Ujung Kulon National Park

2025 Conservation Outlook Assessment

SITE INFORMATION

Country: Indonesia
Inscribed in: 1991
Criteria: (vii) (x)

This national park, located in the extreme south-western tip of Java on the Sunda shelf, includes the Ujung Kulon peninsula and several offshore islands and encompasses the natural reserve of Krakatoa. In addition to its natural beauty and geological interest – particularly for the study of inland volcanoes – it contains the largest remaining area of lowland rainforests in the Java plain. Several species of endangered plants and animals can be found there, the Javan rhinoceros being the most seriously under threat. © UNESCO

SUMMARY

2025 Conservation Outlook

Finalised on 11 Oct 2025

SIGNIFICANT CONCERN

The values for which Ujung Kulon National Park (UKNP) was inscribed on the World Heritage List are all still present, however, based on the situation on the ground and the assessment of the current state, some of the values of UKNP appear to be of high concern. Illegal activities, especially poaching of the Javan Rhino, birds and other species poses a significant threat to important attributes of the site. Poaching of the Javan Rhino in 2019-2023 has essentially wiped out 33% of the remaining Javan Rhino population. Illegal fishing with destructive fishing methods and hunting of other species, particularly birds is ongoing and arrests continue to be reported. Although there are regular patrols, the apparent involvement of police and other officials in illegal activities is concerning. This highlights the need for urgent and effective management intervention to ensure that no further poaching occurs and to speed up efforts to establish a second population elsewhere in its historic range within Indonesia. After the Indonesian Police successfully secured conviction of key suspects involved in Javan rhino poaching cases, the Ujun Kulon NP, has initiated measures to strengthen protection within the NP by sending frequent protection staff to enhance vigil. The NP authorities are being supported by the Indonesian Police and Army to build capacity of NP staff to strengthen protection and vigil. However insufficient human and financial resources urgently need to be addressed to enhance management effectiveness. Another key threat to the Rhino is the overabundance of the palm Arenga obtusifolia (Langkap). Although eradication efforts are underway, research indicates that the spread and overabundance of Arenga is impacting on critical habitats for rare plant species, for instance Kokoleceran (Vatica bantamensis), which is an endemic tree found only in UKNP.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ Most extensive lowland rainforest remaining on Java **Criterion:(x)**

Ujung Kulon National Park contains the most extensive remaining lowland rainforest on the island of Java, a habitat type that has virtually disappeared elsewhere on the island and is under severe pressure elsewhere in Indonesia and Southeast Asia (World Heritage Committee, 2014). The topography of Ujung Kulon is flat to mountainous, with the highest peaks Gunung Honje (620 m) in the east and Gunung Payung (480 m) in the western peninsula (Haryono et al. 2015).

▶ Critical habitat for threatened animal species **Criterion:(x)**

The site provides invaluable habitat critical for the survival of a number of rare and threatened animal species. In addition to Critically Endangered Javan or Lesser One-horned Rhinoceros (Rhinoceros sondaicus), the site is home to 29 other species of mammals, including the Critically Endangered Javan Leopard (Panthera pardus melas), the Endangered Banteng (Bos javanicus), Dhole (Cuon alpinus) and Fishing Cat (Prionailurus viverrinus), and three endemic primate species: the Endangered Javan Gibbon (Hylobates moloch) and Javan Surili (Presbytis comata) and the Vulnerable Javan Lutung (Trachypitecus auratus). Overall, there are two types of large mammals, namely ungulate mammals and primate mammals with 10 types of mammal species belonging to 7 different families recorded by Pratiwi et al. (2023). Large mammals found in 2023 include Rhinoceros sondaicus, Muntiacus muntjak, Cervus timorensis, Hylobates moloch, Presbytis comata, Trachypitecus auratus, Macaca fascicularis, Sus scrofa, Tragulus javanicus, and Bubalus bubalis. Most of the large mammals found are endemic mammals with protected status. Of the large mammals found, the most common were hoofed mammals. Among amphibians and reptiles are numerous frogs and toads, as well as two species of python and two species of crocodile, the Vulnerable False Gharial (Tomistoma schlegelii) and the Salt-water Crocodile (Crocodylus porosus). Over 200 species of birds have been recorded for the park (World Heritage Committee, 2014; Clements et al. 2024).

▶ Critical habitat for rare plant species **Criterion:(x)**

Ujung Kulon is floristically diverse, with 10 distinct plant community groups comprising 39 different plant communities (Hommel, 1987). 57 species of rare plants have been recorded in the park (World Heritage Committee, 2014). A recent study on the diversity of plants in the Javan Rhino and Conservation Area (JRSCA), which is planned to be built in the Ujung Kulon national park area, found 241 plant species; the species diversity index ranged from 3.027-3.982 (trees), 2.460-3.573 (poles), 1.177-3.583 (saplings), and 2.421-3.262 (seedlings and understoreys); at various growth stages dominated by 7 species and 3 species belonging to the VU/Vulnerable category and 1 species belonging to the EN/Endangered category according to IUCN (Siswoyo et al. 2024).

▶ Landscape of exceptional beauty **Criterion:(vii)**

Krakatau is one of the natural world’s best-known examples of recent island volcanism. The physical feature of Krakatau Island combined with the surrounding sea, natural vegetation, succession of vegetation and volcanic activities combine to form a landscape of exceptional beauty (World Heritage Committee, 2014). In addition, located in western Java, Indonesia, the Ujung Kulon peninsula protrudes from the southwest extremity of mainland Java, to which it is joined by a low isthmus some 1-2 km wide (Ramono et al. 2009).

▶ Stronghold for Javan Rhinoceros **Criterion:(x)**

The site is home to the last remaining population of Javan or Lesser One-horned Rhinoceros (Rhinoceros sondaicus) in the world (World Heritage Committee, 2014; International Rhino Foundation, 2017). The last census of the Javan Rhino in Ujung Kulon National Park was 72 individuals (Gokkon, 2019). In the last official mention of the Javan rhino population, the ministry said in a press release in September 2023 that there were “about” 80 rhinos left, with an average of three births per year (Gokkon, 2023). However, the environmental NGO Auriga Nusantara revealed that 18 rhinos had been missing for years, and at least three of them were confirmed to have died since 2019, yet continued to be listed in the official population count (Auriga Nusantara, 2023).

Assessment information

Threats

Current Threats

High Threat

There is a very high threat from illegal poaching of the Javan Rhino. 26 individuals were reportedly killed between 2019-2023 wiping out about 33% of the Javan rhino population as the Javan rhino numbers in 2023 were reported as 76, before these series of rhino poaching incidences were reported. Hence the current Javan Rhino population at the end of 2024 is estimated to realistically be about 50. The killings of 26 Javan rhino may have also impacted the male and female ratio which could pose potential threats in future leading to inbreeding depression. The threat from encroachment and other illegal activities is also notable. Illegal fishing and hunting of other species, particularly birds is ongoing and arrests continue to be reported. Although there are regular patrols, the apparent involvement of police and other officials in illegal activities is concerning. Forest encroachment due to human activities seems to be reducing, and recent studies have reported a fall in human footprint pressure. However, the threat from invasive alien species, in in particular the Arenga Palm (Arenga obtusifolia), remains a key threat, outcompeting native plants and reducing suitable rhino habitat and food plants. Efforts to eradicate the invasive species are being carried out, however latest reports indicate that 60% of the park's suitable rhino area is affected by the palm. In addition, the invasion and spread of disease from water buffalo (Bubalus bubalis) into the park carries a substantial health risk to the Javan Rhino and threatens plans to establish a new population outside of its only current range in Ujung Kulon NP. Lastly, pollution both from solid waste and from water pollution resulting from ship groundings presents another notable threat.

▶ **Mining & Quarrying**

Low Threat

(Sand harvesting)

Inside site, localised(<5%)

There is a demand for high quality sand from Anak Krakatau, to be used as construction material. Anak Krakatau is easily accessible by sea, making it difficult to control sand exploitation (IUCN Consultation, 2014b). The current level of impact from this activity is unclear. However, in 2015 a decision was made by the DG Forest Protection and Nature Conservation (now, DG Conservation of Natural Resources and Ecosystem) and agreed by the Ministry of Forestry (MoF) to not allow sand exploitation. The decision was based on the field surveys and analysis, which found that exploitation was not only breaking the conservation law, but would also disturb activities that had been done related to volcanic activity and forest succession in Krakatau islands as a whole (IUCN Consultation, 2020).

▶ **Fishing, Harvesting & Controlling Aquatic Species**

High Threat

(Illegal fishing)

Inside site, scattered(5-15%)
Outside site

Dynamite fishing and other unsustainable fishing methods disturb the integrity of healthy coral reefs and the marine ecosystem (IUCN Consultation, 2014b). Fishing is permitted close outside the boundaries of the Park, but illegal fishing occurs in the marine portion of Ujung Kulon National Park. Studies have shown there is evidence of bomb fishing such as crates from blasts, coral rubble or bleaching both around Peucang Island (Gumbira et al., 2017) and Panaitan Island (Putra et al., 2019), leading to decreased coral reef coverage at depth between 5 and 10 m. Illegal shrimp fishing has been occurring mainly outside of the Traditional Use Zone. After the Ministry of Maritime Affairs and Fisheries opened up for export of marine and fisheries products, including shrimp fry and crabs, there has been an increase in

illegal shrimp fry collection at the East and South Ujung Kulon Peninsula. Since early 2020, there is an additional Rhino Protection Unit (RPU) that focuses on marine patrolling, supported by the Rhino Foundation of Indonesia in cooperation with UKNP Management Authority. This program was established to effectively reduce illegal fishing and unsustainable fishing in Ujung Kulon NP. All the fishing platforms that usually utilize the area of Ujung Kulon NP have been identified and registered. Each Unit spends 15 days patrolling the coastline before heading back home and rotating with the alternate team. During the first 12 months of operations, the Marine Patrol Units apprehended 220 people illegally fishing and encroaching into Ujung Kulon's waters (Save the Rhino, 2022). Illegal fishing continues to be a problem will illegal fishers being apprehended regularly (Rivaldo, 2023) including those using bombs (Arief, 2022). It also a threat to the habitat of Javan rhino as illegal fishing sometimes brings rhino poachers to enter Ujung Kulon NP (IUCN Consultation, 2025).

► **Annual & Perennial Non-Timber Crops, Terrestrial Animal Farming, Ranching & Herding** — **Low Threat**
(Forest encroachment) — Inside site, localised(<5%); Outside site

The Honje Mountains, which form the mainland portion of Ujung Kulon National Park and which are connected to the Peninsula by a narrow isthmus, are fully surrounded by 19 buffer villages and the community's livelihood pattern depended on the Park, each consisting of a number of kampongs (Andre et al., 2018). While the villages and their agricultural fields are mostly located outside the boundaries of the site, two kampongs (including their agricultural fields) are partially or completely located within the boundaries, namely Ciakar and Legon Pakis, respectively (Van Merm, 2008). The rate of encroachment is relatively low, but grew from 400 hectares in 1990 to 3,436 hectares in 2008. However, a study measuring the change in the human footprint in and around 43 terrestrial national parks over 5 years, between 2012 and 2017 in Indonesia concluded that Ujung Kulon National Park had the greatest decrease (10.5%) in human footprint (Dwiyahreni et al. 2021). The trend could have been influenced by the development of the Javan Rhino Study and Conservation Area (JRSCA) which commenced 2010-2011 (IUCN Consultation, 2014b).

The regulating Zonation policy of UKNP has been in place since 2011, where some agricultural activities are allowed in the Traditional Use Zone. Overall, these activities are controlled by the Park rangers of Honje Mountain and the limited equipment used is not harming the environment (IUCN Consultation, 2020). The zonation of UKNP was reviewed and revised in 2017 through public consultation, and agreed by the DG of Conservation of Natural Resources and Ecosystem (No. SK. 78/KSDAE/KSA.0/2017). The pristine forest of Honje Mountain is legally designated as Core Zone, while other forested areas belong to the Wilderness Zone. Other zones include the Rehabilitation Zone (areas of key wildlife habitat and/ or hydrological importance); the Traditional Use Zone (where the land is partly cultivated); and the Special Zone (50ha) where there are some local settlements (IUCN Consultation, 2020). Tree cutting, hunting wild animals and cultivation is banned within the Wilderness and Rehabilitation Zones, which is enforced by the Park rangers. Issues can often be solved through coordination with head of villages and key local elders, although sometimes these problems need the local police to take further action for investigation and prosecution (IUCN Consultation, 2020). Problems have also occurred with local buffalo owners (IUCN Consultation, 2020).

Furthermore, the existence of rice farming areas owned by local communities in the TNUK area is one of the threats that can result in the fragmentation of the TNUK forest area. This is projected to have an impact on efforts to protect the habitat of the Javan rhinoceros and other endangered animals. There are 1,556.82 ha (2.54%) of community-owned rice fields that overlap with the boundaries of the TNUK conservation forest area (Wandani et al. 2022).

► **Hunting, Collecting & Controlling Terrestrial Animals** — **Very High Threat**
(Javan Rhino poaching) — Inside site, widespread(15-50%)

Illegal poaching of the Javan Rhino within park boundaries has been continuing in 2019-2023. The Indonesian Police revealed in a press conference in June 2024 that seven suspects has been arrested for killing 26 Javan rhinos since 2018 (CBS News, 2024; Traffic, 2025). Considering the park's population is less than 100 individuals this is a significant proportion.

Most recently, authorities have been investigating links between the killings and a man in Sumatra. The individual was arrested on 23 August 2024 for allegedly attempting to sell eight rhino horns, five tobacco pipes made of elephant ivory, and three pipes made from dugong tusks. Four of the horns have been determined to be of Indonesian origin; the others are understood to be from abroad (Save the Rhino, 2024). The region has long been under the spotlight for international rhino horn trafficking. From January 2021 to December 2023, TRAFFIC data shows at least 19 rhino horn trafficking incidences in five Southeast Asian countries. About 420kgs of rhino horns have been confiscated, including at least 84 whole horns. Viet Nam seized over half of this volume in 11 incidents (Traffic, 2025).

To protect rhinos and support important security interventions, authorities increased funding availability to the Park, closed public access to the UKNP peninsula in 2023 and deployed greater numbers of rangers alongside police and other personnel to patrol the Park's forests. Following these heightened security efforts, there has been no evidence of rhino poaching incidents during 2024 (Save the Rhino, 2024).
An Emergency Action Plan (EAP) for Javan rhinos was also issued on 21 March 2023 by CIRCULAR LETTER Number: SE. 3/KSDAE/KKHSG/KSA.2/3/2023 about directions for the implementation of priority activities for Javan Rhino management.

► Invasive Non-Native/ Alien Species

High Threat
Inside site, widespread(15-50%)

(Overabundance of Arenga obtusifolia palm affects the natural regeneration of rhino food plants in UKNP)

Arenga Palm (Arenga obtusifolia) or Langkap in Bahasa Indonesia is a palm type plant that spreads very quickly so that the succession of the Javan rhino habitat stops below the climax (sub climax) or deviates from the climax (post climax). The very rapid growth of the species results in competition and reduces the abundance of the Javan rhino food plant. The invasive of langkap plant has taken over about 60 percent of the habitat and marginalized the population of javan rhino on Ujung Kulon peninsula that has become fragmented and isolated (OFORA Trust Foundation, 2022). It out-competes most other plants by forming a dense canopy where very little light penetrates, and is a significant threat to the Javan Rhino by reducing the availability of habitat and food plants. This negative impact of Langkap on plant diversity is closely related with poor light under its canopy as more than 95% of the light will be absorbed before reaching the forest floor (Van Merm, 2007; Robiansyah, 2019a). It is also likely to have a significant impact on the habitat of other species of animals and plants (Robiansyah, 2019b).

In a 2021 monitoring visit other invasive plants that are not rhino food, were also recorded including Arrowroot (Maranta arundinacea) and Donax (Donax canniformis).
Ujung Kulon National Park has an ecosystem restoration target of 2,700 hectares for the period 2020-2024. The target for ecosystem recovery is in the form of controlling invasive plants by 2022 in Ujung Kulon National Park covering an area of 104 ha OFORA Trust Foundation, 2022. An update on whether this target was achieved could not be found, however the efforts of invasive species control are ongoing (OFORA Trust Foundation, 2024).

► Hunting, Collecting & Controlling Terrestrial Animals

High Threat
Inside site, scattered(5-15%)
Outside site

(Illegal poaching)

According to Sadjudin (1999), many of the 270 bird species found in Ujung Kulon NP have a high market value. Bird poaching is therefore a common practice in the Park. Other species targeted by poachers may include small mammals, such as mouse deer, banteng and Green Turtle (Chelonia mydas), although no records are available (IUCN Consultation, 2020). In 2025, five defendants were fined and jailed for illegal bird hunting within the core zone. Of the 10 birds caught, 3 were Twig Cucak/Leaf Cucak (Chloropsis cochinchinensis), 6 Kores/Beard Birds (Alopoixus bres), and 1 Flute/Gadung Bird (Irena puella). The arrest also included members of the Banten Police, TNI and TNUK, which is concerning (KSDAE, 2025).

► Terrestrial Animal Farming, Ranching & Herding

Low Threat
Inside site, localised(<5%)
Outside site

(Buffalo grazing/farming)

The existence of Buffalo, which graze the habitat of Rhinos, might endanger the health of the Rhinos due to transfer of disease (IUCN Consultation, 2020). There is limited research available regarding this issue, and the research undertaken has so far not confirmed any spread of disease, such as anthrax (Bacillus anthrax) or Hemorrhagic septicemia (HS), from domestic animals to Rhinos (Anderson et al., 2012). During the last two years (2018-2020) the number of buffalos entering JRSCA areas has been increasing, no more recent numbers are available. The invasion of water buffalo (Bubalus bubalis) carrying Hemorrhagic septicemia (HS) into the Park poses a substantial health risk to the Javan Rhinoceros and threatens plans to establish a new population outside of its only current range in Ujung Kulon NP (Khairani et al,. 2018).

▶ **Water-borne & other effluent Pollution, Garbage & Solid Waste**

Low Threat
Inside site, localised(<5%)
Outside site

(Effluent and solid waste pollution)

A large amount of waste, mostly plastics, cover the water and beaches at the north isthmus of Ujung Kulon Peninsula and some are floating around Welcome Bay. It is believed that this waste originate from locals villages around UKNP, where it is not properly collected, but disposed of into the sea. Turtles and other marine animals are affected by the waste. Furthermore, investigations ship groundings in the waters of Panaitan TNUK island (in 2024 TB ships-Bomas Karya and BG. Pulau Tiga 338) have demonstrated coral damage and water pollution due to e.g. coal or oil spills and from the grounding itself (Ministry of Forestry, 2024).

Potential Threats

Low Threat

The biggest potential threat stems from the high volcanic activity of Anak Krakatau, which is included within the boundaries of Ujung Kulon National Park World Heritage Site, and indeed a part of its Outstanding Universal Value. Although the likelihood of a cataclysmic event such as the one of 1883 is relatively small, even a tsunami resulting from a smaller eruption could cause widespread destruction in the low lying areas of Ujung Kulon NP, and have a catastrophic impact on the Javan Rhino. In addition, the invasion and spread of disease from water buffalo (Bubalus bubalis) into the park carries a substantial health risk to the Javan Rhino and threatens plans to establish a new population outside of its only current range in Ujung Kulon NP. However, these plans have currently been halted due to land disputes and the only remaining option might be to enlarge the Rhino habitat south of Honje Mountain.

▶ **Mining & Quarrying**

Low Threat
Outside site

(Gold mining in the proximity of the park)

Gold mining occurs outside the site (IUCN Consultation, 2014b), very close to its north-eastern boundary. No information is available regarding the current impact from this activity on the OUV of the site, and generally these appear to be limited. However, potential direct (loss of forest cover, contamination of ground water) and indirect (increased risk of poaching, illegal logging, etc.) impacts should be carefully monitored. The Company (Cibaliung Sumber Daya Gold Mining) was planning to end underground exploitation in August 2020, followed by closure of the open pit a year later (Company manager, pers.comm; IUCN Consultation, 2020), however it appears the mine is still in operation (GlobalData Plc, 2023).

▶ **Roads, Trails & Railroads**

Low Threat
Outside site

(Road development)

Road development outside the National Park has facilitated access to nearby areas. This increases the risk of illegal activities such as encroachment and illegal logging. On the other hand, these roads facilitate the transport of agricultural products, thus increasing revenue for farmers (IUCN Consultation, 2014b), and reducing local communities' dependence on the Park for their livelihoods. The government targets the construction of the Serang-Panimbang Toll Road to be one of the strategic infrastructures, which can increase community mobility and accelerate economic growth in the Banten Province area and its surroundings. The road is envisioned as supporting tourism to reach the Tanjung Lesung Special Economic Zone (SEZ), Ujung Kulon National Park, and Sumur Beach. The construction of the Serang

Panimbang Toll Road has 3 sections with the first completed and the second close to completion. Progress is ongoing however hampered by issues with land acquisition. The road is expected to be completed by the end of 2026 (BPJN Banten Directorate General of Highways, 2025).

Throughout construction, the UKNP Management Authority is cooperating with the local government on conservation issues and making efforts to develop prevention measures (IUCN Consultation, 2020).

► Geological Events, Severe Weather Events

High Threat

(Volcanic activity and tsunamis)

Inside site, widespread(15-50%)
Outside site

Although the Krakatau Islands are part of the Outstanding Universal Value (OUV) of Ujung Kulon National Park, as one of the world's best-known examples of recent island volcanism, the continued high level of activity of Anak Krakatau is also a threat to the values of the site. The famous eruption of 1883 caused a tsunami with a height of 15 metres, which destroyed the old growth forests along the flat beaches of the Ujung Kulon peninsula (Hoogerwerf, 1970). Explosive magmatic (strombolian) eruptions of Anak Krakatau have occurred regularly since 2007, with a large eruption recorded on 2 September 2012, when the ash cloud reached a height of 1000 metres (PVMBG , 10 May 2014). In 2018, the Anak Krakatau began showing increased signs of volcanic activity, believed to have set off undersea landslides, triggering a tsunami that killed at least 430 people. Within, UKNP the tsunami had limited impact, however, there were five victims found dead in UKNP, including two rangers (IRF coordinator-Indonesia pers.comm., 2020; IUCN Consultation 2020). There were also some physical damage, where two jetties, one concrete post, two wooden canoes, and one shelter were destroyed. No Javan Rhinos were killed by the tsunami, but it has shown the potential high threat (Dwiastono, 2018). While the likelihood of another cataclysmic event such as the one in 1883 is relatively low, even a tsunami from a smaller eruption could have a devastating impact on the low lying parts of Ujung Kulon NP, and could be disastrous for the Javan Rhino (Setiawan et al., 2018).

Overall assessment of threats

High Threat

Illegal activities, especially poaching of the Javan Rhino, birds and other species poses a significant threat to important attributes of the site. Poaching of the Javan Rhino in 2019-2023 has essentially wiped out 33% of the remaining Javan Rhino population. Illegal fishing with destructive fishing methods and hunting of other species, particularly birds is ongoing and arrests continue to be reported. The illegal fishing sometimes brings rhino/wildlife poachers to enter Ujung Kulon NP and act as a fishermen. Although there are regular patrols, the apparent involvement of police and other officials in illegal activities is concerning. Forest encroachment due to human activities seems to be reducing, and recent studies have reported a fall in human footprint pressure. However, the threat from invasive alien species, in in particular the Arenga Palm (Arenga obtusifolia), remains a key threat, outcompeting native plants and reducing suitable rhino habitat and food plants. Efforts to eradicate the invasive species are being carried out, however latest reports indicate that 60% of the park's suitable rhino area is affected by the palm. In addition, the invasion and spread of disease from water buffalo (Bubalus bubalis) into the park carries a substantial health risk to the Javan Rhino and threatens plans to establish a new population outside of its only current range in Ujung Kulon NP. Lastly, pollution both from solid waste and from water pollution resulting from ship groundings presents another notable threat. Considerable potential threats stem from the risk from high volcanic activity of Anak Krakatau resulting in tsunamis causing widespread destruction of the low lying areas of Ujung Kulon NP. Road dvelopments and onoing gold mining in the area currently do not appear to pose a significant threat to the OUV, however regular monitoring on potential impacts are necessary.

Protection and management

Assessing Protection and Management

► Involvement of stakeholders and rightsholders, including indigenous peoples and local communities, in decision-making processes

Mostly Effective

In preparing the Long-Term Management Plan (RPJP) document for Ujung Kulon National Park, relevant stakeholders, local communities around the area, and the Regional Government were involved to jointly prepare the management plan for Ujung Kulon National Park.

The Government has issued a regulation and policy, which should be implemented by the UKNP Management Authority to guide local participation in the management of the National Park (MoEF Regulation No. P.43/2017 on Empowering Local Communities living around protected areas and conservation areas, and DG CNRE No. P.6/2018 on Technical Guidance for Conservation Partnership within Conservation Areas). Conservation Partnership actions were implemented in four villages (Ujung Jaya, Ranca Pinang, Cibadak and Kertamukti) in 2011 under monitoring by the UKNP Authority and the head of each village. These mechanisms have been simplified and adapted to the new DG CNRE regulation. Two cooperation initiatives with local farmers are still running well, the harvesting of honey and of fruits of rattan species (locally known as Jernang) (IUCN Consultation, 2020; Winangsiha et al., 2020). UKNP has signed a renewed cooperation/partnership agreement with a local NGO, Friends of Rhinos Foundation. Actions consist of local empowerment of mangrove crab aquaculture in Taman Jaya village; assisting the management of outdoor recreation facilities in Tanjung Lame village of Ujung Kulon (built in 2019 by the UKNP authority through the national budget); and continuing management of deer ranching in Pada Suka village (near Honje Mountain). However, the UKNP Management Authority needs more actions of implementing training for locals to improve their skills (Salim et al., 2018, 2020). The Rhino Foundation of Indonesia (YABI) has a strong cooperation with the UKNP Management Authority, and ensures intensive patrolling by Rhino Protection Units (RPUs). These RPUs consist of one Park Ranger and otherwise entirely of local people (IUCN Consultation, 2014a), who are therefore closely involved in the management of the Park. Recently, two new RPUs were formed for marine patrolling, including members from the local fishing community. Overall, the relationship with local people may be considered to be effective.

According to the UKNP Office, various community empowerment activities were carried out in 2023 including strengthening conservation partnerships units, conservation agreements, community group plan preparation, capacity building for forest farmer groups and economic business assistance (UKNP Office, 2023).

► Legal framework

Mostly Effective

Ujung Kulon National Park was designated as a national park area through the Decree of the Minister of Forestry No. 284/Kpts-II/1992 on February 16, 1992.

The following legislation provides the basis for an effective legal framework in Ujung Kulon as stated in the Emergency Action Plan issued on 21 March 2023 by CIRCULAR LETTER Number: SE. 3/KSDAE/KKHSG/KSA.2/3/2023 about Directions for implementation of priority activities for Javan Rhino Management.

1. Law No. 5 of 1990 concerning the Conservation of Biological Natural Resources and their Ecosystems.
2. Government Regulation No. 7 of 1999 concerning the preservation of wild plant and animal species.
3. Government Regulation No. 8 of 1999 concerning the use of wild plant and animal species.
4. Regulation of the Minister of Forestry No. P.43/Menhut-II/2007 concerning Strategy and Action Plan for Rhino Conservation 2007-2017.
5. Decree of the Minister of Forestry No. 447/Kpts-II/2003 concerning the administration of taking or catching and distributing wild plants and animals
6. Presidential Instruction No. 1 of 2023 concerning Mainstreaming of Biodiversity Conservation in sustainable development.

7. Minister of Environment and Forestry Instruction No. INS.1/MENLHK/SETJEN/KUM.1/6/2022 year 2022 concerning protection of wild animals against threats of snaring and poaching inside and outside the area.
8. Letter of Director of KKHSG No. S.137/KKHSG/PSG@/KSA.2/2/2023 dated 23 February 2023 regarding submission of guidelines for the protection of wild plants and animals.

► Governance arrangements — Mostly Effective

Based on the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number: 17 of 2022, the National Park Office has the task of implementing the conservation of natural resources and their ecosystems in national parks in accordance with the provisions of laws and regulations. Aside from collaboration with local communities the UKNP Office also currently partners with the Rhino Foundation Indonesia and the Alliance of Integrated Forest Conservation to carry out various management actions (UKNP Office, 2023). UKNP Management Authority manages the NP with three field management units, which are: Honje Mountain, Ujung Kulon Peninsula, and Panaitan Island. Each unit manages field staff, including park forest rangers, conservation technicians and administrators, and are responsible for protection and conservation actions in their units. All forest rangers are staying at strategically located guard posts, and are helped by locals and/ or volunteers selected by the head of UKNP and the chief of the unit. Rangers and local volunteers, supervised by the chief of the unit, are also responsible for resort work in their respective areas of UKNP, providing services to visitors and undertaking protection actions through a basic field operational ‘Resort Based Management’ plan (IUCN Consultation, 2020)

► Integration into local, regional and national planning systems (including sea/landscape connectivity) — Mostly Effective

The integration of the existence of Ujung Kulon National Park is as follows:
• In 1991, it was designated as a World Heritage Site [UNESCO]
• In 2008, it was designated as a National Strategic Area {Biodiversity Interest] by the Ministry of Tourism
• In 2012, it was designated as KSPN (National Tourism Strategic Area) Tanjung Lesung which was designated by [Ministry of Tourism]
• In 2023, it was designated as part of the Geopark by the Ministry of Energy, Resources and Minerals.

It is to be noted that the 2017 revised Zonation of UKNP was also an effort to integrate consideration of the Park into regional and national land use planning. However, one concern of the UKNP Zonation are the activities in the Rehabilitation Zone. This area is 1474.64 ha, consisting of 1469.10 ha of land and 5,54 ha of coral reef, both in critical need of rehabilitation. The guidance on rehabilitation of forests and seascapes is regulated by the Ministry of Forestry (No. P.48/2014 on Right ways to the implement Ecosystem Recovery within Conservation Areas). Every year, the UKNP Management Authority collects data on planned actions of rehabilitation, funded by the UKNP budget and other partners (YABI, FOR, CSD, local government and other units of MoEF) who support rehabilitation actions in UKNP (IUCN Consultation, 2020).

► Boundaries — Mostly Effective

Ujung Kulon National Park is a natural conservation area managed with a zoning system, has a native ecosystem, and is used for the purposes of biodiversity protection, research, education, tourism, and nature recreation. In 1992 when Ujung Kulon was declared as a national park total area was 122,956 hectares (78,619 hectares of land and 44,337 hectares of marine area). However, since 2014, Ujung Kulon National Park area includes 61357.46 hectares of land and 44337 hectares of marine area, leading to total area of Ujung Kulon National Park to 105694.46 hectares based on the Decree of the Minister of Forestry of the Republic Indonesia Number: SK. 3658/Menhut-VII/KUH/2014 dated May 5, 2014 concerning the Determination of Park Forest Areas Ujung Kulon National Area of 105,694.46 Ha in Pandeglang Regency, Banten Province. It is worth mentioning here that there was long standing boundary dispute at Legon Pakis and Ciakar that was finally resolved through agreements with both village communities in 2010 (IUCN Consultation, 2020). Clear boundaries are very important and any

issues need be solved in order to improve management and support from local communities and other key stakeholders. The UKNP Management Authority has initiated actions towards boundary delineation, including communication with local villages, and analysis of local activities, biodiversity and hydrological systems. Since the UKNP Zonation was legally declared in 2011 and updated in 2017 through field observations and stakeholder consultation, there have been no more boundary disputes (IUCN Consultation, 2020).

► Overlapping international designations — Data Deficient

In 1991, Ujung Kulon National Park was designated a World Heritage Site by UNESCO and to date there has been no other international designation for Ujung Kulon National Park.

► Implementation of World Heritage Committee decisions and recommendations — Data Deficient

Not applicable as no recent WH Committee decisions have been made for this site.

► Climate action — Data Deficient

Ecosystem restoration activities are carried out as outlined in the Ecosystem Recovery Plan document in Ujung Kulon National Park. In 2023 the total amount of forest and mangrove habitat restored was reported as 1,408 ha (UKNP Office, 2023). However, the extent to which climate action is integrated in the management plan and related activities is unclear.

► Management plan and overall management system — Mostly Effective

The overall management plan and management system are outlined in the Long-Term Management Plan of Ujung Kulon National Park which is valid for 10 years, while the budget management plan is outlined in the Strategic Plan which is valid for 5 years. The aims of the management plan is to establish Ujung Kulon as a sustainable and beneficial National Park through the realization of five management objectives, including improvement of local community welfare; development of ecotourism; protection of flora, fauna, ecosystems and cultural sites; scientific, technical and educational development; and sustainable use of biodiversity. Five inter-related management programmes are in place to achieve these objectives, i.e. Integrated Javan Rhino Management, Primates Management, Marine Management, Buffer Zone Management, and Ecotourism Management (UNEP-WCMC, 1991, updated 2011; Ujung Kulon National Park Office, 2015). A revised long-term Management Plan of UKNP (2016-2025) was agreed by the Conservation of Natural Resources and Ecosystem's decree No. SK/359/KSDAE-SET/2015 on December 31, 2020. Another important document is the 2017 revised Zonation of Ujung Kulon National Park (IUCN Consultation, 2020). In addition, the government has prepared its third 10-year action plan for the Javan Rhino, for 2019-2029, which suggests expanding the Rhino habitat in Ujung Kulon (Sadjudin, 2019). on 31 March 2023, the Acting Director General looking after the National Parks and Wildlife areas in Indonesia adopted an Emergency Action Plan for Ujung Kulon NP through Circular letter Number: SE. 3/KSDAE/KKHSG/KSA.2/3/2023 about directions for implementation of priority activities for Javan rhino management. Recently, there was the determination in the Decree of the Minister of Energy and Mineral Resources of the Republic of Indonesia Number: 393.K/GL.01/MEM.G/2023 concerning the Determination of the Ujung Kulon National Park as a Geopark on November 10, 2023.

► Law enforcement — Serious Concern

According to the UKNP Office (2023), data on the number of regional disturbances from 2019 to 2023 shows that the number of incidences has increased from 216 incidences in 2019 to 680 in 2023. The majority were related to illegal entry into the park, road access construction (pioneer for honey, bird, marine biota collection) and installation of traps and nets for illegal hunting.

To address poaching and illegal fishing Rhino Protection Units (PRUs) were established, of which two Marine Protection Units (MPUs) are a part of. In practice the PRUs have law enforcement powers as long as they are accompanied by a Park Ranger (IUCN Consultation, 2014a). The MPUs patrol the waters around UKNP to combat illegal fishing and the use of destructive measures such as dynamite fishing, which destroy coral reefs and impact on the integrity of the marine ecosystem (Gumbira et al., 2017;

Putra et al., 2019). Each RPU also carries out monitoring and records occurrences of other illegal activities, which are reported to the chief of the unit and the head of UKNP. Although in the past, relatively few incidences were reported, the Indonesian Police in 2024 revealed that about 26 critically endangered Javan rhinos were killed by hunters between 2019-2023. Most of these killings went unnoticed to patrolling parties as carcasses of most of the killed rhinos could not be detected. Indonesian Police based on intelligence arrested the suspects (Hance, 2024; Mongabay-Indonesia, 2024; Moore and Hussein, 2024). To enhance vigil to strengthen law enforcement to check further killing of Javan rhinos, Ujung Kulon National Park office carries out law enforcement activities in the Ujung Kulon National Park area by implementing the Integrated Protection System for the entire area and implementing the Fully Protected Area system for the Ujung Kulon Peninsula area as a habitat for the Javan Rhino. The recent killings have promoted the current Director of the park to seek proactive vigil and back up protection support from the Indonesian Police and Army. A few trainings to upscale skills among the frontline NP staffs have been conducted with the help of Indonesian Army and Indonesian Police.

► Sustainable finance — Some Concern

The financial system of Ujung Kulon National Park comes from the Government budget through the APBN budget source and from official partners of Ujung Kulon National Park through the Cooperation Agreement mechanism in accordance with applicable provisions. Some NGOs also assist with financial support on activities related to wildlife and habitat monitoring in Ujung Kulon National Park. However current government funding is not sufficient to enhance vigil to protect the sanctity of the national park and lives of wild animals, specially, critically endangered Javan rhinos. Further due to the failure of RPUs to protect and to unearth the information on time with regards to the recent 26 Javan rhino poaching incidences, the donors supporting the RPU units through YABI (an Indonesian NGO) has also stopped support leading to paucity of sustainable funding to enhance protection and vigil.

According to the latest report from the UKNP Office (2023), the budget has fluctuated substantially. For example in 2019 the budget was 36.518.065.000 RP, in 2022 it was 112.628.864.000 RP and in 2023 it was 17.978.293.000 RP. Revenue from tourism income also decreased between 2022-2023.

Other sources state that the Ujung Kulon National Park budget has increased steadily over the last four years, except in 2020 due to the Covid-19 pandemic. The increases were significant in 2021 and 2022, however, most of this IDR 256.6 billion was not for Javan rhino conservation technical activities, but to build the Javan Rhino Study and Conservation Area (JRSCA); construction or maintenance of other infrastructure; for the procurement and maintenance of vehicles; and for staff salaries. In 2021, the budget allocated for JRSCA development was US$ 2.33 million, increasing to US$ 5.35 million in 2022. Yet, not only is the JRSCA area not in an existing rhino habitat, in 2011 it was already subject to strong opposition from civil society groups and academics as it bisected Ujung Kulon with its fence (Auriga Nusantara, 2023).

► Staff capacity, training and development — Some Concern

Every year, Ujung Kulon National Park holds activities to increase employee capacity/in-house training or sends its employees to take part in education and training carried out by the government, cooperation partners or universities. Many UKNP staff have also received training funded by DG CNRE, Centre of Education and Training of Forestry and Environment (MoEF) to improve knowledge and skills (IUCN Consultation, 2020). Based on the recent killings of 26 Javan rhinos in the NP, the staff needs further advance training on detection of illegal activities, prevention of further killings of threatened species and also thorough investigations from the crime scene leading to identification of suspects involved in wildlife offences.

A concern is that overall, the number of staff working in the UKNP Centre has decreased from 94 in 2019 to 70 in 2023 (UKNP Office, 2023). The majority are employed as forest police or forest monitoring officers.

► Education and interpretation programmes — Mostly Effective

The Education and Interpretation Program in the National Park has been carried out by the National Park by compiling Public Use Documents (PoP) in collaboration with the RARE institution and in collaboration with the New Zealand Embassy to compile an education and interpretation program in Ujung Kulon National Park.

So far, collaborative governance through the establishment of collaborative ecotourism and nature conservation education institutions has been carried out in the Ujung Kulon National Park area in the form of the establishment of a Community-Based Nature Conservation Education Center (PPKBM). This institution has stagnated in its operations, including due to the knowledge gap in understanding the concept of ecotourism and the implementation of nature conservation between the government and the community, openness in institutional management, and also the occurrence of natural disasters that have an impact on the physical structure of the building facilities owned by this institution (Kurniawan et al. 2024).

Other initiatives include the 'Rhino Goes to School' project and information sharing and awareness raising of regulations and policies for the management of Ujung Kulon National Park to Muspika and the community (UKNP Office, 2023).

► Tourism and visitation management — Mostly Effective

Tourism numbers have been increasing from a total of 7,554 in 2019 to 15,047 in 2023 (UKNP Office, 2023).

Tourism management in Ujung Kulon National Park focuses on environmentally friendly nature tourism by implementing a quota system for visitors, a zoning system, and a visitor service system using an online booking application. Involvement of local communities in tourism activities occurs in the form of transportation services, accommodation and guidance in the Ujung Kulon National Park area. Some local people are directly involved in ecotourism by working as guides and porters, and a variety of activities are provided by the local ecotourism organisation Kagum in Ujung Jaya (Van Merm, 2008). Wiyono et al. (2018) estimated that the carrying capacity of tourists on Peucang Island, appointed as an area for tourism, has not yet been reached, but with the recent increase in visitor numbers, management capacity needs to be developed and limitations should be considered to ensure ecological integrity. In 2018, the UKNP Management Authority built some tourism facilities (accommodation, offices, shelters, a field for outdoor activities, parking area, and others) in Tanjung Lame (inside UKNP), near Ujung Jaya village, funded by the central Government. These are managed by people from the local villages, as agreed between the UKNP Management Authority and Bupati Pandeglang. In an effort to provide better services for tourists, some facilities of Handeuleum were also improved, with funding from the central Government. The development activities in Tanjung Lame, Ujung Kulon Peninsula, and Handeuleum Island costed Rp. 18 Billion (or USD 1,200,200) (IUCN Consultation, 2020).

► Sustainable use — Mostly Effective

Sustainable utilization in Ujung National Park consists of the utilization of tourism services, non-commercial water utilization services, utilization of non-timber forest products in the form of utilization of forest honey together with the Community with a Cooperation Agreement mechanism with Community groups around the buffer zone of Ujung Kulon National Park as well as non-commercial water utilization permits for Community groups who utilize water for daily needs.

Further, a Public Use Planning programme is in place to manage the use of the Park and its resources, be it for subsistence or commercial purposes, to ensure that it is sustainable. Among other objectives, the Public Use Plan aims to develop local economies through ecotourism, while ensuring that visitor impacts remain within the Limits of Acceptable Change (Ujung Kulon National Park Office, 2015, 2019). A Public Use programme is also being prepared for the Traditional Use Zone (both the parkland and marine areas), the Special Zone, and the Religious Zone, as the Zonation plan has now been legally issued (IUCN Consultation, 2020). There is a significant threat to the marine portion of the site from destructive fishing

methods, such as bomb fishing (Gumbira et al., 2017; Putra et al., 2019), and other illegal or unsustainable fishing practices. However, two new marine patrolling units have been established in 2020 to address such issue.

► Monitoring — Mostly Effective

Monitoring of activities in the National Park uses the SPIP system "Government Agency Supervision System" as well as monitoring through performance audits carried out by the Inspectorate General of the Ministry of Forestry and the Audit Board of Indonesia (BPK). Intensive day-to-day monitoring is provided by the Rhino Protection Units. In addition to signs or direct sightings of Rhinos, the RPUs also record sightings of Banteng, as well as instances of illegal activities encountered and/or investigated (IUCN Consultation, 2014a). On average, RPUs spend 14-22 days per month on patrol. In addition to this day-to-day monitoring, WWF and the International Rhino Foundation manage a network of camera traps, which provides valuable data about the Rhino population, as well as other species. The goals for 2020-2022 were to increase RPU field patrols to 2 trips covering 4 km per day for the land patrols, and to 15 field patrol days per months for the two marine RPUs, to ensure continued zero Rhino poaching in UKNP. Regrettably this target was not achieved as shown by the recent killings. Field data collected by RPUs are analysed and collected in a monthly progress report (IUCN Consultation, 2020).

► Research — Mostly Effective

One of the objectives of the establishment of the National Park is as a Research Location. The procedure for submitting research is to make a research application letter to the Ujung Kulon National Park Office, which will then be issued a research permit in the form of SIMAKSI (Conservation Area Entry Permit). Some research work is carried out on Javan Rhinoceros, Banteng, the avifauna, coral reef fish communities, marine resources, plants (including Rhino food-plant species) and landscape ecology of Ujung Kulon NP (Ardiansyah, 2017; Gumbira et al., 2017; Setiawan et al., 2018; Putra et al., 2019; Yudha et al., 2019). Other research has focused on orchids, anthropology, mangroves, deer and monitor lizard, and rattan. The Krakatau islands have also been the subject of much research, particularly their recolonization by plants and animals (UNEP-WCMC, 1991, updated 2011). Research related to the existence of the invasive Langkap palm (Arenga obtusifolia) and its spread throughout Ujung Kulon Peninsula has been undertaken by several researchers (Haryadi et al., 2012; Robiansyah and Hamidi, 2019).

Publication data from 2023 indicates that 82 documents in total were published via various channels, 43 for research, science and education purposes (UKNP Office, 2023).

► Effectiveness of management system and governance in addressing threats outside the site — Some Concern

Ujung Kulon National Park is an isolated protected area in a rural landscape. Outside threats relate to mining and a growing human population, however it seems the human footprint has been decreasing in recent years (Dwiyahreni et al. 2021). There is currently no evidence that the mining activities close to the boundary of the national park are having a negative impact on its values, although more research and monitoring is required to confirm that. Increasing reports of various illegal activities are of concern however.

► Effectiveness of management system and governance in addressing threats inside the site — Some Concern

UKNP Management Authority manages the NP with three field management units, which are: Honje Mountain, Ujung Kulon Peninsula, and Panaitan Island. Each unit manages field staff, including park forest rangers, conservation technicians and administrators, and are responsible for protection and conservation actions in their units. All forest rangers are staying at strategically located guard posts, and are helped by locals and/ or volunteers selected by the head of UKNP and the chief of the unit. Rangers and local volunteers, supervised by the chief of the unit, are also responsible for resort work in their respective areas of UKNP, providing services to visitors and undertaking protection actions through a basic field operational ‘Resort Based Management’ plan (IUCN Consultation, 2020). However in

comparison to the area of the NP, the numbers of frontline rangers are in shortage which often creates challenges for effective and timely management interventions. The recent killings of 26 Javan rhinos inside Ujung Kulon NP reflects this lacunae.

Overall assessment of protection and management — **Some Concern**

Overall, the protection and management of Ujung Kulon National Park is of some concern due to increasing illegal activities, especially the killing of 26 Javan rhino in the park. Although the Rhino Protection Units (RPUs) have been patrolling parts of the park with rangers from UKNP and an additional two RPUs were established for marine patrolling, including members from the local fishing community, the threats from hunters focusing on Javan rhino, birds and fish are of deep concern. Despite occasional conflicts, the overall relationship between the UKNP Management Authority and local people is improving and many locals benefits from the existence of UKNP. However, failure to prevent or even detect the carcasses of killings of 26 Javan rhinos in Ujung Kulon raises many questions in efficacies of the protection measures during 2019-2023. After the Indonesian Police successfully secured conviction of key suspects involved in Javan rhino poaching cases, the Ujun Kulon NP, has initiated measures to strengthen protection within the NP by sending frequent protection staff to enhance vigil. The NP authorities even took help from Indonesian Police and Army to build capacity of NP staffs to strengthen protection and vigil. However insufficient human and financial resources urgently need to be addressed to enhance management effectiveness.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Most extensive lowland rainforest remaining on Java** — **High Concern** — **Trend:Stable**

Lowland rainforests in South-east Asia are a highly threatened ecosystem due to conversion to agricultural land and commercial plantations. In contrast, the lowland rainforests of Ujung Kulon NP remain generally in a good condition, and are barely impacted by encroachment and illegal logging. The main concern is the overabundance of Arenga obtusifolia palm (or Langkap), which out-competes most other plants, and causes habitat degradation. These changes in habitat diversity and vegetation affect the quantity and quality of food available to Javan Rhinos in Ujung Kulon NP, potentially leading to deficient nutrient intake and other associated health issues (Hariyadi et al., 2018). In 2007, this palm was reported to be established in 60 percent of the peninsula (Ministry of Forestry, 2007), and it is likely that this figure has increased since. Although it is native to these regions, Langkap is considered as an invasive species. The spread and dominance of Langkap has negative impacts on plant diversity. The density and diversity of seedling and sapling of plant species is low in areas where Langkap is dominant. Cutting clearance and chemical injection treatment are two methods that have been used to control the distribution of the species in Ujung Kulon NP (Robiyansyah, 2019). Eradication efforts are ongoing and cannot be deemed successful as yet (OFORA Trust Foundation, 2024).

▶ **Critical habitat for threatened animal species** — **High Concern** — **Trend:Deteriorating**

According to the IUCN Red List of Threatened Species the Banteng population in Ujung Kulon NP was between 500 and 800 animals in 2014 – the largest population on Java and possibly in the world. However the UKNP Office report from 2023 records just 83 individuals in 2023, compared to 209 individuals in 2022 (UKNP Office, 2023).
Poaching (mainly of birds) may be a threat to some species, but is generally considered to have a low impact (IUCN Consultation, 2014a). Restoration of key habitat for various species beyond the Javan

Rhino (e.g. for the Javan Gibbons) and forest and mangroves generally has been increasing with areas restored totalling from 900ha in 2019 to 1,408 ha in 2023 (UKNP Office, 2023). The overabundance of Langkap, which has an impact on the Rhino, may also be having an impact on other fauna. The spread and dominance of Langkap have negative impacts on plant diversity. The density and diversity of seedling and sapling of other plant species have been shown to be low in areas where Langkap is dominant (Robiyansyah, 2019). In Ujung Kulon National Park, the estimated number of Javan leopard individuals ranges from 35,23 to 41,37 individuals (Ina et al. 2022) and a trend was not ascertainable. Javan Gibbons are estimated to have decreased from 868 individuals in 2019 to 426 in 2023 according to the UKNP Office (2023). During 2017 Indonesian authorities tested 104 water buffalo Bubalus bubalis from the Rancapinang village precinct, one of 19 villages that reside around the eastern edge of Ujung Kulon for disease prevalence (Ramono et al. 2009; Khairani et al. 2018).

▶ Critical habitat for rare plant species

Low Concern
Trend:Data Deficient

Kokoleceran (Vatica bantamensis) is an endemic tree found only in Ujung Kulon National Park and was for 20 years (since 1998) classified as Endangered by the IUCN Red List. Due to its very limited extent, small population size and prospect to experience decline in quality of habitat due to the Langkap invasion, Kokoleceran now meets the category for Critically Endangered (Robiyansyah, 2018; Robiyansyah et al., 2019). However, the impact of Langkap on Kokoleceran, which is known to grow on higher grounds around Payung Mountain, remain debated (IUCN Consultation, 2020).
There is insufficient data available to assess the state and trend of other rare plant species in Ujung Kulon NP, and whether the overabundance of Langkap is having an impact on these species.

▶ Landscape of exceptional beauty

Low Concern
Trend:Stable

There is no evidence of any of the elements that contribute to the outstanding natural beauty of the landscape having been lost or significantly deteriorated, although coral reefs have been impacted by destructive fishing methods, pollution and ship groundings (Gumbira et al., 2017; Putra et al., 2019; Yudha et al., 2019; Ministry of Forestry, 2024).

▶ Stronghold for Javan Rhinoceros

Critical
Trend:Deteriorating

Out of 81 Javan rhino estimated by the park in 2023 (UKNP Office, 2023), 26 Javan rhinos are reported to be killed by poachers as per detailed investigation carried out by Indonesian Police since early 2024. Although many of the killed rhino carcasses could not be detected, Indonesian Police filed cases against suspects based on their confessional statement leading to convictions of poachers as per Indonesian laws (Hance, J., 2024; Mongabay-Indonesia, 2024).

Past population predictions have fluctuated. When censuses started in 1967, the Javan Rhino population was estimated at 25 animals. By 1983 the population had reached 58 – 69 animals, but this growth was not sustained and the population was estimated at 40-50 animals for decades. Camera trap data indicated that this number had increased to between 58 and 61 Rhinos in 2017 (International Rhino Foundation, 2017). In September 2019, Ujung Kulon National Park announced that four new Javan Rhinoceros calves had been observed through a camera trap survey in this last habitat of the species, putting the estimated global population at 72 individuals (Gokkon, 2019). However, there are criticisms of the published rhino population numbers. Auriga's report notes a discrepancy in the reported rhinos living in Ujung Kulon by the environment ministry and what the camera traps had actually recorded for the corresponding year, putting the population trend since 2020 into question (Auriga Nusantara, 2023).

According to the International Rhino Foundation, available evidence suggests that only 4 to 5 females are still breeding. It is believed that the rhino population has reached the carrying capacity of its current habitat (Setiawan et al., 2018), and that it cannot grow any larger without intervention. In response to this concern, the International Rhino Foundation, through its implementing partner YABI and with the support of other partners, has created the 4,000 ha Javan Rhino Study and Conservation Area (JRSCA) in the south-western Gunung Honje area, with among others the objective to expand the Rhino habitat

through intensive habitat management. Control of Arenga palm (Langkap) in JRSCA has significantly increased visitation by Rhinos to feed on young browse plants and has shown good recolonization within one year of sample plots being cleared of Langkap (IUCN Consultation, 2014a; 2014b). The establishment of a second population within its former range in Indonesia has been a long-standing priority for Javan Rhino conservation, and continues to be urgent (Sadjudin, 2019).
One prospective area was the Cikepuh Game Reserve, Sukabumi, West Java. However, surveys of this area were cancelled due to tenure conflicts and resistance from the local community. Another option would be the extension of JRSCA to the South Honje Mountain, as agreed by DG CNRE (IUCN Consultation, 2020).
The situation of the Javan Rhino as a species remains critical, and the protection in Ujung Kulon National Park is not longer secure considering the recent poaching incidents.

Summary of the Values

► **Assessment of the current state and trend of World Heritage values**

High Concern
Trend: Deteriorating

Based on the recent killings of 26 Javan rhinos, of which most went undetected on the ground, the current state of conservation of most values of Ujung Kulon National Park appears to be of high concern, although insufficient data is available to assess to what extent habitats for rare plant species may be affected by the overabundance of the palm Arenga obtusifolia. What is evident is that the Javan Rhino population, although still breeding, appears to have reached the carrying capacity of its current habitat. Urgent action is required to increase the amount of habitat available to the Rhino to allow its population to grow. The recent creation of the Javan Rhino Study and Conservation Area (JRSCA) is starting to show positive results in that regard, and it is hoped that the experiences gained there will be replicable in the entire National Park. The establishment of a second Javan Rhino population elsewhere in its former range remains a high priority. Other threatened animal species (e.g. Javan Gibbon and Banteng) are also showing a declining population trend, which is of concern.

Additional information

Benefits

Understanding Benefits

► **Fishing areas and conservation of fish stocks**

Legal fishing within the Traditional Use Zone and outside the boundaries of the site is an important source of income for some of the surrounding communities.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Moderate
- Pollution Impact level - Moderate
- Overexploitation Impact level - High
- Invasive species Impact level - Low
- Habitat change Impact level - Low

The inhabitants of villages surrounding UKNP are mostly subsistence farmers and fishermen, but not all of their needs can be met by their farming and fishing activities. Some disturbance to beaches where they are resting during fishing.
Some pollution from oil spills and rubbish (plastics).
Some over exploitation could happen, which is not picked up by forest rangers or RPU patrols.

► **Access to drinking water**

Local communities depend on water from the site for domestic use (drinking, cooking, washing), and for subsistence agriculture.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low
- Habitat change Impact level - Low

Little change in the use of clean water from the sources in Honje Mountain; many locals use connected bamboos to supply water to sites in a village. The reliance on these water sources—ranging from natural springs and rivers to rainwater catchment and forest-based piping systems—indicates the critical role of the park in supporting local livelihoods. These findings emphasize the importance of protecting forest hydrological functions, as any ecological disruption within UKNP could directly impact the availability and sustainability of water resources for surrounding communities.

► **History and tradition,**
Wilderness and iconic features

There is a Ganesha statue at the summit of Mount Raksa on Panaitan Island, dating from the 1st century AD. Other sacred/spiritual sites include Sanghyang Sirah Cave at the extreme western tip of the Ujung Kulon Peninsula, as well as sites in Cimahi and Kuta Karang in the Gunung Honje Area (within the JRSCA). Experiencing one activity can trigger other types of conflict, potentially linked to social or economic issues. One example involves disputes between shrimp pond entrepreneurs, with concerns raised about pollution from coastal ponds contaminating the sea.

Factors negatively affecting provision of this benefit :
- Pollution Impact level - Low
- Habitat change Impact level - Low

This pollution reportedly affects local fisheries, making it harder for fishermen to catch fish.

► **Sacred natural sites or landscapes**

The iconic Krakatau Islands are included in the site. The 1883 eruption of Krakatau is world famous, and was the loudest explosion in recorded history. Half of the island of Krakatau was blown away in the explosion. A new island, Anak Krakatau (the Child of Krakatau), emerged from the waves in August 1930, and has been growing at an average rate of 6.8 meters per year since the 1950s.

Factors negatively affecting provision of this benefit :
- Pollution Impact level - Low
- Overexploitation Impact level - Low
- Habitat change Impact level - Low

Only 83 visitors were recorded during 2019. All visitors and their guides in the field were under the control of the forest rangers and collection of plant and animal species and parts is prohibited according to the law of conservation.

► **Outdoor recreation and tourism**

Peucang Island is an island in Ujung Kulon National Park appointed as priority area and welcome area for tourism (Wiyono et.,2018). In addition, Panaitan Island is a well known spot for surfers all over the world, and together with other forms of tourism represent a source of income for local communities.

Factors negatively affecting provision of this benefit :
- Pollution Impact level - Moderate
- Habitat change Impact level - Low

Construction of some facilities such as shelters, posts, jetties, information centre, office, and meeting rooms in Tanjung Lame and Handeuleum island, Ujung kulon Peninsula, has led to some habitat impact and water pollution.

► **Importance for research,**
Contribution to education,
Collection of genetic material

The site is a natural laboratory for geology, biology and evolution, and features prominently in local primary schools. Much research has been done in the site (see section "Research" in the assessment of "Protection and Management"), and Anak Krakatau is subject to many studies by volcanologists the world over.

► **Carbon sequestration,**
Soil stabilisation,
Coastal protection,
Flood prevention,
Water provision (importance for water quantity and quality),
Pollination

These benefits can reasonably be assumed to all be present, but detailed information to quantify these benefits is not available.

Data deficient

► **Tourism-related income**

Eco-tourism is a potential income generating opportunities that could further increase the livelihood diversification in the local villages of the UKNP

Eco-Development activities for the fringe villagers of UKNP could further strengthen conservation and protection of this WHS garnering proactive support from the local people

Summary of benefits

The site is of major importance for nature conservation, as it protects the largest remaining lowland rainforest on Java, as well as many endangered species, including three endemic primates, and the entire global population of Javan Rhinoceros. Its protection provides jobs to local people (patrolling, tourist guides, boat rental and food service for tourists), and local communities depend on the site for their livelihoods (use of water, important fish spawning area, traditional fishing, honey collection, traditional crops etc.). The site is also a natural laboratory for geology, biology and evolution, and contributes to global knowledge.

Projects

Compilation of active conservation projects

№	Organization	Brief description of Active Projects	Website
1	Alert, UKNP	IPS terminology is used as a language of communication in order to invite parties working at TNUK to increase the capacity and effectiveness of all security components and to work in one unified system that supports each other. Broadly speaking, IPS is divided into 4 components, namely monitoring, communication and coordination, response, and follow-up handling components. All of these components currently require efforts to increase capacity, effectiveness, and integration.	https://alertindonesia.org/ https://tnujungkulon.menlhk.go.id/
2	Alert	This program focuses on developing the capacity of the UKNP security system by ensuring that the UKNP landscape is safe from disturbances in the area, especially in the core habitat of the Javan rhinoceros. Development includes improving workflow and security approaches, increasing human resource capacity, developing the latest security technology and so on that can increase the speed and effectiveness of intervention.	

№	Organization	Brief description of Active Projects	Website
3	YABI	RPU presence helps to prevent poaching and encroachment; the teams monitor and protect javan rhino and other big mammals (along with other threatened species and the overall habitat)	https://badak.or.id/

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