

# Conservation in Sabah, Malaysia

by

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## A. General Data:

1. Area: 29,388 square miles
2. Population: 454,421 (1960 Census)
3. Economy: mainly dependent on export of timber and agricultural products.

## B. Government departments and official organizations concerned with conservation:

1. Forest Department (P. O. Box 311, Sandakan, Sabah) – Management and control of forest exploitation, and conservation of wild life.
2. Sabah National Park Board of Trustees: (c/o Conservator of Forests, P. O. Box 311, Sandakan, Sabah) – control and management of National Parks.

## C. Organizations concerned with research into conservation:

1. Research Branch of the Forest Department, Sabah.
2. Sabah Museum.
3. Research Branch of the Agriculture Department.
4. Sabah Society, P. O. Box 547, Jesselton.

## D. Private conservation organizations:

None.

## E. National Parks:

1. Sabah National Park Board of Trustees established by National Park Ordinance, No. 5 of 1962, for the purposes of controlling and managing the national parks. The Board of Trustees shall –
  - (a) be a body corporate to be known by the name of 'The Sabah National Parks Trustees', with perpetual succession and a common seal;
  - (b) in its corporate name, be capable of suing and being sued;
  - (c) be capable of holding, purchasing or otherwise acquiring for the purposes of a national park any movable property, and of alienating such property;
  - (d) be capable, with the approval of the State Secretary, of holding, purchasing or otherwise acquiring for the purposes of a national park any immovable property and, with such approval, of alienating any such property; and
  - (e) exercise the powers and perform the duties conferred upon it by this Ordinance.
  - (f) The duty and function of the Board is to control, manage and maintain national parks and, where they consider it desirable so to do, to purchase any property for such purposes. The main objective is to preserve vegetation and wild life of places of interest.
2. List of National Parks:

The one park, so far, is Kinabalu National Park comprised of 275 square miles, constituted on May 16, 1963, lies about 35 miles east of Jesselton the capital of Sabah, Malaysia, and surrounds Mount Kinabalu (13,455 ft.) which is the highest mountain in South East Asia. It forms part of the Crocker Range, a belt of mountainous country bordering the South China Sea.

3. Information leaflets about the Kinabalu National Park are available; effectiveness is not yet assessed.
  4. No training of park persons at present. Enquiries have been made of the possibility of training park personnel in the African College of Wild Life Management. Enquiries were also made from the University of London Conservation Course. The latter requires high academic qualifications which the present personnel do not possess. The former proved to be mainly for game management with nothing or little of the management of national parks. Australia, New Zealand and U.S.A. are other possibilities.
  5. Facilities are provided for visitors by prior arrangement with the Park Warden. At Park Headquarters there is at present accommodation for 20 persons; en route to the summit of the mountain there are four climbers' huts spaced at approximately 2½-3 hours walking distance apart. See Annex 1.
  6. The park is managed with multiple emphasis – preservation of scenic value, vegetation and wild life, and tourism. It is managed by a Board of Trustees and Park personnel.
  7. Consistent with the objects of management, the park is generally kept as true wilderness.
  8. Exploitation or commercial activity is prohibited.
  9. The protection of park areas is effective. There are a very few old settlements established within the park area prior to reservation; it is proposed to excise these areas where possible or to resettle the inhabitants elsewhere. There are no illegal settlements within the Park; some poaching is believed to take place around the perimeter while visitors do sometimes remove vegetation, especially orchids.
  10. Exotic plants and animals are not being introduced. But, with the specific permission of the Park Warden ornamental plants, shrubs and trees may be introduced around staff quarters and buildings situated on the perimeter of the park.
  11. The major problems facing the national park are training of personnel (see 4 above) and lack of funds. National park funds come from annual Government grants, voluntary contributions and gifts or bequests of money. Funding of this nature is uncertain.
  12. Other Comments: None.
- F. Other areas immediately proposed as National Parks:
1. Pulau Gaya – presently a forest reserve (Domestic reserve). An island comprising 3,150 acres, and located opposite Jesselton is proposed as a national park because of its scenic value, beautiful beaches, wealth of marine life and coral reefs lying in crystal clear water.
  2. Bukit Padang (old reservoir area), Jesselton. About 150 acres – protection of *Nepenthes*; recreational area.
  3. Leila Forest Reserve, Sandakan. About 730 acres. Protection of flora and recreational area.
- G. Forest Conservation: (as of end of 1964).
1. 23,350 sq. miles out of 29,388 square miles = 80 per cent is under forest.
  2. Forest Reserves constitute 9,885 square miles – 33·6 per cent notified and proposed 11,560 = 39·3 per cent.
  3. Objectives of Forest Reserves
 

Class I	-	Protection Reserves, maintenance of forests essential on climatic or physical grounds =	976·85 square miles
" II	-	Commercial forests for supply of timber and other produce to meet the general demands of trade =	8,402·94 square miles
			carried forward 9,379·79 square miles

brought forward 9, 379.79 square miles

Class III - Domestic forests, for the supply of timber and other produce for local consumption =	74.65 square miles
" IV - Amenity forests for local amenity or arboretum work =	119.81 square miles
" V - Mangrove forests	<u>320.16 square miles</u>
	9, 884.56 square miles

4. Forestry training:

- (a) A 3 months introductory course on general and elementary forestry practice at Sandakan Forest School. New recruits after serving 3-6 months, are trained in this school.
- (b) A 9 months course at the Kepong Forest School, Malaya, to train and qualify foresters for promotion to forest ranger.
- (c) Overseas training at Rangers' School Coimbatore, South India, for staff in the intermediate cadres whose educational qualifications are inadequate to admit them for entry to an Australian or English University.
- (d) Overseas training under the Colombo Plan leading to a B.Sc. degree in Australia for officers in the intermediate cadres who have higher qualifications such as Overseas School Certificate or a Philippine B.Sc. (Forestry) degree.

5. Excepting 'shifting cultivation' practiced by natives on the West Coast, Interior and along the Kinabatangan, and illegal logging on a small scale on areas near rivers; illegal clearing and illegal logging are not problems. Shifting cultivation occurs mainly in secondary forest but a small amount of virgin forest is destroyed each year. Government settlement schemes are now helping to solve this problem. Illegal logging is encouraged by the high price paid for export logs. It increases when prices are high and diminishes when prices are low. Illegal logging is confined to State land and when rampant it is difficult to control because of lack of staff. Most of the field staff are engaged in looking after logging and silvicultural operations in the Permanent Forest Estate (Forest Reserves).

6. Logging is carried out entirely by private firms.

7. Research is carried out with a Forest Botanist, Ecologist, Plantations Officer and a Wood Technology Section. They are reasonably well funded but inadequately staffed.

8. Reforestation:

- (a) Where the indigenous forest is logged within forest reserves the forest is regenerated using natural seedlings. The treatment is undertaken by the Forest Department using the tropical uniform system, that is by poisoning the relics left after logging and all the non-commercial and defective commercial trees over 6 inch diameter so as to allow the uninhibited growth of existing commercial seedlings and saplings.
- (b) Reforestation proper is mainly limited to trials and small scale plantations of exotics on degraded grasslands on the East Coast of Sabah.
- (c) Selective poisoning: see (a) above.
- (d) We aim to regenerate all the logged over areas within the Permanent Estate as and when they are logged, but in some years we have not quite kept up with logging due to lack of labor. In 1963, 33, 000 acres were treated and in 1964 the area treated amounted to 21, 500 acres. Reforestation (plantations) at present amounts to twenty or thirty acres per annum but will increase in the next five years to about 300 acres per annum.
- (e) Indigenous species in the indigenous forests: mainly exotics (pines and Araucaria) in the reforestation areas.
- (f) The indigenous forests are free from damage; the trial plantations are subject to occasional small fires.

9. Forest fires are no problem at present.

H. Soil and water Conservation:

1. Soil and water conservation is not a serious problem at present. There is close liaison between the Agriculture, Lands & Surveys and Forest Departments. Areas too steep for agriculture and cultivation are constituted Forest Reserves and wholly protected. Water Catchment Areas are also put under Forest Reserve.
2. Forest, Agriculture and Lands & Surveys Departments are concerned with such problems. Proposals for Forest Reservation are agreed on by these Government Departments.
3. Forest Reservation is legally covered by the Forests Ordinance, 1954. Forest Reservation provisions are adequate and strict enough.
4. Existing Projects:

Paragraph G. 3 refers. Class I Reserves are mainly reserves to conserve soil and water.

I. Conservation of Wild Life:

1. Game Branch of the Forest Department is the responsible authority.
2. The Fauna Conservation Ordinance (No. 11 of 1963) is adequate.
3. There is at present inadequate enforcement of the law due to lack of staff. Recruitment is slow due to lack of suitable candidates.
4. Practical training only for wildlife personnel; there is no academic training as yet.
5. Crop raiding elephants are a serious problem especially with the recent expansion in agricultural development near Sandakan, Lahad Datu and Mostyn. Attempts to scare them away with firecrackers are not very successful and often the leader has to be shot. The Staff is at present inadequate to deal with this problem.
6. Game Reserves:
  - (a) Kota Belud Sanctuary: Approximately 50 square miles in extent. Covers marshland, paddy fields, coconut plantations, village and hills between the Tempasok and Pandasan rivers near Kota Belud. To protect migratory birds during the season.
  - (b) Mantanani Sanctuary: Comprising Mantanani Besar and Lungisan Islands. Two small islands in Kota Belud District. To protect Frigate birds, Megapodes and Pied Imperial Pigeons.
  - (c) Labuan Sanctuary: Comprises area round the Labuan War Cemetery, Hospital and old Government House. To attract and protect birds round this area. Records scanty.
  - (d) Sipidan Sanctuary: Sipidan Island, Semporna District. Covers an area of 7.68 acres. Turtle eggs are collected on this island by natives. It was constituted a Sanctuary in 1932. (original records lost during World War II). It is the haunt and breeding place of four species of pigeon.
  - (e) Bohaydulang Sanctuary: In Semporna District, and covers an area of 76.80 acres. Constituted a Sanctuary in 1937. There is now a cultured pearl industry and a police post on the island. To protect the Megapode.

7. (a) (b) and (c) No wildlife research projects as such as yet; it is hoped to carry out research on the ecology, breeding and feeding habits of rhinoceros, dugong, orang-utan, hawksbill and green turtle, but the Game Branch of the Forest Department is an executive body and is not equipped to undertake research at present.

J. Threatened Species.

1. (a) Wild Animals:

Rhinoceros – Killing the animals for their alleged therapeutic properties.

Orang-utan – Hunting and capture of young animals for export to collectors for Zoos.

Dugong – Killed for food.

- (b) Plants:

Palms: *Orania* near Kudat, shifting cultivation and land alienation.

*Corypha* near Kudat and Bandau being killed by Agricultural Department because it is considered as a host for insect pests in coconut. Some lowland Dipterocarps, such as *Shorea gratissima* which only occurs at sea level. Land alienation taking up their habitats. On Kinabalu some rare endemics suffer from souvenir hunting tourists e.g. *Potentilla leuconota*.

2. Rhinoceros probably extinct very soon. Expert investigation of the status of this species is urgently required. Orang-utan – Local opinion is that there are many more orang-utan than outside authorities believe. More stricter patrols, propaganda and rehabilitation of confiscated animals may save this species.

3. Measures to prevent extermination:

More lowland research and virgin jungle reserves are needed as well as sanctuaries for the threatened species. It is feared that the rhinoceros population has been reduced to such a level that the species can no longer maintain itself.

K. Pesticides:

1. Pesticides against insects are not used in forestry and are only used on a very small scale in agriculture in Sabah. Arborescences are extensively used for eliminating weeds in agricultural estates and also in poisoning the unwanted commercial trees in forest operations. The effect of using sodium arsenite on the flora in lowland dipterocarp forest has not been evaluated; but since undergrowth below 6 inches diameter is in the main not poisoned this threat is not considered to be very serious. No wildlife has been reported killed by sodium arsenite in the forest.
2. The Subsidiary Legislation to Poison (Agricultural and Industrial) Ordinance, Cap 99 – The Poisons (Sodium Arsenite Regulations) 1953 provides regulation for the importation, sale, storage and use of sodium arsenite.
3. Effects on wildlife:  
See (1) above.
4. No research regarding pesticides is being carried out as yet.

L. Public education on conservation:

No problem at present, apart from some pamphlets on the flora and fauna of Kinabalu National Park. Some useful work in publicizing conservation problems is done by the Sabah Society which produces a quarterly journal.

M. Training of Conservation Personnel:

1. There are facilities for training in forest management but none in any other aspects of wild life conservation.
2. No opportunity for advanced training.
3. and 4. See N below.

## N. Urgent Problems:

The most urgent problem is to obtain and train sufficient staff to deal with the present day to day conservation duties of the Game and Forest Department. Thereafter to undertake research into the status of threatened species and to disseminate among the public a real appreciation of the principal needs and vital importance of the proper conservation of Sabah's wild life and natural resources.

International assistance is needed to supply the necessary training facilities and to loan an experienced zoologist to initiate research projects.

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## ANNEX I

### Details of Accommodations at Mt. Kinabalu

1. Park Headquarters, Simpang Kinabalu, Semi-permanent structure situated near the Kambarangan Road junction at the 35th M.S. Ranau Road. Communal dining room/lounge, kitchen, bathrooms and pit latrines. Two dormitory type rooms each with 5 double tiered beds (10 persons); water supply, tables, stools, oil lamps, oil cooking stoves; a limited number of sleeping bags, blankets and sheets for hire. Caretaker i/c.
2. Climber's Huts (En route to summit; all prefab. Aluminium with plank floors and glass louvre windows)
  - (a) Layang<sup>2</sup> (elevation approx. 8,700 feet)

Double Hut; each half comprising sleeping accommodation  $12\frac{1}{2}$  by 10 feet with subsidiary kitchen room  $7\frac{1}{2}$  by 5 feet and supplied with mirror, oil lamps, tier-bunk beds (8), table and stools, oil cooking stove (2 burners), cooking pots, fry pan, basins, buckets, some cutlery, crockery, mugs, dustbin etc.
  - (b) Panar Labah - Huts Nos. 1 and 2 - (Elevation approx. 11,000 feet).

Each comprising sleeping accommodation 15 by 10 feet with subsidiary kitchen room 10 by 5 feet. Similar to the Layang<sup>2</sup> Hut.
  - (c) Sayat<sup>2</sup> (Elevation approx. 12,500 feet).

Comprising sleeping accommodation 10 by 10 feet with subsidiary kitchen room 5 by 5 feet furnished in a similar manner to the Layang<sup>2</sup> Hut but with only 4 tier-bunk beds.
3. An unfurnished prefab 'Altent' structure with plank floor together with other temporary buildings at ex-Royal Society Base Camp, at Mesilau. (Opposite to Kundasang about 2 miles walk in).

Sleeping bags with detachable inner cotton sheet linings and blankets may be hired from Park H. Q. Flysheets and camp beds are also usually available for hire. There is a small charge for the use of the huts. All applications for accommodation should be addressed to the Park Warden, c/o Forest Office, Jesselton (Phone 2234).