



Borneo Rhino Sanctuary (BRS) programme (restricted distribution)

Quarterly report : covering the period January – March 2013

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 (note : following a Government of Sabah decision in March 2013, rhino facilities will be built both in Tabin Wildlife Reserve (TWR) and at Danum Valley)

Main participating agencies

Sabah Wildlife Department (SWD), Borneo Rhino Alliance (BORA), WWF-Malaysia, Sabah Forestry Department (SFD), Leibniz Institute for Zoo and Wildlife Research (IZW), Zoo Leipzig, ITBC/Universiti Malaysia Sabah, WWF-Germany, Sime Darby Foundation (YSD), Sabah Foundation (YS).

Main financing agencies during this quarter

YSD, WWF-Germany, BORA

Programme description (following May 2009 Sabah State Cabinet decision and March 2013 additional 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 inside TWR with additional holding facilities at Danum Valley.
- bringing isolated remnant rhinos from non-viable situations, into BRS facilities at TWR and Danum Valley.
- establishing a sustainable financing scheme to allow long-term operations of BRS.
- appointing a professional company to manage BRS and its rhinos
- develop rhino reproductive laboratory facilities in Sabah
- exchange Sumatran rhino gametes between Sabah and other countries

Targets for this quarter

(1) Availability of a concept of how Puntung and Tam might produce baby rhinos (Partially achieved; see below). (2) State Cabinet approval to capture rhinos in Danum Valley and to build a rhino holding facility at Danum Valley (Achieved). (3) Initiate building of rhino facility at Danum Valley (Site

topographical map prepared). (4) Additional rhino trap at Kulamba (Not done; see below. (5) Rhino food garden planted (Half planted).

Activities originally planned for this quarter

(i) IZW vet team to reduce Puntung's cyst growth, and advise on a programme for artificial insemination (AI), (ii) continue natural mating attempts while AI programme is planned, (iii) submission of a Cabinet paper for endorsement of the plan to capture and house rhinos at Danum Valley, (iv) complete topographical survey of Danum rhino facility site, decide on means to arrange design and construction of the Danum facility, initiate construction of the facility, (v) continue to seek second potential rhino trap site at Kulamba, (vi) continue seeking wild rhinos for capture in Tabin Wildlife Reserve (TWR), including monitoring of camera traps, (vii) transfer of Gelogob from TWR to Lok Kawi Wildlife Park, (viii) finalise details of Sumatran Rhino Crisis Summit (to be held 31 March-4 April), (ix) complete planting of rhino food garden.

Activities achieved during this quarter

(i) Puntung's cyst growth, which had increased in magnitude since removal by laser treatment in June 2012, were significantly reduced by the IZW veterinarian team, using an aspiration technique, on 29 March (planned February procedure was postponed), (ii) an attempt on the same day to remove an oocyte from Puntung for preservation in liquid nitrogen, for potential future in vitro fertilization attempts, was not successful, but a small piece of ovarian cortex (containing the follicles which produce ova) was successfully removed and preserved in liquid nitrogen, (iii) two versions of a Cabinet paper were prepared (one by BORA/Sabah Forestry Department (SFD), the other by Sabah Wildlife Department (SWD), for endorsement of the plan to capture and house rhinos at Danum Valley; due to concerns over dissolution of Parliament for general elections (which occurred on 3 April 2013), and the risk of losing impetus, the SFD version was presented and approved by State Cabinet on 20 March, (iv) the scope of work and topographical survey of Danum rhino facility site was done in January and the map completed in February; a design-and-build consultant with relevant experience and track record was identified; following agreement by SFD (as the land-owner of the site of the Danum rhino holding facility, located in Ulu Segama Forest Reserve about 1.5 km from the Danum Valley Field Centre) and BORA, the intention is to appoint the consultant to prepare the detailed rhino facilities design (in consultation with BORA) and to build the facilities; pending a detailed design and estimate of the cost, financing of this consultancy and construction of facilities will come from a combination of RM1 million raised by SFD in early 2012, topped up from the YSD 2012-15 allocation for additional rhino paddock construction; release of the RM1 million and appointment of the consultant could occur only after the (20 March) Cabinet decision; (v) no new trap was established at Kulamba, and the existing one was closed (see Problems to be addressed, below) (vi) no signs of wild rhinos were found in TWR during this quarter; (vii) Gelogob was transferred from TWR to Lok Kawi Wildlife Park, leaving Tabin Wildlife Reserve (TWR) at 20.00 hrs on 27 March and arriving at Lok Kawi at 11.00 hrs on 28 March; (viii) much of BORA's work effort during this quarter was devoted to planning for the Sumatran Rhino Crisis Summit (SRCS); by end of the quarter over 100 names had confirmed their participation; SRCS commenced on 31 March at Jurong Bird Park, Singapore, (ix) the perimeter fence of the rhino food garden was completed, together with planting of 500 tree seedlings.

Awareness

Preparations were made for the Sumatran Rhino Crisis Summit, which was held in Singapore starting on 31 March.

Meetings held

SWD-BORA, 17, 21, 22 & 29 January, 26 & 28 March; SFD-BORA, 3 & 30 January; BRS steering committee, 25 January; BORA-Ministry of Culture, Tourism & Environment, 22 January & 4 February; BORA-WWF-Malaysia 1, 4, 7 & 10 February, 25 March ; YSD-BORA, 13 March; BORA-Wildlife Reserves Singapore, 22 & 30 March; BORA – Indonesia rhino institutions, 24, 25 & 26 February; BORA Board meeting, 1 March.

Other updates

(1) The slow process of assessment of research permit applications for foreigners was largely resolved during this quarter. (2) Call for tender for construction of the permanent BRS breeding facilities in TWR was announced on 2 January 2103.

Problems to be addressed

(1) Puntung's oestrus cycling is irregular and unpredictable, and this is probably linked in part to the cyst growth. It is clear that her cysts will continue to recur; aspiration seems to be the best technique to periodically control their extent (compared to chemical flushing or laser treatment, which had been done during 2012). It now seems very unlikely that Puntung could achieve and sustain a natural pregnancy; her role is more likely to be as a source of ova for either AI or in vitro fertilization.

(2) A significant new major disappointment became apparent during this quarter. All frozen semen from Tam (collected in 2009 and 2011 by IZW) was lost when the single liquid nitrogen tank with all the straws inside, kept in Lok Kawi Wildlife Park, was found to have become empty of nitrogen and had been inadvertently sent as an empty tank to TWR in August 2012.

(3) Identification of a second potential rhino trap site at Kulamba was delayed for an unfortunate combination of three factors : (a) no signs of rhinos in this region since December 2011; (b) the decision by the nearest land-owner, Bukit Kretam Sdn. Bhd. (LBK) to not allow more than 2 BORA staff on to their land at any one time; (c) the "Suluk invasion" of the Dent Peninsula in early March (see for example : http://en.wikipedia.org/wiki/2013_Lahad_Datu_standoff , which limited the advisability of field work in the coastal parts of Kulamba region. It is not certain why LBK has not allowed more than two BORA staff on to their property commencing January 2013, but is presumably because a group of Sabah conservation NGOs in January made public their view that the remaining forested land owned by LBK should be acquired for conservation of orang-utan and other wildlife. As at least five BORA staff need to be present at all times to safely monitor any rhino trap, the single Kulamba trap was closed in mid-February.

Solutions

(1)(a) Discussions are underway and a decision will need to be taken on how to best utilise Puntung to perform the role of a supplier of ova for production of embryos. (b) An additional female rhino has to be acquired during 2013, with a view to natural breeding with Tam.

(2) Protocols for preserving rhino gametes and tissues in liquid nitrogen in Sabah will need to be reviewed, to minimise the risk of a repeat of the loss of frozen rhino sperm. As a temporary measure, Puntung's ovarian cortex tissue is stored in Institute for Tropical Biology and Conservation, Universiti Malaysia Sabah.

(3) Letters were sent by BORA to LBK in January, February and March to request consideration to allow five BORA staff to the rhino trap area, but no reply was received. Director of SWD wrote to the LBK lawyer in March with a similar plea but no reply was received. BORA is making arrangements to rent a house in the nearest village (Kg. Seri Ganda) and to purchase a boat, in order to allow the existing rhino trap to be re-opened in April for twice-daily checking, using a sea route, instead of via LBK's land.

Plans for next quarter

(1) Decide on and initiate a plan to make best use of Puntung and Tam for embryo production. (2) Pending outcomes of SRCS, initiate collaboration with other managers of captive Sumatran rhino on accelerating between-country rhino breeding work. (3) Locate trap site for Danum female rhino. (4) Complete design of Danum rhino facility and start construction. (5) Commence construction of the permanent BRS breeding facilities at TWR. (6) Continue to seek presence of wild rhinos in TWR, Kulamba area and Danum Valley, (7) initiate study to identify substances occurring in the diet of Sumatran rhinos which may have potentially adverse effects on rhino health and reproduction.



(left) potential contractors for construction of the BRS permanent facilities at TWR (financed by Government of Sabah) on the site visit, 4 January, (b) investigation of possible scenarios for capture of rhino from Danum Valley started during this quarter (8 January, near Borneo Rainforest Lodge).



As a possible aid to enhancing Tam's libido and sperm production, a naturally-occurring boulder in the rhino breeding yard was, using drill, chisels and cement, fashioned to form an artificial female Sumatran rhino rump, and (left) doused with Puntung's urine (13 February) with the aim of attracting amorous attention from Tam; later the same day (right) Tam showed some interest.



Gelogob was moved by SWD from TWR to Lok Kawi Wildlife Park over the night of 27-28 March (left and middle), thereby freeing her facility at TWR for any new rhino that might be caught, as well as to reduce the burden of rhino food harvesting on BORA staff at TWR, (right) a piece of ovarian cortex was removed by aspiration from Puntung (29 March) and stored in liquid nitrogen, as a potential source of ova in future advanced reproductive techniques for production of Sumatran rhino embryos.



Rhino food garden development at Tabin at end of March 2013, (left) entrance to the 2 hectare garden, (middle) energizer battery which powers the electrical wires of the perimeter fence (to prevent elephants from entering the garden), (right) the solar panel which powers the energizer