



ENVIRONMENT

Under its “Environment” pillar, YSD dedicates itself to the protection and preservation of the environment and the conservation of biodiversity, while preserving landscape and selectively, seascape. This includes support for, and the promotion of, initiatives to protect and conserve forests and the sea; species and their biodiversity; and ensure that high conservation value ecosystems are protected. Priority is given to vulnerable and/or endangered species and the preservation of the forest reserves, including areas in and around Sime Darby’s operations.



“Bringing back the rhinos from the brink of extinction may seem impossible to many for now, but we are not giving up.”

*- Datuk Dr. John Payne
Borneo Rhino Alliance*



HOPE AFLOAT FOR SUMATRAN RHINOS

In April 2013, 100 wildlife experts convened at the second Sumatran Rhino Crisis Summit in Singapore where simulations done during the summit showed that the species stands a good chance of surviving if there are at least 30 rhinos with a birth interval of three years or less. However, for populations smaller than that number, the future remains bleak even if they are healthy and protected.

For Malaysia, in a last bid to breed the critically endangered Sumatran rhinoceros, our hope lies in the three captive rhinos in Sabah, taken from the wild in recent years – a male in 2008 and two females in 2011 and in 2014.

In March 2014, we rejoiced when a rare Sumatran rhino, Iman, was successfully translocated from a very remote area in Danum Valley, to join the male (Tam) and female (Puntung) rhinos at the Borneo Rhino Sanctuary (BRS) in the facilities of Tabin Wildlife Reserve. But just weeks later, our hopes were dashed with the discovery of massive tumours in the reproductive system of Iman, halting another progress in our preservation efforts. Meanwhile, Puntung has cysts in her uterus making it impossible for her to become pregnant or sustain an embryo.





Most female rhinos have a tendency of being infected by tumours and cysts if they do not produce babies once sexually mature and in Puntung's case, it is likely that she suffered a failed pregnancy in the past while Iman's condition implies that she has been sick for a long time.

Although the scenario looks bleak, we remain hopeful and have recently embarked on the use of advanced reproductive technology in a desperate bid to save this iconic species. This technology is one of the options which may be able to boost rhino births and bring about a positive turn for the plight of the dwindling Sumatran rhinoceros.



The Borneo Rhino Alliance (BORA) and Sabah Wildlife Department (SWD) are working together with reproductive experts from the Leibniz Institute for Zoo and Wildlife Research (IZW) in Berlin, Germany to perform lab breeding of the embryos. While such fertilisation attempts have yet to be tried on critically endangered species, IZW has succeeded with in-vitro fertilisation with the black rhinoceros, though the foetus died eventually.

Iman, Puntung and Tam will become donors for in-vitro fertilisation attempts, including a technique called intracellular sperm injection whereby, due to low sperm counts, attempts are made to select and inject an individual sperm into the egg. On 9 May 2014, IZW's Dr Thomas Hildebrandt and his veterinary team flew into Malaysia to remove two oocytes (the immature egg cell) from Iman which were stored in a buffer solution at the animal's body temperature, and was brought back to IZW in Berlin to mature in the lab.



The team is also working on synchronising the oestrous cycle for Puntung and Iman through the use of hormones so that both can produce eggs on a predicted date. This attempt may enable the extraction of more oocytes when the IZW team returns to harvest the second batch in mid-2014.

Meanwhile Iman will continue to undergo treatment at the BRS and ultrasound tests are conducted on her every two to three days.





We are eternally grateful for the funding and support from YSD since 2009 and their commitment of a substantial RM11.4 million has been instrumental to fund the sanctuary's operations. YSD works very closely with BORA and SWD, constantly encouraging us to look for more ways to save this near extinct species.

Bringing back the rhinos from the brink of extinction may seem impossible to many for now, but we are not giving up. BORA and SWD will work with World Wide Fund for Nature (WWF) to continue the survey in Danum Valley for additional rhinos and with IZW to see how far we can utilise the technology assisted reproductive methods to our advantage.

We remain hopeful that we can still save these rhinos from extinction.

