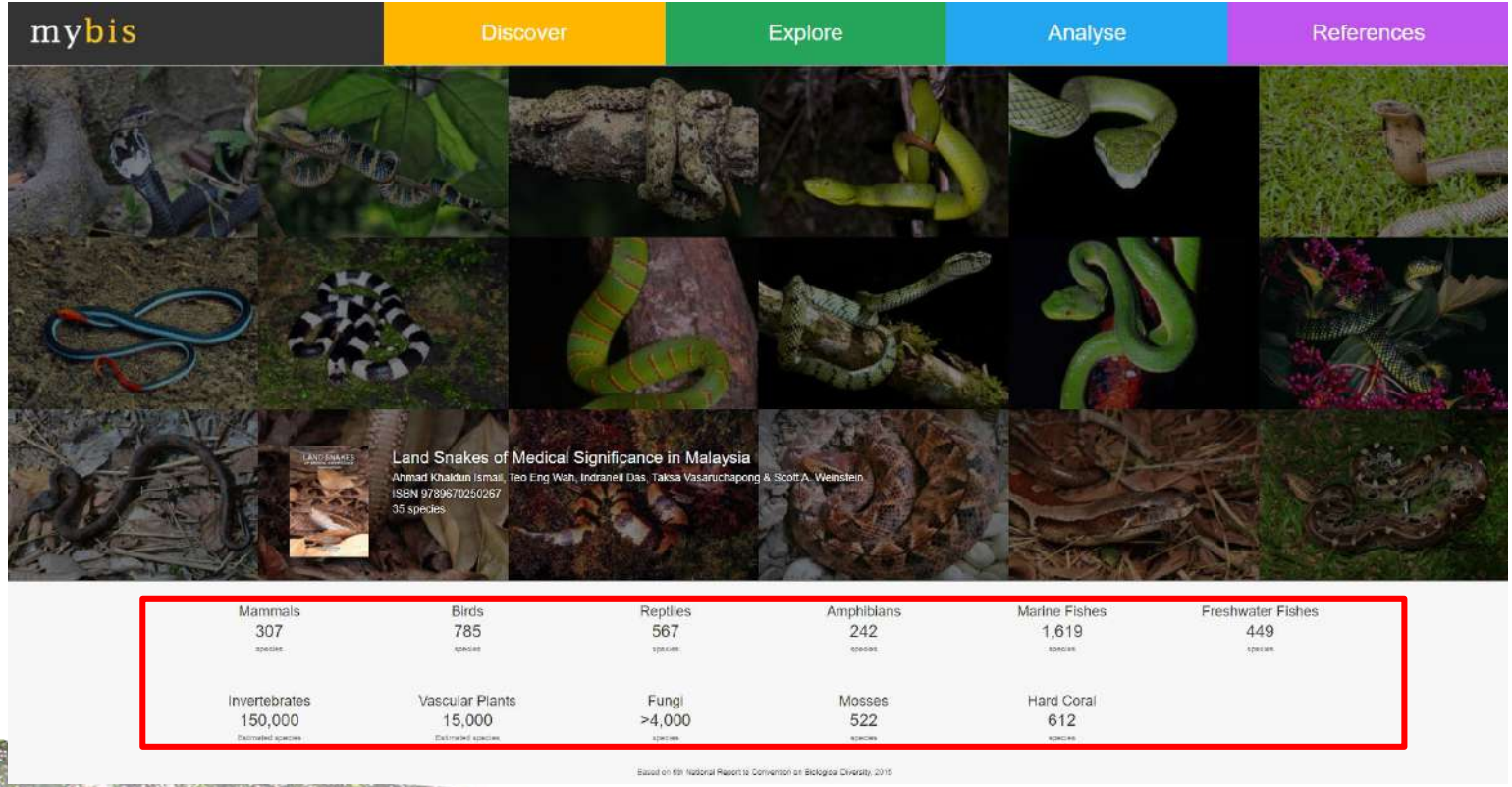
LANDSCAPE CONSERVATION APPROACH FOR WILDLIFE IN MALAYSIA

SHAHFIZ, MA, FARADIANA, NMF & NOR-HAZWANI, AR
ZOOLOGY BRANCH
FOREST BIODIVERSITY DIVISION
FRIM

13 AUGUST 2021

Malaysia's Heritage





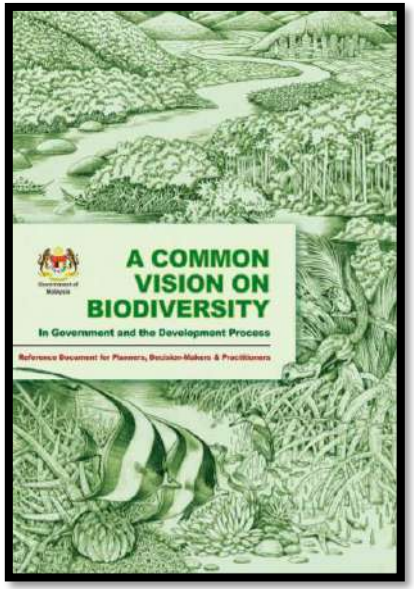












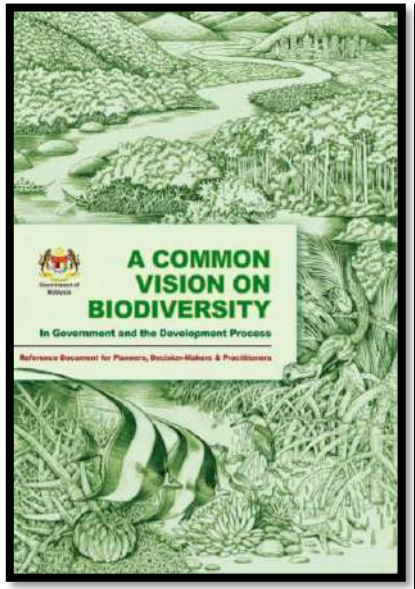
Biodiversity: Life on Earth

Provisioning Services	Regulating Services	Cultural Services
Products obtained from ecosystems	*Benefits obtained from regulation of ecosystem processes*	*Non-material benefits obtained from ecosystem*
• Food • Fresh water • Timber • Fuelwood • Fibre • Biochemicals • Genetic resources	• Climate regulation • Pest regulation • Runoff regulation • Water purification • Pollination • Erosion regulation • Tsunami regulation	• Spiritual & religious • Recreation & ecotourism • Aesthetic & inspirational • Educational • Cultural heritage • Existence values

Supporting Services

Services necessary for the production of all other ecosystem services

Soil formation	Nutrient cycling	Primary production	Provision of habitat	Oxygen production



Total Economic Value

Use Value

Direct Use Value

Resources used directly

- Provisioning Services (e.g. water, fish)
- Cultural Services (e.g. recreation, ecotourism)

Indirect Use Value

Resources used indirectly

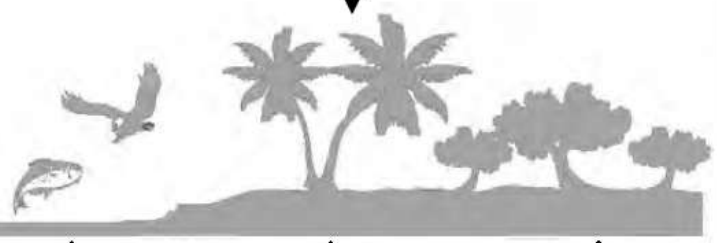
- Regulating Services (e.g. flood prevention, water purification)

Option Value

Our future possible use

- ALL Services (including Supporting Services)

Non-Use Value



Bequest Value

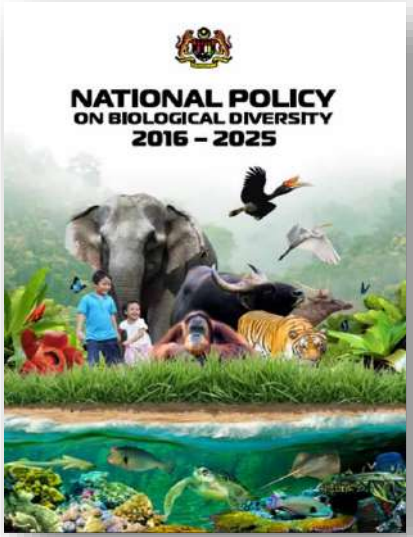
Future generation's possible use

- ALL Services (including Supporting Services)

Existence Value

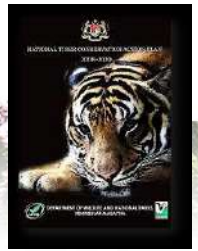
Right of existence

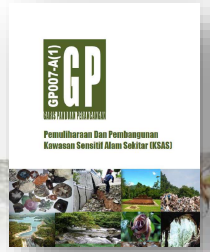
- ALL Services (including Supporting Services)



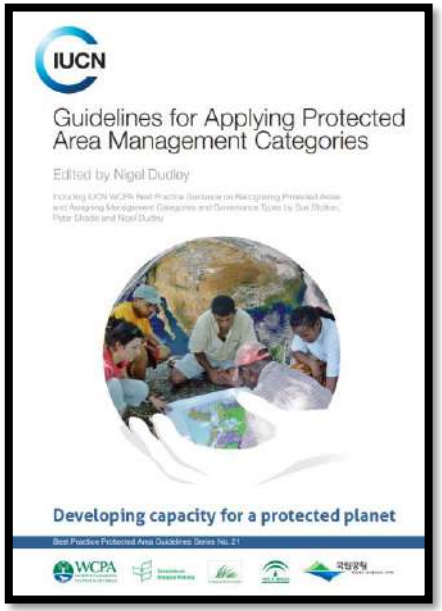
Conservation based on Species
(NTCAP, NECAP)

Conservation based on Landscape
(PA, ESA)





MS ISO 9001:2015



A protected area is:

"A **clearly defined geographical space**, **recognised**, **dedicated and managed**, through **legal or other effective means**, to achieve the **long-term conservation** of nature with associated **ecosystem services** and **cultural values**".

Management Category	Description
Category Ia: **Strict nature reserve**	**Strictly** protected areas **set aside** to **protect biodiversity** and also **possibly geological/geomorphological features**, where human visitation, use and **impacts** are **strictly controlled** and **limited** to ensure protection of the conservation values. Such protected areas can serve as indispensable **reference areas** for **scientific research and monitoring**.
Category Ib: **Wilderness area**	Usually large **unmodified or slightly modified areas**, **retaining** their **natural character and influence**, without permanent or significant human habitation, which are protected and managed so as to **preserve their natural condition.**
Category II: **National park**	**Large natural** or **near natural areas** set aside to **protect large-scale ecological processes**, along with the complement of species and ecosystems characteristic of the area, which also provide a **foundation** for **environmentally and culturally** compatible spiritual, scientific, educational, recreational and visitor opportunities.
Category III: **Natural monument or feature**	**Protect a specific natural monument**, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally **quite small protected areas** and often have **high visitor value**.
Category IV: **Habitat/species management area**	Protect **particular species** or **habitats** and **management reflects this priority**. Many category IV protected areas will need regular, active interventions to address the requirements of **particular species or to maintain habitats**, but this is not a requirement of the category.
Category V: **Protected landscape/ seascape**	**Interaction of people and nature over time** has produced an area of **distinct character** with significant ecological, biological, cultural and scenic value: and where safeguarding the **integrity of this interaction is vital** to protecting and sustaining the area and its associated nature conservation and other values.
Category VI: **Protected area with sustainable use of natural resources**	**Conserve ecosystems and habitats**, together with **associated cultural values and traditional natural resource management systems**. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Why we need more than just PA?

1. **Bias in selecting locations for PAs**

   Example: it is easier to allocate low-value and inhospitable areas such as highlands and mountains; though most biodiversity is typically dependent on suitable habitat in the lowlands.

2. **It is almost impossible to include entire ecosystems in a PA**

3. **Not all systems are represented in the PAs established**

   Note: in Malaysia several Plans/Policies stipulate that critical and representative habitats should be protected but wetlands and lowland Dipterocarp forests are as yet insufficiently covered.

4. **Several important design criteria for a Protected Areas System are not yet in place**

   Example: the requirement for connectivity between habitat fragments; redundancy in site selection; the permanence of sites for PAs.

NPBD Target 6:

By 2025, at least 20% of terrestrial areas and inland waters, and 10% of coastal and marine areas, are conserved through a representative system of protected areas and other effective area-based conservation measures.

ISSUES

1. Land-use change
2. Pollution
3. Human-wildlife conflict
4. Poaching
5. Invasive alien species

Distribution and number of Sumatran rhinoceros in the Endau-Rompin region of Peninsular Malaysia

Malayan Nature Journal - 1983

RODNEY W. FLYNN[1] and MOHD. TAJUDDIN ABDULLAH

Department of Wildlife and National Parks Kuala Lumpur, Malaysia.

[1] Present address: Alaska Department of Fish and Game, Division of Game, 230 South Franklin Street, Juneau. AK 99801, U.S.A.

Numbers

The Endau-Rompin region contains the largest contiguous Sumatran rhino population remaining in Malaysia. Based on the results of the survey and census work, we estimate that 20–25 animals occur there. The Taman Negara (8–12) and the Sungai Dusun (4–6) areas contain the next largest rhino populations remaining in the country (Flynn & Abdullah, unpubl. data.). Rhino density in the Endau-Rompin region was quite variable, depending on the section. The census study area contained the highest density of animals, about 1 animal per 40 km². In areas to the north and east, rhino sign was observed less frequently. The differences in density probably reflect habitat preference and the amount of human disturbance. The census study area contains mostly hill forest above 300 m. The northern and eastern sections contain mostly lowland forest; much of this area has been subjected to high levels of human disturbance.

World wide, only the Gunung Leuser Reserve in northern Sumatra contains a larger number of Sumatran rhinos. Borner (1978) estimated that 20 to 40 rhinos occur in this vast mountainous region. After Endau-Rompin, the Silabukan area in Sabah, East Malaysia, probably contains the next largest group (8–10) of rhinos (Flynn 1981). Insufficient data exist to accurately estimate the number of Sumatran rhinos remaining in the world, however present evidence (Van Strien 1974; McNeely & Laurie 1977; Borner 1978; Schenkel & Schenkel 1979; Payne 1980; Van Strien, pers. comm.; Flynn 1981; Flynn & Abdullah, unpubl. data.) suggests that the total number is less than 300. Thus, the Endau-Rompin region contains a significant proportion (5–10%) of the total individuals of this species.

loggers indicated that they were not aware of any rhino reports from the region. Presently, the lowland forest is being logged by several timber companies. We doubt whether any rhinos now exist east of the Endau mountain ridge. If a few animals are presently found there, their chances for survival are poor because all of the habitat will soon be destroyed, and the threat of poaching is high.

A few reports of rhinos occurring farther to the north near the Rompin

Conservation

The Endau-Rompin region has the most potential for maintaining a viable population of Sumatran rhinos in Malaysia, and conservation efforts for the species should be concentrated there. Our work has shown that Endau-Rompin contains the largest, and possibly the only reproductively viable, population of rhinos remaining in the country. A large proportion of the region has been proposed for national park status which would protect the habitat from exploitation. Recent research has found numerous food plants available in the habitat (Flynn, unpubl. data.).

A sound conservation program must contain short and long-term strategies. In the short-term, all remaining animals must be protected from poaching and their habitat protected. Habitat protection should be a primary priority of a conservation program. Unless a large tract of contiguous

Malaysia's last Sumatran rhino Iman dies, species now extinct in the country

NATION

Saturday, 23 Nov 2019

8:08 PM MYT

By STEPHANIE LEE

A file picture of Iman using a mineral lick in her stall when she was healthier.

THE MALAYAN TIGER

Panthera tigris jacksoni

MALAYAN TIGERS ARE ON THE BRINK OF EXTINCTION

- 1950s - About **3,000** tigers
- Present day - About **250** to **340** but Perhilitan suggests the number is fewer than 200
- Less than **3,000** wild tigers survive in 14 countries

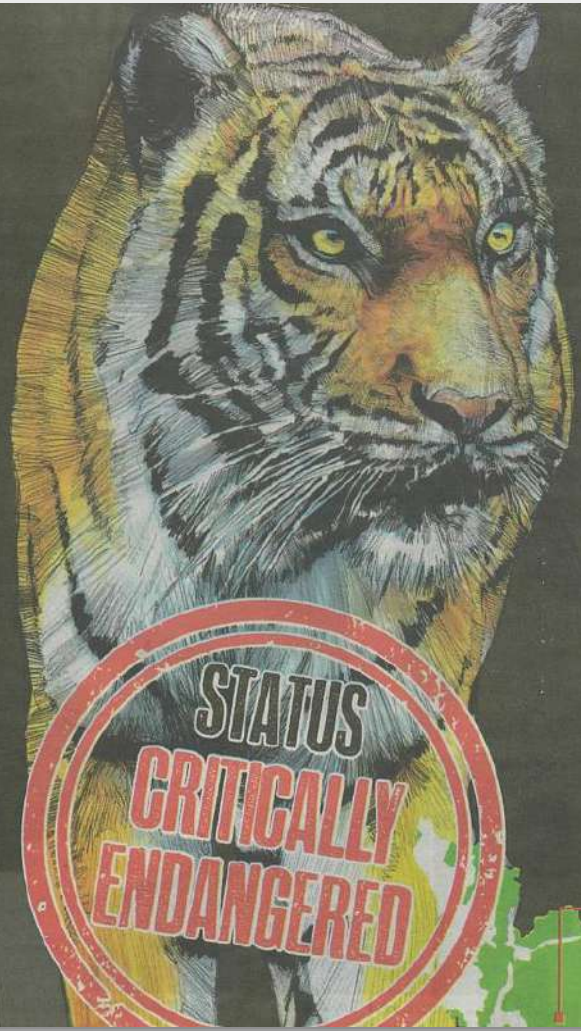
QUICK FACTS

- Habitat: Tropical moist broadleaf forests
- Weight: 99kg-120kg (adults)
- Diet: Carnivorous
- Lifespan: 15-20 years

A subspecies unique to the Malay Peninsula and one of the smallest tigers in the world. Mostly found in the forests of Pahang, Perak, Kelantan and Terengganu (Belum-Temenggor Forest reserve, Taman Negara and the Endau-Rompin Forest reserve). Classified as critically endangered on the International Union for Conservation of Nature (IUCN) Red List in 2015

NATIONAL TIGER CONSERVATION ACTION PLAN (2008-2020)

The goal for 2020 is that tiger populations are actively managed at carrying capacities across the three landscapes within the Central Forest Spine and connected with



THREATS

ILLEGAL TRADE

Illegal trade in high-value tiger products including skin, bones, meat and tonics

FOREST LAND CONVERSION

Commercial logging and human settlement. These are the main drivers of tiger habitat loss. With their substantial dietary requirements, tigers require a healthy large ungulate prey base, but these species are also under heavy human subsistence hunting pressure and competition from domestic livestock

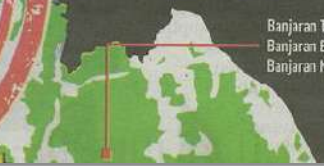
INTOLERANCE

Tiger attacks on livestock and people can lead to intolerance of tigers by neighbouring communities and presents an ongoing challenge to wildlife managers to build local support for tiger conservation

CAUSES

Poaching, illegal logging (loss of habitat), hunted for their body parts, persecuted by angry/scared farmers and villagers, starved as their prey is over-harvested

WILD TIGER SANCTUARIES IN THE CENTRAL FOREST SPINE



The Malayan Tiger (*Panthera tigris*)

Iconic and **apex species** in Malaysia

One of the nine species recorded in **Felidae** Family (biggest species)

Prey-base species

New Straits Times (18 May 2019)

‘Lost’ Malayan tiger is dead

Animal found roaming in Terengganu village dies from viral disease

By RASHVINJEET S. BEDI
newsdesk@thestar.com.my

PETALING JAYA: The Malayan tiger found roaming in a village in Dungun, Terengganu has died, said the Department of Wildlife and National Parks (Perhilitan).

The five-year-old tiger nicknamed Awang Besoi was confirmed dead at the National Wildlife Rescue Centre (NWRC) in Sungkai, Perak, at about 5.30am yesterday.

This was despite the intensive efforts to treat and save the tiger, said Perhilitan, which added that Awang Besoi was infected by canine distemper, a viral disease which infects domesticated animals such as dogs as well as wildlife, including tigers.

“If the disease infects a tiger, it will display behaviour such as being unafraid of humans, and the possibility of it healing is very small,” Perhilitan said in a statement.

It added that it did not rule out the possibility that the virus was spread by other wild animals around Kampung Besol Lama in Dungun, where the tiger was found roaming.

Tests on a blood sample from the tiger confirmed presence of the canine distemper virus.

Awang Besoi, estimated to weigh about 130kg, was caught at about 3.30pm on Friday after being tranquilised.

Videos of the tiger roaming in the village were widely circulated on social media and messaging applications recently.

Perhilitan said it monitored the tiger from July 20-23 and found that it displayed clinical signs of distemper, such as non-aggressiveness, walking in circles, as well as having fits and nasal discharge.

Perhilitan said in the interest of public safety, it was monitoring the area around the village and had placed tiger traps.

It also urged the public to call 1800-888-010 should there be tiger sightings in the vicinity.

No longer with us: The Malayan tiger known as “Awang Besoi” that was found roaming in a village in Dungun has died at about 5.30am yesterday.

20 ekor lembu dibaham harimau

RAHAYU MUSTAFA | | 08 Disember 2020

Jabatan PERHILITAN Semenanjung Malaysia
26 November at 18:00 ·

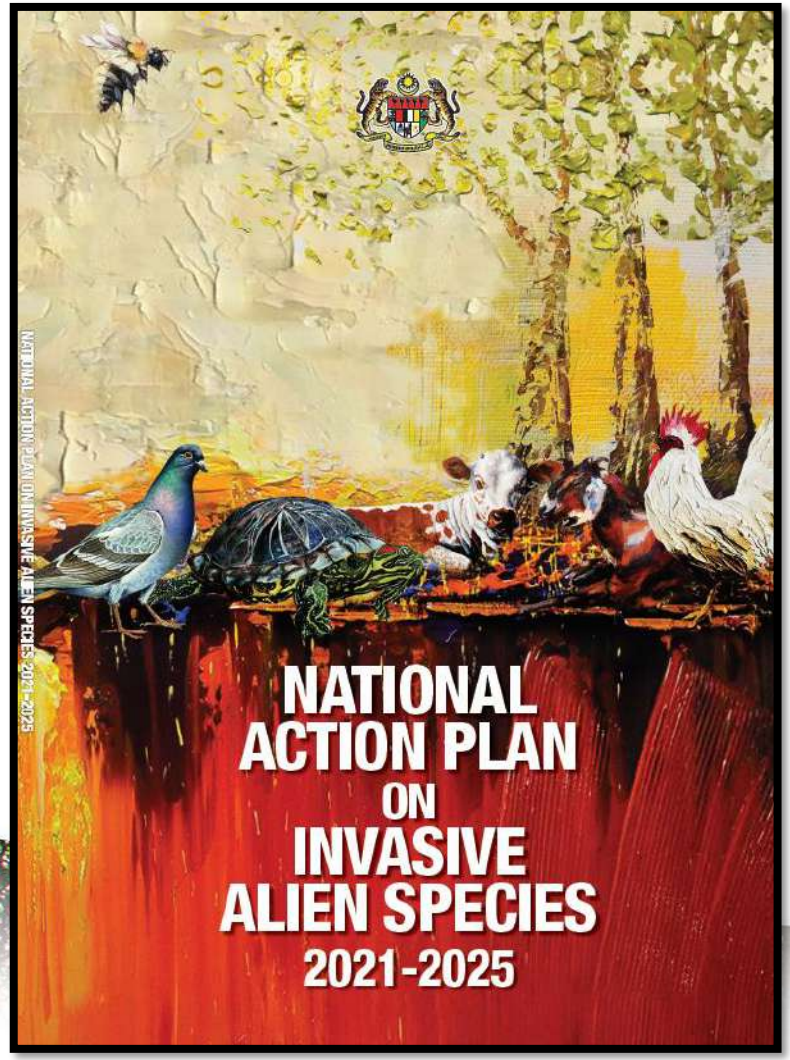
[KEMPEN SELAMATKAN HARIMAU MALAYA: KEUNIKAN HARIMAU MALAYA]

Tahukah anda bahawa belang pada badan Harimau Malaya adalah unik bagi setiap individu? Setiap individu mempunyai corak belang yang berbeza seperti cap jari manusia yang digunakan bagi mengenalpasti individu Harimau Malaya tersebut.

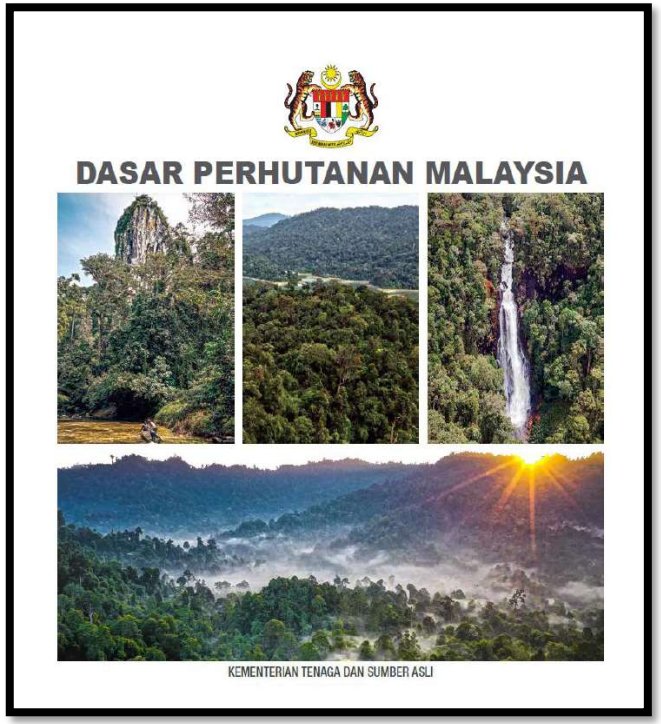
Mari kita saksikan keunikan Harimau Malaya melalui gambar yang dirakamkan menggunakan kaedah perangkap kamera.

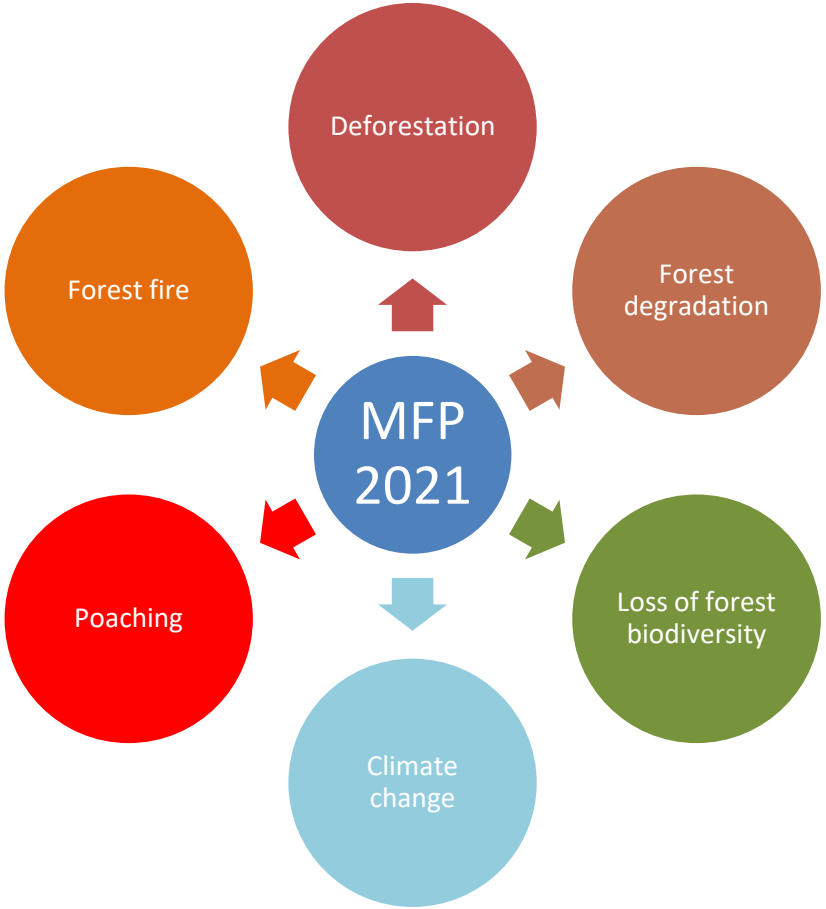
#SelamatkanHarimauMalaya
#SaveOurMalayanTiger

Sumber gambar: 1st. National Tiger Survey (1st NTS)



- **Goals**: 3
- **Targets**: 11
- **Activities**: 27
- **Goal 1**: Improve understanding and public awareness about IAS
- **Target 1**: Increase research in all aspects of IAS management including understanding their pathways and ecological impacts and develop technologies to contain and control IAS.


DASAR PERHUTANAN MALAYSIA
KEMENTERIAN TENAGA DAN SUMBER ASLI


Deforestation
Forest fire
Forest degradation
MFP 2021
Poaching
Loss of forest biodiversity
Climate change

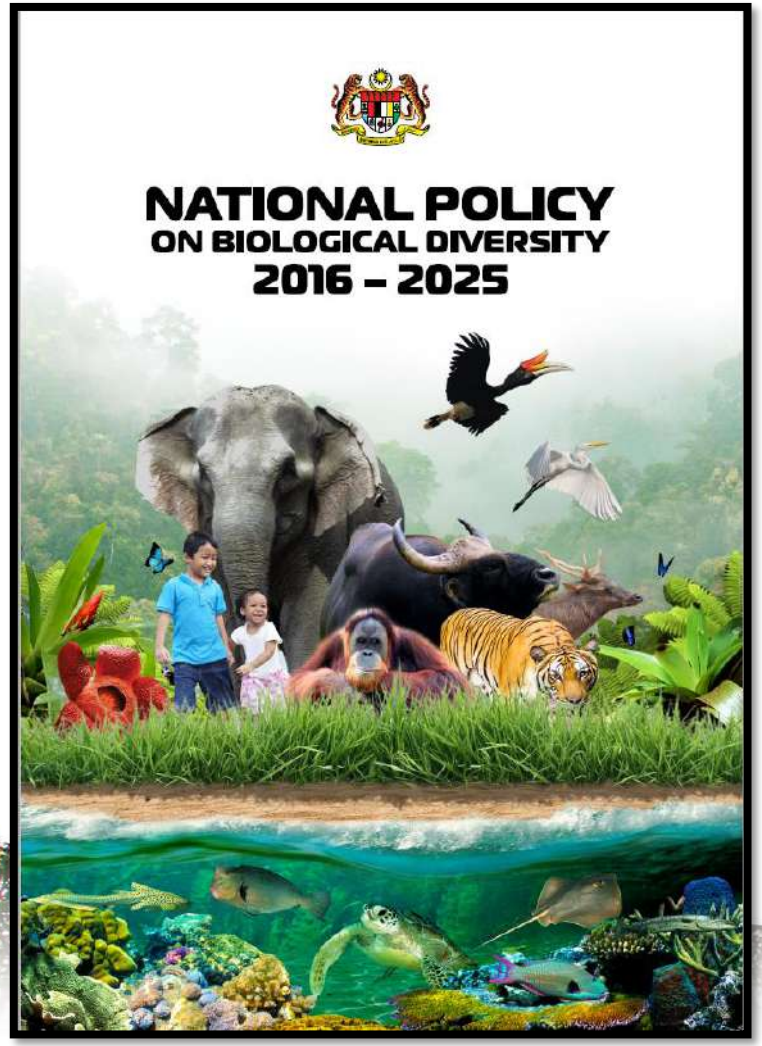
Target 2: Biodiversity Conservation

Strategy 1: Preservation and Conservation of Forest Biodiversity

- Action Plan
  a) Identify and assess status of ecosystem, habitat, flora and fauna species (endemic, rare and threatened)
  b) Conduct programs related to *in-situ* and *ex-situ* conservation
  c) Control entry of invasive alien species and genetically modified organisms
  d) Identify and integrate mitigation actions in land use planning to reduce impact on biodiversity
  e) Identify, establish and maintain more forest areas especially high conservation value (HCV)

Strategy 2: Increase knowledge by documenting scientific information on forest biodiversity

- Action Plan
  a) Conduct inventories on forest biodiversity
  b) Strengthen database and documentation on forest biodiversity
  c) Disseminate information on forest biodiversity to relevant stakeholders
  d) Integrate forest biodiversity information in forest management
  e) Establish and strengthen capacity and expertise on forest biodiversity



- **Goals**: 5
- **Targets**: 17
- **Species conservation**: 1 (Target 9)
- **Landscape conservation**: 3 (Target 6, 7 and 8)

Target 8: Important terrestrial and marine corridors are identified, restored and protected.

Main Indicator (8.1) - By 2025, 10 main corridors under CFS initiative are fully implemented

3rd National Physical Plan

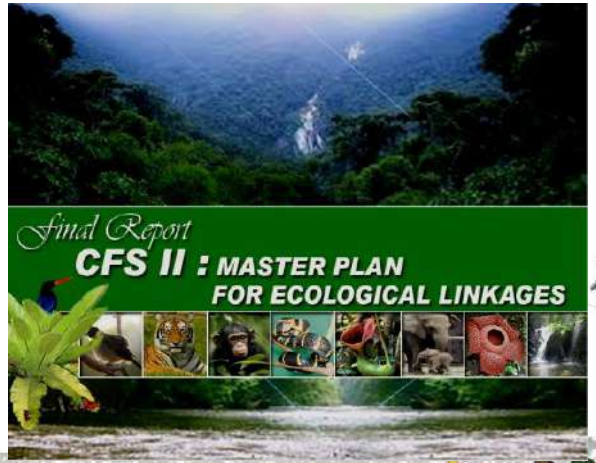
- **KD1**: **Sustainable Management of Natural Resources, Food Sources and Heritage**
  - National resources need to be **maintained, protected** and **enhanced** in line with sustainable development principles

- **KD 1.1**: **Enhancing the Conservation of National Ecological Assets**

- **KD1.1C** is to **establish** and **strengthen** the **implementation** of **terrestrial ecological corridors** including **CFS**

Central Forest Spine (CFS)

- **Goal**: Conservation Biodiversity by creating ecological corridors to connect fragmented forests in Peninsular Malaysia
- **Involves** 8 major states in Peninsular Malaysia: Kedah, Perak, Selangor, Negeri Sembilan, Johor, Pahang, Kelantan and Terengganu
- There are 37 corridors that have been identified
  - 17 Primary Linkages (PLs)
  - 20 Secondary Linkages (SLs)



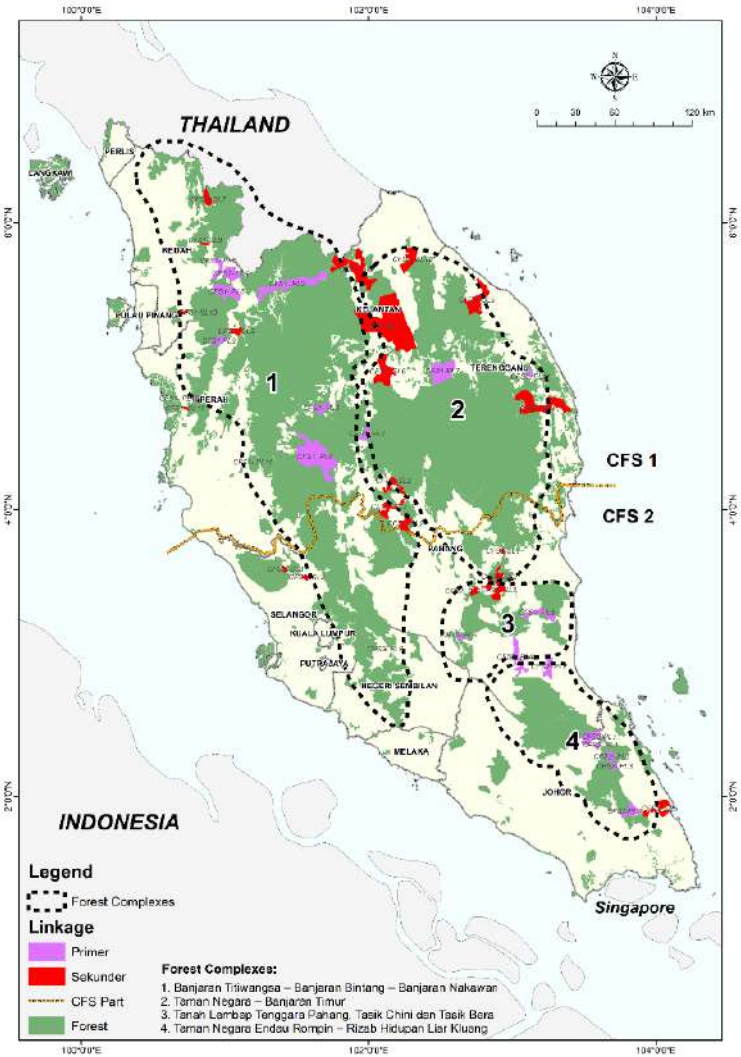
CFS Forest Complexes

1) Titiwangsa – Bintang – Nakawan Ranges

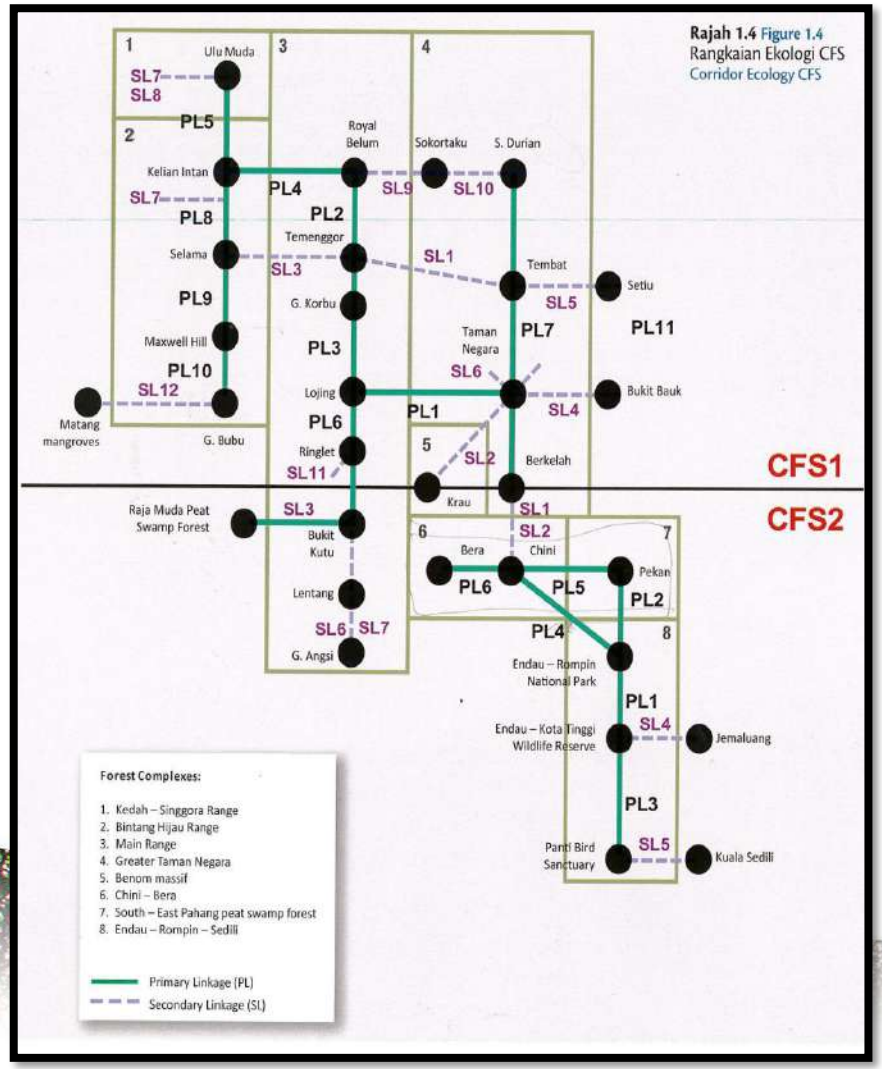
2) Taman Negara – Timur Range

3) Southeast Pahang – Lake Chini – Lake Bera

4) Endau Rompin Park – Kluang Wildlife Reserve



Ecological Corridors in CFS

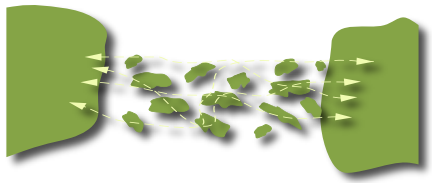


Primary linkages (Linear/direct corridors)

- Most critical (link forest complexes/most important forest islands)
- Facilitate movement of landscape species

Secondary linkages (Stepping stones)

- Where primary linkages not feasible
- Islands not viable habitats for large mammals
- Islands highly isolated
- Still maintains some ecosystem services



FRIM 1985-2021
PENGHIJAUAN MALAYSIA

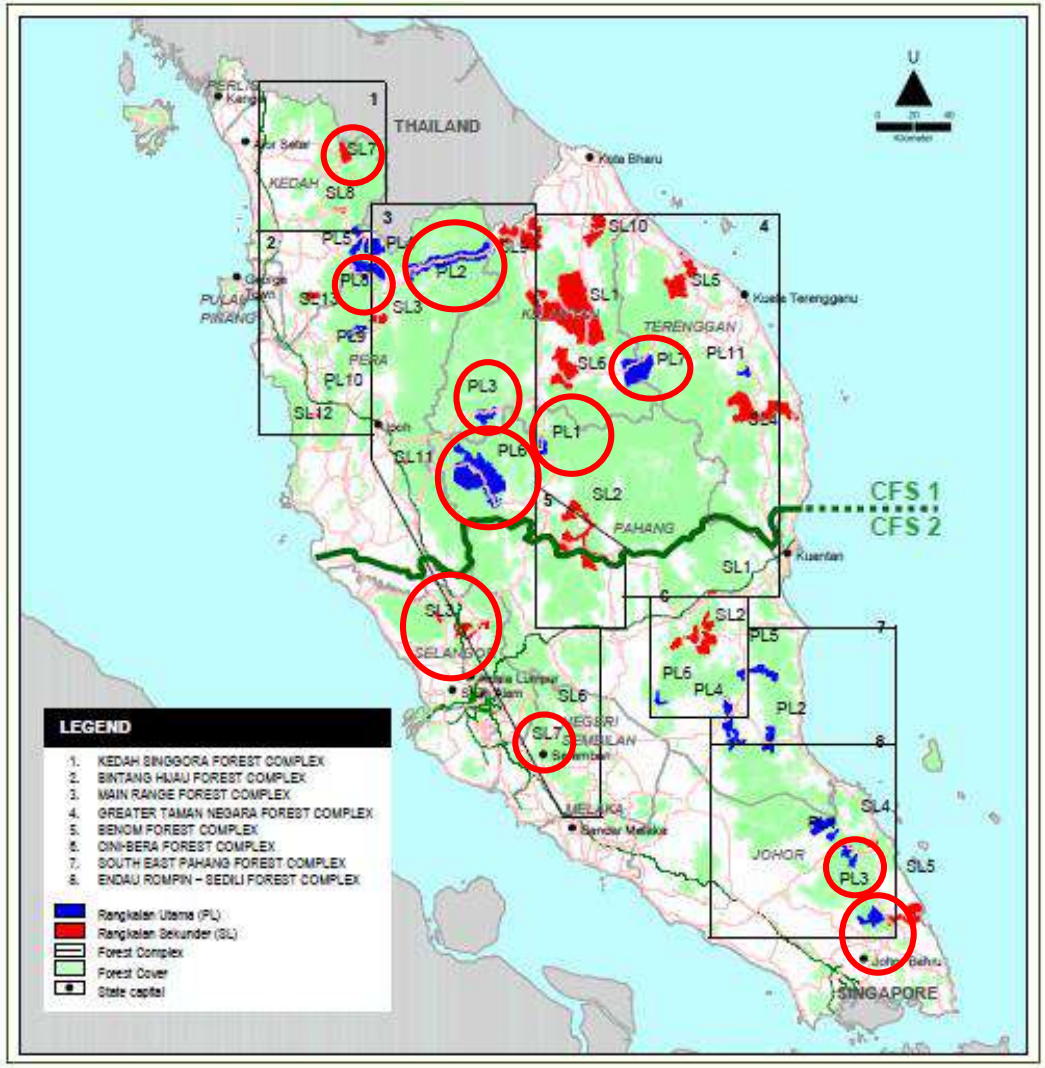
2015

CFS Study in 11th MP

Objectives:

1. To identify and document small vertebrates at selected CFS corridors
2. To assess conservation status of small vertebrates
3. To suggest actions related to conservation of small vertebrate populations at respective corridor

Duration: 2017-2020



Study Sites

1. Kedah: CFSI SL7 (Pedu – Chebar – Ulu Muda)
2. Perak: CFSI PL8 (Kenderong – Bintang Hijau)
3. Perak: CFSI PL2 (Temengor – Belum)
4. Kelantan: CFSI PL3 (Sg Brok – Lojing)
5. Terengganu: CFSI PL7 (Tembat – Taman Negara)
6. Pahang: CFSI PL1 (Sg Yu – Tanum)
7. Pahang: CFSI PL6 (Ulu Jelai – Lemoi)
8. Selangor: CFSII SL3 (Gading – Belata – Raja Musa)
9. Negeri Sembilan: CFSII SL7 (Angsi – Berembun)
10. Johor: CFSII PL1 (Lenggor – Mersing – Labis Timur)
11. Johor: CFSII PL3 (Panti – Ulu Sedili)

Findings

- Mammals
  - Total number of species – 180 spp
  - Threatened species (CR – 2 spp; EN – 16 spp; VU – 21 spp)
  - Protected species according to WCA 2010 (TP - 46 spp; P – 24 spp)
  - Corridor with highest species richness: Kedah CFSI SL7 (127spp)
  - Highest family recorded (bats) - Vespertilionidae (24 spp)
  - Highest family recorded (Non-Volant) - Sciuridae (16 spp)

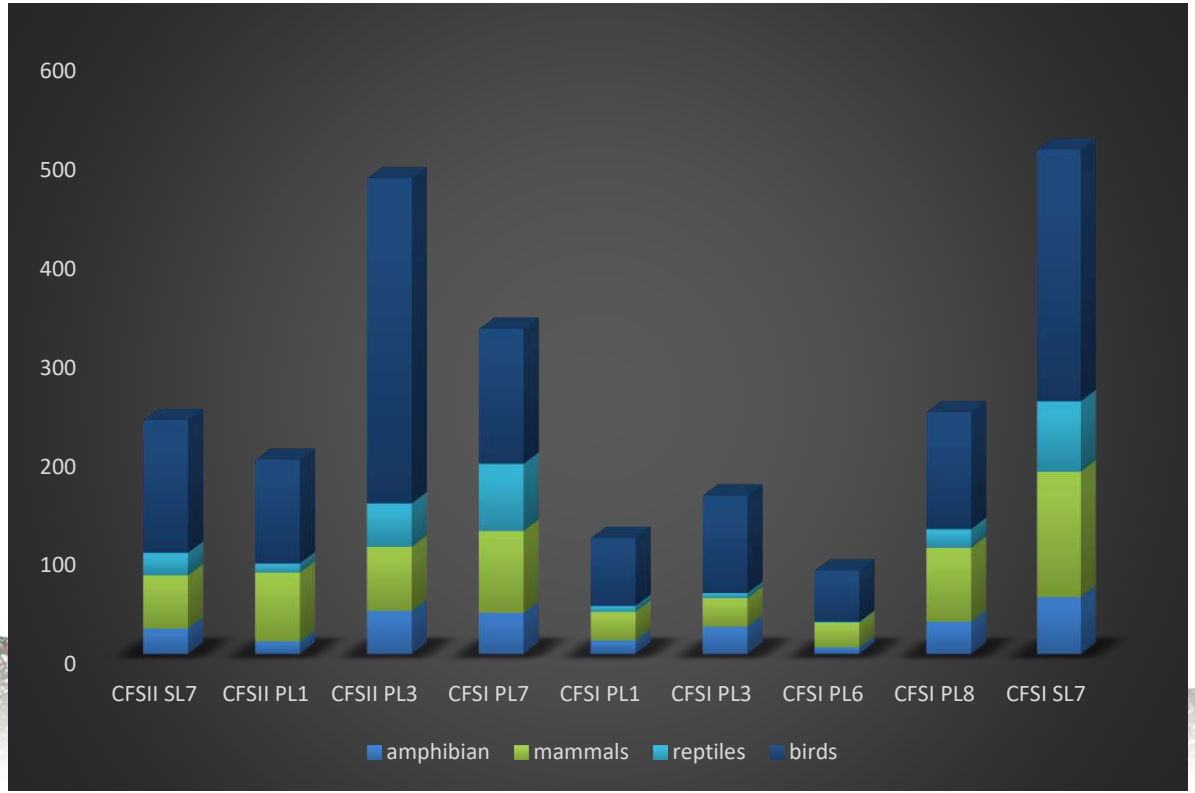
- Avifauna
  - Total number of species – 403 spp
  - Threatened species (CR – 1 sp; EN – 2 spp; VU – 8 spp)
  - Protected species according to WCA 2010 (TP - 349 spp; P – 16 spp)
  - Corridor with highest species richness: Johor CFSII PL1 (328spp)
  - Highest family recorded: Muscicapidae (30 spp)

Findings

- Amphibia
  - Total number of species – 87 spp
  - Threatened species (CR – 0 sp; EN – 3 spp; VU – 0 sp)
  - Protected species according to WCA 2010 (TP - 0 sp; P – 20 spp)
  - Corridor with highest species richness: Kedah CFSI SL7 (58spp)
  - Highest family recorded: Dicroglossidae (16 spp)

- Reptiles
  - Total number of species – 128 spp
  - Threatened species (CR – 2 spp; EN – 1 sp; VU – 3 spp)
  - Protected species according to WCA 2010 (TP - 4 spp; P – 50 spp)
  - Corridor with highest species richness: Kedah CFSI SL7 (71spp)
  - Highest family recorded: Colubridae (40 spp)

Species Richness of Vertebrates



Cynopterus brachyotis
Lesser Short-nosed Fruit Bat


Ptilocercus lowii
Pen-tailed treeshrew


Serilophus lunatus
Silver-breasted broadbill

Spilornis cheela
Crested serpent eagle


Malayan Horned Frog
Megophrys nasuta


Wallace’s Flying Frog
Rhacophorus nigropalmatus

Conservation Malaysia
A Bulletin Supporting Plant and Animal Conservation in Malaysia
ISBN 1823-2875
Issue No 19 (2014)

CENTRAL FOREST SPINE:

AN OVERVIEW AND HOW GERIK WAS CHOSEN FOR THE PILOT PROJECT

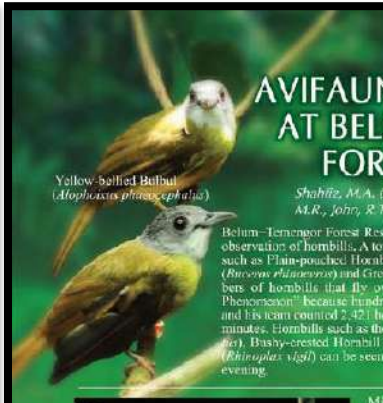
Shukri, M.A.(shukriaziz@forestry.gov.my), Shahfiz, M.A. & Mardiana, S.M.

Habitat fragmentation is the breaking-up of natural habitats into unconnected parts that occurs either naturally by climatic or geological processes or by human activities. Activities such as land clearing for non-forest land uses usually impact large areas over a short period of time.

Forest fragmentation and habitat loss have been identified as one of the serious threats occurring in Malaysia today especially with regards to biodiversity conservation. The loss of forest biodiversity also threatens our food supplies, ecotourism opportunities and other essential ecological functions.

Realizing the need to overcome this crucial issue which is particularly critical in Peninsular Malaysia's forests, the Government of Malaysia has committed to enhance the connectivity of the fragmented forests through the establishment of a network of ecological corridors. This is reflected in one of the National Physical Plan 2 (NPP2) policy statements which states that "A Central Forest Spine (CFS) shall be established to form the backbone of the Environmentally Sensitive Area (ESA) network". This was approved by the National Physical Planning Council (NPPC) on 13 August 2010.

Under this initiative, four main fragmented forest complexes will be reconnected to create the CFS spanning the north to the south of Peninsular Malaysia. These complexes, namely, (i) Main Range Bintang Range Nakawan Range; (ii) National Park-Eastern Range; (iii) South East Pahang-Tasik Chini-Tasik Bera Wetlands; and (iv) Endau Rompin State Park-Kluang Wildlife Reserve are shown in Fig. 1. In NPP 2, it is estimated that CFS will cover 5.3 million hectares or 40% of the total area of the peninsula. Of this, 80% is Permanent Reserved Forests (PRFs). To facilitate the restoration of connectivity and continuity of these four forest complexes, the CFS Master Plan was prepared by the Town and Country Planning Department (TCPD) in 2010 with the main objective to establish a viable and contiguous or connected conservation area comprising both forest and non-forest areas that will be maintained as the green lung of the ESA network in Peninsular Malaysia.



AVIFAUNA ASSEMBLAGES AT BELUM-TEMENGOR FOREST RESERVES

Shahfiz, M.A. (shahfiz@frim.gov.my), Kaviarasu, M., Rizal, M.R., John, R.T., Fakrul, I.A.F. & Faridatul, N.M.R.

Belum–Temengor Forest Reserves is one of the best sites in the country for observation of hornbills. A total of ten species can be found in these reserves such as Plain-pouched Hornbill (*Aceros subruficollis*), Rhinoceros Hornbill (*Buceros rhinoceros*) and Great Hornbill (*B. bicornis*). In fact, the sheer numbers of hornbills that fly overhead daily has been termed the "Hornbill Phenomenon" because hundreds can be counted in a day. In 1993, Davison and his team counted 2,421 hornbills in the Sg. Halong Base Camp within 40 minutes. Hornbills such as the White-crowned Hornbill (*Berenicornis comatus*), Bushy-crested Hornbill (*Anorrhinus galeritus*) and Helmeted Hornbill (*Rhinoplax vigil*) can be seen daily either early in the morning or late in the evening.

FRIM is currently carrying out surveys of avifauna assemblages around the viaduct. Although this viaduct is intended for mammals, it is also beneficial for birds particularly raptors, swifts and low-flying, understorey birds. Unlike hornbills and raptors, understorey birds such as bulbuls, babblers, pittas, woodpeckers, flowerpeckers and sunbirds fly short distances and stay within the forest canopy cover. The construction of the viaduct would create an additional fly path through which these low flying birds could cross the highway. Raptors (eagles and hawks) live in the forest canopy; the viaduct is a strategic foraging site as their very sharp eyes enable them to locate small mammals particularly rats that cross the highway. Beneath the viaduct, swifts are provided sites to build nests; the presence of nests can be clearly seen at the Sg. Deka viaduct in Terengganu and Sg. Yu in Pahang.

Mist nets were used to capture birds during the day and at least 10 mist nets were set up for each sampling session. A mist net is at least 2 m high and 8 m in length. These nets are set along the trails for six consecutive days and are checked every two hours beginning from 0800 until 1600 daily. The trapping exercise began in November 2012. All birds captured are measured, identified and photographed before they are released. Binoculars are used to observe canopy-flying birds such as eagles, hawks and hornbills.

To date, the Malaysian Nature Society (MNS) has recorded at least 304 species of birds from 47 families in BTFR. However, there is no information about how these records were made. Of these 304 species, at least 56 species have been captured since trapping began in this project. Species that were frequently captured are bulbuls such as Spectacled Bulbul (*Pycnonotus erythropthalmos*), Red-eyed Bulbul (*P. brunneus*), Yellow-vented Bulbul (*P. goiavier*), Grey-bellied Bulbul (*P. cyaniventris*), Black-crested Bulbul (*P. melanicterus*), Yellow-bellied Bulbul (*Alophoixus phaeocephalus*); woodpeckers (Picidae) such as Rufous Piculet (*Sasia abnormis*) and Buff-necked Woodpecker (*Meiglyptes tukki*); babblers such as Black-capped Babbler (*Pellorneum capistratum*), Ferruginous Babbler (*Trichastoma bicolor*), Scaly-crowned Babbler (*Malacopteron cinereum*), Rufous-crowned Babbler (*M. magnum*) and Moustached Babbler (*M. magnirostre*). The rare catches include the Asian Paradise Flycatcher (*Terpsiphone paradisi*), Greater Racket-tailed Drongo (*Dicrurus paradiseus*), Black Magpie (*Platysmurus leucopterus*) and Javan Frogmouth (*Batrachostomus javensis*). Species that are often observed and heard are Raffles' Malkoha (*Phaenicophaeus chlorophaeus*), Chestnut-breasted Malkoha (*P. curvirostris*), Banded Cuckoo (*Cacomantis sonneratii*),

PRELIMINARY CHECKLIST OF MAMMALS AT SUNGAI ENAM IN TEMENGOR FOREST RESERVE, PERAK, PENINSULAR MALAYSIA

[1]SHAHFIZ, M.A., [2]SHAHRUL ANUAR, M.S., [1]KAVIARASU, M., [3]FAUZI, M. Z., AND [1]RIZAL, M.R.

Email: shahfiz@frim.gov.my

[1]Zoology Branch, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor.
[2]School of Biological Sciences, Universiti Sains Malaysia, 11800, Penang
[3]Department of Wildlife and National Parks, Gerik District, Perak

Abstract: Survey was carried out at Sungai Enam from 2-7 October 2012 in Temengor Forest Reserve, Perak. The main objective of this survey was to identify, document and update the checklist of mammalian species. In total, 150 cage traps were placed, baited with ripped banana for four consecutive nights to capture non-volant small mammals. At the same time, five harp traps and 30 mist nets were used to capture the flying mammals and bats. Moreover, 30 camera traps were setup at these trails. On top of that, direct observations were also carried out using binoculars to spot any arboreal species. Feces, scats, marks, dungs and footprints were also recorded to indicate the existence of the mammalian species. As results, a total of 58 species of mammals from 25 families were documented and recorded. The squirrels (Sciuridae) were mostly recorded comprising of eight species and followed by the mega-chiropterans or the fruit-eating bats (Pteropodidae) with seven species and the rats and mice (Muridae) with six species. Moreover, at least four species of wild cats including the Malayan tiger (*Panthera tigris*) and leopard (*P. pardus*) were identified in this area. Tigers are the top predator in a food chain or are also known as the umbrella species. Deforestation that leads to forest fragmentation is one of the key factors that contribute to the loss of our biodiversity. Therefore, it is important to conserve this area as it still functions as habitats for these vertebrates. Governments (federal and states) have established two initiatives to solve this issue by having the National Tiger Conservation Action Plan (NTCAP) and the Central Forest Spine (CFS).

Keywords: Temengor Forest Reserve, Mammals, Sciuridae, Pteropodidae, Muridae, *Panthera tigris*, National Tiger Conservation Action Plan (NTCAP), Central Forest Spine (CFS)

SURVEYS OF SMALL MAMMALS AT SELECTED SITES IN ROYAL BELUM STATE PARK

[1]M. A. Shahfiz, [2]Shahrul Anuar, M.S., [3]Nor Zalipah, M., [2] Nurul 'Ain, E., [1]Pan, K. A., [2]Muin, M. A., [2]Yusof, M. O., [2]Khairul N. A. M. , [2]Edzham, S. M. S. H., [2]Ganesan, M., [2]Nordin, A., [4]Juliana, S., [4]Yusuf, A., [4]Rashid, A. & [5]A. Fadhil

[1]Zoology Branch, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor.
[2]School of Biological Sciences, Universiti Sains Malaysia, 11800, Penang
[3]Department of Biological Sciences, Faculty of Science and Technology, Universiti Malaysia Terengganu, 21030 Kuala Terengganu, Terengganu
[4]Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600, Bangi, Selangor
[5]Department of Wildlife and National Parks (DWNP), 53000, Cheras, Kuala Lumpur

Abstract: Two separate surveys were conducted in Royal Belum State Park, Perak. These surveys held from 25 July-1 August 2003 and 16-23 July 2007 covering Sungai Kenarong, Sungai Tiang and Sungai Kejar respectively. The main objectives of these studies were to document the species diversity of small mammals and to compare the distribution of the species based on previous studies conducted in this park. Twenty-harp traps and fifteen-mist nets were used to capture bats. Sixty cage traps baited with banana and oil palm seeds were used to capture non-flying small mammals. In addition, direct observations were also carried out during these exercises. In total, 113 individuals of chiropterans were captured comprising 23 species from four families namely; Hipposideridae, Rhinolophidae, Vespertilionidae and Pteropodidae; and 21 species of small mammals were recorded from 10 families; Tupaiidae, Cynocephalidae, Manidae, Muridae, Hystricidae, Rhyzomidae, Sciuridae, Mustellidae, Viverridae and Tragulidae. Of these, the bicolor roundleaf horseshoe bat, *Hipposideros bicolor*, were mostly captured with 19 individuals; brown spiny rat, *Maxomys rajah* and red spiny rat, *M. surifer* were two species of rat that mostly captured with four individuals respectively throughout the surveys.

Abstrak: Dua persampelan telah dijalankan di Taman Diraja Belum, Perak. Survei ini telah berlangsung pada 25 Julai-1 Ogos 2003 dan 16-23 Julai 2007 di Sungai Kenarong, Sungai Tiang dan Sungai Kejar. Objektif utama kajian ini dijalankan adalah untuk mendokumentasikan

RELATION BETWEEN GRASSES AND LARGE HERBIVORES AT THE ULU MUDA SALT LICKS, PENINSULAR MALAYSIA

MY Chew[1,*], K Hymeir[2], R Nosrat[3] & MA Shahfiz[1]

[1]*Forest Research Institute Malaysia, 52109 Kepong, Selangor Darul Ehsan, Malaysia*
[2]*Earth Lodge Sdn Bhd/Ulu Muda Field Research Center, 98-03-28B Prima Tanjung, Jalan Fettes, 11200 Tanjung Tokong, Penang, Malaysia*
[3]*Department of Wildlife and National Parks, Km 10 Jalan Cheras, 56100 Kuala Lumpur, Malaysia*

Received August 2013

CHEW MY, HYMEIR K, NOSRAT R & SHAHFIZ MA. Relation between grasses and large herbivores at the Ulu Muda salt licks, Peninsular Malaysia. Ulu Muda Forest Reserve is known for its salt licks and grassy floodplains. Previous studies largely overlooked the floristic component of Gramineae in this herbivore-rich forest. This paper reports on the dominant grass species present at Sira Bongor, Sira Keladi and Sira Air Hangat salt licks, namely, *Hymenachne amplexicaulis*, *Centotheca lappacea* and *Oryza nilleyi* and describes the niches occupied by grasses at the three sites in relation to signs of large herbivore activities. Preliminary evidence indicated that the salt licks and adjacent *H. amplexicaulis* swamps were dynamic habitats, plausibly created and maintained by large-bodied herbivores including elephants. The presence of grasses that extended the role of salt licks as places for both minerals and nutritive food intake for large herbivores was discussed.

Keywords: Salt lick vegetation, Gramineae, herbivore, Asian elephant

INTRODUCTION

The Ulu Muda Forest Reserve (105,060 ha) of the state of Kedah consists of mainly lowland to hill dipterocarp forest and riverine forest with distinct dry periods (Sharma et al. 2005). It is slightly south of the Kangar–Pattani border that divides the lowland evergreen rainforest in the floristic zone of the Malay peninsula from the semi-evergreen rainforest in the Isthmus of Kra (Saw 2010). The combined effects of logging from the 1960s to the 1990s and the impoundment of three catchments for dams and reservoirs gave rise to seasonally inundated floodplains at lower elevations dominated by grasses, sedges, herbaceous creepers and climbers (Suksuwan 2008). Although extensive surveys on various plant groups have been carried out during the Ulu Muda Scientific Expedition in March 2003 (Shaharuddin et al. 2005), the family Gramineae was overlooked and not reported. Prior to 2010, only one Gramineae specimen (*Scrotochloa urceolata*) from Gua Labu in Ulu Muda was deposited at the Kepong Herbarium, Forest Research Institute Malaysia.

Almost all extant Peninsular Malaysian large herbivores are found in Ulu Muda (PERHILITAN 1993, Sharma et al. 2005), which include Asian elephant (*Elephas maximus*), Malayan gaur (*Bos gaurus*), Malayan tapir (*Tapirus indicus*), sambar deer (*Rusa unicolor*), barking deer (*Muntiacus muntjak*) and historical records of the critically endangered Sumatran rhinoceros (*Dicerorhinus sumatrensis*) as well as the endangered banteng (*Bos javanicus*). Studies pertaining to local wildlife habitats often acknowledge salt licks (sites with localised natural concentrations of minerals such as sodium and/or calcium and/or magnesium within or arising from soils or rocks) as a key component limiting species distribution and abundance (Caldecott 1988, Payne 1990, Novarino 2005, Matsubayashi et al. 2007). An area around Gerik in the state of Perak was known to hold one of the densest elephant populations in Peninsular Malaysia, attributed to its large number of salt licks (Khan 1969, Olivier 1978). Under Section 85 of the Wildlife Conservation Act 2010 (Act 716) for Peninsular Malaysia, salt licks and

*chew@frim.gov.my

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CHECKLIST OF VERTEBRATES AT PRIMARY LINKAGES 2 (PL2) OF THE CENTRAL FOREST SPINE ECOLOGICAL CORRIDOR IN BELUM-TEMENGOR FOREST RESERVES, PERAK, PENINSULAR MALAYSIA

SHAHFIZ, M.A.,[1*] SHUKRI, M.A.[2], KAVIARASU, M.[1], NOR HAZWANI, A.R.[1], FARADIANA, N.M.F.[1] AND NUR ALWANI, Z.[1]

[1]Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor
[2]Forestry Department of Peninsular Malaysia (FDPM), Jalan Sultan Salahuddin, 50660 Kuala Lumpur

*Corresponding author:
Email: shahfiz@frim.gov.my

Abstract: Central Forest Spine (CFS) is an important initiative to address forest fragmentation in Peninsular Malaysia using connectivity called ecological corridors. This paper illustrates a checklist of vertebrates identified and documented from one of corridors named Primary Linkages 2 (PL2) connecting Royal Belum State Park and Temengor Forest Reserve, Perak. This checklist combined information which was based on primary data and published articles. A total of 120 species of mammals including 33 families, 306 species of birds from 64 families, 45 species of amphibians from 7 families and 67 species from 13 families of reptiles were documented. Of these, iconic species such as tiger (*Panthera tigris*), elephant (*Elephas maximus*), seladang (*Bos gaurus*) and hornbills are also documented here.

Key words: Species List, Ecological Corridor, Mammals, Birds, Herpetofauna, Malaysia.

INTRODUCTION

Perak is more fortunate amongst other states in Peninsular Malaysia as it recorded a rich faunal diversity especially, in the lowland and hill dipterocarp forests in northern Perak which included the Belum Forest Reserve, Temengor Forest Reserve and Gerik Forest Reserve (Latiff and Faridah-Hanum 2011). Based on past expeditions and researches carried out over the last two decades, these reserves contain about 20% of the total species of mammals, birds and herpetofauna of Peninsular Malaysia and hence it is important to conserve them.

Habitat fragmentation is a major threat to Malaysia's biological resources (DTCP 2010). Habitat fragmentation is a process where forested areas are breaking up and becoming unconnected parts and patches. It may occur naturally via climatic and geological processes which alter the landscape such as the rise of the sea level may change a certain landscape area. Later, this process would alter the life which constitutes the areas and this process generally occurs over such great expenses of time and by then most living organisms would have already adapted to the changes. Habitat fragmentation could also be caused by human activities such as land alteration through the clearing of native vegetation for non-forest land uses that usually impact

CHECKLIST ON SMALL VERTEBRATES AT BUKIT TAREK FOREST RESERVE, SELANGOR

***Faradiana N.M. Fauzi, Shahfiz M. Azman, Kaviarasu Munian, Nor Hazwani A. Ruzman & Alwani N. Zakaria**

Zoology Branch, Fauna Biodiversity Program, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor.

*Corresponding author's email: noorfaradiana@frim.gov.my

ABSTRACT

Bukit Tarek Forest Reserve (BTFR) is one of the four forest reserves identified in Central Forest Spine (CFS) Selangor known as Secondary Linkage-3 (SL3). Not much information on small vertebrates is documented from this forest reserve. The main objective of this paper is to provide a preliminary checklist on small vertebrates from BTFR. Three surveys were carried out in April, May and July 2017. Forty collapsible cage traps, 40 Sherman traps, ten mist nets and two harp traps were used to capture non-volant small mammals, bats, and birds. Active searches were carried out to record nocturnal species, especially amphibians. The surveys were carried out with a minimum of four sampling trap-nights. Based on these surveys, ten species of small mammals from five families, 17 species of birds from 10 families, and 13 species of herpetofauna from eight families were recorded. BTFR plays its role in providing habitats and resources for vertebrates to survive. Therefore, conservation efforts must be taken immediately to ensure this reserve is preserved and conserved.

Keywords: Checklist, small vertebrates, Bukit Tarek Forest Reserve, Selangor

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INTRODUCTION

Vertebrates are organisms belonging to Phylum Chordata, which are described as animals that possess a rod of flexible tissue which protected in higher forms by vertebral column known as spinal cords (Allaby, 2009). This phylum includes mammals, birds,

CHECKLIST OF AVIFAUNA AT SELECTED ECOLOGICAL CORRIDORS IN PENINSULAR MALAYSIA

***Alwani N. Zakaria, Shahfiz M. Azman, Faradiana N.M. Fauzi, Nor Hazwani A. Ruzman & Kaviarasu Munian**

Zoology Branch, Fauna Biodiversity Program, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor.

*Corresponding author's email: nuralwani@frim.gov.my

ABSTRACT

Thirty-seven ecological corridors have been identified in the Central Forest Spine (CFS) Master Plan. Of these, Panti Forest Reserve– Ulu Sedili Forest Reserve (PL3) and Sungai Yu Forest Reserve–Tanum Forest Reserve (PL1) which are located in Johor and Pahang respectively are among the important ecological corridors in Peninsular Malaysia. The main objective of this paper is to provide a preliminary checklist of avifauna at these corridors. Ten mist nets were set up at each forest reserve for five-sampling nights, respectively. Inventories were carried out from March to September 2017. Overall, from Panti and Ulu Sedili Forest Reserves, 203 individuals from 59 species were recorded while Sungai Yu and Tanum Forest Reserves documented 129 individuals from 45 species. Of these, 18 species are categorised as Near Threatened, and one species each under the Vulnerable category in PL3; while in PL1, 12 species under the Near Threatened category were recorded. Weather, fruiting season and vast resources may affect the number of species captured. Based on this information, further action must be taken to conserve these fragmented forest reserves as a habitat for the valuable avifauna species.

Keywords: Avifauna, ecological corridors, Central Forest Spine, Panti - Ulu Sedili FR, Sungai Yu - Tanum FR.

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Presence of moonrat (*Echinosorex gymnura*) at selected forest reserves in Central Forest Spine (CFS) landscape of Peninsular Malaysia

N M F Faradiana[1,*], M A Shahfiz[1], A R Nor Hazwani[1], M Kaviarasu[1, 2], N Z Alwani[3], T Rusli[3]

[1]Zoology Branch, Fauna Biodiversity Program, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor, Malaysia
[2]Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia (Pagoh Campus), 84600, Muar, Johor Darul Ta'zim, Malaysia
[3]Central Forest Spine Section, Forest Management Division, Forestry Department of Peninsular Malaysia

*Corresponding author: noorfaradiana@frim.gov.my

Abstract. Surveys on moonrat were conducted at 13 sites under 11 fragmented forest reserves of five CFS ecological corridors located in the states of Negeri Sembilan, Johor, Terengganu, Pahang and Kelantan. The surveys were conducted between February 2018 to September 2019. Not much information on moonrat is documented at these forest reserves. Therefore, the study aims to document the presence of moonrat within CFS landscape in Peninsular Malaysia. A total of 100 collapsible cage traps were deployed at each surveyed site. Cumulatively, a total of eight individuals of moonrat were recorded from six forest reserves. Tanum FR and Ulu Jelai FR located in Pahang, harbour highest number of individual of moonrat, respectively with two individuals in each forest reserve. Forest conditions such as canopy closure, vegetation density and food resources may affect the presence of moonrat. Based on the information, further conservation measures can be strategized in order to conserve these fragmented forest reserves of CFS ecological corridor as a habitat for this mammal.

1. Introduction

Moonrat, *Echinosorex gymnura* (Raffles, 1822) is a mammal species under the family Erinaceidae [1, 2]. Moonrat has body weighs of 870-1100 g, head-body lengths of 30-40cm, and tail lengths of 21-29 cm [1, 2].The distribution of moonrat ranging from peninsular Myanmar, Thailand and Malaysia to Sumatra and Borneo [2]. In Peninsular Malaysia, the moonrat typically seems to be in black and colour, with the face covered by white fur and marked by three prominent black patches [2, 3]. Meanwhile, the endemic Borneo subspecies *Echinosorex gymnura alba* generally appears white with only a sparse scattering of black hairs [1]. This terrestrial mammal recorded inhibits lowland primary, secondary rainforest, swamp forest, sometimes mangrove and plantation at an elevation of up to 900m above sea level and prefers to occur in damp areas and near streams [2]. It is primarily active at night, and during the day, it usually rests in hollow rotting tree trunks on the ground, under tree roots or in-ground cavities [2]. The species devours mainly on terrestrial and aquatic invertebrates such as beetles, spiders, earthworms, millipedes and crustaceans [2, 4]. The IUCN Red List of Threatened Species has classified moonrat as Least Concern [5]. However, the population may probably decline due to the loss of intact forests [2].

Notes on roundleaf bats (Hipposideridae) at selected forest reserves of Central Forest Spine (CFS) landscapes in Peninsular Malaysia

A R Nor Hazwani[1,*], M A Shahfiz[1], N M F Faradiana[1], M Kaviarasu[1,2], N Z Alwani[1] and M S Farhan[3]

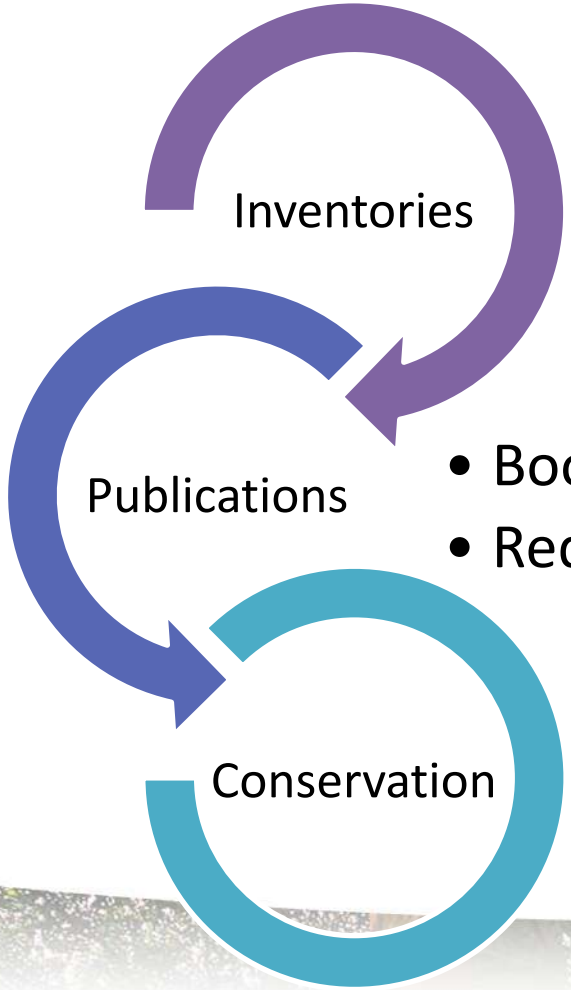
[1]Zoology Branch, Forest Biodiversity Division, Forest Research Institute Malaysia (FRIM), 52109 Kepong, Selangor Darul Ehsan, Malaysia
[2]Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia (Pagoh Campus), 84600, Muar, Johor Darul Ta'zim, Malaysia
[3]Central Forest Spine Section, Forest Management Division, Forestry Department of Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia

*Corresponding author: norhazwani@frim.gov.my

Abstract. Surveys on Roundleaf bats (Hipposideridae) were conducted at 18 forest reserves in nine CFS ecological corridor networks namely Pedu, Bukit Saiong, Kenderong, Bintang Hijau, Sungai Betis, Sungai Brok, Tembat, Tanum, Sungai Yu, Ulu Jelai, Bukit Bujang, Angsi, Berembun, Labis Timur, Mersing, Lenggor Tengah, Panti and Ulu Sedili FRs. This study mainly aims to record the presence of Hipposideridae at the selected forest reserves. The surveys started from February 2018 until August 2020. A total of three harp traps were set up in each forest reserve, except for Ulu Jelai, Tembat and Berembun FRs with six harp traps. Overall, 67 individuals comprising seven species from genus Hipposideros were recorded in this study. *Hipposideros bicolor* was the most widely distributed species recorded in nine forest reserves whereas, *Hipposideros larvatus* is the most abundance species recorded in this study with 25 individuals. Kenderong and Bintang Hijau FRs recorded the highest number of Hipposideridae species in this study, both with four species. The presence of Hipposiderids in this study might be associated with their suitable roosting and foraging areas as well as availability of food sources. Therefore, this information gives an early insight on Hipposideridae distribution and habitat requirement at the forest reserves in CFS ecological corridor landscapes that stakeholders need to consider in establishing the corridors. More sampling efforts need to put in this study, covering more areas in the forest reserves with longer sampling periods and more number of traps used in order to really identify critical corridors for bat conservations.

1. Introduction

There are 21 species of Roundleaf bat (Hipposideridae) in Peninsular Malaysia that consists of three genera namely *Hipposideros* (18 spp.), *Aselliscus* (1 sp.) and *Coelops* (2 spp.) [1-3]. This family varies in size from small (forearm length 34mm and 4g weight) to moderately large species (forearm length over 100mm and 60-70g weight) [4]. Generally, insectivorous bats are essential biological control agent for some of the significant insect pest populations not only in the forest but also in the agriculture habitats [5]. Hipposideridae mainly consumes insects such as moths and beetles [6].



- Data
- Information

- Books/Journals
- Redlist

- Action Plan
- Policies

Ecosystem Approach

"For **biodiversity to survive** in the **landscape** there is an increasing **need for decision-making and policy actions** across multiple geographic scales and multiple ecological dimensions. The very nature of the **issue** requires it: **land use occurs in local places**, with real-world **social and economic benefits**, while potentially causing **ecological degradation** across local, state, national and global scales"

Ecosystem Approach

- "……has been **conceived to meet this challenge** and it is considered **one of the most important principles of sustainable environmental management**."
- "The approach is **based on** the **application** of appropriate **scientific methodologies** focused on levels of **biological organization**, which **encompass** the **essential structure, processes, functions and interactions among organisms** and their **environment**."

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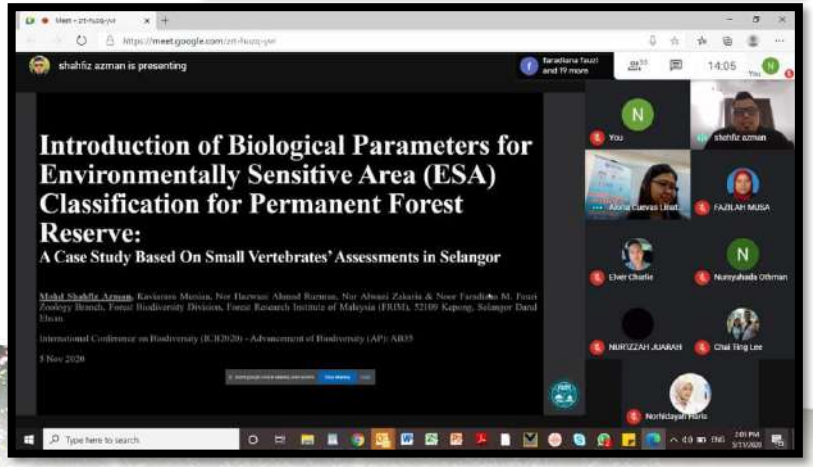
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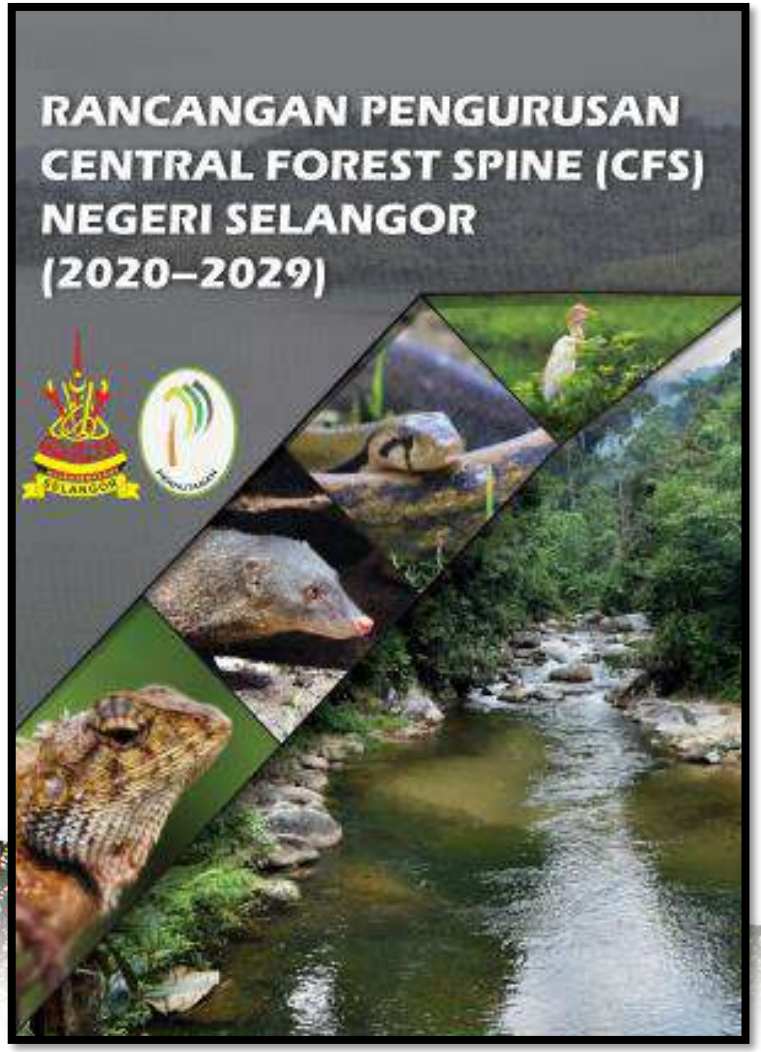
PENGURUSAN CFS NEGERI SELANGOR
DE PALMA HOTEL SHAH ALAM



CFS Selangor Management Plan (2020-2029)

STAKEHOLDER VIRTUAL DISCUSSION

SIS2006 ENVIRONMENTAL AND SUSTAINABILITY POLICY

MALAYSIAN FORESTRY POLICY AND CLIMATE MITIGATION

WITH

MR. MOHD YUSSAINY MD YUSOP
DIRECTOR OF FOREST ECO-PARK & FOREST STATE PARK
FORESTRY DEPARTMENT OF PENINSULAR MALAYSIA
19 MAY 2021 4:00PM

MALAYSIAN WILDLIFE UNDER THREAT: LATEST STORIES

WITH

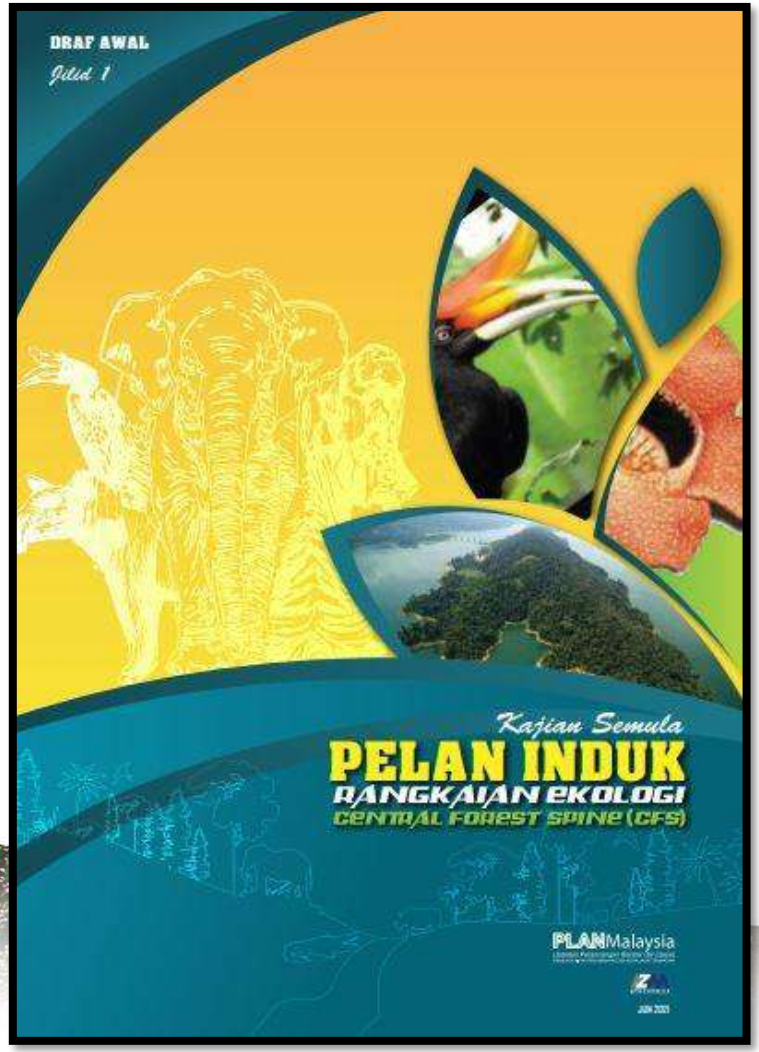
MR. MOHAMMAD SHAHFIZ BIN AZMAN
HEAD OF ZOOLOGICAL BRANCH
BIODIVERSITY FOREST DIVISION
FOREST RESEARCH INSTITUTE MALAYSIA (FRIM)
24 MAY 2021 4:00PM

MARINE CONSERVATION: POLICY AND MANAGEMENT IN MALAYSIA

WITH

MS. LIM AI GAIK
FISHERIES OFFICERS
MARINE PARK MANAGEMENT DIVISION
DEPARTMENT OF FISHERIES MALAYSIA
27 MAY 2021 4:00PM


PELAN INDUK



CFSMP Review

Not only CFS!

ESA

- ESA I, II, III
- GPP KSAS

CFS

- CFSMP
- 37 EC

KBA

- 8 themes
- IUCN guidelines

GP007-A(1)

GP

GARIS PANDUAN PERANCANGAN

Pemuliharaan Dan Pembangunan Kawasan Sensitif Alam Sekitar (KSAS)

ESA	Description
Rank 1	No development, agriculture or logging shall be permitted except for low impact nature tourism, research and education.
Rank 2	No development or agriculture. Sustainable logging and low impact nature tourism may be permitted subject to local constraints.
Rank 3	Controlled development whereby the type and intensity of the development shall be strictly controlled depending on the nature of the constraints.

GP007-A(9) Wildlife Habitat

- **ESA Rank 1** : wildlife reserves and sanctuaries, national and state parks, turtle landing areas, ecological linkages and buffer zones.

Introduction of Biological Parameters for Environmentally Sensitive Area (ESA) Classification for Permanent Forest Reserve: A Case Study Based on Small Vertebrates' Assessments in Selangor

M A Shahfiz[1,2*], K Munian[1,3], N H A Ruzman[1], N A Zakaria[1], N F M Fauzi[1]

[1]Zoology Branch, Forest Biodiversity Division, Forest Research Institute of Malaysia (FRIM), 52109 Kepong, Selangor Darul Ehsan, Malaysia
[2]Faculty of Science and Technology, The National University of Malaysia, 43600 Bangi, Selangor, Malaysia
[3]Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia (Pagoh Campus), 84000, Muar, Johor Darul Ta'zim, Malaysia

*Corresponding author:shahfiz@frim.gov.my

Abstract. Environmentally sensitive areas (ESAs) is vital for seeking the balance between biodiversity conservation and land use planning based on the concept of sustainable development. However, the classification of ESA in Malaysia grounded on physical attributes and the biological elements neglected. Therefore, the aim of the study is to propose a new approach of ESA for permanent forest reserve classification by integrating biological parameters based on small vertebrates with the existing physical attribute of ESA classification. Three forest reserves in northern Selangor selected and four taxa of small vertebrate e.g. small mammals, birds, amphibians and reptiles assessed to develop the biological parameters. Forty potential biological parameters were listed which were thoroughly screened and examined before final ten parameters were finalised. These parameters were composed of four categories including species diversity, trophic composition, origin of species and conservation status. An initial threshold values for each biological parameter were determined. The finding indicates the parameters are promising and the research need to further fine-tuned by conducting verification tests in various landscapes or regions before being integrated with physical attributes to enhance the existing classification of ESA in Malaysia.

1. Introduction

Malaysia has adopted two approaches to conserve biodiversity, namely via species and habitat protection. Numerous initiatives have been proposed and enforced for species protection, especially to the threatened species such as tiger (*Panthera tigris*) and elephant (*Elephas maximus*). Action plans like National Tiger Conservation Action Plan (NTCAP) and National Elephant Conservation Action Plan (NECAP) are documents that focus on conserving and protecting these species before extinct. On the other hand, another approach is via habitat protection. Gazettement, a particular area as a Protected Area based on specific laws and regulations, is one of the main initiatives. However, Environmentally Sensitive Areas (ESAs) is another critical approach that needs to be strengthening and implemented thoroughly.

Biodiversity Data Journal 8: e50304
doi: 10.3897/BDJ.8.e50304

Research Article

Diversity and composition of volant and non-volant small mammals in northern Selangor State Park and adjacent forest of Peninsular Malaysia

Kaviarasu Munian‡, Shahfiz Mohammad Azman‡, Norhazwani Ahmad Ruzman‡, Noor Faradiana M. Fauzi‡, Alwani Nur Zakaria‡

‡ Zoology Branch, Forest Biodiversity Division, Forest Research Institute Malaysia, Kepong, Selangor, Malaysia

Corresponding author: Kaviarasu Munian (kaviarasu@frim.gov.my)

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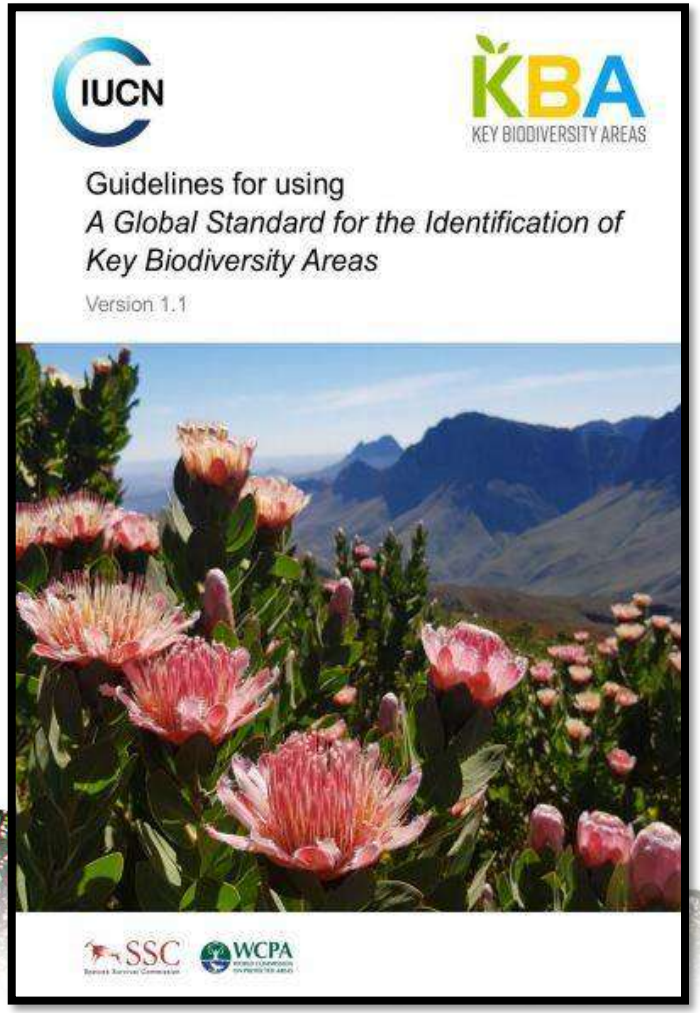
Abstract

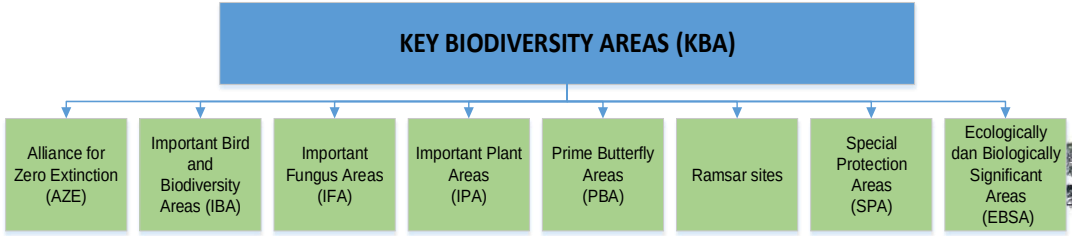
Volant and non-volant small mammals from three forest reserves, located inside and outside Selangor State Park, Malaysia, were trapped and documented. A total of five-line transects, each 200 m long and a total of 100 collapsible cage traps, three harp traps and ten mist nets were deployed at each study site to capture rodents and bats species. The presence of 47 species of volant and non-volant mammals was documented with the highest abundant species being *Leopoldamys sabanus* (n = 61). The Family Vespertilionidae was the most diverse, while Muridae was the most abundant species. Diversity indices have shown forest reserves - Gading Forest Reserve (FR) and Bukit Kutu FR – located in the State Park, have a higher species composition than the impaired adjacent forest reserve, Bukit Tarek FR extension. The taxonomic diversity and taxonomic distinctness of the three forest reserves ranged between 2.433 and 2.610, while the taxonomic distinctness values ranged between 2.638 and 2.748. Even though Gading FR recorded the highest number of species diversity, the Chao 1 diversity estimator and the rarefaction accumulation curve indicated that Bukit Kutu comprised more species. Comparisons between other state parks and national parks in Peninsular Malaysia indicated that Selangor State Park indeed harbours relatively more species of small



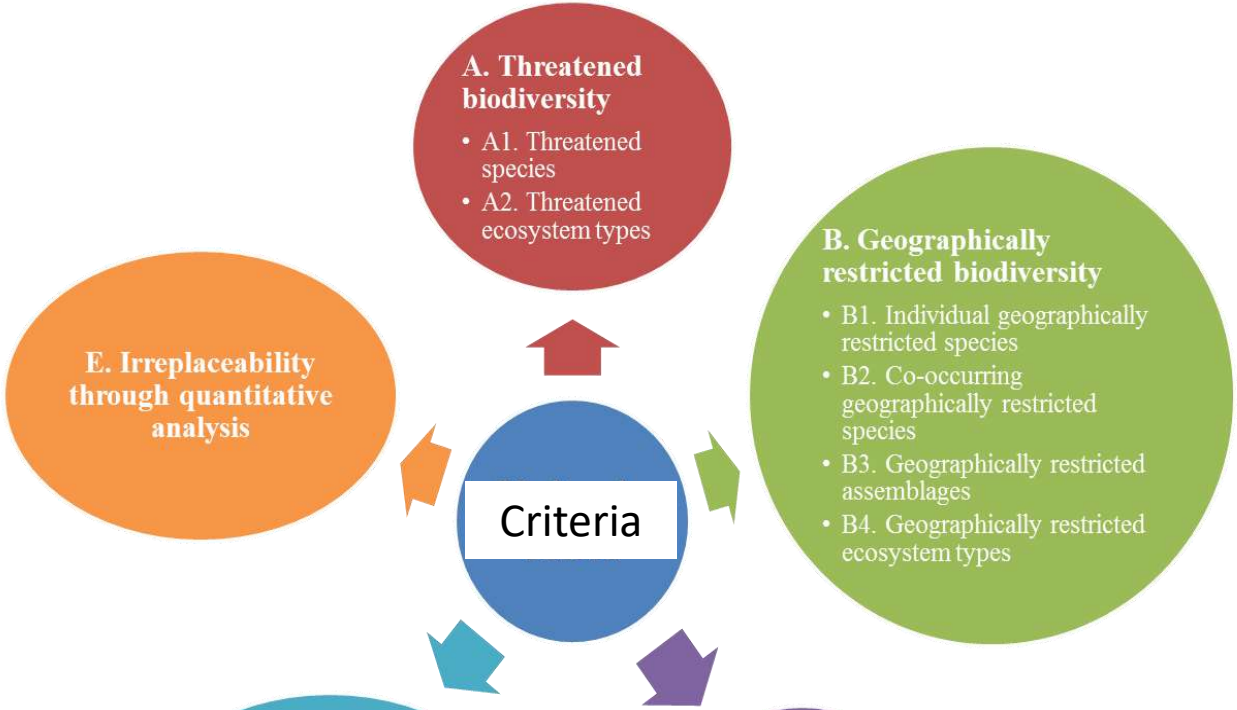
KEY BIODIVERSITY AREAS (KBA)

***Vision Key Biodiversity Areas* (KBA):**

"***Comprehensive network of sites*** *that contribute significantly to the global persistence of* ***biodiversity*** *is appropriately* ***identified***, ***correctly documented***, ***effectively managed***, ***sufficiently resourced*** *and adequately* ***safeguarded***".



55 IBA, 6 AZE dan 7 RAMSAR


A. Threatened biodiversity
• A1. Threatened species
• A2. Threatened ecosystem types
B. Geographically restricted biodiversity
• B1. Individual geographically restricted species
• B2. Co-occurring geographically restricted species
• B3. Geographically restricted assemblages
• B4. Geographically restricted ecosystem types
C. Ecological integrity
D. Biological processes
• D1. Demographic aggregations
• D2. Ecological refugia
• D3. Recruitment sources
E. Irreplaceability through quantitative analysis
Criteria

ACKNOWLEDGEMENT

- Ministry of Energy and Natural Resources (KeTSA)
- Forestry Department of Peninsular Malaysia (FDPM)
- Department of Wildlife and National Park (PERHILITAN)
- State Forestry Departments
- District Forestry Officers
- State PERHILITAN Officers
- Forest Research Institute Malaysia (FRIM)
- Malaysia Biodiversity Information System (MyBIS)

بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ

أَلَمْ تَرَ أَنَّ ٱللَّهَ أَنزَلَ مِنَ ٱلسَّمَآءِ مَآءً فَأَخْرَجْنَا بِهِۦ ثَمَرَٰتٍ مُّخْتَلِفًا أَلْوَٰنُهَا ۚ وَمِنَ
ٱلْجِبَالِ جُدَدٌۢ بِيضٌ وَحُمْرٌ مُّخْتَلِفٌ أَلْوَٰنُهَا وَغَرَابِيبُ سُودٌ ﴿٢٧﴾

SAHIH INTERNATIONAL

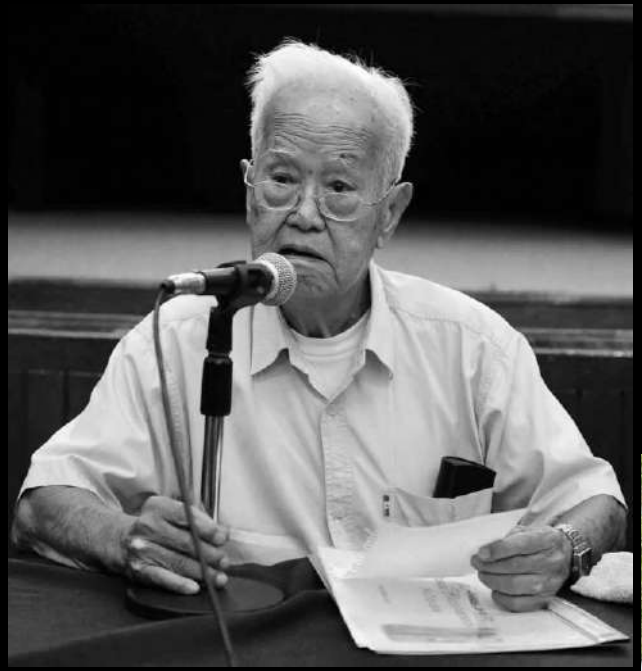
Do you not see that Allah sends down rain from the sky, and We produce thereby fruits of varying colors? And in the mountains are tracts, white and red of varying shades and [some] extremely black.

وَمِنَ ٱلنَّاسِ وَٱلدَّوَآبِّ وَٱلْأَنْعَٰمِ مُخْتَلِفٌ أَلْوَٰنُهُۥ كَذَٰلِكَ ۗ إِنَّمَا يَخْشَى ٱللَّهَ
مِنْ عِبَادِهِ ٱلْعُلَمَٰٓؤُا۟ ۗ إِنَّ ٱللَّهَ عَزِيزٌ غَفُورٌ ﴿٢٨﴾

SAHIH INTERNATIONAL

And among people and moving creatures and grazing livestock are various colors similarly. Only those fear Allah, from among His servants, who have knowledge. Indeed, Allah is Exalted in Might and Forgiving.

Surah Al-Fatir Verse: 27-28



Thank you!