



Hutan Harapan: A Heaven for Herpetofauna

In the midst of the sound of forest insects at night, Musadat was able to hear and mark the location of the amphibians along the Lalan River in Hutan Harapan. In early January 2021, Musadat accompanied a researcher from the Biology Faculty of the University of Jambi (UNJA), Dr. Tedjo Sukmono, who was investigating vertebrates, especially frogs in Hutan Harapan. According to Musadat, Hutan Harapan, apart from having charismatic animals, such as Sumatran tigers and elephants, is also rich in Herpetofauna species (amphibians and reptiles). The former Ecotourism Coordinator in Hutan Harapan argues that many people overlook or even ignore the role of small vertebrates, such as frogs, toads, snakes, or turtles, whereas these species play an important role in maintaining the balance of the forest ecosystem.

In 2013, Andre Jankowski, a researcher from the University of Hamburg, Germany conducted research on herpetofauna in Hutan Harapan. He identified at least 55 amphibians and 71 reptile species. One species is categorized as endangered (EN) (IUCN Redlist) the spiny turtle (*Heosemys spinosa*); while other reptiles he identified are listed as "vulnerable" (VU) include the softshell turtle (*Amyda cartilaginea*), the orange headed forest turtle (*Heosemys grandis*) and the sinyolong false gharial (*Tomistoma schelegelii*).

The latest research results from Hutan Harapan conducted by Eki Aprilia Resdiyanti Devung, a student from the Bogor Agricultural Institute (IPB) in 2017, indicated the existence of a new species of tiny frog measuring 22.8 millimeters as adults. This finding was confirmed by researchers from the Indonesian Institute of Sciences (LIPI) who later named this frog *Micryletta sumatrana*.



According to LIPI researchers, amphibians and reptiles are important as indicators of ecosystem health. Reptiles play a major role as predators in the food chain while amphibians, especially frogs, play a role in detecting micro-climate change because frogs are sensitive to stressors such as drought and pesticide use.

Judging by Hutan Harapan's rich and diverse herpetofauna the forest ecosystem is still in a healthy condition. Hutan Harapan is the last paradise for herpetofauna in the lowland forest ecosystems in Sumatra. If Hutan Harapan becomes degraded, it will lose its herpetofauna. (HOS|Musadat)

The Batin Sembilan Indigenous People: Far from Covid-19

The impact of Covid-19 is having an impact on all aspects of life, severely limiting all social interactions. At the Hutan Harapan basecamp health protocols are in place to ensure that it does not spread to the staff or surrounding communities. For the nomadic Batin Sembilan that live in Hutan Harapan, however, Covid-19 is a world away. In mid-January 2021, the Hutan Harapan communication team visited the nomadic Batin Sembilan group of Mat Atam who happened to have set up camp near a Hutan Harapan guard post in the Meranti area, Musi Banyuasin, South Sumatra. When we met him, Mat Atam was in the hut with his wife and eight children. The youngest was born at the end of October 2020.

"Sir, do you know Corona?" Mat Atam shook his head with a faint smile. The man with the characteristic square mustache shook his head more when asked about corona. Mat Atam also stated that none of his family was sick. For Mat and his family, nothing has changed in their daily activities. Mat and his family still plant cassava, collect dragon's blood, resin (damar) and hunt for their daily needs.

The Meranti guard post team confirmed that none of the Batin Sembilan had complained of illness or died with Covid-19 symptoms over the past year. In general, the Batin Sembilan, who still live a nomadic way of life in the forest, will come to the Meranti guard post if something happens to their family. Since the outbreak of the pandemic, Hutan Harapan's Besamo Health Clinic has not received any complaints of Covid-19 symptoms from the community groups in the forest areas.

There are eight Batin Sembilan families (49 people) who lead a nomadic way of life in Hutan Harapan. According to Bi Mala, a semi-nomadic Batin Sembilan woman, who is aware of the dangers of Covid-19, living in a forest area makes them safer and more comfortable. "We are safe in Hutan Harapan, there is no corona." (HOS)





Securing the Hutan Harapan Landscape Through Partnerships

When viewed from a satellite image, Hutan Harapan is an “island” of lowland forest in a “sea” of commodity plantations. But upon closer inspection, the broader landscape is made up of overlapping ecological, social and economic activities and values. The “Hutan Harapan Landscape” provides a variety of services to society; biodiversity, food, water, shelter, livelihoods, economic growth, and human well-being. Given that all these services are interlinked, as demand for agriculture and plantation production in the landscape increases for example, it will have repercussions for the area covered by forests in Hutan Harapan.

In recognition of the interconnectedness of the Hutan Harapan Landscape, PT REKI’s landscape management plan seeks to bring together neighbouring concession holders to improve the protection and security of the remaining lowland forests of Sumatra, as well as to save the biodiversity of Hutan Harapan. In the second half of 2020, PT REKI (REKI) signed a memorandum of understanding (MoU) with two companies that share a common border with Hutan Harapan, PT Berkas Sawit Utama (BSU) and APP Sinar Mas. The signing parties agreed to: protect forest areas and biodiversity through joint patrols, prevent forest and land fires and illegal activities in forest areas; develop and manage areas of high conservation value (HCV) and; share innovative restoration practices. It is hoped that with this MoU, the companies can work together to ensure zero burning, reduce forest clearing, and save biodiversity in Hutan Harapan landscape. It is expected that these MoUs will serve as a model for developing partnerships with other neighbouring concessions.

At the MoU signing ceremony with PT BSU in August 2020, the President Director of PT REKI, Mangarah Silalahi, emphasized the importance of this cooperation for saving and restoring the remaining lowland forests of Sumatra, especially Hutan Harapan. “Hopefully our common goals for the future, such as zero burning, can be achieved along with minimizing illegal activities and saving high-value conservation areas. For the long-term sustainability of the landscape it will be necessary to restore the degraded areas for biodiversity and to boost food security,” said Mangarah.

In addition to the MoUs with these two companies, PT REKI has also signed MoUs with other companies and organizations as part of its vision for creating a sustainable multifunctional landscape. Companies such as PT Systemiq (P4F), PT Java Agro Species, Bagrotec, and PT Hoktong-Halcyon Group, are all working with PT REKI on different dimensions of business development. Hutan Harapan also collaborates with Hutan Kita Institute-Palembang, WARSI-Jambi, PRANA, CRU-IBCSD, IMN and Walestra to facilitate community economic development, conflict resolution, and social forestry. “We are very open to working with other parties because we believe that by working together we can save Hutan Harapan, which is an important national asset that needs to be left to our children,” Mangarah concluded. (HOS)

Hutan Harapan: Protecting Water Sources and Preventing Floods in South Sumatra and Jambi

Hutan Harapan’s rich water resources form the base of its diverse ecosystems and biodiversity. The rivers in Hutan Harapan are a source of life for the Batin Sembilan Indigenous People and the Melayu people. For Modot (23), a Batin Sembilan, the Lalan River is a special place because it is so peaceful and serene. “When I was a kid, I saw a tiger drinking in this river. Such an experience cannot be repeated. We usually see bears and deer drinking in the Lalan River.”

Hutan Harapan’s water resources play an important role not only in Hutan Harapan, but beyond its boundaries as well. Hutan Harapan acts as a buffer zone for four sub-watersheds; Kandang and Lalan rivers in Jambi and the Meranti and Kapas rivers in South Sumatra. Hutan Harapan regulates water flows and acts as a guardian of both water quality and quantity both inside and outside the area. In particular, the Meranti and Lalan rivers which flow into Batanghari Leko watershed, which are located upstream from the Sekayu sub-district. “If Hutan Harapan is damaged, Sekayu sub-district and other sub-districts will be flooded,” said Deputy Regent of Musi Banyuasin, Beni Hernedi during his working visit to Hutan Harapan in November 2020.

Overtime, each river has formed its own network of tributaries, lakes, marshes, and bank vegetation. They not only protect wildlife, such as tigers, elephants and Sun bears that seek refuge around rivers but also hundreds of amphibian and reptile species that depend on water catchments for their survival. In 2018, a total of 123 Sumatran endemic fish species were identified during a survey conducted by the University of Jambi (UNJA) and Hutan Harapan researchers.

In the last three years water quality in Hutan Harapan has remained stable. Research results in 2020 found that the annual value of sedimentation is stable in the Meranti, Kapas, and Lalan rivers. Also, water temperature and pH indicate optimal conditions for the growth of aquatic life.

Although there are is much to be optimistic about the water quality of the Meranti, Kapas, and Lalan rivers, the changes taking place along the Kandang river call into question the long-term health of the river. The riparian forests in this area have been replaced by food crops and oil palm leaving the river banks exposed, resulting in sedimentation. “This condition greatly affects the animal population and also increases soil erosion that causes flooding,” said Elva Gemita, Manager of Environment, Research and Development. Elva emphasized the need for protection and rehabilitation of riverbanks together with the community, private sector, government and other related parties. Protecting rivers and ensuring Hutan Harapan’s role as a buffer zone for the four sub-watersheds is very important, so that Jambi and South Sumatra are free from large floods such as those that have occurred in South Kalimantan and DKI Jakarta. Let’s protect Hutan Harapan! (Rohmat Eko S)