Okapi Wildlife Reserve

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Democratic Republic of the Congo **Inscribed in:** 1996 **Criteria:** (x)



The Okapi Wildlife Reserve occupies about one-fifth of the Ituri forest in the north-east of the Democratic Republic of the Congo. The Congo river basin, of which the reserve and forest are a part, is one of the largest drainage systems in Africa. The reserve contains threatened species of primates and birds and about 5,000 of the estimated 30,000 okapi surviving in the wild. It also has some dramatic scenery, including waterfalls on the Ituri and Epulu rivers. The reserve is inhabited by traditional nomadic pygmy Mbuti and Efe hunters. © UNESCO

SUMMARY

2020 Conservation Outlook

Finalised on 02 Dec 2020

CRITICAL

The principal components of the Reserve's Outstanding Universal Value are intact. The main habitat types are largely intact but key mammal species, including okapi and forest elephant are highly threatened by poaching. As long as the armed militias and various groups of poachers remain active in the Reserve, management capacities will be seriously constrained and it will be difficult to reverse the negative trends. However, regardless of the presence of armed militia, the pressures on the Reserve's natural resources from commercial hunting for bushmeat, forest clearance for agriculture in the village enclaves, and illegal mining and illegal logging (in the buffer zones) are likely to continue as immigrants continue to move into the Ituri forest from the overpopulated highlands to the east. The security problem caused by the militias is a problem of national security which the ICCN, the Reserve's management authority, cannot resolve alone. The illegal gold and coltan mining, and illegal artisanal logging in the buffer zones are also issues of poor governance which require strong political leadership if a sustainable resolution is to be found. Finally, a fully protected core area with National Park status should be created as a matter of urgency. The overall security situation and hence the surveillance activity seems to have improved in 2019 thanks to the State Party efforts. However, more than half of the site remains uncontrolled and many illegal activities such as semi-industrial mining with the support of foreign companies continue.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ Presence of emblematic and endangered mammal species.

The Okapi Wildlife Reserve (OWR)'s most important emblematic species is the okapi which is endemic to the Democratic Republic of the Congo (DRC), and the national symbol. At the time of inscription as a World Heritage site the okapi population was considered the largest in the DRC, estimated at 5,000 in 1994 although a survey in 2006 suggests that the population probably halved between 1995 and 2006 as a result of the wars (Beyers, 2008; UNESCO, 2009, UNESCO, 2010). The OWR probably also contains the largest population of forest elephant in the DRC (estimated at 4,000 in 1995 but significantly reduced by poaching since then (Beyers, 2008; UNESCO, 2009; UNESCO, 2010). There is also a large chimpanzee population (estimated at 7,500 in 1994) (ICCN, 2010).

Pleistocene refuge of central African tropical rainforest flora and fauna with several endemic species and high biodiversity.

The Ituri forest, where the OWR is located, served as a refuge of tropical rainforest species when dry periods in the Pleistocene caused major retractions of the Congo basin rainforests. As a result the forest contains several endemic species of large vertebrates, the most notable being the okapi Okapia johnstoni (a forest giraffe), the aquatic genet Osbornictis piscivora, the giant genet Genetta victoriae. In the north of the OWR an area of spectacular granitic inselbergs provide a unique microclimate for specially adapted plant species including the endemic giant cycad Encepholarcus ituriensis.

Biodiversity in the OWR is high as a result of a variety of intact habitat types in the altitudinal range of 600m to 1,200m including swamp forest, mixed evergreen forest, mono-dominant Gilbertiodendron deweveri forests, forest clearings (locally known as edos) and inselbergs. The OWR contains 101 mammal species, including 17 primate species (including chimpanzees) and 14 ungulate species (including okapi, bongo and 6 duiker species). 376 species of bird have been recorded in the OWR, including 2 endemic weaver birds (Ploceus flavipes and P. aureonucha) (ICCN, 2010).

Assessment information

Threats

Current Threats

Very High Threat

As is the case with other areas in central Africa, the intensity of elephant poaching, organised by armed criminal networks/militia is a very serious threat to the Reserve's elephant population. Artisanal mining for diamonds and coltan is also largely controlled by organised criminal networks with the support of some local chiefs and foreign companies. These militias have recently shown their readiness to take violent retribution against ICCN in response to their anti-poaching and anti-mining activities. This is a very worrying escalation of the situation, particularly in view of the ongoing security situation in eastern Congo. However, the security situation seems to have improved in 2019. The transformation of the RN4 from a muddy footpath to an international highway has resulted in a large increase in exploitation of natural resources in the Ituri forest, particularly wildlife for distant bushmeat markets and illegally exploited timber for internal and external markets. There is a very high risk that this threat will increase.

Criterion:(x)

Criterion:(x)

Immigration into the area from the overpopulated highlands to the east is also contributing to increasing pressure on the Reserve's natural resources. This is a particularly worrying threat since it is difficult to monitor and control, and there is a very high risk that it will increase.

Other Activities

(Migration to villages inside the Reserve)

The overpopulation of the fertile highlands east of the OWR (along the Albertine Rift), combined with easier access provided by the rehabilitated RN4 and the insecurity in the town of Beni (ADF-NALU massacre), caused the pressure of immigrants seeking new land to settle in and on the outskirts of the OWR to have increased sharply. This contributes to an intensification of deforestation for subsistence agriculture and hunting and the bush meat trade. As these resources become scarce in the outlying areas, activities will increasingly move within the OWR.

► Crops

(Forest clearance for agriculture)

The OWR management plan provides for 27 agricultural zones around the villages that existed within the boundaries of the Reserve at the time of the creation of the OWR. In some agricultural areas, particularly in Epulu where the head office is located, immigration to the area has resulted in unsustainably high forest clearance rates for agriculture and the risk that the area set aside in the agricultural zone is not sufficiently large to accommodate the number of families living in the area. In some cases, the boundaries of agricultural areas may have already been exceeded and there is a very high risk of this continuing. The boundaries of these zones are also crossed by unauthorized mining activities for gold, coltan or diamonds (Muchacha, Badengaido) (IUCN Consultation, 2020).

Hunting and trapping

(*Commercial bushmeat hunting (all large mammals) and trophy hunting (elephant)*)

Forest elephants are under intense pressure from ivory poachers. Many players are involved including uncontrolled elements of the Congolese army (FARDC) and armed militia. Hunting for the commercial bushmeat trade is also intense, and has increased significantly since the rehabilitation of the national road RN4 was completed in 2008. This has resulted in (a) much more meat being sold in the roadside restaurants in and around the Reserve and (b) bushmeat being transported much more easily, and in greater quantities, to distant urban markets. Vehicle traffic through the Reserve went from almost zero in 2004 to >1,000 vehicle per month in 2009 (UNESCO, 2009). Indigenous semi-nomad pygmies and local Bantus are involved in the commercial hunting, as are hunters from outside the area. Hunting is with nets, guns and snares. Wildlife surveys in 1995, 2006 and 2011 have clearly demonstrated a progressive reduction in all wildlife abundance indices, particularly along either side of the RN4 through the Reserve (WCS, 2008). There is a very high risk that this trend will continue.

In 2019, concerns were reiterated by the World Heritage Committee regarding the need to rapidly strengthen the number and capacity of guards and drastically reduce the poaching that affects the Outstanding Universal Value. Furthermore, priority should be given to close and rehabilitate all remaining illegal artisanal mines inside the site. Illegal mines are correlated to the increasing sale of bush-meat, including a certain percentage of Okapi meat, in the village markets (UNESCO, 2019). In 2019, especially in order to limit poaching, 493 ecoguard patrols covered ~48% of the site which allowed for the arrest of 151 people for illegal activities (State Party of the DRC, 2020).

Mining/ Quarrying

(Illegal artisanal mining (diamonds, coltan))

Illegal artisanal mining of diamonds and coltan occurs in the eastern and western sections of the OWR and in the peripheral zones of the Reserve. Over the years ICCN has managed to mobilise local authorities and the army to periodically evacuate the mines (UNESCO, 2009) but the problem continues to return. The militia and uncontrolled elements of the army are involved, in collusion with certain

High Threat

Inside site, scattered(5-15%)

Inside site, extent of threat not known

Very High Threat Inside site, extent of threat not known Outside site

High Threat

Outside site

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

Very High Threat

traditional chiefs. Since February 2012 the southern sector of the OWR has been occupied by militia. In addition to the damage caused to the water courses and the felling of trees, subsidiary activities of subsistence agriculture and hunting are also associated with the mining camps. Forest loss due to mining outside the OWR is significant. While some efforts have been undertaken to address the issue of artisanal mining, the majority of gold and diamond mines within the property have resumed their activities (UNESCO, 2017). As of 2019, illegal artisanal mining remains a serious concern and the number of illegal artisanal mines are increasing (UNESCO, 2019). In 2019, 57 mines were observed during surveillance field missions, of which 30 active mines that have been closed by ecoguards. However, mining activities continue in the site, including semi-industrial illegal mining (State Party of the DRC, 2020).

► War, Civil Unrest/ Military Exercises

(Presence of armed militia)

Several armed militia groups (Simba, Kumu, Rombi, Yira) operate in the OWR. In June 2012, the Simba attacked the Reserve headquarters killing seven people (including two guards and the wife of a guard) and destroying buildings and equipment. This was in retaliation for increased anti-poaching efforts by ICCN, carried out with the help of the FARDC, over the previous six months. 14 of the station's captive okapi were also killed as retaliation (Mushenzi and Balole, 2012). Ill-disciplined elements of the Congolese army continued the looting of the station and village for several days afterwards. This attack constitutes a considerable set back after nearly 30 years of continued investment by the international community for the protection and management of the OWR. In January 2013 the Zunguluka patrol post was attacked and destroyed. The post was attacked again in November 2015. In July 2017 a ranger's position in the Papela illegal mine in the East of OWR was attacked by unknown armed group: four rangers and one porter were killed in the attack. In 2019, the overall insecurity decreased in the site and several armed militia groups surrendered thanks to the activity of several local stakeholders including FARDC, ecoguards and local chiefs (State Party of the DRC, 2020).

Potential Threats

The front of artisanal timber exploitation is advancing rapidly towards the Reserve boundaries. A limited amount of illegal logging inside the Reserve probably already occurs but this may increase as sources of timber close to the road outside the Reserve diminish.

Logging/ Wood Harvesting

(Front of illegal artisanal logging moving closer to the site boundaries)

The rehabilitation of the RN4 route has had a direct and immediate impact on the level of off take of forest resources, particularly bushmeat and timber, in the Oriental Province (Nkoy Elela, 2007). The rapid movement of the front of illegal logging towards the OWR is a particular concern and constitutes a very high risk to the Reserve itself. There has been a large increase in the volumes of illegally logged hardwoods being transported along this road eastwards. Most of this timber is destined for neighbouring countries (Uganda, Rwanda, Kenya). Although most of this timber is currently logged outside the Reserve, the effect of the road rehabilitation has been to rapidly accelerate the rate at which the front of logging approaches the Reserve boundaries. Cases of illegal logging were reported in the Western part of the reserve (IUCN Consultation, 2017). The current and potential impacts of the significant increase in inhabitants in the villages along RN4 road is of concern and needs to be evaluated (UNESCO, 2017).

Overall assessment of threats

The presence of armed militia involved in illegal mining and hunting is a serious threat to the Reserve. Immigration is also a serious threat. Until relatively recently (2008) the lack of road access into the vast Ituri forest meant that the forests and the wildlife populations they contained remained relatively well preserved. This has changed dramatically since the RN4 road was rehabilitated allowing easy

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

High Threat

High Threat Outside site

Very High Threat

Very High Threat

access to pristine forests where quick money can be made from the bushmeat trade, artisanal logging and mining. Since the RN4 bisects the southern part of the Reserve from east to west, there is a very high risk that pressure on the Reserve's natural resources will increase singificantly. Human activity related disturbances from poachers, miners, militia, military and farmers, and loss of forest habitat are the main threats.

Protection and management

Assessing Protection and Management

Management system

A draft management plan was submitted to ICCN headquarters in September 2011 and is awaiting official approval. In the meantime some of the elements of the plan are being implemented. In 2019, the World Heritage Committee noted the delay in updating the Integrated Management Plan (PAG) for the property and the validation of the Central Integral Conservation Zone, and raised the need to expedite the updating of the PAG, integrating provisions relating to the different zones of the site, including the subsistence zones, the Central Integral Conservation Zone and forestry concessions for local communities, and ensure its immediate implementation (UNESCO, 2019).

Effectiveness of management system

A management effectiveness tool (PAMET) is being tested since 2011 but is not fully operational. An LEM (law enforcement monitoring) system, based on MIST, is operational. OWR receives strong support from GIC, WCS and, since 2010, KfW (through GFA) for implementation of the Management Plan. Mixed patrols (ICCN/FARDC) are deployed in hotspot areas. In 2019, the World Heritage Committee once again requested the government to rapidly strengthen the number and capacity of guards, as well as the budget for the property in order to extend the coverage of the patrols and progressively gain full control of the property and drastically reduce the poaching that affects the Outstanding Universal Value of the site. The number of patrols in the field, even with more guards, has decreased and is essentially located along the main roads (UNESCO, 2019). In 2019, 493 ecoguard patrols covered ~48% of the site and allowed the arrest of 151 people for illegal activities (State Party of the DRC, 2020).

Boundaries

Eighty percent of the boundaries of the OWR follow natural or clearly identifiable man-made features (rivers, roads). 200km of "artificial boundaries" (lines on a map) need to be marked. Discussion and information on some site boundaries have been led with local people in 2019 (State Party of the DRC, 2020).

Integration into regional and national planning systems

Wherever possible the OWR's strategy to support community development takes into consideration the concerns of local "Collectivités". Development initiatives must be compatible with the conservation objectives of the OWR, particularly in the special context of the OWR where legally recognised villages (enclaves) are located inside the boundaries of the Reserve where agricultural and hunting activities are meant to be regulated. However the Reserve's community development initiatives must be viewed in the context of the enormous development needs of this province, very weak regional planning capacities, widespread poverty, and the general absence of functioning state structures (communications, schooling, health care, justice, etc.).

Relationships with local people

The legal status of the protected area recognizes the legitimate presence of the semi-nomadic Mbuti and Efe pygmies and the Bantu populations who lived in the area before the creation of the reserve. Recognizing, integrating and reconciling their needs with the conservation objectives of the reserve are

Serious Concern

Serious Concern

Mostly Effective

Some Concern

Some Concern

therefore at the heart of ICCN's management strategy for the reserve (ICCN, 2010). The draft management plan defines a series of agricultural zones around the villages that existed before the creation of the reserve, and ICCN and its conservation partners (WCS and GIC) have devoted considerable resources in recent years to the establishment of sustainable agricultural practices within these areas. The work is coordinated and monitored by community-based natural resource management structures. GIC has also invested heavily in conservation education activities in all villages and towns around the OWR. The management plan also defines the principle of larger hunting areas extending into the forest from agricultural areas. However, the rules and regulations relating to the management of these hunting areas have not been clarified because of the difficulty of banning wire traps as a method of hunting. Metal snares are illegal, but are the most common and destructive method of hunting. Rangers on patrol occasionally pick up snares. Pilot village structures to monitor and control immigration to villages have also been tested in some villages. Other awareness-raising activities (construction of schools, dispensaries, fishponds, water sources, etc.) are also undertaken. In 2019, a strategy for closing artisanal mines of the property has been developed, and whilst it awaits validation at the national level, some quarries have been evacuated. It is one of the major occupations of the local population in the area and is not decreasing. The assessment of the impacts of the increased populations on the land-use in the property and the villages located along the RN4 has not been completed (UNESCO, 2019). The state of disrepair of the RN4 road in the Reserve could reduce the effectiveness of vehicle patrols.

Legal framework

ICCN manages the site with technical and financial support from two longstanding partners (GIC and WCS) and a more recent partner KfW. The legal framework is inadequate because no legal provision was made to create a totally protected core area with National Park status. Without this the long-term integrity of the Reserve's wildlife cannot be guaranteed.

Law enforcement

Law enforcement is challenging given the vast area of forest that must be patrolled and, more recently, the insecurity caused by rebel activities actively involved in elephant poaching and mining. Similar to other parts of the DRC, some elements of the FARDC are also involved in poaching and mining. In the past, ICCN has collaborated successfully with the FARDC to implement joint anti-poaching and anti-mining activities (indeed this is what provoked the brutal retaliation by rebels in Epulu in June 2012). An operational law enforcement monitoring system was in place until the last attacks. There continues to be a shortage of guards to ensure surveillance of the entire property (UNESCO, 2017). Law enforcement efforts have continued in 2019: 493 ecoguard patrols covered ~48% of the site (compared to 40% in 2017) and allowed the arrest of 151 people for illegal activities (State Part of the DRC, 2020). The surveillance system has been strengthened with the training of newly recruited eco-guards and the provision of additional financial and material resources in 2018. Unfortunately, the percentage of area covered decreased and the surveillance is concentrated along the main roads.

Implementation of Committee decisions and recommendations

Most of the Committee decisions that require action from the OWR management structure are being addressed, but with varying degrees of success given the current social, political and security context. The attack on Epulu is a major setback. These are:

- Increased scale of anti-poaching, with support from the army in sensitive areas
- Expand the immigration control measures to include more villages
- Control of traffic along the RN4 (but permission has not been granted to close the barriers at night)
- Management plan developed, but still awaiting approval.
- Proposed boundaries of a fully protected central core zone are being mapped.

• Definition of rules and regulations for management of the agricultural zones and hunting zones. Progress is slow.

• A wildlife survey using a comparable methodology to the ones in 1994 and 2006 was conducted and the result are currently being analysed.

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Serious Concern

Actions requiring the intervention of higher-level government bodies are inadequate:

• Permission to close the RN4 to traffic at night has not been given

• No adequate measures are being taken at international border posts to halt the export of illegal timber, minerals and ivory

• A forest zoning plan for the periphery of the Reserve has not yet been elaborated.

• Measures to stop the illegal activities of ill-disciplined members of the army (FARDC) in the area are inadequate.

In 2019, the World Heritage Committee again requested the government to provide Spatial Monitoring and Reporting Tool (SMART) data collected to enable an assessment of the illegal activities on the OUV of the property and data concerning progress accomplished with regard to the indicators defined in the Desired state of conservation for the removal of the property from the List of World Heritage in Danger (DSOCR) (UNESCO, 2019).

Sustainable use

The presence of 27 village "enclaves" in the Reserve is legally recognised. The management plan's zoning plan defines agricultural zones (where subsistence agriculture can take place) and more extensive hunting zones for subsistence hunting. However ensuring that rules and regulations for the sustainable use of these zones are respected is proving challenging particularly as pressure from immigration is steadily increasing. This is particularly the case for the hunting zones because regulations remain ambiguous and a certain level of illegal hunting (eg wire snares) is tolerated to avoid social tensions. In 2019, the assessment of the impacts of the increased populations on the land-use in the property and the villages located along the RN4, which the World Heritage Committee had requested, has not yet been completed (UNESCO, 2019).

Sustainable finance

The OWR has received substantial funding through its two long term technical partners (GIC and WCS) since the early 1980s. GIC annual funding has averaged about \$500.000 for the past several years. Funds are used to run the okapi breeding station, support for surveillance, community conservation activities (agro forestry, etc) and education & sensitisation. WCS mobilises several sources of funding (CARPE-USAID and private donors) for its community conservation activities (agricultural and hunting zoning) as well as contributing to general surveillance costs. Since 2010 KfW, through GFA, has been supporting OWR funding infrastructure rehabilitation and development, equipment and general protected area management support. UNESCO also provides emergency support. Revenue from tourism is small, but steady and, prior to the recent rebel attack, was benefiting from the improved access provided by the rehabilitated RN4 highway. Unusually for a protected area in DRC the majority of the visitors to Epulu are Congolese (travelling along the RB4).

As with all protected areas in DRC, for the foreseeable future the OWR will be dependent on international funding agencies. External aid will be particularly important following the destruction of the station by armed militia in June 2012 and of the Zunguluka post in January 2013 and in 2015.

In 2019, the expected funds from the KfW (with previous funding in 2018) was postponed, which complicates the strategy of the OWR to find enough funding to execute all necessary activities (State Party of the DRC, 2019). About \$2.5 million will be attributed to site management over the period 2020-2022 (State Part of the DRC, 2020).

Staff capacity, training, and development

Investments in staff training and development are ongoing, but these efforts need to be continued. In 2019, the World Heritage Committee again requested the government to rapidly strengthen the number and capacity of guards, as well as the budget for the property in order to extend the coverage of the patrols and progressively gain full control of the property, and drastically reduce the poaching (UNESCO, 2019). No further recruitment occurred in 2019 but some staff received training in first aid, policing, etc. (State Party of the DRC, 2020).

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Education and interpretation programs

For several years, extensive environmental education and public awareness campaigns (supported by GIC) have been conducted in the towns and villages around the Reserve. Health issues are also covered in these campaigns.

Tourism and visitation management

The Reserve has a small guest house which receives a small but steady flow of visitors. The rehabilitated RN4 highway improved access for tourism.

Monitoring

The long term presence of WCS has ensured continuity in the monitoring of the Reserve, although during the wars monitoring activities were seriously curtailed because it was impossible to access 80% of the Reserve. Wildlife surveys, using methodologies that allow valid comparisons, were conducted in 1994, 2005 and 2010, and these data sets indicate a general decline in wildlife indices for okapi, elephant and duiker with higher densities in the more inaccessible parts of the protected area. Adequate monitoring of this vast forested area is difficult to achieve in the current context and is expensive. Since July 2016, ICCN, with support from WCS, is monitoring the presence of okapi and other key species including chimpanzees, small monkeys, and duikers in different areas by camera traps. Several okapi, chimpanzee, small monkey and duiker's videos and pictures were collected and saved in the ICCN Research and Monitoring Program data bank.

Research

Conservation related research has been one of the key focuses of WCS activities in the Reserve since the 1980s (okapi and duiker ecology, hunting by pygmies, vegetation dynamics). Two large vegetation plots are monitored regularly within the framework of the worldwide network of tropical forest sites coordinated by the Centre for Tropical Forest Science (CTFS) of the Smithsonian Tropical Research Institute. A large herbarium is maintained by WCS. GIC has also contributed considerably to okapi research (particularly health aspects) through the captive breeding programme.

Overall assessment of protection and management

It is essential that a central core area with National Park status should be created as soon as possible. The southern and northern parts of the Reserve remain seriously affected by conflict - notably the presence of the armed militia in the south of the Reserve undertaking illegal mining and poaching. Furthermore, the presence of various groups of poachers in the northern-western part is alarming. The resolution of this problem, which negatively impacts its attributes, is largely beyond the control of the management authority. The destruction of the Epulu headquarters in 2012, and the assassination of staff, dealt a severe blow to management effectiveness, and as long as armed militia remain active in the area, the values of the Reserve will be seriously threatened. This is a national security problem that park management has little capacity to influence. Although there has been successful recent collaboration with the Congolese army FARDC for anti-poaching and controlling illegal mining, the presence of uncontrolled armed elements continues to be a threat. Strong political leadership is required to deal with the threats of illegal gold and coltan mining in and around the Reserve, especially led with the support of foreign companies. Without this, park management effectiveness will be compromised since this is not a problem that park management can resolve on its own. However, the Reserve has dedicated long term partners prepared to continue supporting management. The overall security situation, and hence the presence of ecoguards on site, improved in 2019 although some zones remain uncontrolled and thus subject to illegal activities.

Assessment of the effectiveness of protection and management in addressing threats outside the site

The destruction of the Epulu headquarters in 2012, and the assassination of staff, dealt a severe

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blow to management effectiveness, and as long as armed militia remain active in the area, the values of the Reserve will be seriously threatened. This is a national security problem that park management has little capacity to influence. Although there has been successful recent collaboration with the Congolese army FARDC for anti-poaching and to control illegal mining, the presence of uncontrolled armed elements continues to be a threat. Illegal gold, diamond and coltan mining in and around the Reserve constitutes a major concern for the park since the protection of the buffer zones is essential to the ecological integrity of the ecosystem to which the park belongs. Strong political leadership is required to deal with the threats of illegal gold, diamond and coltan mining in and around the Reserve. Without this, park management effectiveness will be compromised since this is not a problem that park management can resolve on its own. Finally, it is essential that a central core area with National Park status should be created as soon as possible.

State and trend of values

Assessing the current state and trend of values

World Heritage values

Presence of emblematic and endangered mammal species.

High Concern Trend:Deteriorating

Comparison of the results of wildlife surveys between 1994 and 2010 shows that the abundance indices of the okapi (Okapia johnstoni) have declined and that the spatial distribution has contracted (WCS, 2008). In 2017, reports from the territories of Mambasa, Wamba and Watsa showed that there were still cases of okapi poaching in and around the reserve. In addition, okapis are poached for their meat and the skin is trafficked for various traditional purposes in the Central African Republic. In March 2017, 3 okapi skins were confiscated from poachers in Wamba (IUCN Consultation, 2017). No reliable data exists on the abundance and distribution of other endemic mammal species (aquatic genet, giant genet, Congo peacock). Populations of the forest elephant (Loxodonta cyclotis) have also declined steadily since 1994, and their distribution has contracted. A similar picture emerges for duiker populations. Data on Pan troglodyte chimpanzee populations are insufficient. In 2019, although a comprehensive strategy for closing the artisanal mines at the property had been developed, some quarries were evacuated. Quarries are directly linked to the sale of bushmeat in markets, including okapi (UNESCO, 2019). There are no reliable data on large mammals which are studied for several years, but also amphibians, fishes, bats, insects and other small mammals are not taken into account. As a result, little is known about this wildlife wealth in the Okapi Wildlife Reserve (IUCN Consultation, 2020).

Pleistocene refuge of central African tropical rainforest flora and fauna with several endemic species and high biodiversity.

The forest is essentially intact outside of the Agricultural Zones. Illegal mining inside the Reserve has resulted in localised habitat loss but this is relatively minor compared with the very large surface area of the Reserve.

Summary of the Values

Assessment of the current state and trend of World Heritage values

High Concern Trend: Deteriorating

The main forest types and biotopes of the Reserve that constitute the central African rainforest Pleistocene refuge are intact, apart from very localised habitat destruction around the illegal mining sites. However poaching of endemic and emblematic mammal species (okapi, forest elephant) for

Low Concern Trend:Stable trophies and the bushmeat trade is causing a progressive decline in their populations. It will require the removal of armed militia from the Reserve, the creation of a fully protected core area with National Park status and many years of strong park management to allow these populations to recover.

Additional information

Benefits

Understanding Benefits

Direct employment

The reserve is highly valued for its unique biodiversity and its endemism values, resulting from its status as a Pleistocene forest refuge. The okapi is the most emblematic endemic species and is the national emblem. The forest elephant population is one of the largest remaining in the DRC. The reserve provides jobs (permanent and temporary) for many people, especially the semi-nomadic Mbuti pygmies, whose unique forestry knowledge is used to provide the daily supplies of plant species for the captive okapi at the Epulu station (although unfortunately the 14 captive okapis were killed in the June attack on the station, so this source of employment is now over). It also contributes to the socio-economic well-being of local populations through primary health care infrastructure and services, schools and micro-projects.

Collection of medicinal resources for local use, Outdoor recreation and tourism

The park has a significant tourist potential, but this has never been fully realised. In the past this was because of difficult access (until 2008 the RN4 was little more than a muddy footpath) but more recently the deteriorating security situation has been a constraining factor. Key tourist attractions are: okapi at the station (until the June attack), easy walks in pristine rainforest accompanied by pygmies, possibility to participate in pygmy activities (traditional net hunting, etc..).

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

Several large rivers, and hundreds of smaller rivers, flow through the Reserve or start in it. The vast area of forest through which they flow ensures regulation of downstream flows. The 13.726 km² of dense tropical rainforest also constitutes an important carbon sink.

History and tradition, Wilderness and iconic features, Sacred natural sites or landscapes

Two groups of semi-nomad pygmies, the BaMbuti and the BaEfe are the indigenous inhabitants of the Ituri forest. About 5.000 pygmies live inside the Reserve and depend on its natural resources. The spiritual values of the forest are central to their well being.

Since 2012, the closure of the Epulu's zoo increased issues such as alcoholism and other negative behavior in the BaMbuti population.

The principle of not selling okapi meat is, since 2012, less and less respected and the quantity of okapi meat in the local markets is increasing. This animal was traditionally protected by the BaMbuti.

Factors negatively affecting provision of this benefit :

- Overexploitation : Impact level - Low, Trend - Increasing

Summary of benefits

The national and global benefits in terms of nature conservation (central African humid forest biodiversity and endemism) are exceptionally important. The site also has high cultural and spiritual importance for the Mbuti and Efe pygmies who are the indigenous inhabitants of the Ituri forest and whose hunting and gathering rights are recognised in the Reserve's legal status. However these benefits are all at risk because of the presence of armed militia, the increasing levels of poaching and the difficulty of controlling immigration into the area.

Projects

N⁰	Organiz ation	Proj ect dura tion	Brief description of Active Projects
1	Gilman Internati onal Conserv ation		GIC's The White Oak Conservation Centre has funded the Okapi Conservation Project since 1987. It mobilises its own sources of funding, and also mobilises support from private donors and a large network of Zoos. The project mobilises on average 500,000 \$US/year in support of the Reserve. The project supports a wide range of park management related activities including surveillance, capacity building and training, agro-forestry, alternative livelihoods, community assistance, education and research.
2	Wildlife Conserv ation Society		WCS has been present in the RFO since the early 1980s. In recent years they have concentrated on land use planning issues and the community-based management of natural resources in the extractive zones of the RFO (agricultural and hunting zones). WCS also undertakes long term monitoring of large mammals and human impact. Forest dynamics have also been monitored since the mid-1990s and more recently they have started monitoring forest carbon dynamics.
3	KfW		KfW has until recently provided support for various aspects of management of the Reserve: material, capacity building, constructions and technical support. In 2020, there is no more funding and the next phase is postponed.

Compilation of active conservation projects

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