IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 26 May 2014

Please note: this is an archived Conservation Outlook Assessment for Salonga National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Salonga National Park

SITE INFORMATION

Country:
Democratic Republic of the Congo
Inscribed in: 1984
Criteria:
(vii) (ix)

Site description:
Salonga National Park is Africa's largest tropical rainforest reserve. Situated at the heart of the central basin of the Congo river, the park is very isolated and accessible only by water. It is the habitat of many endemic endangered species, such as the dwarf chimpanzee, the Congo peacock, the forest elephant and the African slender-snouted or 'false' crocodile. © UNESCO

SUMMARY

2014 Conservation Outlook

Critical

The values of the Salonga National Park remain, although they are under significant pressure. Bonobos and forest elephants have been severely reduced through poaching for ivory and the bushmeat trade. Habitat diversity remains intact, despite continuing (though relatively limited compared to the overall surface area of the park) deforestation though slash and burn agriculture. If the devastating impacts of the commercial bushmeat trade are to be reversed, law enforcement will have to be very significantly improved. This will require more and better trained and equipped staff, greatly increased funding levels, and strong political leadership.

Current state and trend of VALUES

High Concern
Trend: Data Deficient

The faunal values of the park are seriously threatened by poaching for the bushmeat trade. Forest cover, habitat diversity and floral diversity values are probably still intact despite deforestation by subsistence agriculture in the two enclaves in the park, and along disputed park boundaries. Areas affected by deforestation remain, however, relatively limited when set against the vast size of the park.

Overall THREATS

High Threat

Bushmeat commerce, involving elites and the military, is the most important threat to the values of the park. Emblematic and endemic species (forest elephant, bonobo) have already been seriously affected and continue to be so. All large to medium sized mammal populations are being impoverished by the intensity of the commercial bushmeat trade. Illegal and unsustainable fishing

activities threaten a) the fish diversity and b) the livelihoods of people living downstream who are highly dependent on fish as a food source. Forest clearance for slash and burn agriculture affected at least 6% of the park in 2003 and the forest clearance continues.
Since 2011 an armed rebellion has set up a quasi independent administration in the park creating insecurity and no-go areas for ICCN. An ongoing joint operation with the Congoelse army FARDC entitled “Operation Bonobo” has had success in liberating these areas and restoring the rule of law.Although not strictly defined as armed militia, the presence of uncontrolled elements of the Congolese army involved in poaching threaten the security of the site.
The long term ecological integrity of the site is threatened by the fact that much of the corridor between the northern and southern blocks no longer acts as a viable ecological link. Only in the south eastern section does an ecological link remain intact. Moreover, concession blocks for oil exploitation cover the Salonga National Park. Although it is thought that no concessions have yet been granted the possibility exists that this will happen in the near future.

Overall PROTECTION and MANAGEMENT

Serious Concern

Protection and management are still very weak although it should be recognised that slow progress is being made to improve this. This is in part due to the vast size of the park, the extraordinarily difficult logistical transport problems, and the challenge of having to deal with four Provincial governments. Staff levels and funding levels remain very far short of what is needed for effective management and protection of such a large area.

FULL ASSESSMENT

Description of values

Values

World Heritage values

- **Vast area of intact lowland tropical rainforest covering a wide range of habitats with high biodiversity.**
  Criteria:(vii)(ix)(x)

  Salonga National Park represents one of the very rare existing biotopes absolutely intact in central Africa. Moreover, it comprises vast marshland areas and practically inaccessible gallery forests, which have never been explored and may still be considered as practically virgin (SoOUV, 2012). At 36.000 km² (divided into two block separated by an inhabited corridor of between 25-50km wide), Salonga National Park is by far Africa's largest area of lowland tropical rainforest with protected area status. Its wide range of habitats (primary forest, secondary forest, periodically and permanently flooded forest, savannah islands, dense river network) results in high biodiversity. The headwaters of some of the Congo basin's most important river systems, containing fish stocks that millions of people depend on downstream, are protected within the Salonga National Park. Fish diversity is very high. Because of its vast size it also probably plays a critical role in regulation of local climates and constitutes a very significant carbon sink.

- **An example of biological evolution and the adaptation of life forms in a complex equatorial rainforest environment**
  Criterion:(ix)

  The plant and animal life in Salonga National Park constitute an example of biological evolution and the adaptation of life forms in a complex equatorial

rainforest environment. The large size of the Park ensures the continued possibility for evolution of both species and biotic communities within the relatively undisturbed forest (SoOUV, 2012). Salonga National Park is the most important site in the Democratic Republic of the Congo for the endemic bonobo Pan paniscus. Although reliable survey data is fragmentary, according to the 2012 Bonobo Conservation Strategy it is likely that Salonga National Park contains roughly half (range 7.100-20.400 (Grossmann et al. 2008)) of the entire population of bonobos throughout its range. Forest elephant Loxodonta cyclotis distribution is patchy and densities are very low as a result of sustained heavy poaching over many years (Hart et al, 2008). However the vast size of Salonga National Park means that it remains a very important stronghold for forest elephants in the Congo basin because, if effective and sustained protection can be re-established, the potential for a large population increase is high. Elephants are also vitally important for maintaining characteristics, regenerative capacity, and long-term viability of the forest and probably help to maintain the vegetation understory characteristics important for bonobo nesting (Reinartz et al 2006).

Assessment information

Threats

Current Threats

High Threat

Bushmeat commerce, involving elites and the military, is the most important threat to the values of the park. Emblematic and endemic species (forest elephant, bonobo) have already been seriously affected and continue to be so. All large to medium sized mammal populations are being impoverished by the intensity of the commercial bushmeat trade. Illegal and unsustainable fishing activities threaten a) the fish diversity and b) the livelihoods of people living downstream who are highly dependent on fish as a food source.
Forest clearance for slash and burn agriculture affects at least 6% of the park and the rate of forest clearance is probably not decreasing.

Since 2011 an armed rebellion has set up a quasi independent administration in the park creating insecurity and no-go areas for ICCN. An ongoing joint operation with the Congoelse army FARDC entitled “Operation Bonobo” has had success in liberating these areas and restoring the rule of law.
Although not strictly defined as armed militia, the presence of uncontrolled elements of the Congolese army involved in poaching threatens the security of the site.
The long term ecological integrity of the site is threatened by the fact that much of the corridor between the northern and southern blocks no longer acts as a viable ecological link. Only in the south eastern section does an ecological link remain intact.

► Commercial hunting

Very High Threat
Inside site
Outside site

Ivory poaching and bushmeat commerce, involving almost all vertebrate species, is very intense and thus affects the biodiversity values of the park. The Congolese military have been heavily involved in this illegal activity for many years (since the late 70s for ivory). Local elites (administrative and traditional authorities) are also often involved (Plan Général de Gestion, 2011; Aveling et al. 2009, Fabing & Chardonnet, 2012)).

► Fishing / Harvesting Aquatic Resources

High Threat
Inside site
Outside site

Illegal fishing is widespread in the park, and destructive methods are used (particularly small mesh size, dynamite and poison) (Plan Général de Gestion, 2011). The rivers are easily navigable for great distances into the heart of the park. Bushmeat hunting and elephant poaching is often associated with illegal fishing activities.

► Crops

High Threat

Inside site
Outside site

Forest clearance of subsistence agriculture is most intense in the areas occupied by the Iyaelema (8 villages along the old Anga-Munja road traversing the southern block) and the Kitawalistes (in north eastern part of northern block). Six percent of the park was affected by slash and burn agriculture in 2003 (Plan Général de Gestion du PNS, 2011). Surprisingly, bonobo numbers appear to be significantly higher near the Kitwaliste and Iyealima villages as a result of taboos against killing these animals held by these populations (Grossmann et al. 2008).

► War, Civil Unrest/ Military Exercises

High Threat
Inside site
Outside site

In 2011 an armed rebellion set up a quasi independent administration in the park creating insecurity and no-go areas for ICCN. An ongoing joint operation with the Congoelse army FARDC entitled “Operation Bonobo” has had success in liberating these areas.
Although not falling within the strict definition of armed militia, uncontrolled elements of the Congolese army are involved in ivory hunting and the commercial bushmeat trade.

► Other

High Threat
Inside site
Outside site

According to the latest UNSCO/IUCN monitoring mission report (Fabing & Chardonnet, 2012) the only remaining part of the corridor that fulfils the role of providing an ecological continuum between the northern and southern blocks of the park is in the south east part of the corridor, designated as the Luilaka Community Based Natural Resource Management area (CBNRM).

Potential Threats

Low Threat

Concession block for oil exploitation cover the Salonga National Park. Although

it is thought that no concessions have yet been granted the possibility exists that this will happen in the near future. The environmental effects could be serious (pollution, forest clearance, immigration of people).

► Oil/ Gas exploration/development

Low Threat
Inside site
Outside site

Concession blocks for oil exploitation cover Salonga National Park. Although it is thought that no concessions have yet been granted the possibility exists that this will happen in the near future. The environmental effects could be serious (pollution, forest clearance, immigration of large numbers of people).

► Tourism/ visitors/ recreation

Low Threat
Inside site
Outside site

The presence of researchers/visitors/tourists may enhance disease transmission and pose a risk to ape populations. This potential threat is monitored by MPI at LK research site (Hohmann, 2013).

Protection and management

Assessing Protection and Management

► Management system

Some Concern

A draft management plan was produced in 2011 and is awaiting approval by ICCN. Certain components are being implemented within the constraints of the current context (limited funding, difficulties of access, local corruption, involvement of army in illegal activities, etc)..

► Relationships with local people

Some Concern

Relations with local populations have generally been conflictual for most of

the park's history. As the region is extremely poor and isolated, 95% of local peoples' activities is based on natural resource use. As these resources become impoverished in the periphery of the park, people move inside the park to exploit them. Only relatively recently have community conservation and environmental education activities been conducted, and these are essentially limited to the corridor between the two block and at Munja (PGG, 2011). These need to be extended to other areas, although the challenges are immense given the size of the park and the logistical transport difficulties.

► Legal framework and enforcement

Serious Concern

The legal framework (National Park) is inadequate due to the fact that the concerns of the Iyaelema people living in the area that became the National Park were not properly addressed, the result being that they have always refused to leave and their (illegal) presence is tolerated by ICCN.
ICCN manages the site with technical and financial support from several partners. Key financial partners are USAID (CARPE) and EU. Technical implementing partners include WWF, Milwaukee Zoological Society MZS, Max Planck Institute MPI, Wilfife Conservation Society WCS, Lukuru Wildlife Research Project LWRP, Réseau des Aires Protégées d'Afrique Centrale RAPAC, International Fund for Animal Welfare IFAW, Institut Africain pour le Développement Economique et Social INADES, International Conservation and Education Fund INCEF. This support is vital to enable ICCN to manage this area.
Enforcement is challenging given the vast size of the park and the logistic transport difficulties. Approximately 40% of the park is more than 30km from a guard post or station. Management is also constrained by corruption at the local and provincial levels and by a perceived lack of good governance and transparency at the national level of ICCN with respect to the management of Salonga National Park.

► Integration into regional and national planning systems

Some Concern

Given the extreme poverty and isolation of the region, and the virtual inexistence of effective regional planning and development structures, there is little integration of park management into regional and national planning

systems. The situation is further complicated by the fact that the park lies astride four Provinces.

► Management effectiveness

Serious Concern

Management effectiveness is still very weak, although it has improved recently following the appointment of new senior staff. Large areas of the park are never visited by patrols, and controls on the river access routes into the park used by poachers and fishermen remain inadequate. Management is almost entirely dependent on external financial and technical support. An LEM (law enforcement monitoring) system, based on MIST, is not yet operational. Corruption at the local level is a constraint to the resolution of poaching (and the successful prosecution of poachers). The implication of the Congolese army in poaching is also a major constraint. However, recent collaboration with disciplined elements of the army on anti-poaching has had some success. Lack of strong political support at the national level is of serious concern.

► Implementation of Committee decisions and recommendations

Some Concern

• Joint anti-poaching operations with FARDC: 2 operations in 2011, and 1 in 2012 have been conducted targeting a number of known poaching gangs. At least 27 poachers were neutralised (arrested or killed) and 140 military weapons and 70 hunting rifles confiscated. This has helped improve relations with ICCN by re-establishing security for local communities.
• Establish permanent structure for dialogue with military and administrative authorities of the 4 Provinces: Only one meeting of this structure has taken place (in 2008).
• Establish and implement a law enforcement and monitoring strategy: According to the management plan a strategy exists. However an operational LEM system, based on MIST, has yet to be established.
• Establish a conflict resolution process for natural resource use:
o Participatory boundary marking: 80km of the 400km of artificial boundaries have been marked jointly by ICCN and the concerned local communities.
o Fishing: Progress has been made on clarifying of the limits for fishing zones on park boundary rivers. Co-management agreements have been

established, although they do not define any protection zones.
• Deal with the illegal village issue: No progress has been made with finding a lasting solution for this problem.
• Ensure ecological continuity between the northern and southern blocks: Land use planning exercises in the corridor has resulted in the creation of two Community Based Natural Resource Management CBNRM zones. The Luilaka CBNRM (south east part of corridor) is the only one that provides a good perspective for maintaining the ecological connectivity between the two park blocks.
• Strengthen management capacities: Senior management capacities have been improved with a change of personnel. Ninety guards have been trained but are not yet integrated into the park guard force. The current guard force of 200 remains far short of what is needed for such a large park (600).
• Sustainable funding: Good progress has been made with the creation of a Trust Fund for the DRC protected area network. 100m $ capital is expected, but this is far short of what is needed for the network. However, KfW has recently made a long term financial commitment to the site.

► Boundaries

Some Concern

Most of the parks boundaries are “artificial “ i.e. do not follow natural features. According to the management plan only about 64km, out of a total of 640km of park boundary, are officially marked. A participatory boundary marking exercise is in progress but will take many years to complete, and will require significant funding.

► Sustainable finance

Serious Concern

Good progress has been made with the creation of a Trust Fund for the Democratic Republic of the Congo protected area network. One hundred million USD capital is expected, but this is far short of what is needed for the network. KfW has recently expressed its intention to make a long term financial commitment to the site, but current funding levels remain very far short of what is required for effective management of the park.

► Staff training and development

Serious Concern

Senior management capacities have been improved with a change of personnel. 90 guards have been trained but are not yet integrated into the park guard force. The current guard force of 200 remains far short of the 600 that would ideally be needed.

► Sustainable use

Some Concern

The only legal sustainable use of natural resources concerns the fishing on the rivers that form the boundary of the park. For many years this has been a source of conflict between the park and the communities but over the past three years progress has been made to clarify rules and regulations and co-management agreements have been signed (see above). However no protection zones were defined.

► Education and interpretation programs

Some Concern

Education and sensitisation activities are conducted by the various partners in the areas where they work. A program of environmental education has been conducted in the secondary schools of the sector of Lokolama (Hohmann, 2013)

► Tourism and interpretation

Some Concern

No tourism activity is carried out due to the current situation in the region. However, with funding from ARCUS, Max Planck Institute carries out an evaluation for bonobo ecotourism. Areas such as LK forest that are connected to airstrips have a high potential for bonobo ecotourism and may promote conservation and community development (Hohmann, 2013).

► Monitoring

Some Concern

Given the vast size of the park it is not possible to ensure regular monitoring

over the whole area. However specific sites, such as the areas where MZS and Max Planck Institute (MPI) are active, benefit from systematic monitoring. Surveys in specific areas have been conducted by different partners (MZS, MPI, WCS). The last survey covering almost all the park dates from 2003 (Grossmann et al. 2008;).

▶ Research

Some Concern

MZS conducts research in northern block in the Watsi Kengo sector, between Salonga and Yenge Rivers. Research focuses on bonobo ecology, forest elephants, and the impact of human activities on their distribution.
MPI conducts research on the socio-ecology of bonobos and ethnobotany at LioKotola in the southern block. MPI and RKI (Robert Koch Institute, Germany) also conduct studies that focus on zoonotic diseases and the threat of transmission of human diseases on wild bonobos.

The presence of research activities contributes significantly to protection of the sites where research is ongoing. However given the vast size of the park protection through research is limited in geographical scope.

Overall assessment of protection and management

Serious Concern

Protection and management are still very weak although it should be recognised that slow progress is being made to improve this. This is in part due to the vast size of the park, the extraordinarily difficult logistical transport problems, and the challenge of having to deal with four Provincial governments. Staff levels and funding levels remain very far short of what is needed for effective management and protection of such a large area.

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

Some Concern

Given the lack of functional governance at the national and provincial levels the park’s management system has very little leverage to influence the outcome of threats originating from outside the site. Most management

efforts are therefore concentrated on tackling the threats inside the site. However there have been some, albeit limited, successes. For example the establishment of CBNRM areas in the corridor, and the mobilisation of joint FARDC-ICCN patrols to deal with the rebellion (although the government's motivation for the latter was to quell a rebellion that threatened to upset the presidential elections, rather than out of a concern for the ecological integrity of the site).
The prospect of oil exploration/exploitation in and around the park remains a major worry. In the event of discovery of major oil deposits in Salonga National park it is likely that oil exploitation will take precedence over biodiversity conservation concerns.

State and trend of values

Assessing the current state and trend of values

World Heritage values

- **Vast area of intact lowland tropical rainforest covering a wide range of habitats with high biodiversity.**
  High Concern
  Trend:Improving

  Two main areas of deforestation occur in the park linked to the Kitwaliste and Iyaelima enclaves. Deforestation also occurs along the boundaries, particularly where these are disputed and participatory boundary marking has not yet been done. In 2003 about 6% of the park was affected by deforestation and this is likely to have increased since then. Faunal biodiversity is highly threatened by the massive scale of the bushmeat trade, although paradoxically bonobo densities are highest near the Kitwaliste and Iyaelima enclaves, probably because of taboos against hunting this species. Given the size of the park forest cover and floral diversity is essentially intact (Fabing & Chardonnet, 2012).

-

An example of biological evolution and the adaptation of life forms in a complex equatorial rainforest environment

Critical

Trend:Deteriorating

All available survey data, although geographically patchy, indicate that emblematic species (bonobos and forest elephant) have declined over the years as a result of poaching (Plan Général de Gestion, 2012; draft Bonobo Conservation Strategy, 2012). In areas where permanent research activities are being carried out bonobo populations appear to be stable, but these areas represent a small fraction of the total surface area of the park. The elephant population is severely reduced throughout the park.

Summary of the Values

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

High Concern

Trend: Data Deficient

The faunal values of the park are seriously threatened by poaching for the bushmeat trade. Forest cover, habitat diversity and floral diversity values are probably still intact despite deforestation by subsistence agriculture in the two enclaves in the park, and along disputed park boundaries. Areas affected by deforestation remain, however, relatively limited when set against the vast size of the park.

Additional information

Key conservation issues

▶ **Commercial hunting**

Local

Commercial hunting in and around the site is on an “industrial” scale and involves the army and local elites (authorities, influential people). It must be addressed by vigorous law enforcement involving not only surveillance and

anti-poaching on the ground, but equally importantly effective prosecution of offenders, most of whom are currently immune from prosecution. This requires strong political leadership and support at the highest level, as well as a major increase in and staff capacities and funding levels.

▶ **Kitwaliste and Iyaelima encalves**

Local

The presence of these two groups living inside the park, and tolerated by park management, is not coherent with respect to the national park status of the site, and is unsustainable in the long term with respect to the protection of the site's values. The situation should be resolved, ideally by providing land for settlement outside of the park. Changing the status of the currently settled areas is also an alternative, but would have implications for the conservation of its World Heritage and biodiversity values.

▶ **Maintenance of ecological continuity between the northern and southern blocks of the park**

Local

Only the Luilaka CBNRM zone in the south east of the corridor separating the northern and southern blocks of the park has the potential to maintain a functional ecological link between the two blocks. Serious consideration should therefore be given to upgrading its protection status (eg IUCN category VI) with the principle of co-gestion. This would require a change in the Democratic Republic of the Congo protected are legislation because category VI-type status does not currently exist.

Benefits

Understanding Benefits

▶ **Is the protected area valued for its nature conservation?**

Salonga National Park is highly valued for its biodiversity and the presence of the Democratic Republic of the Congo's largest population of its most charismatic endemic species, the bonobo.

▶ Carbon sequestration, Flood prevention

Several very large rivers start in the park or flow through it. The vast area of forest through which they flow ensures regulation of downstream flows. The 36.000 km² of dense tropical rainforest also constitutes an important carbon sink. This vast area of intact and continuous rainforest almost certainly has an important regulating effect on regional and continental climate systems.

▶ Outdoor recreation and tourism

A first ecotourism assessment made in 2011 highlights the potential for tourism. Further evaluations are ongoing and will provide a detailed assessment of the potential benefits and risks (Hohmann, 2013).

▶ Fishing areas and conservation of fish stocks

Salonga National Park is highly valued for its fish diversity on which millions of people depend directly or indirectly. The park acts as a reservoir for fish stocks downstream.

Summary of benefits

The national and global benefits in terms of nature conservation (central African humid forest biodiversity and endemism) and environmental services (water, carbon, climate regulation) are exceptionally important. However, the nature conservation benefits are at risk because of the scale of the poaching of wildlife.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	ICCN		In charge of park management

№	Organization/ individuals	Project duration	Brief description of Active Projects
2	WWF		WWF implements CARPE funded activities in the Salonga landscape. It provides support to ICCN for different aspects of the management of the park.
3	Wildlife Conservation Society		WCS implements CARPE funded activities in the Salonga landscape. works on conflict resolution issues in and around the park, participatory boundary marking, and wildlife surveys and monitoring.
4	RAPAC		Funded by the EC, RAPAC supports to all aspects of park management.
5	Milwaukee Zoological Society		Conducts research on the ecology of bonobos, undertakes monitoring, and supports anti-poaching, staff training, education, and various development initiatives.
6	Lukuru Wildlife Research Project		Main focus of attention is on bonobo research and conservation outside the park to the south, but the LWRP has conducted surveys in the Iyaelima enclave. It also provide support to the park during the war.
7	Max Planck Institute for Evolutionary Anthropology		Research on ecology of bonobos at LuiKotal research site in the southern block of SNP Research on ethnobotany/medicinal plants at the LuiKotal research site

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	.	As for all parks in the DRC all park management activities require sustained funding for many years to come.	

REFERENCES

№	References
1	Aveling, C., Hart, T. & Sionneau, J.M. (2007) : Mission conjointe de suivi réactif UNESCO/IUCN au Parc National de la Salonga, RDC. Rapport au Centre du Patrimoine Mondial UNESCO.
2	Grossmann, F., Hart, J.A., Vosper, A. and Ilambu, O. 2008. Range occupation and population estimates of bonobo in the Salonga National Park: Application to large scale surveys of bonobos in the Democratic Republic of Congo. In: Furuichi, T. and Thompson, J. (eds) The Bonobos: Behaviour, Ecology and Conservation. pp 189–216. Springer, New York.
3	ICCN / IUCN. 2012. Conservation Strategy for the Bonobo (Pan paniscus) 2012–2022 (draft)
4	ICCN, 2011. Plan Général de Gestion du Parc National de la Salonga
5	John A. Hart, Falk Grossmann, Ashley Vosper, and Jose Ilanga. 2008. Human Hunting and its Impact on Bonobos in the Salonga National Park, Democratic Republic of Congo In: Furuichi, T. and Thompson, J. (eds) The Bonobos: Behaviour, Ecology and Conservation. pp 189–216. Springer, New York.
6	Reinartz, G.E., Bila Isia, I., Ngamankosi, M. and Wema, L.W. (2006). Effects of forest type and human presence on bonobo (Pan paniscus) density in the Salonga National Park. International Journal of Primatology, 27(2) 603-634.
7	The Forests of the Congo Basin. State of the Forest 2008. Eds: de Waseige C.; de Marcken P.; Eda’a Atyi R. ; Nasi R. et Mayaux Ph.
8	UNESCO, 2010. World Heritage in the Congo Basin. World Heritage Centre, UNESCO. 63p.