Borneo Rhino Sanctuary (BRS) programme (restricted distribution)

Quarterly report : covering the period June – August 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); WWF-Germany; Sabah Wildlife Department; US Fish & Wildlife Service Rhino & Tiger Conservation Fund; BORA.

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 100% prioritization of capture of Puntung, including fielding staff on the north and west fringes of her home range in an effort to coax her towards the trap, no patrols were done elsewhere during this quarter.

Rhino rescue Twice daily monitoring of rhino trap number 3 at Malambabula continued through this quarter. Trap 4 was abandoned and closed due to repeated disturbance by

elephants. The heavy rain experienced up to mid May eased during this quarter. As proposed in the previous quarter, two teams of two men each were fielded through most of this quarter, present in the northern and western parts of Puntung's home range, in an attempt to coax her towards the trap 3 site. Puntung travelled to within a few metres of trap 3 around 13 July but did not walk on to the trap. Differences of opinion remain as to whether she was scared by human odour, or whether the problem lies in the general nature of the trap site, which is flat ground with no clear traditional rhino pathway. The location for a fifth trap was selected in late August 2011, about 2 km north of the Malambabula camp, at a location known to be used by Puntung when she descends from the hills to the lowlands, and where Puntung was camera-trapped on 1 April 2010.

Rhino Quarantine Facility (RQF) The RQF was completed, minus water and electricity supply, 23 July. Temporary measures for these utilities were added during August (bringing water in tanks by road, as needed, to the site; revival of abandoned generator). A solar power system for the RQF was ordered from a Lahad Datu based supplier; construction of a pipeline from the existing water intake point at Tabin HQ was initiated in August. Gelogob was moved to the RQF 23 August 2011. This move allows a full two months before the Institute for Zoo and Wildlife Research (IZW) team return to Sabah at end of October 2011, to make a final attempt to promote follicle growth in Gelogob and (tentatively) perform electro-ejaculation on Tam.

Rhino health and management (a) repairs and modifications of the paddocks were made frequently to ensure minimum contamination and injuries the rhinos; biosecurity protocols including chlorination of drinking water, disinfecting of the night stalls and surrounding areas, liming of sumps and sampling of water, soil and faeces for laboratory analysis were done routinely, (b) salt block was inadvertently unavailable to Gelogob for a few weeks in June, and a drop in sodium levels in her blood was revealed during routine blood monitoring (an indication that Sumatran rhinos do need salt supplement in their diet, and that wild rhinos may be suffering chronic sodium deficiency), (c) manual attempts to obtain semen with sperm continued. No sperm were found in the semen samples obtained on 14 June, 30 and 31 July.

Rhino food supply The rhino diet continues to be free access to at least 50 kg of wild-harvested fresh leaves and twigs per rhino daily, with at least 3 kg of fruits and 1.5 kg of horse pellets daily. More efforts were made during this quarter to plant favoured rhino food species near to the interim facilities.

Water supply at Tabin (a) Additional staff was recruited by BORA, with duties to include assisting SWD in routine maintenance of existing water supply system, (b) request was made to Jabatan Mineral dan Geosains Malaysia Sabah to assess Tabin HQ area for possible ground water supply, (c) new water storage tanks, pump and pipeline are to be installed to extend the water supply to the RQF; construction commenced in August.

Policy issues Five policy issues that need government decisions were outlined via a draft Cabinet paper and second steering committee of the BRS programme (held 14 June) : (1) to allow exchange of gametes (sperm, eggs and other reproductive materials) between Sumatran rhinoceros in Sabah and other countries (Indonesia and USA), and for Sabah to

take the first step in promoting this exchange (this was endorsed by steering committee, pending endorsement of BRS technical committee and approval of Cabinet); (2) to allow capture and transfer of Sumatran rhinos into the Tabin BRS facilities from other Forest Reserves in Sabah, including from Protection Forest Reserves (steering committee directed that arguments for and against to be presented in the Cabinet paper, with the concept of loan of rhinos from other sites to be the recommended solution); (3) to elevate the Sumatran rhino to a national-level species conservation priority in Malaysia (steering committee decided to retain the Sumatran rhino as a Sabah State level issue/programme for time being, but federal funding to be sought); (4) to establish rhino reproductive laboratories at Tabin; and (5) establishment of an MOU on rhino conservation programmes with Indonesia (steering committee asked that Indonesia prepare first draft).

Links with Indonesia
Requests to Indonesia for samples of the urine from female rhino in oestrus have been made from Sabah. The purpose is to expose Tam to the hormones in the urine, as part of the effort to try to improve his sperm production. By end of this quarter no sample was available.

BRS breeding facilities Following much-reduced rainfall from mid May 2011, work on construction of the 1.2 km access road re-commenced.

Visitors Journalist Alexandra Hostert visited Lahad Datu/Tabin 7-8 June. Dutch zoologist Dr Kees Rookmaaker visited Tabin and the BRS interim facilities 21 June; he created and maintains The Rhino Resource Centre website (www.rhinoresourcecenter.com) which represents the best global repository of freely available information on Sumatran (and other) rhinos.

Meetings held SWD-BORA, 13 June, 5 July ; BORA-YSD, 4 & 21 July. BRS programme steering committee meeting was held 14 June. BORA annual general meeting was held 16 June. BORA executive director participated in a Yayasan Badak Indonesia trustees meeting, Bogor, 15 July.

Problems to be addressed

1. Failure to capture Puntung; as noted previously, heavy rainfall has been the single main factor up to beginning of this quarter, but the fact that Puntung walked near the trap around 13 July highlights that (a) traps should be set on a known precise route used by Puntung (traps 1-4 were all on flat land where Puntung has no fixed exact pathway), and (b) twice daily manual checking of the trap *may* represent a factor dissuading Puntung from walking on to the pit site.
2. Low production of normal sperm by Tam
3. Gelogob too old to breed
4. Non-availability of anticipated funding from federal government of Malaysia to build the BRS breeding facilities.

Solutions

(1) (a) select the site and build an additional trap where Puntung is proven to have walked on several occasions in the past, and (b) include a remote detection device in the new trap.

(2) (a) Continue regular penile stimulation to ejaculation, (b) continue attempts to obtain urine from Sumatran rhino in oestrus (from Indonesia or Cincinnati Zoo).
(3) Keep Gelogob in top condition in preparation for third attempt with hormone treatment scheduled for October 2011
(4) Seek alternative funds for development of BRS breeding facilities.

Plans for next quarter

(1) Capture Puntung. (2) Obtain better quantity and quality of sperm from Tam. (3) Administer hormone treatment to Gelogob in last attempt to induce follicle production.

(left) selection of the site for a fifth trap for Puntung, August 2011 (discussion on site between Herman Stawin, Suzali Jaya and Dr Zainal), (right) a small spring ("mata air") was found in a rocky stream bed about 100 metres from the selected trap site

(left) Gelogob at her wallow in the interim paddock, July 2011, (right) Gelogob was moved to the Rhino Quarantine Facility, 23 August


(left) Gelogob in a new wallow in the Rhino Quarantine Facility paddock, August 2011, (right) resurfacing the floor of the interim paddock night stalls to provide a smoother surface


(left) a spring ("mata air") exists within 80 metres of the Rhino Quarantine Facility, but it was found to dry out during non-rainy periods, and being near the public roadside there is a risk of pollution, so is unsuitable as a water source, (right) construction of the RQF underway in late June.


(left) some procedures previously conducted by the BORA veterinarian, notably collection of blood, can now be done unsupervised by BORA staff, (right) newly-planted seedling (June 2011) of nangka (*Artocarpus heterophyllus*) as a source if future rhino food near the interim rhino paddocks


(left) Dr Kees Rookmaaker (centre) at the interim paddocks, (right) road to the BRS breeding facilities, early August