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To cite this article: D Setiawan et al 2019 J. Phys.: Conf. Ser. 1282 012091

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doi:10.1088/1742-6596/1282/1/012091

# Inventory of wildlife in the protected forest area Bukit Jambul Gunung Patah as basic data to support sustainable management

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Bukit Jambul Gunung Patah protected forests is located at the Sumatran submontane and montane rainforest ecosystem region, South Sumatra. Various activities that exist around the area of protected forests can caused disruption of the existence and diversity of animals that inhabit the area. Therefore, a wildlife inventory survey is needed, particularly focus on mammals and birds taxa, because two taxa have clear data information in the region. This research has been carried out from April to July 2018 with the exploration methods, The results of the study found 34 species of birds, and 11 species of mammals,. Based on the Government Protection Regulation of the Republic of Indonesia No.P.20/MENLHK/Setjeb/Kum.1/6/2018 was found 12 species protected, 6 threatened species based on IUCN redlist, and 5 species into Appendinces I based on CITES. From the results and compared with the study database of endangered species at Rantau Dedap by the Indonesian Greencap Team in 2014-2015, 12 species mammals were found 9 of which were threatened species, By comparison of baseline data and with species found that are in the category of threatened status. There was decreased in the threatened and protected species found this indicates that the habitat has begun to be disturbed. So that, a long-term study is needed to providing comprehensive biodiversity information to support the management of the protected forest Bukit Jambul Gunung Patah to remain sustainable.

#### 1. Introduction

In Bukit Jambul Gunung Patah protected forests is located at the Sumatran submontane and montane rainforest ecosystem region, South Sumatra, with altitudes ranging from 1500 masl to 2600 masl. Various activities Such as the conversion of forests into plantations and settlements as well as the opening of roads for geothermal activities as well as access to hunters who can threatened the existence of wildlife in the area [1]. According to Susilowati et.al. (2016), the Bukit Jambul Gunung Patah Protected Forest area is one of the spots that has higher flora-fauna biodiversity in the South Sumatra region [2], For this reason, an inventory is needed to find out species that have high conservation value based on the status of the IUCN Red List (International Union For The Conservation of Nature and Natural Resources) and Indonesian Protection Regulation with No.P.20/MENLHK/Setjeb/Kum.1/6/2018, and CITES (Convention on International Trade and Endangered Species of Wild Fauna and Flora). Based on the report of biodiversity action plan of PT. Supreme Energy, Rantau Dedap, at least 9 species of birds were found protected by Government

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Regulation No.7 of 1999 and 2 species of birds that were categorized as threatened species under the IUCN redlist and database of endangered species at Rantau Dedap by the Indonesian Greencap Team in 2014-2015 is 12 mammals were found 9 of which were threatened species [3].

#### 2. Methods

This research has been carried out from April to July 2018 with methods of collecting data exploration methods with direct observation and Indirect observation such as footsprint, faeces and with camera trap installation. Direct observation of mammals and birds is carried out by walking slowly (Reece walk) by involving observers moving through habitats in a certain direction and not having to follow the transect line with a particular route and being allowed to take easy and efficient routes to find objects. with a distance of approximately 1-2 km in 5 survey locations, Direct observation through footprints, nests and faeces is carried out during the day while night observations can be done with camera traps [4].

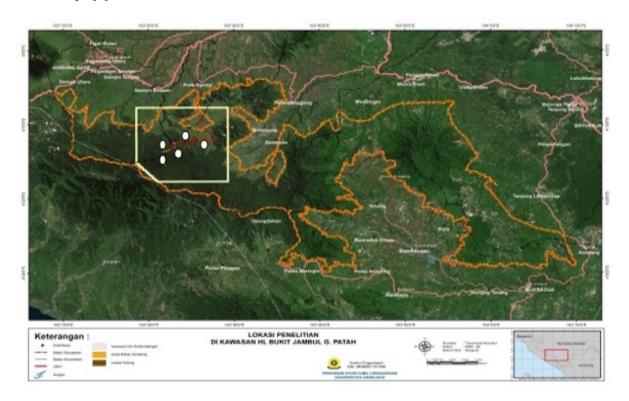


Figure 1. Map of the study location in Bukit Jambul Gunung Patah protected forests

#### 3. Results and Discussions

Various programs for the assessment and management of the area continue to be designed to deal with various issues of reducing biodiversity to threatened species. Therefore, before that it was designed to need accurate data about the existence of wildlife in the Protected Forest Area Bukit Jambul Gunung Patah. From the results of study the wildlife found consisted of 34 species of birds, 11 species of mammals.

doi:10.1088/1742-6596/1282/1/012091

Table 1. Wildlife High Conservation Value in Region Bukit Jambul Gunung Patah

Common Names	Latin Names	IUCN	P20/2018	CITES	Info
Mammals					
Sumatran Tiger	Panthera tigris sumatrae	CR	PI	I	Footprints
Malayan Tapir	Tapirus indicus	EN	PI	I	CT
Siamang	Symphalangus syndactylus	EN	PI	I	
Sumatran Surili	Presbytis melalophos	EN	PI	I	
Malayan Sun bear	Helarctos malayanus	Vu	PI	Ι	СТ
Sambar Deer	Cervus unicolor	Vu	PI	II	Footprints
Red Deer Birds	Muntiacus muntjac	LC	PI	II	Footprints
Oriental Honey buzzard	Pernis ptilorhynchus	LC	PI	II	-
Crested Serpent-eagle	Spilornis cheela	LC	PI	II	
Changeable hawk-eagle	Nisaetus ciirhatus	LC	PI	II	
Fire-Tufted Barbed	Psilopogon pyrolophus	LC	PI	II	
Wreathed Hornbill	Rhyticeros undulatus	LC	PI	II	

**Information :** IUCN = CR : Critically Endangered, EN : Endangered, VU ; Vurnerable, LC : Least concern PI :Indonesian Protection. CT : Camera Trap, I : Appendinces 1, II : Appendices II.

From the table 1 above it is known that the total types of high conservation values are 12 species with three main categories:

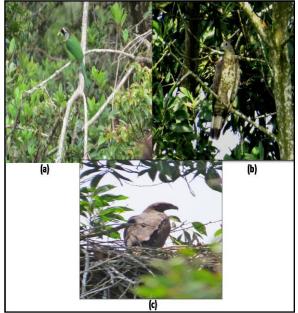
- 1. Based on The Government Protection Regulation of the Republic of Indonesia No.P.20/MENLHK/Setjeb/Kum.1/6/2018 was found 12 species: 7 species of Mammals and 5 species of Birds.
- 2. Based on IUCN Redlist (*International Union for Conservation of Nature*). there are 6 species of mammals which are in the category of threatened species, especially for species with high threatened were is *Panthera tigris sumatrae* (Critically Endangered), *Tapirus indicus*, *Symphalangus syndactylus*, and *Presbytis melalophos* (Endangered).
- 3. Based on CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora) 5 species into Appendinces I is Panthera tigris sumatrae, Tapirus indicus, Symphalangus syndactylus, Presbytis melalophos and Helarctos malayanus.

Protected forest is a forest area that has been determined by the government to protect species, so that the ecological functions of the habitat. There was a decreased species found during in the study if compared to the previous preliminary data from PT. Greencap where is found 7 species birds under Indonesian protection regulations and 9 mammals species categorized as species threatened by the IUCN Red List, but from the research only found 5 protected birds species and 6 mammals species included in the threatened species category.

Forest birds can be used as an indicator that a region has good forest. Birds from the Hornbill group such as *Wreathed Hornbill* (Bucerotidae), and *Fire-Tufted Barbed* (Capitonidae), are two families of birds that are in desperate need of forests which can still be found in the area. The trend of population of 12 species high conservation value categories showed a decline in its natural habitat. The Sumatran tiger existences in the area can be used as indicators of forest ecosystems that are still good conditions.

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From the above, the existence of the protected forest needs to be maintained as a habitat for threatened species and protected so as not to become extinct in the wild. So that monitoring of wildlife is needed, especially to see the trend of status of threatened species from various illegal activities in the Bukit Jambul Gunung Patah protected forest like illegal hunting, land clearing, illegal logging this data can be used as scientific information for management policies in the region.



(a) (b)

**Figure 2.** Three birds protected (a) *Psilopogon-pyrolophus* (b) *Pernis ptilorhynchus* (c) *Nisaetus cirrhatus*.

**Figure 3**. Four mammals Protected (a) *Prebystismelalophos*, (b) *Symphalangus syndactylus* (c) *Tapirus indicus*, (d). *Helarctos malayanus*.

#### 4. Conclusions

Showed that in this area is important habitat to support wildlife in it. so that, a long-term study is needed to providing comprehensive biodiversity information to support the management of the protected forest Bukit Jambul Gunung Patah to remain sustainable with develop of collaboration with Nature Conservation Agency (BKSDA) of Forestry and Environment Ministry.

#### Acknowledgments

The authors acknowledgments to thanks DIPA Sriwijaya University for providing an opportunity for the research team through the 2018 Sriwijaya University Kompetitif Grants scheme according to contract no.0007/UN9/SK.LP2M.PT/2018 that has helped funding this research.

#### References

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- [3] Greencap 2015 Final Report of Study Endangered Species at Rantau Dedap Muara Enim: PT.SERD (Report)
- [4] Yustian I, Zulkifli H, Setiawan A, Setiawan D, Iqbal M, Aprilia I, Indriati W, Noberio D and Pragustiandi G 2017 *Panduan Cepat Survey Keanekaragaman Fauna Di Sumatera Selatan* Indralaya: FMIPA Unsri

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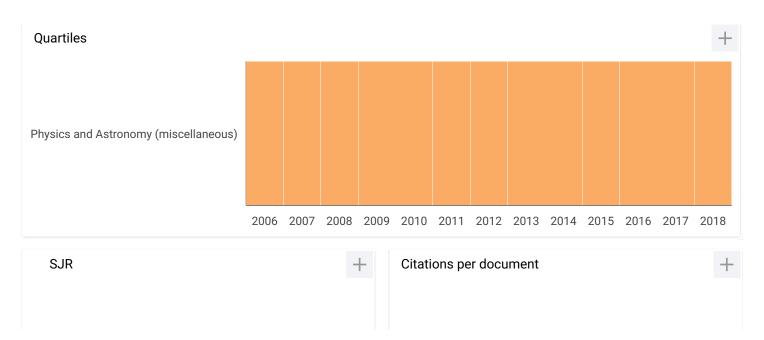
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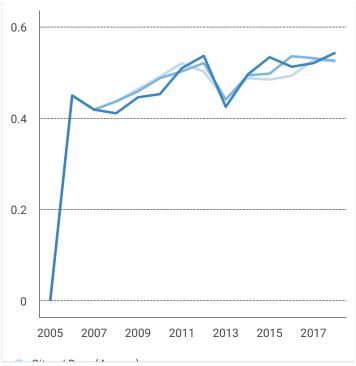
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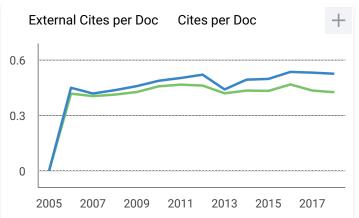
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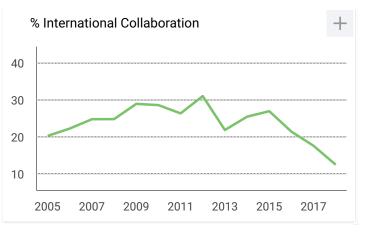


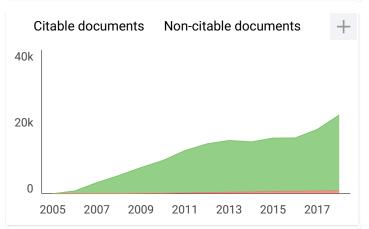


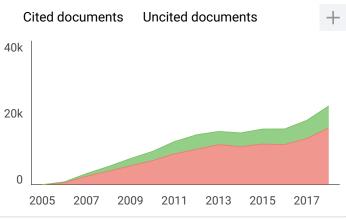












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Thank you for your attentio

Best regards



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Regard

Md. Sarfaraz Alam Research Scholar IIT Guwahati (India)



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- 2. Bogachkov I. V., Lutchenko S. S. Reliability assessment of fiber optic communication lines depending on external factors and diagnostic errors // Journal of Physics: Conference Series, 2018, v. 1015 (2018). pp. 1 7. DOI: 10.1088/1742-6596/1015/2/022005 WOS:000446952000005 (ISSN: 1742-6588)

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Mohammad Faizal Postgraduate Student (PhD) Universiti Putra Malaysia (UPM) Malaysia

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Regard

Md. Sarfaraz Alam Research Scholar IIT Guwahati (India)



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Best regards

Ikhlasul ardi nugroho

Post graduate Yogyakarta State University

reply



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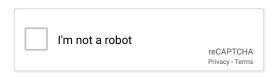
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