

Proceedings of the 46th Annual American Association of Zoo Keepers National Conference



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Papers



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AAZK & IRF Taking Action in Indonesia to Protect Critically Endangered Rhino

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International Rhino Foundation

The American Association of Zookeepers' Bowling for Rhinos program is responsible for the support and protection of two of the most critically endangered rhinos in the world. With support from AAZK BFR, the International Rhino Foundation (IRF) funds Indonesian Rhino Protection Units (RPUs), protecting Javan and Sumatran rhinos in Indonesia. Thanks to continuous RPU protection, we have kept rhinos safe in all three parks where these wild populations reside, for more than a decade. While 2020 has brought significant financial stress to all conservation organizations, IRF has continued supporting vital rhino protection efforts in Indonesia, thanks to AAZK's support. IRF collaborates with our on-the-ground partner, Yayasan Badak Indonesia, to fund RPUs in three locations; Bukit Barisan Selatan National Park, Way Kambas National Park, and Ujung Kulon National Park. AAZK BFR's donation covers roughly one quarter of the RPU costs; these funds are used for the RPUs' salaries and benefits as well as operations, transportation, equipment, and guard post maintenance. The RPUs are highly trained, four-person anti-poaching teams that intensively patrol key areas within the parks. Their presence provides a significant deterrent to would-be poachers. Thanks to your support, Javan and Sumatran rhinos can survive in Indonesia with little to no evidence of poaching because of this careful around-the-clock monitoring. Attendees at this paper presentation will hear how AAZK's BFR program supports the conservation of Javan and Sumatran rhinos, including recent news and updates from the field, and success stories that have been made possible because of AAZK's tireless efforts.



**Programmatic Report
Sumatran and Javan Rhino Conservation**

**Submitted to the
American Association of Zoo Keepers Bowling for Rhinos Program**

July 2021



A Javan rhino calf and mother spotted on camera trap in Ujung Kulon National Park. Image courtesy of the Indonesian Ministry of Environment and Forestry.

The International Rhino Foundation is grateful for the continued, generous support of the American Association of Zookeepers' (AAZK) Bowling for Rhinos program, which contributed \$100,360.74 in December 2020 to support Indonesian Rhino Protection Units (RPUs). Thanks to continuous RPU protection, we have kept rhinos safe in all three parks where these wild populations reside, for more than a decade. The support of AAZK's Bowling for Rhinos event has been a vital part of sustaining Javan and Sumatran rhinos, two of the most threatened large mammal species on Earth. IRF collaborates with our on-the-ground partner, Yayasan Badak Indonesia, to fund RPUs in three locations; Bukit Barisan Selatan National Park, Way Kambas National Park, and Ujung Kulon National Park. AAZK BFR's funds are used for the RPUs' salaries and benefits as well as operations, transportation, equipment, and guard post maintenance. The RPUs are highly trained, four-person anti-poaching teams that intensively patrol key areas within the parks. Their presence provides a significant deterrent to would-be poachers. Regularly patrolled areas show little to no evidence of poaching efforts targeting rhinos or other megafauna. Thanks to your support, Javan and Sumatran rhinos can survive in Indonesia because of this careful around-the-clock monitoring.

IRF is pleased to provide this update on our Javan and Sumatran rhino conservation programs during Q4 2020 and Q1 2021.

SUMATRAN RHINO CONSERVATION PROGRAM

Fewer than 80 Sumatran rhinos survive in very small and highly fragmented populations. These populations exist in three regions in Sumatra, Indonesia; Way Kambas (WKNP), Bukit Barisan Selatan (BBSNP), and Gunung Leuser National Parks, plus a handful of animals in central Kalimantan. Facing intense pressure from a variety of threats, the Sumatran rhino is considered the most endangered species of rhinoceros. The population is limited by small population effects, human encroachment/disturbance, and the potential for catastrophic events.

With our local implementing partner, Yayasan Badak Indonesia (YABI), the International Rhino Foundation (IRF) uses a multi-faceted approach to Sumatran rhino conservation, including protecting rhinos and other mega-fauna and their habitat through our Rhino Protection Units (RPUs), research on and captive breeding of the species at the Sumatran Rhino Sanctuary in WKNP, habitat restoration, and outreach to local communities, including education and alternative income programs.

YABI operates thirteen RPUs in Way Kambas National Park and seven RPUs in Bukit Barisan Selatan National Park. All RPUs spend at least 15 days per month on patrol in key rhino areas in each park. Two of the Way Kambas RPUs are also now protecting the Sumatran Rhino Sanctuary.

Despite the protection provided by the RPUs, the Sumatran rhino population continues to decline. In the isolated pockets in which Sumatran rhinos live, it can be difficult for breeding-age animals to encounter one another. Like many rhino species, reproductive problems ensue if females do not become pregnant.

Complete details on RPU activities during the last quarter of 2020 and first quarter of 2021 can be found in the tables below.

Table 1: Way Kambas RPU Data for October 1, 2020 – March 31, 2021

| Way Kambas RPU Data | Q4 2020 | Q1 2021 |
|--------------------------------------------------------------------|---------|----------|
| Avg. Days on Patrol Per Month | 15.64 | 9.9 |
| Total km. on Patrol | 5,535 | 1,996.00 |
| Rhinos Poached | 0 | 0 |
| Direct Rhino Sightings | 0 | 0 |
| # Rhino Footprints | 9 | 0 |
| # Rhino Wallows | 0 | 0 |
| Rhino Feces | 0 | 0 |
| Rhino Feeding Signs | 0 | 0 |
| Other Rhino Signs | 0 | 0 |
| # Cases of Illegal Activity Identified | 36 | 11 |
| # Traps Destroyed | 6 | 0 |
| # Poachers/Encroachers Documented or Turned Over to Park Authority | 1 | 1 |

Table 2: BBS RPU Data for October 1, 2020 – March 31, 2021

| BBS RPU Data for January 1 - Dec 31 2020 | Q4 2020 | Q1 2021 |
|--------------------------------------------------------------------|---------|----------|
| Avg. days on patrol per month | 15.41 | 15 |
| Total km on patrol | 1695.55 | 3,622.00 |
| Known rhinos poached | 0 | 0 |
| Direct Rhino Sightings | 0 | 0 |
| # Rhino Footprints | 5 | 0 |
| # Rhino Wallows | 32 | 19 |
| Rhino Feces | 2 | 1 |
| Rhino Feeding Sites | 2 | 1 |
| Other Rhino Signs | 5 | 3 |
| # Cases of Illegal Activity Identified | 54 | 119 |
| # Traps Destroyed | 5 | 13 |
| # Poachers/Encroachers Documented or Turned Over to Park Authority | 10 | 4 |

Sumatran Rhino Program – Highlights

Rhino Protection Units (RPUs) continued their work in Way Kambas National Park and Bukit Barisan

Selatan National Park throughout 2020 and 2021. Program highlights include:

- There was no evidence of rhino poaching in either Way Kambas or Bukit Barisan Selatan.
- RPU's documented 14 rhino footprints.
- During this period, the Sumatran RPU's walked a total of 12,848.55 km on patrol. The RPU's found 220 instances of illegal activities and destroyed 24 animal traps used by poachers.
- Reforestation efforts in Way Kambas National Park are ongoing and extremely successful, more than 45 species of wildlife have been identified visiting the reforestation site since planting efforts began. Recently, the team found a fresh footprint of a tapir, a first for this particular area and a sign that replanting efforts are working.

Sumatran Rhino Protection Units

YABI currently operates thirteen Rhino Protection Units (RPU's) in Way Kambas National Park and seven RPU's in Bukit Barisan Selatan National Park. Two of Way Kambas's RPU's also regularly patrol the Sumatran Rhino Sanctuary, which is located within the park and holds several rhinos. All RPU's spend at least 15 days per month on patrol in key rhino areas in each park.

Throughout 2020 and 2021, the RPU's regularly patrolled and surveyed the protected areas in which they operate, removing traps and snares, identifying and apprehending illegal intruders, and investigating crime scenes. Their presence is pivotal in the prevention and reduction of wildlife loss and illegal activities within the park.

During this reporting period several rhino footprints, wallows, feeding sites, feces and horn scrubs were identified by RPU members in Bukit Barisan Selatan National Park and Way Kambas National Park. Most of the footprints were documented to be fresh (less than 1 week old). Footprints are typically found in areas that are safe from human disturbance, with a dense canopy made up of seedlings, saplings and full-grown trees. Other wildlife species documented in these parks include sun bear, Sumatran elephant, tiger, Sambar deer and tapirs.



Tiger print (left) and sun bear scratch (right).

Illegal activities continue in both Bukit Barisan Selatan and Way Kambas National Parks. These activities include park areas being cleared and used for seasonal plantings such as coffee and pepper and continued animal hunting. The RPU's found signs of sling snares, nylon traps and bird stakes. RPU's remove all traps, document their use with park authorities and destroy them.



A sling snare in BBSNP, used to target mammals like elephants, tigers and rhinos.

No rhinos were known to be poached in either Way Kambas or Bukit Barisan Selatan during Q4 2020 or Q1 2021. During this period, the Sumatran RPU's walked a total of 12,848.55 km on patrol. The RPU's found 220 instances of illegal activities and destroyed 24 animal traps used by poachers.

JAVAN RHINO CONSERVATION PROGRAM

Ujung Kulon National Park (UKNP) is Indonesia’s first UNESCO World Heritage Site, the largest remaining tract of lowland tropical forest on the island of Java, and home to the world’s last surviving population of the Critically Endangered Javan rhino, numbering 73 individuals. The International Rhino Foundation (IRF) and our local partner, Yayasan Badak Indonesia (YABI), run a comprehensive program aimed at monitoring, protecting and ultimately increasing the population of Javan rhinos. With long-time generous support from AAZK, YABI operates five terrestrial and two marine Rhino Protection Units (RPUs) in UKNP. **Thanks to the efforts of the RPUs, there have been no recorded instances of rhino poaching for many years and the population appears to be stable and slowly increasing.**

The greatest threat to Javan rhinos is that the entire population exists in a single site, making it susceptible to small population effects and catastrophic events, like disease outbreaks, earthquakes, tsunamis, and volcanic eruptions. Poaching and human encroachment remain threats as well.

Javan Rhino Program - Highlights

Rhino Protection Units (RPUs) continued their work in Ujung Kulon National Park throughout 2020 and 2021. Program highlights include:

- 100 new camera traps installed by Rhino Protection Units in Ujung Kulon National Park
- At least 1 Javan rhino calf born in the Spring of 2021
- There was no evidence of rhino poaching in Ujung Kulon National Park
- RPUs documented 8 rhino footprints
- During this period, the Javan RPUs walked a total of 6,315.33 km on patrol. The RPUs found 123 instances of illegal activities and destroyed 12 animal traps used by poachers.

Table 3: UKNP RPU Data for October 1 2020 – March 31, 2021

| UKNP RPU Data for January 1 - Dec 31 2020 *Terrestrial | Q4 2020 | Q1 2021 |
|-----------------------------------------------------------|----------|----------|
| Avg. days on patrol per month | 15 | 14.8 |
| Total km on patrol | 1,440.35 | 1,220.00 |
| Known rhinos poached | 0 | 0 |
| Direct Rhino Sightings | 0 | 1 |
| # Rhino Footprints | 8 | 35 |
| # Rhino Wallows | 0 | 9 |
| Rhino feces | 1 | 7 |
| Rhino feeding sites | 4 | 21 |
| Other Rhino Signs | 0 | 5 |
| # Cases of Illegal Activity Identified | 58 | 46 |
| # Traps Destroyed | 1 | 11 |

| | | |
|--------------------------------------------------------------------|----------------|----------------|
| # Poachers/Encroachers Documented or Turned Over to Park Authority | 21 | 0 |
| | | |
| UKNP RPU Data for October 1 2020- March 31 2021 | | |
| *Marine | Q4 2020 | Q1 2021 |
| Avg. days on patrol per month | 15 | 14.7 |
| Total km on patrol | 1,745.98 | 1,909.00 |
| # Illegal Fishing Activities Encountered by RPU Unit | 8 | 11 |

Javan Rhino Protection Units

The rigorously trained terrestrial Rhino Protection Units operating in UKNP are charged with intensively patrolling key areas (using SMART) within UKNP to protect the park's rhinos and other threatened resources. A wildlife ranger, who is a qualified civil investigator employed by the National Park, leads each RPU team. The three other members are recruited from the surrounding communities.

UKNP terrestrial RPUs operate from a base station on the north-eastern border of the park and stage their patrols from the guard posts situated at strategic locations in the park, including several that require access by boat. Patrols deploy to the field for a continuous 15 days or more per month per unit, creating a significant detection risk for would-be poachers, whose chances for a good 'take' are seriously decreased. This deterrent has proved effective. Regularly patrolled areas show little or no evidence of poaching efforts that target rhinos or other threatened species (e.g., banteng, leopard, deer, primates, or pangolin). The illegal activities most frequently encountered are honey collection, bird collection, and illegal fishing.

RPUs deactivate and remove any traps or snares encountered while on patrol. They investigate all illegal activity and collect evidence. Anyone who is apprehended is taken to the National Park headquarters for further processing by a civil inspector from the park or the police.

The marine RPUs follow similar protocols to the terrestrial RPUs. Since marine patrols only began in 2020, the RPUs began by targeting areas where we know there are high levels of incursions into the park. Now, they are relying on patrol data to guide patrol routes. When the marine patrol apprehends people fishing illegally, they first release the catch back into the water. The RPUs then take the perpetrators (along with their boats and equipment) to the UKNP park office and hand them over to park authorities. Park staff confiscate the boats and equipment and collect information on each apprehended individual. They show the perpetrators a map of the park boundaries, discuss relevant laws and prohibitions and explain to the fishermen that they were illegally encroaching into park waters. The suspects are then asked to sign an official statement demonstrating that they understand the park boundaries and regulations and pledging that they will not encroach into park waters again. Park officials tell them that if they are apprehended again, they will be arrested and prosecuted and their signed statements will be used as evidence in the court case against them. These statements are filed at the park office and the suspects are released. To date, this deterrence method has proven successful as no encroachers have been apprehended a second time.



An octopus, caught illegally, is documented and released back into the water after RPU's interrupted an illegal fishing vessel.

In January 2021, we celebrated the one-year anniversary of the Javan rhino marine patrol in Ujung Kulon National Park, and these two new patrol units have been more successful than we could have imagined. Over the first 12 months of operations, the marine patrol units apprehended 220 people illegally fishing and encroaching within Ujung Kulon park waters.

One of the marine patrol units was able to see the results of their hard work in January, when they observed the Javan rhino in the photo to the right - one of only 73 in the world - visiting a salt lick on the north beach of peninsular Ujung Kulon. It's important for Javan rhinos to supplement their diet with salt, and they have historically been sighted along the park's beaches for this reason. But in recent years, as more illegal fishermen have built fishing platforms along the northern peninsula, fewer and fewer rhinos have been seen. Instead they must traverse much greater distances inland to find plants that contain enough salt. Now that the marine patrol units are effectively keeping illegal fishermen away, we hope that more rhinos will return to the beaches.



Because of the extreme weather conditions in Ujung Kulon, the live-aboard boat used by the marine RPUs can only patrol along the northern boundary of the park. The marine patrol is currently unable to operate along the southern coast of the park, and because there are no guard posts along the southern coast, terrestrial teams are not able to patrol the area as frequently as necessary. It seems evident that people are now taking advantage of this gap in protection as the marine patrol has closed off the north coast - a recent terrestrial patrol found more than 100 fishing boats illegally pulled up on a southern beach. IRF and YABI have begun working with the national park on a solution which will enable us to close the protection gaps in Ujung Kulon, by building two permanent guard posts along the southern coast and hiring two new Rhino Protection Units to patrol the coastline on land, and in the shallow water along the coast with a small boat.

Additionally, Ujung Kulon National Park runs a comprehensive rhino monitoring program, tracking every individual Javan rhino. The monitoring program plays a critical role in the protection and management of this species and provides demographic data on the park's Javan rhino population that will be used to eventually determine which rhinos to move to a second site to reduce the species' risk of extinction. In May 2021, IRF purchased 100 new camera traps for Ujung Kulon National Park. Rhino Protection Units and park staff installed the new cameras throughout May and June, during their regular patrols. IRF also provided funding for the park's analysts' salaries for the period from May through December 2021. The camera trap monitoring program plays a critical role in the management of Javan rhinos. By tracking and identifying every individual animal on a monthly and yearly basis, park staff can rapidly tell if any animals have died. The deaths can then be investigated and the cause of death determined, so that park and IRF/YABI staff can react quickly to deal with any potential disease outbreaks or poaching incursions. The rhino monitoring program also provides us with demographic data on the park's Javan rhino population. This data can be used for population management decisions and to eventually determine which rhinos to move to a second site.

In mid-June 2021, Indonesia's Ministry of Environment and Forestry announced the birth of a new calf in Ujung Kulon NP (image, right). Based on reports from the UKNP monitoring team, three calves were captured on camera traps over the past eighteen months.



Conclusion

Indonesia continues to face high COVID-19 infection rates. The Indonesian government has just issued a new lockdown order for the month of July 2021. The Rhino Protection Units were deemed essential and have been allowed to continue patrolling protected areas with safety measures in place. Happily, because they are classified as essential workers, all Ujung Kulon RPU members have also just received their first COVID-19 vaccination shot.

Thanks to AAZK's continued support, the teams protecting Javan and Sumatran rhinos are able to continue their efforts. AAZK's Bowling for Rhinos funds provide critical support to RPUs to ensure they have the tools and knowledge needed to protect the most critically endangered rhino species. It is thanks to your generosity that efforts to monitor and protect rhinos continue. We value our partnership with the AAZK tremendously and know how committed keepers are to BFR, and how hard they work to raise BFR funds. Again, thank you!