

Rhino Conservation: A Glass Half-Empty or Half-Full?

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The day may come when the world's rhinos are no longer under threat, but probably not for a very long time. Of the five rhino species, three are Critically Endangered according to the IUCN Red List of Threatened Species, another is Vulnerable, and only one is not considered threatened at this time, but could be if poaching continues at current levels or escalates. Looking at the conservation status of rhinos at the global level, is the glass half-empty or half-full?

The white rhino (*Ceratotherium simum*) is the most abundant of the five living species and is listed as Near Threatened by IUCN. Between 20,000 and 21,000 presently occur in 10 countries: the Republic of South Africa, Namibia, Kenya, Zimbabwe, Botswana, Swaziland, Uganda, Mozambique and Kenya. Almost all of these animals represent the southern subspecies (*C. s. simum*). Only a handful of the northern white rhino (*C. s. cottoni*) remain, two at the San Diego Zoo Safari Park, one at the Dvur Kralove Zoo in the Czech Republic, and four at the Ol Pejeta Conservancy in Kenya, the latter group representing the only potential reproductive unit. Captive populations of southern white rhinos currently number several hundred animals and are maintained worldwide.

Overall, wild white rhino populations have remained relatively stable and have actually increased slightly in recent years, even in the face of aggressive and sophisticated poaching, but the situation is almost certainly unsustainable over the long-term. The Republic of South Africa still holds the overwhelming bulk of the population, but is also the country hardest hit by the poaching crisis, with a current average of one rhino being lost every 7 hours to poachers. The slaughter and illegal trade are fueled by centuries of superstition, as well as by a rising demand for rhino horn in countries like Vietnam and China, where it is used in traditional medicine, as a supposed miracle cure for cancer, or purchased simply to convey social status. The highest priority for ensuring this species' survival is to step-up protection of wild and free-ranging populations, and for range country governments to enforce existing wildlife laws.

The black rhino (*Diceros bicornis*) is Critically Endangered and presently numbers just over five thousand animals in nine countries: the Republic of South Africa, Namibia, Kenya, Zimbabwe, Tanzania, Zambia, Malawi, Swaziland and Botswana. Three subspecies remain: the western black rhino (*D. b. bicornis*), with its stronghold in Namibia; the eastern black rhino (*D. b. michaeli*), with its stronghold in Kenya; and the southern black rhino (*D. b. minor*), with strongholds in the Republic of South Africa and Zimbabwe. More than 25 years ago, Zimbabwe's black rhino population was decreasing at an alarming rate from intense poaching. In response, in 1989, a group of concerned individuals in the US and Australia founded the International Black Rhino Foundation to help save this species in Zimbabwe. In 1993, recognizing that the crisis facing all five rhino species was not receiving the attention it deserved, the IBRF expanded its mission and became the International Rhino Foundation.

Black rhinos remain victims of heavy and sophisticated poaching activity, yet their numbers continue to slowly increase despite this ongoing threat. Normal reproduction appears to have offset mortality to some degree, and populations across the species' range have actually remained relatively stable or even increased thanks to staunch anti-poaching efforts. In Zimbabwe's Lowveld region, for example, translocations of animals from high risk to more secure areas, coupled with an intensive monitoring program, is responsible for saving hundreds of black rhinos. The highest priorities for safeguarding this

species are to bolster anti-poaching activities and to maintain intensive management of wild populations.

No more than two hundred black rhinos are currently maintained in captive breeding programs, representing the eastern and southern subspecies. IRF recently accepted responsibility for managing the latter, working both with AZA and private institutions.

The greater one-horned rhino (*Rhinoceros unicornis*) numbers more than 3,300 animals in India and Nepal, thanks to continued protection and reintroduction efforts, and is designated as Vulnerable on the IUCN Red List of Threatened Species. The wild population actually continues to increase despite renewed poaching pressure. The Indian state of Assam remains the stronghold for this species, with more than 2,400 rhinos found in Kaziranga, Manas and Orang National Parks, as well as the Pobitora Wildlife Sanctuary. Just over 250 individuals are also documented from protected areas in the states of Uttar Pradesh and West Bengal, and more than 500 greater one-horned rhinos remain in Nepal, the majority in Chitwan National Park. Approximately two hundred greater one-horned rhinos are currently maintained in coordinated managed breeding programs worldwide.

The principal recovery effort for this species is Indian Rhino Vision 2020 (IRV 2020), a joint initiative of IRF, India's Department of Environment and Forests, the Government of Assam, the Bodoland Territorial Council, WWF-India and the US Fish and Wildlife Service. Under the auspices of IRV 2020, rhino translocations from the Pobitora Wildlife Sanctuary and Kaziranga National Park have re-established the species in Manas National Park, where two dozen animals have been reintroduced and breeding has recently occurred. Poaching remains a threat, however, especially in Kaziranga National Park during the seasonal monsoons. Plans for additional moves have been put on hold until a full assessment of security measures is completed and actions to improve protection are put in place. In the interim, planning continues for eventual reintroductions to Assam's Laokhowa Wildlife Sanctuary.

Rhino specialists now believe that as few as 100 Sumatran rhinos (*Dicerorhinus sumatrensis*) may survive as fragmented populations in Indonesia's Bukit Barisan Selatan, Gunung Leuser and Way Kambas National Parks, as well as in tiny, unprotected forests of Sabah, Malaysia. This recent estimate reflects the loss of former populations in India, Bangladesh, Myanmar, Thailand and Peninsular Malaysia, declining numbers in Malaysian Borneo, and the lack of reliable population estimates from northern Sumatra. Sumatran animals represent *D. s. sumatrensis*, while remnant populations of Malaysian Borneo represent *D. s. harrisoni*. Based on all of the above, IUCN lists the Sumatran rhino as Critically Endangered, and many regard it as the most threatened of the world's rhinos due to its continuing decline. In addition, experts agree that *D. s. harrisoni* is a non-viable taxon and its remaining population(s) should be managed jointly with *D. s. sumatrensis* as a meta-population.

Sumatran rhino populations in Bukit Barisan Selatan and Way Kambas are safeguarded by Indonesia's Ministry of Forestry and Rhino Protection Units (RPU) co-managed by IRF and its local partner, Yayasan Badak Indonesia (YABI). The RPU programs in both protected benefit significantly from annual support provided by the American Association of Zookeepers through Bowling for Rhinos and other fundraising events. Three managed breeding facilities in Indonesia, Malaysia and the United States currently maintain a total of 10 Sumatran rhinos. Four of these animals are captive born: Andalas, Suci and Harapan at the Cincinnati Zoo and Botanical Garden, and Andatu at the Sumatran Rhino Sanctuary.

The Javan rhino (*Rhinoceros sondaicus*) now survives only in Indonesia's Ujung Kulon National Park. The estimated population is between 35-44 individuals and may have stabilized, but the species remains Critically Endangered. There are no Javan rhinos in captivity. Historically, the species probably occurred in nine other countries - India, Bangladesh, Myanmar, Laos, Thailand, Malaysia, Cambodia, China and Vietnam – but the last individual recorded outside Indonesia was killed by poachers in Vietnam in 2010. Population estimates for Ujung Kulon National Park are based on field observations by Rhino Protection Units (RPU), ground surveys, and data from video camera-trap research. There has been no known rhino poaching since RPU were established in the late 1990s.

The last remaining Javan rhinos require round-the-clock protection and more suitable habitat. A significant portion of Ujung Kulon National Park is dominated by an invasive palm (*Arenga obtusifolia*), not one of the more than three hundred plants Javan rhinos are known to eat. Approximately 100 acres of experimental plots have now been cleared of invasive palms by local workers, among them people who previously lived illegally within the park's borders. New plants appearing from dormant seeds, runners and roots can reach chest height in only a matter of months, and more than 90% of the recolonizing species are rhino food plants. In the years ahead, these efforts should help increase Javan rhino numbers in Ujung Kulon so that a second, insurance population can be established. The prospects are not very good for doing so elsewhere in Java, so the next step is to search for suitable translocation sites in the species' historic range.

In summary, the overall conservation status of the world's rhinos is mixed. The white rhino outnumbers all the rest combined, but currently bears the brunt of the poaching pressure. Black and greater one-horned rhino populations are slowly recovering from historic lows and continue to increase despite record poaching levels. Sumatran rhinos are in steep decline, except where effective protection programs are in place. And Javan rhino numbers, although incredibly low, have remained relatively stable for nearly half a century. Considering all of the above, IRF regards the glass as being half full when contemplating the future for the world's rhinos. Effective programs have been put in place or being initiated. Support for these programs will spell difference between extinction and survival for all five rhino species.