

X. CONSERVATION

(edited by H.P. Nootboom; continued from page 294)

CITES: In February 1987 Singapore finally ratified the Washington Treaty on the international trade in threatened species, exceptions have been made for the trade in crocodile products. A serious breach has now been closed that was of some impediment to the trade between Singapore and many of its partners.

FAO's Tropical Forestry Action Plan. (Unasylva 38, 1986) develops a strategy for action in five fields, among which conservation of tropical forest ecosystems. The main goals of the latter action plan are: to prevent loss or degradation of the tropical forest resource, while furthering development and the wise use of existing natural resources; to promote the sustainable use of tropical forest ecosystems, either exploited or not, for the production of timber and wood, in such a way that the genetic resources they contain are safeguarded; to encourage and facilitate the integrated management of tropical forest ecosystems so as to provide wildlife and non-wood crops with minimal disturbance of the ecosystems and associated wild genetic resources; to promote the conservation and management of samples of ecosystems as reservoirs of species diversity.

In the discussion of the main problems and possible solutions it is stated that there is an urgent need to initiate and complete basic botanical surveys of plant diversity and distribution, and to initiate and complete investigations to clarify what measures are needed to conserve the intraspecific variation of any species, including those of current importance.

The cost of the conservation action programme is estimated at US\$ 661 million, of which US\$ 150 million for research into management for sustainable

production. I presume that the 'basic botanic surveys' are included in that part, because it fits in none of the others. Several institutes are already engaged in that sort of work, but due to lack of funds progress is very slow. Therefore more money should be directed to those institutes. Another important thing to do is to train SE. Asian botanists, already done, but on too small a scale.

The I.U.C.N. has prepared a candidate list of sites for the proposed Plant Sites Red Data Book. There are still a few gaps left including perhaps one or two sites from Java. Space is here unfortunately too short to describe the projects fully, to give the criteria whereby the sites have been selected, and to enumerate the problems where the I.U.C.N. would like to receive help. In order to invite comments from as wide a constituency as possible the following too brief summary for the Malesian area and Thailand is here given. For more information, also on other SE. Asian areas, please write to Mr. S. DAVIS, Senior Research Officer (Asia and Pacific), The Herbarium, Royal Botanic Gardens, Kew TW9 3AE, United Kingdom.

Peninsular Malaysia:

Endau - Rompin: To protect the Southern lowland forest which contains a remarkable Bornean element not found elsewhere in the Peninsula. There is also hill dipterocarp and hill swamp forest. Due to logging operations the area has already shrunk from 200,000 ha to 84,000 ha since 1976!

Taman Negara: Excellent representation of the species-rich tropical evergreen rain forest that once covered the lowland to montane areas of the Peninsula.

Limestone flora: Over 1200 species of vascular plants, 20% endemic, 14% of the Malayan flora. Individual areas tend to be small, threats include mining, tourist development, and agricultural expansion on the lower slopes.

Montane flora: For example the Genting Highlands (Pahang) has over 460 species of flowering plants (90 endemic to Malaya, 28 to Genting) and 100 species of ferns. Montane areas are threatened by hill resort development. The destruction of the native vegetation of Mt. Ophir, parts in the Cameron and Genting Highlands, Fraser's Hill, and Kedah Peak is already almost complete.

North-West Peak Region: The area under consideration includes G. Babu (Perak), P. Pangkor (Kedah), the Segari Melintang FR, part of Penang and the Dindings area. It has lowland and hill dipterocarp forest, floristically distinct from that of Taman Negara with many endemics, while others are only known from nearby Sumatra or Thailand.

Sumatra:

G. Leuser National Park: 2500—3000 vascular plant species (25—30% of the Sumatran flora) grow in the area. Ca. 25% of these have a known use. The area is threatened by illegal settlement, logging, shifting cultivation, recently increased by the new road to Blangkejeren that bisected the Park.

Mt. Kerinci Seblat National Park: Lowland, hill, montane, and cloud forests on a volcano, hence of a different composition than the above Park. Same threats.

Borneo:

Bako National Park (Sarawak): Unique assemblage of species, many endemics on sandstone derived soils: beach, peat swamp, lowland and hill dipterocarp, and heath (kerangas) forests.

G. Mulu National Park (Sarawak): Except for volcanic soils examples of all major dry-land vegetation types of the country, extensive limestone and heath forests. Over 2500, incl. over 100 palms, have been identified. The Pan-Sarawak Highway is being constructed through the NW. of the Park inevitably causing increasing human influence.

Kinabalu Park (Sabah): This highest mountain of Malesia outside New Guinea is famous for its extra-ordinary wealth: ca. 4,500 vascular species are known, but the area is under heavy attack by shifting cultivation, logging, mining, and misguided tourist developments.

Kutai (Indonesia): A large portion of the Eastern part was destroyed by the fires of 1982. The remainder represents the best example of the E. Borneo mixed dipterocarp forest type. There is a rich assemblage of tree species, many economic or wild relatives of cultivated taxa. Seriously threatened by logging and shifting cultivation.

Lambir Hills National Park (Sarawak): 6952 ha, up to 465 m alt., various types of soils causing a mosaic of dipterocarp and kerangas forests with a rich assemblage of species.

Northeast Borneo ultramaphic flora (Eastern Sabah): A site around Mt. Silam may be a candidate. About 1000 m high with lowland, hill, and submontane forest, rich in endemics due to the soil.

Celebes:

There are ca. 5,000 species on the island, forest cover in 1982 was slightly over 50% (incl. depleted forest). Reserves at present are under 10% of the land area, but in several the forest has already been partly destroyed. Dry lowland forest, the most species-rich, is threatened everywhere. Ultramaphic rocks occur in Central and North Celebes, locally with up to 2% nickel. Large areas have already been cleared for strip mining.

Lowland forest area: Site not yet been decided.

Limestone and montane flora: Very badly known and in need of conservation. No sites yet.

Ultramaphic flora: High local endemism, but many species are likely to become extinct as mining increases. Site to be decided.

Philippines:

Mt. Apo (2930 m) has been described as the most important area of rain forest in Mindanao. The Park also includes Mt. Sibulan and one of the last patches of virgin rain forest of the island with many endemics. Under heavy human pressure.

Mt. Pulog: 2880 m high with affinities with the mountain flora of Mt. Kinabalu, Celebes, New Guinea, Taiwan. Pine and grassland areas are increasing through fire at the expense of the primary rainforest.

Thailand:

Khao Yai National Park: A good representation of the floristically rich, seasonal mixed dipterocarp forest which extended from Burma to South China. Threatened by illegal logging, and there are plans for hydro-electric projects in several valleys.

Deforestation in Sarawak, Malaysia is the largest exporter of tropical hardwood in the world. Sarawak claims at this moment almost 40% of the total Malaysian timber export. According to estimates made by E. HONG (Natives of Sarawak, *Survival in Borneo's vanishing forests*, (1987), Penang) 28,217 km² were felled in the 1963—1985 period. This represents 30% of the rainforest in Sarawak. If the felling continues at its present rate, then it can be expected that in the ten years from 1985 yet another 28% of the rainforest will disappear. By the time that all the concessions have been logged hardly any rainforest will remain in Sarawak.

The situation is particularly bad in the Fourth Division where the logging proceeds up to the border of the famous Mulu National Park.

The intensive logging has disastrous results for the local environment. It causes periods of extreme drought in the dry season and then flooding during the wet one. Many species of plants and animals will disappear before they even have been discovered. Tribal communities whose livelihood depends completely or in part on the rain forest products are suffering heavily. This applies particularly to the Penan, the nomadic and semi-nomadic hunter/gatherers, who since time immemorial have lived in and from the rainforest without disturbing its ecological balance.

During recent months the Penan and the Dayak have held meetings at many places in the Baram River basin. They protested against the destruction of their forests and they demanded a reservation of their own. On the increase are incidents in which the native population tries to hinder the penetration of new as yet untouched areas by the logging companies.

Tourists and scientists are encouraged to visit the Wildlife Parks like the one around G. Mulu. However, elsewhere, outside these selected areas they are hardly welcome. In fact, some local newspapers would have one believe that the resistance against the deforestation has been instigated by foreigners. Sahabat Alam Malaysia (Friends of the Earth) Marudi, which for many inhabitants of the interior forms an important link with the outside world, calls for an immediate suspension of the deforestation in the Penan region. According to last reports, this organization is being subjected to heavy pressure by the Government to stop its activities on this subject. — J. de Beer.

Survival International, Tapol, and Friends of the Earth, with the support of many other non-governmental organizations (NGO's) have launched a worldwide campaign to halt international funding of Indonesia's Transmigration Program. Providing one of the first detailed evaluations of the devastating social and environmental effects of this massive resettlement program, leading international human rights and environmental organizations have called on the World Bank and other funding agencies to suspend their support for the program until it observes internationally recognized human rights and sound ecological principles.

Transmigration, the mass movement of land hungry poor from Indonesia's over-populated central islands of Java, Madura, Lombok, and Bali to the less densely populated outer islands, is the largest colonization program in history. With nearly four million people already relocated and the Government now planning the movement of a further 65 million (!) in the next 20 years, the program dwarfs the controversial and widely criticized programs for the colonization of Amazonia with which it has been compared.

Transmigration receives massive financial backing from the World Bank and the Western nations. Millions of dollars of international 'aid' have been spent promoting a program that is leading to the permanent destruction of vast areas of undisturbed tropical rainforest, with a corresponding huge loss of genetic diversity and potential resources. As this new report makes clear, this tragic misuse of resources is not even successfully alleviating the problems of the resettled Javanese peasantry. On the contrary, many migrants have been unable to make a living in their new environment, instead drifting into the urban centres or engaging in the further destruction as slash and burn farmers to avoid complete destitution.

Transmigration is being carried out with scant regard for its shattering effects on the tribal minorities in its path. As the program has been extended into the most remote parts of the Indonesian archipelago, whole peoples have been uprooted, torn from the lands on which they have lived for millennia and resettled in Government-built unit dwellings to conform to the national goals of 'progress' and 'development'. Compensation, payable to the tribal people for the loss of their lands, has been denied and the security forces called in where the locals have resisted what they see as no less than the invasion of their ancestral territories.

This disquieting new report also reveals how Transmigration, far from being a humanitarian exercise, is really a political program designed to extend Governmental control over the peripheral islands through the elimination of ethnic diversity. Increasingly under the control of the Indonesian Armed Forces, transmigration is being given special emphasis in politically sensitive areas, where militarized settlements are being established to subjugate local peoples reluctant to give up their lands to the central Government. It examines, too, the motives underlying the Western governments' support for the program. (Press release, The Ecologist 16, 1986, Banking on disaster: Indonesia's transmigration programme).

In a press release (87/28, 5 May 1987) the President of the World Bank, Mr. B. CONABLE, has announced several new measures the Bank will take to protect the environment. In true bureaucratic style an Environment Department will be created with new offices in each of the Bank's regional operations structures. These additional staff positions (hopefully filled by experienced biologists?) are supposed to help ensure environmental awareness. An urgent country-by-country assessment of environmental threats in the 30 most vulnerable developing nations will be made (if not done previously, it surely was about time!). A process that will involve not just study but education and that will involve both local policymakers and Bank staff. The Bank will participate in a global program to conserve tropical forests by an expansion of annual lending to forestry projects from US\$ 138 million to US\$ 350 million. New emphasis will be placed on correc-

ting economic policies that promote environmental abuse. Mr. Conable admitted that the Bank had 'stumbled' in the past on this. — J.F. Veldkamp.

The Tropical Forest Action Plan drawn up by the World Resources Institute, the world's richest environmental think-tank, which was discussed in June 1987 at Bellagio, Italy, is apparently one of the first results of the Bank's good intentions. The plan has its backing and of the UN's environmental and agricultural agencies and intends that over the next 4 years US\$ 8 billion will be spent to plant trees and protect tropical forests. Robert Goodland, environmental affairs officer of the Bank, dampened the expectations, however, by saying that this plan will not conserve existing forests. Apparently most of the plan is for industrial forestry, only a small amount will go to conservations and protection of watersheds.

It is to be hoped that the reforestation will be made on previously forested areas and not within existing forests, and, if the latter is contemplated, to think of local species and not of the ubiquitous pines and eucalypts, which may be fast growers, but ultimately doom the richness of the local natural vegetation.

Meanwhile, NGO's of the countries targetted by the plan have claimed that the emphasis on industrial forestry will serve the interests of the richer nations that, indirectly, pay for the plan, rather than those of the local poor. They say that present World Bank forestry projects have a serious negative social and ecological impact. This is hopefully what Mr. Conable wants to correct now.

It is well-known that industrial forestry in existing primary forest under the present circumstances is nothing more than a postponement of execution for it. The first thing that will be done by those that want to meddle with the remnants of our heritage, is to make it more 'accessible' and to start roads into it. This in its turn attracts illegal loggers and squatters: good bye forest. (See also New Scientist 25 June 1987, 33). — J.F. Veldkamp.

World Bank under fire. The World Bank is under fire — again — as a result of money loaned to Indonesia to finance that country's transmigration programme. This time the Sierra Club National Newsletter is the latest of numerous NGO's which have criticized the Bank's involvement in and the results of transmigration. The publication says that since the 1970's the World Bank has been funding the large-scale resettlement scheme to move people from Indonesia's densely populated inner islands to forested outer islands. The Sierra Club considers transmigration to be the largest single threat to the tropical forests in the world. Since 1950 Indonesia has lost approximately 75 million ha. of forest through logging and conversion to agricultural use. To date the Bank has granted seven loans totaling nearly US\$ 600 million. The loans, says the Sierra Club, amount to US\$ 7,000 per transmigration family in a country where the annual per capita income is only US\$ 700.

Under the current phase being financed by the World Bank, 80% of the transmigration sites are to be established in primary forests, covering about 8 million acres of land. The amount of forest being lost is actually much greater, because once the shallow tropical forest soils are depleted, settlers clear neighbouring forest land in search of more arable land. While new land is cleared for agriculture, already deforested grasslands and secondary forests lie barren.

Environmentalists urge the World Bank to make future loans conditional upon the rehabilitation and reclamation of these areas. Rehabilitation of grasslands for agriculture could double the area under permanent cultivation — IUCN Bull. 17 (1986) 133) — From an interview of IUCN's Jeff Sayer on the same page it appears that IUCN is preparing guidelines for transmigration, to be discussed early in 1987 and to be published in 1987 in English and Indonesian. The guidelines will strengthen the point that agricultural planning must guarantee that agriculture in resettlement areas will be sustainable. Sayer also brings forward that there are indications that the World Bank may now increase their contribution to the long term development of agriculture in resettlement sites.

A five year plan of research activities at the Tropical Rain Forest Research Centre (PUSREHUT), Samarinda, East Kalimantan, Indonesia.

The first joint committee meeting of the Tropical Rain Forest Research Project between the directorate general of Higher Education of the Ministry of Education and Culture of Indonesia and the Japan International Cooperation Agency was held in Jakarta in October, 1985. In this meeting 19 research topics to be carried out at the Research Centre between 1985 and 1989 have been agreed upon.

Sahabat Alam Malaysia (Friends of The Earth) Conference on forest resource crises in the Third World, 6-8 September 1986.

This conference, held in Penang, brought together representatives of active NGO's from 23 countries of the Third World and Industrialized Countries, concerned planners in regional agencies, researchers and teachers from Universities, as well as the media.

The conference identified the Southeast Asian insular countries as the region where tropical deforestation is highest in the world today. The main cause is commercial logging.

Country reports from various Third World participants revealed critical situations in their respective countries. The common fact was rapid deforestation leading to drastic ecological consequences. A number of participants emphasized the plight of tribal peoples whose lands and homes were being taken over by timber companies and projects. Such people who directly depend on the rain forest number about 200 million on a world wide scale. Destruction of the tropical rainforest will mark the death knell for their livelihood and cultural identity.

For countries which rely on timber revenue for development funding, unchecked deforestation will also threaten that source of revenue. It has happened to Thailand already: once an exporting country for valuable tropical timber it is an importer today. The conference brought to attention that much tropical wood is being used for sustaining luxury consumer lifestyles in industrialized countries.

The conference ended with the formation of a World Rainforest Network (WRN) to link groups and individuals involved in the effort to save the tropical rainforest.

Taman Negara again threatened. Once again the integrity of Taman Negara is threatened. This time by a well-meant but ill-conceived plan to build a jeep track from Kuala Tahan to the foot of Gunung Tahan. The road will cut a way through an otherwise unspoiled expanse of one of the worlds oldest tropical rainforests. It threatens to upset the fine balance of ecology, destroy the

unique atmosphere of Kuala Tahan, give rise to silting of the rivers, cause the loss of the ultimate challenge to all adventurers — the back-breaking trek to Gunung Tahan. That all to enable tourists to reach the mountain in an easy way. The Malayan Nature Society states, in an open memorandum to the Minister of Science and Technology & the Environment, that such a road is undesirable. We hope that the Minister in all his wisdom will reach the same conclusion and not follow this ill advise.

TROPENBOS news. Between 27—31 October 1986, an European Community (EC) consultation funded by the EC and the Dutch Department of Education and Science took place in Tiel, The Netherlands. It was attended by TROPENBOS officials, scientists involved or wishing to become involved in TROPENBOS activities, representatives of USAID, UNESCO, ICRAF, CTFT, IUCN, UNEP, and other organizations, EC officials, and last but not least representatives of many rain forest countries. During the meeting, which also had the goal to induce EC to fund TROPENBOS projects, among other subjects the following topics were discussed:

The state of European Research on tropical Rain Forests; the need for common methodologies; the need for a common approach to Research in the Humid Tropical Forest Lands; the state of Tropical Forestry Action Plan; the Forestry Research Programme in Indonesia; introduction to the idea of a common framework for a Coherent Research Programme. As a result of the meeting an inventory is being made of the proposed projects which will be presented to the EC for possible funding.

On 24 November 1986 on behalf of their respective Governments, a Memorandum of Understanding was signed by the Minister of Forestry of Indonesia and the Minister of Education and Science of the Netherlands concerning TROPENBOS. Work in the field on the TROPENBOS localities in East Kalimantan and Sumatra (Kerinci area) is supposed to start as soon as possible after the elections in Indonesia in 1987.

Dr. W. MEIJER (KY) reports that the Rhizanthus (Rafflesiaceae) locality in Ulu Gadut near Padang (Sumatra) has been transformed illegally to a *Parkia* plantation.

Solomons 'Rainforest people' victorious. Paul SCOBIE describes in an article in *Habitat, Australia* (15/1, 1987, 13—16, 4 col. fotogr., 1 black/white, 1 map) how local villagers of North New Georgia Island, were nearly robbed of 75,000 ha of virgin forest by an agreement between the Government of the Solomon Island and Unilever. About a year after Independence the New Georgia Timber Corporation Act was passed vesting the ownership of all trees to the Corporation, i.e. Unilever, while saying that the land still belonged to the traditional owners. To many this may seem a very clever trick, indeed, but in many cultures there is a distinction between the rights to land and the rights to plants which is often overlooked when viewing tenure in developing countries (see also Weinstein & Vergara, *Econ. Bot.* 41, 1987, 312—322). Still, economic plants under local customary laws if not belonging to an individual or his family will be regarded as the property of a village or a tribe. For the local people it was therefore impossible to see that a government might claim any rights.

A political blunder was that one of the first actions of Unilever was to bulldoze the coconut plantation of an outstanding community leader, Rev. S. Eto, and taking over the village garden area for the main logging camp. The people at first retaliated with peaceful protests, which resulted in the arrest of 40 people, jailing many for 2 months. After some time a warrior party burned one store, three bulldozers, and a crane. Again 7 people were jailed. An inquiry was announced. Unilever threatened with international blacklisting and tried to land bulldozers again at the site, but the people had set the wharf alight. The son of Eto mustered political support within the Solomons and overseas and subsequently was elected Premier of the Western Province, where the logging operations were based. The National Government then had to impose a moratorium on new logging licenses and started to enforce a plan to ensure that all logs would be processed in the Solomons. Nevertheless, Unilever with their special act of Parliament pressed ahead. Another logging camp was burnt. Unilever threatened now to pull out of the Solomons to which the Premier responded 'that is your business, not mine'. So, after 20 years of logging, Unilever finished its operations in October 1986 selling all their assets and destroying several logging road bridges. It left 10,000's ha of land reduced to vine cover that will take at least 500 years to grow back, but no on-going forest based industry, no worthwhile community facilities, as was originally promised.

... This example shows that local action can stop the destruction of the rain forest! — J.F. Veldkamp.