



Borneo Rhino Sanctuary (BRS) programme (restricted distribution)

Quarterly report : covering the period March - June 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), Sabah Forestry Department (SFD), WWF-Malaysia, Leibniz Institute for Zoo and Wildlife Research (IZW), Zoo Leipzig, ITBC/Universiti Malaysia Sabah, WWF-Germany, Sime Darby Foundation (YSD).

### **Main financing agencies during this quarter**

YSD, WWF-Germany, SWD, BORA, USFW Rhino & Tiger Conservation Fund.

### **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).
- 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**

(Note : this reporting period is extended to 4 months, in order to match the termination of the first YSD BRS grant and to bring reporting in line with normally used quarterly reporting periods)

Kulamba rhino trap A trap was built on the western edge of Kulamba Wildlife Reserve to capture what is believed to be a pair of rhinos that range in the 78,800 hectare Lower Kinabatangan and Segama Wetlands. The region contains only a very few small, scattered patches of forest on dry land, mostly remote within extensive swamps. A pit trap would be

unsuitable in case two rhinos are travelling together. Accordingly, it was decided to build a single surface trap, known as a “boma” (African term for small stockade) trap, consisting of a wooden stockade 50 feet x 15 feet x 7 feet tall, with a door at each end. Materials to build the trap were brought to the site by boat from Sandakan on 11 April. The trap was completed on 27 April. Access to the site (previously referred to as Bukit Kretam or Sungai Merah) can also be gained by road and foot. Initially, an official design was installed for the trigger, but this was found to be complex and prone to problems. Following site visits (29 April & 15 June) to Kulamba by experts from the Malay Tapir Conservation Project in Peninsular Malaysia (<http://www.malaytapir.org>), an improved trigger system was installed. Other improvements were made and the trap was finally open for rhinos in mid June. A “standard operating procedure” for handling rhino(s) caught in the trap was prepared.

Puntung IZW veterinarians led by Dr Thomas Hildebrandt visited the BRS interim facilities on 28 March and attempted to flush out as much as possible of the endometrial cysts growth, but two large cysts remained. However, both ovaries were producing follicles, indicating that she is fertile. It was decided (a) to attempt natural mating between Puntung and Tam, and later, if pregnancy is not achieved, (b) artificial insemination, assuming adequate sperm can be obtained from Tam and assuming Puntung can be induced to ovulate at the appropriate time. To increase prospects for pregnancy, the larger remaining endometrial cysts were removed by the IZW team on 27 June using ultrasound-guided laser treatment.

The best method to relieve stress on Puntung’s damaged front left leg is to have her out in her forest paddock as much as possible, and minimise her time on concrete. Improvements to her forest paddock were made during this reporting period, including development of a forest night stall. This allows her to walk on soft soil at all times, except when she is brought into the old concrete night stall every few days for procedures such as taking blood samples. However, very dry weather through May and June caused even the clay-rich Tabin forest soils to harden. A plaster cast has been taken as a basis for constructing a prosthetic foot.

Tam Low production of normal sperm has been seen as a significant problem. There is a growing feeling that “low” sperm count may possibly be “normal” for Sumatran rhinos, and that electro-ejaculation, while necessary to acquire good, clean sperm for possible artificial insemination, might not be conducive to production of large quantities.

Gelogob Gelogob remained at in the Rhino Quarantine Facilities (RQF) at TWR during this reporting period as funds are not available to renovate her old enclosure in Lok Kawi Wildlife Park, nor to build a new enclosure for the +/-30 sambar deer that reside there now.

Surveys for rhinos in Tabin Wildlife Reserve (TWR) Following the capture of Puntung, five surveys were done during this reporting period in the north-west quarter of TWR and two in the south-west, each of between 7 and 10 days, to seek signs of rhinos. Up to end of this reporting period, no rhino signs had been found. After two years of frequent rainfall with no dry period (since April 2010), May and June were much drier, making location of solitary animal footprints difficult.

Kuamut rhino Reports from two independent sources during this reporting period of the presence of rhino in the Kuamut region, central Sabah, led to a preliminary survey in the

area 18-21 June by SWD, BORA and SFD. No immediate proof was found of rhinos, but strong indications based on verbal reports.

Rhino Food Garden A location was chosen in June near RQF for planting/tending of about 250 rhino food trees which, after five years, should begin to contribute to much of the BRS rhinos' diet, and reduce the time spent on harvesting wild leaves

Sumatran Rhino Global Management and Propagation Board (GMPB) meeting This ad hoc group of global experts, keepers and donors for Sumatran rhinos met in the Ministry of Forestry HQ in Jakarta, Indonesia, on 15 March, chaired by Director of SWD. A letter of intent was crafted and signed during the meeting (see Appendix below), which for the first times formalises an intent of collaboration between the key institutions working for the conservation of the Sumatran rhino globally. The Indonesian authorities remained reluctant to agree to capture more wild rhinos for the Sumatran Rhino Sanctuary at Way Kambas. YSD sponsored costs of the Sabah participants of this meeting; IZW was not represented.

Awareness A range of awareness-raising actions occurred during this reporting period including :

(a) 28 March, British freelance science writer Henry Nicholls visited TWR with the IZW team. An article was published 31 May in the journal Nature, asking if the costs associated with saving the Sumatran rhino from extinction are justified. Sex and the single rhino by Henry Nicholls, Nature 485, 566–569 (31 May 2012; <http://www.nature.com/news/endangered-species-sex-and-the-single-rhinoceros-1.10731> ). BORA posted a response on its website (10 June; <http://www.borneorhinoalliance.org/featured/a-comment-on-sex-and-the-single-rhinoceros-by-henry-nicholls/>).

(b) 3 April, staff from the Switchup TV channel visited BRS facilities for filming of work and interviews; 3 videos were produced and made available entitled “Sime Darby’s support for rhino breeding”, “The life of a rhino keeper” and “Wallowing with Gelogob”

<http://switchup.tv/View.aspx?vid=8610&cid=22>

<http://switchup.tv/View.aspx?vid=8609&cid=22>

<http://switchup.tv/View.aspx?vid=8608&cid=22>

(c) 9 April, an article on the BRS programme was posted on the Mongabay website ([http://news.mongabay.com/2012/0409-hance\\_interview\\_johnpayne.html](http://news.mongabay.com/2012/0409-hance_interview_johnpayne.html))

(d) as a prelude to the Minggu Saham Amanah Malaysia held in Sabah in the second half of April, a “Rhino Walk” was held at Likas on 15 April, with participation from several thousands of students, government staff and others.

(e) 10 May, a group of new and trainee staff from the Kuala Lumpur Kepong estates to the south of TWR visited the BRS facilities.

(f) 4-5 June, BORA senior staff provided training on rhino biology and husbandry to a group of staff from SWD, SFD and WWF-Malaysia.

Sumatran rhino people Dr Terri Roth (Director, Center for Conservation and Research on Endangered Wildlife, Cincinnati Zoo & Botanic Garden, USA) visited TWR and examined Puntung, 22-23 March. Rasmus Havmøller and Torsten Bohm (IZW) arrived at TWR 16 June to commence a programme of research on wild rhinos.

Interim and supporting infrastructure Amongst infrastructure complete during this reporting period were rhino breeding yard, gazebos for visitors to the rhino interim facilities, and renovation and extensions to the field manager's house and garage.

Sumatran Rhino Sanctuary at Way Kambas, Sumatra. A male rhino was successfully born to Ratu and Andalas on 23 June. This provided a significant boost to confidence that the BRS programme can yield results if the right combination of rhinos, professionally-designed facilities and expertise are all in place.

Meetings held SWD-BORA, 1, 6, 20, 23 March, 5 April, 4, 14 May; YSD-BORA, 7 March, 16, 20 April, 28 May; WWF-Malaysia-BORA, 12, 24 April, 18 May; Sumatran rhinoceros GMPB meeting, 15 March; BRS technical committee / Sabah rhino task force meetings meeting, 5 April, 4 May; Tabin Wildlife Reserve management committee, 21 May.

### **Problems to be addressed**

1. (a) Government funds are still not available to build the permanent BRS facilities; this issue is now of very significant concern, as work is underway to capture additional rhinos, with nowhere to put them; (b) the access road to the BRS breeding facilities was not completed during this reporting period; the poor quality of the culvert built as part of the access road remains of concern.
2. The existing old road from the TWR HQ to the RQF and interim facilities are not maintained, and almost impassable to 4WD vehicles after periods of heavy rain.
3. The unreliable piped water supply at Tabin continues to cause significant concern for humans and rhinos.
4. Up to half the rhinos captured in Malaysia over the past few decades showed signs of injuries on the leg resulting from escape from a snare trap (known as jerat). After the fact that there are very few fertile Sumatran rhinos left alive, jerat probably represent the biggest specific threat to individual rhinos in Sabah. Access to TWR and Kulamba for people who set jerat is mainly via oil palm plantations.

### **Solutions**

1. Various means have been discussed amongst SWD, BORA, SFD, the consultant company which designed the permanent facilities, as well as with independent contractors requested by BORA to assess the situation, in an effort to seek ways to speed up completion not only of this access road, but equally the entire BRS breeding facilities. By end of this reporting period, it seems that the best that can be hoped for is (a) build another interim paddock for one rhino using non-governmental funds, (b) BORA to source additional funds needed to complete and improve the access road once the contractor appointed in September 2010 has been terminated or abandoned the project, (c) the main BRS facilities to be built over years 2013-2014 using State government funds.
2. BORA contracts machinery with excavator capability from time to time to re-form the road and clear side drains. Through liaison with Public Works Department, it is hoped that this role can be taken over by a governmental contractor.
3. Build a gravity feed system water supply from the upper Lipad river.
4. An email message was sent in April by BORA to Malaysian and Indonesian palm oil producer members of Roundtable on Sustainable Palm Oil (RSPO), alerting them to the risk posed by snare traps. The request is for plantation units to either establish

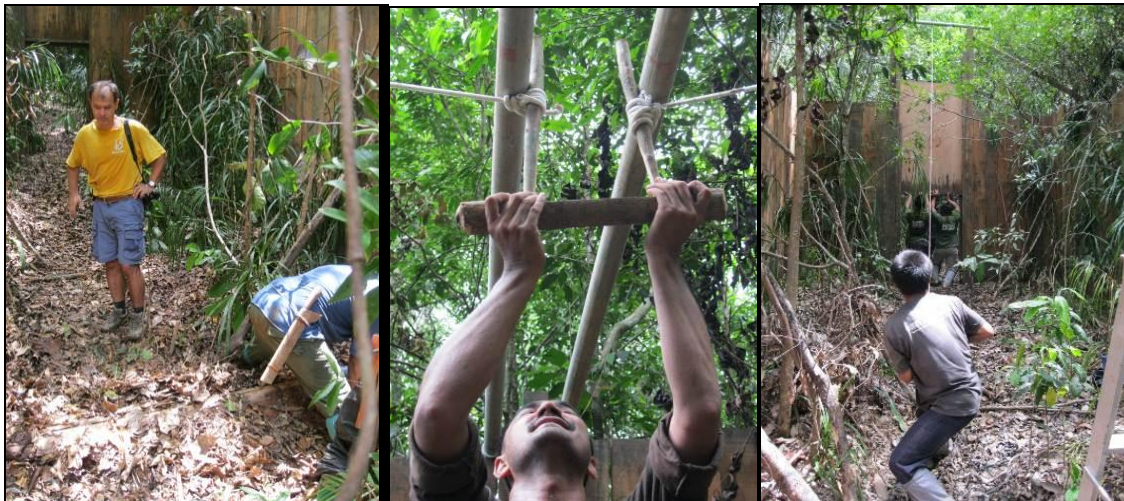
security/enforcement units, or for management to try specifically to prevent setting of snare traps in forests adjacent to their plantation. One out of 17 Malaysian companies acknowledged the message.

### Plans for next quarter

(1) First attempt to mate Puntung with Tam. (2) Build additional interim rhino holding facility in TWR. (3) Build additional rhino trap at Kulamba. (4) Seek additional rhino capture area (other than Kulamba). (5) Add additional rooms for BORA staff in the abandoned “Trek Force” house next to the old long house. (6) Seek ways to hasten commencement of building the BRS permanent rhino facilities.



(left) typical scenery in the Lower Kinabatangan and Segama Wetlands near Kulamba (in front, Mr Herman Stawin, SWD rhino trapping team leader), (right) a gap in the nipa and mangrove trees on Sungai Merah, visible in the middle of this picture, leads to the rhino trap.



Evolution of the Kulamba rhino trap (a pit trap cannot be used, as two rhinos travelling together are being targeted) : (left) initial design, requiring a rhino entering the wooden “boma” to step on to a trigger concealed under a small mound in the middle of the trap (29 April with Dr Carl Traeholt of Malay Tapir Conservation Project ), (middle) Mr Sanusi Mohamed, also of the Malay Tapir Conservation Project in Pahang, demonstrates the principles of an alternative trigger mechanism with rope and wood (15 May), (right) view inside the modified trap (June), showing the reduced-weight (55 kg) doors, one at each end of the trap, each attached to a 28 feet long cable.





(left) the inside end of each cable is tied to an ironwood peg, (middle) close-up view of the final trigger design, with ironwood pegs held in place by a combination of galvanised iron cross pipes above and, below, a steel plate with a flange at each end, (right) when a large animal enters the trap, it will push an arrangement of barely-visible, fine plastic-coated wire, that pulls the steel plate downwards and simultaneously releases the ironwood pegs, cables and doors within 1 second.



(left) Puntung is immobilised by the IZW team led by Dr Thomas Hildebrandt and, assisted by Dr Sen Nathan (SWD) and BORA, hoisted to allow flushing out of cyst material from the uterus (28 March), (right) ultrasound-guided laser removal of larger cysts (27 June).

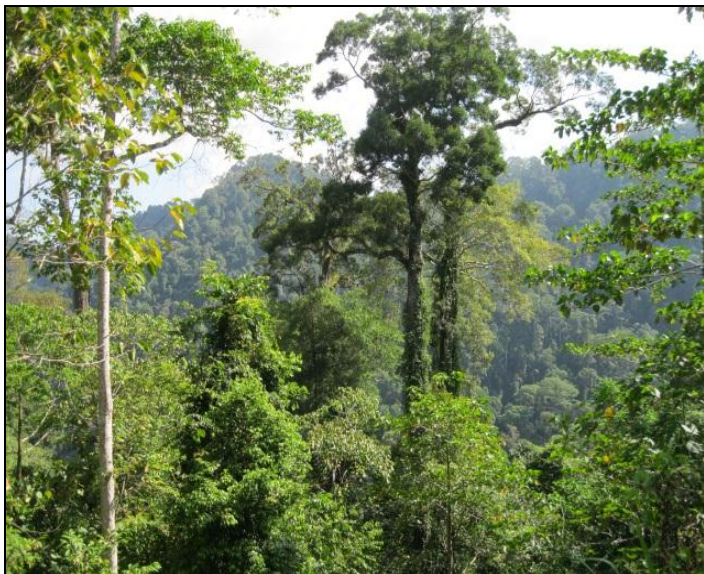


(left) since late March, Puntung has been encouraged to remain in her forest paddock for most of the time, (right) the forest night stall developed during this reporting period for Puntung, so she can avoid walking on concrete.





(left) natural salt spring found during a mid-May survey for rhinos, along Tabin river, near to Burung river, (right) jerat set for large mammals in same area (photos by Saimon Ambi)



(left) typical steep topography of forest land in the Kuamut region visited 18-21 June, (right) plaster casts of rhino footprints were left with two logging contractors at Kuamut, as a prompt to staff and workers to seek and report rhino signs (the upper cast in this picture is of Puntung's front left foot, taken as an aid to designing a prosthetic foot).



(left) Daily Express (Sabah report, 16 March, on rhino walk, (right) group from KLK plantations (adjacent to TWR) visits the BRS interim facilities (10 May).





(left) view of the location of the proposed Rhino Food Garden near to the Rhino Quarantine Facilities, (right) Sumatran Rhino GMPB meeting in Ministry of Forestry Indonesia, 15 March, with Director-General of Forest Protection and Conservation, Bpk. Darori, in middle



(left) Dr Terri Roth (Cincinnati Zoo, USA) examines Puntung's feet with BORA field manager/ veterinarian Dr Zainal (23 March), (right) BORA field manager briefs staff from WWF-Malaysia, SWD and SFD on rhino biology (5 June)



(left) external view of the rhino breeding yard fence at the rhino interim facilities, completed at end of June, (right) one of two gazebos completed in June at the rhino interim facilities





(left) BORA field manager / veterinarian's house and (right) garage were renovated in June



(left) 10 jerat (snare) ropes retrieved from forest near to the Kulamba rhino trap (February 2012), three are big enough to cause the death of a rhino, (right) view of the BRS access road ("Pakej A") box culvert (6 June), showing additional "patching up"

Appendix 1. Text of Sumatran rhinoceros GMPB Letter of Intent for Collaboration on Ensuring the Survival of the Sumatran Rhinoceros



15 March 2012

**Letter of Intent for Collaboration on Ensuring the Survival of the Sumatran Rhinoceros**

We the undersigned, alarmed by the declining status of the critically endangered Sumatran rhino in the wild, affirm our intent to work together to maximize the contribution of every rhino in the globally managed breeding programme to prevent the species' extinction.

Despite protective measures in place, and based on our observation of the decline of the species over the past few decades, protection of wild populations of Sumatran rhinos might not necessarily be adequate to ensure the survival of the species in the future.

Under this letter of intent, and as part of a holistic conservation strategy that also includes protection in the wild, we will concentrate our joint efforts to promote reproduction of the species in managed breeding conditions, at the same time not carrying out any action that might undermine the conservation of wild Sumatran rhino populations.

On behalf of our respective organizations, we declare the following:

We will collaborate within the framework of all relevant national, state and international laws and conventions.

We will endeavour to acquire additional fertile rhinos of both sexes from the wild for our managed breeding programme without detriment to the wild population.

Recognizing scientific evidence that genetic differences between the remaining populations of Sumatran rhino are negligible, in order to maximize production, we support and will facilitate the integration of all animals in the globally managed breeding programme.

Based on availability and need, and on prior consultation between the parties, we will share biological materials (including sperm and embryos).

We will transparently share information, in particular concerning husbandry and reproduction, and experiences relating to translocation of the species.

**Dr Novianto Bambang Wawandono**

Director  
Biodiversity Conservation  
Indonesia

**Dr. Laurentius N Ambu**

Director  
Sabah Wildlife Department  
Sabah, Malaysia

**Drs. Widodo Ramono,**  
Executive Director,  
Yayasan Badak Indonesia

**Dr Terri Roth,** Director,  
Center for Conservation and  
Research of Endangered Wildlife  
Cincinnati Zoo & Botanic Garden, USA

**Dr Abdul Hamid Ahmad,** Chairman,  
Borneo Rhino Alliance, Sabah, Malaysia

**Dr Susie Ellis,** Executive Director,  
International Rhino Foundation, USA

**Hajjah Yatela Zainal Abidin,**  
Chief Executive Officer,  
Sime Darby Foundation, Malaysia

**Dr A. Christy Williams**  
Coordinator, WWF-AREAS, Nepal

**Dr. Bibhab Talukdar**  
Chairman  
IUCN Asian Rhino Specialist Group

**Clare Campbell**  
Vice Chairperson  
Asian Rhino Project

In the presence of :

**Ir. Darori MM**  
Director-General,  
Directorate of Forest Protection  
and Nature Conservation, Indonesia