

#### X. CONSERVATION

(edited by H.P. Nooteboom; continued from page 172)

Tropical Forests: A Call for Action. Report of an International Task Force convened by the World Resources Institute, The World Bank, and the United Nations Development Program. World Resources Institute, 1735 New York Avenue, N.W. Washington, D.C. 20006, U.S.A. October 1985. ISBN 0-915825-10-4.

The report was discussed in a meeting held in The Hague, the Netherlands, during a three day meeting, the first two devoted to the question how international cooperation could be coordinated; the last day was a discussion day for the public with representatives of non-governmental organizations, Parliament etc. That day was opened by Ms. E.M. Schoo, Minister for International Development Cooperation. She announced that the Dutch Government in the near future will double the funds available for tropical forests from f 50 million to f 100 million. She also announced that she would give a substantial contribution to scientific research (The TROPENBOS program). After hearing her speech the Director General for Science Policy could announce the official start of that program (see under Research).

The Action Plan contains three parts:

1. The Plan, in which the cost of deforestation, the ways of arresting deforestation, and an Agenda for Action are discussed;

2. Case Studies, important subjects are Land Use on Upland Watersheds, Forest Management for Industrial Uses, Conservation of Tropical Ecosystems, and Strengthening Institutions for Research, Training, and Extension;

3. Country Investment Profiles, with the same subjects. In this part it is anticipated that a total of US\$ 4 billion, or US\$ 800 million annually for 5 years, would need to be mobilized by the development assistance agencies and international lending institutions, which would double the present levels of external aid to combat deforestation.

Conserving the wetlands. Wetlands throughout the tropics are vanishing with the help and expertise from the world's richer nations. Out of the nearly 200 large-scale wetland reclamation projects now completed or under way worldwide, any serious study has been made in nine cases, only, of the environmental and ecological consequences. Wetland reclamation projects at least partly financed by development aid agencies in Asia are a.o.: 570,000 ha in South Sumatra and Central Kalimantan, for transmigration projects; another 9,000 ha in the 'Indonesian Swamp Reclamation Project I', in S. Sumatra and 30,000 ha in the 'I.S.R.P. II', also in S. Sumatra, all financed by the World Bank. The American Agency for International Aid (USAID) is currently financing many multi-million dollar irrigation projects which may affect wetlands, including at least four in India and others in Sri Lanka, Indonesia, and the Philippines. Recently USAID has been convinced by non-governmental organizations to adopt a good new environmental policy concerning the multilateral development banks, requiring those banks to adhere to the principles of the World Conservation Strategy. IUCN is now looking for ways by which to cooperate closely in order to influence the policies and actions of multilateral agencies and projects that are funded by a number of agencies to prevent unnecessary destruction of wetlands and to support activities which further wetland conservation. (IUCN Bulletin 16, 1985)

An Initiative of the 'Natural Resources Defense Council, Inc', 1350 New York Avenue, N.W., Washington, D.C. 20005. Important for what is said above on the wetlands is an initiative of the NRDC to change World Bank policies and practices that adversely affect the environment and indigenous people of tropical forest regions. In late 1985 representatives of the NRDC visited several countries in Europe (together with the US having a majority in the World Bank) to discuss a reform program for the World Bank and a strategy for each country to change the voting instructions given to its representative in the World Bank. An initial effort will be to halt all loans for cattle ranching and transmigration projects in tropical forest areas. That this kind of initiative works is demonstrated by the fact that the World Bank already stopped one loan to Brazil. Mr. B. Rich from NRDC stated that this was 'the first time the bank has ever halted disbursements for environmental reasons'.

Lumberjacks wreck primate research. The illegal felling of trees within an Indonesian National Park is threatening the Ketambe Research Station in Sumatra, home of classic studies of the Sumatran orang utan. The fear is that the Gunung Leuser National Park will be split in two by the increasing forest clearance and settlements along the road. Much of the logging is illegal but apparently condoned by the park guards at the post less than 1 km from the research centre. The government also sets up a centre for tourists on the opposite bank of the river from the Research Station, from where shooting of wildlife and fishing with toxic chemicals and explosives takes place. Such activities are ignored by local rangers, whose bosses are also said to have diverted money earmarked for improvements at the Research Centre to the tourist centre. (New Scientist, 3 October 1985).

Illegal Plant Collection in Malaysia. Nepenthes rajah, the largest known pitcher plant, is threatened by unscrupulous traders belonging to an international syndicate which preys on rare, exotic plants. The Australian L. Watson is

known to be a key figure behind the racket which is robbing Borneo of its rarest plants. He was photographed recently in Bario, Sarawak, before boarding an aircraft with four boxloads of pitcher plants. He is known to have made two subsequent trips to Sabah, and on each occasion large quantities of exotic plants disappeared from Kinabalu Park. He is said to plan to go to G. Mulu by helicopter for collecting more exotic plants (Malayan Naturalist, February 1985 and Borneo Bulletin, 27 October 1984).

Malaysia plans dams in Sarawak. Malaysia plans to execute a gigantic hydro power project in Sarawak, the so-called Bakun Hydro-electric Project, in the Upper Rajang River. A 204 m high concrete dam has to be build behind which a reservoir of 695 km<sup>2</sup> will form. Maximum electricity output is estimated at 2400 Megawatt, equivalent to ca. 22% of Malaysia's oil production. Total costs will be around US\$ 4 billion, of which 20 million is intended for the transmigration of the local population. These are more than 5,000 people belonging to 6 different ethnical groups. They lose everything: their ancestral land, their long-houses, their places of worship, hunting, and gathering. In brief, by this move their culture will be drowned when their lands are. They have erected the Bakun People's Action Committee to protest against these plans and to call for the help of the whole population of Malaysia. The project will of course cause enormous harm to the environment as well. Large areas of virgin forest will be inundated, up-stream fishes will lose their spawning grounds and down-stream the water regime and subsequently the ecology will be severely altered. (Suara Sam 2, 1, February 1985; Sarawak Tribune 5, February 1986).

Erosion causes silting of lakes. Several if not all the lakes in Indonesia are threatened by silting through erosion. Instances are Lake Tempe in S. Celebes and Lake Limboto in N. Celebes. The former had a surface of 35,000 ha in the wet and 1000 ha in the dry season in 1978 while nowadays in the dry season the surface is a mere 250 ha. The latter has been shrinking from 5000 ha and a depth of 7 m to 1500 ha and a depth of 2.5 m. Shallowing of the lakes means diminishing of fresh water so important for the population. This is another adverse effect of deforestation (Jakarta Post 01-04-85).

Irian Jaya threatened. The Indonesian Government has planned to resettle about 5 million people from Java in Irian Jaya. Not only that many of the sites contain soil that is marginal for agriculture, but also the traditional Papua tribes are threatened, not only by competing for room, but in their very existence. Moreover, logging companies have already applied for concessions covering 70% of Irian Jaya's forest resources, and oil and mineral resources there are being explored and extracted at a rapid pace (although sometimes disturbed by Papua guerrillas). A report of the WWF and the IUCN details the province's natural wealth and warns that major policy decisions will have to be made if the development of Irian Jaya is not to destroy the forest resources. Threatened species include crocodiles, deer, and parrots. Trade in birds, shells, and black coral continues despite a new law to curb it. Petroleum is being exploited in four major nature reserves, and logging has destroyed almost all primary forest on the offshore islands.

Australia's rainforests still at risk? Read Habitat 13 (1985) 2—5. Two articles, 'World Rainforest shrinks: what will history say of us?' by J.H. WOOTTEN, and 'The Giants of Downey Creek' by G. BORSCHMANN. Indonesia's Minister for the environment, when challenged about logging the Borneo rainforests, said that he was very sorry that his country's poverty and population pressures were forcing it to destroy part of the world's heritage, and if only the rich countries of the world would help pay for the preservation of that heritage would Indonesia be happy to cooperate. In contrast to this the Minister of Parks of one of the very few affluent states with tropical rain forest, Queensland, said 'Not one more inch of Queensland is to go on the World Heritage List.' Despite the creation of the Cape Tribulation National Park, that piece of coastal forest has gone the way of the disappeared and threatened. It is the site of the absurd and pointless attempt to construct a road. This recently constructed road is already rapidly washing away and threatening to damage fringing coral reefs with silt.

As regards to the Downey Creek forest, it is rare and important because it is a lowland valley supporting the most complex of rain forest types on the richest of basalt soils. From the lower Downey catchment about 1300 big trees are now merely logs, sawn timber, or veneer. About ten times that number are due to join them over the next few years. In the upper catchment the loggers moved in about five years ago, and by this year logging of over 1000 ha will finish.

A trial of propagating endangered species which are difficult to cultivate was carried out in the Botanical Gardens, University of Tokyo. *Melastoma tetramerum* (Melastomataceae), an endemic of Chichijima Isl., Bonin Arch., was successfully cultivated and young plants were returned to sites on the island.

IUCN/WWF project Irian Jaya. Important for the course of affairs in Irian Jaya is the IUCN/WWF project which enters its second phase through 1986 under the new IUCN/WWF Conservation for development program in Indonesia, with a total budget of US\$ 180,000. Project objectives of the first phase have been reached with the publication of a comprehensive document on conservation and development in Irian Jaya, already shortly cited above. It covers the most important aspects of all developmental sectors which are involved in the conservation and utilization of natural resources in the province. Guided by the concept that conservation should be an integral part of the socio-economic development process, it has been designed to stimulate coordination and cooperation between the various Departments and Sectors. For this purpose Dr. R.G. PETOCZ has written a report: 'Conservation and Development in Irian Jaya. A Strategy for Rational Resource Utilization'. 1984.

Irian Jaya has a total land area of 41,066,000 ha, of which 80% is covered by primary evergreen forests. The present population is between 1.2 and 1.3 million. The main areas which are suitable for sustained agriculture are the highland valleys, which support 40% of the population. Most of the lowlands are very marginal for agricultural development due to low fertility of the soils.

Reserves. At this stage the design of existing and proposed protected areas in Irian Jaya encompasses 49 reserves, including 8 recreation areas, and 2 marine

reserves of which the boundaries have not yet been established (Raja Ampat and Teluk Lelintah). Seven priority areas for management planning have been selected based on their biological importance, their accessibility and threats to their integrity, and their location. They are:

1. Lorentz National Park, 1.5 million ha, covering the entire altitudinal range. It has been proposed as a world heritage site by IUCN.
2. Mamberamo-Foja National Park, 1.4 million ha. This has also been proposed as a world heritage site.
3. Arfak Mountains Nature Reserve, 63,000 ha.
4. Jamursba-Mandi Strict Nature Reserve, a strip of beach about 90 km long and 50 m wide, the most important nesting beach for sea turtles.
5. Wasur Wildlife Reserve, 430,000 ha. It is the most accessible reserve and is severely threatened.
6. Cyclops Mountain Strict Nature Reserve, 22,000 ha, an isolated mountain block near Jayapura.
7. Teluk Cenderawasih Wildlife Reserve, with 500 km of coastline, 2,500 ha of islands and 80,000 ha of reefs, is a unique and incredibly rich marine reserve.

Species conservation and utilization. A list is given of several threatened species which deserve protection or which could be used for a utilization program to boost the rural economy.

Threats. Logging companies have applied for nearly 70% of all forest resources in 66 separate concessions, 14 of which have already been approved. In most of these active logging has started. A substantial proportion of logging takes place on the offshore islands that hold considerable numbers of endemics. Eleven approved concessions overlap elements of the protected area system and in four cases reserve lands are actively logged. Suggestions are given to halt this.

Road construction. Roads are often a major threat to conservation as exemplified by the situation in the southeast where a complete section of the trans-Irian highway runs through the Wasur Reserve resulting in large-scale degradation of the environment and destruction of wildlife.

Transmigration program. Enormous areas will be cleared and given over to agriculture. It is imperative that environmental planning becomes a component of the design system within each area.

Resettlement. Under the transmigration program the government encourages rural shifting cultivators to settle by providing them with housing and facilities.

Oil and mineral exploitation. Several petroleum exploration concessions have major overlaps with reserve lands. By far the largest ongoing mining operation is carried out by Freeport Indonesia in the Carstensz Range and 45% of their mining area lies within the Lorentz National Park.

Commercial fisheries are rapidly expanding with five fleets now in full operation. Also uncontrolled shell harvesting and fish bombing are areas of concern.

Shifting cultivation. Since a long time the small and stable highland communities have practiced sustainable shifting agriculture. Centralization, expansion and social changes have made that traditional methods cannot longer meet the needs of growing communities.

Livestock ranches and farms proliferate near the large population centres.

Against all these threats suggestions for acceptable solutions are proposed. Recommendations are given for a conservation support system and public awareness, legislation and enforcement, and tourism.

At the end of the report a comprehensive list is given of international agencies which are funding projects in Irian Jaya or from which funding is requested.