





Nordic researchers strengthen bonds with Borneo

On 12 June, Nordic research institutions and two Malaysian organisations pledged to collaborate on exploring the natural and socioeconomic values of Borneo's rainforests. Joint efforts of Nordic and Malaysian researchers are expected to lead to new knowledge that can help to conserve and restore unique ecosystems.

What can we learn from a pristine Bornean rainforest about natural dynamics, and how can we use this knowledge to better conserve and manage ecosystems? What economic value can nature provide for the local society?

These are some of the questions that researchers in the newly formed Nordic Rainforest Research Network (NRRN) seek to answer.

On 12 June 2015, the NRRN was officially launched as it signed a Memorandum of Understanding with the Sabah Foundation and the Maliau Basin Management Committee. The event took place during a rainforest conference in Kota Kinabalu, the capital of the Malaysian state Sabah.

The MoU will smooth the path for much-needed research related to conservation and restoration of Borneo's rainforest. It aims to support the formation of joint research projects between Nordic and Malaysian researchers.

The collaboration is initially focussed on the renowned Maliau Basin, also known as the Lost World of Sabah. This area of almost 59,000 hectares is uninhabited and was first discovered in 1947, when a plane nearly crashed against the steep cliffs surrounding the circular Basin. Several research expeditions have since revealed numerous unique and rare species to exist in the secluded area.

Facilitating research

A secretariat will communicate opportunities of collaboration and support the publication of research results. It will also support the network scientists in obtaining residence and research permits.

Jon Fjeldså is a professor and curator at the Centre for Macroecology, Evolution and Climate at the Natural History Museum of Denmark and an acknowledged biodiversity expert. He says, "Maliau Basin is one of very few places in the world that have probably never been inhabited by humans. The complex soil and topographic conditions make it ideal for exploring structures in rainforest ecosystems and for understanding natural forest dynamics. Such data provide a great baseline for regeneration studies in neighbouring timber concessions."

"Research has consistently shown that ecosystems with a high biodiversity are more robust than others. In a time of climate change, we should be interested in conserving the biodiversity of our ecosystems. This is our best life insurance," notes Ida Theilade, leader of the Network's secretariat and senior researcher at the University of Copenhagen.

Sven Bislev is Vice Dean of Education and Associate Professor at the Department of Intercultural Communication and Management at Copenhagen Business School (CBS). "The area has economic potential e.g. in the shape of medicinal plants and ecotourism. There are good opportunities for linking the restoration of damaged forest with forest carbon projects, where carbon credits are traded under schemes such as Verified Carbon Standard (VCS). At the same time, protection against illegal logging and other threats can be organised to create jobs for the local communities. Mobile technology is available in Malaysia, and there is plenty of opportunity for involving local people in monitoring and nature protection," states Mr Bislev.

The research network is an offshoot of a two-year project implemented by the Danish non-profit organisation NEPCon in collaboration with Sabah Foundation. NEPCon believes that research in and around Maliau Basin is needed to spearhead applied science used in conserving and restoring precious rainforest on Borneo and across Southeast Asia. "We need science and knowledge more than ever when it comes to conserving our nature," states NEPCon Executive Director Peter Feilberg.

"In the twenty years between 1990 and 2010, Sabah lost 700,000 hectares of forest. Research is crucial to develop robust conservation strategies that can withstand the pressure on Borneo's nature."

Ms Theilade stresses that the network is open to researchers from all Nordic research institutions. Non-Nordic researchers may also gain support from the network, if their research on Borneo is based on collaboration with Nordic institutions.

The NRRN was initiated by Danish organisations, however several universities from the other Nordic countries have expressed their interest in participating.

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BACKGROUND

Maliau Basin - Lost World of Sabah

Maliau Basin is a nearly circular, uninhabited rainforest area of close to 59,000 hectares surrounded by steep mountain sides. The inner core of approximately 39,000 ha consists in untouched rainforest at various elevations above sea level, with numerous rivers and waterfalls as well as Sabah's sole freshwater lake. Maliau Basin provides researchers with unique insight into pristine ecosystems. The area includes more than 270 bird species and over 1,800 plant species, including 6 species of Nepenthes and 80 orchid species as well as the giant flower Rafflesia tengku-adlinii. Known mammal species include rarities such as the Sumatran rhino, Spotted Leopard, Proboscis Monkey and Sun Bear. The total number of species in the Basin is estimated at 240,000, corresponding to 38% of the species that exist on Borneo. Many of the species in Maliau are red listed or endemic.

Despite its formal protection, the Maliau Basin is still threatened, for instance by poaching and collection of sandal wood for perfume production. The surrounding forest is partly overlogged, but is now designated for protection and restoration. The varied physical conditions offer plenty of opportunity to conduct basic science within numerous biological disciplines. In addition, the surrounding areas lend themselves well to studying regeneration of degraded rainforest.

Maliau Basin is part of a global biodiversity hotspot. Protected rainforest corridors comprising an area of nearly 4,000 km² (400,000 hectares) include and link the three crown jewels of Sabah's natural heritage - the Maliau Basin, Danum Valley and Imbak Canyon. There is a massive need for restoration of degraded forest in the corridor. Large species such as the orang-utan, Borneo's pygmy elepehants, leopards, rhinoceros and others are threatened and need a large natural forest area for their habitat and dispersal.

Nordic Rainforest Research Network (NRRN)

The Network aims to facilitate Nordic researchers in exploring Borneo's rainforest. This is done by supporting contact to local researchers and by developing joint research projects and applications. The Secretariat will also support and guide Nordic researchers to obtain residence and research permits. The network is open for all Nordic research institutions and their partners around the world.

The network is newly formed, but the idea is not new. A previous attempt to establish a similar collaboration ten years ago failed due to lack of financial support. However, the need still exists and the partners behind the network are confident that the initiative will succeed this time.

Sabah Foundation

Sabah Foundation (Yayasan Sabah) is a state sanctioned organisation that was developed to promote educational and economic opportunities for the people of Sabah. The Sabah Foundation manages about 1 million hectares of rainforest in Sabah, including the Maliau Basin. The organisation recently established the University College Sabah Foundation (UCSF).

Danish partners

University of Copenhagen

The University of Copenhagen conducts research in tropical biodiversity and has a long tradition for researching in Southeast Asia. The university co-initiated and is hosting the international information and data centre Global Biodiversity Information Facility (GBIF). http://www.ku.dk/english

Copenhagen Business School (CBS)

CBS possesses expertise within Payment for Ecosystem Services (PES), a rapidly growing research area. Understanding the role of firm engagement, the role of donor institutions, as well as ways in which civil society may be mobilized is of principal interest. The agreement offers an unprecedented opportunity to practice CBS's present 'Business in Society' initiative. http://www.cbs.dk/en

NEPCon

NEPCon is an international non-profit organisation that works to mainstream sustainability. Specialising on sustainable natural resources management, it works partly through donor-financed projects. The organisation has engaged in nature conservation in Malaysia for 15 years and has worked with the Sabah Foundation on the conservation and management of the Maliau Basin. Currently, NEPCon is conducting a GEF financed project that develops management and business plans for several iconic parks in peninsular Malaysia: Taman Negara National Park, Royal Belum State Park and Endau-Rompin National Park. www.nepcon.net