Report On Rhinoceros (Dicerorhinus sumatrensis) in Silabukan Forest Reserve, Sabah: a recommendation to catch and translocate them.

Introduction

Matters related to wildlife conservation in Sabah are the concern of two separate bodies; the Sabah National Parks, a statutory body, and the Game Branch of the Sabah Forest Department. The former is responsible for the administration and development of National Parks in Sabah. Only one National Park (Kinabalu National Park) contains habitat where rhinoceroses may exist, but there is no evidence that they do so. The later body is responsible for the protection of wild animals in Sabah.

The maximum penalty for killing a rhinoceros in Sabah is five years imprisonment and a M$5000 fine. There have never been any successful prosecutions. Verbal reports received by the Faunal Survey of Sabah (WWF Project 1692) indicate that a minimum of four rhinos have been killed in Sabah in the past four years:

(1) a young individual, snared, Silabukan area, 1976,
(2) adult, 1976, Deramakot area,
(3) adult, probably shot, Silabukan area, 1978,
(4) adult male, between Segama and Kinabatangan rivers, March or April 1980; horns now is possession of a Sabah Timber company owner.

Owners of timber companies within Sabah are believed largely to be responsible for instigating hunting or rhinoceroses. Hunting is made easier by the presence now of logging roads throughout much of Sabah and the widespread use of firearms. Although many are used illegally, it is easy to obtain firearms under licence, the commonest reasons given being (i) for supply of fresh meat to timber camp workers or (ii) protection of wages or property. Most timber camps possess at least one firearm.

The monetary value of rhinoceros horn is well-known to most people in Sabah. Prices quoted within the last year are M$75,000 for a whole rhino, and M$2000 for a horn (US$1 = M$2.2). Word of rhinoceros in any area becomes widely-known. There is no area in Sabah where rhinos are safe from hunting, although pressure is greater in some areas than in others.

Members of the Faunal Survey of Sabah team have visited three areas where rhinos have been reported in recent years (see inset to map):

(1) Lokan river - around early 1975 a rhinoceros was seen twice on the main road, not far north of the Lamag/Lahad Datu junction, by a lorry driver (Syarikat Kretam Sdn.Bhd.). Footprints were seen by Game Branch Rangers February 1979 and again by Forest Department Range Officer, April, 1979. Localities now being cleared and burned for cocoa plantations. One rhino seen by Forest Department worker, November, 1979. Locality now being surveyed for cocoa plantation. Fresh tracks seen by Sabah Timber Company worker, January 1980. Area now being logged.

If plotted on a map, the last four records form a fairly straight line about 11.5 Km long. Three days were spent by a Faunal Survey team searching in the vicinity of the last record, early in March, 1980, but no evidence was found. An isolated 6 Km^2 patch of forest remains unlogged in this area, the surrounding area a network of logging roads. The infrequency of rhino reports in an inhabited area suggests that only one rhino remains.

(2) Pacific Hardwood Concession in Ulu Segama - in the vicinity of the Bole and Kawang rivers. Footprints were reported in the area in 1976 (Game Branch Rangers), 1978 (Australian tourist) and, most recently, 1979, about half-way between the Bole and Kawang rivers. (Mr. Albert Ganning, assistant plantation manager).

Two Faunal Survey teams each spent 10 days in the area in March-April 1980, but no recent evidence of rhinos was found, only one old wallow.

(3) Silabukan - detailed below

There are other reports from:

(4) Danum Valley area - within the proposed Danum Valley National Park. Evidence of 2 or 3 rhinos, WWF Malaysia survey in July 1976. No recent evidence.

(5) Sungei Pin/Sungei Koyoh Forest Reserves - frequent sightings of female with calf, and solitary male, during 1976 - 1977, by workers in Syarikat Kretam logging concession. The area has been excised from Forest Reserve for agriculture. The three individuals were still present when logging operations finished (Syarikat Kretam Manager), but the area has since been easily accessible. The area should be checked as soon as possible.

(6) Gunung Lutong - verbal reports of footprints on the south side, to Arthur Mitchell, June, 1978.

(7) Ulu Padas - report by Murut hunter to Game Branch Ranger in November 1978.

(8) Deramakot area - a rhino is reportedly still living in the area where one was killed in 1976, (Timber company manager, May 1980).

(9) Tomanggong - one individual still alive near one of the Tomanggong Salt Springs (footprints seen by Pirian Mat Salleh).

THE SILBAUKAN AREA

The Silabukan area in the centre of the Kent Peninsula, eastern Sabah (see map) has long been known to natives of eastern Sabah as a good area for hunting rhinos. Even before the Rivers Estates company started operations from Tomanggong some 25 years ago, hunters came from along the Segama river there, specifically to obtain rhino horns (personal communication from Pirian Mat Salleh). Reports of sightings of rhinos or their tracks continued to be received by the Game Branch up to the end of 1979.

Two surveys have been done in the Silabukan area in 1980. Results and recommendations are reported below.

Access to the Silabukan area

There are three main access routes to the rhino area in Silabukan.

(1) Wing Loi road - the Wing Loi logging company made a road from the Silabukan oil palm scheme, which is south of the area shown in the map. This company logged the area shown on the map, to the west and south of the present rhino area. This area has been re-logged by Chong Chin Company, which has nearly finished operations. The Wing Loi/Chong Chin road branches into three (see map). One road continues northwards to the Segama river. Another goes northeast into the Rivers Estates Concession area, and is now used by the Trus Jadi company. The third goes eastwards and is used by the Suriajaya Company.

All of these roads are maintained in good condition and, in fine weather, the area can be reached from Lahad Datu, a main east-coast town, within 2-3 hours.

(2) Indoh Concession - this company is operating at the end of an old, well-maintained road built by Kennedy Bay Timber Co. in the 1950's, from Bakapit. The hilly terrain between the Indoh Concession boundary and the rhino area, with no roads or paths, makes access difficult.

(3) Rivers Estate Road - starts at Tomanggong, on the north coast of the Dent Peninsula. This will probably not be maintained in the near future, since Rivers Estates have stopped logging, and logs taken by Trus Jadi and other minor concessionaires now operating in the old Rivers Estates area will be transported to the south by the Wing Loi/Chong Chin Road.

The Wing Loi/Chong Chin Road provides easy access to the rhino area. Rhino poachers can enter the area with ease, night or day.

The area is accessible by the Tagas and Tabin rivers, using dugout canoe, in rainy times. It is the roads, not the rivers, however, that nowadays provide easy access. During a rhino survey in April 1980 (see below) the fresh marks of a track were seen in Silabukan. The hunters had crossed a small river by cutting some small trees nearby and laying them to form a bridge. The rewards expected must have been large to perform such a risky operation.

The current and future state of forest in the rhinoceros area

All of the area shown on the map except the grey-shaded area (marked "unlogged", and "Suriajaya boundary") has been logged, most of it twice. The vegetation is low secondary growth, up to about 10 metres in height, with isolated emergent trees.

The area around Salt Springs S3 and S4 (see below) is a 8 Km x 1 Km hill, rising to over 1000 feet altitude. It is currently being relogged by the Trus Jadi Company.

Unlogged forest to the west of Tabin river is to be logged over the next 4½ years by Suriajaya Company. Unlogged forest to the east of Tabin river has been granted to the Sabah Foundation and there are currently no plans to log it.

The terrain through the area shown on the map is uneven, but almost entirely below 1000 feet altitude. Much of it is suitable for growing cocoa, oil palm and rubber. Sabah Government policy is to plant with crops all suitable land as quickly as possible. Looking further into the future, it is likely that any land unsuitable for the above-mentioned crops and food crops will be cleared, and planted with fast-growing, exotic tree species.

Powerful political figures have interests in both Suriajaya and Trus Jadi Companies. It would not be possible to have a nature reserve made in the rhino area.

Salt Springs

Two Salt Springs were identified from the air before logging occurred in the rhino area. Both (S1 and S2) are an area of salty soil 4 or 5 acres in extent, where no plants grow. The salt springs and surrounding forest (1.25 Km^2 for S1, about 2 Km^2 for S2) were gazetted as Virgin Jungle Reserves (VJRs), to be preserved in their natural state.

There are two smaller (less than 1 acre) salt springs, S3 and S4, which were not identified at the time when VJRs were being set up. Both have been logged over by Rivers estates company. It has not been possible to map these salt springs relative to the Trus Jadi logging concession, but S3 is probably within the concession boundary.

Men who have worked for Rivers Estates and hunted in the rhino area for many years said that there are no other salt springs.

The 1980 surveys in the rhino area

A Faunal Survey team surveyed the Silabukan area 29 February - 16 March 1980. The area was approached initially by the Indoh Concession road. Neither company workers nor the local Forest Department Range officer had ever heard any report of rhinos. A new approach was made by the Wing Loi/Chong Chin road. Chong Chin company were uncooperative,

but the S1 VJR was inspected. Traces of rhino tracks, at least six months old, were found, no recent signs.

By talking to workers in Rivers Estates (which finished operations in early April, 1980) and Suriajaya, it become apparent that all recent sightings of rhinos or their tracks were in three separate areas:

(1) between the salt springs S3 and S4,

(2) around the boundary of Rivers Estates and Suriajaya concessions at the end of a side-road to the east of Rivers Estates main road,

(3) in the Suriajaya concession where tree-felling was in progress.

Each area was investigated. Eight days were spent searching for rhino evidence between the 2nd and 3rd areas, and the VJR which encloses salt spring S2. Routes taken by foot area marked with red on the map.

Fresh rhinoceros tracks were found in the places marked on the map, although few prints were sufficiently clear for useful measurement of foot-width. The area between salt springs S3 and S4 was visited on 5th and 15th of March. It was being used by at least two rhinos (hind-foot print widths about 18 cm and about 21.5 cm), which travelled together some of the time - presumably a female with offspring. They had used salt spring S3 recently, but not S4. One worker had seen fresh rhino tracks at S4 in 1979. In some places, the ground was covered completely by superimposed rhino footprints. Two large, recently-used piles of dung were found, and a recently and frequently-used sleeping or resting place. Only one freshly-used wallow was located, made on an old, overgrown tractor path.

On 4th March, fresh tracks (clear hind-foot print 21.5 cm) of a single individual were found some 6 Km south of S3/S4 area (see map). This must be a different individual. At one place, a whitish deposit was found on saplings and shrubs, at the sides of a rhino track. It was clearly a liquid which had been sprayed and dried to leave the solid deposit. The area covered was about 4 x 1 metres, up to a height of about 1m. This may have been the urine of a male rhino, described by Marcus Borner and others.

There were tracks of rhinoceros between the Suriajaya tree-felling area and the west side of Tabin river. (Surprisingly, no evidence, new

or old, of rhinos was found east of Tabin river although five days were spent in the VJR around salt spring S2). All the tracks here were in sand, gravel or soft river banks, during a period with no rain; it was possible only to guess that they were 2-4 days old. No useful measurements could be made, but it is possible that a single rhino had been following the western tributary of Tabin river over a period of 2 or 3 days (see map) as the rhino surveyors themselves were doing.

One rhino dung heap, not used for at least several days, was found in the vicinity of the Suriajaya tree felling area.

Four wallows were found in the Suriajaya concession near to new rhino tracks, but none had been used for weeks or months.

From this survey, it was possible to conclude that in March 1980:

(1) two rhinos, probably adult female with accompanying sub-adult offspring, were present between and around salt springs S3 and S4. Judging from the abundance of tracks, they had been using an area of only several Km^2 for at least several weeks.

(2) at least one adult rhino, probably male, was present in the unlogged Suriajaya concession area.

Food supply for rhinos is probably poor in the S3/S4 area. At the time of this survey, Indonesians were collecting rattan (probably illegally) near S3. There was evidence of other people, possibly poachers, coming along the road north-west of S3. News of resident rhinos will become known to rhino-hunters, if it has not already done so. It is possible that these two rhinos remain in the locality because of the presence of salt springs. Van Strien (Progress Report hr. 8) found that the ranges of all of 9 individuals recognised were centred on salt licks.

It is not known whether rhinos have crossed the main Rivers Estates road in recent years.

A second survey was made by a Game Branch team, 18 - 21 April 1980. They checked thoroughly the area around S1 (see map) in the Chong Chin Concession. No evidence of rhinos was found there. They checked the tree-felling area of Suriajaya and found some fresh tracks where the previous survey had seen fresh tracks.

RECOMMENDATION

Attempts should be made to catch as many rhinos as possible in the Silabukan area, as soon as possible. They should be taken to Sepilok (14 miles west of Sandakan, and the site of the well-known orangutan rehabilitation centre), and kept in enclosures built within the forest there, until such time as a suitable protected area in Sabah is found into which they can be released.

JUSTIFICATION

All the rhinos in the Silabukan are dommed to die at the hands of poachers unless they are removed to a safer place. Apart from the fact that destructive logging in the area cannot be stopped, it is unrealistic to suppose that any protection measures can be certain of stopping hunters.

SUGGESTED METHOD

The presumed mother-offspring pair in the vicinity of salt springs S3 and S4 should be given priority. Anaesthetic dart guns involve too much risk to be the preferred method of capture; in any case, it is well-known to be almost impossible to catch more than a brief glimpse of a wild Sumatran rhinoceros inside forest cover. The initial attempt should be to catch the rhinos in pit-fall traps (as described by N.J. van Strien, "Dicerorhinus sumatrensis (Fischer). The sumatran or two horned Asiatic rhinoceros. A study of literature". Mededelingen Landbouwhogeschool wageningen, Netherlands, 74-16(1974). The traps would be made on all access routes to salt springs S3 and S4. If, after a reasonable time, it becomes apparent that this method is unlikely to catch rhinos, tracking and anaesthetic dart guns will have to be tried.

If a rhino is caught in a pit-fall, it should be kept in a locally-made enclosure, until a time suitable for it to be transported to Sepilok.

The Game Branch can provide manpower except for veterinary skills, and foodstuffs for captured rhinos. Transport will be arranged within Sabah but financial assistance may be requested.

IUCN/WWF priority actions

(1) Formally support the aims of this project (whether or not financial assistance is ultimately provided) and suggest modifications or new ideas if appropriate.

(2) Give priority to financing purchase of materials where the Forest Department or other Sabahan organisation cannot do so. (All efforts will be made to obtain local funds where possible).

(3) Seek an expert who could be present at the time of capture of a rhino and remain in Sabah until after the rhino has been taken to Sepilok. The expert should be a vet with experience of the capture and handling of large wild mammals in the tropics, rather than a zoologist who has studied rhinoceros ecology. WWF would have to pay the salary of the expert and this would probably be WWF's major financial contribution.

Game Branch (Sabah) priority actions

(1) Map sites of salt springs S3 and S4. Check boundaries of Trus Jadi logging concessions and obtain information on predicted dates of logging within the main rhino area.

(2) Build camp between the rhino area and Trus Jadi road. Two Rangers to be present at all times to (a) keep potential poachers out, (b) check on the movements of the rhinos.

(3) Contact Veterinary Department in Sabah, Sarawak and Peninsular Malaysia, and the vet at Zoo Negara, Kuala Lumpur, to see if there is a suitably-qualified vet within Malaysia, and who could assist if necessary.

(4) Contact Dr. Engke Soepadmo, Botany Department, University of Malaya, who was present on the project led by P. Ryhiner and H. Skafte, which captured ten sumatran rhinos in central Sumatra in the late 1950's.

(5) Make preliminary enquiries to other organisations in Sabah which might be connected in some way with the project (for example: Sabah Foundation for additional funds; Army, for helicopter; Research Section, Forest Department, for suitable site for enclosure in Sepilok Forest Reserve).

(6) Practise the construction of pit-fall traps and the handling of animals caught in them (for example, near salt spring S1).

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(with minor revisions and additions over 13 June draft).