GLOBAL ENVIRONMENT FACILITY

Indonesia and Malaysia

Conservation Strategies for Rhinos in Southeast Asia

Project Document

This Project Document has been edited to facilitate public dissemination.
The original is on file in the GEF Office at UNDP Headquarters in New York.

ABBREVIATIONS

APO	Associate Professional Officer
AsRSG	Asian Rhino Specialist Group
BII	Bank International Indonesia
CITES	Convention on International Trade in Endangered Species of Flora and Fauna
DF	Department of Forestry
DW	Department of Wildlife
DWNP	Department of Wildlife and National Parks
EPU	Economic Planning Unit
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
IMC	Intensive management centre
IRF	International Rhino Foundation
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union (formerly the International Union for the Conservation of Nature and Natural Resources)
IWF	Indonesia Wildlife Fund
NGO	Non-governmental organization
ODA	Overseas Development Administration (United Kingdom)
PHPA	Directorate General of Forest Protection and Nature Conservation (Ministry of Forestry, Indonesia)
PHVA	Population Habitat and Viability Analysis
RCO	Rhino Conservation Officer
SRT	Sumatran Rhino Trust
SSC	Species Survival Commission
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WWF	Worldwide Fund for Nature
YMR	Yayasan Mitra Rhino (Foundation of Rhino Friends)

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UNITED NATIONS DEVELOPMENT PROGRAMME

GLOBAL ENVIRONMENT FACILITY

Project of the Governments of Indonesia and Malaysia

Title:	Conservation Strategies for Rhinos in Southeast Asia (Indonesia and Malaysia)
Number:	RAS/94/G32/A/1G/99
Duration:	Three years
Project Site:	Indonesia: Sumatra Malaysia: Peninsula, Sabah and Sarawak
UNDP Sector:	Environment
Subsector:	Biodiversity Conservation
Government Executing and Implementing Agencies:	Indonesia: Directorate General of Forest Protection and Nature Conservation (PHPA), Ministry of Forestry Malaysia: Ministry of Science, Technology and Environment Peninsula: Department of Wildlife and National Parks, Ministry of Science, Technology and Environment Sabah: Department of Wildlife, Sabah Ministry of Tourism and Environmental Development Sarawak: Department of Forestry, Sarawak Ministry of Resource Planning
Associated Agency:	Asian Rhino Specialist Group (AsRSG) of the World Conservation Union (IUCN)/Species Survival Commission (SSC)
UNDP Approval:	November 1994
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GEF/UNDP Inputs:	US$ 2 million

Brief description

Rhinoceros serve as a flagship and umbrella species for the preservation of the ecosystems which they inhabit. Without immediate conservation initiatives, rhinos could be lost as quickly as in three years. The project will provide direct support to enhance the capabilities of the wildlife conservation and management agencies in Indonesia (PHPA) and Malaysia (Department of Wildlife and National Parks (DWNP) in the Peninsula, Department of Wildlife (DW) in Sabah, and Department of Forestry (DF) in Sarawak). This capacity building will enable these agencies to implement the conservation strategy for rhinoceros in both nations.

A. CONTEXT

1. Description of subsector

The two species of rhinoceros in Southeast Asia (*Dicerorhinus sumatrensis* and *Rhinoceros sondaicus*) are critically threatened species of national, regional and global significance. These species are of great cultural importance in Asia, and of major interest worldwide.

As recognized by the recent initiatives of the United Nations Environment Programme (UNEP)/Convention on International Trade in Endangered Species of Flora and Fauna (CITES) and the intensifying programmes of IUCN and the Worldwide Fund for Nature (WWF), there is a global crisis in the conservation of rhinos. All five species are threatened with extinction: only about 11,500 of all five species survive in the wild. The situation is even more severe because half of the surviving animals are southern white rhino (*Ceratotherium simum*) which, although very vulnerable, is the most secure among the five species.

Recently, the decline has been most spectacular for the African black rhino (*Diceros bicornis*), whose population (now 2,500) has decreased by 95 percent in the last twenty years, and perhaps 30 percent in the last three years. It is, however, fortunate that relatively secure and reproductively prosperous nuclei of both black and white rhino exist in a few nature sanctuaries in the wild, and in captivity outside Africa.

By comparison, the two species of Southeast Asian rhino (*Dicerorhinus sumatrensis*, the Sumatran and *Rhinoceros sondaicus*, the Javan) are the rarest of rhinos, and among the most threatened mammals in the world. Fewer than 500 Sumatran rhino survive, distributed over at least 35 localities in Indonesia and Malaysia. The total population of Sumatran rhino in Indonesia is estimated at 200 to 300, and in Malaysia at 150 to 200. Remnant pockets of the Sumatran rhino may survive in Thailand and Myanmar, but they are very few in number and their viability is doubtful. Fewer than 100 Javan rhino exist, mostly in a single protected area in Indonesia, with a remnant recently rediscovered in Vietnam.

These two species have not declined quite as drastically in the last years as the African black rhino, whose population has decreased by 75 percent. The decline in Sumatran rhino, however, has been probably between 30 percent (Peninsular Malaysia) and 50 percent (Indonesia) during the last decade. During the same period, the population of Javan rhinoceros seems to have stagnated, perhaps even decreased, although the protected area they inhabit is believed to have the carrying capacity to support a larger population.

The situation for the two species of Southeast Asia is more precarious than for either of the two African species, or for the Indian/Nepalese rhino (*Rhinoceros unicornis*), for at least three reasons:

- Their numbers are already very low, and poaching pressure remains high.
- Accelerated habitat loss which, unlike the situation in Africa, is at least as serious a threat as poaching for this species. Human encroachment is severe in the three major Sumatran rhino protected areas in Indonesia, and has eliminated at least two habitats outside protected areas. Recent reports indicate a very disturbing reduction in one of the main protected areas in Malaysia.
- Lack of secure or propagating nuclei in nature sanctuaries or captive facilities. The captive population of Sumatran rhino is not yet reproducing reliably; there are no Javan rhino in captivity, and current plans do not include an *ex situ* programme for this species.

These pressures have increased for many years and have now developed to the point of becoming an emergency in Southeast Asia of equal urgency to (although with less publicity than) the crisis in Africa.

Perhaps of even greater importance, the tropical forest ecosystems the rhino inhabit are reservoirs of immense biodiversity. Indonesia and Malaysia, located at the junction of two biological regions with widely divergent floras and faunas, have possibly the richest collection of biodiversity in the world. On average, some 20 percent of all the plants and animals reside in this area, and many are exclusive to this region. The Malayan Subregion, comprising Peninsular Malaysia, Sumatra, Java, and Borneo, has one of the highest concentrations of biodiversity of any area in the world.

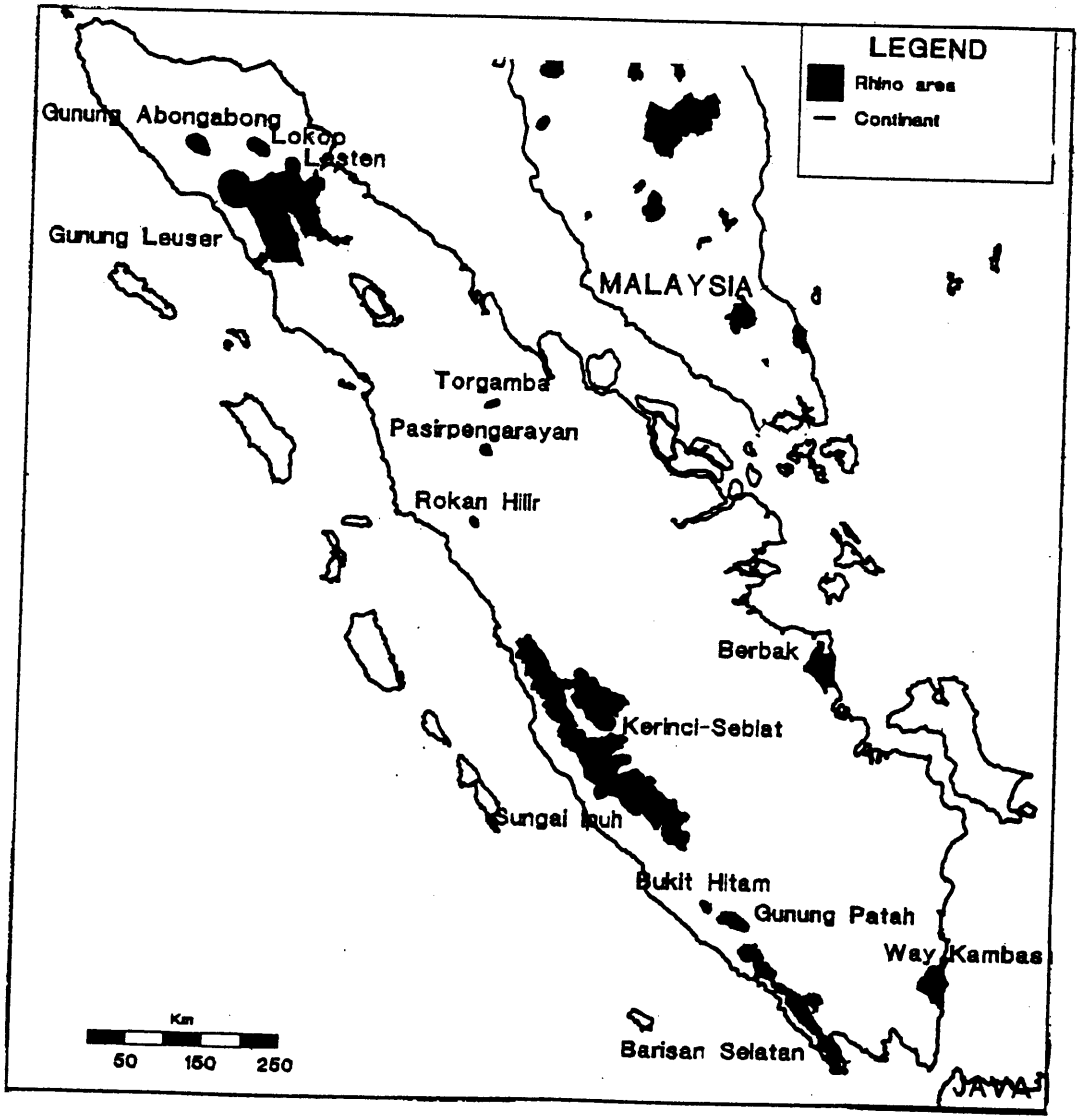
The rhinoceros in Indonesia and Malaysia inhabit ten major protected areas: the Sumatran rhino on the Malayan Peninsula and the islands of Sumatra and Borneo; and the Javan rhino on the island of Java.

Indonesia

Kerinci Seblat National Park

The park covers an area of 10,000 square kilometres (km^2) in west-central Sumatra, Indonesia, with mostly tropical forest consisting of lowland dipterocarp (48 percent) and submontane (41 percent), and lesser amounts of montane and cloud forest. The park contains an estimated 100 to 200 Sumatran rhino, the largest known population, and has an ultimate carrying capacity of at least 500 Sumatran rhino. It also has large populations of Sumatran tiger; vertebrate species include 167 birds and a number of threatened mammals that do not occur in Gunung Leuser National Park, including Sumatran rabbit and Asian tapir. There is significant human use and habitation with 7

SUMATRA - Rhino habitats



percent of the park under agriculture, and at least 1,100 people resident within the park's boundaries, and a much larger number (300,000) in the central enclave. A large biodiversity investment has been proposed by the Global Environment Facility (GEF) for this area, but it will not provide funds specifically for rhino or other species conservation.

Barisan Selatan National Park

This park, with an area of 3,600 km^2 in southern Sumatra, Indonesia, has mostly tropical forest consisting of lowland dipterocarp (70 percent) and some submontane (9 percent). The park contains an estimated 25 to 60 Sumatran rhino, but has the capacity, if properly protected and managed, for at least 100 rhino. Other threatened mammals in the park include tiger, clouded leopard, Asian wild dog, sun bear, serow, elephant and tapir. Human habitation is appreciable, with 17 percent of the area under agriculture and 10,000 residents within the park. The government has been successful in containing further encroachment, and in fact, many people are being resettled outside the park. A major tourist resort is being developed very near to one of the known rhino areas.

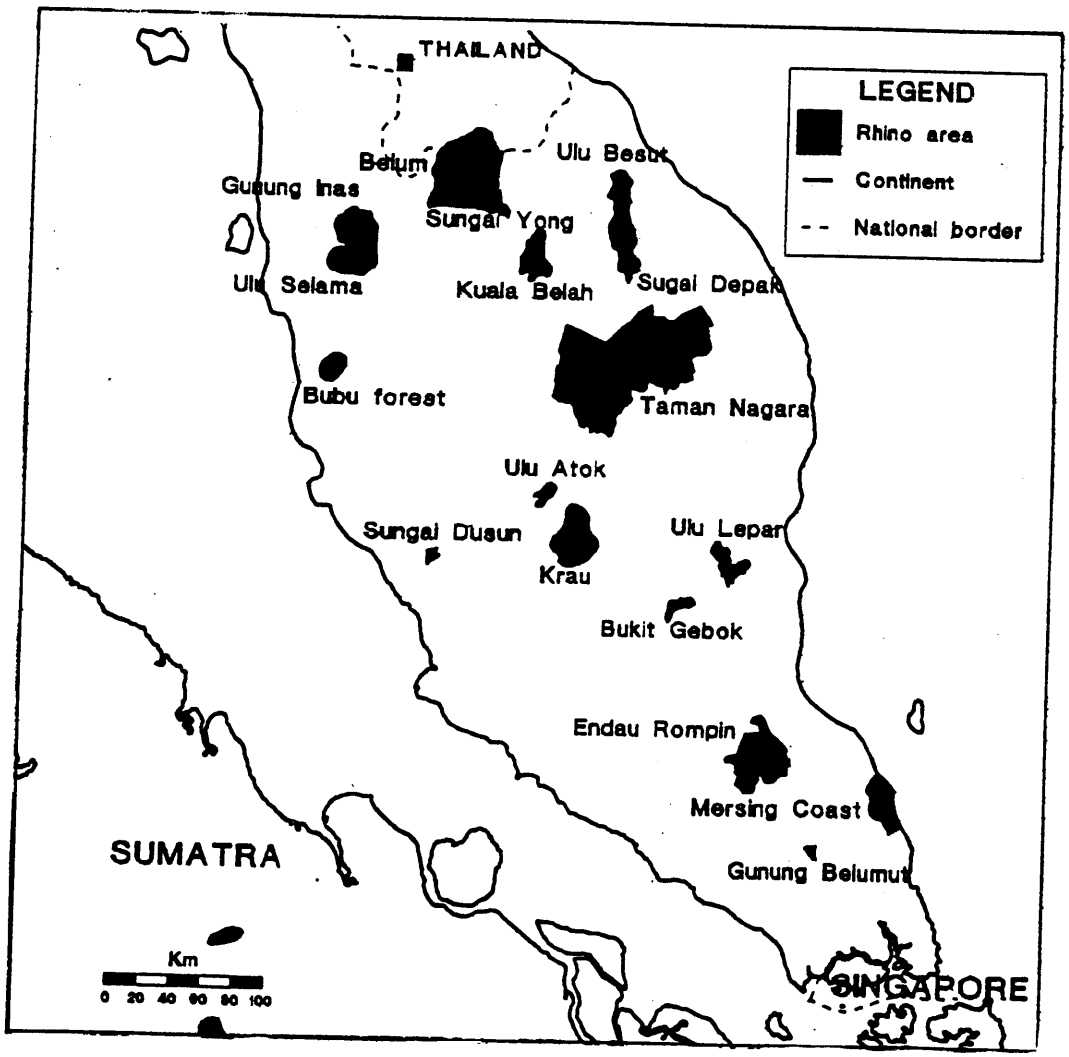
Gunung Leuser National Park

An area of 8,000 km^2 in northern Sumatra, Indonesia, this park is mostly tropical forest consisting of lowland dipterocarp (40 percent), submontane (45 percent), and montane (15 percent). The park contains an estimated 90 to 120 Sumatran rhino, and has an ultimate carrying capacity of at least 400 rhino. Vertebrate species in the park include 105 mammals and 313 birds. It represents the main protected area for orangutan in Sumatra, and has appreciable populations of other threatened species including tiger, elephant, serow, wild dog, sun bear and clouded leopard. Threats to species and habitat in the area include poaching and increasing human habitation, with 6,000 people resident within park boundaries. Additions to the park and adjustments to its boundaries have been recommended, including a Biosphere Reserve where much of the previous research on the Sumatran rhino was conducted. Some rhino protection units are already operating with support from the European Union (EU).

Ujung Kulon National Park

An area of 300 km^2 in western Java, Indonesia, the park is mostly tropical forest, of which about 50 percent is dense primary lowland, with more open secondary forest dominated by palms and stands of bamboo. It contains the last appreciable population (40 to 60) of Javan rhino; other significant components of the fauna include the Javan gibbon, 270 species of birds, and a number of threatened reptiles including false gharial and estuarine crocodile. Ujung Kulon is a World Heritage Site and the premier national park in Indonesia.

Peninsular Malaysia - Rhino habitats



Peninsular Malaysia

Taman Negara National Park

An area of 4,343 km^2 in the centre of Peninsular Malaysia, the park is almost entirely tropical forest consisting of four main types: lowland dipterocarp, hill dipterocarp, montane oak, and montane ericaceous. It contains an estimated fifty Sumatran rhino. Other threatened vertebrates in Taman Niagra include great argus pheasant, crested fireback pheasant, Malaysian peacock pheasant, tiger, elephant, tapir and serow. Considered by many to be the best national park in Southeast Asia, the area has been subjected twice in the last two decades to proposals for a major dam that would remove about 10 percent of the park.

Endau Rompin

An area of 1,600 km^2 on the western side of Peninsular Malaysia, Endau Rompin contains two principal forest types: lowland mixed dipterocarp, and hill formations which can be further distinguished as palm or heath forest. The area contains an estimated 10 to 25 Sumatran rhino, with an ultimate carrying capacity of 100 rhino. It is inhabited by other threatened species, including tiger, elephant, tapir and primates. The area has been proposed as a national park, but its jurisdiction is currently divided between two states—Johore and Pahang. Only Johore has recently gazetted its approval. Despite partial gazettement, habitat degradation continues, and this excellent area for Sumatran rhino is under intense pressure from exploitation and development. GEF funding could catalyze further gazettement and improve conservation of the area.

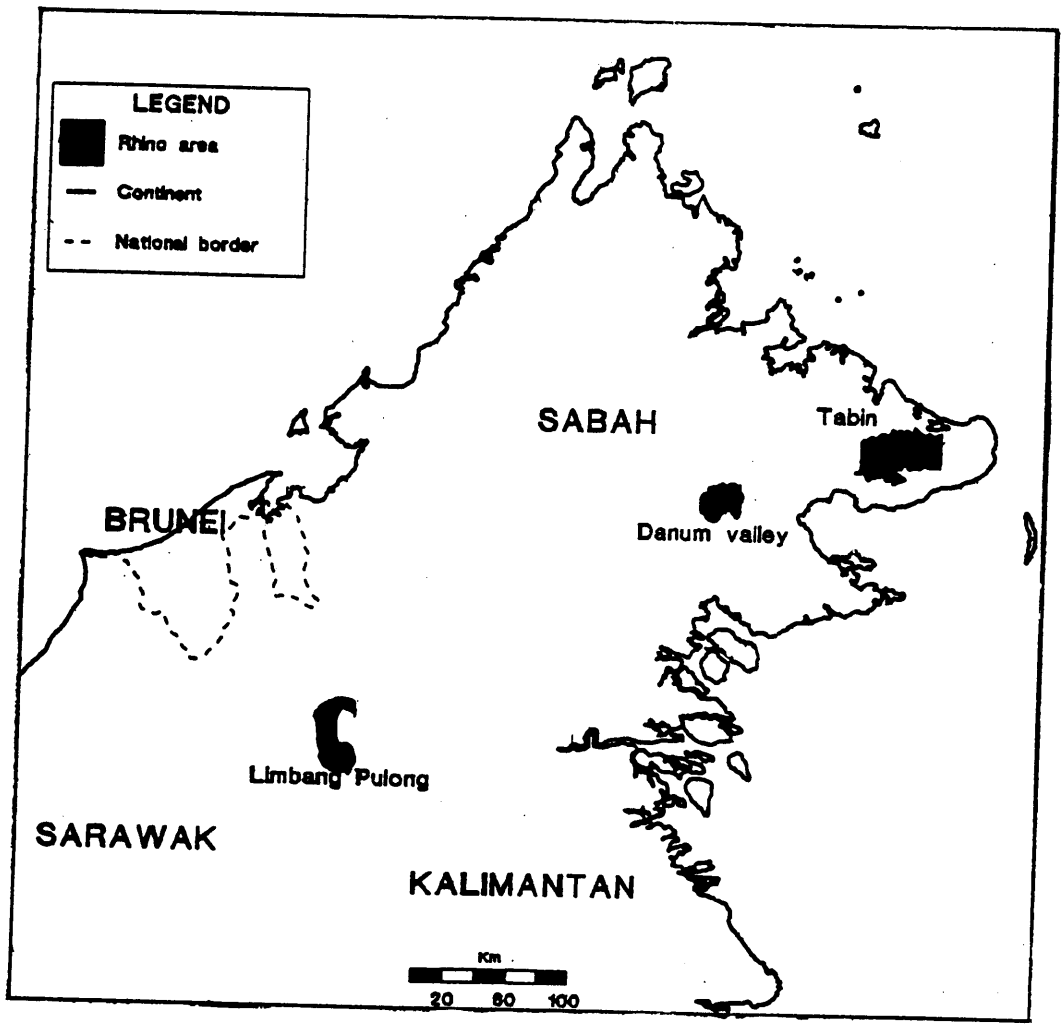
Ulu Selama

Ulu Selama is a considerable area (over 1,000 km^2) encompassing both protected and unprotected tracts of tropical forest in the northwestern part of Peninsular Malaysia. The protected part of the area is the Gunung Bintang Hijau Wildlife Reserve (900 km^2) which contains a nucleus of 10 to 15 rhino, and has a carrying capacity, if properly gazetted, of at least 100 rhino. GEF funding would provide an important incentive for official protection to be accorded to this area.

Ulu Belum

Ulu Belum is an extensive area of 2,900 km^2 located on the border with Thailand in the north-central part of Peninsular Malaysia. A portion of the area (1,300 km^2) constitutes the Belum Forest reserve, and has been proposed as a Wildlife Reserve by the DWNP. Until recently the area was under national security control. Very recent surveys whose results are not yet fully and officially disclosed confirm the rich biodiversity of the area, including a substantial population of Sumatran rhinoceros (over ten), as well as elephant, seladang (gaur), serow and hornbills.

North Borneo - Rhino habitats



Sabah

Tabin Wildlife Reserve

The Tabin Wildlife Reserve is an area of 1,200 km^2 in eastern Sabah. The vegetation is mainly evergreen dipterocarp forest. The reserve contains an estimated 20 or more rhino, with a carrying capacity of at least 100 rhino. Other threatened species include Bornean orangutan, sun bear, elephant and banteng. The reserve currently contains resident staff, and the World Bank has provided funds for a new headquarters complex. The United Nations Development Programme (UNDP) is supporting a project to improve management, and the GEF project will enhance the operational capabilities, and in particular permit isolated rhino to be moved into this intensively protected zone.

Danum Valley Conservation Area

The Danum Valley Conservation Area is an area of over 438 km^2 in southeast Sabah with largely lowland dipterocarp forest, with some montane at higher elevations. It contains a nucleus of more than 10 rhino, and has an ultimate carrying capacity of at least 100 rhino. The area is inhabited by 134 bird and 41 mammal species, including threatened species like the Bornean orangutan, proboscis monkey, clouded leopard, elephant and banteng. Danum Valley is currently part of a forest concession to, but managed as an ecological reserve by, the Sabah Foundation, a joint venture of the government and the private sector. GEF funding will help solidify the continued protected status of this area.

Sarawak

Ulu Limbang/Pulong Tau

This area of 600 to 1,000 km^2 in Sarawak is currently ungazetted, but is proposed for protection as part of the planned Pulong Tau National Park. The area contains a nucleus of 6 to 15 rhino, with an ultimate carrying capacity of 100 rhino, if the full extent of the forest can be incorporated into a protected area. This area is adjacent to the vast Kayan Mentarang area of Kalimantan (16,000 km^2) which may also still contain a few rhino, and has the potential to sustain a very large population if properly managed and protected.

Collectively, these protected areas in Indonesia and Malaysia represent approximately 32,000 km^2 of tropical forest. Being extremely rich in biodiversity, they have much value in terms of use, insurance, information, existence and bequest. The known or estimated numbers of species include over 1,500 plants, over 200 reptiles, over 500 birds, and over 200 mammals. Over 100 of the faunal species feature in IUCN's Red Data List. These major rhino protected areas are also vital watersheds for their regions, and hence have immediate use value for local human populations.

These habitats and species are now threatened by developments in logging, mining, shifting agriculture, and other changing land uses, as the economies of Indonesia and Malaysia expand to meet the needs of their increasing population. Lowland habitats and wetlands are particularly threatened since these are the areas most accessible for agricultural developments.

Much loss of biodiversity in Indonesia and Malaysia, as elsewhere, is due to economic development that emphasizes rapid exploitation of biological resources rather than sustainable use. Slowing the rate of biodiversity loss will require policy and institutional reform, as well as institutional strengthening for effective action in all four areas.

The active participation and support of local communities will also be essential for *in situ* conservation, for they are the *de facto* managers of forest, wetland and marine resources. The plan calls for greater collaboration between government agencies, and local communities and NGOs to work together as partners in biodiversity conservation.

2. Host country strategy

Both Indonesia and Malaysia have developed national strategies and action plans for the conservation of biodiversity, and by extension, explicitly for conservation of the rhinoceros as a flagship and umbrella species for their ecosystems.

Biodiversity conservation

Indonesia and Malaysia are parties to the Convention on Biological Diversity which opened for signature at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil. The treaty requires signatories to compile inventories of their plant and animal resources, and develop national conservation plans for those that are endangered. Indonesia and Malaysia are also signatories to CITES.

Indonesia

Recognizing the need to conserve its rich biological resources, the Government of Indonesia has made a commitment to protect 10 percent of the land area, and eventually 20 million hectares of coastal and marine habitats, as conservation areas. Worldwide, this would be one of the highest ratios of land conserved.

The current National Conservation Plan for Indonesia was drafted in 1981-82 under the National Park Development Project of UNDP and the Food and Agriculture Organization of the United Nations (FAO). The strategy will be updated under the World Bank National Park Investment (Package B) project, currently in its first year of operation.

Conservation and the preservation of nature have been established in government policy for many years in Indonesia. The growing worldwide concern for nature conservation led to the formulation of the World Conservation Strategy. This is reflected in Indonesia's recently adopted Conservation Strategy, where conservation is based on the protection of life support systems, preservation of genetic resources, and sustainable use of living natural resources. Act No. 4/1982 on Management of the Living Environment, and Act No. 5/1990 on the Conservation of Living Natural Resources and their Ecosystems provide a strong commitment to the conservation of nature.

As critical inputs to the development of conservation management in Indonesia, the two acts direct the development of the Indonesian Rhino Conservation Strategy. This strategy was formulated at the Indonesian Rhino Conservation Workshop of PHPA-IUCN-WWF in 1991. The strategy was subsequently endorsed by the Government of Indonesia as a document to guide the conservation of Indonesian rhinos.

The Biodiversity Action Plan for Indonesia sets out a strategy for action under four main headings: *in situ* conservation in terrestrial parks and protected areas; *in situ* conservation outside the protected area network (production forests, wetlands, and agricultural lands); *in situ* conservation of coastal and marine resources; and *ex situ* conservation. The final draft was completed in 1991, and the recommendations are now being translated into strategies and action plans, under the guidance of the State Ministry for the Environment (KLH) and the National Development Planning Agency (BAPPENAS).

Among the various terrestrial habitat types present in the country, about 50 percent were originally tropical lowland rain forest, biologically one of the richest habitats on earth. Being the source of most tropical hardwood timber, less than 5 percent of the original lowland forests in Indonesia remain preserved in reserves and national parks, often in more or less degraded form.

The goal of the National Biodiversity Action Plan is to conserve, as much as possible, the biodiversity on which the livelihood and prosperity of Indonesia depends. The major objectives of the plan are:

- To slow the loss of primary forests, wetlands, coral reefs and other terrestrial and marine habitats of primary importance for biodiversity
- To expand the data and information available on the nation's biodiversity, and make it available to policy-makers and the public
- To foster the utilization of biological resources in ways that are sustainable and less harmful than current practices.

The plan stresses that the first priority for maintaining biodiversity must be *in situ* conservation, both within the protected areas network and elsewhere.

The objectives for *in situ* conservation in terrestrial parks and protected areas are:

- To establish an integrated protected area system covering all major terrestrial habitats and approximately 10 percent of the land area of Indonesia

- To strengthen PHPA, the main agency responsible for conservation areas
- To gain local support for national parks and protected areas through buffer zone projects and the involvement of local communities and NGOs in management decisions
- To develop innovative and sustainable means of funding for park management and buffer zone activities
- To evaluate options for the management of protected forests to enhance the conservation of biodiversity.

These strategies and action plans are now being translated into more specific programmes for implementation. Conservation of rhinoceros as a major component of the tropical lowland ecosystem is important to achieve the goals and objectives of the Biodiversity Action Plan. As noted before, the rhinoceros is recognized as an important flagship and umbrella species to serve the greater goal of the conservation of biodiversity.

Malaysia

Similar strategies and action plans for the conservation of biodiversity have been or are being developed in Malaysia. Of specific relevance to this project, the Sumatran rhino is protected by law throughout Malaysia. Under the federal system in Malaysia, wildlife conservation is managed by three authorities corresponding to the three geographically distinct parts of the country.

Peninsular Malaysia

Conservation of the rhinoceros and its habitat is of the highest priority in Peninsular Malaysia. The Wildlife Protection Act of 1972 provides wildlife protection for the region's eleven states. Primary responsibility for the management and conservation of wildlife resides with the Department of Wildlife and National Parks (DWNP or Perhilitan) in the Ministry of Science, Technology and Environment. As a federal system, however, much of the responsibility is actually implemented at the state level, both by the State Directorates of Perhilitan, and by various state wildlife authorities. Perhilitan has developed a Wildlife Plan for Peninsular Malaysia to implement provisions of the Wildlife Protection Act. The objectives of the plan and Perhilitan are:

- To conserve in perpetuity the country's wildlife
- To conserve and manage wildlife species with the goal of fulfilling the various needs and interests of the people
- To create and manage national parks, wildlife reserves, and wildlife sanctuaries for the preservation and conservation of flora and fauna, and their natural habitats.

Perhilitan has adopted a strategy with five components to achieve its objectives:

- Enforcing the Wildlife Protection Act of 1972
- Implementing wildlife management programmes through *in situ* and *ex situ* conservation
- Conducting wildlife research programmes
- Conducting training and conservation education programmes
- Managing and developing national parks, wildlife reserves, and wildlife sanctuaries.

Sabah

The Fauna Conservation Ordinance provides the main legislation for wildlife conservation and management. Responsibility for these activities resides with DW in the Sabah (State) Ministry of Tourism and Environmental Development. A major revision of the Fauna Conservation Ordinance is in progress, with the expert assistance of a UN consultant. Much new wildlife policy has already been delineated in the biodiversity section of the comprehensive Sabah Conservation Strategy prepared with UNDP/WWF assistance in 1990-92.

Sarawak

The Wildlife Protection Ordinance provides the legislation for management and conservation of wildlife in Sarawak. Responsibility for these activities resides with the Department of Forestry (DF) in the Sarawak (State) Ministry of Resource Planning.

Rhinoceros conservation

Both global and national conservation strategies and action plans have been developed for the conservation of viable populations of the two species of rhinoceros in Southeast Asia. These strategies and action plans employ rhinoceros as an umbrella and flagship species for the ecosystems they inhabit.

The strategies have been formulated over the last eight years, as information and analysis of the populations and habitats for these rhino species have improved. Over the last decade, the strategy has evolved as a collaborative effort of the conservation authorities in range states and the Asian Rhino Specialist Group (AsRSG) of the Species Survival Commission (SSC) of IUCN. The range state conservation authorities are the PHPA in Indonesia, the DWNP in Peninsular Malaysia, the DW in Sabah, and the DF in Sarawak.

The conservation strategy is documented in:

- *Asian Rhinos: An Action Plan for their Conservation.* A "global" conservation strategy and action plan for Asian rhinos formulated by the IUCN AsRSG. The plan was developed through a consultative process that involved government representatives of the range states (especially in this case of Indonesia and Malaysia), as well as international experts and consultants. The plan has been reviewed and updated at the AsRSG meeting in Jaldapara Sanctuary, West Bengal, India, 6-10

December 1993. It recommends both general strategies and specific measures to protect and preserve the three species of Asian rhino: the great one-horned or Indian rhino, *Rhinoceros unicornis*; the lesser one-horned or Javan rhino, *Rhinoceros sondaicus*; and the Asian two-horned or Sumatran rhino, *Dicerorhinus sumatrensis*.

- *A Global Heritage Species Programme Prototype Action Plan for Sumatran Rhino.* A detailed programme of activities and costs to implement the "global" Action Plan, and to utilize the rhino as an umbrella and flagship species prepared under IUCN/SSC auspices.

- *Report of the IUCN/SSC AsRSG to the UNEP Conference Among Rhinoceros Range States, Consumer States, and Donors.* An overview analysis of rhino conservation actions, their costs, and their relative priority. Current estimates of the total costs for rhino conservation in Indonesia and Malaysia over the next three years is approximately US$ 14 million, of which US$ 11.5 million is required from external funding. The breakdown of these costs is as follows (all figures are in US$):

	In situ	*Ex situ*	*Total*	*External fund needs*	*GEF*	*Other donors*
Indonesia	5,780,000	1,770,000	7,550,000	6,072,000	900,000	5,172,000
Malaysia	3,975,000	2,930,000	6,905,000	3,875,000	900,000	2,975,000

The strategy is based on viable population theory and has formulated explicit, in most cases quantitative, objectives to achieve the goal of conserving the rhino and their ecosystems. Small and isolated populations are very vulnerable to accidental loss or poaching. They are also subject to localized catastrophes like floods, fires, cyclones, and they can suffer declining vigor or vitality through steady loss of genetic diversity.

To maintain demographic security, genetic adaptability, resilience, and vitality, a minimum population of approximately 2,000 to 3,000 rhino per species (and perhaps valid subspecies) is necessary for survival in the long term. For each species, these rhino should be distributed over at least five protected areas capable of accommodating a minimum of 100 rhinos each, preferably more. It is highly desirable to have at least two or more protected areas that can accommodate 400 to 500 rhinos each.

The existing populations of Southeast Asian rhinos are far below this minimum level. For the Sumatran rhino, however, the current protected area system has the potential of accommodating rhino populations of this magnitude, if the rhino can be protected effectively enough for the populations to recover to viable levels. For the Javan rhino, achievement of the population objectives will require, in addition to strict protection and habitat management in the sole existing sanctuary of Ujung Kulon, restoration of populations to more protected areas in Indonesia (on Sumatra), Peninsular Malaysia, and ultimately others areas of the former range on the Southeast Asian mainland.

The first step in rhino conservation in Indonesia and Malaysia must be to prevent further decline of the populations, and provide the protection necessary for the populations to recover to larger and more viable levels. As demonstrated with rhinoceros species elsewhere (for example, the southern white rhino in South Africa and the Indian rhino in India), populations do have the potential to grow if they are adequately protected and managed.

The Rhino Conservation Strategy has evolved through wide consultations and collaboration between and within the range states, principally Indonesia and Malaysia, under the auspices of the IUCN/SSC (AsRSG), with the support of UNEP.

To implement the Rhino Conservation Strategy at a national level, both Indonesia and Malaysia have developed rhino conservation action plans:

- *The Indonesian Rhino Conservation Strategy and the Indonesian Conservation Action Plan Priorities.* Documents for implementation of conservation activities for these species at the national level were developed with the encouragement and assistance of the IUCN/SSC and UNEP by the Directorate General of Forest Protection and Nature Conservation (PHPA), Ministry of Forestry, Indonesia, with the assistance of the Foundation of Rhino Friends (Yayasan Mitra Rhino), IUCN, SSC (AsRSG), and WWF's Indonesia Programme. The Action Plan and Conservation Strategy have been recommended and endorsed by the Government of Indonesia, IUCN and WWF. The Indonesian Rhino Conservation Strategy will also contribute significantly to the high priority placed on rhino conservation by UNEP and CITES. The strategy and plan delineate immediate and attainable priorities for conservation action, and suggestions for further studies on policy and funding mechanisms to strengthen the Indonesian Rhino Conservation Strategy. The goal of the Indonesian Plan is to create conditions conducive to the long-term survival of viable populations of the Javan Rhino and Sumatran Rhino in the wild in Indonesia.

- *Report of the 1993 Population and Habitat Viability Analysis (PHVA) Workshop.*

- *The Malaysia Rhino Conservation Action Plan.* A document for implementation of conservation activities for these species at the national level (in the Peninsula, Sabah and Sarawak) with the encouragement and assistance of the IUCN/SSC and UNEP. The Malaysia Rhino Conservation Action Plan was formally prepared in 1993 with the assistance of a consultant mission from UNEP.

Summary of the Rhinoceros Conservation Strategy

The conservation strategy, global and national, provides for survival and recovery of viable populations of the rhino. The strategy integrates *in situ* and *ex situ* components, governmental and non-governmental partners, and traditional and non-traditional methods. The strategy entails a diversified approach that includes wild population protection, sanctuary management, captive propagation, and ultimately, gene bank technologies. The strategy also employs the rhinos as an umbrella and flagship species to conserve the ecosystems of which they are an integral part. More specifically, major components of the strategy are as follows.

Survival or recovery of viable populations of the rhino

This strategy is based on initial PHVAs. These analyses use models to consider demographic and genetic characteristics of the population, as well as current and projected conditions in the habitat to assess the risks, both deterministic and stochastic (random), to survival and recovery of the population, and evaluate various management options or scenarios.

Based on these analyses, explicit and quantitative recommendations for the conservation of the species are generated. Their goal is the recovery of rhino populations to target levels that have been established through population viability analyses. These levels are as follows:

- *Sumatran rhino*
  Sumatra: 1,000 rhino in 3 protected areas
  Borneo: 700 to 1,000 rhino in 5 protected areas (2 in Kalimantan, 2 in Sabah, and 1 in Sarawak)
  Mainland: 1,000 rhino (600 in peninsular Malaysia, 200 in Thailand, and 200 in Burma) in 7 protected areas (3 in Peninsular Malaysia, 2 in Thailand, and 2 in Burma)

- *Javan rhino*
  Java: 100 rhino in Ujung Kulon with improved protection and management
  Elsewhere: another 1,900 Javan rhino re-established in 9 to 19 protected areas (each capable of sustaining at least 100 rhino) within the historic range of the species.

PHVAs will continue to refine the action plans for the rhino strategy. These PHVAs will generate more explicit assessment of risk and recommendations for action. In particular, further PHVAs for the Sumatran rhino in both Indonesia and Malaysia will permit optimal placement of the infrastructure provided by this project. The PHVAs will be enhanced by Geographic Information System (GIS) techniques that are being developed in both Indonesia and Malaysia.

Protection and management of the Sumatran and Javan rhino as a species and as components of their ecosystems

While an emergency exists for the survival of the two species of rhino, the Conservation Strategy also emphasizes their role as a flagship and umbrella species for their ecosystems. The term flagship species is well established in conservation parlance, while the term umbrella species is not used as much. There is a useful distinction between the terms that is related to the emerging science of viable population biology. Flagship species is best used as a marketing term to designate those charismatic species that can attract support for conservation of their ecosystems. Umbrella species is best used as an ecological term to indicate species for which the habitat required to sustain viable populations (defined in terms of genetic and demographic factors) is so large that it will encompass appreciable parts of the natural ecosystem inhabited by the umbrella species.

The two species of Southeast Asian rhino are both an umbrella and a flagship species. The population viability analyses used to formulate the conservation strategy for the rhino has recommended that priority be accorded to protected areas that can accommodate a population of 100

rhino, preferably more. Moreover, the strategy recommends that the recovery programme aspire to total target populations of 2,000 to 3,000 to be restored in the wild for each species (and 700 to 1,000 of significant subspecies) of Sumatran and Javan rhino. Ecological studies indicate that each Sumatran rhino requires on average 5 to 10 km^2 of tropical forest habitat. Hence, objectives for the priority protected areas will be around 1,000 km^2 at a minimum, and the overall objectives will, if achieved, help conserve 40,000 to 60,000 km^2 of tropical forest ecosystems in Southeast Asia.

Protection and management of habitat sufficient to accommodate viable populations of rhino will also benefit many other threatened species including orangutan, tiger, elephant, and thousands of other taxa. The activities of the rhino units, and the application of their infrastructure, can be used for protection and management of other species in the rhino's ecosystem.

Prioritization of protected areas for conservation activities

A major recommendation is to concentrate field efforts on wild populations and protected areas that are sufficiently large and potentially viable (in other words, demographically secure and genetically diverse) over the long term. The strategy recognizes nine major wild populations of, and protected areas for, Sumatran rhino, and one major population and protected area for the Javan rhino. These areas will receive priority for field efforts and resources. Isolated rhino that are not situated in these larger populations and areas are recommended for *ex situ* actions, in other words, careful translocation, and intensive management and propagation.

Improved protection and management of the ten major populations and protected areas

Critical to the *in situ* component of the Rhino Conservation Strategy is the development of special rhino protection units. These units must possess the equipment and training to provide improved protection and management of rhino and their habitats. The units will also serve as extension agents to promote community development, and involvement in, the conservation activities. The funding from GEF is critical for development of these rhino units.

Professional training within the range states

Implicit in the formation of the rhino units is the need for more training in wildlife population and protected area management. Such programmes will be continued and expanded as part of the strategy.

Capacity development in local communities

In addition to traditional protection and management actions for the *in situ* population, this prototype plan also includes components relating to local community problems and involvement in rhino conservation and their habitats, including:

- Public awareness and educational campaigns nationally and locally
- Economic incentive and development programmes
- Networks of local citizens to provide information useful to protection and management of rhino and their habitats.

Cooperative programmes by PHPA and WWF for the community relations and development portions of the strategy in Indonesia are already under way.

Development of more intensively protected and managed in situ *zones (sanctuaries)*

A sanctuary is a natural or artificially enclosed tract within a protected area in which a high density of rhinos is developed as a propagating nuclei to repopulate other protected areas. This method is a hybrid between *in situ* and *ex situ* areas, and could be a prime site for translocation of rhino rescued from inviable situations.

Development of intensively managed populations in support of the in situ *efforts*

Ultimately, the goal of the captive programmes is to develop captive populations to support survival of the species (and perhaps subspecies) in the wild. Rhinos for the sanctuaries or captivity will be individuals that are not in viable situations in the wild, in other words, they are not part of populations sufficiently large or feasibly protectable. Some of these rhino may also be translocated into the major protected areas.

The *ex situ* efforts will utilize captive facilities which can be zoos, or preferably special centres which may be constructed in or near protected areas, but which would entail more intensive management than the sanctuaries described above. Such intensive management centres (IMCs) are to be developed in Indonesia (probably at Barisan Selatan National Park, otherwise in or near Kerinci Seblat National Park), or have already been initiated in Malaysia (at Sungai Dusun Wildlife Reserve).

Reduction of trade in rhino horn

Efforts are required at the international, national, and local levels to reduce the trade in rhino horn, and thus the poaching pressure on rhinos. Particularly important are the capacity development programmes in local communities which can help stop the trade at its source.

Explicit delineation of methods and estimates of their costs to achieve the biological objectives of the strategy

The total cost to initiate implementation of the conservation strategy for Sumatran and Javan rhino in Indonesia and Malaysia over the next three years has been estimated at approximately US$ 14 million, of which US$ 11.5 million is needed from external sources. The proposed GEF funds of US$ 2 million are expected to catalyze additional funds from national and international sources. Some of these costs can be—and in some cases are—covered by governments of the range states, supplemented by NGOs.

A funding plan to provide for the initial and recurrent costs is required, as acknowledged in the documents cited earlier. The funding plan must incorporate support from the range states and contributions from external donors. This GEF project will provide catalytic technical and financial support to initiate full implementation of the conservation strategy. The project will also focus on a funding plan for its long-term sustainability.

3. Prior and ongoing assistance

Indonesia

Total foreign assistance to subsector

Agency	Project name	Contribution (US$)
World Bank	First Forestry Institution and Conservation Project (1989-1996)	7,100,000
World Bank	Second Forestry Institution and Conservation Project—Conservation Component (1993-1994)	2,500,000
Asian Dev. Bank (ADB)	Biodiversity Conservation Project (1993-1999)	25,100,000
USAID/ITTO	Natural Resources Management (1989-1997)	754,000
ODA/UK	Indonesia Tropical Forest Management (1991-1996)	2,502,000
New Zealand	Development of Ujung Kulon National Park (1991-1995)	1,546,000
TNC	Development and Management of Lore Lindu and Morowali Conservation Areas (1991-1996)	4,963,000
Asian Wet. Bureau (AWB)	Wetland Conservation (1990-1995)	1,520,000
KNIP (Netherlands)	Rhino Conservation (1994)	17,900
Bank International Indonesia (BII)	Rhino Conservation (1990-1994)	17,400
Birdlife	Indonesia Bird Conservation (1993-1995)	118,200
WWF	Conservation Programmes	1,708,000
Total		57,446,500

Foreign assistance specifically related to rhino conservation

- *UNDP.* Management support for Kutai National Park, which is potential rhino habitat.

- *World Bank.* Review of management of national parks with rhino populations; revision of national conservation strategy; and preparatory project for the development of an integrated conservation and development programme for Kerinci Seblat National Park.

- *EU.* Support of biodiversity project in Gunung Leuser National Park that includes a rhino protection programme.

- *Overseas Development Administration (ODA).* Rhino survey in Way Kambas National Park.

- *United States Agency for International Development (USAID).* Support for management plans for conservation areas in Kalimantan that are potential rhino areas.

- *WWF.* Research and monitoring programmes for rhino in various areas, as well as rhino protection in Gunung Leuser National Park.

- *Indonesia Wildlife Fund (IWF).* General support and public awareness programmes.

- *Bank International Indonesia (BII).* Support for Javan and Sumatran rhino research and public awareness campaigns; support of Yayasan Mitra Rhino (YMR).

- *Sumatran Rhino Trust (SRT)/Howlett's-Port Lympne Foundation.* Support for rescue of doomed rhino, and development of captive propagation programme.

- *Sumatran Rhino Survey (SRS).* Census survey of Sumatran rhino in Kerinci Seblat National Park.

- *Minnesota Zoological Garden.* Support for Management of Ujung Kulon National Park.

- *Government of New Zealand.* Development of infrastructure and administration of Ujung Kulon National Park.

- *Government of Netherlands.* Support for rhino protection activities of YMR.

Malaysia

Peninsular Malaysia

- *WWF.* Support for at least thirty-four projects involving protected areas and wildlife species.

- *Malayan Nature Society.* Conservation Survey and Management Plan for Endau Rompin State Parks and Conservation Survey in the Belum Area.

Sabah

- *UNDP/FAO.* Support for a project to prepare a masterplan for the forest sector throughout Sabah.

- *UNDP (MAL/88/009).* Support for Sabah Environmental Management Plan providing for formulation of a Sabah Conservation Strategy. Inputs designed to improve management in Tabin Wildlife Reserve, and expert assistance in the development of policy and planning in the Wildlife Department, including extensive revision of the wildlife/conservation legislation.

- *World Bank.* Support for implementation of the Sabah Land Settlement and Environmental Management Project, including provision of an access road and headquarters complex for the Tabin Wildlife Reserve.

- *WWF-Malaysia.* Support for at least thirteen major projects involving protected areas and wildlife species, including three relevant to rhinoceros conservation: Sumatran rhinoceros in Sabah; additions to the conservation area network of Sabah; and conservation action plan for the Dent Peninsula.

- *Wildlife Conservation Society (formerly Wildlife Conservation International of NYZS).* Assistance with training of Wildlife Department staff.

Sarawak

- *Wildlife Conservation Society (formerly Wildlife Conservation International of NYZS).* Over the last ten years this group has provided support for seven major projects relating to protected areas or wildlife species.

- *International Tropical Timber Organization (ITTO).* A management plan for Lanjak Entimau National Park.

- *WWF-Malaysia.* Since 1974, six major projects to provide data and promote management for proposed or existing conservation areas; seven major projects designed to provide data and conservation advice on threatened or rare taxa or habitats, including a species management plan for Sumatran rhino (1987); two major

projects designed to identify and promote the creation of new conservation areas; three conservation education projects; and seven projects to facilitate general action and project elaboration.

4. Institutional framework for subsector

Indonesia

The primary responsibility for conservation of biodiversity, and hence rhinoceros, resides with the PHPA in the Ministry of Forestry. Within PHPA, responsibilities for conservation activities for wildlife, including rhinoceros, are distributed among a number of directorates. The Directorate of Conservation Programme Development (Direktorat Bina Programme) is responsible for overall planning, coordination, and evaluation of conservation programmes. The Directorate of Development of Conservation Areas, Protection of Forests and Conservation of Flora and Fauna (Direktorat Bina Kawasan Suaka Alam dan Konservasi Flora-Fauna) is responsible for species conservation, including the rhino. The Directorate of Development of National Parks and Recreation Forests (Direktorat Bina Kawasan Pelestarian Alam) is responsible for the area management of the national parks and recreation forests. The Directorate of Forest Protection (Direktorat Perlindungan Hutan) is responsible for law enforcement and coordination of protection activities. The State Ministry of Environment (LH) provides guidance for biodiversity conservation at the policy and strategy level.

YMR is an Indonesian NGO devoted to promotion of rhino conservation activities in Indonesia. YMR works closely with PHPA on fund raising, public awareness, anti-poaching and research. Boards for technical and financial/community support have been established under YMR to assist implementation of, and develop sustainability for, the Indonesian Rhino Conservation Strategy.

Various international NGOs are also involved in rhino conservation, including WWF, International Rhino Foundation (IRF), Minnesota Zoological Garden, Sumatran Rhino Trust, Howlett's-Port Lympne Foundation, Sumatran Rhino Survey (SRS), and private sector donors (BII). An objective of the project is an expanded and closer coalition of such organizations.

Malaysia

Responsibility for the conservation of biodiversity, and hence rhinoceros, is distributed among three management authorities reflecting the three geographically distinct regions of the nation. In Peninsular Malaysia, responsibility resides with the DWNP, and the Ministry of Science, Technology, and Environment. In Sabah the DW in the state Ministry of Tourism and Environmental Development has responsibility for protection of all wildlife outside parks, in other words, the wildlife reserves such as Tabin where rhino are located. Sabah Parks is responsible for protection of wildlife in the parks. In Sarawak, the Wildlife Division of the DF in the state Ministry of Resource Planning is responsible for conservation activities.

The federal Economic Planning Unit (EPU) is responsible for approving and coordinating all external assistance. The EPU also links external donors and government departments implementing

projects. The Malayan Nature Society (Peninsula) and WWF-Malaysia (Sabah), as well as a number of international NGOs (IRF) have also been involved in rhino conservation. An objective of the project is to form a closer coalition of these organizations to help implement the project.

B. PROJECT JUSTIFICATION

1. Problem to be addressed and the present situation

The present situation

The decline of Sumatran rhinoceros in Indonesia and Malaysia continues and is intensifying in certain areas. In Indonesia estimates indicate that the population may have been reduced by 50 percent in the last decade. In Malaysia the rate of decline has also been appreciable, but variable in Sabah and in Peninsular Malaysia. The situation in Sarawak is poorly known.

The population of Javan rhino apparently has stabilized, although at a level too low to be viable over the long term. This species, however, is concentrated in a comparatively well-funded and managed national park; the current situation is therefore not as critical as it is for the Sumatran rhino.

Both species of rhinoceros have been on the decline for a long time. The Javan rhino, for example, was eliminated from Malaysia in the 1930s. Rhino decline in Southeast Asia is due to a combination of reduction in habitat and over-exploitation of rhino (most recently by poachers seeking the horn). The relative importance of these two causes for decline has varied in both time and place. At this time, poaching pressure continues to be high in Indonesia, hence anti-poaching activities must be emphasized in the country's rhino conservation programmes. In contrast, there is little current evidence of rhino poaching in Sabah, but loss and fragmentation of habitat is a serious threat. Rhino conservation efforts in Sabah need to concentrate on translocating isolated ("doomed") rhino into intensively protected areas whose management is being reinforced. In Peninsular Malaysia, habitat and poaching problems are of roughly equal importance, so the rhino conservation programme is oriented both to improved anti-poaching and translocation components. Unfortunately, the situation in Sarawak continues to be poorly known.

Although concern has been high and plans have been developed, both Indonesia (PHPA) and Malaysia (DWNP in Peninsula, DW in Sabah, and DF in Sarawak) have insufficient technical, logistical, and organizational capacity to initiate full implementation of the strategies and actions for rhinoceros conservation that have been formulated in both nations. Specifically, both countries need to further develop special rhino conservation units to immediately arrest and reverse the decline in rhino populations. In Indonesia, these rhino units will concentrate on protection; in Sabah, on surveys and translocation; and in Peninsular Malaysia and Sarawak, on both activities.

Rhino protection units concentrating on poacher problems will require recruitment, training, and deployment of more personnel to conduct anti-poaching as well as community outreach activities. In Indonesia, the approximate cost to recruit, train, deploy, and operate a team is US$ 12,000 per year, with an additional US$ 14,000 initial investment for operational facilities.

In Indonesia, rhinoceros are subject to poaching pressure both from hunters with firearms, and from trappers who use wire snares and other traps that maim and kill the animals. The methods employed in poaching prevention are primarily field patrols to search for traps and other signs of poachers, to destroy these traps, and to collect evidence to identify and apprehend the people involved. Rhino protection units should have the power to arrest the poachers. They must also be adequately equipped to deal with armed poachers so they must be able to carry guns. One of the members of each rhino protection unit must be an official forest guard (a jagawana) who has the authority to arrest suspects and carry firearms.

For the Indonesian programme, a mobile unit needs to be formed to provide leadership, training and supervision of the rhino protection units. The mobile unit should be composed of experienced persons, whose combined experiences and skills allow the team to do the tasks specified. Especially important are a wildlife or nature conservation background, research experience, administrative experience, and leadership. Ideally a team should be composed of an experienced team leader with a nature conservation background, a wildlife ecologist, and a person with an administrative or legal background. One member of the mobile unit should have the qualifications of an assistant magistrate (Penyidik Pegawai Negri Sipil or PPNS). The leader of the mobile unit will be the Regional Rhino Coordinator.

For Malaysia, especially in Sabah, where there is more need to translocate rhino from isolated, inviable situations into the intensively protected areas, provision of operational capabilities are required to locate and move rhino at risk, maintain surveillance on them via patrol and telemetry, and improve protection of the areas into which the rhino are being consolidated.

It should be noted that rhinos have been successfully translocated in Southeast Asia, in India, and in Africa. When projects are well designed and conducted, mortality rates are negligible. Significant mortalities (30 percent) have occurred in cases where rhinoceros have been moved into inadequate conditions in traditional captivity, or into situations in the wild where there has been insufficient preparation for the new arrivals (for example, placing new rhino into established territories of resident rhino). The project will be guided by the extensive experience of rhino translocation that has been acquired over the last ten years in both Asia and Africa. Translocations will be a secondary component of the project, except in Sabah. The major emphasis is on development of effective protection and management of the rhinoceros in their current habitat.

Another major problem has been inadequate coordination and management of rhino conservation efforts in both nations. Indonesia has not had a special coordinator. Designating a Rhino Conservation Officer is a high priority in the Indonesian Rhino Conservation Strategy and Action Plan. The appointment of a Rhino Conservation Officer for Indonesia is vital for the success of the programme. This position should be at the Director level within PHPA. The government can provide a basic salary, but functional supplements are required and requested from the GEF project. This position also needs administrative and technical support to operate effectively.

A Rhino Conservation Officer was designated in Peninsular Malaysia from 1977 to 1988. The limitations of staff in the DWNP, however, required the rhino officer to engage in many other management and research projects. Hence, over the last several years, rhino conservation has been conducted on an ad hoc basis or delegated to state directors for wildlife. The lack of coordination

is probably a reason for the recent increase in poaching. The position of Rhino Conservation Officer needs to be reinstituted in the Peninsula, and instituted in Sabah and Sarawak.

The rhino protection units and rhino officers should associate and coordinate closely with the other existing protected area and wildlife management staffs, as well as with civil authorities, both at the regional and national level. To further improve coordination, periodic visits and regular communication between the Indonesian and Malaysian rhino conservation programmes is highly recommended.

There has also been insufficient attention paid to community outreach, involvement, and development as an essential component of viable and sustainable conservation programmes for rhino and their ecosystems. There have also been inadequate attempts to demonstrate or develop how rhino, and by extension biodiversity, conservation can be of economic value and non-economic importance (pride, traditions) to local communities.

Conservation of nature cannot be successful without appreciation of the need for, and provision for the costs of, conservation by all levels of society, but especially at the local level in communities around the rhino habitat. Public awareness and appreciation should be developed through a variety of formal and informal educational programmes.

An earnest, professional force that carries out the rhino conservation programmes with zeal and dedication will also have a significant beneficial impact on public opinion. The rhino protection units and the mobile units will play an important role in the education of the people living around rhino areas. Staff involved in education and awareness programmes need special interpretive training in how to interact with people (both individually and during meetings and gatherings) and ideas on what to say and how (values, natural history, economic and social context, and other aspects of rhinos).

The rhino protection units will be required to develop good relations with local people, obtain information and assistance in the prevention of poaching, and increase awareness of the plight of the rhino and the importance of its conservation. They should also try to establish the identity of contact persons and the routes used for the horn trade, and relay such information to the appropriate authorities. Monetary rewards to individuals who identify poachers should also be considered.

The people selected for the anti-poaching and monitoring units should be recruited in part from local communities. All members should have considerable knowledge of the rain forest, but in each team one person should have the authority to apprehend poachers. Each team should consist of four to five people, one of whom should be the leader with appropriate rank and skills. Salaries and other benefits should be adequate to attract well-qualified people. A bonus system for good performance should also be considered.

Conservation programmes must be based on reliable data on the status of the populations and species. Data on rhino numbers and distribution is inadequate; often it consists of rough estimates or tenuous extrapolations. To provide more reliable data, a continuous monitoring programme for Sumatran rhino must be initiated in all reserves. Reliable census methodology should be developed, and personnel should be trained in census techniques and evaluation of the results. The rhino

protection units should be used as field observers to enhance census information on the rhino and other species.

Finally, the extensive strategy and action plan formulation process has indicated that the costs for rhino conservation are high, and will remain so for some time. To date, no adequate funding plan for sustainability of the rhino conservation programme has been developed or implemented.

To establish the organizational and technical foundation on a solid basis with the available funds, the project will concentrate on the Sumatran rhino, with benefits to the Javan rhino accruing from increased knowledge and capacity enhancements. The activities of the Rhino Conservation Officer in Indonesia will be concerned with both species. In Indonesia, the project will concentrate on two of the four main areas for Sumatran rhino to develop the capacity and model that can be extended to other areas. There is still time to reverse the current rapid decline in the population of the Sumatran rhino. Current efforts at all levels must therefore be intensified if a "Javan rhino" population size situation is to be avoided.

The project development process

This Project Document has been produced through a process of extensive consultation and participation by the major governmental and non-governmental conservation agencies involved in rhinoceros conservation in Indonesia and Malaysia. Participating groups were:

- Malaysia: Malayan Nature Society and WWF
- Indonesia: WWF and YMR
- Internationally, IUCN/SSC/Asian Rhino Specialist Group (AsRSG), Sumatran Rhino Trust, Howlett's-Port Lympne Foundation and International Rhino Foundation (IRF).

Two workshops have been conducted in each country, as well as one joint workshop between the countries, to formulate the Project Document. Both government and NGO representatives participated in these workshops. Representatives from the respective UNDP Country Offices in Indonesia and Malaysia have participated in the national workshops.

A Preparatory Assistance Mission has supported this developmental process. The Preparatory Assistance Mission Teams represented managers and researchers from Indonesia and Malaysia, as well as some international experts. Team members provided expertise in a number of areas:

- *In situ* rhino protection, management, monitoring and research
- Structure and function of in-country wildlife conservation agencies
- National programmatic and economic planning
- Socioeconomics of local communities in rhino areas
- Community education and outreach
- Team building and coordination
- Fund-raising
- Conservation biology and wildlife management, including PHVA and Geographic Information Systems (GIS).

Many members of the Preparatory Assistance Mission Team in each country have been working directly in the areas where the rhinoceros occur, and have therefore been able to consult with and represent the local communities involved.

Both governments have officially endorsed the current version of the Project Document which further incorporates responses to the review by the Project Approval Committee (PAC) of the Bureau of Asia and the Pacific and the Programme Review Committee (PRC) of UNDP Headquarters.

It should be emphasized that this project originated as a biodiversity programme responding to an "emergency" situation (the terms UNEP used at the inception of this project) for the rhinoceros. Conservation of the rhinoceros will require both long-term and short-term actions. The funds available for this project are limited, and hence the scope of the project needs to concentrate on the short-term crisis. This focus will ensure that the rhinoceros will survive over the next three to five years. The proposed capacity building, initiation, and strategic planning (especially for financial sustainability) occurring during the three years of the full project attempt to develop the groundwork for the longer term and broader problems.

Because of the limited funds for this project (at least twice the amount available is really needed to fully address even the facilitative and catalytic functions of this grant), some important items are not receiving as much attention as they deserve. One area that should receive even greater attention is community development and involvement. Another GEF project through the World Bank is concentrating on local community issues in the largest of the conservation areas concerned in Indonesia (Kerinci Seblat). The UNDP/GEF project on rhinoceros conservation will coordinate very closely with this World Bank GEF project.

It has not been feasible or appropriate as part of the Preparatory Assistance Mission to collect all of the baseline data, or to conduct as extensive consultations with the local communities as would be optimal. The preliminary consultations that have occurred, however, indicate that poaching of rhinoceros is actually perpetrated by a small number of opportunists seeking a quick profit, with very little of the benefits of their activities being distributed within the local communities. The GEF will concentrate on the collection of more baseline data oriented to providing benefits to the local communities through greater participation and involvement in rhinoceros conservation. This involvement will include recruiting most members of the rhino units from the local communities, as well as generating jobs as part of the ecotourism programmes to be developed.

Ecotourism is considered the most likely income generation activity capable of providing the level of funds required on a sustainable basis. A major collateral project involving ecotourism of rhinoceros in southern Sumatra is under development by a group of private and governmental partners. The programme will be developed in Way Kambas National Park, which is near Kerinci Seblat and Barisan Selatan. Since the onset of development of this GEF project, a small remnant population of Sumatran rhino has been discovered in this area. This tourism programme will be based upon development of an intensive management centre (IMC) for Sumatran rhino. The programme has the objectives and prospects of generating major income for continuing rhinoceros species, as well as ecosystem conservation, and should be operating in southern Sumatran by year two of the GEF project. This IMC programme will be a model for, and a complement to, a future programme for Javan rhino in Ujung Kulon which is close enough for both sites to be combined on

an ecotourism circuit. Similar programmes are contemplated for Malaysia in conjunction with IMCs in Sungai Dusun (Peninsula) and Tabin (Sabah).

Ecotourism is an income generation mechanism being imported from the outside. There will be an attempt during the project to delineate better what indigenous income generation activities are significant and sustainable while maintaining the integrity and viability of conservation areas.

Another area not receiving much direct attention in this GEF rhino project relates to the trade in rhino horn and related policy issues. This area is another example of the emphasis on short-term rather than long-term aspects of the rhinoceros conservation crisis. Unsustainable utilization of rhinoceros for the illegal trade in rhino horn has been possibly the most important cause of decline of rhinoceros species in Africa, and probably also in Asia. Attempts to control this trade can occur at the supply side (the rhinoceros in their natural habitat) and/or at the demand side (at the markets for the horn).

This project is clearly oriented toward the supply rather than the demand side. Significant activity on the demand side is indeed beyond the scope of this project. There are major parallel efforts in progress by CITES, TRAFFIC, WWF, and others who are conducting surveys into trade issues, encouraging trade sanctions and bans, introducing substitutes, and engaging in other actions. Solutions to the demand problem will require more time to solve than the rhinoceros has, at least in Southeast Asia. The rate at which efforts on the demand side are progressing will not preserve the rhino. Immediate action of the kind proposed by this project on the supply side is the only hope to sustain the rhinoceros long enough for demand-side efforts to succeed.

The rhinoceros, both as a species in itself, and as an umbrella and flagship species for its entire ecosystem, is literally in a life and death struggle that will be lost within the next three years unless immediate and focused actions are implemented. The bottom line is that with the amount of resources available, this project simply cannot be all things for all concerns. If the emergency is not resolved, the long-term issues involving the rhinoceros will become merely academic.

2. Expected end-of-project situation

Ten rhino protection units each will have been organized, trained, and deployed in both Indonesia and Malaysia. These units will be effectively engaged in anti-poaching and community outreach programmes. Moreover, they will be able to train more units for use in other rhino areas.

An improved management structure with dedicated national coordinators in both Indonesia and Malaysia will have been established. Poacher activity will be reduced to the point of elimination within the areas covered by the rhino protection units. Reduction is measured by numbers of traps and poachers detected by patrols, and the numbers of rhino known to be lost as revealed by improved information on rhino numbers and distribution.

A number of rhino, particularly from Malaysia, will have been translocated from isolated situations into the intensive protection zones (IPZs) operated by the rhino protection units. Monitoring of these rhino by radio telemetry will provide further improved information on rhino status and biology needed for the conservation programmes.

During the three years of the project, the population of approximately 350 Sumatran rhinoceros (75 percent of the world total) inhabiting the areas of operation for the project will have been stabilized, without further significant losses. The protection and management groundwork will also be in place to permit the rhino to commence their recovery to viable population levels.

Persons from the local communities will be employed in the rhino protection units. Income generating activities (such as ecotourism) will at least be delineated, if not actually initiated. Local communities will develop appreciation of, and pride in, the rhino, its ecosystem, and their conservation. The commitment of communities will be demonstrated by their provision of information about poacher activity. Standards of living will be enhanced by improved protection and management of the forest resources (for example, increase in fish stocks due to elimination of illegal and unregulated fishing).

A strategic plan for resource mobilization will have been formulated. A plan for both the short-term (three to seven years), and the long-term (beyond seven years) will be formulated. The short-term plan will:

- Emphasize support from other donors (corporate, governmental, non-governmental) to supplement and extend the GEF project.

- Attempt to link target donors with specific modules of the conservation programme.

- Prepare and present proposals to these donors (governmental and non-governmental, including the private sector, inside and outside Indonesia and Malaysia).

- Attempt to actually secure commitments from these donors during the project.

- Closely coordinate rhinoceros and tiger anti-poaching and conservation activities, mainly in Indonesia but also in Malaysia. It is expected that a major collateral grant from a corporate source will be available soon for tiger conservation activities.

- Prepare proposals to acquire additional funds for rhino conservation. A major source of cofinancing funds linking the rhinoceros and tiger could be available under the Rhinoceros and Tiger Conservation Act of 1994. Preliminary proposals are already being prepared to approach this fund.

The longer-term plan will emphasize sustainable utilization and income generation including:

- Major ecotourism programmes
- Support from the timber industries that are major users of rhinoceros habitat
- Increased allocations from government budgets.

The following activities will be initiated during this project:

- At least one major long-term income generating ecotourism project in southern Sumatra will have been facilitated by this project. This ecotourism programme will

be based in Way Kambas National Park, which is near Kerinci Seblat and Barisan Selatan National Parks, where a small remnant population of Sumatran rhinoceros was recently discovered. This programme also has the potential of being linked with ecotourism efforts involving the Javan rhinoceros in Ujung Kulon which is located in Java across a short channel of ocean from southern Sumatra.

- A similar project in Peninsular Malaysia should also be ready for initiation near the end of the project.

- It is possible that one or more additional GEF proposals will be developed during the course of the current project to assist development of specific income generating projects.

The private sector will have become more significantly involved in support of rhinoceros conservation. The project will also provide a model that can be transferred to the other rhinoceros range states in Asia: India, Laos, Myanmar, Nepal, Thailand and Vietnam.

3. Target beneficiaries

As a biodiversity project, the target beneficiaries will be the two species of rhinoceros, other megavertebrate species (tiger, elephant, tapir, orangutan) sympatric with the rhino, and all the other species in the ecosystems they inhabit.

From a developmental perspective, the target beneficiaries are the biodiversity conservation agencies and officials within the governments of Indonesia and Malaysia, as well as the major national NGOs involved in biodiversity conservation. The project will also serve as a model that can be transferred to the other rhinoceros range states in Asia.

From a human perspective, the target beneficiaries are the local communities in the vicinity of rhino habitats; the people of Indonesia and Malaysia, whose biodiversity conservation will be enhanced by this project; and the global community who will also benefit from the natural heritage conserved.

4. Project strategy and institutional arrangements

There will be national execution and implementation of the project. Rhino Conservation Officers (RCOs) are being appointed by the governments to coordinate the programme and serve as Project Managers. The UNDP Country Offices in Indonesia and Malaysia will assist the government agencies in implementation, emphasizing locally executed purchases and contracts. The government agencies involved in each country are described below.

Indonesia

Execution and implementation in Indonesia will be provided by the Directorate General of Forest Protection and Nature Conservation (PHPA) through an RCO and the Directorate of Conservation Programmes, in collaboration with YMR (Foundation of Rhino Friends). Assistance

will also be sought from consultants. A technical advisory board formed under YMR consisting of national and international experts and leaders in rhino conservation will provide advice for the RCO and PHPA on the rhino conservation programme. The Indonesian RCO will serve as Project Manager for the GEF project, and as national coordinator for the Rhino Conservation Strategy. The RCO/GEF Project Manager will receive administrative assistance for the project from YMR. Technical assistance for the RCO/GEF Project Manager will be provided by consultants, especially the Asian Rhino Specialist Group (AsRSG) Programme Officers.

Malaysia

Overall coordination and authorization will be provided by the federal Economic Planning Unit (EPU), with the project management and operations being delegated to the three authorities that manage wildlife conservation in Peninsular Malaysia, Sabah and Sarawak. In Peninsular Malaysia, this authority is the DWNP, in the Federal Ministry of Science, Technology and Environment; in Sabah, it is the DW in the State Ministry of Tourism and Environmental Development; and in Sarawak, it is the DF in the Ministry of Resource Planning. Three RCOs will be appointed or designated in Malaysia, one for each of the major geographic and political regions of the country. In Peninsular Malaysia, a full-time RCO will be appointed, and support for this position for the first three years is being requested from the GEF project. In Sabah, an existing Wildlife Officer will be designated as a part-time RCO, with the assistance of an Associate Professional Officer (APO). In Sarawak, an existing Forest Officer will be designated as a part-time RCO. These RCOs will serve as the managers for this project, and as the national/state coordinators for the rhino conservation action plans in each region respectively.

The IUCN/SSC AsRSG Programme Officers will provide coordination of the project between the two countries, and will provide overall oversight, monitoring and coordination. They will assist the national Project Managers in management of the project. These Programme Officers will be able to provide all of the technical backstopping needed by the project, based on their extensive experience in rhinoceros conservation in Asia. They will be employed through a subcontract to the International Rhino Foundation (IRF), which acts as the executing agency for the AsRSG. This subcontract will also encompass international and some national consultants in field operations. The AsRSG Programme Officers will provide a virtually continuous presence in the region for the duration of the project, although this aspect of their work is not officially reflected in the budget and workplan. The budget and workplan have been prepared within the context of the limited funds available for the project, and the standard UNDP tariffs for the amounts consultants and others are to be paid. In reality, the personnel employed on this project will commit more time than is indicated officially in the Project Document. This greater involvement will be subsidized by the IRF. This practice actually began during the preparatory phase, when many of the costs were supported by the IRF outside the Preparatory Assistance Mission.

5. Reasons for GEF assistance

Significant financial and technical assistance is needed to initiate full implementation of the rhino conservation action plan. Currently, the governments of Indonesia and Malaysia are unable to provide the full level of initiation costs required. GEF assistance for support to initiate the implementation of the conservation strategy for rhinoceros is being requested by the Governments of Indonesia and Malaysia.

The proposed project is consistent with UNDP's Fourth Country Programme in Indonesia, which includes environmental protection and natural resource management as one of its eight key programmes for implementation over the period 1991-1994. The proposed project is also consistent with UNDP policy and programmes in Malaysia.

The GEF project will help to catalyze full implementation of the conservation strategy for these globally significant rhino and ecosystems. Without immediate and considerable intervention, the rhinos of Southeast Asia and their ecosystems will be lost. Although nominally for conservation of rhino species, the overall programme and this project will provide protection and management for large tracts of tropical forest, and the extensive biodiversity contained therein. Donor interest in rhinos seems high and is growing, but most of the attention has been directed to the African species. This GEF project will provide some balance in global rhino conservation by concentrating on Southeast Asian species.

UNDP inputs will provide the means (basic training, expert advice, and infrastructural support, both organizational and logistical) to enable initiation of full implementation of the rhinoceros conservation strategy. This GEF project will establish the institutional foundation for an effective and sustainable rhinoceros—and hence ecosystem—conservation programme in both countries. Extensive consultations will be provided to train the core and model rhino units, and to assist in the institutional development of the coordination capacity needed for viable conservation. At least one additional formal workshop will be supported.

If this project, and the overall conservation strategy to which it will contribute, are successful, the model can be replicated for the other species of Asian rhino (*Rhinoceros unicornis*) in India and Nepal, as well as for other range states for the Javan and Sumatran rhino (Laos, Myanmar, Thailand and Vietnam.)

6. Special considerations

The project will promote involvement by the private sector in conservation and development activities. Specifically, in Indonesia the board of patrons of YMR will provide links to the private sector (corporations and interested individuals) and NGOs to assist the development of sustainable rhino conservation programmes. YMR already has good linkages to the corporate, financial (for example, BII), and philanthropic community in Indonesia. There will be special efforts to involve the timber community, currently major utilizers of rhinoceros habitat, to become more involved in support for rhinoceros conservation. YMR will pursue this matter through connections with Masgarakat Perhutanan Indonesia (MPHI). In Malaysia, the existing connections with Yaysan Sabah and ITTO in Sarawak will be further developed. Special effort will be exerted to cultivate corporate and philanthropic support in the Peninsula. The IRF, which is currently the executing agency for the IUCN/SSC AsRSG, will continue its effort to facilitate involvement of the corporate and philanthropic community internationally.

The project will have no negative impacts on the environment. The only special group on which the project will have a negative impact is the rhino poachers which comprise a small number of opportunists who are not contributing significantly to local community economies. Moreover, the poacher activity is not a sustainable utilization of the natural resource.

7. Coordination arrangements

The IUCN/SSC AsRSG will provide the mechanism for coordination of rhino conservation between Indonesia and Malaysia, and between the various governmental and non-governmental parties involved. In Indonesia, the technical advisory board of YMR will provide further coordination at the national level. In Malaysia, a similar technical advisory group involving both governmental and non-governmental parties is anticipated soon.

8. Counterpart support capacity

The process of strategy development that has occurred so far demonstrates the long-term commitment of the governments that will contribute to the sustainability of the programme. This GEF project is an intervention that will be both significant and successful.

Indonesia

Rhino conservation is a very high priority for the Government of Indonesia which has endorsed the Rhino Conservation Strategy and Action Plan and is encouraging its implementation. The National Development Planning Agency (BAPPENAS) has designated the Sumatran rhino conservation programme as a priority project under Repelita VI (1994–99 Development Plan for Indonesia). The rhino conservation programme has been placed on the 1994–95 list of priority projects for which external funding is requested. It is anticipated that the government will contribute substantially to the rhino conservation programme, and this investment will increase as a result of the funding plan to be developed by this project. This commitment is further demonstrated by the establishment of YMR, whose board includes the Director General of PHPA and assistant ministers from the State Ministry of Environment. Counterpart capacity will be further increased by the Directorate of Conservation Programme Development (BINA) in PHPA.

Malaysia

The Rhino Conservation Action Plan is a also very high priority for the Malaysian government, both at the federal and state levels. The government is committing approximately US$ 1,200,000 to rhino conservation over the next three years. It is anticipated that government investment in the programme will increase as a result of the funding plan to be developed by this project. The designation of RCOs in Peninsula, Sabah, and Sarawak is a further indication of the strong commitment of the governments.

C. DEVELOPMENT OBJECTIVE

The development objective is to enhance the conservation of biodiversity in Indonesia and Malaysia by providing technical training, operational support, and a long-term funding strategy to improve the effectiveness, sustainability, and benefits (to local, national, and global human communities) of the protection and management programmes for the Southeast Asian rhinoceros. This development objective relates directly to the Biodiversity and Rhino Conservation Action Plans of Indonesia and Malaysia. To achieve this objective, the project has three major elements, each of which will be accomplished by specific measurable outputs.

The first element of the project aims to enhance the capabilities of conservation agencies (governmental and non-governmental) to arrest and reverse the decline of rhinoceros due to poacher activity and habitat disturbance. Under this component, the following activities will be undertaken:

- Rhino protection units will be organized, trained, and deployed in both Indonesia and Malaysia (ten in each country). These units will be effectively engaged in both anti-poaching and community outreach programmes. Moreover, they will be able to train more units and serve as models for other rhino areas.

- Improved management structures with dedicated national coordinators (RCOs) in both Indonesia and Malaysia will be established.

- Poacher activity will be reduced to the point of elimination within the areas covered by the units. Reductions will be measured by the numbers of traps and poachers detected by patrols, and the numbers of rhino known to be lost as revealed by improved information on rhino numbers and distribution.

- A number of rhino, particularly in Malaysia, will be translocated from isolated situations into the intensive protection zones (IPZs) operated by the rhino protection units.

- Monitoring of these rhino by radio telemetry will provide further improved information on rhino status and biology needed for the conservation programmes.

The second element of the project is to develop more involvement by, as well as benefits and incentives for, local communities in rhino conservation through the following:

- Persons from the local communities will be employed in the rhino protection units. Income generating activities (such as ecotourism) will be delineated and initiated. Local communities will develop appreciation of, and pride in, the rhino, its ecosystem, and their conservation.

- In conjunction with the World Bank Kerinci Seblat programme, and possibly another project to be proposed, baseline data needed to develop an effective community involvement programme will be collected.

The third element of the project is to formulate, catalyze, and initiate a comprehensive and sustainable funding plan for the rhino strategy. The following measures will be undertaken:

- A strategic funding plan will have been formulated that links target donors with specific modules of the conservation programme

- Proposals to these donors (governmental and non-governmental, inside and outside of Indonesia and Malaysia) will be prepared and presented

- At least one major long-term income generating ecotourism project will be facilitated.

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

Indonesia

IMMEDIATE OBJECTIVE 1

To enhance the capabilities of the Directorate General of Forest Protection and Nature Conservation (PHPA) and associated wildlife conservation agencies to arrest and reverse the decline of rhinoceros due to poacher activity and habitat disturbance toward the national and global goal of recovery of viable populations of rhino species in Indonesia.

Achievement indicators

A total of one mobile unit and nine rhino protection units will be operational in two of the major protected areas for Sumatran rhino in Sumatra (seven rhino protection units in Kerinci Seblat National Park and two rhino protection units in Bukit Barisan Selatan National Park). A management, coordination, and training structure will have been established that can be used to extend the rhino conservation activities to other areas. Poacher activity will be reduced to the point of elimination within the areas covered by the units. More accurate and reliable information on rhino distribution and numbers linked to a geographic database will be available in place of the approximate estimates and extrapolations that are now available. Stabilization of the rhino populations will have commenced (in other words, no significant losses during the next three years) in the areas of operation by the project, with the groundwork in place to permit recovery (increase) in rhino numbers.

Output 1.1

Improved management and coordination mechanisms for implementation of the Rhino Conservation Strategy and Action Plan.

Activities for Output 1.1

1.1.1 Create the position and appoint an RCO who will be responsible for overall facilitation, coordination, and implementation of the Rhino Conservation Action Plan.

Responsible party: PHPA

1.1.2 Appoint the RCO as manager for the GEF project.

Responsible party: UNDP Country Office.

1.1.3 Appoint YMR as the administrative assistance mechanism for the RCO.

Responsible party: PHPA and UNDP Country Office.

1.1.4 Appoint field operations consultant(s).

Responsible party: PHPA, YMR and IRF (subcontractor).

1.1.5 Appoint the IUCN/SSC AsRSG Programme Officers to provide the overall oversight and coordination of the project in collaboration with the RCO.

Responsible party: IRF (subcontractor).

1.1.6 Develop, through a selection and training process, a Regional Field Coordinator to serve as the leader of the mobile unit for the two protected areas covered by the project.

Responsible party: RCO and consultants.

1.1.7 Assist and advise the RCO/GEF Project Manager and the Regional Field Coordinator.

Responsible party: AsRSG Programme Officers and consultants.

1.1.8 Prepare detailed annual workplans and budgets.

Responsible party: RCO/GEF Project Manager.

1.1.9 Adapt and adjust management structures as the project is implemented.

Responsible party: RCO, AsRSG Programme Officers and consultants.

Output 1.2

Recruitment, training, deployment and operation of nine rhino protection units in two of the major protected areas (Kerinci Seblat and Barisan Selatan National Parks) where Sumatran rhino survive.

Activities for Output 1.2

1.2.1 Recruit and appoint members of the mobile unit.

Responsible party: RCO, Regional Field Coordinator and consultants.

1.2.2 Recruit fifty-four candidates from local communities and eighteen candidates for official forest guards (jagawanas) to serve as members and leaders of the rhino protection units.

Responsible party: RCO, Regional Field Coordinator and consultants.

1.2.3 Training programmes that will produce twenty-seven rhino protection unit members and nine rhino protection team leaders.

Responsible party: RCO, Regional Field Coordinator and consultants.

1.2.4 Procure operational equipment and facilities (base camps) to enable the rhino protection units to be activated expeditiously.

Responsible party: PHPA and RCO, as GEF Project Managers.

1.2.5 Rehabilitate existing rhino rescue (capture) team centre at Air Hitam as an initial base of training and operation for the rhino protection teams.

Responsible party: RCO, Regional Field Coordinator, YMR and consultants.

Output 1.3

Creation of a core of personnel capable of training rhino protection units in other rhino areas in Sumatra.

Activities for Output 1.3

1.3.1 Train selected team leaders and members to themselves become trainers of other units and coordinators.

Responsible party: RCO, Regional Field Coordinator and consultants.

Output 1.4

Reduction to the point of elimination of effective poacher activity within the areas of activity of the rhino protection units.

Activities for Output 1.4

1.4.1 Intensive patrolling of areas to detect traps, interdict intruders, and arrest suspected poachers.

Responsible party: Rhino protection units.

1.4.2 Surveillance of traps to detect further poachers.

Responsible party: Rhino protection units.

1.4.3 Destruction of poacher traps and camps.

Responsible party: Rhino protection units.

1.4.4 Intelligence operations to assist in the apprehension of poachers, including:

- Collation of existing information
- Collection and interpretation of rumour and stories easily available from villages
- Recruitment of paid informers through a bonus system to be developed with financial support from private donations
- Debriefing of apprehended poachers and other illegal operators
- Information deriving from the community outreach programme
- Recruitment of agents to penetrate poaching and trading cells.

Responsible party: RCO, Regional Field Coordinator and rhino protection units.

1.4.5 Action against unauthorized utilization of natural resources in addition to rhino protection.

Responsible party: Rhino Field Coordinator, mobile unit and rhino protection units.

1.4.6 Close coordination with the rest of the staff of the national parks.

Responsible party: Rhino Field Coordinator, mobile unit, and rhino protection units.

Output 1.5

More intensive and sophisticated assessment of rhino numbers and distribution.

Activities for Output 1.5

1.5.1 More intensive and extensive surveys and monitoring of the rhino population.

Responsible party: Rhino protection units.

1.5.2 Improve and refine current survey and census techniques.

Responsible party: Consultants.

1.5.3 Develop a system for the collection, analysis, and interpretation of data collected by the rhino protection units.

Responsible party: RCO and consultants.

1.5.4 Establish a Geographic Information System (GIS) rhino database.

Responsible party: RCO and consultants.

Output 1.6

Adaptive refinement of the conservation strategy and action plan as more information becomes available and situations change in the course of implementation.

Activities for Output 1.6

1.6.1 Incorporate data collected by the project into the GIS database.

Responsible party: RCO.

1.6.2 Continue the PHVA process for both Sumatran and Javan rhinos.

Responsible party: PHPA, YMR, AsRSG and consultants.

Output 1.7

Greater advocacy with policy- and decision-makers on rhino conservation issues.

Activities for Output 1.7

1.7.1 Increase communication with government officials about the significance of rhino conservation.

Responsible party: YMR, RCO and AsRSG Programme Officers.

IMMEDIATE OBJECTIVE 2

To develop more involvement by, as well as benefits and incentives for, the local human communities in the vicinity of the rhino habitat.

Achievement indicators

Persons from the local communities will be employed in the rhino protection units. Income generating activities (such as ecotourism) will at least be delineated, if not actually initiated. Local communities will develop appreciation of and pride in the rhino, its ecosystem, and their conservation. The commitment of communities will be demonstrated by their providing information about poacher activity. Standards of living will be enhanced by the improved protection and management of forest resources (for example, increase in fish stocks due to elimination of illegal and unregulated fishing).

Output 2.1

Direct employment of at least 100 persons, and formulation of plans for future income provision for many other local people from rhino and ecosystem conservation.

Activities for Output 2.1

2.1.1 Identify appropriate candidates for the rhino protection units.

Responsible party: Consultants and RCO.

2.1.2 Train the selected members of rhino protection units.

Responsible party: Consultants and RCO.

2.1.3 Formulate ecotourism programmes, especially in Barisan Selatan National Park, in conjunction with the anticipated development of an intensive management centre (IMC) in nearby Way Kambas National Park by other donors and partners.

Responsible party: RCO, AsRSG Programme Officers, consultants and other donors.

Output 2.2

Establishment of a regular and vigorous programme of outreach to the local communities.

Activities for Output 2.2

2.2.1 Visit villages to explain the programme and the issues involved.

Responsible party: Community outreach consultant and rhino protection units.

2.2.2 Design and distribute questionnaires to obtain information on: local rhino populations, human use of the forest, and ecological-economic problems confronting the village such as crop destruction, tiger predation, and decrease of fish stocks.

Responsible party: Community outreach consultant and rhino protection units.

2.2.3 Analyze questionnaires and formulate programmes to link solutions to problems with rhino conservation.

Responsible party: Community outreach consultant and rhino protection units.

2.2.4 Conduct a continuing series of meetings with the local political, civic, and religious leaders to provide a forum and to obtain community involvement. In part this participation will occur through economic incentives, and in part through emphasis of Islamic and adat (local tradition) values.

Responsible party: Community outreach consultant and rhino protection units.

2.2.5 Regular discussion of problems and progress with the local villages, with particular attention to the inclusion of women because of their inherent interest in the agriculture and ecology of the area.

Responsible party: Community outreach consultant and rhino protection units.

2.2.6 Conduct informal programmes through scouts and other youth organizations for presentations on the conservation of rhinos and biodiversity.

Responsible party: Community outreach consultant and rhino protection units.

2.2.7 Produce leaflets and posters.

Responsible party: Community outreach consultant and rhino protection units.

Output 2.3

Integration of the community outreach programmes with ongoing and future buffer zone development programmes.

Activities for Output 2.3

2.3.1 Coordinate with the implementing agencies for the buffer zone programmes.

Responsible party: Regional Field Coordinator and mobile unit.

2.3.2 Provide information on local social and economic structures derived from the community outreach programme to the developers of buffer zone programmes.

Responsible party: Regional Field Coordinator and mobile unit.

IMMEDIATE OBJECTIVE 3

To develop a comprehensive and sustainable funding plan for the Rhino Conservation Strategy and Action Plan.

Achievement indicators

By the end of the third year of this project, a funding plan that involves both governmental and non-governmental, national and international, public and private sector parties will have been developed to cover the full costs of the Rhino Conservation Strategy for at least the next seven years.

Output 3.1

A detailed plan that links modules of the total strategy and action plan with target contributors.

Activities for Output 3.1

3.1.1 Further delineate exact actions and costs required for rhino conservation.

Responsible party: RCO, YMR, and AsRSG Programme Officers.

3.1.2 Identify target donors (governmental and non-governmental, national and international).

Responsible party: RCO, YMR, and AsRSG Programme Officers.

Output 3.2

Greater financial commitments from the Indonesian government for explicit parts of the funding plan.

Activities for Output 3.2

3.2.1 Proposals to the Government of Indonesia explicitly delineating and justifying greater

expenditure of funds to sustain the rhino programmes as an integral component of biodiversity and human development action plans.

Responsible party: RCO, and YMR and PHPA counterparts.

Output 3.3

Securement of long-term commitments from non-governmental and foreign governmental partners.

Activities for Output 3.3

3.3.1 Prepare and present proposals for likely donors for various components (modules) of the rhino conservation programme.

Responsible party: RCO and AsRSG consultant.

Malaysia

IMMEDIATE OBJECTIVE 4

To enhance the capabilities of the Department of Wildlife and National Parks of Peninsular Malaysia (DWNP), the Department of Wildlife in Sabah (DW), and the Forestry Department in Sarawak (FD) to arrest and reverse the decline of rhino due to poacher activity and habitat disturbance toward the national and global goal of recovery of viable rhino populations in Malaysia.

Achievement indicators

A total of ten rhino protection units will be operational in six of the major protected areas for Sumatran rhino in Malaysia (Endau-Rompin State Parks, Taman Negara National Park, Selama Forest Reserve and Belum Forest Reserve in Peninsula; Tabin in Sabah; and Pulong Tau National Park in Sarawak). The management, coordination, and training structure will have been enhanced, and will be available to extend the rhino conservation activities to other areas. Poacher activity will be reduced to the point of elimination within the areas covered by the rhino protection units. More accurate and reliable information on rhino distribution and numbers linked to a geographic data base will be available, rather than the approximate estimates and extrapolations that are now available. An appreciable number of rhino will have been translocated from isolated situations into the intensive protection zones (IPZs) operated by the rhino protection units. Monitoring of these rhino by radio telemetry will provide further information on rhino status and biology needed for the rhino conservation programmes. Stabilization of rhino populations will have commenced (in other words, no significant losses during three years) in the areas of operation of the project, with the groundwork in place to permit recovery (increase) in rhino numbers.

Output 4.1

Improved management and coordination mechanisms for implementation of the Rhino Conservation Strategy and Action Plan.

Activities for Output 4.1

4.1.1 Reactivate a position of RCO in Peninsular Malaysia and appoint RCOs for Sabah and Sarawak. These RCOs will be responsible for overall facilitation and coordination of implementation of the Rhino Conservation Action Plan in Malaysia.

Responsible party: Director General of DWNP Peninsular Malaysia, Director of DW Sabah, and Director of FD Sarawak.

4.1.2 Appoint the RCOs as managers of the GEF project.

Responsible party: UNDP Country Offices, Director General of DWNP Peninsular Malaysia, Director of DW Sabah, and Director of FD Sarawak.

4.1.3 Appoint field operations consultant(s).

Responsible party: Director General of DWNP Peninsular Malaysia, Director of DW Sabah, Director of FD Sarawak, and IRF (subcontractor).

4.1.4 Appoint an Associate Professional Officer (APO) to assist the Sabah RCO.

Responsible party: Director of DW Sabah.

4.1.5 Appoint IUCN/SSC AsRSG Programme Officers to provide the overall oversight and coordination of the project in collaboration with the RCOs.

Responsible party: UNDP Country Office.

4.1.6 Assist and advise the RCOs/Project Managers.

Responsible party: Field operations consultant, APO and AsRSG Programme Officers.

4.1.7 Preparation of detailed annual workplans and budgets.

Responsible party: RCOs and consultants.

4.1.8 Adaptive adjustment of the management structures as the project is implemented.

Responsible party: RCOs, field operations consultant, APO, and AsRSG Programme Officers.

Output 4.2

Activation or enhancement and operation on a permanent basis (at least seven years) of ten rhino protection units in the six major protected areas where Sumatran rhino survive.

Activities for Output 4.2

4.2.1 In Peninsular Malaysia, recruit or reassign fifty rangers to concentrate on rhino conservation in Endau Rompin, Taman Negara, Belum and Selama. In Sabah, provide support for the conservation management team for Tabin. In Sarawak, reassign ten rangers to serve as members and leaders of the rhino conservation units in Pulong Tau.

Responsible party: DWNP, DW and DF.

4.2.2 Organize training programmes that will improve the effectiveness of the rhino protection teams.

Responsible party: RCOs, field operations consultant and APO.

4.2.3 Procure operational equipment and develop operational facilities (guard posts) to enable the rhino conservation units to be activated expeditiously and operate effectively.

Responsible party: DWNP, DW, DF, and RCOs as Project Managers.

Output 4.3

Creation of a core of trained personnel in the six protected areas that can be extended to other rhino areas in Malaysia.

Activities for Output 4.3

4.3.1 Train the rhino conservation team leaders to themselves become trainers of other units.

Responsible party: RCOs, field operations consultant and APO.

Output 4.4

Reduction to the point of elimination of all poacher activity within the intensive protection areas operated by the rhino protection units.

Activities for Output 4.4

4.4.1 Intensive surveillance through patrols of the areas to detect traps and intruders (persons without authorization) and arrest apparent poachers.

Responsible party: Rhino protection units.

4.4.2 Surveillance of traps to detect further poachers

Responsible party: Rhino protection units.

4.4.3 Destroy traps.

Responsible party: Rhino protection units.

4.4.4 Intelligence operations to assist in the apprehension of poachers, including:

- Collating existing information
- Collecting and interpreting rumors and stories easily available from villages
- Recruiting paid informers through development of a bonus system with financial support deriving from private donations
- Debriefing apprehended poachers and other illegal operatives
- Facilitating information gathering through cash bonuses deriving from the community outreach programme
- Recruiting agents to penetrate poaching and trading cells.

Responsible party: Rhino protection units.

Output 4.5

Consolidation of isolated Sumatran rhino into IPZs covered by rhino units.

Activities for Output 4.5

4.5.1 Locate isolated rhino by surveys outside protected areas.

Responsible party: RCOs and rhino protection units.

4.5.2 Capture isolated rhino to be transported into IPZs.

Responsible party: RCOs and rhino protection units.

4.5.3 Monitor by radio telemetry the rhino translocated into IPZs.

Responsible party: Rhino protection units.

Output 4.6

More intensive and sophisticated assessment of rhino numbers and distribution.

Activities for Output 4.6

4.6.1 More intensive and extensive surveys and monitoring of the rhino population.

Responsible party: Rhino protection units.

4.6.2 Improve and refine current survey and census techniques.

Responsible party: Consultants.

4.6.3 Develop a system for the collection, analysis, and interpretation of data collected by the rhino protection units.

Responsible party: Consultants and RCOs.

4.6.4 Establish a GIS rhino database.

Responsible party: Consultants and RCOs.

Output 4.7

Adaptive refinement of the conservation strategy and action plan as more information becomes available and situations change as the project is implemented.

Activities for Output 4.7

4.7.1 Incorporate data collected by the project into the GIS database.

Responsible party: RCOs

4.7.2 Initiate a PHVA process for rhinos in Peninsula, Sabah, and Sarawak by conducting workshops for each of these areas.

Responsible party: RCOs and consultants.

Output 4.8

Advocacy to decision- and policy-makers for improvement in protected status and habitat management in the areas inhabited by rhinos.

Activities for Output 4.8

4.8.1 Proposals to state and federal governments to confirm and extend state/national park status to Endau Rompin, Belum, and Selama, and manage these areas to enhance habitat for rhino.

Responsible party: RCOs and DWNP staff.

4.8.2 Proposal to state government of Sabah to change status of Tabin from a Wildlife Reserve to a State Wildlife Sanctuary which will accord greater protection status.

Responsible party: RCOs and DW staff.

4.8.3 Encouragement and proposals to the government to activate and extend Pulong Tau National Park to include rhinoceros areas in Ulu Limbang in Sarawak.

Responsible party: RCOs and DF staff.

IMMEDIATE OBJECTIVE 5

To develop more involvement by, as well as benefits and incentives for, the local communities in the vicinity of the rhino habitat.

Achievement indicators

Persons from the local communities will be employed in the rhino protection units. Income generating activities (such as ecotourism) will at least be delineated if not actually initiated. Local communities will develop appreciation of and pride in the rhino, its ecosystem, and their conservation. The commitment of communities will be demonstrated by their provision of information about poacher activity. Standards of living will be enhanced by improved protection and management of forest resources (for example, increase in fish stocks due to elimination of illegal and unregulated fishing).

Output 5.1

Direct employment of at least fifty persons, and formulation of plans for income provision to many other local people from rhino and ecosystem conservation within the next five years.

Activities for Output 6.1

5.1.1 Identify appropriate candidates for the rhino protection units

Responsible party: RCOs and consultants.

5.1.2 Train the selected members of protection units.

Responsible party: RCOs and consultants.

5.1.3 Formulate ecotourism programmes, especially in Sungai Dusun Wildlife Sanctuary (Peninsula) and in Tabin (Sabah), in conjunction with incipient intensive management centres (IMC) there by other donors and partners.

Responsible party: RCOs, AsRSG Programme Officers, consultants and other donors.

Output 5.2

Establish a regular and vigorous programme of outreach to the local villages.

Activities for Output 5.2

5.2.1 Visit villages to explain the programme and the issues involved.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.2 Design and distribute questionnaires to obtain information on local rhino populations, human use of the forest, and ecological-economic problems confronting the village, such as crop destruction, tiger predation, and decrease of fish stocks.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.3 Analyze questionnaires and formulation of programmes to link solutions to problems in rhino conservation.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.4 Conduct a continuing series of meetings with the local political, civic, and religious leaders to provide a forum, and obtain community involvement. Participation will be encouraged in part through economic incentives, and in part through emphasis of Islamic and local traditional values.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.5 Regular discussion of problems and progress with the local villages.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.6 Visit schools and youth organizations for presentations on conservation of rhinos and biodiversity.

Responsible party: Rhino protection units, with help from community outreach consultant.

5.2.7 Produce leaflets and posters.

Responsible party: Rhino protection units, with help from community outreach consultant.

IMMEDIATE OBJECTIVE 6

To develop a comprehensive and sustainable funding plan for the Rhino Conservation Strategy.

Achievement indicators

By the end of the third year of this project, a funding plan that involves both governmental and non-governmental, national and international, public and private sector parties will have been developed. The plan will provide the full costs of the Rhino Conservation Strategy for a period of at least the next seven years.

Output 6.1

A detailed plan that links modules of the total strategy and action plan with target contributors.

Activities for Output 6.1

6.1.1 Further delineate exact actions and costs required for rhino conservation.

Responsible party: RCOs and AsRSG Programme Officers.

6.1.2 Identify target donors both governmental and non-governmental, national and international.

Responsible party: RCOs and AsRSG Programme Officers.

Output 6.2

Greater financial commitments from the Malaysian governments (federal and state) for explicit parts of the funding plan.

Activities for Output 6.2

6.2.1 Prepare and present proposals to the federal and state governments for increased allocations for rhino conservation.

Responsible party: RCOs, Deputy DG DWNP, Director DW and Director FD.

Output 6.3

Secure long-term commitments from non-governmental and foreign governmental partners.

Activities for Output 6.3

6.3.1 Prepare and present proposals to likely donors for various components (modules) of the rhino programme.

Responsible party: RCO and AsRSG Programme Officers.

Indonesia and Malaysia (Southeast Asia region)

IMMEDIATE OBJECTIVE 7

To increase the exchange of information and expertise between Indonesia and Malaysia on rhino conservation matters.

Achievement indicators

More frequent visits by personnel of Indonesian and Malaysian rhino conservation programmes to each other's projects. Less redundancy in the development of techniques for, and acquisition of, knowledge about rhino conservation. Complementary approaches to non-national donors for support of rhino conservation programmes.

Output 7.1

Meetings and visits between Indonesian and Malaysian officials will be held to exchange information and programme adaptations.

Activities for Output 7.1

7.1.1 Visit once per year of Indonesian RCO and Malaysian RCOs to each other's countries to observe field operations.

Responsible party: RCOs.

7.1.2 Visits by AsRSG Programme Officers to both countries to convey information between them.

Responsible party: AsRSG Programme Officers.

E. INPUTS

Indonesia

Government	US$
	588,700
(a) *Personnel*	117,000
Partial support for RCOs and administrative assistants	
Partial support for members of mobile unit and rhino protection units	
Nine PHPA rangers to serve on rhino protection units	
Partial support of in-country travel for RCOs and Rhino Field Coordinator	
(b) *Training (including operational facilities and support)*	227,700
In-service training to provide personnel with the appropriate skills and status	
Partial support of mobile unit and nine rhino protection units	
Partial support for base camps	

(c) *Equipment* 226,000

Partial support of required field equipment
Community outreach materials
Vehicles from previous rhino rescue project and additional motorbikes
Long-range radio system
Office and furniture for the RCO and staff
Operations and training centre at Air Hitam

(d) *Miscellaneous* 18,000

UNDP US$ 1,229,000

(a) *Personnel* 366,000

Partial support for RCO (first three years)
Partial support for administrative assistant for RCO
Rhino Protection Units & Field Coordinators
Base camp staff
Preparatory Assistance and Evaluation Missions

(b) *Direct country level support to national execution (Indonesia and Malaysia)* 637,000

The two national execution agencies in Malaysia and Indonesia will request the services of the UNDP Jakarta Country Office (Principle Project Resident Representative, PPRR) to provide direct inputs specifically described under project budget lines 16.01—P.A. Missions (US$ 36,000 each for Indonesia and Malaysia), 16.02—Evaluation Missions (US$ 18,000 each for Indonesia and Malaysia), and 20.00—Subcontract (US$ 354,000 for Indonesia and US$ 175,000 for Malaysia), with the total amount of US$ 637,000. This provision shall automatically give the UNDP Jakarta Country Office (PPRR) the authority to spend against these budget lines without further written agreement between UNDP and the government executing agencies.

(c) *Training* 85,000

(d) *Equipment including training/operation facilities construction* 129,000

(e) *Miscellaneous* 12,000

Malaysia

Government Total US$ 1,058,000

(a) *Personnel* 756,000

RCO (Peninsula)
RCO (Sabah)
RCO (Sarawak)
Seventy wildlife rangers (fifty in Peninsula, ten in Sabah, and ten in Sarawak)

(b)	*Training (including operational facilities and support)* Offices for RCOs Bases for rangers in areas of operation Recurrent expenses for facility and vehicle operation Bomas for translocation of rhino	71,000
(c)	*Equipment*	168,000
(d)	*Miscellaneous*	63,000
UNDP	Total	US$ 771,000
(a)	*Personnel*	107,000
(b)	*Direct country level support to national execution (Indonesia and Malaysia)*	(229,000)
	See under Indonesia, UNDP (b)	
(c)	*Training (including operational facilities and support)* Veterinary training GIS development Activation of rhino protection units	128,000
(d)	*Equipment including bases for training and operations in rhino protected areas*	488,000
(e)	*Miscellaneous*	48,000

F. RISKS

Implementation of the GEF project and Rhino Conservation Strategy will not be initiated expeditiously, and the situation for the rhino will deteriorate further, perhaps irredeemably. The additional funds for full implementation of the rhino strategy will not be available.

G. PRIOR OBLIGATIONS AND PREREQUISITES

None.

Indonesia

The government will establish the position of a RCO within the PHPA structure. The technical advisory council for YMR will be established as provided in the Indonesian Rhino Conservation Strategy. The government will also allocate funds in national budgets as indicated in Section E.

The DWNP, DW, and DF will designate the RCOs. The government will allocate funds in national budgets as indicated in Section E. A Trust Fund for Rhino Conservation will be established by the DWNP to facilitate and expedite management by the government implementing agencies of the funds from the GEF project and collateral sources. The project will be signed by UNDP, and UNDP assistance to the project will be provided, subject to UNDP receiving satisfaction that any prerequisites have been fulfilled, or are likely to be fulfilled. If one or more prerequisites fails to materialize, UNDP may, at its discretion, either suspend or terminate its assistance.

H. PROJECT REVIEW, REPORTING AND EVALUATION

The project will be subject to joint review by representatives of the governments, UNDP, and the IUCN/SSC AsRSG at the end of each twelve-month period of the three-year project. The national Project Managers (the RCO in Indonesia and the RCOs in Malaysia), the AsRSG Programme Officers, and the senior project officer of the United Nations executing agency (OPS) shall prepare and submit to each joint review meeting a Project Performance Evaluation Report (PPER). Additional PPERs may be requested, if necessary, during the project.

A project terminal report will be prepared for consideration at the terminal tripartite review meeting. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by the governments, UNDP, and the IUCN/SSC AsRSG at least four month prior to the terminal tripartite review.

This project will be subject to a full-scale evaluation by UNDP, with the participation of UNEP, in accordance with the normal procedures of UNDP. Funds are provided in the budget for independent evaluation missions. All information on this GEF project will be available to the public through UNDP.

I. LEGAL CONTEXT

This Project Document shall be the instrument envisaged in the Standard Basic Assistance Agreement between UNDP and the host countries. The host countries' implementing agencies shall, for the purpose of the supplemental provisions to the Project Document, refer to the government cooperating agency described in the supplemental provisions.

The following types of revisions to this document require the signature of the UNDP Resident Representative only, provided he/she is assured that the other signatories of the document have no objections to the proposed changes:

- Revisions in, or additions to, any of the annexes and appendices of the original Project Document

- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the re-arrangement of inputs already agreed to, or by cost increases due to inflation

- Mandatory annual revisions which rephase the delivery of agreed project inputs or increased expert or other costs due to inflation, or take into account agency expenditure flexibility.

J. BUDGET

The project budget is attached.

PROJECT BUDGET COVERING UNDP CONTRIBUTION
(In US Dollars)

Countries: Indonesia and Malaysia
Project Number: RAS/94/G32/A/1G/99
Project Title: Conservation Strategy for Rhinoceros in South East Asia

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
10.00	PROJECT PERSONNEL								
16.00	P.A. Mission (Conducted in 1994)	6	72,000	6	72,000				
16.00	Missions (Evaluation)	3	36,000	1	12,000	1	12,000	1	12,000
16.99	Subtotal	9	108,000	7	84,000	1	12,000	1	12,000
17.00	Indonesia								
	Rhino Conservation Officer/Project Manager	36	54,000	12	18,000	12	18,000	12	18,000
	R.C.O. Administrative Assistant	36	36,000	12	12,000	12	12,000	12	12,000
	Regional Field Coordinator	36	24,000	12	8,000	12	8,000	12	8,000
	Mobile Unit	60	30,000	20	10,000	20	10,000	20	10,000
	Rhino Protection Units (9 units-4 pers/unit)	693	152,000	146	29,000	219	50,000	328	73,000
	Community Outreach Consultant	6	60,000	2	20,000	2	20,000	2	20,000
	Subtotal - Indonesia	867	356,000	204	97,000	277	118,000	386	141,000
	Malaysia								
	Rhino Consrvtn Officer/Project Mngr (Pns)	36	57,000	12	19,000	12	19,000	12	19,000
	Rhino Consrvtn Officer/Project Mngr (Sbh) (Field Allowances)	18	12,000	6	4,000	6	4,000	6	4,000
	Rhino Consrvtn Officer/Project Mngr (Srwk) (Field Allowances)	18	12,000	6	4,000	6	4,000	6	4,000
	Assoc. Prof. Ofcr.- Sabah - Field Allowances	36	36,000	12	12,000	12	12,000	12	12,000
	Subtotal - Malaysia	108	117,000	36	39,000	36	39,000	36	39,000
17.99	Subtotal	975	473,000	240	136,000	313	157,000	422	180,000
19.00	Component Total	984	581,000	247	220,000	314	169,000	423	192,000

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
20.00	SUBCONTRACT								
	AsRSG Program Officers	15	180,000	6	72,000	5	60,000	4	48,000
	Field Operations Consultant(s) - Indonesia	24	264,000	12	132,000	8	88,000	4	44,000
	Field Operations Consultant(s) - Malaysia	9	75,000	3	25,000	3	25,000	3	25,000
	PHVA Workshop		10,000		10,000		0		0
29.99	Subtotal	48	529,000	21	239,000	16	173,000	11	117,000
30.00	TRAINING								
	Indonesia								
	Operations/Transport Mobile Unit		25,000		13,000		6,000		6,000
	Operations Rhino Protection Units		60,000		15,000		20,000		25,000
	Subtotal - Indonesia		85,000		28,000		26,000		31,000
	Malaysia								
	Wildlife Veterinarian (Sbh)		10,000		10,000		0		0
	GIS Specialist (Pns)		10,000		10,000		0		0
	Operations Rhino Units (72 Pns/ 36 Sbh)		108,000		36,000		36,000		36,000
	Subtotal - Malaysia		128,000		56,000		36,000		36,000
39.00	Component Total		213,000		84,000		62,000		67,000

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
40.00	EQUIPMENT								
41.00	Expendable								
	Indonesia:								
	Various Field Equipment		33,000		20,000		7,000		6,000
	Subtotal - Indonesia		33,000		20,000		7,000		6,000
	Malaysia:								
	Field Equipment (10 Pns/10 Sbh/5 Swrk)		25,000		25,000		0		0
	Capture Equipment/Supplies (Sbh)		25,000		25,000		0		0
	GIS Software/Remote Sensing Data		10,000		10,000		0		0
	Subtotal - Malaysia		60,000		60,000		0		0
41.99	Subtotal - Expendable Equipment		93,000		80,000		7,000		6,000
42.00	Non-Expendable								
	Indonesia:								
	6 4X4 WD Vehicles		45,000		45,000		0		0
	9 Motor Bikes		4,000		4,000		0		0
	4 486 Computers with Printers		10,000		10,000		0		0
	1 Facsimile Machine		1,500		1,500		0		0
	1 Photocopier		2,500		2,500		0		0
	Operations and Training Base Camp Facilities		33,000		13,000		10,000		10,000
	Subtotal - Indonesia		96,000		76,000		10,000		10,000

PROJECT BUDGET COVERING GOVERNMENT OF INDONESIA CONTRIBUTION
(in US$)

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
10.00	PROJECT PERSONNEL								
17.00	Rhino Conservation Officer/Project Manager	36	20,000	12	6,000	12	7,000	12	7,000
	R.C.O. Administrative Assistant	36	17,000	12	5,000	12	6,000	12	6,000
	Regional Field Coordinator	36	16,000	12	4,000	12	6,000	12	6,000
	Mobile Unit	60	16,000	20	2,000	20	6,000	20	8,000
	Rhino Protection Units (9 units-4 pers/unit)	693	48,000	146	9,600	219	16,800	328	21,600
17.99	Subtotal		117,000		26,600		41,800		48,600
19.00	Component Total		117,000						
30.00	TRAINING								
	In-Service Training		30,000		10,000		10,000		10,000
	Operations/Transport Mobile Unit		38,000		8,000		15,000		15,000
	Operations Rhino Protection Units		21,700		2,200		5,800		13,700
	Operation Project Vehicles		24,000		8,000		8,000		8,000
39.00	Component Total		113,700		28,200		38,800		46,700

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
40.00	EQUIPMENT								
41.00	Expendable								
	Various Field Equipment		30,000		13,000		8,000		9,000
	Community Outreach Materials		72,000		24,000		24,000		24,000
	Subtotal		102,000		37,000		32,000		33,000
	6 4X4 WD Vehicles		105,000		80,000		25,000		0
	9 Motor Bikes		14,000		4,000		5,000		5,000
	Radio System for Mobile Unit		15,000		15,000		0		0
	4 486 Computers with Printers		5,000		5,000		0		0
	Office for RCO		45,000		45,000		0		0
	Furniture for RCO Office		3,000		3,000		0		0
	Operations and Training Base Camp Facilities		33,000		23,000		2,000		8,000
	Subtotal - Expendable Equipment		220,000		175,000		32,000		13,000
49.00	Component Total		322,000		212,000		64,000		46,000
50.00	MISCELLANEOUS								
	Operations Costs for R.C.O.		18,000		6,000		6,000		6,000
	Operations Cost - YMR Boards		15,000		5,000		5,000		5,000
	Reporting		3,000		1,000		1,000		1,000
59.00	Component Total		36,000		12,000		12,000		12,000
99.00	GRAND TOTAL		588,700		278,800		156,600		153,300

PROJECT BUDGET COVERING GOVERNMENT OF MALAYSIA CONTRIBUTION
(in US$)

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
10.00	PROJECT PERSONNEL								
17.00	Rhino Conservation Officer/Project Mngr (Pns) (Travel)	36	6,000	12	2,000	12	2,000	12	2,000
	Rhino Consrvtn Officer/Project Mngr (Sbh) (Field Allowances)	18	27,000	6	9,000	6	9,000	6	9,000
	Rhino Consrvtn Officer/Project Mngr (Srwk) (Field Allowances)	18	27,000	6	9,000	6	9,000	6	9,000
	Community Outreach Consultant	12	60,000	4	20,000	4	20,000	4	20,000
	70 Wildlife Rangers (50 Pns/10 Sbh/10 Swk)	2520	636,000	840	212,000	840	212,000	840	212,000
17.99	Subtotal	975	756,000	868	252,000	868	252,000	868	252,000
30.00	TRAINING								
	Wildlife Veterinarian (Sbh)		10,000		10,000		0		0
	GIS Specialist (Pns)		10,000		10,000		0		0
	Operations Rhino Units (25 Pns/ 25 Sbh)		51,000		17,000		17,000		17,000
39.00	Component Total		71,000		37,000		17,000		17,000
40.00	EQUIPMENT								
41.00	Expendable								
	GIS Software/Remote Sensing Data		10,000		10,000		0		0
	Community Outreach Materials		36,000		12,000		12,000		12,000
41.99	Subtotal - Expendable Equipment		46,000		22,000		12,000		12,000

Code	Description	Total		1995		1996		1997	
		MM	US$	MM	US$	MM	US$	MM	US$
	EQUIPMENT (Continued)								
42.00	Non-Expendable								
	Operational and Training Facilities Construction (50K Pns/ 25K Sbh/ 15K Swrk)		50,000		0		0		50,000
	Offices for RCOs		72,000		72,000		0		0
	Subtotal - Non-Expendable Equipment		122,000		72,000		0		50,000
49.00	Component Total		168,000		94,000		12,000		62,000
50.00	MISCELLANEOUS								
	Aerial Tracking of Radio Collared Rhino		60,000		12,000		24,000		24,000
	Reporting		3,000		1,000		1,000		1,000
59.00	Component Total		63,000		13,000		25,000		25,000
99.00	GRAND TOTAL		1,058,000		396,000		306,000		356,000

ANNEX 1
PRELIMINARY WORK PLAN

Indonesia Objective 1: To enhance the capabilities of PHPA and related wildlife agencies to arrest and reverse decline in rhino numbers due to poaching.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.1 Improved management and coordination mechanisms													
Activities													
1.1.1 Establishment of Rhino Conservation Officer (RCO)	PHPA, UNDP	X											
1.1.2 Appointment of RCO as GEF Project Manager	UNDP, PHPA	X											
1.1.3 Appointment of YMR as the Admin. Assist. to RCO	PHPA, UNDP	X											
1.1.4 Appointment of Field Operations Consultant(s)	PHPA, UNDP	X											
1.1.5 Appointment of AsRSG Program Officers as Project Supervisors	UNDP, PHPA	X											
1.1.6 Appointment of Regnl Field Crdntr (RFC)/Mobile Unit Leader	RCO, Conslts	X			X				X				
1.1.7 Assistance and advice for RCO/PM and RFC/MUL	Consultants	X	X		X	X			X	X			
1.1.8 Detailed work plans	RCO, Conslts	X				X				X			
1.1.9 Adaptive adjustment of mgmt. structures	RCO, Conslts				X				X				X
OUTPUT 1.1 Organization, training, operation of rhino units													
Activities													
1.2.1 Recruitment of members of the rhino mobile unit	RCO, Conslts	X	X										
1.1.1 Recruitment of candidates for rhino units	RCO, Conslts	X		X		X		X		X		X	
1.1.2 Selection & training of members of rhino units	RCO, Conslts	X		X		X		X		X		X	
1.1.3 Provision of operational equipment and facilities	RCO/PM	X	X										
1.1.4 Rehabilitation of operation center at Air Hitam	RCO, YMR	X	X										
OUTPUT 1.3 Creation of core trainers for further rhino team training													
Activities													
1.3.1 Training of rhino units/field coordinator to be trainers	RCO, Conslts		X		X				X				X

Indonesia Objective 1: To enhance the capabilities of PHPA and related wildlife agencies to arrest and reverse decline in rhino numbers due to poaching.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.4 Reduction of poacher activity													
Activities													
1.4.1 Intensive patrolling to detect traps and intruders	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.2 Surveillance of traps to detect poachers	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.3 Destruction of traps	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.4 Intelligence operations	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.5 Protection of natural resources as well as rhino	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.6 Close coordination with other park staff	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
OUTPUT 1.5 Better assessment of rhino populations													
Activities													
1.5.1 More intensive/extensive surveys	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.5.2 Improvement of survey/census methods	Rhino Units		X		X		X		X		X		X
1.5.3 Systematic data treatment system	Rhino Units					X	X	X	X	X	X	X	X
1.5.4 GIS rhino database	RCO					X	X	X	X	X	X	X	X
OUTPUT 1.6 Adaptive refinement of strategy													
Activities													
1.6.1 Incorporate data into GIS database	RCO					X	X	X	X	X	X	X	X
1.6.2 Continue PHVA process	RCO, PHPA				X				X				X
OUTPUT 1.7 Advocacy to policy and decision makers													
Activities													
1.7.1 Increased communication government officials		X	X	X	X	X	X	X	X	X	X	X	X

Indonesia Objective 2: To develop more involvement by, a well as benefits and incentives for, local human communities, in vicinity of the rhino habitat.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 2.1 Employment of 100 locals													
Activities													
2.1.1 Identifying team (employment) candidates	RCO, Conslts.	X		X		X		X		X		X	
2.1.2 Training of team members	RCO, Conslts.			X		X		X		X		X	
2.1.3 Formulation of ecotourism programs	RCO, Conslts.					X	X	X	X				
OUTPUT 2.2 Community Outreach Program													
Activities													
2.2.1 Village visits	Rhino Units		X	X	X	X	X	X	X	X	X	X	X
2.2.2 Design/distribute questionnaires	Units, YMR			X			X			X			
2.2.3 Analysis of questionnaires	Conslts.				X			X			X		
2.2.4 Conduct participatory village meetings	Rhino Units		X	X	X	X	X	X	X	X	X	X	X
2.2.5 Discussion of problems/progress	Rhino Units				X				X				X
2.2.6 Youth organization programs	Rhino Units		X	X	X	X	X	X	X	X	X	X	X
2.2.7 Production of leaflets/posters	YMR, Conslts.				X		X		X		X		X
OUTPUT 2.3 Integration with Buffer Zone Programs													
Activities													
2.3.1 Coordination with agencies implementing buffer zone programs	RCO, Conslts		X	X	X	X	X	X	X	X	X	X	X
2.3.2 Provision of information for buffer zones	RCO, Conslts		X	X	X	X	X	X	X	X	X	X	X

Indonesia Objective 3: To develop a comprehensive and sustainable funding plan for the rhino conservation strategy and action plan

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 3.1 Funding plan linking costs and donors													
Activities													
3.1.1 Further delineation of exact costs	RCO, AsRSG, YMR				X				X				
3.2.1 Identification of target donors	RCO, AsRSG, YMR				X				X				
OUTPUT 3.2 More commitment of funds from Govt.													
Activities													
3.2.1 Funding proposals to Govt.	RCO, PHPA, YMR					X	X						
OUTPUT 3.3 Funds from NGOs & non-host Govts.													
Activities													
3.3.1 Proposals to target donors	RCO, AsRSG					X	X	X			X	X	

Malaysia Objective 1: To enhance the capabilities of PHPA and related wildlife agencies to arrest and reverse decline in rhino numbers due to poaching.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.1 Improved management and coordination mechanisms													
Activities													
1.1.1 Activation or reactivation of Rhino Conservation Officers	DWNP, DW, DF	X											
1.1.2 Appointment of RCOs as GEF Project Managers	UNDP, DEPTS.	X			X				X				
1.1.3 Appointment of Field Operation Consultant (Peninsula/Sarawak)	DWNP, DF	X											
1.1.4 Appointment of Associate Professional Officer (Sabah)	DW	X											
1.1.5 Appointment of AsRSG Program Officers as Project Supervisors	UNDP	X											
1.1.6 Assistance and advice for Rhino Conservation Officers	Rhino Ofs, Consits	X	X			X	X			X			
1.1.7 Preparation of annual detailed work plans/budgets.	RCOs, Consits	X				X				X			
1.1.8 Adaptive adjustment of structures						X			X				X
OUTPUT 1.2 Organization, training, operation of rhino units													
Activities													
1.2.1 Assignment of rangers to rhino units	DWNP, DW, DF	X	X										
1.2.2 Training of members of rhino units	Rhino Ofs, Consits		X	X	X	X							
1.2.3 Provision operational equipment and facilities	RCOs thru Depts.	X	X										
OUTPUT 1.3 Creation of core trainers for further rhino team training													
Activities													
1.3.1 Training of rhino units/field coordinators to be trainers	Rhino Ofs, Consits				X				X				X

Malaysia Objective 1: To enhance the capabilities of PHPA and related wildlife agencies to arrest and reverse decline in rhino numbers due to poaching.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.4 Reduction of poacher activity													
Activities													
1.4.1 Patrolling to detect traps and intruders	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.2 Surveillance of traps to detect poachers	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.3 Destruction of traps	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
1.4.4 Intelligence operations	Rhino Units	X	X	X	X	X	X	X	X	X	X	X	X
OUTPUT 1.5 Consolidation of rhino into IPZs													
Activities													
1.5.1 Location of isolated rhinos	Rhino units		X	X	X	X	X	X	X	X	X	X	X
1.5.2 Capture of isolated rhinos	Rhino units		X	X	X	X	X	X	X	X	X	X	X
1.5.3 Radio telemetry of translocated rhino	Rhino Ofs/Teams		X	X	X	X	X	X	X	X	X	X	X
OUTPUT 1.6 Better assessment of rhino populations													
Activities													
1.6.1 More intensive/extensive surveys	Rhino units		X	X	X	X	X	X	X	X	X	X	X
1.6.2 Improvement of survey/census methods	Conslts, Rhino Ofs		X		X		X		X		X		X
1.6.3 Systematic data treatment system	Rhino Ofs/Teams						X	X	X	X	X	X	X
1.6.4 GIS rhino database	Rhino Ofs/Teams						X	X	X	X	X	X	X
OUTPUT 1.7 Adaptive refinement of strategy													
Activities													
1.7.1 Incorporate data into GIS database	Rhino Ofs.					X	X	X	X	X	X	X	X
1.7.2 Initiate PHVA workshop/process	Rhino Ofs, Conslts		X				X				X		

Malaysia Objective 1: To enhance the capabilities of PHPA and related wildlife agencies to arrest and reverse decline in rhino numbers due to poaching.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.8 Advocacy for better protection status													
Activities													
1.8.1 Proposals to state/federal Govt. on Endau Rompin, Belum, and Selama	RCO, DWNP								X				
1.8.2 Proposal to Govt. on Tabin	RCO, DW								X				
1.8.3 Proposal to Govt. on Pulong Tau	RCO, FD								X				

Malaysia Objective 2: To develop more involvement by, a well as benefits and incentives for, local human communities, in vicinity of the rhino habitat.

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 2.1 Employment of 100 locals													
Activities													
2.1.1 Identifying team (employment) candidates	Rhino Ofs, Depts.	X		X		X		X		X		X	
2.1.2 Training of team members	Rhino Ofs, Conslts	X	X	X	X	X	X	X	X	X	X	X	X
2.1.3 Formulation of ecotourism programs	Rhinos Ofs, AsRSG					X	X	X	X				
OUTPUT 2.2 Village Outreach program													
Activities													
2.2.1 Village visits	Rhino units	X	X	X	X	X	X	X	X	X	X	X	X
2.2.2 Design/distribute questionnaires	Community Conslt			X			X			X			
2.2.3 Analysis of questionnaires	Community Conslt				X			X			X		
2.2.4 Conduct participatory village meetings	Rhino units		X	X	X	X	X	X	X	X	X	X	X
2.2.5 Discussion of problems/progress	Rhino units				X				X				X
2.2.6 School visits	Rhino units		X	X	X	X	X	X	X	X	X	X	X
2.2.7 Production of leaflets/posters	Community Conslt				X				X				X

Malaysia Objective 3: To develop a comprehensive and sustainable funding plan for the rhino conservation strategy and action plan

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 3.1 Plan linking costs and donors													
Activities													
3.1.1 Further delineation of exact costs	Rhino Ofs, AsRSG				X				X				
3.2.1 Identification of target donors	Rhino Ofs, AsRSG				X				X				
OUTPUT 3.2 More commitment of funds from Govt.													
Activities													
3.2.1 Funding proposals to Govt.	Rhino Ofs, Depts.				X	X							
OUTPUT 3.3 Funds from NGOs & non-host Govts.											X	X	
Activities													
3.3.1 Proposals to target donors	Rhino Ofs, AsRSG					X	X	X					

Objective Indonesia and Malaysia 1: To increase exchange of information and expertise between Indonesia and Malaysia on rhino conservation matters

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	SCHEDULE (IN 3-MONTH INTERVALS)											
		3	6	9	12	15	18	21	24	27	30	33	36
OUTPUT 1.1 More info. exchange between countries													
<u>Activities</u>													
1.1.1 Rhino Officer visits to each other's country					X				X				X
1.1.2 AsRSG Consultant visits to both countries		X			X	X			X		X		X

Annex 2

TRAINING PROGRAMME

Training is a central aspect of this project. Most of the training will occur on the job and will involve all levels of the rhino conservation programme. The Rhino Conservation Officers (RCOs) in both Indonesia and Malaysia (one in Peninsular Malaysia) will receive training from the various consultants involved.

Extensive on-the-job training will be provided to the rhino protection units (conservation teams) by the consultants and RCOs. This training will include anti-poaching methods, census and survey techniques, and community outreach approaches.

In Indonesia, in-service training to provide each of the rhino protection units with personnel with the proper qualifications to arrest poachers and carry firearms will be conducted at government expense.

The RCOs will also receive training in GIS. NGOs in both Indonesia (WWF) and Malaysia (Malaysian Nature Society) have the expertise to provide much of this training as a collaborative endeavor with the government wildlife departments. The training will be conducted through short courses and problem exercises.

Sabah requires additional training for a staff wildlife veterinarian in capture and translocation methods. A modest amount of the GEF funds are requested for this purpose. At this point, the optimal programme for such training is still being formulated, for example, it could be abroad in the United States, Africa, or elsewhere in Asia. In the case of Sabah, experts from abroad could come and provide training. In either case, it is anticipated that matching funds at least equal to the amount proposed from GEF can be obtained.

The Population and Habitat Viability Analysis Workshop(s) to be conducted in Malaysia will also provide in-service and on-the-job training for all levels of the rhino conservation staff.