

RHINO TRAPPING IN MALAYSIA

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1.0 HISTORY

In 1975, Rodney W. Flynn, a Biologist who studied the ecology of the Sumatran rhino (*Dicerorhinus sumatrensis*) in Endau-Rompin, attempted unsuccessfully to capture the animal by using corral or surface trap. Then, once again in 1985, the Department of wildlife and National Parks (DWNP) used corrals to capture the rhino in Tenggaroh, Johor and Bukit Gebok, Pahang. These traps however were found to be ineffective at both sites. In November 1985, after the Sumatran Rhino Trust Agreement (van Strien 1985) fell through, the DWNP set up an *ad hoc* committee on Rhino Capture. Most of the committee members (Table 1) have had wide experience in the field and in handling large mammals, particularly elephant, deer and seladang. Among the resolutions made at the 1st meeting are :

- 1.1 The capture of individual rhinos in threatened or doomed habitats.
- 1.2 The capture of individuals for breeding in captivity at the Zoo in Malacca and in the Sungai Dusun Reserve.
- 1.3 The development of an effective method of capture.
- 1.4 The training of personnel in the Rhino Management Unit (RMU).

The RMU is given the task of executing the decisions or recommendations made by the committee.

2.0 AREAS FOR CAPTURE

Areas in priority I : Threatened or doomed areas with no hope for survival for the rhinos.

- a). Bukit Gebok and Ulu Atok, Pahang

- b). Tenggaraoh and Kambau, Johor
- c). Sungai Dusun, Selangor.

Areas in priority II : Less threatened areas.

- a). Sungai Yong and Sungai Depak, Kelantan
- b). Kenyir, Trengganu.

Table 1. *Ad hoc* committee on Rhino Capture in Malaysia

Member	Designation/Specialization
Mohd. Khan bin Momin Khan	Chairman
Louis C. Ratnam	Head/Management Division
Zainal Zahari Zainuddin	Veterinarian/Malacca Zoo
Zaaba Zainal Abidin	Wildlife Management Unit
Syariff Daim	Elephant Management Unit
Mohd. Tajuddin Abdullah	Rhino Management Unit

Table 2. Trapping sites and number of traps

Sites	No.	of traps Dimension	Notes
Bukit Gebok	6	8' x 8' x 8'	Six tapir and an elephant fell into the trap
Kambau	10	8' x 8' x 8'	Six tapir were caught. One rhino escaped in January 1986 Deactivated in September 1986
Ulu Atok	4	8' x 8' x 8'	One rhino escaped (pit size: 8' x 8' x 6')
		10' x 4' x 8'	One motorcyclist and cattle fell into the pits
Tenggaraoh	1	10' x 4' x 8'	One female rhino was caught Deactivated.
Sungai Dusun	4	10' x 4' x 8'	One female rhino was caught Pit was deactivated. Cattle fell in

3.0 TRAPPING TECHNIQUE

During the initial stage of trapping in November and December 1985, a rather primitive pitfall trap was designated and set up at Bukit Gebok, Kambau, and Ulu Atok. The pit measured 8' x 8' x 6' (length x width x depth). As a result of the poor design, the capture team faced severe setback when two animals escaped from the pitfall traps in Ulu Atok and Kambau. The animals were able to excavate the earth on the wall and gather the leaves and twigs used as shock absorber to help in their escape. Subsequently a new

design was made with major modifications in width and depth and reinforced wall. The new pits measured 10' x 4' x 8' with strong plywood wall and were used in Ulu Atok, Tenggaroh and Sungai Dusun. Finally, two rhinos were caught in the newly designed pits (Table 2) and the animals were sent to the Malacca Zoo at Air Keroh.

The pitfall trap had some major problems associated with it. First of all, where the soil had poor drainage, flooding and landslide usually occurred. The pit must be closed when flooded at 1.5' and stronger wall should be built to prevent the pit from caving in. Secondly, the interference from non-target species: there were incidents of tapir, elephant, cattle and even human beings trapped in the pits (Table 2). There is nothing that can be done to prevent such non-target species from falling into the pits. Even sign boards erected for the benefit of man, went unnoticed. Thirdly, the duration of waiting time spent before a rhino is trapped is unpredictable. A pit at Ulu Atok trapped a rhino within 12 hours from the time it was completed and activated, but at the sametime, there are some traps that are even now not at all effective in trapping either a rhino or a non-target animal.

Therefore, the site selection is very important and it is the factor that determines the success or failure of a pitfall trap. The trapping team should be properly trained to distinguish between ordinary trails used by animals and rhino highway or major trail. The cosmetics of the pit surface is also important. After the trap is set, the area must look as natural as it was before. Finally, there are problems from porcupines and termites that chew the timber and plywood. Woody materials should therefore be treated prior to use.

4.0 COST

According to Mohd. Samsudin (1986) the cost of building a 10' x 4' x 8' pit in terms of materials and salaries for workers is MS\$ 1,426.40 and MS\$ 1,534.66 respectively (Table 3). The cost is based on the use of highly trained workers who have had good experience in building such traps in June 1986. When however, the programme was first started in November 1985, at a time when there was none with any experience, the total cost was more than MS\$ 5,000.00 per pit.

Table 3. Cost of building a 10' x 4' x 8' pit

<i>Material cost</i>	
Materials (Timber, Plywood etc).....	MSS 311.40
Digging equipment (reusable).....	MSS 225.00
Transport crate (reusable).....	MSS 890.00
Total.....	MSS 1,426.40
<i>Manpower cost (40 days)</i>	
Salaries (8 x 5 days).....	MSS 684.66
subsistence allowance.....	MSS 850.00
Total.....	MSS 1,534.66
Grand total.....	MSS 2,961.06

5.0 FUTURE ALTERNATIVES IN RHINO CAPTURE TECHNIQUES

There are few alternative techniques in the rhino capture that can be considered :

- i. the use of drugs.
- ii. the use of Stephenson box trap

Drugs are effectively used on other rhino species such as the Great Indian Rhinoceros. The dosage could be adjusted for use on the Sumatran rhino. The box trap is found to be useful in capturing animals such as the white-tailed deer in North America. The box design can be improvised to capture the rare Sumatran rhino.

6.0 REFERENCES

- Samsudin, Mohd. S. 1986. Lapuran Proyek Tangkapan badak dikawasan Sg. Dusun, Selangor. Unpublished Report. Department of Wildlife and National Parks, Kuala Lumpur.
- van Strien, N.J. 1985. Report in preparatory mission for the implementation of the Singapore proposal for captive breeding of Sumatran rhinoceros as part of a conservation strategy for the species. IUCN, Gland.