plantation, particularly in much of the low-lying coastal land. The predicted range encompasses a large proportion of the existing and proposed protected area network on Borneo. We highlight the priority areas for the conservation of the Sunda clouded leopard in Borneo based on our predicted distribution.