Population and Habitat Analysis of the Javan Gibbon (Hylobates moloch) at Gunung Halimun National Park, West Java, Indonesia Final Report – June 2006 Entang Iskandar, MSi

The specific objectives of this research are to: 1) conduct a population survey of the Javan gibbon at the Gunung Halimun National Park to provide updated information on the status of the population; 2) conduct a vegetation survey (plot sampling) at the Gunung Halimun to assess habitat quality and provide dietary information on Javan gibbon at the park.

The research was conducted at four locations in Gunung Halimun National Park: 1) Citarik (S 06°47.956', E 106°33.002'); 2) Cibeureum (S 06°47.567', E 106°34.433'); 3) Cisalimar (S 06°45.361', E 106°33.622'); and 4) Cikaniki (S 06°44.798', E 106° 32.274'). Citarik was located at an elevation of 1178 m above sea level (asl) and consisted of primary forest. Cibeureum was located at an elevation of 913 m above sea level and consisted of secondary forest. Cisalimar was at the elevation of 936 m asl and represented by forest that borders an agricultural plantation. All three locations (Citarik, Cibeureum, and Cisalimar) are in the area known as Leuwi Waluh Resort, Sukabumi, West Java), The final location, Cikaniki consisted of primary forest and is part of an ecotourism area in the Cikaniki Resort, Bogor, West Java.

The estimate of mean group density for the Javan Gibbon at the Citarik area was 4.0 groups/km². Average group size was 2.6 animals (range: 1-4 animals) and population density was estimated at 10.3 individual/km². The population density of the Javan gibbon at the primary forest area of Citarik was greater than observed at the other three locations (see table 1).

		Citarik	Cikaniki	Cibeureum	Cisalimar
Group density (groups/km ²)	ý	4.0	3.8	2.6	3.0
Group (individual)	size	2.6	2.6	2.7	2.2
Population (individual/km	density 1 ²)	10.3	9.4	6.7	6.3

Table 1. Abundance Estimates of the Javan Gibbon at Gunung Halimun National Park, West Java

In comparison to the most recent study conducted at Gunung Halimun National Park (Sugarjito, 1997), the current population survey Indicates a decrease in both group density and population density at the Park (see Table 2).

Table 2. Comparison of density of the Javan gibbon at Gunung Halimun National Park

Study	Group density	Population	Study Site
	(grps/km ²)	density (ind./km ²)	Elevation (m)
Kool (1992)	2.6	8.9	700-1075
Sugarjito et al (1997)	5.6	9.9	600-1200
Iskandar (2006)	3.4	8.2	986-1312

The estimation of habitat availability at the Gunung Halimun National Park was 33,013 ha. Based on this estimate, the Javan gibbon population in the Park was estimated at 2,707 individuals.

The number of groups identified and the group composition of the Javan gibbons in the park differed from one location to another. In areas of higher quality habitat, the greater the number and composition of the groups. For example, Javan gibbons at Citarik and Cikaniki, both areas of primary forest, showed greater group numbers compared to the two other locations as shown in Table 3.

	Citarik			Cibeureum			Cisalimar				Cikaniki					
Group	AM	AF	J	Ι	AM	AF	J	-	AM	AF	J	Ι	AM	AF	J	Ι
	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1
II	1	1	1	0	1	1	0	0	1	1	0	0	1	1	1	1
111	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0
IV	1	1	0	1	1	1	1	1	-	-	-	-	1	1	0	1
V	1	1	1	0	-	-	-	-	-	-	-	-	1	1	1	0
Notes: AM : Adult Male J : Juvenile																
AF : Adult Female					I	: Infa	ant									

 Table 3. Group Composition of the Javan gibbon at Gunung Halimun National Park

In general, vegetation at the research site was dominated by *Altingia exelsa*, *Schima wallichii* and *Quercus sp.* These vegetation species were used primarily as food sources and cover. Table 4 presents descriptive statistics for the three dominant vegetation types at each location.

Table 4. Three dominant vegetation types at Citarik, Cibeureum, Cisalimar and Cikaniki

No.	Species	RDn	RF	RD	IVI
	Citarik	(%)	(%)	(%)	(%)
1.	Puspa (Schima wallichii)	25,0	25,0	32,2	82,2
2.	Rasamala (Altingia exelsa)	10,7	10,9	20,3	41,9
3.	Pasang beleketebe	10,7	10,9	15,3	36,9
	(Quercus gemiliflorus)				
	Cibeureum	RDn(%)	RF (%)	RD (%)	IVI (%)
1.	Puspa (<i>Schima wallichii</i>)	27,6	23,2	40,7	91,5
2.	Rasamala (<i>Altingia exelsa</i>)	34,5	23,2	39,4	97,1
3.	Pasang riung anak	6,9	7,7	11,7	26,3
	(Quercus gemelliflora)				
	Cisalimar	RDn(%)	RF (%)	RD (%)	IVI (%)
1.	Puspa (Schima wallichii)	26,5	19,6	46,0	92,1
2.	Rasamala (Altingia exelsa)	5,9	5,9	14,1	25,9
3.	Pasang riung anak	38,2	13,7	21,6	73,5
	(Quercus gemelliflora)				
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	Cikaniki	RDn(%)	RF (%)	RD (%)	IVI (%)
1.	Rasamala (Altingia exelsa)	13,8	14,1	35,6	63,5

2.	Pasang kayang	6,9	7,6	5,2	19,7
3.	(<i>Lithocarpus tjismanii</i>) Saninten (<i>Castanopsis sp</i> .)	10,3	10,9	9,0	30,2

Notes:

- RDn = Relative Density
- RF = Relative Frequency RD = Relative Dominance
- IVI = Important Value Index

PROJECT EXPENCES

* Based on exchange rate of $\pounds 1 = Rp. 16,000$

	Items	Total Rupiah (Rp)	£ *
1.	Transportation		
	Bogor-Gunung Halimun National Park Rp. 450,000/trip x 10 trips Gunung Halimun to the site (local transportation)	4,500,000	281
2.	Rp.200, 000/trip x 10 trips Lodging and Meals (at the national park)	2,000,000	125
	Rp. 50,000/day x 4 persons x 240 days	48,000,000	3,000
3.	Park Rangers fee		
	Ranger @ Rp. 75,000/day x 240 days	18,000,000	1,125
4.	Botanical Sample Identification		
	300 samples @ Rp. 10,000/sample	3,000,000	188
5.	Field Supplies		
	GPS @ Rp. 1,900,000 x 1	1,900,000	119
	Binocular @ Rp. 1,750,000/pair x 2 pairs	3,500,000	219
	Camera @ Rp. 5,940,000 x 1	5,940,000	371
	Compass @ Rp. 200.000 x 2	400,000	25
	Machetes @ Rp. 100,000 x 2	200,000	13
	Flash light @ Rp. 125,000 x 4	500,000	31
	Backpack @ Rp. 175,000 x 3	525,000	33
	Sleeping bag @ Rp. 350,000 x 2	700,000	44
	Rain coat @ Rp. 125,000 x 4	500,000	31
	Canteen @ Rp. 80,000 x 4	320,000	20
	Batteries @ Rp. 2,500 x 100	250,000	16
	Botanical sample supplies	275,000	17
	Clipboards, pens, paper	250,000	16
	Miscellaneous supplies	275,000	17
	First aid supplies	425,000	27

Total

Rp. 91,460,000 £ 5,718

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