IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 06 November 2014

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

Serengeti National Park

SITE INFORMATION

Country:
Tanzania (United Republic of)
Inscribed in: 1981
Criteria:
(vii) (x)

Site description:

The vast plains of the Serengeti comprise 1.5 million ha of savannah. The annual migration to permanent water holes of vast herds of herbivores (wildebeest, gazelles and zebras), followed by their predators, is one of the most impressive natural events in the world. © UNESCO

SUMMARY

2014 Conservation Outlook

Significant concern

The large size of Serengeti National Park and its location at the core of a trans-boundary complex of protected areas (which together cover most of the wider ecosystem) should ensure the long-term protection of its values. Recent threats to build a major road through the northern part of the park, and establish other infrastructure corridors, have been stopped for the time being, but there remains a possibility that such projects will be re-examined. Tourism brings substantial financial benefits which support management of Serengeti as well as other parks in Tanzania, but associated developments will require continued vigilance to ensure that carrying capacities are not exceeded. If the construction of a road through the Serengeti were to go forward in the future, it would adversely affect the wildebeest migration and could endanger the ecosystems and wildlife populations of the Serengeti and its wider ecosystem, and would constitute a very high threat to the park.

Current state and trend of VALUES

Low Concern
Trend: Stable

The World Heritage values of Serengeti National Park are being well maintained as a result of appropriate management of the site and surrounding protected areas (which serve as an essential buffer zone, sustaining the migrating herds for much of the year beyond the boundaries of the park). The status of the park’s two most endangered species (black rhino and wild dog) remains critical.

Overall THREATS

High Threat

Although there are numerous threats to the park they are generally being addressed adequately by park management and its ecological integrity is well

maintained. Recent proposals for a major tarmac road through northern Serengeti have been stopped for the time being, and threats from poaching, fire, disease transmission from domestic stock, spread of invasive alien plants and human-wildlife conflicts are under control, except for increasing levels of rhino and elephant poaching. Tourism demand is growing strongly, creating pressure for further accommodation, game-viewing tracks and other infrastructure developments, but the potential damage of such developments is being effectively managed and mitigated. The availability of water – the key driver of the migration – is a crucial factor and there are emerging issues over the state of the Mara River, the ecosystem's only permanent water. Additional potential threats arise from changes in land-use patterns in the buffer zones around the park, which are likely to exert increasing constraints on the geographical reach of the migration, and possible future road proposals through the park. Climate change may be sufficient to effect significant ecological change on the ecosystem. If the construction of a road through the Serengeti were to go forward in the future, it would adversely affect the wildebeest migration and could endanger the ecosystems and wildlife populations of the Serengeti and its wider ecosystem and constitute a very high threat to the park.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Serengeti benefits from a strong policy and legislative environment which enables TANAPA to raise and retain revenues from a rapidly growing number of visitors. Funds generated at Serengeti (US$ 22.4 million in 2009/10) have been used to strengthen protection and management of the park, as well as other Tanzanian parks. Although there are still some shortcomings this is one of the best managed parks in Africa, maintaining a high degree of ecological integrity. The site is surrounded by other protected areas, and although these are subject to some degree of resource use from trophy hunting, pastoralism and other activities they serve as an effective buffer zone maintaining the ecological integrity of the entire ecosystem.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Greatest terrestrial mammal migration on Earth**
Criterion:(vii)

The Serengeti supports the greatest large mammal migration on Earth, involving approximately 1.4 million wildebeest, 200,000 zebra and 300,000 Thomson's and Grant's gazelle (TAWIRI Aerial Census, 2010). The predators, are dependent on the abundance of grazers, and the ecosystems harbours 7,500 hyenas, 3,000 lions and other predators. The annual migration follows a 1,000 km circuit between key dry-season water points and grazing lands along the Mara river (in Kenya's Masai Mara Reserve) and short-grass pastures and calving grounds to the south (in the Ngorongoro Conservation Area) (SoOUV).

▶ **Outstanding savanna scenery**
Criterion:(vii)

Serengeti means 'endless plains' in the local Masai language, and the vast expanse of short-grass savannas provide a spectacular setting for the phenomenal congregations of wildlife. The plains are punctuated by impressive outcrops of massive weathered granite 'kopjes', seasonal wetlands, low hills and a diversity of woodland types (SoOUV).

▶ **Complex and complete mammalian community**
Criterion:(x)

The mammalian community is the most diverse and complex savanna

community on Earth, including 1.4 million wildebeest, 200,000 zebra, 300,000 Thomson's and Grant's gazelle and large numbers of other species such as buffalo, eland, topi, giraffe, warthog, elephant, hippopotamus, and black rhino (TAWIRI Aerial Census, 2010). The complex community of large grazing mammals is accompanied by an equally impressive diversity of large and small predators including as many as 7,500 hyenas, 3,000 lions, 1,000 leopards, 225 cheetahs and wild dogs (SoOUV, SP Report 2011).

► Diversity of savanna communities

Criterion:(x)

The 'endless plains' of Serengeti experience a remarkable spatial complexity of abiotic factors (rainfall, temperature, soils, topography), resulting in a diverse array of savanna grassland, forest and woodland communities. These include short-grass plains, Terminalia and Acacia woodlands, gallery forests and communities associated with saline pans, other wetlands and rocky kopjes. The General Management Plan (2006-16) distinguishes 7 major vegetation types and a number of sub-types (SoOUV).

► Diversity of other fauna and flora

Criterion:(x)

The park's flora and fauna has not been systematically surveyed, but species diversity is expected to be high for a wide range of taxa. The park lies within one of the world's Endemic Bird Areas, with over 500 bird species recorded (SoOUV, Birdlife IBA Factsheet, UNEP-WCMC Information Sheet, 2012).

► Rare and endangered species

Criterion:(x)

Rare and endangered species include cheetah (VU), elephant (VU), black rhino (CR), wild dogs (EN) and hippo (VU), as well as 5 species of birds (SoOUV, UNEP-WCMC, 2012).

► Large, ecologically dynamic self-sustaining ecosystem

Criterion:(x)

Serengeti National Park (14,763 km2) lies at the core of the wider Serengeti ecosystem which includes a complex of protected areas covering a total area

of 35,567 km2. Other components of the complex cover an additional 20,804 km2 and include Ngorongoro Conservation Area (8,094 km2), Maswa Game reserve (2,200 km2), Ikorongo-Grumeti Game reserves (5,000 km2), Loliondo Game Controlled Area (4,000 km2) and Masai Mara National Reserve in Kenya (1,510 km2). The protected status of adjacent areas ensures that the entire ecosystem used by the migrating herds is maintained in an ecologically viable state (SoOUV, UNEP-WCMC, 2012).

Assessment information

Threats

Current Threats

Low Threat

Current threats to this extensive site are wide-ranging, but generally low-level and adequately addressed. The threat of a major tarmac road through northern Serengeti has been stopped for the time being, as have earlier projects to develop infrastructure corridors (rail, fibre-optic cable) through the park. Commercial and subsistence poaching are adequately controlled within sustainable limits. Rhino and elephant poaching have increased to worrying levels. Tourism pressures are growing, leading to local over-use in parts of the park. The availability of water – the key driver of the migration – is a crucial factor and there are emerging issues over the state of the Mara River, the ecosystem’s only permanent water. Other significant threats to SNP include the spread of invasive alien plants, disease transmission between domestic and wild animals, the occurrence of uncontrolled fires, and budgetary constraints on management.

▶ Tourism/ visitors/ recreation

Low Threat
Inside site

The park receives approximately 160,000 non resident visitors per annum, (350,000 travel through, but mostly just crossing the park without visiting)

(SP Report, 2011), which would not be excessive if they were well distributed around the park. However, visitors tend to concentrate around Seronera where there is an attractive visitor centre and other facilities. There are few opportunities for visitors to get out of their vehicles elsewhere, and the number of game viewing tracks is limited, so those that exist become quickly over-crowded.

► Fire/ Fire Suppression

Low Threat
Inside site

Although the Serengeti ecosystem is adapted to fire, hot burns (which occur at the end of the dry season and are often lit by poachers to detract attention from their activities) can cause extensive long-term damage to woody vegetation (SP Report, 2011)

► Other

High Threat
Inside site
Outside site

Disease transmission between domestic stock and wildlife can be catastrophic. The present population of 1.3 million wildebeest is the result of long-term recovery from a rinderpest outbreak, transmitted by cattle, which had decimated the population. Wild dogs disappeared from the park in 1991, when a rabies outbreak killed three packs (UNEP-WCMC, 2012). Over 1000 lions, a third of the population, were killed in a canine distemper virus epidemic in 1993/94.

► Invasive Non-Native/ Alien Species

Data Deficient
Inside site

Three invasive alien weed species are already established in the park (Argemone mexicana, Datura stromium and Opuntia species) and two others are reported in neighbouring parts of the wider ecosystem. The highly aggressive and damaging weed Parthemium hysterophorus is already found in Ngorongoro Conservation Area and Masai Mara National Reserve, while

Chromolaena odorata is in Grumeti Game Reserve (Mission Report, 2010)

► Other

Low Threat
Inside site
Outside site

A total of 68 human-wildlife conflicts was recorded in 4 adjacent villages during 2011, of which 31 involved elephants (SP report, 2012)

► Dams/ Water Management or Use

Data Deficient
Inside site

Surface water is scarce throughout Serengeti, the only permanent source being the Mara River in the north. This river is threatened by unsustainable levels of water abstraction and by degradation of forest in the Mau catchment (in Kenya) (SP Report, 2011). A continuous flow in the Mara river is essential for the migration, as it is the only water source available in the dry season. Water for the park headquarters and other infrastructure at Seronera (in the centre of the park) is extremely limited and is piped a considerable distance from Bologonja Springs. Elsewhere, tourist lodges and other facilities depend on borehole water.

► Commercial hunting

Low Threat
Inside site
Outside site

There has been a recent surge in commercial poaching for elephant ivory with 12 animals killed in 2010 and 33 in 2011 (SP Report 2012). A newly-translocated black rhino was also killed in 2009/10 (SP Report 2011). Recently two more rhinos poached, and one group of 42 wilddogs was poisoned (http://www.reuters.com/article/2012/05/30/us-tanzania-poaching-idUSBRE84T12B20120530; http://zimbabwewilddogs.wildlifedirect.org/2012/09/27/40-wild-dogs-killed-in-ngorogoro-district-tanzania/). Elephants have also been killed through the use of poison near Ikorongo-Grumeti Reserves (adjacent to the Serengeti; http://allafrica.com/stories/201208140556.html).

► Subsistence hunting

Low Threat
Inside site

Subsistence poaching for meat targets the migration of wildebeest and constitutes a steady drain on the animal population (Mission Report, 2010). However, as populations of most target species are stable or increasing, this does not appear to be affecting their overall viability.

► Tourism/ Recreation Areas

Low Threat
Inside site
Outside site

The central part of Serengeti (around Seronera) appears to be overwhelmed by visitors (SP Report, 2011), partly because tourism infrastructure and facilities are concentrated in this relatively small area. Overnight facilities include a total of 2,016 beds, comprising 5 lodges, 9 permanent tented camps, 9 public campsites, 98 ‘premium’ and ‘special’ campsites, 4 rest houses and a youth hostel. The road network used for game viewing is limited, and much of it is heavily used, especially around Seronera

Potential Threats

High Threat

Additional threats arise from changes in land-use patterns in the buffer zones around the park, which are likely to exert increasing constraints on the geographical reach of the migration, as well as a possible future road proposal through northern Serengeti. Climate change may be sufficient to effect significant ecological change on the ecosystem. Inadequacies in collaboration between institutional stakeholders, at national and trans-boundary level may also threaten the long-term management of the ecosystem. If the construction of a road through the Serengeti were to go forward in the future, it would adversely affect the wildebeest migration and could endanger the ecosystems and wildlife populations of the Serengeti and its wider ecosystem, and constitute a very high threat to the park.

► Roads/ Railroads

Very High Threat
Inside site

There have been a series of development proposals to link the heavily-populated parts of the Lake Victoria basin to the west of Serengeti with the port city of Dar es Salaam and other areas to the east of the park including; an early proposal to construct a railway through the park (IUCN Evaluation), to pass fibre-optic cables through the park (SP Report, 2010), and to build a road through the park (SOC Report, 2009).
The most recent, highly controversial, proposal involved construction of a tarmac road through northern Serengeti from Musoma to Arusha via Tabora ‘B’ (park gate) and Klein’s Gate (Mission Report, 2010). The part of this road project which would have traversed the park has been stopped for the time being, and a public statement to this effect was made by the former Minister for Tourism, Mr Ezekiel Maige, during the 35th World Heritage Committee in Paris, France (SP Report 2012; Statement by the former Minister Ezekiel Maige to the UNESCO World Heritage Committee, 35th session, 2011, Paris, France). However, the Environmental and Social Impact Assessment (ESIA) for the road is ongoing and there is no information available on its status. There is also no information available on the status of the Strategic Environmental Assessment (SEA) of Tanzania’s northern road network and a possible alternative southern route circumventing the Serengeti. The eastern and western sections of the road outside the park are currently under construction.
While the proposal to construct a tarmac road through northern Serengeti from Musoma to Arusha via Tabora ‘B’ (park gate) and Klein’s Gate has been stopped for the time being, this proposal may reemerge in the future. If the road were to go forward, it would constitute a very high threat to the Serengeti’ World Heritage values and lead to a Conservation Outlook of Significant Concern. There is a large scientific consensus that the road will adversely affect the wildebeest migration and could endanger the ecosystems and wildlife populations of the Serengeti and its wider ecosystem (Mission Report, 2010; FZS, 2010; Dobson et al., 2010; Holdo et al. 2011). The 2010 UNESCO/IUCN Monitoring Mission considered that the possible mitigation measures which were presented for the proposed North Road, including the option of not paving the stretch through the property, are

insufficient to mitigate possible negative impact of the proposed north road alignment on the World Heritage values of the park.

► Habitat Shifting/ Alteration

Low Threat
Inside site

Human population densities are increasing in all areas around the protected area complex, limiting wildlife migration routes in the buffer zones.

► Droughts

Data Deficient
Inside site

The potential impact of climate change is unknown, but may affect critical aspects of ecosystem dynamics including water availability and the quality and quantity of grazing.

► Flight Paths

Data Deficient
Outside site

According to the 2014 State of Conservation report, there are plans for the construction of an international airport at Mugumu, approximately 40 km away from the World Heritage Site. This airport would increase the area's capacity for tourism development. Although some media reports suggest that construction could start in 2014, the current status of this project is not clear.

Protection and management

Assessing Protection and Management

► Tourism and interpretation

Mostly Effective

The number of visitors has increased strongly over the past ten years, and currently numbers around 300,000 per annum, about half of whom are foreign visitors. There is a total bed capacity of 2,016 and a policy to grow this number through development of low-impact high-value facilities, focused

on additional tented camps. A review of tourism development was carried out in 2011 aimed at finding ways to distribute tourism activities more widely. A superb visitor centre is located at Seronera.

► Education and interpretation programs

Data Deficient

The park operates an outreach programme, and assists in organizing group visits by local community members. In 2009/10, approximately 4,000 members of local communities visited the park including 1,700 school children from 7 adjacent administrative districts.

► Relationships with local people

Data Deficient

The park adjoins other protected areas on all sides, with only those lying to the east (Loliondo Game Controlled Area) and south (Ngorongoro Conservation Area) allowing a resident human population. Nevertheless, Community Outreach is one of the park’s four main programmes of work (GMP, 2006-16) with activities aimed at strengthening relationships with neighbouring communities and local government, and assisting with development of community-based natural resource management programmes in the buffer zones so as to reduce poaching and dependence on park resources. In 2011, the equivalent of US$ 180,350 was spent by the site for community support (SP Report 2012).

► Legal framework and enforcement

Mostly Effective

The legal framework is robust, with the Tanganyika National Parks Ordinance CAP [412} of 1959 providing for the establishment of a semi-autonomous agency, Tanzania National Parks (TANAPA) with its own Board of Trustees and facility to retain all revenues. TANAPA operates under a comprehensive National Parks Policy, which requires that all national parks operate within the framework of an approved management plan. In addition infrastructural developments throughout Tanzania are subject to Environmental Impact Assessment (EIA) under the Environmental Management Act (2004) and 2005 EIA Regulations.
The effectiveness of law enforcement operations, particularly those relating

to poaching has been slowly improving, but there are still shortcomings. The park lost 90% of its rhinos to poachers in the 1980s and there has been a recent surge in commercial poaching for elephant ivory. Although no elephants were killed in 2008, 2 were lost in 2009, 12 in 2010 and 33 in 2011 (SP Reports, 2010, 2011). Anti-poaching efforts were intensified in 2011, with the recruitment of 43 additional rangers (SP Report 2011), but the total deployment is still below that envisaged in the General Management Pan (GMP).

► Integration into regional and national planning systems

Mostly Effective

The Serengeti Ecosystem Forum is a 26-member consortium involving TANAPA, the Ngorongoro Conservation Area Authority, Wildlife Division, local communities and other key ecosystem stakeholders that ensures coordination and collaboration in addressing common interests. Coordination at a trans-boundary level, particularly over sustainable management of the Mara River, is facilitated by the Lake Victoria Basin Commission (SP Report, 2012). However, there is insufficient coordination between key institutional stakeholders at several levels. One of the most important issues is international cooperation between Tanzania and Kenya in implementing appropriate measures for the sustainable management of the Mara River (SP report, 2012)

► Management system

Highly Effective

The park operates under a General Management Plan (2006-16), with four main management programmes aligned to the park’s operational departments (ecosystem management, tourism, community outreach and park operations). Tourism impacts are managed through a system of zonation with high use, low use and wilderness areas. The 2010 IUCN/UNESCO monitoring mission team commended TANAPA for the quality of the General Management Plan and considered that it could serve as a model for other parks in the country as well as other World Heritage sites.

► Management effectiveness

Mostly Effective

Management is generally effective, but there are significant budgetary constraints as the majority of Serengeti revenues are used to cross-subsidise other parks elsewhere in Tanzania. Capital investment is particularly affected, with insufficient funds available for enough patrol vehicles and road servicing plant (SP Report, 2011). Staffing is also constrained, with 422 full-time staff deployed, compared with a total requirement (as detailed in the GMP) of 608 staff (SP Report, 2012)

► Implementation of Committee decisions and recommendations

Mostly Effective

Most committee decisions are implemented in a timely manner, or further explanation on actions pending is provided. Committee decisions concerning the possible northern road and the laying of fibre optic cables through the site have been respected, with satisfactory alternatives adopted; more resources have been allocated to anti-poaching efforts; collaboration on control of invasive exotic vegetation undertaken; community needs addressed; and the Serengeti Ecosystem Forum re-activated. There are still ongoing issues related to the annexation of land in the Speke Gulf area (which local residents oppose) and sustainable management of the Mara River.

► Boundaries

Some Concern

The World Heritage site is at the core of the wider Serengeti ecosystem and is surrounded by other protected areas, making up about half the total area. The ecological integrity of the site is therefore dependent on effective management and protection of areas beyond its boundary, which constitute a ‘buffer zone’. This seems assured, but it would be advisable to formally recognize the adjoining protected areas as a buffer zone (Mission Report, 2010). Physical demarcation of the boundary (with concrete cairns) is ongoing. There is a plan to extend the ‘western corridor’ of the park (adding 96km2) to provide wildlife access to permanent fresh water at Speke Gulf (Lake Victoria), but this is being resisted by local community representatives (SP Report 2012). Adjacent Makao Wildlife Management Area, Loliondo Game Controlled and Maswa Game Reserve buffers the Serengeti, but these two protected areas are highly influenced by human activities. Hunting pressure

from these protected areas can affect the Serengeti. Unlike those protected areas, Maasai Mara Game Reserve, Ngorongoro Conservation Area, Grumeti Game Reserve and Ikorongo Game Reserve provide adequate buffer to Serengeti.

► Sustainable finance

Mostly Effective

Serengeti is one of TANAPA's main sources of revenue, and 70% of the US$ 22.4 million generated in 2009/10 was used to support conservation of less profitable parks elsewhere in Tanzania. The remaining 30% (US$6.5 million) was deployed at Serengeti, where it was insufficient to meet all planned expenditures. Capital investment has been badly affected by budget constraints, leaving the park with insufficient patrol vehicles and heavy plant for road maintenance (SP Report, 2011)

► Staff training and development

Mostly Effective

There are currently 422 staff, somewhat short of the required 608 envisaged in the General Management Plan (SP Report, 2012). Approximately half are park rangers, responsible for law enforcement. The 2010 mission team assessed the training levels of park wardens and other professional staff as being 'good', and that of technical staff as 'fair'.

► Sustainable use

Data Deficient

There is no consumptive use of resources within the site, but most of the adjoining protected areas (the 'buffer zone') allow some degree of resource use, including trophy hunting (in Maswa Game Reserve), pastoralism (in Loliondo and Ngorongoro) and other compatible activities.

► Monitoring

Some Concern

Ecological monitoring involving systematic aerial censuses of the principal large mammals has been undertaken every few years for several decades, providing a sound understanding of population trends for about 20-25

prominent species. Six main ‘ecosystem health indicators’ have been identified to serve as a focus for future ecological monitoring activities as follows: migration; Mara river flow; Terminalia and Acacia woodlands, rhino population, kopjes habitat and wild dog. The park was part of the UNESCO pilot project (2007) on management effectiveness, which involved development of a monitoring system to track implementation of management activities, but this has not been used, nor has an effective alternative been developed (Mission report 2010). There remains a need to develop protocols to monitor management effectiveness and the conservation impacts of management interventions, as a basis for adapting management.

► Research

Mostly Effective

The park has been a major centre of ecological research for five decades, and the Serengeti Research Centre has well-established linkages with international academic institutions. It has well-equipped laboratories, a herbarium and accommodation facilities for visiting scientists. There are currently 15 research projects underway, including long-term studies on cheetah, lion, hyena, biodiversity, vegetation dynamics, wildlife diseases and water quality/quantity (SP report, 2011). These are not always linked directly to management.

Overall assessment of protection and management

Mostly Effective

Serengeti benefits from a strong policy and legislative environment which enables TANAPA to raise and retain revenues from a rapidly growing number of visitors. Funds generated at Serengeti (US$ 22.4 million in 2009/10) have been used to strengthen protection and management of the park, as well as other Tanzanian parks. Although there are still some shortcomings this is one of the best managed parks in Africa, maintaining a high degree of ecological integrity. The site is surrounded by other protected areas, and although these are subject to some degree of resource use from trophy hunting, pastoralism and other activities they serve as an effective buffer zone maintaining the ecological integrity of the entire ecosystem.

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

Mostly Effective

The site is surrounded by other protected areas, and although these are subject to some degree of resource use from trophy hunting, pastoralism and other activities they serve as an effective buffer zone maintaining the ecological integrity of the entire ecosystem.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Greatest terrestrial mammal migration on Earth

Good
Trend:Stable

The migration is essentially intact with all major parts of the route used by the migrating herds included within protected areas. Small areas of the migration route bordering the north-west of the park are unprotected and some poaching occurs here, but populations of the major species are able to withstand this level of off-take (Thirgood et al, 2004).

► Outstanding savanna scenery

Good
Trend:Stable

The scenic values of the site are being well maintained, with lodge and tented camp developments generally well positioned, concealed, and appropriately designed.

► Complex and complete mammalian community

Good
Trend:Stable

This is one of the few African parks to have maintained a complete

mammalian fauna, (with the exception of wild dog, which became locally extinct in 1991, UNEP-WCMC 2012). Five wildlife censuses of major species conducted between 1996 and 2010 indicate stable populations of 13 species, increasing populations of 5 species and decreasing populations of 1 species (SP Report, 2011; TAWIRI Aerial Census, 2010)

► Diversity of savanna communities

Data Deficient
Trend:Data Deficient

No data available, but assumed to be stable

► Diversity of other fauna and flora

Data Deficient
Trend:Data Deficient

No data available, but assumed to be stable

► Rare and endangered species

Low Concern
Trend:Improving

The status of some notable species appears to be improving. Elephant populations are reported to be ‘fast increasing’ (SP Report, 2012); the small black rhino population (remnants of a population that was heavily poached during the 1980s) has been supplemented with additional animals translocated from South Africa (originally from East African genetic stock); and several small populations of wild dog have established themselves in adjoining areas of the ecosystem, and may soon be able to re-establish themselves in the world heritage site (Mission Report 2010)

► Large, ecologically dynamic self-sustaining ecosystem

Good
Trend:Stable

The site, with its surrounding protected areas under various management regimes has been well maintained, ensuring the maintenance of ecological integrity of the entire ecosystem.

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**
Low Concern
Trend: Stable

The World Heritage values of Serengeti National Park are being well maintained as a result of appropriate management of the site and surrounding protected areas (which serve as an essential buffer zone, sustaining the migrating herds for much of the year beyond the boundaries of the park). The status of the park's two most endangered species (black rhino and wild dog) remains critical.

Additional information

Key conservation issues

▶ **Sustainable management of the Mara River**
Regional

Strengthen efforts to ensure sustainable management of the Mara River and its catchment on both sides of the international border.

▶ **Reducing land-use conflicts within the wider Serengeti ecosystem**
National

Continue to promote sustainable land-use systems in communal areas outside the protected area complex, encouraging land-use practices that are compatible with wildlife conservation.

▶ **Maintaining an appropriate balance between tourism development and protection of wilderness values**
Local

Improve the distribution of tourist activities through strategic development of alternative points of interest, additional game viewing trails and low-impact

accommodation facilities.

▶ Increase investment and management effectiveness

Local

Continue to increase the level of funding and investment in park management and ensure that an appropriate system of monitoring is implemented to evaluate the success of management inputs in achieving park objectives, so that necessary adjustments can be made in a timely manner.

▶ Restore populations of highly endangered species

Local

Continue efforts to protect rhinos and wild dogs and mitigate threats to the restitution and recovery of their populations.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Frankfurt Zoological Society		Support for ecological monitoring, resource protection, and tourism activities, community conservation
2	Tanzania Wildlife Research Institute		Implementation of regular aerial censuses, wildlife research
3	Friends of Serengeti (Switzerland)		Support of resource protection and infrastructure projects ?
4	WWF		Monitoring and coordination of efforts towards sustainable management of the Mara river
5	WSCT/ BirdLife		Scrutiny of infrastructure projects

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years

1	German Federal Ministry of Economic Co-operation and Development, BMZ with GIZ and KFW	Economic development activities in adjoining districts and park protection
2	Norwegian Embassy	Research on road requirements and routing options
3	World Bank	Serengeti South Alternative Road, rural development in areas adjacent to the Serengeti National Park

REFERENCES

№	References
1	Birdlife IBA factsheet, 2012.
2	Cleaveland, S. et al., 2000. Serological and demographic evidence for domestic dogs as source of canine distemper virus infection for Serengeti wildlife. Microbiology 72 (2000) 217-227.
3	Dobson, A.P., Borner, M., Sinclair A.R.E and others (2010).Road will ruin Serengeti. Nature 467, 272–273.
4	Holdo, R.M, Fryxell, J.M., Sinclair, A.R.E., Dobson, A. and Holt R.D. (in press) Predicted impact of barriers to migration on the Serengeti wildebeest population.
5	Hopcraft, G. et al (in press). Why are wildebeest the most abundant herbivore in the Serengeti ecosystem? Book chapter in Serengeti IV: Sustaining biodiversity in a coupled human-natural system. Sinclair, A.R.E., Mduma, S.A.R., and Packer, C. (eds.). Chicago University Press.
6	Serengeti National Park General Management Plan 2006-16.
7	Serengeti National Park Statement of Outstanding Universal Value.
8	State Party report, 2010.
9	State Party report, 2011.
10	Statement by the former Tanzanian Minister of Tourism, Hon. Ezekiel Maige, to the UNESCO World Heritage Committee, 35th session, 2011, Paris, France.
11	TAWIRI, 2010. Aerial Census in the Serengeti Ecosystem, SE46, Final report.
12	Thirgood et al., 2004. Can parks protect migratory ungulates? The case of the Serengeti wildebeest. Animal Conservation 7 (2004), 113-120.
13	UNEP-WCMC Information Sheet, 2012.
14	UNESCO World Heritage Centre and IUCN, 2010. Report of the mission to Serengeti National Park, 29 November - 8 December 2010.

№	References
15	Walpole, M., Y. Ndoinyo, R. Kibasa, C. Masanja, M. Somba, and B. Sungura, 2004. An Assessment of Human-Elephant Conflict in the Western Serengeti. Report.