

Simien National Park

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Ethiopia

Inscribed in: 1978

Criteria: (vii) (x)



Massive erosion over the years on the Ethiopian plateau has created one of the most spectacular landscapes in the world, with jagged mountain peaks, deep valleys and sharp precipices dropping some 1,500 m. The park is home to some extremely rare animals such as the Gelada baboon, the Simien fox and the Walia ibex, a goat found nowhere else in the world. © UNESCO

SUMMARY

2020 Conservation Outlook

Finalised on 01 Dec 2020

SIGNIFICANT CONCERN

Simien National Park was one of the first four natural sites to be inscribed on the World Heritage list, and the first in Africa. The property has always faced extreme challenges arising from its location in the densely populated Ethiopian highlands where people live close to nature and directly rely on its resources. The area was settled millennia before the national park's creation. In forty years alone, the population around the site has increased fourfold. It remains under intense human pressure with few settlements remaining inside the park, some area under cultivation and most of the rest subject to intensive grazing pressure from domestic livestock originating from outside the park, which is fourteen times that estimated to be sustainable. The biodiversity values were severely impacted by high levels of human activity, including long-term settlement, cultivation resulting in widespread soil degradation, and high levels of grazing by domestic stock. However, wildlife populations, including the park's highly endangered large mammals (Walia ibex and Ethiopian wolf) as well as the endemic gelada, are reported to be stable thanks to the efforts of the park's management and its partners. Such efforts are now being challenged by proposals to build four new tourist lodges within the park contrary to the WH Committee's decision, which requested that all new lodges are located outside the park boundaries. In 2017 the park was removed from the List of World Heritage in Danger on which it was inscribed since 1996, and much more remains to be done to conserve and restore other biodiversity values and ecological integrity. The most significant step forward is the recent reconfiguration and enlargement of the national park, which needs to be sustained by corresponding management and should be formalized under the World Heritage Convention as soon as feasible. The short-term outlook for the Park has the potential to be encouraging due to substantial financial support from donors, however, longer term financial security is required to ensure the continued management of the property and the larger Simien Mountains National Park.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Dramatic mountain scenery**

Criterion:(vii)

The park occupies a stretch of about 35 km along the dramatic northern escarpment of the Simien massif, with a high plateau at around 4,000m.a.s.l. altitude, dropping precipitously through a series of steep forested gorges, massive cliffs and spectacular outlying inselbergs and rock outcrops (World Heritage Committee, 2011). Ethiopia's highest peak (Ras Dejen, 4,540 m.a.s.l.) has been included in the extended national park boundary, which is the area the World Heritage Committee has requested to be added to the property.

► **Endemic plant communities**

Criterion:(x)

The flora is exceptionally diverse and includes communities characteristic of different altitudinal zones from around 1,800 to above 4,000m.a.s.l. Communities include montane forests, tree heather forests, high altitude grasslands and Afro-alpine communities. The higher Afro-alpine communities are especially rich in endemic species, including the conspicuous giant Lobelias and red-hot pokers (*Kniphofia* spp.), while 10 species of grass (19% of the total) are endemic to the Simien Mountains (World Heritage Committee, 2011).

► **Endangered and endemic mammals**

Criterion:(x)

Flagship species of large mammal include the Walia ibex (*Capra walie*, EN), Ethiopian wolf (*Canis simiense*, EN) and Gelada (*Theropithecus gelada*), all endemic to the Ethiopian highlands. The endangered Walia ibex is restricted to the Simien Mountains, where populations are understood to be stable and possibly increasing. The endangered Ethiopian wolf is the world's rarest canid and although it also occurs in a small number of other locations in the Ethiopian highlands, Simien is one of its last remaining strongholds along with the Bale Mountain. Other readily observed large mammal species include golden jackal (*Canis aureus*), klipspringer (*Oreotragus oreotragus*), bushbuck (*Tregalaphus scriptus*), serval (*Felis serval*), spotted hyena (*Crocuta crocuta*), black and white colobus (*Colobus guereza*), and anubis baboons (*Papio anubis*) (GMP 2009-2019).

► **Rare & Endemic birds**

Criterion:(x)

Over 200 species of birds are recorded in this BirdLife Important Bird Area, including 16 species endemic to the Ethiopia/Eritrea highlands. The property is particularly rich in raptors and vultures including the important population of the bearded vulture (*Gypaetus barbatus*, NT) (World Heritage Committee, 2011; BirdLife International, 2017).

Assessment information

Threats

Current Threats

High Threat

The main threats arise from the high levels of human activity surrounding the park and to a lesser extent within the property heavily affecting the entire property and the much larger national park. A large area of the property and the park is overgrazed by domestic stock with localised problems of soil erosion and

widespread disruption of ecosystem function and wildlife habitats. There are now less than 200 households living illegally in the park, while numerous villages are located along the boundary using park resources mainly for grazing and firewood. With the increasing human population growth around the property, the pressure on natural resources and the ecosystem is increasing. A new lodge development inside the Simien Mountains National Park appears to have started despite the WH Committee's request to ensure all new lodges are located outside the National Park boundaries. The extent of threat from Invasive Alien Species (IAS) is not currently known, but the new road development brings with it, potential risks of introducing and spreading IAS as well as uncontrolled access to the Park and its resources. The uncontrolled fires in 2019 that spread across some parts of the National Park including the property, caused considerable damage to the forest, the grass undergrowth and the adjacent grassland, but their impact on the OUV needs to be further assessed.

► **Hunting and trapping**

Low Threat

*(Low-level poaching of *Walia ibex*)*

Inside site, throughout(>50%)

Poaching of large mammals for subsistence use is reported to be less of a threat in recent years. In the 1980s and early 90s however, subsistence hunting led to a very severe reduction in *Walia ibex* numbers (UNESCO/IUCN, 2009).

► **Crops**

High Threat

(Cultivation of barley, wheat, beans and other crops in different parts of the park (Abergina, Ambaras, Kebero, Key Afer, Michibign and Limalimo))

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

Some 1,200 hectares of the park has perviously been reported to be under cultivation by about 200 household, and an estimated further 20,000 households living along its periphery and engaged in a mixed crop-livestock farming system using park resources as grazing area. No recent data is available but it can be assumed that current figures are similar to these previous numbers. Sheet, rill and gully erosion commonly occur in areas subjected to cultivation (UNESCO/IUCN, 2009) which might be partly attributed to gaps or misleading provisions in the regional land administration and management law; which permits crop cultivation on steep slopes of up to 60 degree slope gradients. The lag in demarcating the Park extension, the high permeability of the Park boundary, the high area to perimeter ration and the increasing pressure from a high population growth rate coupled with community livelihood strategies that are dominated by subsistence agriculture are dynamics which all lead to the increased encroachment of cropping activities from adjacent communities (EWCA, 2020).

► **Invasive Non-Native/ Alien Species**

Data Deficient

(Invasive alien species)

Inside site, extent of threat not known
Outside site

The threat from invasive alien species (IAS) has not been properly assessed, but was observed during the October 2009 mission (UNESCO/IUCN, 2009). The proposed road development through the property also has the potential to introduce IAS (IUCN, 2017).

► **Roads/ Railroads**

High Threat

(Road and infrastructure corridor)

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

A main (unpaved) road runs through critical wildlife habitat in the middle of the park, along the top of the escarpment, linking Debark with Mekane-Birhan. Electricity transmission lines were being installed along this road at the time of the last monitoring mission in October 2009 (UNESCO/IUCN, 2009), and a telecommunication tower was set up at Buyit Ras in close view of the Simien Lodge. A new road, for which construction started in 2012, will be mostly located outside of the National Park but its middle section of the road will run through the Park. The current existing road will not be decommissioned. The delay in constructing the road was mainly capacity limitations of the local companies engaged in the construction. In the January 2020 report, the State Party noted further delays in completing the road construction (State Party of Ethiopia, 2020). An EIA for this section of the road crossing the Simien Mountains National Park has still not been submitted as requested by the WH Committee since 2017 (WH Committee, 2017). The electric transmission line is also expected to follow the new road. According

to third party information, in 2020, the construction of a road for one of the new tourist lodges also commenced inside the National Park.

► **Other Ecosystem Modifications**

Low Threat

(Soil erosion)

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

Extensive human-induced soil degradation has resulted from poor cultivation techniques and overgrazing lasting since several decades to centuries (Hurni and Ludi, 2000; UNESCO/IUCN, 2009). Through the voluntary relocation of about 420 households up to 750 ha of cultivated land has been abandoned in 2016, thereby reducing soil erosion considerably. Nevertheless, widespread soil degradation as a result of century-old soil erosion remains for many decades to centuries to come, as soil regeneration is extremely slow at these altitudes.

► **Other Ecosystem Modifications**

Very High Threat

(Overgrazing)

Inside site, throughout(>50%)

With the exception of a few currently effective 'no grazing' zones at the top of the escarpment around Chennek and Sankaber, over 60% of the park is subject to heavy grazing pressure from massive numbers of sheep, goats and other stock belonging to herders around the park who bring their animals into the park. The constant presence of high densities of domestic stock, and the resulting overgrazing reduces the amount of habitat available for key wildlife species (e.g. Walia ibex avoid disturbed areas) and diminishes its capacity to support key species such as the Ethiopian wolf (whose rodent prey are also dependent on grass) (UNESCO/IUCN, 2009). While anecdotal data suggest a possible increase in Walia ibex and Ethiopian wolf populations (State Party of Ethiopia, 2017), there is a need for a clear, systematic and long term monitoring protocols for these species (WH Committee, 2018). Overgrazing has led to almost complete disappearance of small mammals, particularly rodents (Nievergelt, 2012). The necessary financial means to implement the grazing reduction strategy, and in particular developing a zoning scheme in an integrated approach with participation of local stakeholders have been lacking in 2012 (UNESCO, 2013), but were underway in 2015 (UNESCO, 2016). While recent reports (State Party of Ethiopia, 2019) suggest that much has been achieved in reducing the severity of this threat through the continued implementation of the Grazing Pressure Reduction Strategy, it remains significant and substantial investments required in order to bring under control (State Party of Ethiopia, 2020).

► **Housing/ Urban Areas**

High Threat

(Settlement and human presence)

Inside site, scattered(5-15%)

586 households (3,223 people) were counted in 9 villages within the property at the time of a household survey in 2006 (UNESCO/IUCN, 2009) and many others residing nearby used the park's land and resources for cultivation, grazing and resource collection. In 2015/16, the about 420 households of Gich Village were voluntarily relocated from the core area of the property to the margins of the nearby town of Debark, for seeking alternative livelihoods and leaving their cultivated and grazed land to regenerate. Through this, also grazing pressure was reduced, although it remains as a main threat across most of the property.

► **Logging/ Wood Harvesting**

High Threat

(Tree cutting for construction (houses/huts), tools and firewood collection)

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

The high density of people living in or near the park and the local scarcity of wood, combine to create very high pressure on forests and trees, especially the tree heathers forests and Hypericum thickets at higher altitudes (UNESCO/IUCN, 2009).

► **Tourism/ visitors/ recreation**

High Threat

(Construction of tourist lodges inside the National Park)

Inside site, extent of threat not known
Outside site

In 2018 the State Party reported of plans to construct four new lodges on the border of Simien Mountains National Park. In response, the WH Committee requested the State Party of Ethiopia to

ensure that "all new lodge developments are located outside the boundary of the national park and to submit the EIAs for any new lodge projects to the World Heritage Centre for review" (WH Committee, 2018). In the State Party's report submitted in January 2020, EIAs for two new lodges were attached, which would be located well inside the National Park boundaries (State Party of Ethiopia, 2020). Furthermore, in the first quarter of 2020, third parties reported that the construction of one of the lodges, located inside the National Park (but outside of the WH site, had already begun. Its location is understood to be in an important gelada habitat and therefore pose a considerable risk to the OUV under criterion (x) as well as the visual impacts under criterion (vii). The State Party is currently developing a Significant Boundary Modification proposal as requested by the WH Committee in order to align the WH boundaries with the expanded National Park. If/once the Significant Boundary Modification is approved by the Committee, the lodges will therefore be located within the WH site.

► **Fire/ Fire Suppression**

(Uncontrolled fires)

High Threat

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

On 28 March 2019, wildfire started in the eastern part of the National Park, spreading rapidly and causing significant damage to the WH site and its OUV. The State Party later reported that the site's ericaceous forest had been heavily burnt and it can be assumed that many other fauna and flora were affected. According to an unpublished report with maps by Hurni et al (2019), the fires in March and April 2019 affected a total of 815 hectares (ha) inside the SMNP, excluding the Lemalimo burning. A major part (787 ha) was to the north of Jinbar River, including most of the Gich plateau and part of the escarpment beyond Jinbar Valley towards the northern lowlands. A minor part of the burnt surface was in the Sankaber area (28 ha). The category 'Burnt forest or bush land' (66 ha) showed the highest damage, as both trees and bushes have been heavily affected besides the underlying grasses. Particularly affected was the area between Jinbar Wenz and Imet Gogo, but also the area below Kedadit towards Muchila Afaf and a small strip around Gich Camp. Some heavy damage of trees and bushes also occurred in the Sankaber burnings. The second category, 'Burnt grassland under forest or bush' (93 ha), had less damage on trees and bushes while all grasses were burnt, but will regenerate quickly again. The third category, 'Burnt grassland' (656 ha) constituted the bulk of the fire damage, mainly located on the Gich plateau and extending into the escarpment. It remains difficult to determine the exact extent of the damage to the OUV. Climate change may see such cases increasing in the future. There are plans by the State Party to develop a fire management strategy under the UNESCO International Fund, but no progress on this strategy has been reported.

Potential Threats

High Threat

Human population increase around the park is a current threat as well as a long-term potential threat, most likely to create ever-increasing resource pressures if not properly managed. Growth in tourism provides income generation opportunities but needs to be well planned and managed to minimize potential negative impacts, especially in view of a total of four new lodges proposed inside the Simien Mountains National Park in contrary to the WH Committee's decision. The anticipated effects of already observable climate change, particularly increase in temperature, as well as the incidence and severity of drought and floods, will raise the altitudinal belts such as Erica woodlands with unknown effects on high altitude plant and wildlife communities. The impact of climate change is already starting to be observed in terms of precipitation pattern changes and droughts.

► **Tourism/ Recreation Areas**

(Poorly planned and managed tourism, including infrastructure.)

High Threat

Inside site, extent of threat not known
Outside site

Badly planned tourism infrastructure could easily affect nature around the camping sites and the visual aesthetic along the top of the escarpment (UNESCO/IUCN, 2009; IUCN, 2017). The 2017 IUCN mission noted that a new tourism lodge had recently been constructed and further lodges have been proposed inside the Park (IUCN, 2017). However these developments appear to be incompatible with the General Management Plan, which explicitly states that "new infrastructure should be built outside the national park (GMP 2009-2019), and the applicable law ("constructing roads or other structures" is a "prohibited activity" according to Regulations No. 163/2008) (IUCN, 2017). In the January 2020 State Party report, it

notes that 4 new lodges are proposed around the Simien Mountains National Park boundaries, in addition to the 2 lodges already present inside the Park. However upon examining two out of the four EIAs submitted by the State Party for the new lodges, they show that the new infrastructures are in fact proposed inside the National Park. This is in stark contrast to the WH Committee request in 2018 "to ensure that all new lodge developments are located outside the boundary of the national park" (WH Committee, 2018).

► **Habitat Shifting/ Alteration, Droughts, Storms/Flooding**

(Climate change)

High Threat

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

Increasing temperatures as a result of climate change is expected to shift plant and animals communities to higher ground, and is likely to reduce the amount of suitable habitat available to species that presently occur at the higher elevations, particularly the Ethiopian wolf (UNESCO/IUCN, 2009). An upward shift of the treeline by about 100 elevation metres was observed since the beginning of the 20th century (Hurni, 2005). Precipitation patterns have changed noticeably, especially reduced snowpacking resulting in unprecedented spring droughts (IUCN, 2017).

► **Other Activities**

(Human population increase)

Very High Threat

Inside site, throughout(>50%)

The human population in and around the property is increasing rapidly at a rate of ca. 2% p.a., creating ever-increasing resource pressures, such as overgrazing, firewood collection and cultivation (PaDPA, 2007). Land that was previously unattractive for agriculture is increasingly attracting people and being converted for agriculture.

► **Tourism/ Recreation Areas**

(Tourism and its impact on water use and waste management)

Low Threat

Outside site

Although tourism brings its benefits such as job opportunities and capacity building, it also not compatible with the General Management Plan. Much of the tourism infrastructure is in need of major re-investment and many require greater environmental considerations. Concerns have been raised regarding the impact of tourism on water supply and disposal of solid and liquid waste.

Overall assessment of threats

High Threat

Many of the threats, which resulted in the property's inscription on the List of World Heritage in Danger in 1996 in principle, remain despite laudable improvements resulting in the recent removal of the property from that list (World Heritage Committee, 2017). High levels of direct human dependence on the national park's natural resources persist, with human population ever increasing. The expansion of the boundaries of the current World Heritage property to be aligned with the extended National Park boundaries as repeatedly requested by the World Heritage Committee, would improve the outlook of the property. The effects of climate change is already being felt, with potential future implications, as well as the current and future tourism developments and their impacts on the ecosystem. The extremely low level of financial support from the government and the consequent development of severe donor dependence is a significant concern. The short-term commitments of donor funding promise to launch the implementation of the newly revised General Management Plan for 2020-2029, but the threat of a funding vacuum thereafter must be addressed through funding commitments from government (EWCA, 2020).

Protection and management

Assessing Protection and Management

► **Management system**

Some Concern

From 1996 to 2009 the management of the property was under the authority of the Amhara Regional National State, enabling the establishment of much closer links than existed previously between the various local and regional stakeholders. In 2009 the re-constituted (Federal government) Ethiopian Wildlife Conservation Authority (EWCA) took control, and most all the park staff were transferred to the new authority, providing necessary continuity in management, regional and national integration. A 'technical modality' has been established to guide collaboration between State agencies and EWCA (State Party of Ethiopia, 2012). Closer collaboration between federal and regional authorities is however essential to improve park management and tackle the pressing issues of settlement and unsustainable natural resource use. The low levels of remuneration received by the EWCA officials, as well as the extremely limited budget allocations mean that the movement of officials to and from and within the site is solely dependent on funding support from donors (Debrus and Zunckel, 2017). Wildlife has already had some extensive damage to the habitat within the property and the National Park, and the development of a fire management plan, and its implementation, is urgently required.

► **Effectiveness of management system**

Some Concern

Anti-poaching patrols and community participation efforts have been effective in protecting the key endangered large mammals. Management has been able to start tackling some of the factors affecting the integrity of the property and reverse the pervasive negative impacts of settlement, crop cultivation and excessive levels of livestock grazing. However, the lack of financial support from government has generated a high level of donor dependence and although there are substantial commitments to launch the implementation of the revised General Management Plan for 2020 - 2029, these are only for three years with no indication of increasing commitments from government. A management effectiveness tracking exercise carried out in September 2017 produced a score of 46% (Debrus and Zunckel, 2017).

► **Boundaries**

Some Concern

The national park boundaries are demarcated with concrete beacons, including 300 new beacons established around the perimeter of the park extensions, in parts following agreement with local communities on their location. Revision of the park boundary involves (a) exclusion of some areas near the periphery of the existing park that have been heavily settled and (b) the addition of four elongated sectors each encompassing a mountain ridge (including Ethiopia's highest peak Ras Dejen, 4,540 m.a.s.l.) or a steep section of the escarpment. These extensions are all relatively long and narrow, so the configuration of the extended park has a very high boundary to area ratio, with all the management and law enforcement challenges such a configuration brings with it. Additional work is needed on further demarcation of intermediate sections of the new boundary line, and accurate GPS recording and mapping of some parts of the revised boundary. The WH Committee has been requesting the State Party to ensure the alignment of the National Park boundaries with that of the WH property since 2010, and in its January 2020 state of conservation report, the State Party states that the development of a Significant Boundary Modification proposal for this process is underway (State Party of Ethiopia, 2020).

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

Mostly Effective

From 1996 to 2009 the management of the property was under the authority of the Amhara Regional National State, enabling the establishment of much closer links than existed previously between the various local and regional stakeholders. In 2009 the re-constituted (Federal government) Ethiopian Wildlife Conservation Authority (EWCA) took control, and most park staff were transferred to the new authority, providing necessary continuity in management, regional and national integration. A 'technical modality' has been established to guide collaboration between State agencies and EWCA (State Party of Ethiopia, 2012). Closer collaboration between federal and regional authorities is however essential to improve park management and tackle the pressing issues of settlement and unsustainable use, although the property has well established liaison structures at the Woreda and Kabele levels which will need to be carefully managed and maintained (EWCA, 2020).

► **Relationships with local people**

Serious Concern

Local relations have seen an improvement following the transfer of management authority from federal level to the Amhara Regional State Government in 1997, a year after the property was inscribed on the List of World Heritage In Danger. Austrian-funded project support since 1997 has facilitated this improvement, financing consultative management planning processes and boundary re-alignment and demarcation as well as direct benefits aimed at reducing community dependence on park resources (such as firewood, grazing). Volunteer community guards have been recruited and trained in most of the neighbouring communities and now actively support conservation (UNESCO/IUCN, 2009). However, significant tensions remain between conservation of the Park and the rapidly growing and impoverished subsistence farmer populations around its highly convoluted boundary, although liaison structures at the Woreda and Kabele levels promise to manage this tension (EWCA, 2019). Funding to support this liaison and collaborative management is currently entirely derived from donor funding which is committed for the next three years and it is essential that the potential funding vacuum is addressed by government as soon as possible.

► **Legal framework**

Mostly Effective

The national park was established in 1966 and first gazetted in 1969, primarily to save the locally endemic Walia ibex from imminent extinction from overhunting. Following the voluntary relocation of 418 households in 2016, less than 200 households are currently living illegally inside the park. Most of the afro-alpine meadows are still subject to heavy grazing pressure from domestic stock. The national park boundaries were both aligned and significantly expanded (Simien Mountains National Park Designation Council of Ministers Regulation No. 337/2014). The regulation came into force with the publication in the Federal Negarit Gazette in February 2015. The World Heritage property boundaries have however remained unchanged although the Committee has repeatedly requested the State Party to align the property boundaries with that of the new national park boundaries. However, this aspect will be addressed urgently through implementation of the revised 2020-2029 General Management Plan (EWCA, 2020).

► **Law enforcement**

Some Concern

Law enforcement capacity is severely limited due to the lack of financial resources provided by government. Officials are very poorly paid and are ill equipped and therefore the level of moral is low and consequently law enforcement is largely ineffective. The short-term funding injection from donors promises to address this to some extent, but the risk of a funding vacuum thereafter remains serious.

► **Implementation of Committee decisions and recommendations**

Serious Concern

The property was inscribed on the List of World Heritage in Danger in 1996 and was removed from it only in 2017. There is widespread agreement that sustained and long-term efforts are needed to address the multiple current and anticipated threats. Despite the Committee's repeated requests to submit a significant boundary modification request to align the property boundaries with that of the expanded national park boundaries, little progress has been made by the State Party. Overgrazing within the property and the national park, support to the Gich Village community now settled in Debarq Town require further focus. However, the recently revised General Management Plan for 2020-2029 has substantial funding support for its first three years of implementation and management actions to address these issues have been incorporated into the plan (EWCA 2019; 2020). The most current concern is the reported construction of a tourist lodge and its associated road inside the Simien Mountains National Park despite the WH Committee's request to ensure all new lodge developments are located outside the National Park boundaries.

► **Sustainable use**

Some Concern

Resource use within the property seemed a bit high, particularly the afro-alpine grassland. Indicators of progress towards adequate levels of ecological restoration to allow removal from the List of World Heritage in Danger were established by the 2009 UNESCO/IUCN Reactive Monitoring mission, while

considerable progress in achieving these targets has been reported in recent years. There is nevertheless a desperate need to achieve acceptable levels of grazing, whilst important to note that zero-grazing as noted in the current Grazing Pressure Reduction Strategy appear unrealistic. The revised General Management Plan for 2020-2029 includes a zonation plan which designates Sustainable Community Use Zones where the nature and level of use still requires negotiation (EWCA, 2020).

► **Sustainable finance**

Serious Concern

Between 2010/11 and 2014/15 the park generated the equivalent of approximately US\$ 180,000 in direct revenues, while local communities and tour operators generated about US\$ 255,000, including a considerable increase in the last two years of the observed period (State Party of Ethiopia, 2016). The government recurrent budget was equivalent to approximately US\$ 120,000 (excluding staff costs) (State Party of Ethiopia, 2012) but trends of such efforts are needed for a meaningful assessment. For relocation and compensation of the 418 households of Gich Village, the government allocated the equivalent of US\$ 7.8 million in two budget years (SP report 2016). Significant additional funds were provided by development partners, notably the Austrian Development Cooperation and African Wildlife Foundation. However, capital funding for major necessary investments to develop and implement livelihood restoration plan for the relocated households at Gich village and the park neighbouring community, and the recently developed grazing pressure reduction strategy implementation may require significant amount of funding support from the international community.

The revised 2020-2029 General Management Plan requires a budget that is an order of magnitude greater than what is currently allocated by government. Fortunately donor funding commitments promise to more than adequately close the gap. However, this will be for the first three years of this plans life span and the risk of a substantial funding vacuum are extremely high, although the plan does show that the potential return on investment for the country is on average ETB45:1 over the next three years (EWCA, 2019). It is essential that EWCA are given the legal framework to retain, invest and manage the revenue streams that they generate. At present the legal framework does not provide an incentive to EWCA to increase these as all revenue is returned to central treasury.

► **Staff capacity, training, and development**

Some Concern

A wide range of training opportunities have been provided for staff and local community stakeholders since 1997 through Austrian-funded project support, African Wildlife Foundation, Frankfurt Zoological Society and other donors. Since 2009, EWCA has undertaken a 'Business Process Re-engineering' activity involving staff re-structuring, recruitment of technical specialists and further training (State Party of Ethiopia, 2012) although further efforts to increase staffing and training are required (IUCN, 2017). There are currently over 100 staff including 45 community scouts recruited from local communities. The 2020-2029 General Management Plan includes a number human resource development actions which promises to improve staff capacity substantially, but which also implies that this capacity is limited and of concern. The recommendations from an institutional analysis of EWCA completed in 2017 remain to be implemented (Debrus and Zunckel, 2017).

► **Education and interpretation programs**

Some Concern

Community-based education and awareness programmes have been a central element of the Austrian-funded integrated development projects since 1997 and have clearly had a major impact in gaining the support of local communities for the national park. However, the fact that the external threats to the integrity of the Site persist, indicates that these programmes need to be intensified.

► **Tourism and visitation management**

Some Concern

Tourism development in the Simien Mountains is constrained by a number of challenges including lack of skilled man power, limited capacity of guides and service providers, lack of standard tourism facilities and park and park management infrastructures. Thus, a Tourism Development Plan for the park was produced in 2014 by African Wildlife Foundation in collaboration with the Ethiopian Wildlife Conservation Authority (EWCA) with full public and private organisations' participation. Tourism in the Simien Mountains is creating reasonable income for the government and the local community compared to other protected areas in the country. There was a ten-fold increase in visitor numbers, from 1,825 in

2000-01 to 17,556 in 2010-11 (State Party of Ethiopia, 2012) and over 20,000 in 2013/14 and 2014/15 (State Party of Ethiopia, 2016), with half of the income contributed to local economy (approx. US\$ 250,000 equivalent in 2010-11) attributable to local people who provide mules, guiding and other services. A well-run private lodge concession and provision of basic overnight accommodation at key locations on the main trails has facilitated tourism development. Since mid-2016 tourist numbers dropped sharply in response to security concerns and the declaration of the state of emergency in Ethiopia. Political stability and investor and visitor confidence has seen an increase in tourism numbers to the Site (EWCA, 2019), while in 2020, the COVID-19 pandemic has resulted in a sharp drop of international tourism to the site, with unknown outcomes and future developments.

► **Monitoring**

Some Concern

Simultaneous fixed-point counts of Walia ibex along the cliff-tops, and fixed-point photography of habitat change over 30 years resulting from cooperation with Swiss researchers (Nievergelt et al., 1998) provide a strong basis for understanding the ecological changes over this period, and the dramatic deterioration in wildlife habitat quality. There appears to be widespread agreement on an overall stable to positive trend of Walia ibex in the national park, and conservation prospects significantly enhanced due to the expansion of the national park boundaries and efforts to start reducing the competition with domestic livestock (IUCN, 2017). Ethiopia wolf populations are understood to be stable and probably positive. The exact numbers of gelada are unknown but there is a general consensus that its population trend is stable to slightly increasing within the national park (IUCN, 2017). However, increasing incidents of human/wildlife conflict poses a risk to these iconic species with disease being one of the negative dynamics which threaten the integrity of their populations (EWCA, 2019). Long-term funding support is required to ensure that robust monitoring and evaluation actions may be instituted and this remains an aspect of high risk until government can commit substantially more than its current allocations.

► **Research**

Some Concern

Long-term collaboration with Swiss researchers has been ongoing since the early 1970s (Nievergelt et al, 1998; Hurni and Ludi, 2000), and since 2013, the High Mountain Observatory project on climate, hydrology and sedimentology monitoring by the Water and Land Resource Centre (WLRC) associated to EWCA and Addis Ababa University. Researchers from the University of Oxford are undertaking research under the Ethiopian Wolf Conservation Programme (www.ethiopianwolf.org). EWCA has deployed park ecologists and veterinarians, and the General Management Plan (2009-19) establishes 'ecological management' as one of the five main programme areas with emphasis on monitoring and research to support management decision-making. However, implementation remains limited due to the current lack of capacity at park level and insufficient resources (State Party of Ethiopia, 2012). As with monitoring, research also required long-term funding commitment which is not donor dependent and until government can show this commitment, this aspect will remain of some concern.

Overall assessment of protection and management

Some Concern

The reconfiguration of the national park boundaries, more than tripling its surface area to around 42,000 hectares is probably the most significant step to invest in the long-term viability of the national park, although this does increase and exacerbate the impact that the high perimeter to area ratio has on management effectiveness. As requested by the World Heritage Committee, the new boundaries should be harmonized with the formal World Heritage boundaries via a significant boundary modification. The reported construction of tourist lodges within the National Park not only poses considerable threat to the property and the National Park, but questions how the WH Committee decisions are respected and implemented. Despite considerable recent improvements in protection and management, which have contributed to a stabilisation of the populations of the park's highly endangered flagship mammal species and some progress in terms of community relations and tourism management, overgrazing by domestic livestock remains a major threat to the property requiring an sustained and meaningful management response. The 2020-2029 General Management Plan addresses these threats and with the substantial donor support for the first three years of implementation, there should be meaningful progress. However a longer term funding mechanism is

required to ensure the implementation of the GMP can continue beyond the three years.

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

Serious Concern

The revised 2020-2029 General Management Plan covering the entire Simien Mountains National Park addresses the need for the establishment of a Buffer Zone and with the substantial funding support from donors over the next three years, it may be possible that this essential aspect of the Park is realised. However, the risk of a funding shortfall in the medium to long-term remains very serious unless government is willing to step up. Some of the external threats relate to issues that are extremely difficult to manage, such as a rapid human population growth rate with the majority being almost exclusively dependent on subsistence agriculture. However other threats from outside the property include construction of lodges within the wider Simien Mountains National Park against the WH Committee's decision. Fire has been demonstrated to pose a real threat to the property and the development of a fire management strategy is urgently required.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► **Dramatic mountain scenery**

High Concern
Trend:Deteriorating

The scenic values of the site, particularly the views along the top of escarpment, have generally been maintained in recent years, although they are significantly impacted by the main road and associated infrastructure which brings heavy traffic, dust, noise and other disturbance to the core area of the park. A new road is expected to improve the situation by taking much of the existing traffic outside the park. Persistent pressure from adjacent communities in terms of accessing the Park for livestock grazing, crop farming, resource harvesting and settlement; as well as the intensification of these land uses immediately adjacent to the National Park does impact on its scenic value. The high perimeter to area ratio also means that there are few areas within the National Park where a sense of wilderness prevails.

► **Endemic plant communities**

High Concern
Trend:Stable

Heavy grazing pressure continues to affect plant communities across most highland parts of the park, while the still persisting area of land under cultivation is thought to be stable. The park areas where grazing restrictions are enforced show gradual increase over time and endemic plant communities are recovering, but other areas where firewood harvesting continues, and grazing prevents regeneration of tree heather forests which are getting gradually more senescent and vulnerable (UNESCO/IUCN, 2009). The abandonment of cultivation of Gich Village in the Upper Jinbar Valley in 2016 could provide a best practice example of reducing pressure and enabling plant communities to regenerate, but unfortunately the relocation plan was not sustainable and failed to take the long-term viability of the relocation into account. Consequently some elements of the relocated community are expressing unhappiness at their situation and this does not bode well (EWCA, 2019). The 2020-2029 GMP includes important monitoring and evaluation and research actions that will help to provide more clarity on the trend of this value. Quantifiable data on the outcome of the 2019 wildfire that swept across the National Park shows that some 66 hectares of important ericaceous forests were burnt down, while a further 93 hectares of grass was burnt under erica tree heather and 656 hectares of grassland was also burnt but recovered quickly (IUCN Consultation, 2020).

► **Endangered and endemic mammals**

High Concern
Trend: Stable

The trend of Walia ibex and Ethiopian wolf populations are reported to show upward increase in the past ten to fifteen years, and are now at levels approximately four times those recorded in 1994. But this increase occurred exclusively in the relatively open ranges south-east of Chennek where Walias became habituated. In the biologically richer core area around the Gich Plateau, Walias are rarer and shier (Nievergelt, 2012). Vaccination of domestic animals in neighbouring communities is being carried out to prevent disease transmission to wildlife which could have a devastating impact on these highly endangered species. The area of protected suitable habitat has been increased dramatically through extension of the park. Ethiopia reported to be looking for funding to commission a detailed independent scientific study to assess the current status, composition and distribution of Walia ibex and Ethiopian wolf in its 2016 state of conservation report. Gelada is a somewhat less prominent flagship next to the Walia ibex and Ethiopian wolf, but deserves equal management attention considering their important ecological role, conservation value and exceptional attractiveness for wildlife viewing. As for other species, populations of some small mammals, especially the diurnal and easily visible Abyssinian grass rat (*Arvicanthis abyssinicus*), have declined due to overgrazing around Gich Plateau (Nievergelt, 2012). The plans for four new lodges within the National Park, and reports that construction for one of these lodges and its associated road in an important gelada habitat is highly concerning. The situational analysis undertaken as part of the revision and development of the GMP for 2020 - 2029 suggests that the status of this value remains of 'high concern' although the trend is 'stable' (EWCA, 2020).

► **Rare & Endemic birds**

High Concern
Trend: Data Deficient

In the absence of reliable data it must be inferred that this value inherits the threat status of the others, particularly in regards to habitat integrity and ecosystem functionality. As these key aspects are under persistent threat, the status of this value must be seen as being of 'high concern'.

Summary of the Values

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

High Concern
Trend: Stable

The scenic values of this dramatic mountain escarpment with its far-reaching views are maintained, although they are visually affected to some extent by a major road and a parallel power line which pass through the core of the property as well as the pressures from adjacent communities. The biodiversity values have been severely impacted on by high levels of human activity, including the destruction and degradation of important and once much larger forests, long-term settlement, cultivation and high levels of grazing by domestic stock. Wildlife populations, including the park's highly endangered large mammals (Walia ibex and Ethiopian wolf) as well as the endemic gelada, are reported to be stable thanks to the efforts of the park's management and its partners. However such efforts are jeopardised by the plans to construct four new tourist lodges within the National Park, one of which has begun, reportedly in an important gelada habitat. The park was inscribed on the List of World Heritage in Danger between 1996 and 2017, and much more remains to be done to conserve and restore the biodiversity values and ecological integrity.

Additional information

Benefits

Understanding Benefits

► **Traditional agriculture,
Livestock grazing areas**

Traditional agriculture consists of a combination of cereal cultivation and livestock for subsistence; both land uses are being discouraged and most human residents have been voluntarily relocated in 2016 to areas outside the park, in particular to the nearby town of Debark. What remains is high intensity livestock rearing, particularly in the higher altitudes of the park between 3,700 and 4,200 m.a.s.l. Overgrazing and associated degradation of biodiversity are increasing and need to be urgently addressed.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Moderate, Trend - Increasing
- Pollution : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - Very High, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Moderate, Trend - Continuing

Deforestation has become rare in the park, while afro-alpine grasslands are heavily overgrazed in most parts. Soil erosion from cultivation and resulting sedimentation of rivers is decreasing due to the relocation of human land users to outside the park and leaving their cultivated land fallow. Waste management associated with tourist and people using the road through the Site is a challenge with both solid and liquid waste posing a threat.

► **Access to drinking water**

The 41,200 hectares of the park contribute between 40-160 million m³ of high quality runoff water to the Tekeze-Atbarah Basin. These can be used for irrigation in the lowland areas of the basin as well as for the direct abstraction and use by adjacent communities.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Moderate, Trend - Increasing
- Pollution : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - Moderate, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Moderate, Trend - Continuing

The total annual runoff from the park area is estimated by taking an average 1000 mm annual rainfall and a runoff rate of 10-40%, based on first results of the Simien High Mountain Observatory of the Water and Land Resource Centre and EWCA. Climate change may increase runoff due to higher rainfall; while land use change may decrease runoff due to vegetation growth once grazing is reduced. The judicious use of fire as a management tool needs to be implemented effectively, while non-management fires need to be prevented and controlled.

► **Collection of medicinal resources for local use,
Outdoor recreation and tourism,
Natural beauty and scenery**

The site offers unique benefits for recreation and tourism both to local and international tourists, while medicinal plants are estimated to have an annual value of approximately ETB 2.7 million (van Zyl, 2015).

Factors negatively affecting provision of this benefit :

- Pollution : Impact level - Moderate, Trend - Increasing
- Overexploitation : Impact level - Moderate, Trend - Increasing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Low, Trend - Continuing

Tourism and recreational impacts need to be planned carefully to avoid over-exploitation along tourist routes and spots and the harvesting of medicinal plants must be monitored to ensure that it remains within sustainable thresholds.

► **Importance for research,
Contribution to education,
Collection of genetic material**

Simien is a mountain system where natural altitudinal vegetation belts can still be found in well-preserved transects at elevations between about 2,000 and over 4,500 m.a.s.l. These are unique learning grounds for scientists and students at all levels, as well as for visitors. Biodiversity offers genetic material particularly of species endemic to Simien, such as the Walia ibex. Significant local knowledge exists in inhabiting a harsh environment as the Simien Mountains.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - High, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Continuing
- Habitat change : Impact level - Low, Trend - Continuing

Overgrazing if not controlled will change the afro-alpine grassland composition even further, while otherwise the habitats are well preserved at present but the Site will always offer a rich variety of learning opportunities at all levels.

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

Environmental services are improving as a consequence of park management and voluntary relocation of most human land users to town areas outside the park. Resulting re-vegetation will lead to soil conservation and carbon sequestration particularly by building up soil organic carbon at altitudes higher than about 2500 masl. Peak runoff is expected to regulate through this land use change. The park's unique biodiversity provides a source of pollination to neighbouring areas, which are all heavily used by local farming. van Zyl (2015) estimates the annual value of the Sites environmental services to be ETB 2.8 billion.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Low, Trend - Increasing
- Pollution : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - High, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Moderate, Trend - Continuing

Over-exploitation of afro-alpine grasslands above about 3,500 m.a.s.l. remains high, but may decrease when strategies to reduce grazing are introduced and become effective.

► **Collection of timber, e.g. fuelwood,
Sustainable extraction of materials (e.g. coral, shells,
resin, rubber, grass, rattan, etc)**

Grass for thatching and wood resources are extracted from the site by adjacent communities. Levels of extraction need to be monitored carefully to ensure that they are sustainable.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Low, Trend - Increasing
- Pollution : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - High, Trend - Increasing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Moderate, Trend - Continuing

Collection of materials may be allowed but need careful monitoring and appropriate action by management, including zonation and user agreements.

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

Local people can get additional income to farming by providing their services to tourism groups, such as pack animals, carrying goods, and accompanying tourist groups as supporting staff. The park provides local employment particularly to wildlife guards, but also through the development of associations for tourism service provision.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Low, Trend - Increasing
- Pollution : Impact level - Low, Trend - Increasing
- Overexploitation : Impact level - High, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Increasing
- Habitat change : Impact level - Moderate, Trend - Continuing

Summary of benefits

Benefits of the property and the larger national park are manifold but remain moderate in economic terms. Food, water, recreation, materials such as grass and wood, as well as knowledge are nevertheless important. Among the most important are tourism options for local and international visitors, knowledge generation for scientists and students, while for local land users, the provision of additional income through employment may be considered significant. At the local level, reaching an agreement on reasonable harvesting and grazing levels would appear to be the most sustainable approach.

Projects

Compilation of active conservation projects

Nº	Organization	Project duration	Brief description of Active Projects
1	African Wildlife Foundation (AWF)		Support of the alternative livelihood strategy, improving the tourism and park management infrastructure, capacity building for private and public organisations, and the Grazing Pressure Reduction Strategy (GPRS) development and implementation.
2	University of Oxford (UK), Wildlife Conservation Research Unit & Ethiopian Wolf Conservation Programme (EWCP)		Research and monitoring of Ethiopian wolf
3	SDPASE, GEF/UNDP		Capacity building support to EWCA, training, management and business planning
4	Water and Land Resource Centre, Addis Ababa University and University of Bern	From: 2013	The WLRC established a Simen high-mountain observatory in various parts of the site, including climate stations and hydro-sedimentology in the Upper Jinbar Valley, an area recently undergoing land use change from cultivation to regeneration areas. Monitoring is ongoing.
5	Pro Semien Foundation, Bern and Zürich		Pro Semien Foundation was established in 1974 by a group of Swiss scientists. Since then it provided support to scientific studies, monitoring and mapping, but also for boarding children of the park staff. The Foundation was located at the Centre for Development and Environment (CDE), University of Bern, and closed in 2019 due to lack of funding.

№	Organization	Project duration	Brief description of Active Projects
6	Austrian Development Cooperation (ADC)		To contribute to poverty reduction and sustainable development in the North Gondar Zone through conservation and sustainable use of the SMNP natural resources and promotion of alternative livelihood opportunities through an integrated regional development approach and private sector involvement.

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