
REPORT ON A PREPARATORY MISSION FOR THE IMPLEMENTATION OF THE
'SINGAPORE PROPOSALS' FOR CAPTIVE BREEDING OF SUMATRAN RHINOCEROS
(*Dicerorhinus sumatrensis*) AS PART OF A CONSERVATION STRATEGY FOR THE
SPECIES.

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Conservation Masterplan



Background

In 1982 a number of zoos became interested in acquiring a few Sumatran rhinos, a very rare and interesting species of which none were in captivity, for a comprehensive captive breeding programme to supplement the conservation efforts for this species. Independently the Howletts and Port Lympne Zoos (HPLF) in the United Kingdom and the American Association of Zoological Parks and Aquariums (AAZPA), in particular the conservation coordinator Dr. Thomas J. Foose, sought contacts with Southeast Asian countries where the rhino was known to survive. In the subsequent years draft agreements were worked out between the Department of Wildlife and National Parks of Peninsular Malaysia (**Perhilitan**), the Wildlife Section of the Forest Department of Sabah (WSS) and the Sumatran Rhino Trust (SRT) of the AAZPA (further referred to as the Malaysian/USA agreement) and between the Directorate General of Forest Protection and Nature Conservation of the Republic of Indonesia (PHPA) and the HPLF (further referred to as the Indonesian/UK agreement).

Because of the very sensitive and possibly controversial nature of a project involving the capture of a number of specimens of a very rare and endangered species, the parties involved requested the participation as a coordinator and independant monitor of the International Union for Conservation of Nature (IUCN), in particular of IUCN's Species Survival Commission (SSC), its Asian Rhino Specialist Group (ARSG) and its Captive Breeding Specialist Group (CBSG). Therefore the IUCN SSC convened a meeting in Singapore on 3 and 4 October 1984, where the proposed projects were discussed in depth by representatives of all parties involved or interested. Consensus was reached on a statement of principles, which was later called the 'Singapore Proposals'.

The chairman of the Singapore meeting, Dr. Ulysses S. Seal (Chairman of the CBSG) prepared detailed minutes, with supporting documents, of the meeting and a summary report, which were, together with comments from the participants, sent to SSC for endorsement. The Steering Committee of SSC considered the reports on its meeting in Madrid, 1 November 1984, and endorsed the proposals with enthusiasm. In a letter dated 20 December 1984 the Director General of IUCN, Kenton R. Miller, expressed IUCN's endorsement of the Singapore proposals, "contingent on future actions continuing to be in accord with both the spirit and letter of the agreements".

Since it may not be clear what is ment by the 'Singapore proposals', it seems most appropriate to regard the summary in the Memorandum from Robert F. Scott,

Executive Officer SSC, to Kenton R. Miller, Director General IUCN, dated 19 December 1984, as the 'official' version of the 'Singapore proposals', because this document carries the endorsement of IUCN. Since this document has not been widely distributed outside the participants of the Singapore meeting it is appropriate to include the complete text here.

THE SINGAPORE PROPOSALS

1. The primary goal is long term survival of the Sumatran rhino as a species and as a component of natural ecosystems.
2. A comprehensive masterplan for conservation of the species will be developed, which will be collaborative and multinational in nature and which will identify and integrate all of the actions necessary to achieve the primary goal.
3. Development and oversight of the masterplan will be the responsibility of a full-time, paid 'coordinator' with the advice and participation of the SSC Asian Rhino Specialist Group and an advisory board composed of representatives of the interested parties. IUCN is able to hire the coordinator on a consultancy contract with funds provided by the parties, and with terms of reference agreeable to the parties. Implementation of various segments of the masterplan will be accomplished by various of the parties as mutually agreed and specified.
4. The conservation programme will include the following three fundamental activities:
 - a) Provide primary support for a programme of conservation of the Sumatran rhinoceros as viable populations in sufficiently large areas of protected habitat.
 - b) Develop an educational programme to enhance public awareness and support for the Sumatran rhinoceros.
 - c) Establish a captive propagation programme for the preservation of the genetic diversity of the Sumatran rhinoceros in the countries of origin and in North America and Europe, using animals with no hope of survival in the wild.

The parties are committed to contribute to each of these in each country as mutually agreed, with details subsequently recorded in a bilateral memorandum of understanding or similar document.

5. The following principles and actions are to be observed in the captive propagation programme:
 - a) Animals selected for capture in the wild are to be 'doomed' individuals or come from 'doomed' populations or habitats; that is, those whose future long term viability or contribution to the survival of the species is determined to be unsatisfactory as measured by objective criteria subject to continuing refinement.
 - b) Currently presumed subspecies stocks will not be mixed, either in captive breeding or in wild translocation until further work is done on their taxonomy.
 - c) The zoo communities will provide support and technical assistance in field capture and transfer operations.
 - d) Bilateral agreements will provide for captive breeding programmes in the countries of origin as well as in the US and UK.
 - e) Animals sent abroad will be on breeding loan from the countries of origin, or under some similarly equitable ownership agreement of sufficient time span to protect all interests.
 - f) All animals placed in captivity and their future progeny will be managed cooperatively as part of a 'world population' in the light of the primary overall goal of the programme. Decisions will be taken by consultation among the owners and interested parties, with oversight by the coordinator and advisory groups.
 - g) Bilateral agreements will provide for appropriate support, training and technical assistance in captive breeding in the countries of origin.

[Note: The masterplan mentioned in 2 may be called the 'Sumatran Rhino Conservation Masterplan' and is further referred to as the **Masterplan**. The title of the coordinator mentioned in 3 may be 'IUCN Coordinator of the Sumatran Rhino Conservation Masterplan' and is further referred to as the **Coordinator**. The advisory board composed of representatives of the interested parties mentioned in 3 has so far been called the 'Sumatran Rhino Foundation'. Although the term foundation is less appropriate the name may be retained because of previous usage, and will be further referred to as the **Foundation**.]

During the Singapore meeting the outlines for the bilateral agreements were drafted and discussed. The agreements were further refined through consultations between the partners and in the beginning of 1985 it appeared that the negotiations had reached their final stage and that the parties were close to reaching agreement on most points. As a token of its support for this project IUCN provided the funds for the preparatory mission reported on here.

As (proposed) IUCN Coordinator of the Sumatran Rhino Conservation Masterplan, I was requested to travel to and consult with the interested parties, to review the proposed agreements, and to make proposals for the masterplan, the advisory group, the selection of capture sites, the management of the captive population, and the function of the coordinator.

Itinerary.

I travelled from 9 till 13 March to Howletts and Port Lympne in the United Kingdom and to the World Conservation Centre in Gland, Switzerland. From 17 March till 4 April I travelled in the USA for discussions with the AAZPA conservation coordinator, the chairman of the CBSG and to visit the zoos participating in the programme (Cincinnati, Los Angeles, New York, Miami, San Diego and Washington). During this period I was the guest of the SRT. From 11 April till 12 May I travelled in Malaysia, Sabah and Indonesia for discussions with the authorities and to collect information on the future capture sites. Finally on 25 and 26 May I travelled again to Howletts and Port Lympne to discuss the latest developments of the Indonesian/UK agreement and to meet with the AAZPA conservation coordinator and the CBSG chairman, who were visiting there.

General comments.

Everywhere I was received with great hospitality and it was clear that the involvement of an IUCN Coordinator in this project was widely endorsed and appreciated. All aspects of the project could be discussed openly and in full detail and suggestions from my side were appreciated and incorporated in the drafts. I am convinced that the same openness will prevail in the future developments. The good spirit shown by all parties at the Singapore conference is still vivid, but of course the real test will come when the first rhinos have been bred and their future has to be decided.

It was extremely useful to be able to visit the participating zoos and to meet their staff. I was genuinely impressed with the facilities they have developed and with the expertise and dedication of the staff. It would be foolish not to make use of these facilities for a captive breeding programme. The present programmes of breeding in the countries of origin, with transfer of technological and financial support from outside, as well as breeding abroad in highly experienced institutions, is certainly the best solution. For captive breeding zoos are the natural partners of conservation.

Remarks on the position of the zoos

The American zoos participating in the SRT are very much dependent on the support of the public and put much effort in attracting more visitors. Certainly the Sumatran rhinos will also be used for this purpose. Emphasis is put on exhibiting the animals in a way that is attractive for the public. As a consequence the animals are housed so that they are easily visible for the public during the opening hours. Often animals are only allowed out in the opening hours and are locked up for most hours of the day, usually very close to each other even when they are carefully separated when out in the yard. The daily rhythm and the social conditions under which zoo animals are kept are often quite distinct from what they are in the wild. This may be perfect for zoo-animals that have completely adapted to zoo conditions and are being domesticated, but it is not right for Sumatran rhinos in the initial phase of the breeding programme. The rhinos are in the zoo to breed and, at least part of the animals, are destined to go back to the wild later. Therefore the zoos should be extremely careful when the rhinos are to be displayed and they should do everything to avoid any unnecessary adjustment to typical zoo conditions.

The Howletts and Port Lympne zoos are in an unusual and enviable position. They are not dependent on the support and income from the public, and don't need to make concessions to attract visitors. The zoos are managed, with great success, by and for the owner, Mr. John Aspinall, who provides the financial backing of the enterprise and on whose ideas the management is based. So far they have been very successful in acquiring and breeding a great number of rare mammal species, but the continuity, once the driving force of the founder has fallen away, is a point of concern. The continuity of the Sumatran rhino programme could be better guaranteed if HPLF would seek active cooperation with a few other zoos in the UK or Europe, to manage the future captive population. Other zoos will probably be involved anyway later, because it is unlikely that HPLF will be capable of housing the whole captive population once they start reproducing successfully. The aim is to have a captive population of a genetically effective size of 25, as is specified in the bilateral agreements, which would involve housing 30 to 35 individuals or more.

Since none of the captive facilities, except those in Melaka, have been constructed to date, problems may develop if a number of animals is caught rather soon. The bilateral agreements provide for the shipment of animals according to a certain schedule (a random draw for the American zoos; 1st and 4th pair to go to UK). The shipment of the animals should be conditional to the readiness of the facilities and the exporting countries should make sure, through the coordinator, that the institutions to which export permits are issued have adequate permanent facilities ready or in an advanced stage of construction. This should also apply to the facilities to be developed in Sabah and Indonesia. Until the animals can be shipped to the permanent captive facility they should be kept in the countries of origin in temporary facilities managed by the capture teams. Because of the unpredictability of the capture the temporary facilities should be adequate to house the animals for relatively long periods of time.

Rhino husbandry

There is virtually no experience in keeping and breeding Sumatran rhinos in captivity, and therefore there is the danger that the Sumatran rhinos will be treated like a miniature replica of Indian or African rhinos. One should realize that the natural habitat of the Sumatran rhino species is rather distinct from that of the other rhino species and that they may require a different treatment for successful breeding. Forest animals are often difficult to keep and breed in captivity. Until there is sufficient experience over a number of years the best policy is un-

doubtedly to look at the natural surroundings for the design of the captive facilities. It may be that the Sumatran rhino is very adaptable and will breed under conditions that are very different from the natural ones, but as long as experience is lacking one should design the captive facilities and arrange for them to be treated as much as possible like under natural conditions.

It is impossible, and probably unnecessary, to mimic the natural habitat of the rhino in a zoo, but one should avoid major changes in diet, daily rhythm, social structure and one should give the animals a surrounding that contains as much as possible elements from the natural environment. For instance Sumatran rhinos should be kept single, except for a short period when the female is ready to mate; when possible they should be able to roam free day and night; they should be given browse, at least as an addition to the standard fare. There should be deep shade over most of the yard and plentiful cover in the form of trees, bushes or poles. There should be a mud wallow in a secluded spot and preferably also a pool. The climate should be humid and with moderate temperatures, avoiding too great daily changes.

All zoos realise that simply changing the nameplate does not make a black rhino enclosure into one for Sumatran rhino. All zoos plan to build new facilities or will convert an existing one for the Sumatran rhino, but few designs have been finalised and most zoos are uncertain about the details. A good cooperation and an exchange of ideas between all zoos is necessary to develop the best designs and schedules, adapted for the local circumstances, for the enclosures and husbandry. The Coordinator and the Foundation could play an important role in this. The zoos should consult with the other parties on the designs for the enclosures and the proposed husbandry practices through the coordinator. And once the rhinos are in captivity the zoos should send detailed reports on their experiences, not only on their successes, to the coordinator to be redistributed to the other parties.

For a successful breeding programme there should be a good exchange of ideas and experiences between the parties and criticism should be welcomed. To start the discussions I plan to make a review of the existing, albeit scanty, literature on husbandry of Sumatran rhino and write down some suggestions for enclosure design and husbandry, based on the present knowledge of the animal's ecology.

Principles of a 'world population'

The Singapore proposals stipulate that all animals in captivity shall be managed as part of a 'world population' and that decisions on the management of the 'world population' must be made by consultation among the owners and interested parties, with oversight by the Coordinator and the advisory group. So the Foundation, where all interested parties and owners are represented, is the appropriate organisation to provide the guidelines for the management of the captive population. This is a long-term commitment and therefore the Foundation should not be allowed to fall apart once the present capture programmes have ended, but it should remain in function until the primary goal of conserving the species has been achieved.

Management as a world population primarily requires a free exchange of animals and germplasm between the different captive facilities and between the captive and the wild populations when that is necessary for maximizing the genetic and demographic vitality of the rhino populations. The guidelines and the concrete plans for the exchanges, based on scientific principles, should be developed by the Foundation, who should guard against domination of private, commercial and nationalistic motives.

For the time being the accent will be on the establishing of the initial captive populations and on breeding the first offspring. Once this is achieved exchanges of animals and germplasm will become very important. For this to be successful, and in particular for a successful reintroduction in the wild, the distribution of the captive population will be of imminent importance. When the rhinos are being scattered over many distant locations exchange of animals will be troublesome and it will be almost impossible to get animals for reintroductions. The present plans already provide for captive breeding in 8 different locations in SE Asia, the UK and the USA, each starting with only one or two pairs. Until the captive groups have reproduced successfully and each facility has several pairs, no animals should be moved to other zoos or breeding units. Only when the captive population is stable and the 'surplus' animals are not needed for reintroductions, may it be decided to involve other facilities in the captive breeding programme.

There will certainly be a strong demand from zoos in other parts of the world for Sumatran rhinos once the programme is under way, and some very tempting offers can be expected. To guard against unwanted movements of animals the parties should adopt the principle that the animals will never be sold, not for money nor for other animals, and that they can only be moved with the consent of all Foundation members.

The bilateral agreements

The Malaysian/USA agreement had been worked out in great detail between the partners, but at the time of my visit to Malaysia there were still differences of opinion about certain parts of the contract. In Malaysia I met up with Tony Parkinson, SRT's Field Supervisor, and much time was spent on discussions on the proposed agreement. At the end of the visit compromise articles were drafted that were acceptable for the Peninsular Malaysian Authorities. Some further changes were agreed between the partners and both the Perhilitan and SRT were ready to sign the document.

The WSS and the Forest Department in Sabah agreed in principle with the programme, but could not promise a speedy signing of the documents. Recent changes in the State Government and negative publicity in the press, made the Forest Department wish to reconsider the project and postpone the final decision. It was feared by the other parties that the Forest Department's hesitation could jeopardise the whole project. Further delay of a programme that had been so thoroughly discussed and where there were no more major points of disagreement seemed unnecessary and also the plight of the rhino (at least two or three are killed each year in Sabah) urged a speedy decision. At the end of my visit the matter seemed unsettled, but later Mr. Mohd Khan, Director General of the Perhilitan and Chairman of the ARSG, was able to visit Sabah for further discussions. This freed the way for a favourable decision from the Forest Department and the signing of the Malaysian/USA agreement was expected in July, but to date no final decision has been taken. (October 1985)

The Indonesian/UK agreement had not been worked out in detail at the start of the mission, but there was agreement on a few points in a memorandum of understanding signed on 11 November 1984 by Prof. Dr. Ir. Rubini Atmawidjaja, Director General of PHPA and Mr. John Aspinall, Director of HPLF. While in Bogor I met Mr. Francesco Nardelli, Curator of HPLF and the Field Supervisor for the Sumatran operations of PHPA/HPLF. Together a draft agreement was made, based on the Malaysian/American agreement, where necessary adapted. This draft was fully acceptable to me, except that I would like to have included a management committee or similar structure for the day-to-day decisions. This point had to be discussed further with HPLF. The draft was presented to PHPA and briefly discussed, and PHPA did not express any major difficulties with the draft agreement.

In the meantime the UK embassy was contacted, because PHPA wished to have the agreement endorsed by the UK Government. After I left Indonesia the discussions were continued between PHPA and HPLF's representative and on 24 May an agreement was signed between the partners and endorsed by the Minister of Forestry, Dr. Soejarwo and H.B.M. Ambassador, Mr. Alan Donald.

Comments on the bilateral agreements

The Indonesian/UK agreement signed on 24 May is in many aspects much different from the draft that I discussed with PHPA and HPLF's representative. The changes are apparently made on instigation of PHPA, but nothing of this was discussed with me, nor with the HPLF representative, during the two weeks that I stayed in Bogor. Any mentioning of IUCN, the Singapore Proposals, the Coordinator, the Sumatran Rhino Foundation and the Masterplan have been deleted from the text, and a few articles on a fixed amount to be paid for each rhino and insurance for the rhinos abroad have been added.

In the present agreement little of the Singapore proposals can be found, and PHPA should clarify its position with respect to the Singapore proposals, which they helped to draft, and with respect to the role of independent monitor and coordinator provided by the IUCN/Foundation/Masterplan structure.

Apart from the fact that the Singapore proposals do not seem to be fully incorporated in this agreement, a few articles seem to be inconsistent with the conditions that HPLF has agreed with the Department of Environment for the CITES import permits (See appendix A). These conditions were negotiated between the department and HPLF and were, after consultation with IUCN, accepted by both. On these points the agreement needs modification.

Most of these apparent inconsistencies are probably unintentional, caused by too hasty redrafting without full consideration of the consequences of the changes. The basic structure of the agreement is acceptable, but IUCN should ask PHPA for a clarification and for a letter of intent or similar document to supplement the agreement, in accord with both the spirit and the letter of the Singapore Proposals.

A point of concern with both agreements is the emphasis on capturing a certain minimum number of pairs of rhinos. It places the programme in the wrong perspective and it is not very realistic because there is no guarantee that any number of pairs can be caught. For founding a captive population the principle should be 'the more the better', but in the end one shall have to do with the number of 'doomed'

animals that can be located and caught. Emphasis should have been placed on the function as a rescue mission, to save a number of animals from certain death, with the hope of procuring enough animals to found a captive population. Also it is doubtful whether the numbers of pairs mentioned in the agreements can be regarded as being sufficient for the long-term viability of the captive population, with adding more rhinos later.

From the standpoint of the people who provide the finances for the programme the desire to have a certain return for their investment is perfectly understandable, but the mentioning of minimum numbers of pairs in the agreements is not conducive for the universal acceptance of this programme. There is still much scepticism with respect to the intentions of the zoos involved and precisely these articles in the agreements give fuel to further criticism from the conservation side.

The same applies to the articles in the Indonesian/UK agreement where the 'price' of a Sumatran rhino is put at \$50,000 (to be deposited in the Indonesian Wildlife Fund for unspecified conservation projects) and where HPLF is required to insure the rhinos for \$25,000 per head. This is a very sensitive issue and articles in the agreements that can be seen as putting a market-value on the Sumatran rhino should have been avoided.

Locations for capture

In both agreements a few areas are mentioned where immediate attempts to capture are recommended. In Malaysia I paid a short visit to the Mersing coast area, where a trap had been built and activated. In Sabah and Indonesia I did not have enough time to make visits to these areas, but I could gather sufficient information from others. In all cases it seemed justified to start capture because the rhinos and the habitat are seriously threatened and the population has very limited potential for survival. A detailed report is attached.

When I was in Malaysia a second young female Sumatran rhino was caught by plantation workers and handed over to the Perhilitan. The animal arrived in perfect condition in the Melaka zoo. The animal apparently originated from a 1000 ha patch of forest surrounded by oilpalm plantations. It was not known that rhinos survived in this location, and this event proves that there are probably more of these small isolated populations left than is generally believed. It also shows that a public awareness campaign is urgently needed. It may seem fortunate that rhinos are

becoming so easily available for the captive groups, but these animals should have been left untouched. Capture of rhinos is unlawful without the consent of the authorities and the animals are perfectly harmless.

The oversight structure

While I felt that the activities of a IUCN coordinator were appreciated by all parties, and that they will fully support his activities, I encountered less enthusiasm for the advisory group (the Sumatran Rhino Foundation) and the Masterplan. There were fears that it would lead to decisions being taken by outsiders and that it would violate the authority and independence of the parties.

This is certainly not intended by IUCN and these fears are unjustified. The Sumatran Rhino Foundation is an advisory group and is composed of the parties involved in this project and international conservation groups, all having an equal right and vote. Also the masterplan will not be a plan dictated by IUCN, but it will be drafted in consultation with the Foundation members who will have to make the final decisions on the contents of the plan.

The Foundation is best organized as the SSC Specialist Groups, installed by the IUCN/SSC. SSC should invite the proposed members to participate and to appoint a representative. The proposed terms of reference, prepared by IUCN and the Coordinator, should be distributed for discussion (A draft document is attached) and when all parties have approved and signed the terms of reference the Foundation will start to function. The further details will then be worked out among the members. The Foundation will work mainly by correspondence, but it may be appropriate to have occasional meetings.

The coordinator should be appointed by IUCN/SSC and he should be responsible to IUCN/SSC for the technical matters and to the Sumatran Rhino Foundation for matters concerning the programme (A draft terms of reference is attached). He will be the contact person between the Foundation members and carry out the coordination and independent monitoring specified in the Singapore Proposals and in the bilateral agreements. He will be appointed as soon as the agreements are signed and the zoos have remitted their contribution to IUCN.

The masterplan, that will give the guidelines and principle for the actions to be taken by the foundation members, will be drafted by the coordinator, and will be published, after consultation with and approval of the Foundation members,

as a series of documents. These documents will be drafted and published when needed and may concern all matters of importance for the welfare of the Sumatran rhino in the wild and in captivity.

Evaluation of the bilateral agreements

Below the complete texts of the two bilateral agreements are printed in small type, side by side for easy comparison. Comments are inserted in normal type. The Malaysian/USA agreement (WDMS & SRT) is the most detailed document and it has been discussed and reviewed many times. The Indonesian/UK agreement (PHPA & HPLF) is adapted from the Malaysian/USA agreement and where possible the same text was used. This agreement was originally drafted in consultation with the (proposed) IUCN Coordinator, but has been modified later. This has led to a number of apparent inconsistencies.

The text of the Malaysian/USA agreement is followed, with in the righthand column the corresponding text from the Indonesian/UK agreement. When the text in both agreements is similar or almost so it is printed over the full page.

HPLF= the Howletts and Port Lympne Foundation
PHPA= Directorate General of Forest Protection and Nature Conservation of Indonesia
SRT= Sumatran Rhino Trust of the American Association of Zoological Parks and Aquaria
WDMS= Wildlife Departments of West Malaysia and Sabah

WDMS & SRT Agreement

PHPA & HPLF Agreement

P R E A M B L E

Recognising that the Sumatran rhino is one of the most endangered mammal species in the world and is facing serious threats of habitat loss, poaching and other mortality factors:

1. The HPLF/SRT together with the PHPA/WDMS agree to work together on a project aimed at providing this species with the maximum chances of survival.
2. The HPLF/SRT recognise that as part of their commitment to the conservation of the species, they will undertake to fund conservation activity beyond their normal emphasis of acquiring animals for their collections.
3. The PHPA/WDMS recognise that the technically advanced facilities existing in England/North America provide for a more rapid increase in size of a captive breeding group which potentially could be utilised for re-introductions back into their natural habitats at a more suitable time in the future. However it is noted that the entire programme will be managed as a single conservation effort for the species and, in general, will be aligned so that the species stands to gain the maximum advantages.

Background - Basically similar, but in the Indonesian/UK agreement the references to the role of IUCN, the Singapore agreements etc. have been deleted, with the result that the programme is taken out of the context.

B A C K G R O U N D

1. This agreement is entered on this date by the PHPA/WDMS and HPLF/SRT. Collectively, West Malaysia, Sabah and the SRT constitute the 'parties' and the 'signatories' to this agreement.
2. The purpose of the Agreement is to establish a conservation project between the parties as part of a global strategy for conservation of the Sumatran rhinoceros Dicerorhinus sumatrensis (referred to as the 'Rhino') being developed under auspices of the Species Survival Commission (SSC) of the International Union for the Conservation of Nature and Natural Resources (IUCN).

2 - Both mention the global strategy for conservation of the Sumatran rhino, but this is not further specified in the Indonesian/UK agreement. For clarity this should be corrected.

3. The goal of the strategy is the long-term survival of the Rhino as a species and as a component of its natural ecosystems.

4. The strategy is justified because:

- (A) The rhino is a greatly endangered species;
- (B) The rhino presently survives in the wild to a great extent in small, isolated populations which may not be genetically or demographically viable for the long-term;
- (C) The rhino population is decreasing due to poaching, logging, and a combination of factors;
- (D) Elimination of this species will deprive mankind of a irreplaceable, natural resource;
- (E) This agreement is entered into for the purpose of supplementing a conservation program to prevent the extinction of the Sumatran Rhino and thereby enrich our environment by preserving for mankind a species of invaluable scientific, educational and cultural significance.

5. The strategy will attempt to achieve this goal through conservation programs for:

- (A) The protection of viable populations in sufficiently large areas of natural habitat, and
- (B) Captive propagation to preserve a reservoir of genetic diversity employing animals with no apparent hope in-situ of contributing to the long-term survival of the species.

6. However, since the expertise and resources of the HPLF/SRT are largely oriented toward captive propagation, their contributions must concentrate on this part of the strategy while providing other limited support for the in-situ conservation efforts.

7. Thus the major objective of this specific cooperative conservation project is to develop a program of captive propagation for the rhino.

8. The primary purpose of the captive propagation will be to reinforce wild populations.

9. The project will be developed in accordance with the guidelines established by the IUCN Ad-hoc Meeting on Sumatran Rhino conducted in Singapore, 2-4 October 1984, and attended by representatives of the parties to this Agreement. ('the Singapore Proposals'): See appendix I.

10. The project will be developed under the oversight of the Sumatran Rhino Foundation ('Foundation') to be established under the auspices of the IUCN SSC. The foundation will operate as an independent task-force under the aegis of the Asian Rhino Specialist Group of the IUCN SSC. Initially, the foundation will consist of the Sumatran Rhino Coordinator ('Coordinator') and one representative each from WDMS, SRT, PHPA, HPLF, the IUCN SSC Asian Rhino Specialist Group and the IUCN SSC Captive Breeding Specialist Group. The Sumatran Rhino Coordinator will be employed by the IUCN under terms of reference which are available from IUCN.

9 and 10 - Both articles have been left out in the Indonesian/UK agreement and this takes the programme out of its context as an international conservation effort. Both articles should be reincluded in the agreement or in an addendum.

11/9. While the major contributions of the HPLF/SRT should and must be oriented to the captive propagation components of the conservation strategy for the rhino, the cooperative nature of the project will be further demonstrated by financial & technical support from the HPLF/SRT to Indonesia/West Malaysia and Sabah for in-situ conservation efforts.

This financial and technical support will include:

- (A) Assistance from the HPLF/SRT to increase protection of viable natural populations and sanctuaries. Priority in this regard will be given to the Tabin (Silabukan) Wildlife reserve in Sabah/National Parks in Sumatra containing viable rhino populations.

An important part of this assistance may be field research conducted collaboratively by Malaysian and SRT investigators.

- (B) Surveys to determine which rhinos are suitable for capture.

(C) Assistance for an innovative 'gene pool' project in West Malaysia that in concept will combine elements both of in-situ conservation and captive propagation.

(D/C) Training for PHPA/WDMS staff in management of captive and wild populations.

(E/D) Transfer of capture and transport technology

and wildlife husbandry technology

11 - Only minor differences with the Malaysian/USA programme providing also support for research and for the gene pool project.

Specifics of the project - The structure is similar but there are many important differences, mainly caused by omissions in the Indonesian/UK agreement.

SPECIFICS OF THE PROJECT

1. Captive propagation projects will be developed in West Malaysia, Sabah and North America/Indonesia and England.

2. Field operations to collect appropriate rhinos will be (simultaneously) initiated in West Malaysia and Sabah/Indonesia. An HPLF/SRT representative will coordinate and facilitate these efforts as the Field Supervisor. The field operations will commence within 30 (HPLF 60) days of signature of this agreement by all parties.

3. A Management Committee ('Committee') will be formed consisting of seven members. These would include the Director General of the Department of Wildlife and National Parks of Peninsular Malaysia as chairman; the Director of Research and Management of the Department of Wildlife and National Parks of Peninsular Malaysia; the Assistant Chief Game Warden of Sabah; three representatives from the SRT, one of which will be the Species Coordinator for the SRT; the IUCN SSC Sumatran Rhino Coordinator.

4. The primary function of the committee will be to supervise and facilitate implementation of the project as specified by the agreement and also if required to interpret the terms of this agreement.

However it is recognised that the primary responsibility of implementation of this project rests with the Malaysian parties to this agreement.

5/3. Because of the long distances and the local necessities of the project, the Field Supervisor would represent the HPLF/SRT on all day-to-day operational matters such as the coordination and supervision of the capture teams, the construction of the holding pens, the transportation and management of the animals after capture and the basic logistics supporting the operations both in Sabah and West Malaysia/Indonesia.

6. If any problem develops that cannot be resolved by the Field Supervisor as the Trust representative, and the local authorities, the Management Committee would be consulted by telephone or some other form of rapid communication. If the problem still could not be properly resolved, a physical meeting in a mutually acceptable location can be convened by the Chairman, the Field Supervisor, or a majority of the other members of the committee. This meeting would be for the purpose of dealing with any major matters not covered in the agreement as well as the management of the field operations in which there was a major disagreement.

7. Funds from the SRT for the project would be directed through the Management Committee, who are responsible to the Trust and who must present the documentation of the costs and a financial statement on a quarterly basis. At this point, the funds will be delivered to a special account of the Management Committee who shall act as paymaster in accordance with a budget adopted by the Management Committee. Payments shall be made by cheque or purchase order signed by any two members of the committee.

4. Funds from the HPLF for the project would be directed through the Field Supervisor who is responsible to the foundation and who must present the documentation of costs and a financial statement on a quarterly basis.

3 to 7 - These articles concern the management of the programmes, and the function of the Field Supervisors. The Malaysian/USA agreement provides for a management committee to manage the project, including financial matters. In this committee the Game Departments, the SRT, and the Coordinator are all participating equally and this structure enables the Coordinator to be fully informed on the progress of the programme. This is vital for his function. In the Indonesian/UK agreement the responsibility rests solely with the HPLF Field Supervisor and PHPA and the Coordinator have no function in the day-to-day management of the programme. This will make it more difficult for the coordinator to be informed and also PHPA should wish to be more directly involved in the management. Therefore a management committee or similar structure to enable a good communication should be included in the Indonesian/UK agreement.

8/5. A field capture team will be supported by the HPLF/SRT to operate (simultaneously) in West Malaysia and Sabah/Indonesia. The contractual obligation will cover a 3-year period from the date of the signature of the agreement by all parties. At the end of this 3-year period, signatories to the agreement will review the project and decide whether it is to be continued, modified or discontinued.

9. The number and identity of animals to be captured in West Malaysia will be determined by the Director General of Wildlife and National Parks in accordance with the criteria delineated by the Foundation Masterplan and subject to the review and ratification of the IUCN Sumatran Rhino Foundation.

At this time, all animals captured in West Malaysia will remain in the country of origin. The captive propagation program in West Malaysia will be located at the Melaka Zoo. Funds for adequate facilities to accommodate any and all rhinos placed at Melaka shall be the responsibility of West Malaysia.

Additionally, rhinos may be moved to a 'gene pool' site to be determined by the Director General. Actual distribution of rhinos captured in West Malaysia between the Melaka zoo, site of captive propagation in West Malaysia, or the gene pool project will be the decision of the Director General and will depend on the number of rhino captured during the 3-year period by the West Malaysian capture team.

10. In Sabah, rhinos will also be selected as candidates for capture according to criteria of the Foundation Masterplan. Preliminary analysis has indicated that all animals outside the Tabin (Silabukan) Wildlife Reserve and its contiguous environs and Danum valley identified in the report "the plight of the Sumatran rhino in Sabah" by P.M. Andau and J. Payne satisfy these criteria and are candidates for immediate attempts at capture. Other groups or populations of rhino that might be discovered in Sabah in the course of the Project will be evaluated on a case-by-case basis according to the Foundation Masterplan criteria.

6 (part) The number and identity of animals to be captured in Indonesia will be determined by the PHPA.

7. Preliminary analysis has indicated that animals in Torgamba area (Sumatra) are candidates for immediate attempts at capture.

9 and 10 - These articles concern the selection of the animals to be captured. The basic decisions rest with the national authorities, but in the Malaysian/USA agreement it is clearly stated that selection will be done in accordance with the Masterplan criteria and under the review of the Foundation. This is one of the most

crucial points in the Singapore Proposals, but is lacking in the Indonesian/UK agreement. The present text in the Indonesian/UK agreement is also apparently inconsistent with one of the conditions (B) for the import in UK, where it is stated that selection, capture and transport shall be independantly monitored. Therefore the IUCN oversight structure should have been mentioned here.

[Note: For comments on the areas that are suitable for immediate capture see the attached report on these locations.]

11. Due to the seriousness of the rhino situation in Sabah, it is deemed necessary that a healthy captive population be established without delay. This population is to be built up of animals in fragmented situations and of doubtful value to the natural population in the wild. The aim of this is to establish a reservoir of the Bornean subspecies that could be utilised at a later date for re-introduction in the wild when adequate reserves or systems of protection have been established. It is envisaged that five good breeding pairs will be set up at five different facilities i.e. Sepilok and the Cincinnati, Los Angeles, New York and San Diego Zoos.

12. Animals will be suitably matched by age and sex to maximise the breeding potential of this captive group.

6(part). At least 4 potentially breeding pairs are planned to be captured and equally distributed between the facilities at HPLF and Indonesia with the understanding that the 1st and 4th pair will be located at HPLF and 2nd and 3rd in Indonesia. If and when more doomed rhino are located, the Parties agree to consider capture of additional pairs. In case of death or infertility of any rhino, they will be replaced if and when animals will become available.

11 and 12 - Concerning the number and 'quality' of the animals to be captured. The Malaysian/USA agreement aims at five (or six- it has been suggested to house two pairs in Sepilok) breeding pair from Sabah and four from Peninsular Malaysia and the Indonesian/UK agreement at four breeding pairs, with a possibility of catching more doomed rhinos (here it is indicated that the animals should be from doomed populations, but this should have been worded more explicitly earlier). Both agreements speak about good or potentially breeding pair, which means that in fact more animals will have to be captured. It is not stated what shall be done with the surplus of unsuitable or unmatchable animals. This may cause a problem and it would be better if the captive facilities would guarantee accomodation for any rhino caught, and not just single pairs.

13. The SRT will assist technically and financially in the development of the facility at Sepilok.

6 (part). A breeding centre will be developed with the assistance of HPLF in Indonesia.

13 - The development of the captive facilities in Melaka is the responsibility of the Perhilitan (see article 9) and the facilities in Sepilok will be developed mainly with RST funds (see 19 C e). HPLF will assist in developing a breeding facility in Indonesia, but a location is not mentioned. Jakarta zoo may be interested, but it might be more appropriate to develop a facility in Sumatra. This should be worked out in more detail before the first animals are ready to be moved from the capture sites.

14. Derivation of all rhino destined for North America from Sabah will facilitate compliance with the Singapore Proposals recommendation for management of subspecies as separate populations in captivity for the near future.

15/8. By signing this agreement, it is understood that PHPA/WDMS agrees promptly to provide the HPLF/SRT with all documents needed for the legal exportation of these rhino from Malaysia/Indonesia (and their importation into the United States), immediately upon their capture.

16. The SRT will support through technical advice and financial help capture teams in both West Malaysia and Sabah. This support shall not exceed US\$ 250,000 in the first year of the project and will not exceed budgets agreed to each year thereafter by vote of the SRT (which shall depend upon the progress of the project as well as financial capability) on a date no later than 1 October in each calendar year. These funds will be assigned on a 4:1 ratio between Sabah and the Peninsula respectively.

17. The SRT will also provide technical and financial aid to the Sabah and Melaka captive propagation program, to the 'gene pool' project, and to in situ conservation efforts on a case-by-case basis to be approved by the SRT from time to time and in each year's budget and not to exceed US\$ 100,000 during the first year and US\$ 75,000 in each of the second and third years.

18. Further specifics on the amount of financial support will be determined mutually by the parties, project by project, based on the Foundation Masterplan.

15. It is understood that all the expenses for the survey, capture and transport of the rhino will be covered by HPLF.

13. HPLF will donate the sum of US\$ 50,000 per rhino received to the Indonesia Wildlife Fund to assist in the better preservation of the species in the wild.

13. HPLF will insure the rhino (at Howletts Zoo) in such a way that in the event of a death in captivity due to mismanagement by the Zoo personnel indemnity of US\$ 25,000 per rhino will be paid to the Indonesian Government.

17 and 18 - These articles concern the money made available for the in situ conservation programme. The Malaysian/USA agreement provides for financial help to in situ conservation projects (next to the support for the captive programme and the gene pool) of \$ 250,000 for three years, the details to be determined by the parties based on the masterplan. In the Indonesian/UK agreement the amount available for in situ conservation is dependant on the number of animals caught. The animals abroad have to be insured.

These articles (13 and 14 of the PHPA & HPLF agreement) discredit the programme and make it to appear to be an animal transaction instead of a conservation effort. It is also unpractical because it can never be foreseen how much money will be available in each year and therefore no concrete plans can be made. In article 13 HPLF promises to pay \$ 50,000 for each rhino received, but it is not clear whether this means received from the wild or received in the UK. Since all animals will be partly owned by HPLF and are part of one captive population this payment may be required for each animal, or a total of \$ 400,000 if 4 pairs are captured, and more if additional animals are captured as is provided for in article 6. It would be much more realistic if HPLF made yearly contributions to the in situ conservation programme, irrespective of the success of the capture programme.

HPLF's contribution will be deposited in the Indonesian Wildlife Fund for better preservation of the species in the wild. This is not further specified and parties should have made it clear that this money should be used for projects developed through the Foundation as part of the Masterplan. Before payments are made the destination of the money should be specified and discussed in the Foundation.

The purpose of insuring the animals in captivity is not clear, and one wonders why this should apply only to the animals to be moved to the UK. If the money is meant to replace the dead animal it is unnecessary because HPLF is obliged to pay all costs for capture. This article is best removed entirely from the agreement because it harms the credibility of the programme as a conservation effort.

19. Presently agreed upon items would be:

(A) Support for 2 capture teams financially and technically

(a) In Sabah, due to limited staff currently available, the SRT will pay salaries and field allowances of all personnel required as determined by the Field Supervisor.

(b) In West Malaysia, the organization and payment of the capture team will be the responsibility of the Department of Wildlife and National Parks with the exception that the SRT will pay field allowances for staff not to exceed the amount for this purpose expended by the SRT in Sabah.

(B) Specific items for Malaysia:

(a) Gene pool project -US\$ 70,000- to be used to construct staff and research buildings.

(b) 1 Landrover for West Malaysia to be utilized for gene pool project - US\$ 15,000

(c) Radio communication system -US\$ 10,000 - \$ 15,000

(d) Salary and allowances for one ranger - US\$ 7,500

(e) Support for the committee to carry out its functions unless otherwise provided for and up to a limit of US\$ 10,000 a year

(C) Specific items for Sabah:

(a) 2 vehicles; 1 pickup truck, 1 station wagon - US\$ 45,000

(b) Radio communication system - US\$ 10,000 - \$ 15,000

(c) Scholarships for the Sabahan staff to attend relevant courses in Indonesia, India or elsewhere. These scholarships would be available at a rate of two/year with a maximum allowance of US\$ 10,000/scholarship or a total of US\$ 20,000/year

(d) Possible program of field studies, especially concentrating in and around the Tabin Reserve (US\$ 50,000 or expertise, equipment and time of equivalent value over the three-year period of the project), preferably by local scientists.

(e) Construction of holding facilities at Sepilok - US\$ 30,000

20. The field Supervisor, will divide his time equally between operations in West Malaysia and Sabah. The official headquarters and residence for the Field Supervisor will be established in West Malaysia, but a collateral base will be established in Sabah. The Field Supervisor will develop the schedule for distribution of his activities in consultation with the Management Committee and in relation to the evolving situation in the field.

21. The primary assignment of the Field Supervisor will be the rhino project. However, he will also be available to advise and assist on other projects in

West Malaysia (e.g. seladang) and Sabah (e.g. proboscis monkey) as time permits so long as the opinion of the Field Supervisor and the Management Committee these activities do not detract from the primary assignment. Similarly the Field Supervisor may be available on a very limited basis, not to exceed 2 weeks per year to advise on the capture operations for the rhino proposed in Indonesia as part of the IUCN SSC Masterplan.

22/9. Technical assistance by the HPLF/SRT (pursuant to the above paragraphs) may include qualified animal keepers and veterinarians, curatorial guidance and support, and apprentice-training in West Malaysia and Sabah/Indonesia and at appropriate AZPA zoos/HPLF for qualified Malaysian/Indonesian curators, keepers and veterinarians. Such technical assistance during the first year of the project will include: (A) Qualified keepers and veterinarians in an as-needed basis to be determined by the Field Supervisor at the captive facility to be developed at Seplok and Melaka/Indonesia. (B) Veterinary support for the actual capture operations, on a short notice and as-needed basis to be determined by the Field Supervisor. (C) Curatorial support on a semi-continuous basis for the captive facility at Seplok and similar operations such as Melaka in West Malaysia. Support to be provided by alternating among the institutions of the SRT on at least a 4-6 week basis, possibly with some time lapse in between the tours of duty. (D/C) Training in both Malaysia/Indonesia and at appropriate AZPA zoos/HPLF for (Malaysian) curators, keepers and veterinarians to be negotiated on a mutually agreed upon level.

weeks each would be available in the first year to two selected staff members from Seplok and two selected staff members from Melaka or other appropriate facilities in West Malaysia. (E/D) Through these various mechanisms, there will also specifically be an attempt to provide information and instruction in various reproductive and other technologies applicable to the conservation strategy for the rhino and programs for other wildlife. In particular, the SRT will demonstrate technology in endocrinological analysis of urine and blood, embryo transfer and artificial insemination and various genetic analysis (e.g. karyotypic and electrophoretic), capture and transport methods for the rhino and other large mammals. Technical assistance in subsequent years will be provided upon favorable review of the Sumatran Rhino Project by West Malaysia, Sabah, the SRT and the Foundation.

19 to 22 - Details on the financial support and duties of the Field Supervisor applicable mainly to the Malaysian/USA agreement.

23. The SRT will also provide US\$ 25,000 to IUCN toward support of the contract for the Sumatran Rhino Coordinator during each year of the project.

23 - The SRT will support half of the costs of the IUCN Coordinator. The other half will be provided for by HPLF.

24/16. The HPLF/SRT will collaborate as appropriate with West Malaysia and Sabah/Indonesia in attempts to attract outside funds from corporations, foundations, organizations and philanthropists to support the conservation strategy for the Rhino.

25. All animals placed in captivity in West Malaysia, Sabah and North America will be managed cooperatively as part of a 'world population' under coordination of the Sumatran Rhino Foundation.

10. The animals held in captivity, and their progeny shall be managed in consultation with the Indonesian and UK CITES Management Authorities. 11. Progress reports shall be made to the UK CITES Management Authority, the Indonesian CITES Management Authority, at yearly intervals. 12. The animals shall be transferred to other accommodation within the UK or elsewhere if, at any time, the UK CITES Management Authority (after consultation and agreement with the HPLF and the Indonesian CITES Management Authority) considers this necessary as the last resort in the interest of the welfare of this animals.

25 - Concerning the management of the captive population. The Malaysian/USA agreement follows the Singapore proposals and in the Indonesian/UK agreement the articles 10 to 12 are adapted from the CITES import conditions, but with important alterations. In article 10 it is said that the animals in captivity shall be managed in consultation with the CITES Authorities, in condition C it is said that management shall be done in consultation with IUCN and to the satisfaction of the CITES authorities. In article 11 the report to IUCN, as required in condition D is not mentioned. In article 12 again the word IUCN has been deleted. HPLF should renegotiate these articles to remove the inconsistencies.

26. All rhinos captured in the Project shall remain the property of the Malaysian government in perpetuity subject to the conditions of this agreement. All animals transported to North America for captive propagation shall be designated to the SRT or its successor organizations on breeding loan.

6(part). All the animals captured in Indonesia and the progeny will be jointly owned by PHPA and HPLF.

26 - Concerning ownership of the animals. In the Malaysian/USA agreement the ownership of the captured animals, as well as of the offspring (see article 27) will rest with the Malaysian government, with the animals in the USA being on breeding loan. The Indonesian/UK agreement provides for joint ownership between PHPA and HPLF for the captured animals and their offspring.

These articles may prove in the end to be the most important articles because they will influence the development of the captive propagation far after the present agreements have expired. For the future management of the captive part of the 'world population' the ownership of the animals will be of great importance because the owner usually has the last word. It is impossible to say which of the two, the single ownership with breeding loan or the joint ownership, will be the best workable solution. It would be better if there was no such thing as ownership by persons or organizations for these animals, but that they were regarded as being an inalienable part of nature taken in the custody of mankind. It would also be very unpractical to continue the forms of ownership specified in these agreements in eternity. Especially when the captive breeding is successful and there will be an 'abundancy' of Sumatran rhinos in captivity, other arrangements are probably necessary.

Therefore it is recommended to continue the present arrangements till the time that the captive populations attain stability, as specified in article 28. Then the future arrangements for ownership shall be discussed. In the meantime the Foundation should pursue the possibility of a form of communal ownership of the animals, to facilitate the integration of all animals in the 'world population'.

27. Progeny produced in North America will also be on breeding loan to the SRT or its successor organization until the North American population attains demographic stability and a genetically effective size of 25. Thereafter, offspring from the North American population must and will be available for restocking adequate and protected reserves in Malaysia as the local management authorities advise in accordance with the Foundation Masterplan.

28. The number of rhinos potentially to be returned to Malaysia under these circumstances will at a minimum equal the number originally moved from Malaysia to North America. Beyond this number, repatriation of rhino will continue as deemed necessary by the local management authorities and the Foundation Masterplan at a rate that does not detract from the self-sustaining status of the North American population.

29. Germplasm, which may be a more appropriate mechanism than actual animals in many cases for transfer of genetic material from captive to wild populations, can and will be returned to Malaysia immediately as the technology can be applied and the local management authorities and the Foundation Masterplan so recommend.

17. Progeny produced in UK will remain there and other breeding facilities until the population attains demographic stability and a genetically effective size of 25. Beyond that animals will be made available for reintroduction in the wild if that is deemed necessary.

27 to 29 - Concerning the return of animals to the wild. These articles guarantee the zoos possession of the animals until they have been able to achieve successful reproduction, and also guarantee the return of animals for suppletion of the wild populations once captive reproduction is successful. It is assumed that the captive population will be 'safe' when it has an effective size of 25. This means probably 30 to 40 animals, accounting for sub-adults, infertile and senile animals. It will take at least 15 years and probably longer to build up a population of this size and by that time the present agreements have expired and may be forgotten. It will be an important task for the Sumatran Rhino Foundation to carry on until this final goal can be achieved. Then return to the wild should not be limited to the countries of origin as is specified in the Malaysian/USA agreement, but it should also be possible to return animals to other countries (Sarawak, Indonesian Borneo, Thailand, Burma) where it may be much more urgent to reintroduce Sumatran rhinos in the wild.

30/18. This agreement can be amended only by mutual and unanimous agreement of the signatories.

31/19. It is understood that the signature of the representatives of West Malaysia and Sabah/Indonesia to this agreement obligates WDMS/PHPA to the terms of the agreement. Likewise, the signature of the Species Coordinator of the SRT/Chairman of the HPLF obligates the SRT/HPLF to the terms of this agreement.

32/20. Parties to this agreement appreciate that the financial and technical support of the HPLF/SRT is provided in the hope of securing the long-term survival of the Sumatran rhinoceros as a species and as a component of natural ecosystems. The HPLF/SRT seeks to contribute to the long-term survival of the biological diversity through the captive propagation of species that might otherwise be lost or so greatly reduced in numbers as to be highly vulnerable to extinction. The expertise and support of the Foundation/Trust is and must be directed primarily toward the fulfillment of this goal through preservation by captive propagation. In fulfilling these goals, the HPLF/SRT seeks to assist WDMS/Indonesia in its own attempt to propagate the Sumatran rhino and to provide such limited support as HPLF/SRT resources permit to related efforts, as part of the conservation strategy for the rhino, to preserve wild populations where these are adjudged viable using modern criteria of biological conservation. The SRT applauds and does not seek to reduce, replace or supplant the efforts of the Malaysia/Indonesia government to protect its national wildlife in a state of nature.

Signatories:

Mohd Khan bin Momin Khan,
Director General Department of National Parks
and Wildlife Peninsular Malaysia

Mahedi Andau
Assistant Chief Game Warden, Wildlife Section,
Department of Forestry, Sabah, Malaysia

Warren Thomas, D.V.M.,
Species Coordinator, AAZPA Sumatran Rhino Trust

Prof. Dr. Ir. Rubini Atmawidjaya
Director General, Directorate General of Forest
Protection and Nature Conservation of the
Ministry of Forestry, Republic of Indonesia

Mr. Francesco Nardelli
on behalf of and for Mr. John Aspinall, Chairman
Howletts and Port Lympne Foundation - Hythe -
Kent, United Kingdom

Witnessed and endorsed by:
Dr. Soedjarwo
Minister of Forestry, Republic of Indonesia

Mr. Alan Donald
H.B.M. Ambassador, United Kingdom

Signed: 24 May 1985

The Department of the Environment of the United Kingdom has proposed to attach the following conditions to an import permit for Sumatran rhino. These conditions have been accepted by the Howletts and Port Lympne Foundation.

A. The animals held in captivity, and their progeny, shall be jointly owned by the Indonesian Government and Howletts and Port Lympne Foundation:

B. The animals taken into captivity shall be isolated non-viable animals, and their selection, capture and transport shall be independently monitored, to the satisfaction of the Indonesian CITES Management Authority and the IUCN:

C. The animals held in captivity, and their offspring, shall be managed in consultation with IUCN (as part of the programme agreed at Singapore in October 1984, and accepted (with conditions) by the Species Survival Commission (SSC) of IUCN on 1 November 1984) and to the satisfaction of the Indonesian and UK CITES Management Authorities:

D. Progress reports shall be made to the UK CITES Management Authority, with copies to the Indonesian CITES Management Authorities and IUCN, at yearly intervals:

E. The animals shall be transferred to other accommodation within the UK or elsewhere, if, at any time, the UK CITES Management Authority (after consultation and agreement with the Howletts and Port Lympne Zoo, IUCN and the Indonesian CITES Management Authority) considers this necessary as the last resort in the interests of the welfare of the animals:

F. The animals shall be returned to Indonesia, at the expense of the Indonesian Government, if, at any time, the Indonesian Management Authority (after consultation with the Howletts and Port Lympne Zoo, IUCN and the UK CITES Management Authority) considers this necessary in the interests of the conservation of the species or the welfare of the animals:

G. The animals shall not be sold and shall not be displayed to the public for commercial reasons, except in accordance with the terms of any exemption which may be granted from prohibition in that respect in article 6 of European Council Regulation no 3626/82:

H. The Howletts and Port Lympne Foundation shall contribute funds and expertise, as may be agreed with the Indonesian Government, to help protect and conserve the population of Sumatran rhinos in Indonesia.

Draft exemption under article 6 of Council Regulation (EEC) No. 3626/82.

1. The Secretary of State, in exercise of the powers contained in Article 6 of Council Regulation (EEC) No. 3626/82 ('the Regulation') grants an exemption from the prohibitions in that Article in the terms set out in this letter.

2. This exemption relates to 2 male and 2 female Sumatran Rhinos (Dicerorhinus sumatrensis) ('the specimens') owned by the Indonesian Government (Department of Forest Protection and Nature Conservation) and to be held at Howletts and Port Lympne Zoos, Hythe, Kent, UK.

3. Subject to the provisions of paragraph 4 below, the following act (which would otherwise be prohibited by virtue of the said Article 6) is hereby permitted:

The display of the specimens at Howletts and Port Lympne Zoos, Hythe, Kent ('the premises'), to the public for commercial purposes, while the specimens are being held at the premises for breeding purposes.

4. The provisions referred to in paragraph 3 above are that any person duly authorised in writing by the Secretary of State may, at any reasonable time and upon producing evidence that he is so authorised, enter and inspect the specimens and the premises.

5. This exemption is given under Article 6 of the Regulation for one of the reasons set out in Article 6(1) (b), namely that the specimens are intended for breeding purposes.

D R A F T**SUMATRAN RHINO CONSERVATION MASTERPLAN**
Document no. 1 - VIABILITY OF RHINO POPULATIONSIntroduction

In the Singapore Proposals it is stated that animals selected for capture in the wild are to be 'doomed' individuals or come from 'doomed' habitats; that is, those whose future long term viability or contribution to the survival of the species is determined to be unsatisfactory as measured by objective criteria subject to continuing refinement.

A proper and careful assessment of the viability of the rhino populations as the basis for the selection of the animals that are suitable candidates for capture is crucial for the success and acceptance of the programme. It is one of the main tasks of the Sumatran Rhino Foundation and the Coordinator in the first years of the project. A viability assessment should be done only after a thorough investigation and evaluation of the present situation and of the expected future developments. It should be guided by the principle that preservation in the wild is the primary goal (Article 1 of the Singapore Proposals).

The possibilities for preservation in the wild should be considered first, based on a realistic assessment of the future developments and on an evaluation of the necessity and possibility for action to preserve or improve the present situation. If it is concluded that preservation in the wild is not feasible or does not contribute to the survival of the species, because the remaining habitat or rhino population is insufficient for survival or cannot be protected against destruction, we may speak of a 'doomed' population and one may consider capture of some or all of the animals. Some will argue that all Sumatran rhinos, and in fact all large mammals, are doomed, others will hesitate to call any population doomed, because saying so seals the fate of the population. A realistic and balanced decision should be pursued.

All decisions should be based on a thorough investigation and a careful analysis of all available information. It should be realised that in fact very little is known about the majority of the remaining populations and therefore the judgement can only be preliminary and revision should be possible anytime. It would be unforgivable if rhinos were to be captured in populations that at the end prove to be viable or probably were viable before capturing started. The Coordinator should continuously update the status review of the populations and the responsible parties should not hesitate to revoke decisions even if this would imply the cancelation of operations already started.

For the assessment of the viability of a Sumatran rhino population three factors are to be considered; the available habitat, the size and composition of the population, and the hunting pressure. Concerning the habitat not only the present situation should be considered, but also the habitat that may be available in the future and how one may influence the developments in favour of preservation of suitable habitat. Not only the present size and composition of the rhino population is of importance, but also the potential size in relation to the available habitat should be considered. As to the hunting pressure one should consider if and how this could be prevented.

The available habitat, its size and quality, is the most important factor in the viability assessment, because it determines the potential size of the rhino population and to a large extent its long-term viability. It is also the factor that is easiest to evaluate and usually it is possible to foresee some of the future developments.

The size of the present population is much more difficult to assess, unless it concerns very few animals in a small area. Otherwise the present size of the population is less important than the potential size determined by the available habitat. As long as there are more than a handful of animals that reproduce and are left unmolested in an area of sufficient size, the population will grow to a viable size and there is no reason for serious genetic or demographic problems. When it concerns isolated individuals, very small groups that apparently have stopped to reproduce or populations in areas with a low potential there is reason to doubt the viability.

Rhino hunting is a tradition in many parts of Southeast Asia but in some areas it is increasing due to the rapid opening for forestry and agriculture of the remaining forest areas. Where it occurs in a viable population it is a very serious threat for the survival of the species. Most viable populations are now in reserves and poaching should be prevented by the responsible authorities. Sufficient manpower should be allocated to this task. Where rhino hunting cannot be prevented in areas where the rhino populations are fragmented and have doubtful viability one should concentrate on removing the rhinos before they can be killed.

Viable populations of an animal as rare as the Sumatran rhinos should in principle all be preserved, and the responsible authorities should do whatever is possible to achieve this. The habitat should be managed so that it remains suitable for the rhinos and the animals should be protected against hunting. If the habitat is already protected as protected forest, nature reserve, national park or such, it may only involve more intensive poaching control. In areas where timber is harvested it may involve modifications of the logging schedule to allow the continued existence of the rhinos. In areas that are destined to be converted for agricultural use the responsible authorities should seek to reverse the planned developments so that a sufficient area can be preserved.

It may not always be possible to achieve preservation of the habitat of viable populations because other interests are given higher priority by the national authorities. Then a presently viable or potentially viable population must be classed as doomed, because there is no realistic hope of survival through the next decade or so. Such a decision should be made with great reserve and only after every possible action to prevent the destruction has been taken. If other viable populations in the same geographic unit are adequately protected and preserved it can be accepted as an inevitability, but when it concerns one of the last populations in a country, state or zoogeographic unit it is unpardonable.

The possibility to remove the rhinos and place them in captive breeding units should never be used as an excuse for not trying to preserve them in the wild. But one must remain realistic and accept that conservation is not the only priority in the planning of the future landuse. One must therefore consider on a case-by-case basis what the best action is and how the limited resources and the limited influence one can have on the course of events can be used most effectively. The ultimate question should always be how an animal or group of animals can contribute most to the survival of the species; in the wild, in captivity or in the laboratory. When cases are well documented it will not be too difficult to come to a consensus on the actions required.

The available habitat

The preferred habitat of the Sumatran rhinoceros is evergreen tropical forest in hilly or mountainous country. They have also been recorded in lowland areas, including swamp- and peat-forests, but the records from these areas are fewer. This may be an effect of earlier deforestation, but also the sparse undergrowth in most lowland forests may have limited the distribution of the rhino. There is no upper limit to the occurrence of rhinos in the mountains in Southeast Asia. Open areas are avoided and open grassland, savannah-like habitats and open swamps limit the distribution of the Sumatran rhino. Extensive areas of shrub or low forest are probably also avoided. A closed canopy is required in rhino habitat.

The rhino is very sensitive to disturbance, and usually leaves areas where the forest is worked. Logging drives out the rhinos for some years, but they will return if they get a chance. Logged-over forest, old secondary forest and probably also mature plantation forest can be suitable habitat for the rhino. Therefore we may define habitat suitable for the Sumatran rhino as all types of natural forest, excluding mangroves and permanent swamp forest, and including forests modified or made by man as far as they have a closed high canopy and are left undisturbed for longer periods.

Adult Sumatran rhinos have clearly defined home ranges and are very traditional in the use of their range. In areas where they are repeatedly disturbed and forced to shift their ranges the social system will be affected and this might have serious consequences for the reproduction and for the viability. Individuals may probably live for a long time as vagrants in production forest, but it is doubtful whether normal reproduction can occur then. Therefore areas where a viable rhino population is to remain should have a large proportion of undisturbed habitat, where the rhinos can remain permanently and maintain their social system. The rhinos in the disturbed areas have a chance to retreat when necessary and a failure of reproduction there will be compensated for by migration from the undisturbed core area.

The long-term viability of a population is related to the number of individuals. The lower the number the greater the chances for genetic or demographic instability and this may lead to the disappearance of the population. Generally a genetically effective size of 50 is regarded to be the minimum for short-term survival - this may be several generations or a few hundreds of years - while 500 is the minimum for long-term survival - this covers a timespan of evolutionary significance or many thousands of years in the rhino's case. Smaller populations may be less viable in the course of time, but the damage is insignificant if the population is low for a few generations only. Most existing rhino populations are remnants of populations that were much larger not too long ago and we may expect that they will recover if allowed to grow to a sufficient size. Therefore the size of the population that could potentially live in a certain area is of more concern than the present population, as long as there is reproduction.

For a genetically effective size of 50 the number of Sumatran rhinos should be about 70, allowing for 40 percent juveniles and unproductive individuals. Using a density of one rhino per 1000 Ha or 10 sq km as an average (this figure is based on the detailed studies carried out in the Gunung Leuser National Park) a minimal population of Sumatran rhino would require about 70 000 Ha or 700 sq km of suitable habitat. An undisturbed core area should cover the home ranges of a significant part of the population. Since males have home ranges of 50 sq km or more one may estimate the minimal size of the undisturbed core area to be at least 300 sq km to contain a reasonable number of males and females, which have smaller home ranges.

Any area that is about the minimum size (more than about 50 000 Ha and not too oddly shaped) or larger and where there are more than say 4 or 5 adult rhinos is worth saving and one should firstly investigate the possibilities of securing the habitat. The bigger the area and the more rhinos left the more important is preservation of the habitat and especially where there is a fair number of rhinos left, say

15 to 20 or more, and where the size of suitable habitat is 2 or 3 times the minimum area, the highest priority should be given to preservation of the rhinos and the habitat.

The populations in areas smaller than the minimum size can be called 'doomed', especially if it is clear that the habitat cannot be preserved and the rhinos are likely to be hunted. In most of these cases capture will be the best alternative.

Not only the size of the suitable habitat is important, but also the location and the sort of habitat should be considered. If there are other populations nearby, especially if these are larger and protected, there is less urgency for preservation, but if it is the last population in a large area or when it is the last remaining population in a particular type of habitat its preservation in the wild should be given a higher priority even when the viability is less than optimal.

When evaluating the amount of habitat available one should consider the whole contiguous area covered with forest. Wide strips of cultivation, open swamps and large lowland rivers are effective barriers for rhinos, but narrow strips of cultivation and small rivers may be crossed occasionally and the rhinos on both sides are in effect one population. It may also be that the forest is continuous, but the rhino population is not. The connecting forest may be unsuitable or too narrow a strip for migration or the rhinos may have been hunted to extinction. Field surveys should determine whether there is exchange of individuals or not. When the gap between the populations is caused by hunting and may be closed when the populations expand the area is to be regarded as contiguous rhino habitat.

The extent of the presently available habitat should be identified from recent vegetation maps, air- and satellite-photographs and checked through field- and aerial surveys. Also all development plans for the area should be reviewed to assess the extent and the rate of the future changes that may take place in the area. Such information should be provided without restrictions by the national governments, who should also indicate the possibilities and procedures for modifications of planned developments if these are recommended.

The present size of the rhino population

As it is difficult and very time consuming to assess the size of a rhino population, especially of a population in a large area, one should always regard the size as being sufficient until the contrary is proven. In case of isolates or small groups in very small areas this is relatively easy, but when it concerns areas of 'viable size', 50 000 Ha or more, it is impossible to say how many rhinos there are from occasional reports from locals or guards. Only with a proper rhino census a

reliable estimate of the number can be made, but such a census requires long periods in the field.

In many cases it will not be necessary to estimate the number of rhinos, but it will be sufficient to know the extent of the area presently inhabited by the rhinos. From the existing recent records and with some additional field surveys in areas where information is lacking it is possible to delineate the rhino area. This will give some indication of the size of the population.

In some cases it may be necessary to know more about the size of the present population and then a good rhino census should be conducted in the area. A draft manual for censusing Sumatran rhino has been prepared and will be presented as a part of the Masterplan.

Sign of reproduction, e.g. tracks of calves, are an important sign of the 'health' of a population, but the lack of such signs is no proof of the contrary. Tracks of calves are easily overlooked and the breeding interval is several years. Tracks of calves are usually only found during extended periods in the field.

It will always be very difficult to prove that a rhino population is so low that there is insufficient reproduction. If there is reason to believe that this is the case, because the signs of rhino are extremely rare and found widely scattered, a rhino census should be done. When less than about 1 rhino per 100 sq km is found and there are large gaps between the ranges of individual rhinos there is reason to doubt the viability of that population.

The composition of a population - the sex-ratio and the age composition - is important for the viability of the population, but this is even more difficult to assess than the size of the population. Through a comprehensive rhino census one will get some insight in the composition of the population, but unless there is proof of the contrary one will have to assume a normal composition, especially when there are signs of reproduction.

The hunting pressure

Rhino hunting is illegal everywhere in the Sumatran rhino's range, but the chances of being caught and the penalties are too low to be discouraging. It is widely known that rhino-hunting is illegal and it is usually done secretly, but as long as there is a good market for rhino products hunting will continue.

Rhino hunting as a 'profession' as it occurred in many parts of Southeast Asia will disappear as the rhinos become rarer and the standard of living is increasing. It can be expected that rhino hunting in the few large reserved rhino habitats will gradually become less when the people living around the reserve find more

secure means of income. But in areas that are exploited for timber or are to be converted for agriculture the hunting of rhinos will remain a serious matter. The easy access provided by the developers will attract hunters for food or for pleasure, and the rhinos will surely be killed sooner or later.

The responsible authorities should do whatever is possible to prevent rhino hunting and should prosecute rhino hunters, even when the hunting occurs in a 'doomed' population. It should be made clear to the public that any harm done to a rhino is an offence and will be prosecuted. Also the capture of rhinos by the public, as happened already twice in Malaysia, should be strongly discouraged.

The procedure for assessment of the status of rhino populations

Before management decisions are made a status report for each separate rhino population should be made. Based on the status report recommendations for management can be given. The status reports and the recommendations are part of the Masterplan and will be drafted by the coordinator in cooperation with the management authority and will be presented for comments to the members of the Foundation. When all members have expressed their approval of the final version the status report and the recommendations will be included in the Masterplan and will guide the actions of the parties.

The coordinator and the management authority will collect all necessary information to draft the status report. Existing reports will be analysed and when necessary additional data will be collected in the field, until a clear picture can be given of the status of the rhino population and of the habitat, now and in the near future.

When the draft is finished it will be distributed among the members of the foundation and it will be modified according to the comments received. Additional drafts will be made if necessary, until all members can approve of the contents. Then a final version will be produced that will be a part of the Masterplan and can be released for distribution. For the management recommendations the same procedure will be followed and usually these will be drafted in conjunction with the status report.

The status reports and management recommendations will be drafted according to urgency. The areas with the largest populations and those that are most threatened will be made first. When necessary revised status reports and modified recommendations will be made, following the same procedure. This will allow acceptable actions to proceed quickly, without waiting to complete the whole Masterplan.

DRAFT

SUMATRAN RHINO CONSERVATION MASTERPLAN

Document no. 2 - PRELIMINARY STATUS REPORTS ON AREAS IDENTIFIED FOR IMMEDIATE CAPTUREIntroduction

In both bilateral agreements areas are mentioned where preliminary analysis of the situation has indicated a need for immediate capture. These populations are under heavy threat of hunting or loss of habitat and are therefore classed as doomed. Mentioning in the agreements has been done to allow the parties to start the field operations as soon as the agreements are signed. The situation in the areas indicated is so urgent that other measures will certainly come too late. During the mission some information was gathered on the status of these areas to illustrate the urgency.

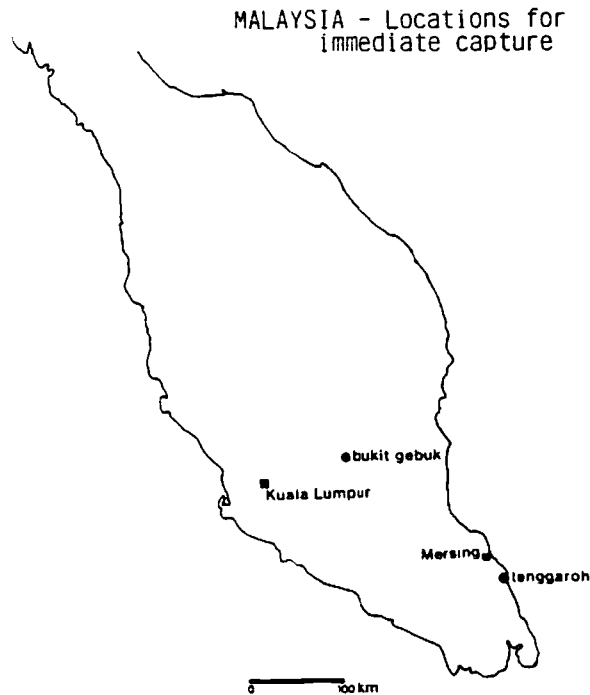
The Malaysian/USA agreement identifies some areas in Sabah mentioned in a status report from the WSS and the Indonesian/UK agreement mentions the Torgamba area in North Sumatra and Riau provinces. Besides these areas two areas in Peninsular Malaysia have been identified by Perhilitan for immediate capture.

Peninsular Malaysia

Tenggaroh. This is an area about 45 km south of Mersing on the east coast of Malaysia (See the location map below). In the past years most forest has been cleared for plantations and now only small patches of forest are left, soon to be cleared also. Along the coast a narrow strip of forest will be spared for coastal protection. One solitary rhino is left in this coastal forest and Perhilitan tries to catch this animal with a corral-trap built around some wallows. In 1983 this animal, a male, escaped from such a trap nearby. No other animals are known in the area now, but in 1983 two animals were reported there.

Bukit Gebuk. A small area of protected forest is left around the hill Bukit Gebuk near Maran (See the location map below). There is apparently one solitary animal left that is frequently met outside the forest in the surrounding cultivation. Because there is a danger that the animal will be killed sooner or later the Perhilitan is currently operating a trap there.

During the mission a short visit was made to the capture site in Tenggara. There is no doubt that the animal or animals have no hope for survival there. In the future the only forest left will be a narrow strip of less than 1 km wide along the coast and it seems unlikely that this strip will remain undisturbed. Soon there will be no suitable habitat left and sooner or later the animals will be forced out in the plantations and may be killed. In Bukit Gebuk the forest left is now already insufficient as the rhino is frequently wandering in the plantations. Capture of these rhinos is doubtlessly the best alternative.



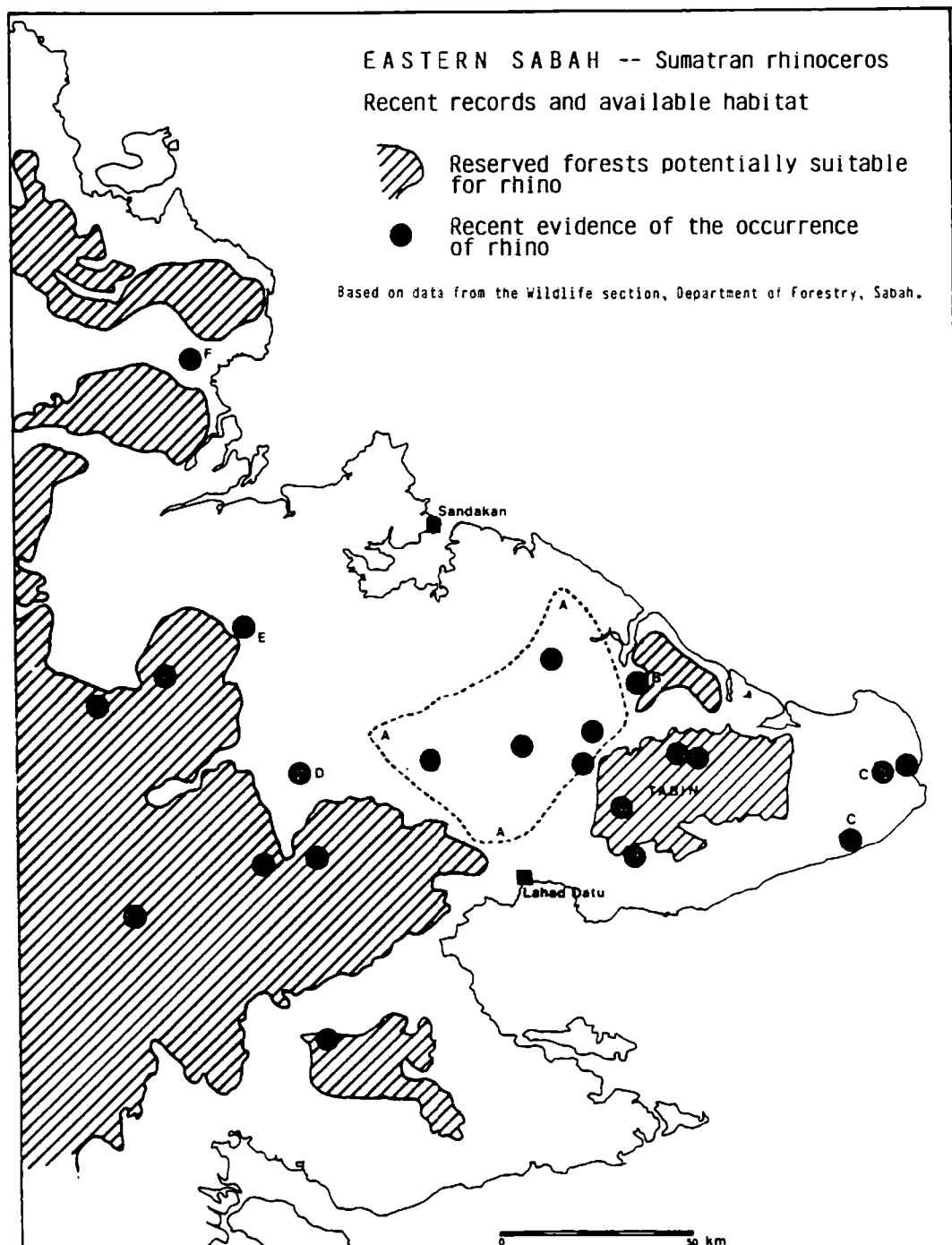
Sabah

In Sabah the populations mentioned in the status report by Andau and Payne ("the plight of the Sumatran rhino") are identified as candidates for immediate attempts to capture, with the exception of the animals in the Silabukan / Tabin reserve and its contiguous environs and those in the Danum valley.

While I was in Sabah there was no time to visit some of the locations indicated but much information was received from the WSS. There are several recent records of rhinos, widely scattered over most of SE Sabah, but there is much uncertainty about the extent and the size of the remaining populations. There is little undisturbed forest left in Sabah and large areas are now rapidly being cleared for agriculture. A large piece of land in central Sabah will be maintained as commercial forest. The largest known rhino population has been given protection in the Silabukan / Tabin reserve. Although most of the reserve will be logged first and the

reserve is rather small to contain a rhino population of long-term viability, the rhinos may survive there if hunting can be controlled. Also the rhinos in the areas of commercial forest can be preserved if hunting can be controlled. But a number of reports are from places where the forest is being cleared and these should be the first candidates for capture.

In the figure below the situation is sketched, based on the data received from the WSS. Only eastern Sabah is shown because at present there are no records of rhinos from the western half of Sabah. The area of available habitat are those areas that are at present planned to remain as forest. Most of this is commercial



forest that will be used for timber extraction, small parts are protection forest, virgin jungle forest and wildlife reserve (Tabin). Areas too small for a viable rhino population and the mangrove forests are not included. The rest of the land area is planned to be cleared for agriculture. At present there are still large forest areas left outside the areas indicated on the map, but these are all destined to be cleared in the next few decades. Therefore in the future most likely only the shaded areas will be available for the Sumatran rhino.

The recent records are from reports from forest guards and others received since 1980. In half of these locations a rhino was killed in that period. There are unconfirmed reports from other places. Most records appear to be on the peninsula between Sandakan and Lahad Datu and partly in the Tabin Wildlife Reserve, where 15 or more rhinos are estimated to survive.

Many records are outside the areas where the forest will be preserved and it is there that the most urgent cases will be found. From the available information it appears that at present the animals reported from the area northwest of Tabin are most threatened. Development is rapid in this area and several rhinos have been killed in recent years. About half of the area is still forested and there may be several small isolated groups of rhinos left, but the rhino habitat is decreasing rapidly and there is little hope for survival. It is recommended that the capture operations concentrate on this area (A on the map) first, working from west to east.

North of Tabin there is a record close to the Kulamba wildlife reserve (B) and there are several records near the tip of the peninsula (C), an area where clearing has not yet started. Since Tabin is relatively small, only slightly over 100 000 Ha, the possibility of extending the reserve to include also these rhinos should be seriously considered. If the whole eastern half of the peninsula could be made into a wildlife reserve Sabah would set a major step on the road to a good management of its natural wildlife.

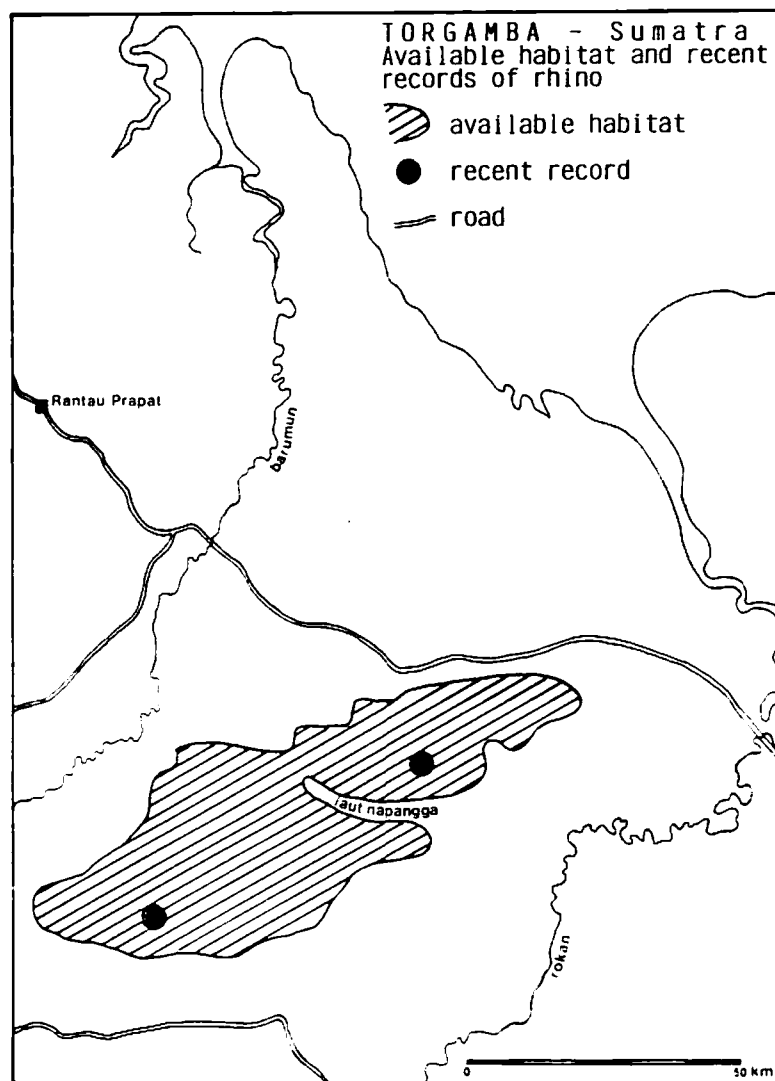
Some other records are in or close to the large block of commercial forest in central Sabah. When hunting can be controlled in this area it could become the most important area for the Sumatran rhino, and in these locations no capture should be attempted for the time being. A good system of protection should be developed in cooperation with the forestry corporations. For the locations outside the reserved forest (D,E,F) more information is needed, but if these also concern small isolated groups in threatened habitat it may be decided to attempt capture there later.

Sumatra

In the Indonesian/UK agreement the Torgamba area is mentioned as the place for immediate attempts to capture. This area is located on the border between the provinces of North Sumatra and Riau, south of the road from Rantau Prapat to Pekanbaru.

Rhinos were first recorded in Torgamba in 1974 by Marcus Borner, who already recommended this area as a possible site for capture if captive breeding was to be attempted. Most of the area was a protected forest, but the whole area has been very heavily logged, anticipating clearing for plantations. Several large plantations have been established in recent years and today there is about 100 000 Ha of logged-over forest left. Further clearing for plantations has been stopped and the remaining forest will be used as production forest.

In 1984 new evidence of rhino was collected by Raleigh Blouch, WWF consultant, who surveyed the area. These records and the remaining habitat for rhino are shown in the figure below. The area is almost split in two by an open-water swamp, called Laut Napangga. There is a narrow corridor of forest between the swamp and



the plantations north of Torgamba, but no sign of rhino were found in this area during the recent survey. Apparently the rhino population is not continuous.

It is remarkable that the rhinos have survived despite the very heavy disturbance in the last decade, but their future is uncertain. When the area can be retained as a production forest it may be possible to preserve the rhinos. There are plans to create a sort of elephant reserve in the southern part and that would also provide some protection for the rhinos. Therefore capture of rhinos should not be attempted in the southern part of Torgamba until more is known about the plans for the future management of this area. Developments should be closely watched as also oil exploration is penetrating this area.

There seems to be little hope for the rhinos in the northern part. They are probably already separated from the (larger ?) population in the southern part and it is unlikely that much of the remaining forest can be preserved there. There are many new settlements along the northern border and these are likely to spread further south, reducing the rhino habitat. Therefore it is justified to start capture operations in the part of Torgamba north of Laut Napangga.

Torgamba is the only lowland area with Sumatran rhinos left on Sumatra. All other rhino populations are in mountainous areas. Therefore it is recommended to attempt to preserve the habitat in the southern part, for the benefit of the elephants and the rhinos. If it appears to be impossible to retain this area as production forest and to control hunting there, it might be better to remove the rhinos also from the southern part.

DRAFT

A G R E E M E N T
for the
E S T A B L I S H M E N T
of a
C O O R D I N A T I N G A N D S U P E R V I S I N G O R G A N I Z A T I O N
called the
' S U M A T R A N R H I N O F O U N D A T I O N '

General provisions

- The 'SUMATRAN RHINO FOUNDATION' (the "foundation") is an organization based on an agreement between governmental and private organizations (the "parties"), endorsed by the International Union for the Protection of Nature and Natural Resources ("IUCN").
- The Foundation aims at developing mechanisms for the long-term preservation of the Sumatran rhinoceros - Dicerorhinus sumatrensis (Fischer, 1814) - as a species and as a component of natural ecosystems.
- The Foundation will pursue its goal by developing a comprehensive plan for the survival of the Sumatran rhinoceros (the "Masterplan"), by planning, coordinating and supervising all activities prescribed by the masterplan and undertaken by the parties, and by employing, through IUCN, of a person who will carry out the necessary work for the foundation (the "Coordinator").
- The Foundation will base its activities on the recommendations of the Singapore Meeting on 3 and 4 October 1984, as described in the 'SINGAPORE PROPOSALS' (See the Memorandum of Robert F. Scott to Kenton R. Miller, dated 19 December 1984) and will seek the continued endorsement of its activities by IUCN. (See the letter from the Director General of IUCN dated 19 December 1984)

Membership

- Members of the Foundation are those organizations that have signed this Agreement.
- By signing the Agreement the party pledges acceptance of all provision of this Agreement and of future recommendations made through the Foundation and promises to consult the Foundation on all its activities that concern the management of Sumatran rhinoceros populations.
- Membership is open to those governmental organizations that have the responsibility for the management and protection of the Sumatran rhinoceros within the national territory ("Government Parties"), and private or multinational organizations interested in the conservation of the species and willing to contribute to the aims of the Foundation ("Private parties"). Initially these are: Department of National Parks and Wildlife - Peninsular Malaysia, Directorate General of Forest Protection and Nature Conservation - Republic of Indonesia, Wildlife Section Department of Forestry - Sabah, Howletts and Port Lympne Foundation - United Kingdom, Sumatran Rhino Trust - American Association of Zoological Parks and Aquariums, Species Survival Commission - International Union for Conservation of Nature and Natural Resources.
- The Species Survival Commission will be represented by the Asian Rhino Specialist Group and the Captive Breeding Specialist Group.
- New members can only be accepted by a unanimous decision of the members.
- Members may end their membership by asking all other members to accept their resignation. The foundation may impose certain conditions on the termination of the membership.
- The Foundation can only be terminated by unanimous decision of the members.

The board

- The foundation is directed by a board, composed of one representative of each of the parties. No person shall represent more than one party and the representatives of the Asian Rhino Specialist Group and of the Captive Breeding Specialist Group shall have no associations with any of the other parties. Each representative shall indicate someone to replace him during periods of absence.
- The coordinator will function as chairman of the board, but he will not have the right to vote.
- The board will normally function by correspondence and through contacts between the coordinator and the representatives, but board meetings may be called for when necessary at the request of at least two members.
- The cost for the board meetings will be shared between the parties and each party will carry the costs made by its representative for attending the meeting.

Procedures

- Decisions in the Foundation are made by consensus.
- The documents forming the Masterplan and other proposals and recommendations will be drafted by the coordinator in consultation with the parties and their representatives. Drafts will be distributed among the parties for discussion. Comments are communicated to the Coordinator who will revise the documents. When all parties have expressed their approval of the document through their representative in the board a final version will be produced.
- The Coordinator may impose a time limit on responding.
- The activities of the parties can be arranged through bilateral or multilateral agreements or contracts. These should be in accordance with the provisions of this agreements and with subsequent recommendations of the Foundation. All agreements and contracts should be presented to the Foundation for discussion and when acceptable for all the parties a letter of endorsement by the Foundation will be issued.

- In case a consensus cannot be reached on matters vital for the continuation of the foundation, the board can refer the matter by majority vote to the Director General of IUCN for arbitration.

The Masterplan

- The Masterplan is a series of documents that will give guidelines and recommendations for the management of the Sumatran rhino, for the species as a whole and for the separate populations. Finally all aspects of conservation and management will be treated, covering all rhino populations.

- The Masterplan documents will be completed in order of urgency and as time permits.

- The surveying and data collection necessary for the completion of the Masterplan documents will be carried out under the supervision of the Coordinator and the responsible government party, who will issue the necessary permits for the field surveys and for the consultation of maps, air- and satellite photographs and government documents and who will give logistic support.

GUIDELINES FOR ACTION

The future actions of the parties to this agreement will be guided by the following principles.

- The existing rhino population will be managed as a unity or 'world population'.

- Emphasis will be on the strengthening of the existing populations by increased protection of sufficiently large areas of natural habitat, spread over the total range of the species.

- Animals that are regarded to be in imminent danger of losing life or home and that in nature have little value for the survival of the species may be captured and used for captive breeding or translocation.

- The decision on the most appropriate form of management for each population will be made after consultation in the Foundation and will be based on the guidelines of the Masterplan.
- Before important decisions are made a status report based on a thorough survey must be made by the responsible government party, together with other parties and under the guidance of the Coordinator.
- The private parties will assist the government parties in the implementation of the management practices by supplying finance, material and expertise.
- The coordinator will assist the parties and will oversee the execution of the activities agreed upon in the Foundation or in separate contracts, endorsed by the Foundation.
- For capture of rhinos the responsible government party will issue a permit, valid only for a specific area and a specific number of animals, based on the recommendations of the Masterplan.
- No party shall engage in agreements on the capture or procurement of rhinos with organizations or persons that are not members of the Foundation and no party will hand over rhinos, in ownership or loan or otherwise, to organizations or persons that are not members of the Foundation.
- All rhinos caught shall be marked and will be given a number in the studbook, initially kept by the Coordinator.
- Rhinos will not be sold for money, not be exchanged for other animals or goods and not be given away as presents.
- All movements of rhinos between the captive facilities and between the captive facilities and the wild populations need the approval of the Foundation.
- The legal owner or owners of the captive rhinos will see to it that rhinos are not entrusted with organizations and persons not members of the Foundation.
- Ownership of the captive rhinos is arranged for in separate contracts and cannot be changed or handed over without the approval of the Foundation.
- The captive population is meant to support the natural population.
- A part of the animals in the captive population will be available at all times for reintroduction in the wild, as soon as the captive populations are genetically and demographically stable.
- Rhinos will only be reintroduced in the wild after the feasibility and necessity of such operation has been studied and the Foundation has approved the plan.

- Captive rhinos will not be used for experiments or studies without the approval of the Foundation.
- Facilities holding rhinos shall supply the necessary data for the keeping of a studbook and shall keep detailed record of the treatment of the animals, with regular reports to the Foundation.
- Publicity in the form of articles, books, films, TV reports etc. on the activities of the Foundation and on the programmes under the Foundation's oversight must have the approval of the Foundation.
- All profits of such publicity shall be given to programmes for the management of the wild rhino populations, under the oversight of the Foundation.

Signatories:

Prof. Dr. Ir Rubini Atmawidjaya
Director General,
Directorate General of Forest Protection and Nature Conservation,
Ministry of Forestry,
Republic of Indonesia

Mohd Khan bin Momin Khan
Director General,
Department of National Parks and Wildlife,
Peninsular Malaysia

Datuk Hj. K.M. Mastan
Conservator of Forests and Chief Game Warden,
Department of Forestry,
Sabah

Grenville Lucas
Chairman Survival Service Commission,
International Union for the Conservation of Nature and Natural Resources,
Switzerland

John Aspinall
Chairman Howletts and Port Lympne Foundation,
United Kingdom

Warren Thomas, D.V.M.
Species Coordinator,
Sumatran Rhino Trust,
American Association of Zoological Parks and Aquariums,
United States of America

DRAFT

COORDINATOR OF THE SUMATRAN RHINO CONSERVATION MASTERPLAN

TERMS OF REFERENCE

The Coordinator;

1. Will be employed on a consultancy contract by IUCN, with technical oversight within IUCN by SSC, for the purpose of providing executive coordinating services to the Sumatran Rhino Foundation and its members; initial term of service 1 year, renewable upon recommendation of the Sumatran Rhino Foundation; The institutional role of IUCN is to provide facilitating services and to be a source of advice, evaluation and arbitration.
2. Will prepare comprehensive workplans and a realistic budget for all anticipated expenses of the coordination function for submission to IUCN, the Sumatran Rhino Foundation and to the AAZPA Sumatran Rhino Trust and the Howletts-Port Lympne Foundation who will equally contribute funds to IUCN to pay for the consultancy and associated costs for the duration of their cooperative agreements with South-east Asian countries.
3. Will serve as chairman of the Sumatran Rhino Foundation, without the right to vote; will be a member of the SSC Asian Rhino Specialist Group in an individual capacity; will coordinate activities of the Sumatran Rhino Foundation and the Asian Rhino Specialist Group and provide liaison between them.
4. Will operate so as to expedite and implement the intent of the Singapore Proposals and the IUCN endorsement thereof and the approved agreements between the members of the Sumatran Rhino Foundation.
5. Will be responsible for the drafting and oversight of a comprehensive Sumatran Rhino Conservation Masterplan that will provide a conservation strategy for the Sumatran rhino. The primary goal of this strategy will be the long-term survival of the Sumatran rhino as a species and as a component of natural ecosystems. The Sumatran Rhino Foundation will supervise the formulation of the Masterplan. The Asian Rhino Specialist Group will exercise a leading advisory role in the plan development. Implementation of the various segments of the Masterplan will be accomplished by various of the parties in the Sumatran Rhino Foundation as mutually agreed and specified.

6. Will perform three basic functions in development of the Masterplan;
 - a- a data function which will entail assisting members of the Sumatran Rhino Foundation in collecting information for the drafting of the Masterplan by conducting, participating in, and supervising field surveys and by training personnel of the management authorities of the countries of origin in such activities.
 - b- a criteria function which will entail formulating the criteria and guidelines to decide the optimal method of enabling every known specimen and group of rhinos to contribute to the survival of the species, in the wild as well as in captivity. Consideration of minimal viable population size, carrying capacity and security of natural habitats and other conservation biology principles will guide the formulation of the criteria. Guidelines will also be developed for translocation, re-introduction and re-stocking projects as well as for the follow-up monitoring protocols.
 - c- an application function which will entail developing recommendations for every known or presumed population, group, or specimen of rhino to be protected in the wild, to be employed for translocation or captive propagation or the reintroduced in the wild. The recommendations will be based on the criteria formulated in the Masterplan and will be decided on a case by case basis by the Sumatran Rhino Foundation. Normally, specific proposals will be prepared by the management authorities of the countries of origin with the assistance of their collaborators from the Sumatran Rhino Foundation and the Coordinator as a basis for deciding on the recommendations. Recommendations already made will be adjusted if new information becomes available.
7. Will provide oversight for the captive propagation programmes and report to IUCN and the Sumatran Rhino Foundation on adherence to the guidelines provided in the Singapore Proposals.
8. Will assist in developing a mechanism for managing the 'world population', which will imply consultation among the parties to the cooperative agreements, with the oversight of the Sumatran Rhino Foundation and the advice of IUCN through the SSC Asian Rhino and Captive Breeding Specialists Groups.
9. Will assist on other activities on the request of the Sumatran Rhino Foundation, Asian Rhino Specialist Group or IUCN.



(proposed emblem)