



## Borneo Rhino Sanctuary programme (restricted distribution)

Quarterly report : covering the period December 2011 – February 2012

### 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), ITBC/Universiti Malaysia Sabah, 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; USFW Rhino & Tiger Fund; Sabah Wildlife Department; 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 No patrols were done during December due to the need for all BORA staff to be involved in capture of Puntung, nor in January, due to the need to close (fill) the three open rhino traps, and to remove from the forest the various materials (wood, camps, pumps, chain blocks etc) that had been used in connection with trapping. Patrols were done in the Rimmer River area (13-19 February) and Tagas-tagas

besar River / Ragged Hill (23-29 February), with the intention to seek signs of rhino, but none were found; minor signs of hunting (not for rhino) were found at the former area.

### Rhino rescue

Tabin Trap number 6 for capture of Puntung (and the second trap built on a ridge top) was completed and opened on 16 December. Puntung fell into the trap during night of 17-18 December. She was successfully moved out of the trap into a temporary stockade, and immediately became tame. An Erickson air crane (modified Sikorsky helicopter based in Miri, Sarawak, and contracted for heavy lifting work, usually logging in hill forests) was contracted to lift Puntung from the trap site to the Tabin access road in a transport crate. The air crane was able to come to Tabin only on afternoon of 23 December. Due to continual rain on 24 December and early morning mist on 25 December, the crate with Puntung inside was lifted late on morning of 25 December. Weighed on 26 December, at 495 kg, Puntung is the smallest recorded adult Sumatran rhino. Puntung quickly adapted to life in the interim facilities, initially eating as much as 80 kg of leaves daily. Her stump foot is debilitating on the concrete floor of the night stall, and much less so on soft soil. It is concluded that keeping Puntung on soft soil as much as possible represents the best treatment for her damaged foot. A prosthetic foot would help when she is in the night stall on concrete. The successful capture served to emphasise lessons which in retrospect should have been followed in April 2010 : (a) traps should be built where rhinos are known to walk repeatedly, rather than at locations chosen to be near a natural freshwater sources, (b) there is no need to place a crate into the pit (trap 6 was the only trap built for Puntung with no crate inside), (c) the number of men allocated for monitoring traps needs to be based on site-specific circumstances. A new lesson was that helicopter represents a good option for removal of rhinos from remote locations.

Bukit Kretam On 13 December, a man from Kampung Seriganda (the village on dry land nearest to Kulamba Wildlife Reserve) reported the presence of rhino in the upper Merah river, an area of swamp forest on the fringes of Kulamba. A WWF-Malaysia visit to the site 16 December confirmed through clear footprints the presence of at least one and probably two rhinos (one appears to be immature). At a “rhino recce and monitoring task force” meeting on 17 February, involving SWD, BORA and WWF-Malaysia, the location and design for a single surface trap was agreed. To minimise logistical difficulties, the location is on dry land next to Merah river, whereby access can be gained by road and a 30 minute walk from Ladang Bukit Kretam oil palm plantation, as well by boat. The general name for the area is Lower Kinabatangan and Segama Wetlands (a RAMSAR site); for the trap site, the name “Bukit Kretam” is used. It is planned that SWD, BORA and WWF-Malaysia will collaborate in capture of rhino(s) from Bukit Kretam.

Kalabakan Based on a November report to BORA of rhino in the Kalabakan area near the border with East Kalimantan, Indonesia, a SWD-BORA visit was made on 3 December to the area where an adult female rhino was killed on a logging road in March 2001. It was found that the recent report in fact referred to that 2001 period, but that the area, abandoned since around 2003, is to be opened up again for development of tree plantations and logging. Further investigation will be delayed, with priority for now to concentrate on Bukit Kretam

### Rhino Quarantine Facility (RQF)

The water tanks, piping from Tabin HQ and pump were installed during this quarter, but the chronic frequent breakdowns of the water supply system at Tabin HQ renders the RQF water supply vulnerable and still largely dependent on rain.

### Rhino health and management

Normal routines were followed and the health of all three rhinos now at the Tabin interim and quarantine facilities is good. Unlike Tam and Gelogob, Puntung is not given horse pellets, as it will be necessary to limit her weight to about 500 kg, in order to avoid undue strain on her damaged foot and atrophied leg.

### Reproductive assessment of Puntung, Tam and Gelogob

The IZW veterinarians visited Tabin 24-25 February and conducted assessments of Puntung, Tam and Gelogob in collaboration with SWD and BORA. It was found that Puntung has endometrial cyst growth in her uterus, which may have significant implications on her ability to reproduce; however, her left ovary produces follicles, indicating that she is fertile. For Tam, less than 1 million sperm/ml were obtained on 25 February, but more than all previous occasions. It is possible that normal sperm concentrations for Sumatran rhino are significantly less than for other rhino species. Sperm motility was extremely low in October 2011 but 54% in 2012. Very few sperm were normal in 2011, but 30% were normal in 2012. Concentration, motility and normality of sperm all need to be improved significantly, however, if artificial insemination is to be contemplated. Current high level of abnormality in Tam may be linked to his low and infrequent sexual activity. The idea that Tam's low sperm production may be linked to presence of another rhino nearby now seems less likely than a year ago. No change in Gelogob's reproductive condition was noted

### Gelogob

With the capture of Puntung, the existing facilities at Tabin (interim, and Rhino Quarantine Facility) are unable to cater for additional rhinos (although with modifications and extensions, two additional rhinos could be sustained for a short period). For this and other reasons, a policy decision was made in January by SWD and BORA to move Gelogob back to Lok Kawi Wildlife Park, once the 30 sambar deer in her old enclosure have been moved out, and after necessary improvements to that enclosure have been made.

### Links with Indonesia

Links between Sabah, Indonesia and IZW were strengthened through a visit by the executive directors of BORA (J Payne) and Yayasan Badak Indonesia (Ir. Widodo Ramono) to IZW in Berlin, 12-13 December. Subsequently, the two executive directors met with the Director-General of Forest Protection and Nature Conservation Indonesia (Bapak Darori) in Jakarta on 24 January, at which the latter expressed support for the idea (rejected at the Sumatran rhinoceros global propagation and management board (GMPB) meeting in Sabah in February 2011) that Indonesia should be willing to capture additional wild rhinos for the Sumatran Rhino Sanctuary (SRS) at Way Kambas. SWD and BORA regard the addition of additional rhinos into SRS as well as in Sabah, as essential for the goal of prevention of the extinction of the Sumatran rhino. It was agreed that the next GMPB meeting will be held in Ministry of Forestry, Indonesia, 15 March 2012, following the IUCN/SSC Asian Rhino

Specialist group meeting to be held in Indonesia on 12-13 March. Together with the IZW veterinary team, executive director of BORA (for Sabah) met with the Director of International Cooperation of the Indonesian Ministry of Forestry on 22 February, and again with Bapak Darori on 23 February, as part of the intention to improve collaboration between the various institutions involved with Sumatran rhino conservation.

Media visit to Tabin A media visit to Tabin, with the main aim of highlighting the capture of Puntung as part of the BRS programme was arranged for 12 January. 14 reporters, journalists and camera people participated along with Sime Darby, BORA and SWD personnel. The visit added significantly to Malaysian and global coverage of the Puntung story.

Confirmation of YSD sponsorship extension for BRS Confirmation was received in February that the YSD Governing Council Members approved a request from BORA, supported by SWD, for an extension to the BRS programme grant of RM6.4 million for the period July 2012 – June 2015.

Meetings held SWD-BORA, 1 December, 19, 20 January, 1 February; BORA-YABI-Ministry of Forestry Indonesia, 24 January, 22, 23 February; BRS rhino recce and monitoring committee meeting, 17 February; BORA Board, 16 January.

### **Problems to be addressed**

1. Low production of normal sperm by Tam
2. Funds are still not available to build the BRS facilities; the 1.2 km access road to the BRS breeding facilities, which involves opening and rebuilding part of a 1970s logging road, was not completed during this quarter (more than one year after commencement). Also, BORA expressed doubt over the quality of a culvert built as part of the access road, and how long this structure will last.
3. The unreliable piped water supply at Tabin continues to waste time and effort, and be cause for significant concern for humans and rhinos. Up-grading done in late 2010 has not led to noticeable improvements. Plans to appoint a contractor to monitor and maintain monthly the water supply system have not materialised.
4. BORA has been requested to vacate staff quarters previously provided by SWD at Tabin for use as an office, laboratory and bedroom for two female BORA staff. An office was added to BORA's "Rumah Badak" accommodation building (built with WWF funds in 2010), with construction completed within two weeks of work in February. However, this situation still leaves BORA with insufficient staff accommodation and no laboratory facility.

### **Solutions**

- (1) Continue regular penile stimulation and occasional electro-ejaculation.
- (2) Seek State funding for building the BRS breeding facilities.
- (3) Review the possibility of a gravity feed system water supply from the upper Lipad river to replace the ever-failing pump system now in place.
- (4) Build additional bedrooms for BORA staff and a laboratory, using (a) the "animal recovery centre" situated adjacent to the RQF and (b) the abandoned "Trek Force" house next to the old long house.

## Plans for next quarter

- (1) Completion of the surface trap for capture of the Bukit Kretam rhino(s).
- (2) Agreement at the 15 March Sumatran rhino GMPB meeting on the need to exchange information and biological materials, and to capture more wild rhinos.
- (3) Decide year 2012 plan for maximising prospects for pregnancy and/or gamete or embryo harvesting from Puntung.



Patrol / rhino-seeking surveys routes (left) in the Rimmer River area (13-19 February) and (right) Tagas-tagas Besar River / Ragged Hill (23-29 February).



(left) trap number 6, built on one of Puntung's ridge top trails, was completed 16 December, and Puntung fell into the trap on night of 17-18 December, shown here morning of 18 December before opening the plywood and walking her into a quickly-erected adjacent stockade (© Zainal Z Zainuddin/BORA), (right) Puntung in the temporary forest stockade, 20 December (© Abdul Hamid Ahmad/BORA).





(left) preparations for moving Puntung from the temporary forest stockade to the air lift site, 22 December 2011, (right) moving Puntung from the temporary forest stockade to the air lift site, dawn 24 December 2011 (both pictures © Azrie Alliamat / ITBC, Universiti Malaysia Sabah)



(left) continual rain throughout 24 December prevented the planned air lift site on that day, (right) having run out of food except for instant noodles, the trap site team pose for a photo before the airlift on morning of 25 December 2011 (both pictures © Azrie Alliamat / ITBC, Universiti Malaysia Sabah)



(left) the Erickson air lift helicopter at the Tabin landing pad, waiting for rain to stop for the airlift of Puntung, (right) transport crate with Puntung inside, Christmas morning 2012, awaiting helicopter to lift her from the forest to BRS interim facilities (left, Mr Herman Stawin, SWD Rhino Capture Team Leader, and right, Dr Zainal Zahari Zainuddin, BORA veterinarian and field manager (© Azrie Alliamat / ITBC, Universiti Malaysia Sabah)





(left) the air lift helicopter hovers above Puntung in her crate, moments before the lift on 25 December morning, and (centre) the crate with Puntung inside is just visible in the bottom right of the photo, attached to the end of a 300 feet long steel cable; note the prevailing steep terrain of the capture area (both © Dr Sen Nathan/Sabah Wildlife Department), (right) there was no shortage of manpower to load Puntung (inside her crate) on to a truck at the “drop off” point.



(left) Puntung, completely tame in her night stall on 26 December, giving the first clear public view of her normal right foot and left leg ending in a stump, (centre) Puntung being coaxed on to scales to take her weight, 26 December, (right ) certificates of appreciation for work done towards successful capture of Puntung were presented to BORA field staff on 27 January by BORA Board members Dr Abdul Hamid Ahmad and Cynthia Ong.



(left) view of the BRS access road box culvert (25 February), showing poor quality of workmanship, (right) new BORA office (24 February), located on the ground floor of Rumah Badak.





(left) mountains near the East Kalimantan border (visited 3 December); a wild adult female Sumatran rhino was killed near this site in March 2001, (right) visit of BORA executive director and Yayasan Badak Indonesia executive director (Ir. Widodo Ramono, second from left) to IZW (Berlin; 13 December).



(left) the last remaining forest on dry land on the fringes of Kulamba Wildlife Reserve, and location of the proposed 2012 rhino trap site, (right) nylon rope snares traps, probably aimed at banteng rather than rhino, found and removed from the same forest.



(left) inspection (10 February) of the Bukit Kretam site chosen for a surface trap aimed at capturing rhinos, (right) Gelogob in her paddock (February); due to the absence of additional rhino holding areas at Tabin, it is planned that she be moved back to Lok Kawi Wildlife Park, so that space is available for any new rhino captured during 2012.





(left) the surprise finding that Puntung has a broken hymen (24 February), indicating that she has mated, (right) easing Tam onto a mattress after anaesthetisation and prior to electro-ejaculation (25 February)



(left) Puntung enters her wallow (24 February); frequent exposure to soft clay represents the best treatment for her debilitating foot injury, the clay-rich mud being not only soft but possibly also bacteriocidal, (right) IZW veterinary team leader Dr Thomas Hildebrand examines video ultrasound imagery of Puntung's reproductive tract (24 February).

Examples of results in the Malaysian media arising from the 12 January media visit to Tabin, (left), Berita Harian 30 January, (right) The Edge, a weekly Malaysian business journal, 6 February.