

Solution for Siberut?

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The authors describe the conservation plan they prepared at WWF's request while they were engaged on a two-year study of the Indonesian island of Siberut in 1976-78. Their plan is designed to conserve as much as possible of both the remarkable wildlife, which includes many endemic species, and the people's traditional way of life. Edited and coordinated by Jeff McNeely, whose article describing Siberut is on page 159, this plan is now being considered by the Indonesian Government.

Between 1976 and 1978 we spent over two years studying the wildlife and forests of Siberut. During this time the World Wildlife Fund asked us to make a survey of the island to help prepare a conservation plan. This article summarises that masterplan, which has now been submitted for approval to the Indonesian Government: *Saving Siberut — A Conservation Masterplan*, 1979, WWF. Conservation efforts have been concentrated on Siberut rather than on the southern Mentawai islands, although some of the animals there are distinct subspecies, because it is the largest and least densely populated of the chain. In addition, the potential for a successful conservation programme is greatest there because logging operations have been less extensive.

The objectives of the Masterplan are:

1. to promote the socio-economic development of the Siberut people in such a way that they are able to maintain their traditional harmony with the environment;
2. to maintain a functioning tropical rainforest ecosystem where all species are conserved, with special attention paid to the four endemic primates;
3. to use Siberut's unique qualities to their fullest advantage through education, research and tourism.

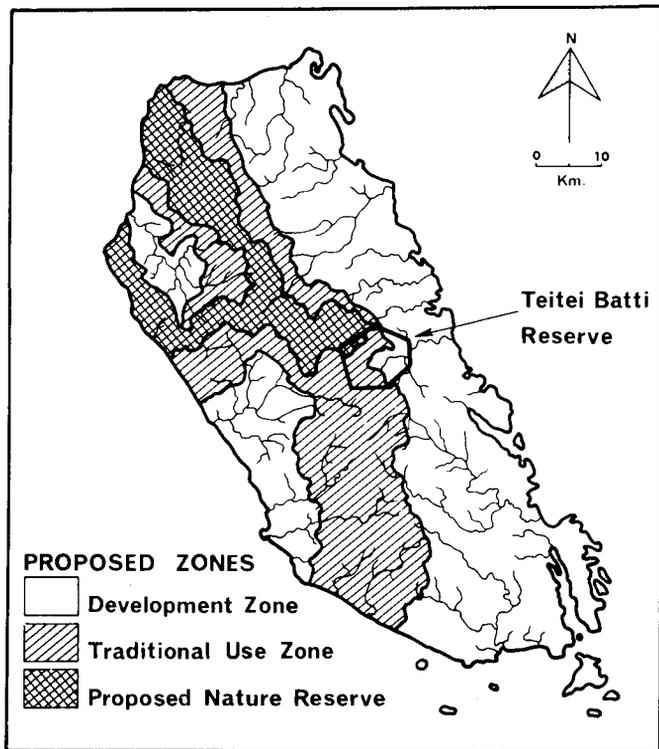
The first objective, based on a Survival International Project, is described by Jeffrey McNeely — page 159. This article summarises the proposals for carrying out the second and third objectives.

The main proposal is that the entire island be established as a Biosphere Reserve, divided into three zones to give a mixture of undisturbed ecosystems and a variety of human involvements with the environment. Existing logging concessions would have to be cancelled and then renegotiated for the zones. The zone boundaries take account of ridge tops, rivers and villages, rather than running in straight lines that are meaningless on the ground. They would be cut and well-marked and the local inhabitants informed of their meaning.

The land use regulations for the three proposed zones are:

Development Zone (c. 250,000 ha)

This includes most of the areas where logging companies already operate. Careful selective logging following sound ecological guidelines would be permitted, but it is recommended that no sawmills be allowed on Siberut since they can quickly denude a forest, taking the smaller trees which logging companies do not take; local people would be allowed to collect rattan canes for



sale. Most of the villages are in this area, and forest clearance for agriculture would be allowed to continue, except on slopes of over 35 degrees, where excessive erosion might result. Hunting by traditional methods would be permitted for all species except crocodile, sea turtle, gibbon and simakobu monkey, which are all considered to be too vulnerable at present. Hunting of other primates would be subject to quotas

Traditional Use Zone (c. 100,000 ha)

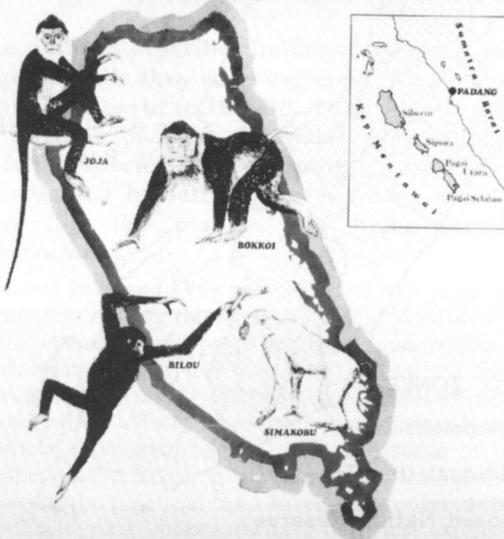
Only the indigenous people's traditional activities would be permitted in this zone; they would have unlimited access, but outsiders would need a permit from the Conservation Department. No commercial logging would be allowed, although logs, sampan trees, firewood and planks could be taken for domestic use. Similarly, commercial rattan collecting would be prohibited, as there is some evidence that this may be detrimental to macaque populations, whereas collecting for domestic purposes would not. Hunting regulations would be the same as for the Development Zone. Clearing riverside forest for crops would be allowed, but no one area should exceed a third of a hectare, and each should be separated from the next by another third of a hectare of forest or fruit-tree groves; field houses could be built but no new villages established. This zone should be made a Wildlife Reserve — *Suaka Margasatwa* — and patrolled by Conservation Department guards, who would enforce the regulations.

Nature Reserve Zone (c. 50,000 ha)

Plants and animals would be totally protected in this inner zone. Regulations would be similar to those for the Traditional Use Zone, except that hunting and clearing new areas for gardens would be prohibited. The area is large enough to

LINDUNGI KAMI

Protect Us



CONSERVATION
POSTER
USED ON
SIBERUT

Mentawai is the one and only place in the world where we live, so cherish us and help the efforts of the Conservation Department.

protect the wildlife within it but not so large as to deny the people any significant resource. It contains no house or agricultural land because it encompasses many of the island's headwaters, where the ground is very steep and the rivers shallow and difficult to navigate.

Education on both local and national levels is vital for the success of any conservation plan. On Siberut itself, a series of posters issued through village chiefs, missionaries, teachers and other respected figures would probably be the most effective method of reaching almost everyone. One poster (*above*) already distributed depicts the four endemic primates, emphasising their uniqueness; others might show the locations of the proposed zones or define the people's rights regarding timber concessions. In addition, traditional animal stories could be published in Indonesian for use as school textbooks.

Siberut's people, forests, wildlife and coral fringes will attract increasing numbers of tourists as they become more widely known. Uncontrolled tourism however, would quickly destroy the very values that visitors are seeking, and the Siberut people would suffer from the rapid changes to their culture. 'High-quality, low-quality' tourism, in which tourists would visit a small number of planned centres, would minimise these undesirable effects and maximise profits, some of which could be used to build schools and health centres. Tourism could thus be of direct value to the people, as well as contributing to the general wealth



ADULT KLOSS'S GIBBON

of the country. Income from tourism would help to offset the losses resulting from a reduction in logging concessions. Local craftsmen could build the accommodation using traditional designs — the longhouse would make an ideal hotel, and locally grown food could be supplied. Initially numbers would have to be very modest with a maximum of only a few thousand visitors annually.

Recognised as a biosphere reserve, Siberut could become an important centre of research, and possibly training, for subjects related to the mutual influences of man and his environment. A thorough documentation of the flora is needed and also a search for possible genetic resources of use to man. Other subjects for research include methods of determining the health of standing trees so that partially hollow trees are not felled and wasted, collection and study of invertebrate animals to reveal their interactions with other animals and plants, and the possibilities of reforestation using local species. It is also important to investigate systematically the traditional herbal medicine in order to discover potentially important secondary compounds, and to study the effects of acculturation and change of religion on the people and their environment.

Siberut will be increasingly influenced by the modern world, but it is possible to use its renewable natural resources rationally, threatening neither its wildlife nor its indigenous people. If the plan to save Siberut is implemented and is successful, it may lead to an answer to the much greater problem of finding an ecologically sound long-term future for other areas in Indonesia.

Acknowledgments

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