

# CONSERVATION IN MALAYSIA

## SPECIES CONSERVATION PRIORITIES IN THE TROPICAL RAIN FORESTS OF PENINSULAR MALAYSIA

Peninsular Malaysia has one of the oldest rainforests in the world and it still houses one of the world's richest and unique animal and plant treasures. There are some 200 species of mammals, 600 species of birds, 130 species of snakes, 3,000 species of trees, 8,000 species of flowering plants, scores of amphibians and reptiles and thousands of insects and invertebrate species.

Conservation in Peninsular Malaysia has evolved over periods of plenty to periods of scarcity of natural resources. During periods of plenty laws were lax resulting in wasteful utilization of wildlife. Up to the time of the first salaried game warden in 1927, wildlife laws were enforced by volunteers or officers of the land office who were involved mainly in the issue of game licences.

The incredibly low value put on the lives of animals contributed to the tragic extinction of the Javan rhinoceros in 1932 and the precarious situation of the Sumatran rhinoceros which is listed as endangered species together with the tiger and the seladang. Strong and effective legislation that was long felt necessary was slow in coming into force thus causing more wildlife mortalities. Presently, although laws appear satisfactory to curb losses from poaching and trade in wildlife, the effects of habitat loss has proved to be a very serious cause of mortality. Approach to the problems have changed from a mere emphasis on law enforcement to a combination of research and management, extension programmes, national parks and wildlife reserves. The emphasis is more on intensive rather than extensive practice.

As a developing country the need to expand and strengthen its economy has resulted in the clearance of vast stretches of virgin forest. In the last two decades Malaysia's forest have rapidly diminished and been replaced by agriculture and settlement schemes. About 49% of the total land area in Peninsular Malaysia still remains under forest.

### Effects Of Logging And Forest Clearance On Wildlife

Steven (1968) spent two years in Peninsular Malaysia and completed a report on wildlife conservation. He accumulated data on the occurrence of mammals at different elevations and concluded that 52% of all mammals are found below 330 meters, 81% are restricted to altitudes of less than 660 meters and only 10% occur at higher elevations. Only 9% can exist at any altitude.

53% of all mammals are confined to primary forest; 25% live in primary or tall secondary forest; 12% live in primary or secondary forest or can subsist in cultivated areas and 10% live in cultivated or urban areas.

Burgess (1971) described the effects of logging on Hill Dipterocarp forests in a study of an area of approximately 100 acres of average lower hill forest in the state of Trengganu. It was found that only 35% of the stand in the area disturbed by logging activity remained undamaged. Of the remainder 10% were felled for timber and 55% were destroyed in extraction operation.

The effects of forest clearance on Malaysian mammals were studied by Harrison (1969) who found that the number of species decreased markedly from primary forest to secondary forest to scrub and grassland. The decrease in native mammals was of the order of 30 to 10 to 4 species respectively. Southwick and Cadigan, Jr. 1972 reported on the abundance of non-human primates in primary and secondary forests of Peninsular Malaysia. An assessment was made of group densities (animal/km<sup>2</sup>) of each species except the dark-handed gibbon. The total area of forest still remaining in 1958 was 84% or 42,590 sq miles.

Based on the same densities provided by Southwick and Cadigan, Jr., Khan (1978) estimated the population of the various species and indicated the losses in population between 1958 and 1975. These estimates are based on 51% of the total land area still under forests in 1975.

### Primates

Recent studies by Marsh and Wilson (1981) indicates the distribution of primates in Peninsular Malaysia is similar to the studies carried out earlier. Leaf-monkeys, Macaques and gibbons are still widely distributed all over Peninsular Malaysia. Only the slow loris (*Nycticebus coucang*) is rare.

### Birds

McClure, (1969) made estimates of minimum bird

populations from study areas of urban gardens, coconut plantation and mangrove, secondary lowland forest, extraction track in logged forest and virgin jungle reserve in Selangor.

The rich species diversity of the forest bird fauna of Peninsular Malaysia was surveyed by Wells (1971) in Pasoh, Negeri Sembilan, Kuala Lompat, Pahang and Kuala Sat and Sg. Sepia of Taman Negara.

The total number of known lowland forest birds is 241 species. Observations at Kuala Lompat, Pahang over an area of 480 acres indicated the density of hornbills and an estimate of area needed to support 5000 individuals (Medway and Wells, 1971).

### Population And Distribution

The population and distribution of wildlife are better known for the more important species. The constraints to limit emphasis on these species are due to a number of factors such as finance, manpower, economic importance and also the seriousness of animal-man conflict. Given priorities are the Sumatran Rhinoceros, tiger, seladang, elephant, deer, river terrapins, leathery turtles and pheasants.

### Sumatran Rhino

An increase of 30 animals is most encouraging but only two areas, namely Endau Rompin and Taman Negara, have large contiguous populations.

It is noted that the Rhinos in Endau Rompin are reproducing, though at a slow rate of one animal in 2 years. The viability of the population has produced at least 3 young during the period 1975-1981. In other areas the rhino population is isolated and therefore threatened with extinction unless translocated to safer areas.

		Seladang	
		1977	1980
Areas	Numbers		
1. National Parks and Reserve	150	150	
2. Ulu Trengganu	25	29	
3. Sungai Nenggiri	40	53	
4. Ulu Lepar	56	96	
5. Maran	-	5	
6. Lepar Hilir	-	10	
7. Endau Rompin	25	25	
8. Ulu Serting	10-12	10-12	
9. Grik Wildlife Reserve	40	40	
10. Belum Wildlife Reserve	60	60	
	<u>408</u>	<u>480</u>	

### Malayan Tiger

Locke (1954) estimated the Malayan Tiger population at about 3,500, but it has now dwindled to about 250 based on work carried out by the wildlife Department over the last 4 years.

The tiger which once inhabited the whole of Peninsular Malaysia is now mainly found in the existing primary and secondary forest of Perak, Kelantan, Trengganu and Pahang.

### Seladang

While it is difficult to manage the Sumatran Rhinoceros and the tiger, the Seladang (gaur or wild cattle) appears more hopeful. All it needs are pastures, water, minerals and cover.

In the last survey by the Wildlife Department in 1980 there was evidence of an increase in population.

A detailed study in Ulu Lepar showed that the Seladang preferred riverine type habitat with 70% of the animals found between 0 to 250 feet above sea level.

### Elephant

Like the tiger, the elephant, which once roamed freely throughout Peninsular Malaysia; is now restricted to the existing forest in the states of Kelantan, Trengganu, Pahang, Perak, Johore and a few in Negeri Sembilan and Kedah. There are now about 700 elephants distributed in these states including Taman Negara.

States	Numbers
Kelantan	134
Trengganu	54
Johore	77
Pahang	175
Perak	126
Negeri Sembilan	5
Taman Negara	100
	<u>671</u>

### Problems of Wildlife Management

Wildlife Management in a strict sense is relatively recent in Peninsular Malaysia. Formerly Game Departments (better known as licensing agencies for hunting and trade in wildlife) were given low priority. Indiscriminate shooting and killing of wildlife and the incidence of licences taking more game than their bag limits were high. Species which have become endangered or extinct is evidence of the absence of sustained efforts in conservation.

Corruption is a serious problem that must be corrected by the creation of good income and attractive future prospects in the wildlife service. Close supervision with a view to prompt removal and action taken against corrupt officers is necessary.

Violations, no matter how small, including technical offences should be acted upon. To speed up action minor offences may be settled out of court by offering compositions. Serious offences should all go to court and dealt with accordingly.

Smuggling is serious because of the demand and the high commercial value of many species of wildlife. To curb smuggling Malaysia acceded to CITES.

Apart from legislation directly relevant to the protection of wildlife and national parks there are numerous others that are not effectively enforced. In Peninsular Malaysia river terrapins are governed by the river right laws of each state. These laws are hardly enforced, which explains why the river terrapin, *Batagur baska*, is endangered. The river right laws provided well for the conservation of species included in the schedules. In prewar days when these laws were strictly enforced terrapins were abundant. After the war projects had to be developed to prevent extinction of the species.

Support for conservation is of top priority. Programmes of varying degrees already exist on radio and television networks but films on conservation are mainly of foreign countries. A more direct approach is necessary to illustrate local problems and what is being done in the field of conservation.

A special effort to gain the support of decision makers and politicians undoubtedly is topmost in priority if pressing problems in wildlife management are to be solved quickly. Admittedly there is an awareness among this group of people as a whole. This approach is unfortunately slow and good only on a long term basis.

The support of the judiciary is indispensable as it would be meaningless to impose fines which do not constitute a deterrent. An effective system with adequate law enforcement officers equipped to perform their duties with confidence is essential.

The large number of firearms in the hands of people interested in hunting present a serious problem in the conservation of wildlife. In Peninsular Malaysia wildlife species may be killed in defence of crops, life or property. Illegal possession of firearms carries the death penalty but far too many persons have licenced firearms.

Political stability far outweigh the importance of national parks and wildlife reserves. In the face of rapid population increase there is no alternative but

to exploit renewable and non-renewable natural resources. The time constraint to develop and raise the standard of living of the people contribute to existing problems. Whatever the pros and cons conservationists have to work in the light of these realities which are the challenges ahead.

Of significance in the region is the inclusion of conservation in the Asean programme for the environment. The people involved are high ranking government officials and ministers from relevant ministries of governments. It is an ideal machinery for conservation where decisions are made by people attending meetings or through them at higher levels.

Under conservation the importance of national parks, trade in wildlife, legislation, training, information exchange and wildlife management research are given prominence. Representatives from the department of wildlife and national parks of each country participate in these meetings, workshops and field trips. Assistance and advice of international organizations like UNEP and IUCN are sought when needed. Lack of management research results in inaccurate administrative decisions as they are based on incomplete data analysis. This has had a serious effect on wildlife. Wrong seasons for hunting have caused heavy mortalities of gravid animals and their young. It is important to step up management research as most, if not all, conservation action must be based on a thorough knowledge of the biology of animals and their role in the ecosystems.

Mining presently occupies about one percent of the total land area in Peninsular Malaysia. There is no landscaping programme because of the high cost for the whole country. Existing legislation if strictly enforced will prevent further silting of rivers and ensure relandscaping of mined areas.

Shifting cultivation presents a serious problem in wildlife management. While it is beneficial to some species of wildlife, it is detrimental to most because of habitat loss. Shifting cultivation of necessity is quite extensive in the region. In practice the first few crops will provide good harvests but decline as fertility decreases thus necessitating shifts. It will be several years before the first abandoned cultivated area becomes naturally fertile again which explains why extensive areas are needed for shifting cultivation. While waiting for the crops to be harvested wildlife is substituted as food together with vegetative materials.

### Pressing Species Management

The elephant problem was tolerable before palm oil become a major industry. The loss of habitat and

elephant preference for oil palm resulted in the most serious problem ever to be faced. A lot of efforts are put in what may be the most practical approach to the problem.

More research is required to produce economically the most effective means of elephant control. A trapping scheme solved the Jengka crop depredation problem which at the time was most seriously damaged by elephants. The scheme is applied to places where there is no available forest for elephants. Electric fences which are being widely used by planters have proved to be effective against elephants.

For conservation of elephants it is important to highlight other causes of losses. Losses from pollution to rivers caused by the palm oil industry is considerable. It will be interesting to know the number of families affected by polluted rivers unfit for fish life. There are also losses from pests such as rats, insects and diseases. With better foresight in planning, the elephant problem can be reduced or even avoided altogether.

The existence of two Sumatran rhinoceroses in Endau-Rompin was verified by the Game Department and their studies revealed the existence of an estimated 20–25 animals. Other studies were carried out in Sg. Dusun and Taman Negara.

Serious studies of the Malayan seladang were started in the mid-sixties. Recommendations were implemented. Further studies on distribution, numbers and movements of the species were carried out in the latter part of the seventies. Guidelines that were made now provide the basis for management of seladang in Peninsular Malaysia. Like the rhino, the tiger is difficult to study. More studies are required to formulate a management plan.

The primate trade is strictly regulated. An annual quota of 5,000 animals was set since June 1979. A total of 4135 and 4809 were approved for export in 1980 and 1981 respectively. So far this year a total of 2572 macaques have been approved for export. It is likely that no more than 3000 macaques will be exported in 1982.

## Projects

A number of conservation projects are being developed to further enhance the survival of wildlife.

Three river terrapin hatcheries were started in the states of Kedah, Perak and Trengganu at a cost of one million dollars. This is being done to overcome the declining numbers of river terrapins in rivers of the states due to poaching of adults and the excessive collection of their eggs. More than 20,000 one year old terrapins have been released since 1967. Two deer

farms are being developed at a cost of one million dollars in the Sungkai Game Reserve, Perak and the Krau Game Reserve, Pahang.

These animals are reared in a semi-wild state in an effort to produce a good breeding stock. From a few animals locally obtained the breeding stock has now increased to about one hundred animals.

An attempt to breed lowland pheasants is being made at the Sungkai Game Reserve. This is being done because of the loss of lowland forests which affects the species. The seladang management unit has been actively involved in creating suitable pastures at Taman Negara and the Krau Wildlife Reserve. A start has been made to capture seladangs with the aim of raising them in captivity.

From what has been mentioned something is being done to conserve wildlife. More efforts are needed to cover the whole spectrum of wildlife. The species being covered are important by virtue of their status either as endangered species, economically important species or serious pests. To cover the whole spectrum a wildlife plan is being prepared.

## Wildlife Plan

A Wild life Plan should include all species, their habitat and their uses. To be able to serve its purposes the plan has to be thorough and comprehensive. Wildlife is ignorant of the boundaries created by man. Man's activities at all levels must be included in the plan. The plan will be dependent on government policies. With a wildlife plan appropriate action can be taken promptly in respect of any situation.

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Table 6

Estimated number of Jumatan Rhuu.

<u>South</u>	1979	1982	Total 1982
Endau-Rempin	8-15	20-25	
Sg. Belumat	-	2-3	
Mersing Coast	-	2-3	24-31

North Central

Taman Negara	4-6	8-13	
Ulu Lepar	2-4	3-5	
Sg. Depok	2-4	3-5	
Kuala Belah	2-4	3-5	
Kram Retrus	-	0-2	
Buk. Sebit	-	1-2	18-32

West Coast

Sg. Dusun	2-4	4-6	4-6
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North West

Ulu Kelama	-	3-5	
Ulu Beluan	2-4	3-5	
Kedah Border	-	0-1	6-11

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TOTAL	22-41		52-80
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