Maloti-Drakensberg Park

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Lesotho, South Africa
Inscribed in: 2000
Criteria: (i) (iii) (vii) (x)

The Maloti-Drakensberg Park is a transboundary site composed of the uKhahlamba Drakensberg National Park in South Africa and the Sehlathebe National Park in Lesotho. The site has exceptional natural beauty in its soaring basaltic buttresses, incisive dramatic cutbacks, and golden sandstone ramparts as well as visually spectacular sculptured arches, caves, cliffs, pillars and rock pools. The site's diversity of habitats protects a high level of endemic and globally important plants. The site harbors endangered species such as the Cape vulture (Gyps coprotheres) and the bearded vulture (Gypaetus barbatus). Lesotho's Sehlabathebe National Park also harbors the Maloti minnow (Pseudobarbus quathlambae), a critically endangered fish species only found in this park. This spectacular natural site contains many caves and rock-shelters with the largest and most concentrated group of paintings in Africa south of the Sahara. They represent the spiritual life of the San people, who lived in this area over a period of 4,000 years.

SUMMARY

2020 Conservation Outlook

Finalised on 01 Dec 2020

SIGNIFICANT CONCERN

The conservation outlook for Maloti-Drakensberg Park is of significant concern. The EKZNW management staff are highly dedicated and experienced and there is also significant appreciation for the values of the Maloti Drakensberg by communities living nearby as evidenced, for example, by the vehemently strong opposition to the possibility of oil and gas exploration in the area. However, the over-arching concern stems from dwindling financial resources and an increasing dependence on external funding to carry out core conservation activities in the site. The prevalence of frequent fires in the upper reaches and the vulnerability of the lower reaches to invasive alien plant establishment are seriously compromising the sites capacity to secure the biodiversity values, while the value of scenic splendor is being impacted on by settlement and livestock encroachment from the outside.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ Outstanding scenic value expressed by the topographic variation, geology and vegetation **Criterion:(vii)**

The outstanding scenic value is expressed largely by the topographic variation, geology and vegetation. The Drakensberg Mountains have high escarpment walls of dark basalt that lie above a high layer of golden clarens sandstone. Soaring basaltic buttresses, incisive dramatic cutbacks and golden sandstone ramparts all contribute to a spectacular environment. Rolling high altitude grasslands, the pristine steep-sided river valleys and rocky gorges also contribute to the beauty of the site (World Heritage Committee, 2014).

▶ Outstanding plant species richness **Criterion:(x)**

It has outstanding species richness, particularly of plants. It is recognised as a Global Centre of Plant Diversity and endemism, and occurs within its own floristic region – the Drakensberg Alpine Region of South Africa (World Heritage Committee, 2014). At the time of inscription of the South African part of this transboundary site, a total of 2,153 species of plants were described in Drakensberg Park, including a large number of internationally and nationally threatened species. A significant feature is the high level of plant species endemism. (IUCN, 2000). In Lesotho, Sehlabathebe National Park hosts 515 plant species, 59 of which are endemic to the park (IUCN, 2013).

▶ Large number of endemic and globally threatened bird species **Criterion:(x)**

The site's diversity of habitats protects a high level of endemic and globally threatened bird species. It is also within a globally important endemic bird area and is notable for the occurrence of a number of globally threatened species, such as the Yellow-breasted Pipit (Hemimacronyx chloris), the Cape vulture (Gyps coprotheres) and the bearded vulture (Gypaetus barbatus). (World Heritage Committee, 2014). The avifauna of the Drakensberg Park included 296 species at the time of its inscription (IUCN, 2000). At the time of the extension of the site to Lesotho, between 106 and 117 bird species, according to different records, were reported in the Sehlabathebe National Park (IUCN, 2013).

Other important biodiversity values

▶ Paleo-invertebrate, reptile and mammal species

Little is known about the many endemic paleo-invertebrates, particularly those species that inhabit the high altitude vegetation communities. Reptile fauna is also poorly understood although with relatively high diversity. Large mammals are well known but the diverse small mammal fauna is also poorly known.

Assessment information

Threats

Current Threats

High Threat

The most significant threats to the biodiversity values of the site are from too high burning frequency (particularly at high altitudes), the spread of invasive alien plant species at the lower altitudes (particularly American Bramble (Rubus cuneifolius)) and the encroachment and overgrazing by livestock. These pose a serious threat to the outstanding biodiversity and scenic values. Although other threats are low, threats to the scenic values are also from outside the core area within the buffer zone.

▶ Utility / Service Lines

Low Threat

Outside site

(Powerlines being constructed in rural areas east of the property)

Collisions between raptors including vulture species and other large birds with powerlines has an adverse impact on the viability of the various species populations. Mitigation measures are essential (Karssing et al., 2012; Short et al., 2003; O'Connor, 2008; Kruger, 2005).

▶ Forestry/ Wood production

Low Threat

Outside site

(Forestry projects in the buffer zone)

A land reform development with forestry projects is taking place in an adjacent municipal area. The development is outside the World Heritage site but within its buffer zone and therefore may have a visual impact (Forster et al., 2007). This land use transforms the natural land cover adjacent to the Park and increases the island effect and the vulnerability of important species. These forestry developments also increase the disturbance and hence facilitate the spread of invasive alien plants.

▶ Flight Paths

Low Threat

Inside site, localised(<5%)
Outside site

(Commercial flight paths and tourism helicopter flights)

Sound pollution, particularly form overhead commercial flight paths, affects the scenic values of the site and wilderness experience of some visitors and therefore (Forster et al., 2007). In addition, tourism operators offer helicopter flights over the escaprment very close to the site. Such helicopter activities pose a threat to both Cape vulture (Gyps coprotheres) and the bearded vulture (Gypaetus barbatus) (KPDH, 2016).

▶ Fire/ Fire Suppression

High Threat

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

(High burning frequency resulting from illegal/ accidental fires)

High altitude sub-alpine vegetation is being burnt too frequently with fires originating from Lesotho. High fire frequency will result in the loss of some plants and animals and may ultimately lead to some extinctions in time. Wild fires are frequent occurrences in these high altitude grasslands in winter and spring (Mander et al., 2008; O'Connor, 2008). Any dynamic which compromises the integrity of the natural vegetation cover, particularly the grasslands, will result in the loss of capacity to deliver watershed services indicative by reduced rainfall infiltration, increased runoff, increased soil erosion, decreased dry season base flow and increased sediment loads in water courses (SANBI, 2012).

▶ Hunting and trapping

Very Low Threat

Inside site, extent of threat not known
Outside site

(Poaching of animals and harvesting of medicinal plants)

Levels of harvesting / poaching are low (Short et al., 2003; Arnott, 2004).

▶ Invasive Non-Native/ Alien Species

High Threat

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

(Invasive alien plant species)

Several invasive alien plant species threaten the natural vegetation communities and habitats (e.g. pine, wattle, American bramble, etc.). Invasive alien plant species replace and compete with indigenous plants leading to a change in the composition of vegetation communities and loss of species and habitats and a change of sense of place. The proximity of forestry plantations outside the park provides an important seed source (Mander et al., 2008; Forster et al., 2007). Recent modeling work shows that

large portions of the montane vegetation are vulnerable to invasion by American Bramble (Rubus cuneifolius) (Ndlovu, et al, 2018) and that the Management Authorities capacity to counteract the spread is compromised due to their reliance on external funding sources for this critically important management action (EKZNW and MTEC, 2016).

▶ **Housing/ Urban Areas**

Low Threat
Outside site

(Residential developments in the buffer zone)

There are proposals to change the town plan for the Cathkin Park village on the boundary from tourism to residential with the sub-division of agricultural land allowing for residential development. There is an increased number of rural homes in communally owned areas including the western boundary with Lesotho. The developments are outside the core area of the site but within its buffer zone. Aesthetic values are affected mainly locally both in approaching / travelling towards the site and views outwards from the site (Forster et al., 2007).

▶ **Livestock Farming / Grazing**

High Threat
Inside site, throughout(>50%)
Outside site

(Overgrazing due to poor range management practices by private and communal livestock farmers)

Possible intensification of dairy farming with associated infrastructure development (dams, pastures) would affect the site. Communally owned areas in Lesotho on the unfenced western boundary are subject to overgrazing with regular incursions into the park, affecting the majority (maybe 100%) of the property. Overgrazing of the high altitude grassland would result in a loss of palatable grass species and loss of other plant species due to erosion and trampling (Forster et al., 2007; Arnott, 2004; Brown and Piper, 1987; Brown, 1992; Kruger, 2005). As with the threat of frequent burning, overgrazing would compromise the site's capacity to deliver watershed services (SANBI, 2012). Associated with the livestock incursions into the site is the long-standing issue of stock theft which compromises the security of the site, both from the perspective of management staff and visitors (Green Door Environmental, 2019).

▶ **Marine/ Freshwater Aquaculture**

Very Low Threat
Outside site

(Expansion of trout fish farm)

The expansion of the trout fish farm on Bushmans River on the World Heritage site's boundary might have a localised aesthetic impact. Possible escape of trout into the river also represents a minor threat (research has demonstrated adverse impacts of trout, an alien species, on biodiversity).

▶ **Mining/ Quarrying**

Low Threat
Outside site

(Expansion of Letsing Diamond Mine (near western boundary in Lesotho))

Letšeng Diamond Mine (in Lesotho, 13 km from the core area) has expanded. Possibly, two new diamond mines may be developed in future. Blasting operations result in vibrations; the consequences are unknown (e.g. on rock art and nesting raptors). The development is just outside the buffer zone (Mander et al., 2008; Forster et al., 2007; IUCN Consultation, 2017).

▶ **Roads/ Railroads**

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

(Road upgrade to Sani Top and proposed cable car development)

Upgrade of the Sani Pass road has progressed to Phase 2 and is to be completed by 2020. It will allow for much increased traffic as well as the section from Sani Top to Mahotlong. Upgrade of the road and pass to Sani Top will also increase the number of tourists to this high altitude sensitive area. The proposed development of a cable car and a possible lease of a tourism site to a private developer will also add to the increase in tourist numbers. Terms of reference for an environmental impact assessment have been developed and the applicant has appointed a consultant to undertake a feasibility study. The site Management Authority is engaging in the process (Forster et al., 2007; IUCN Consultation, 2017). The feasibility study, particularly the environmental screening, showed that the development and operation of a cable car could impact quite significantly on important bird species, especially the Cape

vulture (Gyps coprotheres) and the bearded vulture (Gypaetus barbatus) (KPDH, 2016). A cable car would constitute a high threat to the values of the site but due to the early stage of decision making, the threat is categorised as low for the time being.

▶ **Tourism/ visitors/ recreation** — **Low Threat**

(Path network not being maintained, causing erosion on steeper slopes)

Inside site, widespread(15-50%)

There is an extensive path network thoughout the area. In KZN it is relatively well designed for hiking, with anti-erosion drains in many places. In Lesotho and the Eastern Cape the paths are more associated with livestock movement than hikers. Lack of control, maintenance or initial design results in many braided and sunken paths which channel water and become deeply eroded.

Potential Threats

High Threat

Possible developments near the site (e.g. wind farms) could have severe impacts on its values. Further industrial development of coal-fired power station and potential shale gas, gas and oil exploration within the newly delineated buffer zone of the property also represent high potential threats to the site's values if their potential impacts on the OUV is not fully consider prior to any activity (UNESCO, 2019). Impacts of climate change on sensitive grassland and wetland species are anticipated.

▶ **Oil/ Gas exploration/development** — **High Threat**

(Potential shale gas, gas and oil exploration within the newly delineated buffer zone)

Outside site

The proposed shale gas, gas and oil exploration within the newly-proposed buffer zone has significant potential to affect the OUV of the property (UNESCO, 2019). The State Party have been requested by the Committee to ensure that any projects are subject to full EIAs which fully consider any impacts of the OUV of the property (World Heritage Committee, 2019). The appeal lodged by the site management authority over the proposed petrol filling station in the buffer zone also raises concern over the compatibility of this project with the conservation and integrity of the property (UNESCO, 2019).

▶ **Renewable Energy** — **Low Threat**

(Lesotho Highlands Water Development Phase 2)

Outside site

Lesotho Highlands Water Development Phase 2 incorporates a large dam where hydro power would also be generated. The developments are outside the core area of the site but within its buffer zone (Forster et al., 2007). It is possible that this threat may be turned into an opportunity if both the Lesotho and South African governments, through their bi-lateral agreement governing the sale of water to South Africa, are able to realise the importance of investing in the catchment area to secure its integrity.

▶ **Renewable Energy** — **High Threat**

(Two wind farms being planned near western boundary with Lesotho)

Inside site, extent of threat not known
Outside site

Two wind farms (with associated infrastructure) are at an advanced stage of planning near the western boundary with Lesotho. No progress on the project has been made since 2014 and little information is available at present (IUCN Consultation, 2017). Vortex modelling indicates that even limited wind farm development will have severe adverse impacts on raptor species, particularly the the Cape vulture (Gyps coprotheres) and the bearded vulture (Gypaetus barbatus) and would lead to their extinction within the site and regionally (Forster et al., 2007; Kruger, 2005).

▶ **Air Pollution** — **Data Deficient**

(Air pollution from coal fired power stations)

Outside site

Fallout of airborne particle pollutants (acid rain) from coal-fired power stations to the north (Mpumalanga province) carried by high-altitude winds has been recorded (Forster et al., 2007).

▶ **Identity/social cohesion/ changes in local population and community that result in negative impact** — **Low Threat**

(Population increase and densification of settlements in surrounding areas of communal land)

Inside site, extent of threat not known
Outside site

Population increase and densification of settlements in surrounding areas of communal land cause ever increasing levels of ecological fragmentation and biological isolation of the park. Reduced biological connectivity may result in some species becoming extinct, particularly given predicted increased rates of climate change (Mander et al., 2008; Forster et al., 2007; Kruger, 2005). Coupled to this is the poor settlement planning and control that exacerbates the related impacts (Zunckel, 2017).

Overall assessment of threats — **High Threat**

The most significant threats to the biodiversity values of the site are from too high burning frequency (particularly at high altitudes), the spread of invasive alien plant species at the lower altitudes (particularly American Bramble (Rubus cuneifolius)) and the encroachment and overgrazing by livestock. These pose a serious threat to the outstanding biodiversity and scenic values. Although other threats are low, threats to the scenic values are also from outside the core area within the buffer zone. Possible developments near the site (e.g. wind farms) could have severe impacts on its values. Potential impacts of climate change on sensitive grassland and wetland species are anticipated along side industrial activity outside the boundaries of the site, if their negative impacts on the site's values are not fully considered.

Protection and management

Assessing Protection and Management

▶ **Management system** — **Highly Effective**

This transboundary site links the Sehlabathebe National Park in Lesotho with uKhahlamba Drakensberg Park in South Africa. Joint management documents have been developed and are being impelmented, including the joint fire management plan, joint cultural heritage management plan as well as alien and invasive species management plan, sustainable tourism strategc etc. The joint overarching management plan is being revised (States Parties of Lesotho and South Africa, 2018; World Heritage Committee, 2018). Management staff have received in-service capacity training and research is actively being carried out (Mander et al., 2008; O'Connor, 2003; World Heritage Committee, 2013; IUCN Consultation, 2017).

▶ **Effectiveness of management system** — **Some Concern**

Management effectiveness assessments have been conducted and a 63.23% score achieved in 2016-2017 (IUCN Consultation, 2017). Persistent budget challenges are limiting the Management Authority's ability to implement effective management. Significant achievements have been made in developing management plans for fire, invasive alien species, sustainable tourism and cultural heritage in the site. Whilst the management plans and strategy are already being jointly implemented, more work is required to align the various management documents under the Joint Management Plan, which was under review at the time of reporting to the Committee in 2018 (States Parties of Lesotho and South Africa, 2019).

▶ **Boundaries** — **Mostly Effective**

Generally highly effective although the international western boundary is not demarcated and has resulted in legal issues and law enforcement challenges (Mander et al., 2008; Forster et al., 2007; IUCN Consultation, 2017). Consolidation of the two component areas of the site has been ongoing through

rights-holders of the land in Upper Tugela, which would link the Cathedral Peak and Royal Natal sections of the Ukhahlamba Drakensberg Park World Heritage Site. The process has reportedly come to a standstill due to a dispute regarding the boundary between the communal areas (IUCN Consultation, 2017; 2020). The process of delineating a buffer zone south of Sehlabethebe National Park on the South African side has now been finalised (State Parties of Lesotho and South Africa, 2019), which still needs to be formalised for the World Heritage site through a minorboundary modification (World Heritage Committee, 2019). However, the proposed shale gas, gas and oil exploration within this newly-proposed buffer zone has potential to affect the OUV of the property and should therefore be subject to appropriate Environmental and Heritage Impact Assessments (World Heritage Committee, 2019).

▶ Integration into regional and national planning systems

Some Concern

The park is integrated into provincial and national biodiversity and tourism plans. Of concern is that integration at the local municipal level is poor / inadequate (Mander et al., 2008; Forster et al., 2007). The buffer zone for the World Heritage, south of Sehlabethebe National Park, has now been delineated on the South African side (States Parties of Lesotho and South Africa, 2019), and this should now be reflected under the Convention through a request for minor boundary modification as soon as possible (UNESCO, 2019). Also of concern is the ongoing delay in the completion of the Biodiversity Resources Management Bill by the State Party of Lesotho, which according to the sustainable tourism strategy is planned to be finalized by December 2020 (States Parties of Lesotho and South Africa, 2019). This represents a significant delay is should be expedited to prevent any potential damage to the OUV of the property in its continued absence (UNESCO, 2019).

▶ Relationships with local people

Mostly Effective

Engagement and communication structures are in place and operative, for example, community forums, local boards and park staff providing conservation teaching services to communities (Forster et al., 2007). There are some unresolved land claims by communities who were deprived of their land during the apartheid period. These claims are still under investigation (IUCN Consultation, 2017). A land swap (park land in exchange for high altitude uninhabited communally owned land) has been approved in principle and a Discussion Document developed (IUCN Consultation, 2017This process is ongoing. Although ownership of land might change if a land claim is successful, it should not lead to any change in land use. Therefore, the integrity of the site would remain unaffected. However, co-management of protected areas is proving to be problematic. There is community pressure on low-lying areas to permit stock grazing (Forster et al., 2007). Increasing levels of poverty affect people living in communal areas adjacent to the park and communities are frustrated by lack of service delivery by government that would improve their livelihoods. Should these social issues not be addressed, there would be a growing risk of the park being invaded by these people in order to access resources for their survival (Mander et al., 2008; Forster et al., 2007; Kruger, 2005).

▶ Legal framework

Highly Effective

Comprehensive World Heritage, Conservation and Environmental laws and policies are in place and being implemented (Mander et al., 2008; Forster et al., 2007).

▶ Law enforcement

Some Concern

While there is an active law enforcement effort implemented by the Management Authority, the western border is porous and cross border crime is prevalent, especially that associated with the theft of livestock. There have been on-going efforts by neighbouring commercial farmers to address this with a recent environmental impact assessment of crime prevention measures being undertaken (Green Door Environmental, 2019). The movement of narcotics and firearms has also been associated with stock theft.

▶ Implementation of Committee decisions and recommendations

Mostly Effective

Generally most decisions and recommendations are implemented, albeit with delays in some cases, notably the ongoing delay in the delivery of the Biodiversity Resources Management Bill in Lesotho

(World Heritage Committee, 2019), which has previously been attributed to insufficient staff or other management priorities (IUCN Consultation, 2017). Recommendations by the World Heritage Committee to link / incorporate the northern portion to the southern part of the site have stalled due to a border dispute between the two communities who reside on and use this land, as well as the inability of the Ingonyama Trust to take decisions on finalising the Biodiversity Stewardship Agreements necessary to facilitate the establishment of the two community conservation areas. Note also that the Biodiversity Stewardship unit within Ezemvelo KZN Wildlife has limited capacity to champion the process. However several requests have recently been successfully implemented including efforts to improve the management of the property, in particular its cultural values, to invest in staff training and activities to strengthen the engagement of communities, and review the Joint Management Plan for the site (UNESCO, 2019; World Heritage Committee, 2019).

▶ Sustainable use — Highly Effective

All natural resources that are used are done so on a sustainable basis with procedures and monitoring in place (Forster et al., 2007; IUCN Consultation, 2017).

▶ Sustainable finance — Some Concern

Funds for management of the site are allocated in annual budgets. However, these are insufficient to deal with some high priority threats such as alien invasive plant control, path maintenance and cultural heritage management (Mander et al., 2008; Forster et al., 2007), despite the recent development of specific management plans for these issues.

▶ Staff capacity, training, and development — Mostly Effective

In-service and external training and skills development are implemented on several important aspects of biodiversity management, conservation and environmental management (Forster et al., 2007).

▶ Education and interpretation programs — Some Concern

Much more could be done in the fields of education and interpretation of the natural features, biodiversity and rock art in the site (Mander et al., 2008; Forster et al., 2007), in particular the San rock art sites within the Environmental Centre (UNESCO, 2017). Funding for the Didima Visitor Centre is such that it is not a self-sustaining entity, evidenced by the fact that repair of technical equipment at the centre is beyond the financial capacity of Ezemvelo, with the result that it is no longer fully functional (Leitão et al., 2017).

▶ Tourism and visitation management — Mostly Effective

Facilities have a relatively high level of occupancy by visitors as a result of marketing the park as a prime destination for both local and international tourists (Mander et al., 2008; Forster et al., 2007), which is now specifically addressed in the Sustainable Tourism Management Plan (States Parties fo Lesotho and South Africa, 2019).

▶ Monitoring — Mostly Effective

Climate, fire, large mammals and vultures are monitored annually. There is a need to increase monitoring especially of invertebrates, birds, small mammals, plants and indicators of climate change (Mander et al., 2008; Forster et al., 2007).

▶ Research — Highly Effective

There is a suite of research projects being undertaken by university students and scientific staff of the Management Authority resulting in publications in journals and theses. Priority research projects are identified and a formal project registration and approval process is in place. Two new research facilities have been opened (Mander et al., 2008; Forster et al., 2007).

Overall assessment of protection and management

Some Concern

This transboundary site consists of the uKhahlamba Drakensberg Park (UDP) managed in accordance with an Integrated Management Plan and the Sehlabathebe National Park (SNP) in Lesotho. The management capacity of the latter is currently rather limited and the Joint Management Committee could help share and build capacity in Lesotho. However, challenges faced by the Management Authority of the UDP in terms of inadequate financial resources limits its capacity to implement effective management as well which will impinge on its capacity to support the SNP. EKZNW is progressively losing its capacity to manage the site effectively with large recurrent budget reductions leaving significantly reduced allocations for operational expenditure. While the conservation staff, who implement a hierarchy of integrated management plans and procedures to safeguard the biodiversity values of the site are well trained, much institutional memory has been lost and low operational budgets prevent key activities from being implemented on a consistent basis. Much progress has been made in defining and identifying appropriate and inappropriate developments within the buffer zone and a public consultation has been held along with the recent development of a number of management plans for specific issues including invasive species and tourism management. However, progress to have the buffer zone formally recognised have not been completed and the level of threat from negative external dynamics such as encroachment of settlements and livestock grazing are increasing.

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

Some Concern

Generally the site is threatened by urban, tourism, infrastructure, agriculture and forestry developments and land uses and their cumulative impacts outside the core area and within the buffer zone. Ezemvelo KwaZulu-Natal Wildlife (EKZNW) which is the management authority of the site through the environmental impact assessment process is able to influence environmental impact decisions made by ministries and decision makers including submission of a legal appeal (Ezemvelo KZN Wildlife, 2012). Its ability to influence decisions made in the neighbouring country of Lesotho is limited by bureaucratic and political procedures. The proposed shale gas, gas and oil exploration within the newly-proposed buffer zone is also of some concern as they have potential to affect the OUV of the property unless properly assessed under EIAs (UNESCO, 2019).

▶ Best practice examples

The methodology and process implemented by EKZNW in assessing management effectiveness of the various protected areas under its control is considered to be a significant best practice and more rigorous example that could be followed by other World Heritage site managers. The process of developing the buffer zone has been very active and inclusive, all government departments and municipalities are involved, and is a good example of cooperative governance.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Outstanding scenic value expressed by the topographic variation, geology and vegetation

Low Concern
Trend:Stable

The scenic values of the site are threatened by urban, tourism, infrastructure, agriculture and forestry developments and land uses and their cumulative impacts outside the core area and within the buffer zone. However, the Outstanding Universal Value of the site is still preserved.

▶ **Outstanding plant species richness**

High Concern
Trend:Stable

The plant species richness of the site faces a number of threats. Of particular concern are the frequent fires and alien invasive plant species, which pose direct and current threat to this value. The ongoing land use developments outside the site that results in the increasing ecological isolation of the site, habitat loss and fragmentation, are also of concern, especially with the ongoing lack of capcaoty from the management authority to address such threats. Research and monitoring is in place (Mander et al., 2008; Forster et al., 2007; IUCN Consultation, 2017) but this is limited and needs to be more inclusive and strategic.

▶ **Large number of endemic and globally threatened bird species**

High Concern
Trend:Deteriorating

The population of bearded vulture and Cape griffon have shown a reduction in population size and breeding success (nest sites no longer in use). A monitoring and research programme is ongoing. The main agents of mortality affecting the population of these birds are the feeding on carcasses that have been poisoned by rural people and birds colliding with power lines. Body parts of the vultures have been found in traditional medicine markets. A bilateral Biodiversity Management Plan for vultures is in the process of being developed but implementation in both countries remains challenging.

Summary of the Values

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

High Concern
Trend: Deteriorating

There are a number of significant internal and external threats which are working against the integrity of the site and the Management Authority's capacity to address them. Frequent fire in the upper reaches compromises the implementation of a scientifically based fire management regime, the spread of invasive alien plants in the lower reaches, the increasing vulnerability of these areas to this spread and the lack of funds to address these dynamics is of high concern. Besides laudable efforts to establish the buffer zone and the review of the Joint Management Plan, external dynamics of increasing settlement growth and livestock grazing continue to make the site increasingly more isolated is of growing concern in some instances.

▶ **Assessment of the current state and trend of other important biodiversity values**

Data Deficient
Trend: Data Deficient

Little is known about the many endemic paleo-invertebrates particularly those species that inhabit the high altitude vegetation communities. Reptile fauna is also poorly understood although with relatively high diversity. Large mammals are well known but the diverse small mammal fauna is poorly known.

Additional information

Benefits

Understanding Benefits

▶ **Water provision (importance for water quantity and quality)**

The site is the major high quality water producing area in South Africa (i.e. the water factory) supporting over 60% of the country’s GDP and the livelihoods of a large majority of the population (World Heritage Committee, 2014).

Factors negatively affecting provision of this benefit :
- Climate change : Impact level - Low, Trend - Increasing
- Invasive species : Impact level - Moderate, Trend - Increasing

▶ **Carbon sequestration**

Studies have shown that the site is a major / significant contributor for the sequestration of carbon and other benefits.

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

The site is the world's richest for outstanding San rock art (greatest number of sites and highest density of quality images). It is also the country's largest wilderness area.

▶ **Outdoor recreation and tourism,**
Natural beauty and scenery

The site provides a number of rest camps, campsites and a well marked and mapped network of hiking trails. Outside the site are many private facilities for tourist accommodation and recreation which depend on their proximity to the site for their existence. The site is therefore an important destination for the country's tourism industry (i.e. amongst the top 10 regions).

Factors negatively affecting provision of this benefit :
- Climate change : Impact level - Low, Trend - Increasing
- Invasive species : Impact level - Moderate, Trend - Increasing

The path network is not being maintained and is leading to considerable erosion and reduced visitor experience

▶ **Importance for research**

Many research projects (natural science, archaeology) have been and are being undertaken that have resulted in numerous publications. The site is also important for conservation and environmental education and is used by many school, university, technikon and adult groups.

▶ **Direct employment,**
Tourism-related income,
Provision of jobs

Many jobs are provided by the site for protected area managers and researchers and for tourism staff both within the sites and its environs. The tourism trade that exists because of the site generates additional jobs and economic spin off benefits, while jobs are created through other government funding initiatives such as the Working for Water programme that deals with invasive alien plant infestations, and the Extended Public Works Programme that offers employment for land rehabiliation activities.

Factors negatively affecting provision of this benefit :
- Overexploitation : Impact level - Low, Trend - Increasing
- Invasive species : Impact level - Moderate, Trend - Increasing

Summary of benefits

Of major significance, the site provides both national and global benefits particularly in terms of environmental services, nature conservation, cultural, and tourism and recreation.

Projects

Compilation of active conservation projects

№	Organization	Brief description of Active Projects	Website

1	Ezemvelo KZN Wildlife, Endangered Wildlife Trust, Wildlands Conservation Trust.	Vulture research and monitoring programme	
2	Ezemvelo KZN Wildlife	Fire management and monitoring project incorporates a database, implementation of a control burning plan, and management of a long-term experimental grassland fire plots.	
3	Ezemvelo KZN Wildlife	Alien invasive plant control programme.	
4	Ezemvelo KZN Wildlife	Anti-poaching law enforcement programme	
5	EKZNW Honorary Officers	An assessment of the trail network to collect accurate GPS tracklogs and to provide data on the state of the path sections in terms of erosion, user experience, signage, etc. These data can be used to inform management of areas of concern, with enough detail to do accurate work budgetting.	
6	South African Ecosystem Observation Network (SAEON)	Long term ecological research in established research areas e.g. Cathedral Peak.	www.saeon.ac.za
7	Ezemvelo KZN Wildlife	Ukhahlamba Drakensberg Park World Heritage Site research programme. Research programme aimed at addressing priority research issues, management challenges and done in collaboration with several partners, including many universities inside and out of South Africa	www.kznwildlife.com

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