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IUCN/WWF Project Proposal: Conservation of Endangered Large Mammals in Sumatra

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IUCN Commission on National Parks and Protected Areas

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IUCN/WWF PROJECT PROPOSAL: CONSERVATION OF
ENDANGERED LARGE MAMMALS IN SUMATRA*

by Jeffrey A. McNeely

I. GENERAL INFORMATION

Originator: World Wildlife Fund Indonesia Programme

Principal investigator: to be selected

Project period: 1 January 1981 to 31 December 1982 (2 years)

Funds requested: US\$ 75,000

Endorsements: Ir. Lukito Daryadi, Director of Nature Conservation
Dr. Emil Salim, Minister of Environment
Mr. Julius Tahija, WWF International Trustee
Mr. John H. Blower, Project Manager, FAO National
Parks Development Project in Indonesia

Abstract: Sumatra, with the richest mammal fauna in Indonesia, has some 195 species, including 12 IUCN Endangered Species, among them tiger, elephant, Sumatran rhino, Malayan tapir, and wild dog. These large mammals typically require extensive ranges in order to maintain sufficient populations and to avoid harmful conflicts with villages, but the forests of Sumatra are rather quickly being fragmented by logging and cultivation, bringing the animals into regular troublesome contact with farmers. While Sumatra has a generally adequate system of reserves, these are too small to contain viable populations of large mammals, so new management methods need to be evolved; these could be based on an expanded concept of "elephant ranges", where large areas of land are managed in a way compatible with large mammal conservation. Forestry would be allowed in certain parts of the range, provided appropriate controls were developed, but each range would have a reserve or national park as a core area. This project would make surveys to locate the most appropriate areas for such ranges and develop the range concept in practical terms which can be applied in Indonesia. The new land-use techniques could provide a long-term conservation strategy, but there are also short-term problems with crop and livestock-raiders; these problems are of direct importance to the villagers living in close proximity to the wildlife, and it is essential that workable solutions be found to these problems if tigers and elephants are to survive. A "Wildlife Control Unit" is proposed to be established under the Directorate of Nature Conservation and trained to carry out management guidelines generated by this project. Finally, public education is an important part of the project, both for the general public and for the villagers who are directly affected.

*Received: May 29, 1980

II. PROJECT DESCRIPTION

Conservation achievement: The overall objective of this project is the conservation of viable populations of all endangered species of large mammals on Sumatra. This will involve two components: a) Surveys and discussions leading to new approaches to conservation of species whose ranges are too large to be contained within reserves, possibly based on an expanded concept of "elephant ranges", b) The establishment of a "Wildlife Control Unit", based in Sumatra and available for any conflicts which may from time to time arise between wildlife and local people. Operational objectives:

To assess the effectiveness of existing reserves for conserving large mammals and to suggest alternative land-use systems compatible with conservation;

To evolve a set of practical management guidelines for large mammals and implement these guidelines through the establishment of a Wildlife Control Unit;

To elaborate management plans for one or more "Wildlife Management Ranges";

To train Indonesian counterparts in wildlife management;

To devise a plan for educating the Indonesian public about the plight of endangered large mammals; especially tiger, elephant, rhino, tapir, and wild dog; this would include a separate plan for educating the rural people who are in frequent and direct contact with these species.

Justification: Sumatra is the most promising Indonesian island for the conservation of large species of mammals; endangered species include elephant (Elephas maximus, found elsewhere in Indonesia only in the northern tip of Kalimantan), tiger (Panthera tigris, extinct or nearly so elsewhere in Indonesia), Sumatran rhinoceros (Dicerorhinus sumatrensis¹, nearly extinct in Kalimantan), Malayan tapir (Tapirus indicus, found in Indonesia only in the southern half of Sumatra), and wild dog (Cuon alpinus, with viable Indonesian populations only in Sumatra).

All of these endangered species suffer from a similar set of problems. Habitats that once formed continuous expanses of thousands of square kilometers are now shrinking rapidly and are being fragmented into small "islands" of habitat which are too small to contain viable populations of these wide-ranging species. Shifting cultivation or illegal agriculture following logging activities is a major factor.

These problems have led to conflicts between man and animal. Elephants in various parts of Sumatra, especially Lampung, cause serious damage to agricultural crops and occasionally destroy houses and other property. Tigers

¹See Note No. 4 in Simpson, G.G. 1945. Bull. Amer. Mus. Nat. Hist., 85:142, and Groves, C.P., and F. Kurt, 1972. Mammalian Species, No. 21:1.

may kill cattle, buffalo and other domestic livestock, particularly in areas where their natural prey species are in short supply due to over-hunting or other reasons. And there are still occasional reports of man-eating.

It is accepted by the Directorate of Nature Conservation that wildlife control is its responsibility, but the capability for providing protection to crops and human life is not yet sufficient for the task. This has resulted in a situation where villagers take matters into their own hands, or call in police or military; this can often make matters worse, particularly if the animals are made more dangerous by being injured.

The IUCN "Conservation Programme for Sustainable Development" (1979) lists nine objectives, eight of which apply to this project (lacking only Objective 9, dealing with programme development and evaluation). By making conservation an integral part of broad land-use systems (not just a matter of parks and reserves), conservation is being integrated with development planning; the project will generate new administrative and institutional approaches to large mammal conservation; public education will be essential to achieving the objectives; ecologically sound management of large ecosystems will be promoted; certain core areas will be fully protected as parks or reserves; endangered species of large mammals will be conserved (including three of IUCN's priority groups); through the coordinating office in Bogor, action in the field will be coordinated with national and international efforts; and through action and publicity, the conservation movement will be strengthened.

Background: Large-mammal conservation in Indonesia has not been as effective as had been hoped, largely because viable populations of large mammals appear to need larger areas than can be protected as parks or reserves. In the case of elephants (of which there are about 300 left in Sumatra), the best way of conserving them may be the creation of "Elephant Ranges", where substantial areas which include the entire annual range of a healthy elephant population will be managed in ways consistent with maintaining elephant populations. While the core of the range will typically be a reserve or national park, other parts of the range will allow such human uses as are compatible with elephants. Since these animals do well in partially disturbed areas, they are likely to benefit from limited use of the forested uplands, including selective logging, traditional hunting of deer and pigs, bamboo extraction, and slash-and-burn agriculture (if it is done at traditional population densities at a sustained-yield level for the system). It seems quite likely that such limited use is in fact the optimal long-term human use of the forested uplands in most parts of Sumatra.

Since elephants are apparently the widest-ranging of the endangered large mammals, it seems likely that the other species will also benefit from the elephant range land-use category. In particular, tigers are suffering from range contraction which brings them into conflicts with people, but the elephant range could as easily be considered a tiger range (though the elephant is a more popular animal than the tiger, hence a better "front man" for the concept).

But even with new elephant ranges or "wildlife management ranges" as a part of land-use planning in Sumatra (building on the National Conservation

Plan chapter on Sumatra, just being finished by the FAO National Parks Development Project), there will still be conflicts with crop-raiders or livestock-hunters. This project will evolve a set of practical management guidelines for controlling problem large mammals, including alternative methods of capture, translocation, care and transportation of animals after capture, and, in the case of elephants, possible domestication for work in forestry or tourism. These guidelines will be developed by the "Wildlife Control Unit", which would have responsibility for investigating and dealing with all reports of damage or threatened damage by wildlife.

It is realized that one such unit will not be sufficient to cover all of Sumatra, much less the other islands where problems may from time to time crop up. But this unit would be a pilot project which would evoke working methods and management guidelines which can be applied to other units as they become necessary and feasible.

This project would be an intergral part of the Directorate of Nature Conservation; WWF would supply an expert in large mammal management for a period of two years to help train personnel and start the unit, but full responsibility for the unit would rest with the PPA. The counterpart, perhaps a newly recruited veterinarian, would be trained in the field by the WWF expert and sent abroad for various training courses (perhaps to East Africa) under separate funding to be sought.

The project would build upon previous WWF projects in Sumatra, including the surveys by Borner and Seidensticker, management plans for Gunung Leuser, and the conservation master plan for Siberut (which treats conservation in a broad, island-wide context which might be applied to appropriate areas of Sumatra).

Local involvement and training: This project will include training as a primary objective. Under WWF Project 1746, a "WWF conservation fellow" will be selected as a second counterpart to the WWF expert and will be trained in all pertinent aspects of large mammal management. The project will cooperate with the PPA in establishing a mobile "Wildlife Control Unit" for dealing specifically with the conflicts between man and wildlife, and training this unit will be one of the responsibilities of the expert. It is expected that the management unit will be fully independent at the end of the project and that all its members will be sufficiently trained to competently carry out their assigned duties.

Public awareness and conservation education: This project aims to establish and maintain good relations with local government officials, at both the provincial and the local level. Regular meetings and discussions will be the primary mode of cooperating with these officials in order to earn their ort for the project and for integrating large mammals into land-use plans.

It is also essential to devise a plan for educating the Indonesian public about the plight of the large mammals of Sumatra, including a separate plan for educating the rural people who are in frequent and direct contact with these large mammals. Through cooperation with the PPA, the WWF in Bogor, and the Green Indonesia Foundation, the general public will be approached via

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established media, including television, newspapers, and popular magazines; appropriate posters and leaflets will be produced for presentation to the people, explaining the aims and objectives of the project and how it benefits them.

III. REFERENCES

Ir. Lukito Daryadi, Director of Nature Conservation, Jl. Juanda 9, Bogor, Indonesia.

Dr. Emil Salim, Minister of Development Supervision and the Environment, Jl. Merdeka Barat 17, Jakarta, Indonesia.

Mr. Julius Tahija, WWF International Trustee, Kotak Pos 2437, Jakarta, Indonesia.

Mr. John H. Blower, FAO Project Manager, P.O. Box 133, Bogor, Indonesia.

IV. PROJECT IMPLEMENTATION

A. Personnel

1. Principal investigator: To be selected
2. Administrative responsibility: WWF Indonesia Programme

B. Methods

Standard survey techniques will be used throughout the project, though new techniques are likely to be developed as well. A long-wheel-base Land Rover will be needed to transport the Wildlife Control Unit, which might comprise six people, including a veterinarian and a number of ex-hunters from Sumatra ("pawangs").

The key to the success of this project is the WWF expert. He must be experienced with large mammals in Asia, able to cooperate well with Indonesians of all levels from governor to villager, able to communicate at both a scientific and popular level, able to adapt to difficult field conditions, and preferably already have some experience in Indonesia. Once such a person has been recruited and briefed in Bogor, it is expected that he will be fully responsible for developing his own field programme with minimal guidance from Bogor (though he would remain in frequent and regular contact and would receive full administrative support from headquarters).

C. Budget (two years, indicative only):

Principal investigator consultancy fees (24 man-months)	US\$	36,000
International travel		2,000
Long-wheel-base land rover		12,000
Local travel, including porters, etc.		15,000
Equipment		6,000
Production of reports		1,000
Educational materials		3,000
Counterpart expenses (paid under project 1746)		--
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TOTAL	US\$	75,000 =
	Rp.	46,875,000

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