Borneo Rhino Sanctuary (BRS) Programme–2013 Report
Last chance to prevent the extinction of the rhino in Borneo

The Sumatran rhino (*Dicerorhinus sumatrensis*) continues along the path to extinction. In Malaysia, it is now clear that the species is "functionally extinct", meaning that the few remaining individuals will by themselves not be sufficient to raise birth rate above death rate. Only by viewing the plight of this species from an international perspective is there the possibility to save it.

With this perspective, a special gathering called Sumatran Rhino Crisis Summit (SRCS) was convened at Singapore Zoo, 31 March – 4 April 2013. Originally mooted in Sabah in 2012 as an NGO-led event, SRCS was eventually convened by International Union for Conservation of Nature (IUCN), with about a hundred participants from governments, NGOs, zoos, research institutions and individuals with special interest or expertise, from Indonesia, Malaysia, USA, Europe, Australia and Africa. SRCS was hosted by Wildlife Reserves Singapore and co-financed by Sime Darby Foundation, Wildlife Reserves Singapore, WWF, Borneo Rhino Alliance, Taman Safari Indonesia, International Rhino Foundation and LEAP (Land Empowerment Animals People, which also arranged meeting facilitation and reporting), plus individual participants. Objectives included to forge a global Sumatran rhino conservation plan, and to seek new impetus, financing and ways to help those working on the ground. Based on the SRCS outcomes, IUCN drafted a 2-year Sumatran rhino emergency plan. Veteran Sabah journalist Mr Kan Yau Chong participated in SRCS, and produced a series of ten detailed reports on the event, which were printed in Sunday editions of the Sabah Daily Express from April to June.

As follow-up to SRCS under the BRS programme, representatives from Sabah visited Indonesia on five occasions during 2013, including the 1st Asian Rhino Range States meeting in Bandar Lampung, Indonesia, 2-3 October, where Sabah Wildlife Department and Department of Wildlife & National Parks Peninsular Malaysia (for Government of Malaysia) signed on to a joint Declaration with Bhutan, India, Indonesia, Nepal. Through the keen interest and good offices of Tun Musa Hitam (Chair, Yayasan Sime Darby Council) and Dr Emil Salim (Chair of the Advisory Council to the President of Indonesia), a process was initiated for a written agreement to be secured on bilateral collaboration on Sumatran rhino during the annual meeting of the leaders of Indonesia and Malaysia in Jakarta, 19 December. In the end, this did not materialise.

By end of 2013, a report by Borneo Rhino Alliance (BORA) stated : "Sumatran rhino should be managed as a global meta-population, with Indonesia taking the key role, with a focus on a much-enhanced captive population, and unhindered exchange of Sumatran rhinos and gametes between interested and competent institutions in Indonesia, Malaysia, USA and Germany."

In the absence of a formal agreement with Indonesia and, since 2008, absence of signs of wild rhinos in Tabin Wildlife Reserve (TWR), apart from the female named Puntung captured in 2011, the focus within Sabah during 2013 shifted to seeking rhinos in Danum Valley. After approximately 15,000 "camera trap days" (number of cameras set x number of days switched on) in TWR over the period July 2012 – December 2013, with cameras set to take images when movement is detected, deployed in areas where rhinos were active from 1980s to 2007, images were obtained of almost all medium and large sized mammal species except Sumatran rhino. No footprints or other signs of rhino have been detected in TWR after the capture of Puntung.

The BRS focus also shifted during 2013 to pursue opportunities with advanced reproductive technologies (ART), in particular to produce embryos from the fertile but recalcitrant Puntung and Kertam, a mature male nick-named "Tam", captured in 2008 and housed along with Puntung in temporary facilities in TWR. Growth of cysts in Puntung's uterus had increased in magnitude by early 2013 after removal by laser treatment in 2012 by the Leibniz Institute for Zoo and Wildlife Research (IZW, Berlin) veterinarian team. In March 2013, the cysts were significantly reduced again by the IZW team, using an aspiration technique. A first artificial insemination (AI) was attempted on Puntung, using fresh

Meeting with the Minister of Forestry Indonesia in his office, 6 December 2013, (left to right) J. Payne (BORA), Sonny Partono (Director-General, Forestry Protection and Nature Conservation), Minister Zulkifli Hasan, Dr Emil Salim (Chair, Advisory Council to the President of Indonesia), Dr Zulkarnain Duki (obscured; Chief Secretary of the Advisory Council and Secretary for Economics & Environment), Hjh. Yatela Zainal Abidin and Arifah Sharifuddin (Sime Darby Foundation).

sperm from Tam, on 25 June, but fertilization was not achieved. At the same time, an attempt 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 removed and preserved in liquid nitrogen. Plans were made for further AI attempts, but this is constrained not only by cost, but also the fact that Puntung's oestrus cycle is irregular and, despite constant monitoring by ultra-sound and blood progesterone levels, optimum dates for AI are impossible to predict more than a few days in advance. Only one, unsuccessful, natural mating attempt was done, on 29 October. Due to the cysts, there is in any case increasing doubt that an embryo could implant on to Puntung's uterus wall, and the way forward for Sabah is likely to be attempts at in vitro fertilization which would in turn require a surrogate mother, available only in Indonesia or Cincinnati Zoo.

Sumatran Rhino Crisis Summit at Singapore Zoo, 31 March - 4 April 2013.

A significant disaster in efforts to commence ART work became apparent in March, however, when it was found that all frozen semen obtained from Tam by IZW in 2009 and 2011 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 sent as an empty tank to TWR in August 2012.

In pursuit of the idea of global collaboration to save the Sumatran rhino, Sabah took a bold step to pursue an idea raised at SRCS, to loan Tam to Cincinnati Zoo, which has a fertile mature zoo-born female Sumatran rhino named Suci. In a remarkable meeting of Sabah-based NGOs and governmental institutions held on 15 July, consensus was reached that Tam should indeed be loaned to Cincinati if a fertile female has not been captured in Sabah by July 2014, in preference to either loaning him to Indonesia, or to loan Sabah's rhinos to Germany where ART could be tried on a more regular and consistent basis.

Datuk Seri Masidi Manjun, Minister of Tourism, Culture and Environment together with Datuk Dr Laurentius Ambu, Director of Sabah Wildlife Department and Dato' Dr Dionysius Sharma, CEO/ executive director of WWF-Malaysia, 20 August, announcing that Sabah is prepared to loan Tam to Cincinnati Zoo if a fertile female cannot be caught before July 2014.

Following the capture of Tam in 2008, WWF-Malaysia had periodically reported signs of rhino in various parts of the Lower Kinabatangan Segama Wetlands, centered around Kulamba Wildlife Reserve. But by mid-2013, no signs had been found in this region since December 2011 and the rhino trap built in June 2012 was eventually dismantled and removed in June 2013. Notices of cash reward for information on any rhino signs have been posted in villages and plantations in the Kretam-Kulamba area. Similar notices were placed in parts of the Kuamut area in central Sabah. After June, attention turned to rhinos in Danum Valley. In March, the State Cabinet had approved a plan to capture rhinos from within Danum Valley, as well as to build a rhino holding facility nearby. Details of location and financing for the BRS Danum Valley facility were resolved only towards the end of 2013, and construction of the facility commenced in late November. Funds from Sabah Forestry Department, Sime Darby Foundation and Danum Valley Management Committee were supplemented by those raised at "The Rhino Cup", an event organised by Miss Adilla Jamaludin and her colleagues on Oct 20 at the Royal Selangor Polo Club, involving a polo tournament and other activities aimed at raising Malaysian awareness of the species.

Following a helicopter recce survey to ensure rhino trap materials could be brought in by air without need to cut trees, trap materials were heli-lifted into the centre of Danum Valley on 23 & 24 July, and two rhino traps were constructed from 25-30 July, one next to a wallow and the other on the targeted female's pathway. Twice-daily manual monitoring of the traps by a team of minimally four men based at a camp 1.5 km away in a different water catchment continued until end of 2013. The targeted female rhino walked to within about 100 metres of one of the traps on 30 October. The following day, a WWF-Malaysia camera obtained an image of a rhino, believed to be the same one, about 2 km to the west. By end of this reporting period, the only other sign of rhino in Danum Valley was some poor images from a WWF-Malaysia camera, about 10 km to the east of the rhino traps, in early August. One rhino trap collapsed on 23 December, due to heavy rain and erosion. Signs of two persons who may have been poachers were found overlapping with fresh rhino footprints in the trap area

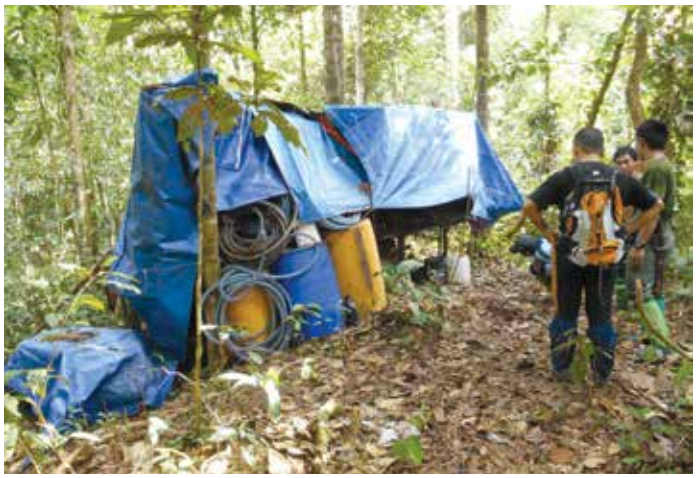
on the day that the trap materials were airlifted in to the area, and a gunshot was heard on night of 24 July, but no further signs of unauthorised persons were detected after 24 July.

Call for tender for construction of the permanent BRS breeding facilities in TWR was announced on 2 January. In the absence of facilities at TWR to keep an additional rhino if one were to be captured, the old, post-reproductive female, Gelogob, was transferred from TWR to Lok Kawi Wildlife Park on 27 March. Also in the busy month of March, the perimeter fence of a "rhino food garden" was completed at the temporary rhino holding facilities at TWR, together with planting of 500 tree seedlings.

Dr Zainal Z Zainuddin (BORA) and Mr Herman Stawin (Sabah Wildlife Department) determine the route to bring rhino trap materials from the helicopter drop point to the trap site.

A part of the route from Borneo Rainforest Lodge to the rhino trap area in Danum Valley.

Moving sections of the rhino post-trapping forest enclosure from the helicopter drop site to temporary storage site, 23 July.



A part of the store of materials above the rhino trap area - plastic drums and piping to supply water to the trap site below.

A rhino trap under construction.