

<https://news.mongabay.com/2017/11/worst-case-scenario-there-could-be-only-30-wild-sumatran-rhinos-left/>

Worst-case scenario: There could be only 30 wild Sumatran rhinos left

Nobody knows exactly how many Sumatran rhinos survive in the wild. But the numbers aren't looking good.

BY JEREMY HANCE ON 7 NOVEMBER 2017

Mongabay Series: Asian Rhinos

- *In 1986, scientists estimated there could be as many as 800 Sumatran rhinos left. That fell to 400 in 1996, then 275 in 2008.*
- *Today the official estimate is 100 rhinos, but almost all experts believe that figure is overly optimistic.*
- *Adding up the minimum estimate for each of the four known wild populations yields a total of just 30 wild Sumatran rhinos left on earth, plus another nine in captivity.*

This is the first article in our four-part series “Is Anyone Going to Save the Sumatran Rhino?”

WEST JAVA, Indonesia — As we sit cross-legged at a restaurant in Java over plates of local delicacies — cow brains, avocado juice and dried fish you eat whole — Haerudin R. Sadjudin tells me a little about his life. Lanky, weathered, with a welcoming demeanor and an open smile, Haerudin, 62, started studying rhinos — both Indonesian species, the Sumatran and the Javan — in 1975. I tell him he's been doing this job longer than I've been alive.

Haerudin, program manager at local rhino NGO YABI, has had the pleasure of seeing Javan rhinos (*Rhinoceros sondaicus*) 31 times in the wild. He's been attacked by them three times, including once when he had to abandon his canoe and cling to a tree. But this isn't what really takes my breath away. He's actually seen Sumatran rhinos (*Dicerorhinus sumatrensis*) in the wild — but only once in his 40-plus years of studying the animal.

This highlights just how endangered the Sumatran rhino has long been. Already by the 1970s they were virtually impossible to encounter. And today they are so rare, so nearly lost, as to be almost mythical: they've become like the Tasmanian tiger in the 1920s or Stellar's sea cow in the 1760s.

The world knows exactly how many Javan rhinos are left: 67, including four calves this year. We know this because of consistent surveys using camera traps, and because all the Javan rhinos survive in a single park, Ujung Kulon. Despite such a small population, the Javan rhino is still far better off than the Sumatran today. Its population is stable, even growing every year.

By contrast, the Sumatran rhino is vanishing before our eyes, and we have no idea how many have disappeared or how many are left to lose.

In 1986, the same year the species was added to the IUCN Red List as Endangered, scientists believed there were 425 to 800 Sumatran rhinos left on Earth. In 1996, when the species was listed as Critically Endangered, that number dropped to 400. Then, in 2008, the estimate fell to 275. Just seven years later, the official figure became 100 individuals, nearly two-thirds lost just like that.

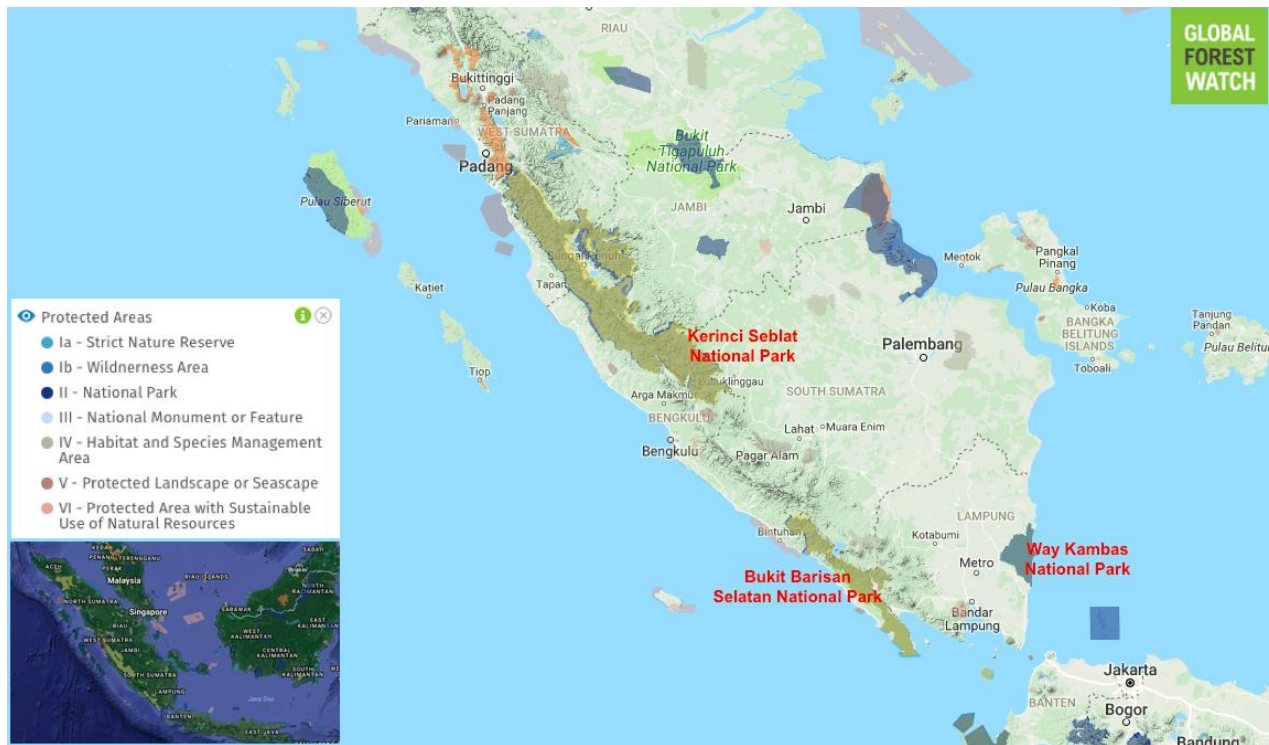
As grim as that figure is, the reality is likely much bleaker.

Most experts believe even 100 rhinos is an overestimate. Despite millions of dollars spent on studying and trying to conserve this species, not one of the 15 experts I interviewed could tell me with any real confidence how many Sumatran rhinos are left in the wild.

“It is very difficult to count Sumatran rhinos ... because of the terrain, because of its behavior,” said Bibhad Talukdar, chair of the IUCN SSC Asian Rhino Specialist Group. “The species has definitely declined. It is a great cause of worry.”

Today, Sumatran rhinos are split into four distinct populations. There’s a group in Way Kambas National Park on the eastern coast of southern Sumatra, and another directly opposite in Bukit Barisan Selatan National Park on the western coast. There’s also a population in northern Sumatra, in the Leuser wilderness of Aceh. And, finally, a recently uncovered population in Kalimantan, across the sea on the Indonesian portion of the island of Borneo.

Scientists have spent decades trying to capture accurate numbers of these distinct populations, with little success.



Two of the remaining Sumatran rhino habitats, Way Kambas and Bukit Barisan Selatan National Parks, lie on opposite coasts at the south of Sumatra Island.

### Bukit Barisan Selatan National Park

“Controversial,” is how Haerudin described the number of rhinos at Bukit Barisan Selatan.

The official estimate of the number of rhinos surviving in the park is 17 to 24. Several experts cite those figures, but then go on to say it is likely inaccurate. Most reckoned it is fewer than 10.

The highest estimate I heard, aside from the official figure, was a minimum of 12 rhinos, from Arief Rubianto, manager of the Rhino Protection Units (RPUs). Operating in both Bukit Barisan and Way Kambas, RPUs are charged with safeguarding and monitoring the rhinos. They are funded largely by the International Rhino Foundation (IRF).

Haerudin gave a slightly different, but still optimistic, view: 15 or fewer. Arief and Haerudin base these estimates on rhino signs collected by RPUs in the field, such as footprints, dung and wallows. However, many experts no longer believe the results of these surveys.

John Payne, the director of the Borneo Rhino Alliance (BORA), said the only solid evidence he's seen of rhinos in Bukit Barisan are camera trap photos from 2014 that showed just one or two rhinos.

"[Those individuals may] have died of old age or cancers by now," he noted. According to Payne, who watched this species go extinct in the wild in Malaysian Borneo, the Sumatran rhino may now be extinct in Bukit Barisan too. Indeed, camera traps dispersed throughout the park have failed to record any rhinos since 2014.

Best case scenario: **12** to **15** rhinos left. Worst case: **Gone**.

For more on the controversy in Bukit Barisan Selatan see the [next article](#) in this

## Kalimantan

In 2013, WWF made an astonishing announcement: they had discovered a remnant population of Sumatran rhinos surviving in Kalimantan. They went on to announce that they had found approximately 15 rhinos.

Last year, WWF-Indonesia successfully captured a female rhino there, but she died in the care of WWF staff during a rescue that was [heavily criticized](#).

With one rhino dead, the number in Kalimantan ticks down to an official estimate of 14.

However, both Payne and Haerudin said they'd never seen evidence of more than three rhinos — or just two today. Payne said the WWF report on the discovery in Kalimantan confirmed just three rhinos, "but the authors managed to inflate that to 15."

Haerudin concurred. He said camera traps confirmed the presence of a female and her calf. But what happened to the male that sired the calf?

"Maybe poached," he told me.

Of course, it is not impossible there are other rhinos in Kalimantan. WWF has publicly maintained that there are other solitary individuals and the organization is currently building a facility in Kalimantan to house rhinos it plans to catch.

However, WWF did not respond to queries asking if they had evidence of more than two rhinos.

Best case scenario: **14**. Worst case: **Two**.



Sunset in Way Kambas National Park in Lampung province, Sumatra. Photo by Rhett A. Butler/Mongabay.

## Way Kambas

Experts pointed to either Way Kambas National Park or Leuser National Park as the greatest hope for survival of the Sumatran rhino in the wild.

At the positive end, some experts believe there is a population of 30 or even more rhinos in Way Kambas. Boosting hopes is the fact that this population is still breeding: YABI has photos of calves from this year taken by RPUs using handheld cameras. A number of experts believe the population here is growing, in contrast to the overall population.

Still, the number of rhinos showing up on camera traps is declining in Way Kambas.

Arief said this is because the rhino population is consolidating in remote areas to avoid ongoing disturbance and encroachment by humans, including illegal deforestation, poaching and fires.

But not everyone believes this. Some researchers ask: if there are so many rhinos, why are so few showing up on camera traps?

Way Kambas is not only patrolled by the RPUs, but also the Wildlife Conservation Society's Smart Patrols. And the Smart Patrols are finding little sign of rhinos — but lots of elephants killed by poachers.

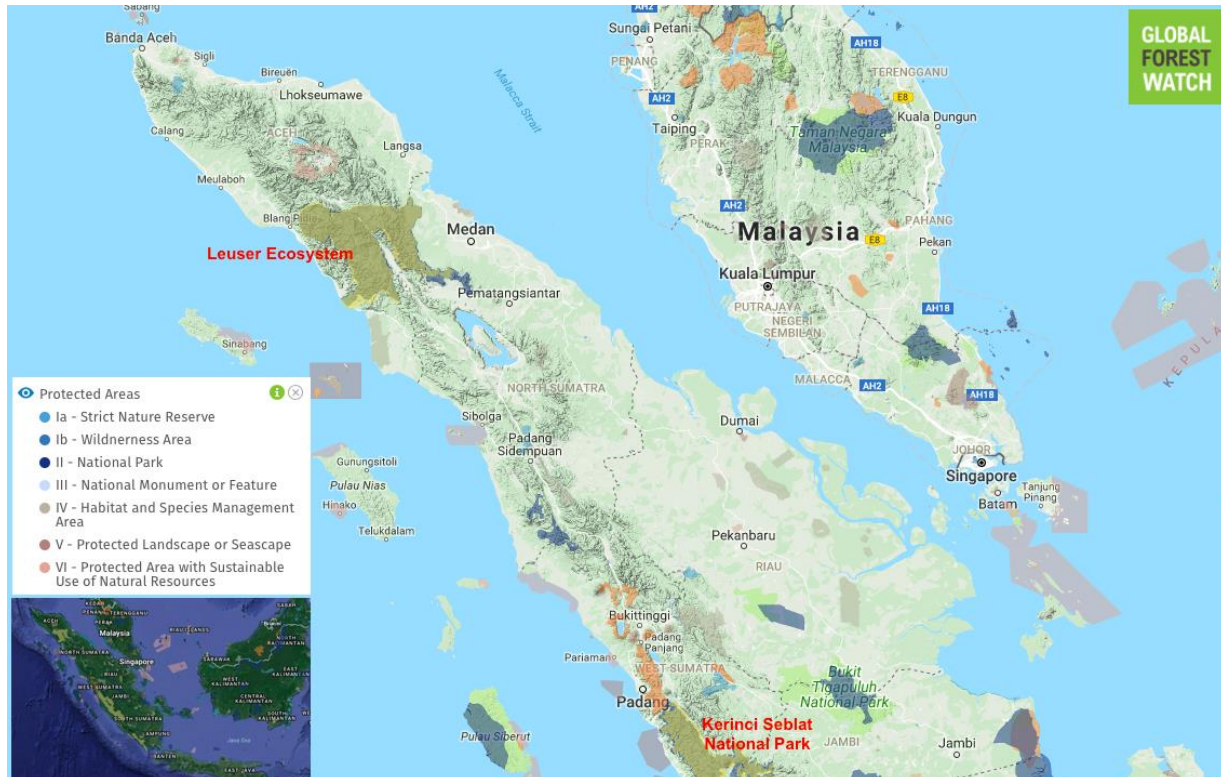
“Last week ... we found another two [dead] female adult elephants,” said Wulan Pusparini, a conservation scientist with the WCS. “It’s a very small park, and the elephant is dying off. So what’s the situation for rhinos whose horns are [more]



valuable than the ivory?" If elephants are vanishing from Way Kambas, it stands to reason that rhinos are also being targeted.

Payne said that based on the evidence he's seen, Way Kambas has at best 12 rhinos, perhaps fewer. There may be a couple of females still capable of birthing, but that doesn't mean the population is viable.

Best case scenario: **30-plus**. Worst case: **12**.



Gunung Leuser National Park is part of the Leuser Ecosystem, in Aceh province in northern Sumatra.

## Leuser National Park

In political terms, Gunung Leuser National Park is a different world. Located in the northern Sumatran state of Aceh, the rhinos here fall under a different jurisdiction than those in the south.

Depending on who you talk to, Leuser is either the best chance for long-term survival, or a disconnected, scattered population, harried by poachers.

"The biggest unknown," Payne said. "A few tens. Maybe. That's all one can say."

On the optimistic side, conservationists appear to have more recent camera-trap photos of rhinos in Leuser than anywhere else. From these, they've identified at

least 12 individuals. Wulan and Payne both believe that Leuser, not Way Kambas, is the most promising place for wild Sumatran rhinos.

But Haerudin said that ongoing uncertainty means it is possible there are fewer than 15 left. He also said poaching here was worse than anywhere else.

“We just don’t know about the north, we just don’t really know about Leuser because of the rocky terrain and the mountainous habitats,” said Susie Ellis, the director of the IRF. “It’s just a tough place to do surveys.”

Worryingly, this year [two rhino horns were confiscated](#) from suspected poachers in northern Sumatra.

Best case scenario: **30-plus**. Worst case: Fewer than **15**.

### Captivity

The only Sumatran rhinos that are easy to count are those in captivity. Currently there are two rhinos, a male and a female, at BORA’s facility in Sabah, Malaysian Borneo. There are another seven rhinos at the Sumatran Rhino Sanctuary, just inside Way Kambas National Park. Two of the rhinos are young: Andatu was born in 2012 and Delilah in 2016. They represent an insurance policy, however feeble, against immediate extinction.

Total in captivity: **Nine**.

### Sabah and Kerinci Seblat National Park

Sumatran rhinos once spanned Southeast Asia, roaming all the way from the Himalayas of Bhutan and India to southern China and down to the Malayan peninsula. They are gone now, all gone — populations winking out one after another over the centuries.

In 2015, Sabah was confirmed as the [latest place to lose the rhino](#). Six years earlier, experts had estimated there were 34 rhinos remaining in Sabah. They were completely wrong.

“By the time captures start[ed] we only realized there [were] four or five,” Talukdar said. There probably hadn’t been 30-plus rhinos in Sabah for a long, long time.

Today, Sabah’s long genetic history is represented by just two individuals at a captive breeding center. Only they can’t breed naturally: Tam has poor sperm, while Iman has tumors in her uterus likely caused by a life without sex.

Payne believes Sumatran rhino numbers have been chronically overestimated. And he has worked with this species in Sabah for decades.

“When I look back at the details of Sumatran rhino number estimates since [the] 1970s, I see that people found a minimum number present, assumed they have missed some rhinos in the same area, and assumed there are a similar number of rhinos in places they have yet to look,” Payne explained. “So you find, say, three rhinos, assume there are probably six there, and double that to twelve on the assumption there are some rhinos in other places.”

This is what happened in Sabah — and probably other places as well.



A female rhino wallows in mud at the SRS. Traces of this behavior are among the signs researchers look for when trying to identify areas populated by rhinos. Photo by Rhett A. Butler/Mongabay.

“Sumatran rhinos are big and distinct. It is easy to find their signs if they exist. If you do not find signs, then there are no rhinos. Simple. They are *not* difficult to find,” Payne said.



In other words, he thinks it's unlikely researchers were ever missing rhinos — yet they kept assuming they were and estimated accordingly. And a certain amount of wishful thinking may have played a role. It's not easy to watch a species go extinct. It's far easier to convince oneself that a situation may be grim, but not hopeless; hopeless is hard to stomach.

Malaysia isn't the only place with overestimated numbers; it's been happening in Indonesia for years too.

In 1990, experts estimated that Kerinci Seblat National Park, on the western coast of Sumatra, north of Bukit Barisan Selatan, was home to upward of 500 rhinos — the largest stronghold for the species. In 2004, experts announced it had gone extinct there. Completely wiped out. The species probably didn't decline from 500 to zero in just 14 years; rather, the estimate of 500 was likely wrong to begin with.

“All I can say is, everyone, including me ... always overestimated numbers, historically,” Payne said. “We find, every time, they've turned out to be fewer than any of us thought.”

Making the whole thing more difficult, and even ridiculous, is the fact that wildlife groups don't share their data with each other. This lack of openness is one of the reasons estimates of wild populations vary so greatly. Several times I was told information was kept under wraps due to fears of poaching — a legitimate concern when releasing information publicly — but why would that stop researchers from sharing basic data with fellow scientists?

[ ]  
[SEP]

[ ]  
[SEP]

### Minimum confidence number

Almost no one believes there are a hundred Sumatran rhinos left. Those citing that number always refer to it as the official tally and not the real one. The lowest total I heard from experts was 50 to 60 animals left in the wild. This is hardly unrealistic, given the stories I was told.

However, looking at the lowest estimates I heard for each site, rather than a global total, the population is potentially even smaller. The most pessimistic scenario: 30 wild rhinos (the most optimistic, around 90).

“Let us think about the minimum number where we are confident,” Talukdar said.

He estimated fewer than a hundred but didn’t want to speculate beyond. But his point still stands: If we assume the worst-case scenario, instead of the best, as has been done in the past, things change quickly.

A 2015 population viability analysis ([pdf](#)) found that even without human-generated threats like poaching, Sumatran rhino populations faced “high rates of extinction” if their numbers fell below 15 breeding or 40 non-breeding animals. This means none of the current sites are secure: Way Kambas and Leuser have the best chances long-term, but only under optimistic scenarios. Under worst-case scenarios, all four population groups face immediate risk of extinction. And those nine rhinos in captivity? Not nearly enough, given that only two have successfully bred.

It is clearer than ever that aggressive action, such as quickly catching rhinos in the wild to bring them into breeding centers, is necessary to ensure the species survives — if not in the wild, at least in captivity, with hopes one day it could be returned to its jungle home. Indeed, the worst-case scenario seems to leave open only two options: catch rhinos for captive breeding, or stand by and watch as the species goes extinct.

Currently, officials appear to be choosing the latter.

[Continue reading Part Two](#) of this series, focusing on Bukit Barisan Selatan National Park.



Way Kambas National Park in southern Sumatra is one of the last remaining areas inhabited by wild Sumatran rhinos. Photo by Rhett A. Butler/Mongabay.

#### MAP DATA:

- IUCN and UNEP-WCMC, The World Database on Protected Areas (WDPA) [On-line], September, Cambridge, UK: UNEP-WCMC. Available at: [www.protectedplanet.net](http://www.protectedplanet.net). Accessed through Global Forest Watch in November 2017. [www.globalforestwatch.org](http://www.globalforestwatch.org)

*Banner image: Harapan, age ten, eating in his natural enclosure at the Sumatran Rhino Sanctuary. Photo by Jeremy Hance for Mongabay.*