



### 3 The Management and Ecology of Malaysian Elephants (MEME), **RM3.36 million** **5 years**

2012 - 2016

Our five-year partnership with the University of Nottingham Malaysia Campus (UNMC) focuses on the first large scale research in the country to study the Asian Elephants. This Research Programme is led by Dr Ahimsa Campos-Arceiz to assess the effectiveness of current elephant management policies in Malaysia, develop a critical long-term strategy based on scientifically sound knowledge of elephant behaviour and ecology, capacity build for the Department of Wildlife and National Parks (DWNP or PERHILITAN) and to produce a new generation of wildlife researchers and managers of high calibre from Malaysian academic circles.

Through our support, scholarships were awarded to three PhD students to undertake Asian Elephants Studies. The scholarships cover courses in the areas of monitoring elephant stress levels, elephant ecology (seed dispersal) and human-elephant conflict: characterisation and mitigation.





This financial year saw MEME completing its studies on 14 wild elephants' movements and stress levels in response to translocation, the social organisation of over 40 wild female elephants in seven herds as well as mapping of elephant distribution and human-elephant conflicts in human-dominated landscape in Peninsular Malaysia with over 5,000 people interviewed.

On top of their ongoing research activities, MEME also plays a pivotal role in contributing towards the National Elephant Conservation Action Plan (NECAP) and is a regular member of NECAP's MyGajah committee. MEME has conducted various impactful talks and programmes to increase awareness about the conservation of Malaysian elephants in national and international circles.

Below is the story of one of our sponsored PhD researchers for the MEME Project.

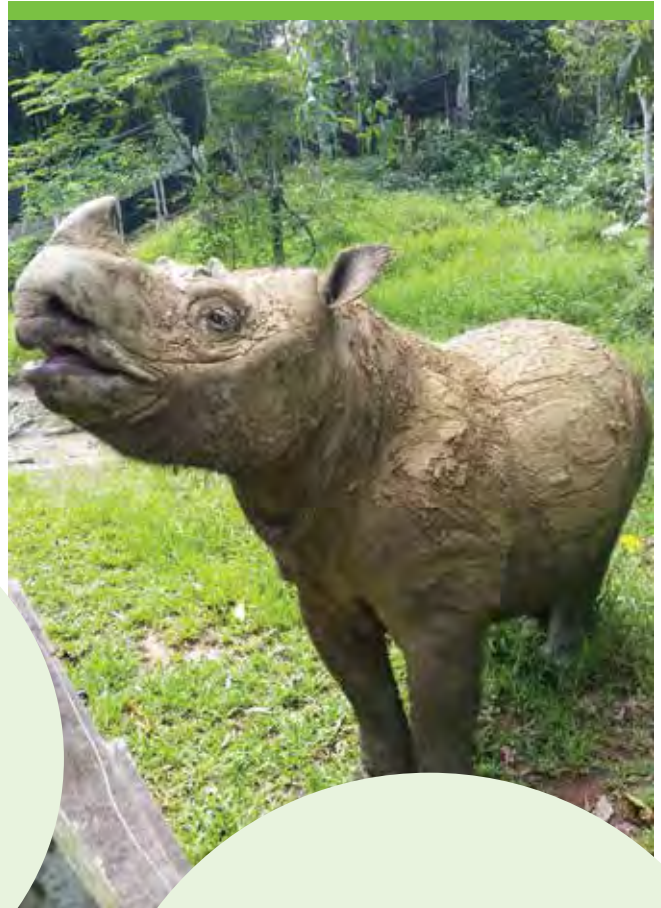


**Ee Phin Wong**, pursuing Doctorate Degree at University of Nottingham Malaysia Campus

I am currently in my final year of completing my PhD and my research area is on non-invasive monitoring of stress levels in wild Asian Elephants in Peninsular Malaysia. Previously,

I did my Bachelors of Science at Universiti Kebangsaan Malaysia (UKM) in Biology, majoring in Zoology, and Master of Applied Science in James Cook University, Australia, on Wildlife Biology and Management.

The scholarship provided by SDF has enabled me to collaborate with international researchers, working with people from the United Kingdom, Czech Republic and Thailand. It is a real privilege to be under the tutelage of our own elephant expert Dr. Ahimsa Campos-Arceiz and the opportunity to study the biology of wild elephants in the field by tracking them up-close using telemetry and satellite GPS collars.



**4** Borneo Rhinoceros Sanctuary (BRS), **RM14.85 million** **8 years** 2009 – 2017

It has been officially declared that the Sumatran Rhinoceros have ceased to exist in the wild in Malaysia. With only three animals being held in managed facilities in Sabah, the goal was and still is to prevent the extinction of the Sumatran Rhinoceros in Malaysia.

Extensive surveys were carried out in all regions where Sumatran Rhinoceros were sighted from 1994 to present. Finally, in April 2015, the Sabah's State Minister of Tourism, Culture and Environment, YB Datuk Seri Panglima Masidi Manjun announced it was unlikely that there were any Rhinoceros left in the wild and the prospect of the Sumatran Rhinoceros going extinct in our lifetime was imminent.

The two female Rhinoceros in this Programme, Iman and Puntung are fertile but they have reproductive tract pathology which prevents them from going through full-term pregnancy. Iman is in a particularly grave situation, with her uterus filled with fibroids (tumours) that are prone to bleeding profusely.



The quest to save this species which predates millions of years ago has brought together international collaboration between the Borneo Rhino Alliance (BORA), Faculty of Veterinary Medicine, Universiti Putra Malaysia (UPM), Professor Arief Boediono of Indonesia and the Leibniz Institute for Zoo and Wildlife Research (IZW) from Berlin.

Our hope remains with three main possible options through advanced reproductive technology to ensure the survival of the Sumatran Rhinoceros species, namely artificial insemination (AI), in-vitro fertilisation in the lab and preserving the frozen sperm and eggs to be used when advanced technology to breed the species becomes possible.

Currently, an in-vitro laboratory has been established at the Agro-Biotechnology Institute Malaysia and a group of experts are harvesting eggs from Puntung and Iman and sperm from Tam for in-vitro fertilisation and laboratory storage. To date, the species is on the brink of extinction and at a critical point where only dedicated specialists and adequate financing could possibly reverse the downward trend that started over a millennium ago.

### 5 UKM-YSD Chair for Sustainable Development: Zero Waste Technology for the Palm Oil Industry

**RM15 million**  
**10 years**

2010 – 2020



### + 14 scholarships worth

**RM1.68 million**  
**4 years**

2014 – 2018

As part of Sime Darby's initiative to lead researches relevant to the palm oil industry, in January 2010, SDF formed a partnership with the Universiti Kebangsaan Malaysia (UKM) to establish the UKM-YSD Chair for Sustainable Development – Zero Waste Technology for the Palm Oil Industry.

The main aim of the Research is to turn palm oil mills into green factories that are not only carbon neutral, but also leave a negative carbon footprint with zero waste from the production of palm oil being dispensed in the air, ground and water.

The Chair also places great importance on capacity building for both UKM and Sime Darby to groom homegrown researchers and scientists with expertise and specialised skills in zero waste technology in the palm oil industry and achieve transfer of knowledge and technology between Sime Darby and UKM. 14 'Sustainable Development' scholarships have been allocated to Sime Darby employees and UKM research assistants pursuing Masters degrees and PhDs for a period of four years until 2018.

