

X. CONSERVATION

(edited by H.P. Nooteboom; continued from page 45)

The IUCN/WWF Plants Conservation Programme 1984 — 1985. World Wildlife Fund chose plants to be the subject of their fund-raising campaign in the period 1984 — 1985. The objectives were to:

1. Use information techniques to achieve the conservation objectives of the Plants Programme - to save plants;
2. Increase public awareness of the importance of plants and plant communities to human welfare;
3. Broaden public perception of WWF as the International Conservation Organization primarily concerned with important environmental issues;
4. Tap new fund-raising and membership sources;
5. Explain the threat to specific plants and plant communities and what WWF and IUCN are doing about it, thereby setting the stage for the intensive fund-raising activities that will follow.

As tropical rain forests are the most endangered plant communities we hope that WWF/IUCN will have great success in this campaign.

State Conservation Strategies in Malaysia. Following the publication of the World Conservation Strategy specific National Conservation Strategies are being developed in Malaysia. As economic development is far exceeding environmental safe-guards there the need for these is obvious. Malaysia has approached the concept of a National Conservation Strategy in an unique way by aiming to develop strategies for each of its 13 states first. Four have now been completed and some of the recommendations are already being implemented. With the assistance of the State Governments WWF-Malaysia has produced plans for Kedah, Melaku, Negeri Sembilan and Trengganu. These have been prepared by a field team that used data collected from state records, officials and through its own inspections. Each strategy cuts across departmental concerns to provide guidance on managing a state's renewable resources in a coordinated way. For instance, all stress the linkage between forest management and water supplies. The importance of lowland forest for its biological potentials has been stressed and conservation of several Forest Reserves has been counselled. The eventual goal is to complete such strategies for each Malaysian state and then to forge a National Strategy. But before further proposals will be undertaken WWF-Malaysia needs assurance that

existing ones are leading to action. Which is obviously the crucial point in all Conservation Strategies in the world.

Forest dynamics. Research into forest dynamics with plots established at Sg. Menyala (in 1947) and Bt. Lagong (in 1949) was continued by Messrs. K.M. KOCHUMMEN and N. MANOKARAN (KEP). They have re-enumerated the plots and are analyzing data on various aspects, in particular population and floristic changes, growth rates, regeneration and forest gap dynamics.

Unlawful felling threatens forest and National Parks. Unlawful felling of the forest is threatening protected forests and National Parks in Aceh and West Sumatra. The governor of Aceh has recently said that illegal felling in the eastern part of his province are endangering 23,000 ha of forest with denudation and the Head of the West Sumatra Forest Service has stated that indiscriminate and unlicensed felling of the forest is looming over a conservation forest and the G. Kerinci National Park. In the latter place the unarmed forestry police could not stand up to the illegal fellers who are armed with sharp weapons and who, moreover, received protection from some members of units of the Armed Forces, the regular Police and the Subdistrict administration. (The Jakarta Post, 29 August 1984).

Bukit Kayu Embun and Bukit Kayu Gedang Seblat. A preliminary report on the Bt. Kayu Embun (106,000 ha) and Bt. Gedang Seblat (48,750 ha) Game Reserves, Bengkulu, Sumatra by C. SANTIAPILLAI and H. SUPRAHMAN (WWF/IUCN Project 3133 no. 7, December 1984, 23 pp.). This report is an attempt to assess the man/wildlife conflicts in the area and to suggest some measures to mitigate these for the future. Some arguments for raising the status of these game reserves which represent the Southeastern extension of the nearly 1,500,000 ha Kerinci-Seblat National Park to that of National Park are also considered. The area together with the G. Leusir may be the only place which offers a reasonable chance of survival for the Sumatran rhinoceros. Both elephants and tigers occur in the lowland parts and are responsible for a lot of damage to crops and cattle of the settlers. These species prefer the secondary forest and a tiger population may nearly double after conversion of primary forests into secondary ones. When this habitat is also reduced or removed they are forced to prey upon the communities that have replaced them. One of the conclusions of the report is that the advice of ecologists ought to be obtained before a major scheme is implemented and not afterwards. As reducing human pressure after settlement is as a matter of fact the only solution for real prevention of man/wildlife clashes, settlement should be prevented in certain cases where nature can still be considered to be of eminent importance.

Geothermal installations on G. Salak. The small but interesting craterfield of the G. Salak, Java, the object of so many trips of the Natuurhistorische Vereeniging van Nederlandsch Indië (see reports in the Tropische Natuur), has been flattened by bulldozers for the construction of geothermal installations. Not a tree has been spared.

Rumours have reached us that in various other places in Java (Banten, G. Salak, Kawa Kamojan, G. Papandayan, Jeng) suitable sites have also been found in

craters to erect installations for winning thermal energy, similar to the methods used in New Zealand. It seems quite certain that the very interesting and highly vulnerable vegetation around these sites will also suffer badly from this way of winning energy in scenic places.

Sabah forest logging. During 1980 the largest amount of logging in lowland and hill Dipterocarp forests of Sabah went on in the Keningau District according to figures shown to me in August 1983 at the Headquarters Office in Sandakan of the Sabah Forest Department. About 56,000 ha had been logged in this district. In the Sandakan North District there was an even larger area (68,000 ha). Of the total of 253,017 ha logged in the whole state 101,849 ha have been logged inside Forest Reserves, under concessions or with special licenses. This logged-over area of forest reserves equals $\pm 1017 \text{ km}^2$, considerably larger than the 673 km^2 of the Mount Kinabalu National Park, and is about the size of Tahiti, Hongkong, 0.4 of Luxembourg, or 0.3 of Rhode Island.

The 151,168 ha logged outside forest reserves are so-called once-and-for-all logging areas, written off to so-called land development, oilpalm or rubber estates, or small holdings of small farmers.

The total area of Sabah is $76,082 \text{ km}^2$. Almost $2,588 \text{ km}^2$ were logged in a single year and only one third of it is reserved as part of the Forest Estate of Sabah. It is a great mystery how it is possible to state, as was done recently in a governmental information bulletin published in the Sabah newspapers, that there is anything left of a sustained yield policy for Sabah's forests. During my visit to the Forest Headquarters I was asked by one of the Deputy Conservators: 'Why did you publish that Sabah logs so much forest? What are the facts?'

The facts are that within another 5 years or so all the lowland forests of Sabah will have been logged except for a few small Virgin Jungle Reserves.

Confirmation of the very heavy logging pressure in this part of Borneo may be collected from some statistics in a publication by the Forestry Agency of Japan, 'Demand and supply of timber and present situation of timber industry in Japan, 1982'. The timber imports from S.E. Asia in 1981 in Japan alone were as follows:

Indonesia	4,629 million m ³	4,506 as logs
Sabah	5,581	5,538
Philippines	1,595	1,467

W. Meijer

In the EPS Newsletter (see Research) Dr. MEIJER further reports on the destruction of Rafflesia sites and the despoilment of the Pinosok Plateau: 'A road (has been) bulldozed through to within 1 km or so of the Mesilau Cave and not far from an important Nepenthes rajah site. The road leads to the proposed site of a reservoir to supply housing, etc. built on the Pinosok Plateau development (an area itself already destroyed). Not only the line of the road destroyed a broad band of the valley floor, but the spoil is filling the river at several points.'

Grandiose paperpulp project near Sipitang (Sabah). This project will strip all the forests of about half of the steep mountainous area of G. Lumaku FR, 81,869 ha, Extension I and II of G. Lumaku of 25,800 ha, Ulu Sg. Padas of 160,585 ha and Klias FR of 3,625 ha (MAP data 1977)). It will cost 1.265 billion M\$ (US\$ 1.00 = ± M\$ 2.00), create only 3,530 jobs for people more educated and better skilled than the poor fishermen, farmers and forest dwellers of the 30 Murut villages inside the area. The siltload on the coastal fishery grounds will be enormous. Local farmers and jungle dwellers may be forced out of the area. The logging area will destroy the catchment of the Padas River which is now being used for a Hydroelectric Plant. Foreign advisers from countries without any tropical forest environmental experience have made sure that the Chief Minister is assured that marine life and the ecology of the land will be protected. See how that is already done in other places of Sabah. Who are the people who will profit from this? Surely not the poor aborigine Muruts from the interior hills of Sipitang District.

Does anybody realize that nowhere in Sabah any scheme of plantations for paper and pulp under local rainforest conditions has been proven feasible, that most of the local fast growing trees have been ignored in the FAO-sponsored research projects? During the next 3 years 12,140 ha will be cleared for the project. It may last for only 10 years.' (Borneo Bulletin, 18 February 1984, as cited in EPS Newsletter 1/3, 1985).

Another report on the situation in Sabah. The time is already late for botanical research in primary forests of Sabah. Dr. Beaman (MICH) was told by a reliable source in the Forest Department that the state would be completely logged over in another 5 or 10 years. Many logging practices are extremely destructive, and these coupled with the forest fires that occurred during the extreme drought of 1983, as well as inexorable increasing pressures from a growing population of shifting cultivators, mean that most of the rich primary forest of this state will cease to exist in a few years. Already there is practically no primary forest in western Sabah accessible by roads. Even in the case of the Kinabalu Park many rare species are now endangered because large areas of critical habitat recently have been degazetted and cleared for such uses as copper mining, temperate vegetable gardens, dairy farming, tea, coffee, and passion flower plantations.

The status of the Crocker Range as a biological reserve is possibly the only good conservation news from Sabah. In March 1984 state legislation simultaneously demoted the Kinabalu and other National Parks to the designation of 'Sabah Parks' and an area of 139,919 ha in the Crocker Range was upgraded from Forest Reserve to National Park. This area includes extensive montane dipterocarp and oak/laurel forests with some of the dipterocarps attaining spectacular dimensions. At the time Beaman left Sabah, however, there had not yet been any obvious implementation of protection measures nor had the Crocker Range National Park been accepted into the Federal Park system.

As to the impact of fires Beaman could study the forests by helicopter and a Piper single-engined plane. His conclusions were that burning was concentrated around areas of human activity, that it was strongly associated with logging, and occurred hardly, if at all, in uninhabited areas. Thus the same conclusions as

from the huge forest fires in East Kalimantan were made. (From a report by Dr. J. Beaman, see also Expeditions).

'Forest denudation far outpaces tree replanting' said D. Hadirijanto, Mulawarman University, Samarinda, East Kalimantan. According to him 2.16 million ha of forest in his province have been selectively cut by concessionaires since 1967 and only 3,775 ha have been reforested. Although he talked of 'selectively cut', he also spoke of 'denudated', indicating the result of the cutting. In the same article extensive illegal felling is also mentioned, thus the 'denudated area' is obviously much larger than the 2.16 million ha 'legally' denudated. Hadirijanto noted that the failure in reforestation was also caused by the fact that many concessionaires have no forestry experts on their payroll. In the same article Dr. S. Hadi, rector of this University, said that 'many experts could not get along with their employers, because the latter are too business oriented'. (Jakarta Post, 27 April 1984).

In a previous article in the same paper W. Kadri, Director General for reforestation, stated that the supervision system will be more effective in the future, and Forestry Minister Soedjarwo said that ten years will be needed to develop the existing forests in Indonesia to acquire a balance between the functions of production, of protected forests and of conservation forests.

Indonesia hopes to increase its timber production to 150 million m³ annually by the end of the century through massive replanting over 6 million ha which are expected to give the country an additional output of 90 million m³ per annum. (Jakarta Post, 13 April 1984).

In view of another prediction that Indonesia will no longer be able to export meranti by the year 2000 (Jakarta Post 1 May 1984: Fires bring misfortune to 105 concessionaires), this seems highly optimistic. Moreover, much replanting is with fast-growing exotics, which are not useful as timber. It is the highly prized meranti that is the prime money earner.

Forest situation in the Philippines. Only one tenth of the original virgin forests is left and at the end of the decade virtually nothing will remain, although officially ± 65 % of the Philippines' total land area has been classified as forest land. Overlogging has resulted in the erosion of once fertile lands, the silting of rivers, landslides and flooding. (Straits Times, 6 December 1983; N. Myer, The primary source, 1984, 364).

Environmental protection in Papua New Guinea. Although Papua New Guinea is largely undeveloped some large scale development projects are having severe localized environmental impacts. Recognizing this the Government has set up an active Office of Environment and Conservation to oversee development schemes and to prevent environmental disasters. However, since all land in PNG is owned by tribal or clan groups, environment protection plans (and developmental ones as well) must strike a fine balance between the traditional uses of resources by land owners and the new uses of these sources as required by the Central Government. (A.B. Viner, Ambio 13, 1984: 342—344).

Logging in the Gogol Valley, Papua New Guinea. The Gogol experience is a major warning to Governments in rain forest countries.

It proved that large scale clear felling is, under the circumstances, not a viable operation and that both the costs and social benefits have extracted a high price from the Central and Regional Governments. One of the outcomes is also that it seems unlikely that reforestation will prove to be a commercial proposition. It most certainly will not provide anything close to the sustained yields needed to maintain the woodchip operation, once the natural resource has been depleted. In practice much of the logged land became semi-derelict, at least at the short term.

If adequate ecological safe-guards had been built into the original agreement, and if the real costs of reforestation and of the level of government support through its agencies had been clearly displayed at the outset, it is doubtful if the project had ever been considered as a financial attractive proposition. (From an article by G. Seddon, *Ambio* 13, 1984, 345—350).

Save the Daintree. The proposed Cape Tribulation - Bloomfield road threatens the largest remaining segment of lowland rainforest in Australia and compromises the proposed Greater Daintree National Park presently considered for World Heritage listing. As Australia is the only 'developed' country possessing tropical rainforest it has its clear duty to offer an example to the poorer rainforest nations by protecting her few remaining tropical forests. Therefore conservationists have set up blockades to prevent the bulldozers to do their disastrous work. The action is backed by conservationist groups all over the world. By now it might be known whether the action has been successful or not. (*Habitat* 12, 1984, 10). The Australian Conservation Foundation (ACF) has recently published an apparently fine book on this National Park and a beautiful poster.

Carnivorous snails. In an attempt to control the numbers of the giant African snail, *Achatina fulica*, which is an agricultural pest, a carnivorous American snail, *Euglandina rosea*, has been introduced in 1977 in Moorea, Society Islands. It is spreading over the island at the rate of c. 1.2 km/y, but its effect on *Achatina* is doubtful. Instead it is eliminating the endemic species of the land snails *Partula* (7 spp.) and *Samoana* (2), and the arboreal *Trochomorpha* (1). One species of the *Partulas* is already extinct in the wild and it is expected that all but one of the remaining will follow suit by 1986/7. *Euglandina* has been introduced into many other oceanic islands and it appears that more than a hundred endemic species are at risk (B. Clarke, et al., *Pac. Sc.* 38, 1984, 97—104).