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Is anyone going to save the Sumatran rhino?

Time is running out for this Critically Endangered species. So why aren't we doing more? BY [JEREMY HANCE](#) ON 9 NOVEMBER 2017

Mongabay Series: [Asian Rhinos](#)

- *As the Sumatran rhino's population dwindled, conservationists were locked in a debate about whether resources should be directed toward captive breeding or protecting wild populations.*
- *With captive breeding efforts showing success, and wild populations becoming non-viable, the pendulum has swung in favor of captive breeding.*
- *Experts agree that action is needed now more than ever, but any steps rely on support from the Indonesian government.*

This is the third article in our our four-part series "Is Anyone Going to Save the Sumatran Rhino?" [Part One](#), looked at how many rhinos remain in the wild and [Part Two](#) focused on Bukit Barisan Selatan National Park and the Rhino Protection Units.

WAY KAMBAS NATIONAL PARK, Indonesia — Five-year-old Andatu pushes his head between the iron bars and whistles at me, a sound like a dolphin greeting. He pulls back and snorts, expelling a puff of rhino breath. He's telling me he's impatient; he's hungry. Behind me, keepers are preparing a meal of fruit and plants for him. The head veterinarian at the Sumatran Rhino Sanctuary (SRS), Zulfi Arsan, tells me that Andatu is smelling me — here I am, a new human, a new bipedal smelly-being, in his territory.

Andatu is the hope for the future of this species. He was born in 2012, the first baby rhino at this sanctuary — and the first Sumatran rhino (*Dicerorhinus sumatrensis*) ever born in captivity in Indonesia. But the hope that Andatu and his younger sister, Delilah, represent is currently outweighed by the dire state of their species as a whole.



Andatu has a breakfast of watermelon after being checked by keepers. Officials are discussing how to best utilize him to aid the dwindling population. Photo by Jeremy Hance for Mongabay.

Official numbers put the number of Sumatran rhinos left in the wild at around 100, clumped in four locations across Sumatra and Indonesian Borneo. But nearly every expert I talked to said that was no longer the case. No one knows for sure how many are left, but the best-case scenario for the wild population would be around 90 and [the worst-case 30](#). And the population continues to decline.

If the Sumatran rhino goes extinct — an increasingly likely proposition despite decades of desperate conservation efforts — it would not just be the loss of a species, but an entire genus. The Sumatran rhino is the only surviving species in the Dicerorhinini group that evolved 15 million to 20 million years ago. It is a living relic, an echo of a past family of rhinos that once roamed the entirety of Eurasia, and the only living relative of the woolly rhino, which humans hunted to extinction 10,000 years ago.

And Sumatran rhinos, at least in my view, are the most easily lovable of the world's rhinos: they are small (for a rhino), weirdly hairy, and the most vocal of all rhino species, making numerous cetacean-like sounds that have been little studied. It's impossible to meet a Sumatran rhino and not feel a tug toward this shy forest wanderer.

The SRS Model

I spent a full day as a guest of the SRS, where I get to meet five of the seven rhinos cared for here. Despite the species' grim prospects, the SRS is brimming with hope and joy. I happened to be there for the birthday of Andalas, the father of Andatu and Delilah. There was singing, photos, banners and a massive cake made up of tropical fruits, while patriarch Andalas snorted and whinnied in the background.

The team has every reason to be proud. They've had two rhino births in five years. And they are working hard on more.

As part of this optimism, the SRS is expanding deeper into the lowland forest of Way Kambas National Park, on the eastern coast of Sumatra. The expansion will add 100 hectares (247 acres) to the sanctuary's current 120-hectare (297-acre) expanse. It will also include room for a laboratory and more quarters for visiting researchers. Most importantly, according to experts, the new area will include a larger paddock where they will move Andatu. It's hoped that in this larger and more natural environment, Andatu's presence might be able to attract wild female rhinos from the adjacent forests of Way Kambas National Park.

Sitting in the meeting room at the SRS, Bibhab Talukdar, chair of the IUCN SSC Asian Rhino Specialist Group, told me the facility has "changed the whole concept of conservation breeding" in Indonesia. The government has been so convinced by the work going on here that the SRS has been named a model for future captive-breeding efforts in the country.



Andatu, who made history as the first captive born Sumatran rhino in Indonesia when he was born in 2012. Photo by Jeremy Hance for Mongabay.

But the SRS has one glaring drawback today: “We need new blood,” head veterinarian Zulfi tells me several times.

What he means is that most of the rhinos here are directly related, including all three of the males: the father-son pair of Andalas and Andatu, and Harapan, Andalas’s brother. This means any new offspring will share the same bloodline. The SRS may be able to breed more rhinos, but it won’t be able to support a long-term population due to a lack of genetic diversity.

Moreover, if the SRS, or the captive population, is truly to serve as a buffer population against extinction, more rhinos are desperately needed. A 2015 population viability analysis ([pdf](#)) found that Sumatran rhino populations need at least 15 breeding animals to be considered at all viable. Today, nine rhinos are held in captivity: seven at SRS and two in Sabah, in Malaysian Borneo. Only two, Andalas and Ratu, have so far proven capable of breeding.

Without more rhinos — without “new blood” — it’s very possible the population in captivity could dwindle to extinction. In 30 years, siblings Delilah and Andatu could be the last of their kind, much like the African northern white rhino today, represented by just three aging individuals. Already, recent years have seen the loss

of several captive rhinos, including females Puntung, who was [euthanized this past June](#) at the age of 25, and Suci, sister to Andalas and Harapan, who died at just 10 years old. But as troubling as the situation is here, the case in the wild is far worse.

New Consensus

In 2015, Wulan Pusparini, a scientist at the Wildlife Conservation Society, and other rhino experts wrote a survey of Sumatran rhino populations [published in the journal *PLOS One*](#).

“It was still quite optimistic,” she said, “but then that paper was published and over the years we saw what was happening — and I’m not that optimistic anymore.”

The paper concluded that doing nothing would result in the rhino’s extinction. Yet to date, none of the paper’s recommendations have been fully enacted.

With numbers in the wild possibly down to just a few dozen, action is needed now more than ever. According to most experts, two populations — in Kalimantan, Indonesian Borneo; and Bukit Barisan Selatan, in southern Sumatra — are no longer viable in the long term. The other two populations — in Way Kambas and Leuser, in northern Sumatra — are at best barely viable, with no hard proof whether they are increasing or decreasing.

At worst, even these are already-doomed populations inching toward local extinction every day, as reproductive problems exacerbated by poaching and snaring take out the population, in a repeat of what happened in Sabah — and prior to that in Bangladesh, India, Thailand, Vietnam, Laos, Myanmar, China and the Malaysian peninsula.

But the debate over what to do about the Sumatran rhino has been stuck between two narratives for decades, impeding progress. The first school of thought is that active, aggressive protection in the wild is what is needed — combating poaching and snaring, and protecting surviving populations.

The second approach, though, dismisses this entirely. What it proposes, instead, is to gather as many rhinos as possible into institutions like the SRS for a captive-breeding bonanza. In short, make more babies, whether through natural means (as with Andalas and Ratu), or via fertility treatments such as IVF.

John Payne, the head of the Borneo Rhino Alliance, sums up the second argument when he bemoans all the money, time and effort spent — a “misguided waste” — on trying to monitor and survey rhino populations.

“Why bother to count, when the imperative is only to breed?” he asked.



Rangers on patrol in Way Kambas National Park. Photo by Rhett A. Butler/Mongabay.

The species' plight is punctuated by how difficult it is for Sumatran rhinos to reproduce. As is common among massive mammals, Sumatran rhinos are slow breeders. Females aren't sexually mature until the age of 4, and males not until 7 — which leaves a lot of time to have to survive poaching attempts, snares and human-started fires. Gestation time is a marathon 15 to 16 months, and juveniles stay with their mothers for several years. Making it even more difficult, Sumatran rhinos are induced ovulators, which means females must have contact with males in order to ovulate, the exact process of which is still mysterious.

“[Sumatran rhinos have a] ‘use it or lose it’ syndrome going on,” says Susie Ellis, the head of the International Rhino Foundation (IRF), which helps manage the SRS. “If [females] don't get pregnant and breed, they lose the capacity to do so.”

As their numbers dwindled over the years, females found fewer males around, leading them to increasingly develop cancer from a lack of mating. Once stricken with cancer, they essentially became unable to breed.

Yet the debate on what approach to take raged on for years. On-the-ground protection and monitoring continued, but likely never at the level that was required. This year alone, for instance, officials in northern Sumatra have [twice found rhino](#)

[horn being traded](#). Meanwhile, most, if not all, populations continue to decline, while calls for more rhino captures have been largely ignored.

“Some decision has to be taken. It’s time. You have to either go this way or that way,” said Talukdar. Both captive breeding and intensive protection in the wild have pros and cons, he said, but sitting idle definitely won’t help. “It’s the time to take drastic steps, proactive steps to save the species.”

A shift is occurring, at least among rhino experts. Nearly all 15 experts I spoke with agreed that it was time, or long past time, to start catching rhinos from the wild and bringing them to the SRS, or building more SRS-like institutions to hold wild rhinos. Most supported taking all the rhinos out of Kalimantan and Bukit Barisan Selatan, as well as capturing some breeding individuals from Way Kambas or Leuser for greater diversity.

The idea of saving a large mammal through the captive breeding of a very small population does have precedent. Perhaps the best example is the European bison, which was saved from total extinction by the work of zoos. From just 12 founding animals, the [population has grown to more than 5,000 today](#), and the species has been reintroduced through Eastern Europe.

The consensus on capturing more rhinos is new. Payne told me “the whole idea of capture was really resisted by almost everyone in Indonesia until around May this year.” It was a meeting that month in Jakarta that really turned heads, Payne said, and convinced many that it was time to catch more rhinos. Dubbed the International Workshop on Capture and Translocation of Indonesian Sumatran Rhinos, the meeting ended with experts deciding that all rhinos should be quickly captured from Bukit Barisan Selatan and Kalimantan, along with fertile rhinos from Way Kambas. These recommendations were then passed on to the Indonesian government.

“What I can say is the situation is still grim for the Sumatran rhino,” said Widodo Ramono, the executive director of local rhino conservation NGO YABI. “It is our decision, not my decision. We have to gather all the rhinos that we have and try to make them close together.”

Widodo noted that putting the rhinos “together” didn’t necessarily mean in a sanctuary like the SRS. In cases like Way Kambas or Leuser, it could be in an “intensive management zone”, an area of the park where the rhinos are consolidated and any disconnected individuals brought in. The management zone would then be heavily protected and surveyed. But Widodo also agreed with the meeting’s recommendations that the rhinos of Kalimantan and Bukit Barisan Selatan should be removed to sanctuaries for captive breeding.



Zulfi Arsan, head veterinarian at the Sumatran Rhino Sanctuary, hand feeds Andalas. Photo by Jeremy Hance for Mongabay.

Wulan from the WCS also agreed it was time to start capturing rhinos. But she added it shouldn’t have ended this way.

“They said in the 1980s captive breeding is the only way to save the species, and here we are in 2017 and you are right, captive breeding *is* the only way to save the species, but only because we didn’t put any effort in[to saving] the wild population back then,” she said. The money that went into captive breeding in the ’80s could instead have gone to support more rangers and provide better training for them, she argued. “Protection in the wild is not as expensive as high-tech captive-breeding program. Now they say ‘See, captive breeding is the only solution.’ And yeah, of course, you are right — *now*.”

Whatever the counterfactual might be, the reality now is that the best chance for the Sumatran rhino to survive over the long term — and arguably its only chance — is by having a strong, large captive-breeding population. An insurance population is necessary to make sure the species doesn't go the way of its cousin, the woolly rhino. But that will require more rhinos from the wild.

“Minimally, we probably need about 20 breeding adults,” said Ellis, emphasizing that these rhinos must be capable of reproducing. “SRS needs to be a breeding center, it cannot be a retirement home.”

But even as a consensus appears to have been reached, nothing is happening. What's the delay? Nearly everyone I spoke to said they were waiting for one thing: the government.

Continue to [Part Four](#) of this series, which explores the Indonesian government's role in rhino conservation.



A billboard marking the entrance to the SRS, located on the edge of Way Kambas National Park. Photo by Jeremy Hance for Mongabay.

Banner image: a rhino in a forested enclosure at the SRS. Photo by Rhett A. Butler/Mongabay.

