

suspected that the death was quick, and occurred while the animal was walking toward a water source (a small creek) along the path. Based on all facts from the site, some possible causes of death were compiled. To everyone’s surprise, a second skeleton of an adult male rhino was found in one of the southern grids (Cikeusik block). Unlike the first, the location of the second finding was in a small creek, causing some bones to have drifted downstream, possibly during heavy rain. Since the southern grids (including the Cikeusik block) contain the highest density of rhino populations, a thorough investigation was needed to determine the cause of death in order to prevent more deaths in this key rhino population area.

A part of the investigation was the use of previous video trap data to track the video clips containing the animals prior to their deaths. This information was expected to reveal anything unusual about these rhinos that might help narrow down (or even determine) the most likely cause of death. Some video

clips show mildly skinny individuals (with prominent ribs), and two rhinos showing excess salivation or hypersalivation. These types of observations allow the use of video trap surveys to be extended for detecting clinical signs for assessing the health of rhinoceros within the population.



An adult male inhabiting the northern blocks of Ujung Kulon peninsula recorded in a small wallow hole.

Update on Rhinos in Sabah, Malaysia, And the Work of Borneo Rhino Alliance

Borneo Rhino Alliance (BORA; www.borneorhinoalliance.org), formerly SOS Rhino Borneo, a non-governmental organization (NGO) established as a not-for-profit company, continues to work with the government authorities and WWF in Sabah, Malaysia, in a last ditch effort to save the Bornean form of the Sumatran rhino from extinction.



Tam in his interim forest paddock at Tabin Wildlife Reserve, Sabah.

Estimated at less than 40 remaining individuals, with only a small proportion being breeding females, BORA and the government of Sabah now consider that just patrolling to protect remaining wild rhinos is unlikely to be sufficient to save the species in Borneo.

Key remaining rhino habitats at Tabin Wildlife Reserve (1,200km²) and Danum Valley Conservation Area (438 km²), both established in the 1980s, and with protection patrols active for most of the time over the past decade, have not seen a clear increase in rhino numbers.

In fact, rhino numbers seem to have stagnated and probably declined overall, an indication of a

phenomenon known as the Allee effect.

As numbers of individuals of a species decline to a very low level, the various factors associated with very low numbers (such as narrow genetic base, locally skewed sex ratio, difficulty in finding a fertile mate, reproductive pathology associated with long non-reproductive periods) conspire to drive numbers even lower, to the extent that death rate eventually exceeds birth rate, even with adequate habitat and zero poaching.



BORA staff James Sandiyang and Indra Buana gather food for Tam (leaves of Nauclea and Merremia lianas) from a nearby oil palm plantation.

Without specific actions to bring fertile female and male rhinos together to boost production of offspring, there is a strong possibility that the rhino may become extinct in Borneo, even if protection of rhino habitats and rhinos can be maintained and improved.

The government of Malaysia, through its Sabah Development Corridor programme in 2008, identified a rhino rescue programme in Sabah as an important conservation priority. The plan is to continue guarding wild rhinos and simultaneously developing within Tabin Wildlife Reserve, a managed, fenced rhino sanctuary, named Borneo Rhino Sanctuary, modelled along the lines of the Sumatran Rhino Sanctuary in Indonesia.

Saving the Bornean rhino has become a classical conservation programme, like those developed to save such species as the Arabian Oryx, and Indian and African rhino species a century ago.

Working with the Sabah Wildlife Department, BORA's target during 2010 is to capture a specific female rhino, which has been monitored for the past three years and which appears to lead a solitary existence in an extensive forest area, as a mate for Tam, a male that was caught in an oil palm plantation in August 2008.

BORA is based in University Malaysia Sabah, at the Institute for Tropical Biology and Conservation, whose director, Dr Abdul Hamid Ahmad, is also BORA's chairman. BORA has a strong team which includes executive director Junaidi Payne, field manager Dr Zainal Zahari Zainuddin (one of the world's most experienced Sumatran rhinos veterinarians), board members Cynthia Ong (www.leapspiral.org) and Dr Isabelle Lackman of the NGO HUTAN, and more than twenty full time staff, all but two working full time in the field.

Apart from the government, the biggest financial backer of development of Borneo Rhino Sanctuary is the Sime Darby Foundation (www.yayasansimedarby.com), which has committed to providing major support for the period 2009-2012.

Sime Darby, a company listed on the Kuala Lumpur Stock Exchange, is one of the major oil palm plantation companies. Other oil palm plantation companies contribute towards rhino conservation at Tabin. For example, PPB Oil Palms has a law enforcement unit active near the Tabin boundary, while the Tradewinds Plantation Bhd has assisted with materials for a rhino paddock.



Tam's food is dipped in a solution of minerals and vitamins before he is fed.



BORA team Justine Sagunting, Junaidi Payne, Rasaman Jaya, Andrew Ginsos and Tinrus Tindok on recce for potential rhino capture sites.