Okapi Wildlife Reserve

SITE INFORMATION

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

Site description:

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.

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SUMMARY

2014 Conservation Outlook

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.

Current state and trend of 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 trophies and the bushmeat trade is causing a progressive decline in their populations. It will require the removal or 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.

**Overall THREATS**

**Very High Threat**

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

**Overall PROTECTION and MANAGEMENT**

**Serious Concern**

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 are 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 recent destruction of the Epulu headquarters, and the assassination of staff, has dealt a severe blow to management effectiveness. As long as the militia responsible 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 collaboration with the Congolese army for anti-poaching and controlling illegal mining, the presence of uncontrolled elements of the Congolese army 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. 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 structures despite the recent destruction of the Reserve headquarters by armed militia.
FULL ASSESSMENT

Description of values

Values

World Heritage values

- **Presence of emblematic and endangered mammal species.**
  
  Criterion:(x)

  The RFO’s most important emblematic species is the okapi which is endemic to the DRC, and the national symbol. At the time of inscription as a World Heritage site the okapi population was considered the largest in the RDC, 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; SOC report, 2009, UNESCO, 2010). The RFO 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; SOC report, 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.**
  
  Criterion:(x)

  The Ituri forest, where the RFO 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 RFO 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 RFO is high as a result of a variety of intact habitat types in the altitudinal range of 600m to 1,200 m including swamp forest, mixed evergreen forest, mono-dominant Gilbertiodendron deweveri forests, forest clearings (locally known as edos) and inselbergs. The RFO 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 RFO, including 2 endemic weaver birds (Ploceus flavipes and P. aureonucha) (ICCN, 2010).

Assessment information

Threats

Current Threats
Very High Threat

As with everywhere else 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 gold and coltan is also largely controlled by organised criminal networks. 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 inability of the State to resolve the security situation in eastern Congo.

The transformation of the RN4 from a muddy footpath to an international highway has resulted in a massive 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.

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 so difficult to monitor and control and
there is a very high risk that it will increase.

► **Commercial hunting**

*Very High Threat*
*Inside site*  
*Outside site*

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 (SOC Report, 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.

► **War, Civil Unrest/ Military Exercises**

*Very High Threat*
*Inside site*  
*Outside site*

At least three armed militia groups (Simba, Kumu, Rombi) operate in the RFO. The Simba, led by an infamous poacher named Morgan, have recently shown that they will stop at nothing to continue their illegal activities of mining (gold, coltan) and elephant poaching. On June 25th 2012 they 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. All 15 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 RFO.

In January 2013 the Zunguluka patrol post was attacked and destroyed.

▶ **Mining/ Quarrying**

**Very High Threat**

**Inside site**

**Outside site**

Illegal artisanal mining of gold and coltan occurs in the southern section of the RFO 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 (SOC Report, 2009) but the problem always returns. The militia and uncontrolled elements of the army are involved, in collusion with certain traditional chiefs. Since February 2012 the southern sector of the RFO 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 RFO is significant.

▶ **Crops**

**High Threat**

**Inside site**

The RFO management plan provides for 27 agricultural zones around the villages that existed within the boundaries of the Reserve when the RFO was created. In certain agricultural zones, particularly Epulu where the headquarters is located, immigration into the area has resulted in unsustainably high rates of forest clearance for agriculture and the danger that the area set aside in the agricultural zone may not be large enough to accommodate the number of families living in the zone. In some cases the boundaries of the agricultural zones may have already been exceeded and there is a very high risk that this will continue.

▶ **Other Activities**

**High Threat**

**Inside site**
Outside site

Overpopulation in the fertile highlands to the east of the RFO (along the Albertine Rift), combined with easier access provided by the rehabilitated RN4 has meant that pressure from immigrants seeking new land to settle inside and on the periphery of the RFO has increased sharply. This contributes to increased intensities of deforestation for agriculture and hunting for subsistence and the bushmeat trade. As these resources become scare in the peripheral zones these activities will increasingly move inside the RFO.

Potential Threats

Low Threat

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.

Forestry/ Wood production

Low Threat

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 RFO is a particular concern and constitutes a very high risk to the Reserve itself. There has been a massive 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.

Protection and management
Assessing Protection and Management

▶ Relationships with local people

Some Concern

The legal status of the protected area recognises the legitimate presence of the semi nomad Mbuti and Efe pygmies and Bantu populations who were living in the area prior to the creation of the Reserve. Recognizing, integrating and reconciling their needs with the conservation objectives of the Reserve are therefore central to ICCN’s management strategy for the Reserve (ICCN, 2010). The draft management plan defines a series of Agricultural Zones around the villages that existed prior to the creation of the Reserve and ICCN and its conservation partners (WCS and GIC) have devoted considerable resources over the past years to establishing sustainable agricultural practices within these strictly defined zones. The work is coordinated and monitored through community-based natural resource management structures. GIC has also invested heavily in conservation education activities in all the villages and towns around the RFO. The management plan also defines the principal of vaster hunting zones extending into the forest from the Agricultural zones. However the rules and regulations for the management of these hunting zones are have not been clarified because of the difficulty of imposing a ban on wire snaring as a hunting method. Wire snares are illegal, but are the most common, and very destructive, method of hunting. Rangers on patrol occasionally collect snares. Pilot village-based structures to monitor and control immigration into the villages have also been tested in some of the villages. Other outreach activities (building of schools, dispensaries, fish ponds, etc) are also undertaken.

▶ Legal framework and enforcement

Serious Concern

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 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. Like everywhere else in the DRC ill-disciplined elements of the FARDC are also involved in poaching and mining. In the past few months 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.

▶ **Integration into regional and national planning systems**

**Some Concern**

Wherever possible the RFO’s strategy for support for community development takes into consideration the concerns of local “Collectivités”. Development initiatives must be compatible with the conservation objectives of the RFO, particularly in special context of the RFO where legally recognised villages (enclaves) are located inside the boundaries of the Reserve where regulated agricultural and hunting activities are meant to take place. 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.).

▶ **Management system**

**Some Concern**

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.

▶ **Management effectiveness**

**Serious Concern**

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.

RFO receives strong support from GIC, WCS and, since 2010, KfW (through GFA) for implementation of the Management Plan. Retirement-age staff have been retired and 35 new recruits have been trained and are operational. Total number of guards is 85 for 13.726km². About 70% of the Reserve is now patrolled (compared with about 20% during the wars in 2002-2004). The recently occupied southern section is currently a no-go area because of armed militia. Mixed patrols (ICCN/FARDC) are deployed in hotspot areas.

Efforts are also made to control the traffic on the RN4 although this is very challenging because of the very high number of vehicles moving through the RFO and the fact that ICCN is not authorised to close the barriers during the night (meaning that staff barriers have to be manned 24h/24h).

Implementations of Committee decisions and recommendations

Some Concern

Most of the Committee decisions that require action from the RFO management structure are being addressed, but with varying degrees of success given the current social, political and security context. The recent 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.

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.

▶ Boundaries
Mostly Effective

Eighty percent of the boundaries of the RFO follow natural or clearly identifiable man-made features (rivers, roads). 200km of “artificial boundaries” (lines on a map) need to be marked.

▶ Sustainable finance
Some Concern

The RFO 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 RFO 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 RFO 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.

▶ Staff training and development
Some Concern

Investments in staff training and development are ongoing, but these efforts
need to be continued.

► **Sustainable use**

**Some Concern**

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 illegal hunting (eg wire snares) is tolerated to avoid social tensions.

► **Education and interpretation programs**

**Mostly Effective**

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 interpretation**

**Some Concern**

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**

**Some Concern**

The long term presence of WCS has ensured continuity in 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 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.

Research

Mostly Effective

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

Serious Concern

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 are 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 recent destruction of the Epulu headquarters, and the assassination of staff, has dealt a severe blow to management effectiveness. As long as the militia responsible 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 collaboration with the Congolese army for anti-poaching and controlling illegal mining, the presence of uncontrolled elements of the Congolese army 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. 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 structures despite the recent destruction of the Reserve headquarters by armed militia.

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

**Serious Concern**

The recent destruction of the Epulu headquarters, and the assassination of staff, has dealt a severe blow to management effectiveness. As long as the militia responsible 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 collaboration with the Congolese army for anti-poaching and controlling illegal mining, the presence of uncontrolled elements of the Congolese army continues to be a threat.

Illegal gold 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 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**

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**Assessing the current state and trend of values**

**World Heritage values**

▶ **Presence of emblematic and endangered mammal species.**

**High Concern**

**Trend:** Deteriorating

Comparison of wildlife survey results between 1994 and 2010 indicate that
abundance indices for okapi Okapia johnstoni have declined and spatial distribution contracted (WCS, 2008). No reliable data exists for abundance and distribution of the other endemic mammal species (aquatic genet, giant genet, Congo peacock). Forest elephant populations Loxodonta cyclotis have also declined steadily since 1994 and their distribution has contracted. A similar picture emerges for the duiker populations. Data on chimpanzee Pan troglodytes populations are insufficient.

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

**Low Concern**

**Trend:** Stable

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 trophies and the bushmeat trade is causing a progressive decline in their populations.

It will require the removal or 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

Key conservation issues

▶ Presence of armed militia
  Regional

As long as armed militia remain active in the Reserve and its surroundings, management’s ability to tackle any of the other conservation issues will continue to be compromised. Furthermore the continued presence of armed militias means that the Congolese army, which is involved in commercial poaching, will remain billeted in significant numbers in the region.

▶ Commercial hunting
  Global

If the militia can be neutralized and uncontrolled elements of the Congolese army withdrawn from the region, management’s ability to combat elephant poaching will be enhanced. However, given the global nature of the ivory trade and the criminal organisations involved, and the relative abundance of forest elephants in the Reserve compared with other sites in DRC, the elephant population is bound to come under further intense pressure from poachers. Controlling commercial poaching for the bushmeat trade will also continue to be a major challenge because of the heavy traffic moving through the Reserve on the RN4 and the near impossibility of checking all the vehicles. Closing the road to traffic at night is an important measure that needs to be taken.

▶ Immigration into the Reserve
  National

The increasing numbers of people migrating to the Reserve and its surroundings in search of land is increasing pressures on the Reserve’s natural resources (deforestation for agriculture, bushmeat). A system for controlling immigration into the Reserve has been tested since 2008 but its effectiveness remains limited because it requires (a) substantial resources and (b) strong support from local authorities, both of which are insufficient for the moment.
Establishing and enforcing clear regulations for the use of the agricultural zones and hunting zones is also a high priority.

► Gold and coltan mining

National

Illegal gold and coltan mining, currently largely controlled by armed militia (with probable connivance from certain local authorities), is a major conservation issue and is a consequence of the breakdown in law and order and the severe socio-economic decline brought on by years of mismanagement and civil strife in the country. While park management can continue to try to enforce the law, the problem is likely to persist as long as there is no high level political will to address it properly.

Benefits

Understanding Benefits

► Is the protected area valued for its nature conservation?,
  Does management of the site provide jobs (e.g. for managers or rangers)?

The Reserve is highly valued for its unique biodiversity and 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 employment (permanent and temporary) for many people, particularly the semi-nomad Mbuti pygmies, whose unique forest knowledge is used to provide the daily provisions of plant species for the captive okapis at the Epulu station (although regrettably all 14 captive okapi were killed during the June attack on the station so this source of employment is now ended). It also contributes to the socio-economic welfare of local populations through primary health care infrastructures 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 Mbuti and the Efe 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.

**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**
### Compilation of active conservation projects

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<thead>
<tr>
<th>№</th>
<th>Organizational/individuals</th>
<th>Project duration</th>
<th>Brief description of Active Projects</th>
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<tbody>
<tr>
<td>1</td>
<td>Gilman International Conservation</td>
<td>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.</td>
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<tr>
<td>2</td>
<td>Wildlife Conservation Society</td>
<td></td>
<td>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 90s and more recently they have started monitoring forest carbon dynamics.</td>
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<tr>
<td>3</td>
<td>KfW</td>
<td></td>
<td>KfW provides support for various aspects of management of the Reserve.</td>
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### Compilation of potential site needs

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<tr>
<th>№</th>
<th>Site need title</th>
<th>Brief description of potential site needs</th>
<th>Support needed for following years</th>
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<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>The destruction of Epulu station by armed militia in June 2012 represents and enormous setback for ICCN. 25 years of investment in infrastructures and equipment must be replaced and the morale of ICCN staff must be rebuilt. This will require sustained support from external partners.</td>
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# REFERENCES

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<td>2</td>
<td>ICCN, 2010. Plan Général de Gestion de la Réserve de Faune à Okapi. (draft)</td>
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