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Mongabay Series: [Asian Rhinos](#)

Indonesia teams up with Germany on Sumatran rhino breeding efforts

by **Basten Gokkon** on 3 June 2022

- *Indonesia and Germany will team up on advancing the science and technology for captive-breeding of critically endangered species in Indonesia, starting with the Sumatran rhino, to save them from extinction.*
- *The agreement, signed in May between Indonesia's Bogor Institute of Agriculture (IPB) and Germany's Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW), will see a new center for assisted reproductive technologies and a bio bank established at IPB.*
- *The initiative between the two research institutes also welcomes government officials, scientists, NGOs and private sector experts from around the world to get involved.*
- *Indonesia is the last refuge for the Sumatran rhino, whose total population may be as little as 30 individuals.*

JAKARTA — Indonesian and German scientists are collaborating on assisted reproductive technologies for critically endangered species, with a primary focus on pulling the Sumatran rhino from the brink of extinction.

Indonesia's Bogor Institute of Agriculture (IPB) and Germany's Leibniz Institute for Zoo and Wildlife Research (Leibniz-IZW) signed the collaboration agreement in May. It calls for establishing a center for assisted reproductive technologies, or ART, and a bio bank, or store of genetic resources, at IPB, according to an [official statement](#). It added the first joint conservation science project will be to save the Sumatran rhino (*Dicerorhinus sumatrensis*), a species that now can only be found in Indonesia and is down to as few as 30 individuals.

“The Sumatran rhinos are now on the brink of extinction, so we have to act very fast,” Steven Seet, head of science communication at Leibniz-IZW, told Mongabay in an online interview on May 27. “What we can't do is trial and error because the material is too precious, and as we're working against time, we have to take the opportunity to save the species.”



The wild population of the rhinos is scattered across small, fragmented pockets of forest on the islands of Sumatra and Borneo. The species once ranged throughout continental Southeast Asia, but rampant poaching, deforestation and a climate change decimated its population and shrank its range. Experts also [say](#) a low birth rate and reproductive woes among the rhinos have added to the challenges of sustaining natural breeding in the wild.

The Indonesian government has prioritized rescuing wild rhinos to put them in sanctuaries for a captive-breeding program. Today, Indonesia has nine Sumatran rhinos in two sanctuaries: eight in southern Sumatra's [Way Kambas](#) and one in the [Kelian forest in eastern Borneo](#). A third facility is currently being developed in [the Leuser ecosystem](#) in northern Sumatra, which is touted by experts as the most promising habitat for wild rhinos.

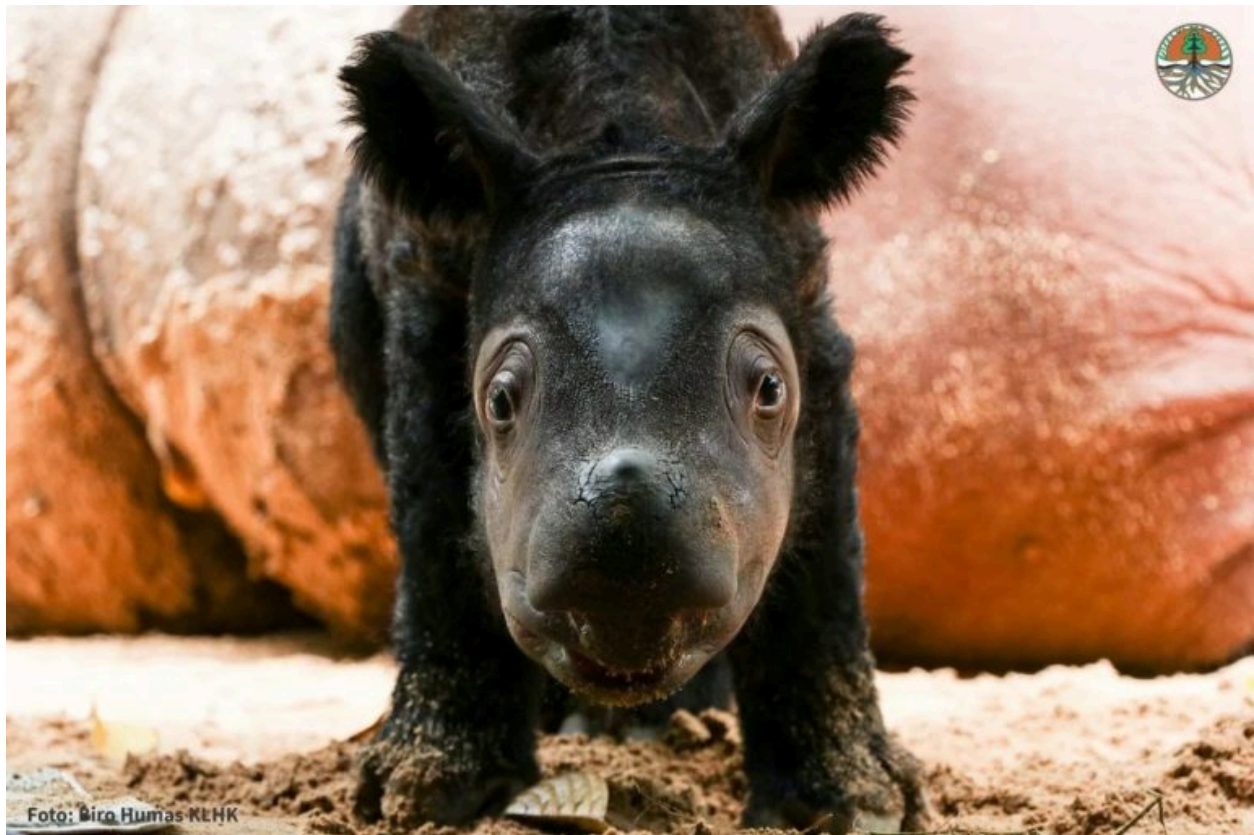
Although the newly inked agreement is between IPB and Leibniz-IZW, the initiative also welcomes government officials, scientists, NGOs and experts from the private sector from around the world to get involved, said Muhammad Agil, head of the hormone analysis laboratory at IPB.

“All ART activities will be done in Indonesia,” Agil told Mongabay in the same interview. “Until we come to the end and we cannot do anything because we don’t have the capacity and capability, then we will need [outside] help.”

Agil also noted that both Indonesia and Germany were signatories to the Nagoya Protocol on the Convention of Biological Diversity (CBD), which regulates the exchange of specimens of protected species. He said that the ART and bio bank applications were also in line with Indonesia’s 2018 Emergency Action Plan on the Sumatran Rhinoceros.

“The main goal is how we can successfully produce embryos, produce induced pluripotent stem cells, and then do other advanced research for the long term on how we can produce egg and sperm from stem cells,” Agil said. “This will be the stepping stone that we will achieve.”

A previous plan to send rhino sperm samples from Indonesia to Malaysia failed to take off, after the Indonesian government balked at Malaysian requests that artificial insemination efforts be carried out in Malaysia. In August 2019, Indonesia’s environment ministry said the two countries had [agreed on a new partnership](#) that would see eggs shipped from Malaysia for in vitro fertilization (IVF) attempts in Indonesia. However, the paperwork to finalize the deal was never completed, and the rhinos in Malaysia [went extinct](#) in the wild and in captivity later that year.



Agil said the next step after the signing of the agreement with Leibniz-IZW will be a two-week workshop between the scientists and government officials in Jakarta in August to discuss further activity details, objectives and a timeline.

“From our perspective, this collaboration will not only be for two or five years, but it’s for a long period because science and technology will develop very fast and we have to catch them all in one bucket,” he said.

Seet of Leibniz-IZW said the collaboration would also benefit other critically endangered species in Indonesia, with plans to develop more conservation science projects.

“Our institution in Germany is dedicated to wildlife research. Our institution has a lot of specialists in birds, bats and mammals,” he said.