

**POPULATION SIZE ESTIMATION OF THE LONG-TAILED MACAQUE
(*Macaca fascicularis*) IN TLOGO MUNCAR AND TLOGO NIRMOLLO,
GUNUNG MERAPI NATIONAL PARK AFTER THE ERUPTION IN 2010**

ABSTRACT

Choiriatun Nur Annisa¹

Plawangan-Turgo where Tlogo Muncar and Tlogo Nirmollo lie on as part of Gunung Merapi National Park has been devastated by 2010 eruption. Those places are known as the habitat of the long-tailed macaque and based on the report from the official of GMNP, they were one of the victim. Yet, there was no information about the population after that disaster. The lack of information about the long-tailed macaque could complicate the officials of GMNP to do conservation management on this species.

The research aimed to estimate the population size in Tlogo Muncar and Tlogo Nirmollo after the eruption. Population data in Tlogo Muncar and Tlogo Nirmollo were compared if they are different. Further, data were compared with previous studies about the long-tailed macaque population and the vegetation before 2010 eruption with descriptive analysis.

There were 125 individuals in Tlogo Muncar higher than in Tlogo Nirmollo = 28 individuals. The number of individuals of each observations were confirmed different using Mann-Whitney-U test with Rcommander ($P = 0.02225$) and manual assessment ($U = 0$; $P < 0.05$). The natural and non-natural food was available. The vegetation in both location were not close similar based on the assessment using Sorensen similarity index = 33.96% with 9 species shared between location. The most dominant species in Tlogo Muncar was Flamboyan (*Dalbergia latifolia*) and the most frequent species was Kina (*Cinchona pubescens*). Meanwhile, the most dominant species in Tlogo Nirmollo was Damar (*Agathis damara*) and the most frequent species was Puspa (*Schima walichii*). Those species are eaten by the macaque. Though, the sex ratio in Tlogo Nirmollo was 13:8 (deficit female) and Tlogo Muncar was 33:41. Less female means less birth. While, the other assumption is that Tlogo Muncar has been a concentrated location a long time ago. Many studies had ever been conducted but there was no prior information of Tlogo Nirmollo. The trend of population size was increasing. The population density in both locations was 75 individuals/ha that means there was still enough spaces. Infant was 11% and juvenile was 27% with adult dominated the group (62%) that could harm the regeneration.

Keywords: Tlogo Muncar and Tlogo Nirmollo, population size, eruption, the long-tailed macaque, habitat, Sorensen similarity index

¹Student of Forest Resources Conservation Department, Faculty of Forestry, Universitas Gadjah Mada

ESTIMASI UKURAN POPULASI MONYET EKOR PANJANG (*Macaca fascicularis*) DI TLOGO MUNCAR DAN TLOGO NIRMOLLO, TAMAN NASIONAL GUNUNG MERAPI PASKA ERUPSI 2010

INTISARI

Choiriatun Nur Annisa¹

Tlogo Muncar dan Tlogo Nirmollo yang berada di Plawangan-Turgo, Taman Nasional Gunung Merapi mengalami kerusakan karena erupsi 2010. Kedua tempat tersebut merupakan habitat bagi monyet ekor panjang dan menurut laporan pihak TNGM, monyet tersebut merupakan korban. Akan tetapi, informasi mengenai populasinya setelah bencana tersebut masih belum tersedia. Kurangnya data mengenai monyet ekor panjang setelah erupsi ini dapat menyulitkan pihak TNGM untuk melakukan tindakan konservasi spesies ini.

Penelitian ini bertujuan untuk memperkirakan ukuran populasi di Tlogo Muncar dan Tlogo Nirmollo setelah erupsi lalu. Data populasi di kedua tempat dibandingkan untuk mengetahui perbedaan. Data kemudian dibandingkan dengan beberapa penelitian yang pernah dilakukan tentang monyet ekor panjang dan vegetasi sebelum 2010 di lokasi yang sama secara analisis statistik deskriptif.

Monyet yang ditemukan sebanyak 125 ekor di Tlogo Muncar, lebih banyak dari pada Tlogo Nirmollo (28 ekor). Jumlah individu tiap pengamatan di kedua lokasi terbukti beda dari perhitungan uji median Mann-Whitney-U menggunakan Rcommander ($P = 0.02225$) dan perhitungan manual ($U = 0$; $P < 0.05$). Sumber pakan alami dan non alami masih tersedia. Vegetasi di kedua lokasi tidak hampir mirip menurut perhitungan indeks persamaan Sorensen = 33.96% dengan 9 spesies yang sama di kedua lokasi. Pohon yang paling mendominasi di Tlogo Muncar adalah Flamboyan (*Dalbergia latifolia*) dan yang paling sering dijumpai adalah Kina (*Cinchona pubescens*). Dominasi jenis di Tlogo Nirmollo adalah Damar (*Agathis damara*) dan yang paling sering dijumpai adalah Puspa (*Schima walichii*). Jenis-jenis tersebut merupakan sumber pakan. Akan tetapi, sex ratio di Tlogo Nirmollo adalah 13:8 (kekurangan betina) dan Tlogo Muncar adalah 33:41. Rendahnya jumlah betina berarti rendah pula jumlah kelahiran. Selain itu, Tlogo Muncar kemungkinan merupakan lokasi yang telah dihuni oleh banyak monyet ekor panjang sejak jaman dulu. Kepadatan populasi dari kedua lokasi adalah 75 ekor/ha yang berarti masih banyak tersedia ruang gerak. Kecenderungan populasi mengalami kenaikan. Infant = 11% dan juvenile = 27% dengan monyet dewasa mendominasi grup (62%). Hal ini dapat membahayakan regenerasi populasi.

Keywords: Tlogo Muncar dan Tlogo Nirmollo, ukuran populasi, erupsi, monyet ekor panjang, habitat, indeks persamaan Sorensen

¹Mahasiswa Jurusan Konservasi Sumberdaya Hutan Fakultas Kehutanan, Universitas Gadjah Mada