IUCN Conservation Outlook Assessment 2014 **(archived)**
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Simien National Park

SITE INFORMATION

Country:
Ethiopia
Inscribed in: 1978
Criteria:
(vii) (x)

Site description:
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

2014 Conservation Outlook

Significant concern

Simien Mountains National Park was one of the first African sites to be inscribed on the World Heritage list. The property has always faced extreme challenges arising from its location in the densely populated Ethiopian highlands where people live close to nature and rely on its bounty. The area was settled before the park's inauguration and this legacy presents the greatest threats to its long-term future. In forty years alone, the population around the site has increased fourfold. It remains under intense human pressure with settlements remaining inside the park, a fifth of its area under cultivation and most of the rest subject to intensive grazing pressure from domestic livestock, which is four times that estimated to be sustainable. The biodiversity values were severely impacted by high levels of human activity, including long-term settlement, cultivation and high levels of grazing by domestic stock.
However, wildlife populations, including the park's highly endangered large mammals (Walia ibex and Ethiopian wolf), are reported to be stable or increasing thanks to the efforts of the park's management and its partners. The park has been inscribed on the List of World Heritage In Danger since 1996, and while much still needs to be done to restore other biodiversity values and ecological integrity, the park has made significant progress towards addressing some of the key conservation issues affecting its World Heritage values. The recent reconfiguration and enlargements of the park's boundaries (from 136km2 to 400 km2) to include some key habitats, exclude some settlements, as well as efforts to find funding for an alternative livelihoods strategy are important steps forward. However, these developments will only really be of lasting value if the level of human activities within the park can be brought to within sustainable limits.

Current state and trend of VALUES

High Concern
Trend: Data Deficient

The scenic values of this dramatic mountain escarpment with its far-reaching views are well maintained, although they are affected to some extent by a main (unpaved) road which passes through the core of the park. The biodiversity values were severely impacted by high levels of human activity, including long-term settlement, cultivation and high levels of grazing by domestic stock. However, wildlife populations, including the park's highly endangered large mammals (Walia ibex and Ethiopian wolf), are reported to be stable or increasing thanks to the efforts of the park's management and its partners. The park has been inscribed on the List of World Heritage In Danger since 1996, and while much still needs to be done to restore other biodiversity values and ecological integrity, the park has made significant progress towards addressing some of the key conservation issues affecting its World Heritage values.

Overall THREATS

High Threat

Most of the threats which resulted in the site's inscription on the List of World Heritage In Danger in 1996 remain. Very high levels of human activity and park resource dependence persist, with settlement, cultivation and grazing of domestic stock the key issues that remain to be resolved. Long-term potential threats to the site include the effects of climate change, which will reduce the area suitable for the most valuable high altitude plant and wildlife communities, rich in endemic species.

Overall PROTECTION and MANAGEMENT

Serious Concern

The recent reconfiguration and enlargement of the park's boundaries(from 136km2 to 400 km2) to include some key habitats, exclude some settlements, as well as efforts to find funding for an alternative livelihoods strategy are important steps forward. However, despite significant recent improvements in protection and management which have resulted in an increase in populations of the park's

highly endangered large mammals and real progress with community relations and tourism, there remain very serious challenges. Most of the World Heritage site is subject to high levels of grazing by domestic stock, about 17% of it is under illegal cultivation, and there are 600 resident households in nine illegal settlements. Management lacks the resources to tackle these issues effectively. Furthermore, most of the detailed provisions in the General Management Plan remain to be implemented, including effective tourism management.

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 altitude, dropping precipitously through a series of steep forested gorges, massive cliffs and spectacular outlying inselbergs and rock outcrops (SoOUV, 2011).

▶ **Endemic plant communities**
Criterion:(x)

The flora is exceptionally diverse and includes communities characteristic of different altitudinal zones from around 1,800 to 4,000m altitude. 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 (SoOUV, 2011).

▶ **Endangered and endemic mammals**
Criterion:(x)

Flagship species of large mammal include the Walia ibex, Ethiopian wolf and Gelada baboon, all endemic to the Ethiopian highlands. The endangered Walia ibex is restricted to the Simien Mountains, where populations are

recovering and may now number around 1,000 individuals. The endangered Ethiopian wolf is the world's rarest canid and although it occurs elsewhere in the Ethiopian highlands, Simien is one of its last remaining strongholds. The mountains are also home to 5 small mammal species (SoOUV, 2011).

▶ **Rare & Endemic birds**
Criterion:(x)

Over 137 species of birds are recorded in this Birdlife Important Bird Area, including 16 species endemic to the Ethiopia/Eritrea highlands. There is an important population of the rare bearded vulture (SoOUV, 2011).

Assessment information

Threats

Current Threats
High Threat

The main threats arise from the very high levels of human activity which affect most parts of the park. About a fifth of the area is under cultivation to barley, and most of the remainder is heavily over-grazed by domestic stock with localised problems of soil erosion and widespread disruption of ecosystem function and wildlife habitats. There are almost 600 households living illegally in one village within the park and another 9 villages around it.

▶ **Crops**
Very High Threat
Inside site

About 23 km2 (17%) of the World Heritage site is under cultivation by about 600 households living within the park and a further 1500 households around its periphery. Sheet and gulley erosion commonly occur in areas subjected to cultivation (IUCN/UNESOC Mission Report, 2010).

► Housing/ Urban Areas

Very High Threat
Inside site

586 households (3,223 people) were established in 9 villages within the park at the time of a household survey in 2006 (IUCN/UNESCO Mission Report, 2010) and many others residing nearby use the park's land and resources for cultivation, grazing and resource collection.

► Erosion and Siltation/ Deposition

High Threat
Inside site
Outside site

Extensive sheet and gulley soil erosion is resulting from poor cultivation techniques and overgrazing (IUCN/UNESOC Mission Report, 2010).

► Erosion and Siltation/ Deposition

Very High Threat
Inside site

With the exception of a few 'no grazing' zones at the top of the escarpment around Chenek and Sankaber, the entire 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) (IUCN/UNESCO Mission Report, 2010). Overgrazing has lead 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 are still lacking (SOC report, 2013).

► Roads/ Railroads

High Threat

Inside 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 (IUCN/UNESOC Mission Report, 2010).

► Subsistence hunting

Low Threat
Inside site

Hunting of large mammals for subsistence use is reported to be less of a threat, but in the past lead to a very severe reduction in Walia ibex numbers during the 1980s and early 90s (IUCN/UNESOC Mission Report, 2010).

► Invasive Non-Native/ Alien Species

Data Deficient
Inside site
Outside site

The threat from invasive exotics has not been properly assessed, but was observed during the October 2009 mission (IUCN/UNESOC Mission Report, 2010).

► Logging/ Wood Harvesting

High Threat
Outside site

The high density of people living on or near the park and the local scarcity of wood resources, combine to create very high pressure on forests and trees, especially the tree heathers forests and Hypericum thickets at higher altitudes (IUCN/UNESOC Mission Report, 2010).

Potential Threats

High Threat

Long-term potential threats to the site include the effects of climate change, which will reduce the area suitable for the most valuable high altitude plant and wildlife communities, rich in endemic species. If not properly managed,

increasing human populations around the park are likely to create ever-increasing resource pressures. Growth in tourism provides income generation opportunities but needs to be well planned and managed to minimize potential negative impacts.

► Tourism/ Recreation Areas

Low Threat

Badly planned tourism infrastructure could easily affect nature around the camping sites and the visual aesthetic along the top of the escarpment (IUCN/UNESOC Mission Report, 2010).

► Habitat Shifting/ Alteration

Data Deficient
Inside site
Outside site

The expected long-term trend towards global warming 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 (IUCN/UNESOC Mission Report, 2010).

► Other Activities

Very High Threat
Inside site

The human population in and around the property is increasing at one of the fastest rates in the world (about 2% increase), creating ever-increasing resource pressures, such as grazing and agriculture (PaDPA, 2007).

Protection and management

Assessing Protection and Management

► Sustainable finance

Serious Concern

In 2010/11 the park generated the equivalent of approximately US$ 500,000

in direct revenues, half of which was attributable to local communities and half to government. The government recurrent budget was equivalent to approximately US$ 120,000 (excluding staff costs) (SP Report, Jan12). Significant additional funds are provided by development partners, notably the Austrian government (Euro 2.2 million for park-related components of the North Gondar Sustainable Resource Management Programme over five years) and Frankfurt Zoological Society. However, capital funding for major necessary investments to develop alternative livelihoods and reduce long-term grazing pressures with the introduction of an appropriate zoning plan requires an additional estimated total equivalent to US$ 8.5 - 17.7 million according to different estimates. Securing funding on this scale is a major challenge, and the authorities have been planning a donor conference since 2010. In 2012 renewed efforts are being made to garner donor support and a donor conference is scheduled in late 2012.

► Relationships with local people

Mostly Effective

Local relations improved dramatically 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 processes over management plans 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 (IUCN/UNESOC Mission Report, 2010).

► Legal framework and enforcement

Serious Concern

The park exists under Establishment Order No. 59 of 1969, but few of the provisions of National Parks laws, such as the prohibition of settlement, cultivation etc are enforced. In 2006, almost 600 households were living illegally inside the park and 17% of the park area was under cultivation, with most of the rest subject to heavy grazing pressure from domestic stock. The proposed park extensions, which will increase the area from 136 km2 to

around 400 km2 have not yet been legally gazetted at the federal level, which should take place late in 2012, or officially submitted to the World Heritage Committee in the form of a new nomination (IUCN/UNESOC Mission Report, 2010).

► 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 (SP Report, 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.

► 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 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 (SP Report, 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.

► Management effectiveness

Serious Concern

Anti-poaching patrols and community participation efforts have been

effective in protecting the key endangered large mammals, leading to a four-fold increase in populations of Walia ibex and Ethiopian wolf over 20 years, although some of this increase is likely due to more effective monitoring methods. However management has been largely unable to tackle the wider issues affecting the integrity of the property and reverse the pervasive negative impacts of settlement, cultivation and grazing by domestic stock. The only exception was the successful relocation of 165 households from the village of Akwasiye in 2009 (which was located in a critical wildlife corridor in the park extension area), thus demonstrating that the political will and resources can be raised to address some of the site's most intractable challenges, but considerable work on such issues lies ahead (IUCN/UNESOC Mission Report, 2010).

► Implementation of Committee decisions and recommendations

Serious Concern

The property has remained on the List of World Heritage In Danger since 1996 due to the ongoing nature of threats to the property and the slow pace of implementation of the corrective measures identified by subsequent reactive monitoring missions. The outstanding issues arising from 30.COM relate to grazing pressure reduction; provision of alternative livelihoods for park residents allowing a reduction in the number of settlements inside the property; and gazetting into national law of the park extension (IUCN/UNESOC Mission Report, 2010).

► Boundaries

Some Concern

Park boundaries are demarcated with concrete beacons, including 300 new beacons established around the perimeter of the park extensions, 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, 4533 m asl.) 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 plan entails. Additional

work is needed on further demarcation of intermediate sections of the new boundary line, and accurate GPS recording and mapping of the revised boundary before it is gazetted into national law. The new boundary proposal was sent to the Council of Ministers for final approval and is expected to be gazetted by the House of Parliament in 2013 (SOC Report, 2013).

► Staff training and development

Mostly Effective

A wide range of training opportunities have been provided for staff and local community stakeholders since 1997 through Austrian-funded project support, 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 (SP report 2012). There are now more than 100 staff including 45 community scouts recruited from local communities.

► Sustainable use

Serious Concern

Resource use within the property is excessive, with only a few areas under adequate control. 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 monitoring mission, but little progress in achieving these targets has been reported.

► Education and interpretation programs

Mostly Effective

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 park. Frankfurt Zoological Society has also had school-level education programmes running for some years.

► Tourism and interpretation

Mostly Effective

A Tourism Master Plan for the park was produced in December 2007, and

tourism is developing strongly. There has been a ten-fold increase in visitor numbers over the past decade, from 1,825 in 2000-01 to 17,556 in 2010-11 (SP report 2012), with half of recorded park revenue (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.

► 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 etc) provide a strong basis for understanding the ecological changes over this period, and the dramatic deterioration in wildlife habitat quality. Walia ibex and Ethiopian wolf are counted annually by park staff and Ethiopian Wolf monitoring is conducted regularly by the Ethiopian Wolf Conservation Programme, but other key indicators such as the extent of cultivation are not. The indicators established by the 2009 IUCN/UNESCO mission that would be used to signal the achievement of a ‘desired stare of conservation’ for removal from the Danger List do not appear to be under regular surveillance (SP report 2012). Frankfurt Zoological Society has developed a threat and ecological monitoring framework with the park authorities, which is partially implemented. Implementation will be extended in the next year, but is hampered by the current low capacity of park staff and turnover.

► Research

Some Concern

Long-term collaboration with Swiss researchers has been ongoing since the early 1970s (Nievergelt et al, 1998; Hurni at al., 1986). 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 Management Plan (2009-19) establishes ‘ecological management’ as one of the five main park programme areas with emphasis on monitoring and research to support management decision-making. However, implementation is limited due to

the current lack of capacity at park level and insufficient resources (SP report (2012)).

Overall assessment of protection and management

Serious Concern

The recent reconfiguration and enlargement of the park's boundaries(from 136km2 to 400 km2) to include some key habitats, exclude some settlements, as well as efforts to find funding for an alternative livelihoods strategy are important steps forward. However, despite significant recent improvements in protection and management which have resulted in an increase in populations of the park's highly endangered large mammals and real progress with community relations and tourism, there remain very serious challenges. Most of the World Heritage site is subject to high levels of grazing by domestic stock, about 17% of it is under illegal cultivation, and there are 600 resident households in nine illegal settlements. Management lacks the resources to tackle these issues effectively. Furthermore, most of the detailed provisions in the General Management Plan remain to be implemented, including effective tourism management.

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

Highly Effective

Most of the domestic stock grazing and much of the cultivation within the park is undertaken by people from within the area as well as neighbouring communities. Management has been unable to reduce these threats significantly.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Dramatic mountain scenery

Low 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. New tourism infrastructure has been well sited away from the key view points (IUCN/UNESOC Mission Report, 2010).

► Endemic plant communities

High Concern
Trend:Stable

Heavy grazing pressure continues to affect plant communities across most of the park, and the area of land under cultivation is thought to be stable. There are a few areas where grazing restrictions have been enforced 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 (IUCN/UNESOC Mission Report, 2010).

► Endangered and endemic mammals

High Concern
Trend:Improving

Walia ibex and Ethiopian wolf populations have doubled in the past ten years, and are now at levels approximately four times those recorded in 1992. 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 suitable habitat is being increased dramatically through

extension of the park. As for other species, populations of some small mammals, especially the diurnal and easily visible Abyssinian Grass Rat Arvicanthis abyssinucus, have declined due to overgrazing around Gich Plateau (Nievergelt, 2012).

► Rare & Endemic birds

Low Concern
Trend:Data Deficient

Probably fairly stable, but there is insufficient knowledge of the park's birds. Of the 35 Important Bird Area 'trigger species' listed by Birdlife International (IBA Factsheet, 2012), 33 are classed as being of 'least concern' while two are 'near threatened' (but widespread outside Simien).

Summary of the Values

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

High Concern

Trend: Data Deficient

The scenic values of this dramatic mountain escarpment with its far-reaching views are well maintained, although they are affected to some extent by a main (unpaved) road which passes through the core of the park. The biodiversity values were severely impacted by high levels of human activity, including long-term settlement, cultivation and high levels of grazing by domestic stock. However, wildlife populations, including the park's highly endangered large mammals (Walia ibex and Ethiopian wolf), are reported to be stable or increasing thanks to the efforts of the park's management and its partners. The park has been inscribed on the List of World Heritage In Danger since 1996, and while much still needs to be done to restore other biodiversity values and ecological integrity, the park has made significant progress towards addressing some of the key conservation issues affecting its World Heritage values.

Additional information

Key conservation issues

▶ Overgrazing

Local

Action is needed to significantly reduce grazing pressure throughout the park and satisfy, at a minimum, the ‘desired state of conservation’ indicators for removal from the List of World Heritage In Danger as detailed in the report of the IUCN/UNESCO 2009 Reactive Monitoring Mission. This would involve zonation of the park into ‘no grazing’, ‘forage harvesting’ and ‘restricted grazing’ zones accounting for 30%, 20% and 50% of the park area respectively, as proposed in the 2009 mission report.

▶ Settlements inside the park

National

Alternative livelihood opportunities need to be developed for members of about 600 households currently residing inside the park to enable arrangements to be made for their voluntary re-location to alternative places.

▶ Cultivation inside the park

National

The amount of land under cultivation within the park should be drastically reduced by facilitating the development of alternative livelihoods for those involved and strengthening enforcement of the legal provisions which prohibit cultivation within the park.

▶ Implement Management Plan

National

Detailed provisions for all aspects of park management have been developed through a comprehensive management planning process which involved extensive stakeholder consultation. Very few of these provisions have been

implemented.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Government of Austria		North Gondar Sustainable Resource Management Programme. 5 years from 2007, Euro 8.2 million, of which Euro 2.2 million directly into park-related inputs
2	JICA		Community tourism promotion
3	Frankfurt Zoological Society		Help with management planning, Akwasiye relocation, environmental education, ecological monitoring and other inputs
4	University of Oxford (UK), Wildlife Conservation Research Unit		Research and monitoring of Ethiopian wolf
5	SDPASE, GEF/UNDP		Capacity building support to EWCA, training, management and business planning

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Grazing Pressure Reduction Strategy, July 2007	143 page document details a 5-year intervention at a cost of US$ 9 million	
2	Alternative Livelihoods Strategy, April 2007	254 page document details a 5-year intervention at a cost of US$ 8.7 million	
3	Implement Management Plan	Large-scale external support required (not yet quantified)	

REFERENCES

№	References
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7	SOC Report 2009
8	SOC Report 2013
9	Simien Mountains National Park Management Plan 2009-19
10	State Party Report, 2012