DISTRIBUSI SPASIAL DAN TEMPORAL MONYET EKOR PANJANG (*Macaca fascicularis*) DAN BERUK (*Macaca nemestrina*) DI TAMAN NASIONAL TESSO NILO

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INTISARI

Macaca merupakan salah satu genus dari primata yang dikenal memiliki kemampuan beradaptasi yang tinggi terhadap perubahan kondisi lingkungan. Secara geografis, sebaran genus *Macaca* seringkali tumpang tindih termasuk di Pulau Sumatra tepatnya di Taman Nasional Tesso Nilo sehingga mereka akan beradaptasi untuk dapat berdampingan dan melangsungkan hidupnya. Penelitian ini bertujuan untuk mengetahui distribusi spasial dan temporal monyet ekor panjang (*Macaca fascicularis*) dan beruk (*Macaca nemestrina*) yang adaptif ketika dihadapkan perubahan kondisi lingkungan pada habitatnya di kawasan Taman Nasional Tesso Nilo.

Penelitian ini memanfaatkan data *camera trap* yang sudah ada selama periode 2004 – 2013 dari Taman Nasional Tesso Nilo dan tim WWF Sumatra Tengah (Riau). Posisi spasial tiap *camera trap* dipetakan dengan *software* ArcGIS 10.4 dan dilakukan identifikasi data kehadiran kedua spesies primata di tiap *camera trap.* Selanjutnya dilakukan pembuatan model untuk analisis prediksi distribusi spasial berdasarkan faktor lingkungan dengan *sdm package* pada *software* Rstudio. Analisis data temporal digambarkan melalui variasi dan tumpang tindih waktu aktifnya dengan *overlap package* pada *software* Rstudio.

Pemodelan distribusi spasial untuk monyet ekor panjang tidak dapat dilakukan karena sedikitnya data temuannya. Prediksi perubahan distribusi spasial beruk menunjukkan bahwa faktor lingkungan yang paling berpengaruh terhadap distribusi spasialnya pada model tahun 2005 yaitu jarak dari hutan rawa (musiman), sedangkan pada model tahun 2007 dan 2011 yaitu jarak dari perkebunan (tanaman sawit). Secara temporal, tidak ada perubahan waktu aktif beruk secara signifikan meskipun tumpang tindih dengan kehadiran manusia yang cenderung tinggi. Perlu perbaikan lebih lanjut dari desain penempatan *camera trap* untuk mempelajari kedua spesies ini sehingga dapat meningkatkan kinerja/hasil analisis.

Kata Kunci : distribusi, monyet ekor panjang, beruk, faktor lingkungan

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SPATIAL AND TEMPORAL DISTRIBUTION OF LONG-TAILED MACAQUE (*Macaca fascicularis*) AND SOUTHERN PIG-TAILED MACAQUE (*Macaca nemestrina*) IN TESSO NILO NATIONAL PARK

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ABSTRACT

Macaca is a primate genus which is known has high ability to adapt to environmental condition changes. The geographical distribution of this genus often overlaps among species, resulting in coexisting and living together including in Tesso Nilo National Park of Sumatra, Indonesia. This research aims to investigate the spatial and temporal distribution of long-tailed macaque (*Macaca fascicularis*) and souhtern pig-tailed macaque (*Macaca nemestrina*) when faced with environmental conditions changes in their habitat in the Tesso Nilo National Park.

This study mainly used existing camera trap studies during 2004-2013 from the Tesso Nilo National Park and WWF Central of Sumatra (Riau). Spatial position of each camera trap was projected using ArcGIS 10.4 software and identify the presence of both species in each camera traps. A spatial modeling was carried out to predict the spatial distribution based on environmental factors using the sdm package in Rstudio software. Temporal data analysis was described by variations and overlaps of activity pattern with overlap package in Rstudio software.

Due to limited findings of long tailed macaque, spatial modelling for this species could not be performed. Predictions on spatial distribution changes of souhtern pig-tailed macaque have shown that the environmental factor that most influences to spatial distribution of souhtern pig-tailed in the 2005 model was the distance from seasonal swamp forest, while in the 2007 and 2011 models was the distance from the oil palm plantations. For the temporal scale, there are no significant changes in activity pattern of souhtern pig-tailed macaque even though it overlaps with human presence which tends to be high. Further improvement of the design of camera trap placement for studying these two species could improve the performance of the analysis.

Keywords : distribution, long-tailed macaque, southern pig-tailed macaque, environmental factors

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