



Borneo Rhino Sanctuary (BRS) programme (restricted distribution)

Quarterly report : covering the period March - June 2011

Programme objective

To prevent the extinction of the Sumatran rhinoceros in Sabah by protecting wild rhinos and by bringing rhinos together in managed breeding facilities at Tabin Wildlife Reserve (TWR)

Main participating agencies

Sabah Wildlife Department (SWD), Borneo Rhino Alliance (BORA), Sabah Forestry Department, WWF-Malaysia, Leibniz Institute for Zoo and Wildlife Research (IZW; Berlin), Zoo Leipzig.

Main financing agencies during this quarter

Sime Darby Foundation (YSD); Sabah Wildlife Department; WWF-Germany; US Fish & Wildlife Service Rhino & Tiger Conservation Fund; BORA; IZW/Zoo Leipzig.

Programme description (following May 2009 Sabah State Cabinet decision)

- protection and monitoring of wild rhinos in TWR (BORA-SWD) and Danum Valley Conservation Area (WWF-Malaysia), the only two areas where potentially viable wild populations exist.
- establishing Borneo Rhinoceros Sanctuary (BRS) breeding facilities (a managed, fenced area) inside TWR.
- bringing isolated remnant rhinos from non-viable situations, into BRS.
- establishing a sustainable financing scheme to allow long-term operations of BRS.
- appointing a professional company to manage BRS and its rhinos

Activities and progress

Monitoring and security of wild rhinos at TWR Due to continuing focus on monitoring Puntung, her home range, and the traps set to capture her, only short patrols were done elsewhere. The part of the TWR boundary currently of most concern is the south-eastern area, where several small to medium sized plantations operate. Unlike the situation in the northern, western, south-western and eastern parts of the TWR boundary, where TWR shares a common boundary with a few large plantation companies, most of which are RSPO members, the owners of the plantations in the south-east is unknown. A patrol done 22-24 March aimed to explore possible access routes previously unknown to BORA along south-eastern boundary (Figure 1). A further survey in the same area 9-13 April involved walks into the forest where rhino presence was recorded in the 1980s (Figure 2). On 11 April, the foot of a bearded pig was found stuck in a snare trap (Figure 3), emphasizing the small but well-known threat posed to rhinos by this form of trap.

Rhino rescue Twice daily monitoring of the rhino traps at Malambabula continued through this quarter. The normal dry spell of around February-April did not occur this year (Figures 4 and 5). Every month up to and including May 2011 has experienced heavy rainfall. Accordingly, Puntung stayed in the hilly part of her range throughout this quarter and did not descend to the trap area. Some observers have suggested that the intensive monitoring of the trap area is keeping Puntung away from the trap. Although the persons involved directly in the “rhino rescue” at TWR do not believe that this is true, steps were taken to acquire a remote sensing device, which could send a text message by cell phone as soon as the trap trigger is broken.

Rhino health and management (a) a temporary laboratory (used, amongst other tasks, for examination of Tam’s semen) and BORA office, was put in place during this quarter in SWD ranger quarters (Figure 6). (b) routine management and monitoring of rhino health, blood, soil and other parameters continues as previously (Figures 7 and 8). (c) due to the heavy rain, Tam started to use the site between the night stall and forest paddock as a wallow; to dissuade this, a new passage way was built in April (Figures 9 and 10).

Reproductive assessment of Tam and Gelogob Manual attempts to obtain semen with sperm (following absence of sperm from electro-ejaculation in January) continued. The first sample of semen containing normal sperm (with good form) was obtained on 15 March, followed by 26 May (Figure 11) by a similar collection method. However, the concentrations of normal sperm obtained to date are still reckoned to be too low to be able to result in fertilization of an egg in a living rhino.

Rhino Quarantine Facility (See Problems to be addressed, in previous quarterly report). In order to provide a facility to separate Gelogob from Tam (the intention being to ascertain if this step might induce better sperm production by Tam) and to allow for separation of any rhinos held at Tabin for quarantine purposes at a later stage, a Rhino Quarantine Facility (RQF) was designed in March and a location chosen (based on access and soil stability) for the facility in April. Sime Darby Foundation agreed to finance cost of building the RQF, using existing funds allocated for the period June-August 2012. Construction commenced mid May (Figure 12). It is intended that a temporary water supply for the RQF will be sourced

from modification of an existing roadside water hole, while it is timely to consider solar power for the electricity supply.

Malua rhino Considerable excitement was generated by receipt of a report from staff monitoring wildlife in Malua Forest Reserve (a logged area to the north of Danum Valley) that they had found signs of a rhino passing through a routine monitoring site on 18 March. The reported signs included footprints, faeces, feeding signs, horn marks on a tree and wallows. A visit was made to the area 28-29 March, involving SWD, BORA and others (Figure 13). It was found that the wallows were those of pigs, while the feeding and tree marks were most likely of sambar deer. No rhino footprints or faeces were seen, presumably due to frequent daily rain. Thirty camera traps were set, in the hope of capturing an image of rhino, as well as banteng (wild cattle; the visit was made with the dual purpose of initiating a separate study of banteng, under the purview of SWD and Cardiff University).

Sumatran rhinoceros global management and propagation board (GMPB) meeting follow-up Sabah (represented by BORA chairman, executive director and field manager) visited Indonesia 12-15 May as follow-up to the February GMPB meeting. Apart from informal discussions with Bapak Widodo Ramono, executive director of Yayasan Badak Indonesia (YABI; the government-approved Indonesian rhino conservation body) a formal meeting was held with the directorate of Biodiversity Conservation (Figure 15; the relevant official section within Ministry of Forestry), and Sumatran Rhino Sanctuary (SRS) at Way Kambas was visited (Figure 16). Various issues were discussed at SRS, including demonstration by the BORA/BRS veterinarian of a simple way to extract blood from the rear side of the hind feet, and options for water supply (Figures 17, 18). Indonesian Ministry of Forestry suggested a memorandum of understanding with Sabah (or Malaysia) as a basis for future collaboration. Indonesia indicated to the Sabah group that urine from a fertile female rhino (requested by SWD as a potential stimulant for Tam's reproductive condition) could not yet be made available, as the CITES export permit necessary for Indonesia has yet to be processed by the scientific authority.

BRS breeding facilities Due to heavy and frequent rain, work on the access road to the BRS breeding facilities was resumed only for short period. It was learned that funding to build the permanent BRS breeding facilities at Tabin, previously understood to be available through the Sabah Development Corridor programme, is no longer available. Alternative funding has not been secured. A schedule for commencement of building the BRS breeding facilities cannot be predicted.

Meetings held SWD-BORA, 1, 10, 11, 14, 21, 26 March, 1, 5, 12 April, 7,10, 11 May ; BORA-District Forest Officer, 6 April; IZW-BORA, 3 May; BORA and plantation managers, 4 March, 8 April; BORA-YSD, 8, 9, 11 May.

Other issues

Publication of international paper on status of Sumatran rhino A paper entitled "Now or never: what will it take to save the Sumatran rhinoceros from extinction" by A W A Zafir et al. was published in the April 2011 edition of the international journal Oryx (45(2):225-233),

with authorship involving WWF-Malaysia, Sabah Wildlife Department, BORA and others (Figure 19). The paper highlights the Borneo Rhino Sanctuary programme.

Other highlights of reporting period: (a) acquisition of latest edition of 1:50,000 scale topographical maps of Tabin region, (b) contact with management of Kuala Lumpur Kepong estates bordering south side of Tabin Wildlife Reserve, (c) staff of Perhilitan (Wildlife and National Parks Department, Peninsular Malaysia) participated in a course in May, run by SWD with BORA assistance, on methods to seek and capture wild rhinos.

Problems to be addressed

1. Failure to capture Puntung; there are several contributory reasons, but the major one is unexpected constant rainfall over more than a year since the traps were first built, which kept Puntung up in the hills and away from the trap, except in October 2010, at which time unfortunately a tree fall had blocked her path to the trap site. The assumption (and, at that time, perceived imperative) that had been made in early 2010, to locate rhino traps only near to a guaranteed water source, has been shown in retrospect to be incorrect. Rhino traps need to be built where it is believed that the rhino will walk in the near future. Water can be brought in manually or if necessary by helicopter. In the case of Puntung, up to end of this reporting period, well over RM230,000 has been spent on sustaining 12 persons at Tabin in order to maintain at least six persons near the trap at all times.
2. Low production of normal sperm by Tam
3. Gelogob too old to breed
4. Although not directly delaying programme implementation, the unreliable piped water supply at Tabin has become progressively an irritant and cause for concern over the past two years (Figure 14). Water is pumped from Lipad river to retention and distributor tanks. Problems include : (a) Lipad river often turbid, and treatment is inadequate to remove turbidity, (b) pumping system blocked or damaged when water is turbid, (c) frequent breakdown of pumps, (d) no system for automatic pumping so timing of pumping is done manually, (e) older pipes within distribution system may be leaky,(f) poor quality materials and construction, (g) piping has not been extended from Tabin HQ area to the interim rhino paddocks, so rhinos are at risk from lack of water, or pollutants in local stream water supply. The water supply system was up-graded in late 2010. Contractor was instructed to improve the system (at meeting held 2 March) but by end of this quarter the problems remain only partly solved. Two local contractors with experience of boring water holes were invited to attempt sourcing of ground water for the RQF, but both declined to proceed.
5. Although not directly delaying programme implementation, the poor condition of the road between Tabin HQ and the interim rhino paddocks became alarming during this quarter, to the extent that even the project four-wheel drive vehicles experienced difficulties (Figure 5). The potential fatal impact on Tam and Gelogob (which, apart from the need for guaranteed care at all times, require supply of at least 120 kg of fresh leaves and twigs to be delivered daily by road) gives rise to serious concern.
6. Abandonment of construction of the access road to the allocated site of the BRS breeding facilities during this period is an issue of concern. However, of greater



(Figure 2, left) routes of a further survey in the same area 9-13 April, (Figure 3, right) foot of a bearded pig stuck in a snare trap, 11 April.



The usual dry period which occurs at some time between February-April in Tabin failed to occur in 2011, with rain on most days through the period. (Figure 4, left) Lipad river at Tabin HQ flooded on 9 April, (Figure 5, right) road to the interim rhino paddocks, April, where the condition became almost impassable and was repaired temporarily, manually and with assistance of an excavator.



(Figure 6, left) a temporary laboratory was put in place during this quarter in Sabah Wildlife Department ranger quarters, (Figure 7, centre) a curious lesion on the skin of Gelogob's back (March) is one of many minor health and condition issues faced by the rhinos and their care-providers and managers, (Figure 8, right) in this case, the lesion turned out to have been caused by Gelogob rubbing her back on a salt-block hanging on the night stall wall, a situation easily rectified.



(Figure 9, left) incessant rain turned the area between Tam's night stall and paddock into a quagmire, to the extent that he started using a pathway as a wallow (he can be seen on left side of this picture), (Figure 10, right) a new passage between the night stall and paddock was built in early April to encourage Tam to avoid the quagmire, and to wallow as usual in more hygienic conditions of the forest.



(Figure 11 (a) left a good example of Tam's sperm (26 May) and (b) a clump of poor-quality sperm, from same collection. (Figure 12, right) construction of new Rhino Quarantine Facility (RQF) started mid May (shown here the location of the night stalls), within the compound of a currently-unused animal recovery centre



(Figure 13, left) setting of camera traps in Malua Forest Reserve, 29 March. (Figure 14, right) sediment in the main water intake storage tank at TWR.



(Figure 15, left) meeting between Indonesia and Sabah 13 May, Ministry of Forestry, Jakarta. (l-r) Abdul Hamid Ahmad & Zainal Zahari Zauuddin (BORA), Widodo Ramono (Yayasan Badak Indonesia, back to camera), Bihbab Talukdur (IUCN Asian Rhino Specialist Group Chairman), Dr Novianto Bambang (Director of Biodiversity Conservation, Indonesia), J Payne (BORA), Agus Sriyadi Budi Sutito (Ministry of Forestry). (Figure 16, right) Male rhino Andalas, with (left-right in picture) Sumardi (who has been instrumental in all aspects of the development of SRS from 1996), Dr Zainal (BRS) and Drh. Andriansyah, assistant veterinarian at SRS.



Sumatran Rhino Sanctuary (SRS) at Way Kambas : (Figure 17, left) view from the top of the 100 metre deep borehole and sole water source since 1997, (Figure 18, middle) the raised tank which supplies water to the staff and visitor buildings, and to the rhino paddocks via about 4 km of pipe. (Figure 19, right) April 2011 edition of Oryx, which contains a “Now or never” paper on the Sumatran rhinoceros, highlighting Borneo Rhino Sanctuary.