IUCN Conservation Outlook Assessment 2017 **(archived)**
Finalised on 08 November 2017

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

Mount Kenya National Park/Natural Forest

SITE INFORMATION

Country:
Kenya
Inscribed in: 1997
Criteria:
(vii) (ix)

Site description:

At 5,199 m, Mount Kenya is the second highest peak in Africa. It is an ancient extinct volcano, which during its period of activity (3.1-2.6 million years ago) is thought to have risen to 6,500 m. There are 12 remnant glaciers on the mountain, all receding rapidly, and four secondary peaks that sit at the head of the U-shaped glacial valleys. With its rugged glacier-clad summits and forested middle slopes, Mount Kenya is one of the most impressive landscapes in East Africa. The evolution and ecology of its afro-alpine flora provide an outstanding example of ecological and biological processes. Through the Lewa Wildlife Conservancy and Ngare Ndare Forest Reserve, the property also incorporates lower lying scenic foothills and arid habitats of high biodiversity, situated in the ecological transition zone between the mountain ecosystem and the semi-arid savanna grasslands. The area also lies within the traditional migrating route of the African elephant population. © UNESCO

SUMMARY

2017 Conservation Outlook

Good with some concerns

The site’s remote and rugged geography, combined with its very limited potential for alternative use means it is not highly threatened. However, a series of issues continue to negatively affect the site and require stronger management efforts. Wild fires occur annually and are sometimes difficult to bring under control, causing extensive damage to the natural vegetation. There are also continuing issues with illegal hunting, and other resource use by local communities and impacts from a growing number of visitors. The ecological resilience of the site is dependent on sustainable management of natural forests at lower elevations beyond its current boundary, and the threat of land excisions and conversion to agriculture cannot be ignored. Moreover, the impacts of climate change are difficult to assess but glaciers are melting and vegetation communities are likely to alter in the long term. Overall, management plans are in place to reduce the negative impacts, but more resources are required to tackle all issues appropriately. Maintaining the site’s values will require long-term protection of the entire ecosystem, as the ecological resilience of the site and its ability to adapt to a warmer climate, will require landscape connectivity with adjacent mid-elevation forests and other communities at lower altitudes.

Current state and trend of VALUES

Low Concern
Trend: Data Deficient

World Heritage values are largely being maintained on account of the remote location and rugged terrain of the site. However, on one side, climate change could potentially alter the scenic values of the site, epitomized by the occurrence of glaciers and snowfields on the Equator, are being compromised as the ice melts (the glaciers are expected to disappear altogether within a few decades). Although difficult to substantiate, it is likely that conditions in the high-elevation habitats are warming and may become less suitable for the iconic Afro-alpine

species that now characterize the high glacial valleys and bogs. On the other side, some of the current threats, such as fires, unsustainable water abstraction, poaching and invasive alien species all have the potential to deteriorate the values of this site if not managed appropriately.

Overall THREATS

Low Threat

The site's remote and rugged geography, combined with its very limited potential for alternative use means it is not highly threatened. However, a series of issues continue to negatively affect the site and require stronger management efforts. Wild fires occur annually and are sometimes difficult to bring under control, causing extensive damage to the natural vegetation. There are also continuing issues with illegal hunting, and other resource use by local communities and impacts from a growing number of visitors. The ecological resilience of the site is dependent on sustainable management of natural forests at lower elevations beyond its current boundary, and the threat of land excisions and conversion to agriculture cannot be ignored. Particularly the increasing water abstraction requires more attention in this context. Moreover, the impacts of climate change are difficult to assess but glaciers are melting (which are expected to disappear altogether within a few decades), and vegetation communities are likely to alter in the long term. Overall, management plans are in place to reduce the impact of these threats, but more resources are required to tackle these issues appropriately.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The remote and rugged nature of the terrain ensures a high degree of natural protection against unsustainable resource use, so the need for management intervention in this respect is limited. There is a good current management plan for the wider ecosystem, and the wider Mt Kenya Ecosystem Management Plan is coming up for review with the possibility to then include the WHS Climate Change Adaptation Plan to the management plan. Lack of financial and staff capacities are, however, the main limiting factors for the success of the management plans. Improved protection and restoration of forest on the mid-slopes of the mountain, and construction of an electric fence at lower elevations to minimize conflict between the protected area and adjacent communities are

effectively reducing threats from outside the site. Efforts need to be continued to ensure benefits for local communities and to support them in their ability to effectively manage and co-manage the protected areas.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Spectacular mountain scenery**
Criterion:(vii)

The park protects some of Africa’s most spectacular mountain scenery, including Africa’s second highest peak (Batian, 5,199m), 12 remnant glaciers, and an abundance of lakes, waterfalls and bog-filled valleys. Mount Kenya is an ancient extinct volcano, which probably reached a height of 6,500m during its formation 3.1-2.6 million years ago (SoOUV). There are a number of volcanic cones and craters such as Ithanguni and Rutundu cones(Gichuhi,2015). Today, the jagged snow-capped peaks, glaciers and exuberant Afro-alpine vegetation create one of the most impressive landscapes in Africa.

▶ **Diversity of evolving habitats**
Criterion:(ix)

There is a great diversity of habitats on account of the range of altitude (2,400 to 5,200m), equatorial location and high rainfall. The World Heritage Site is particularly noted for its unique afro-alpine flora, which provides an outstanding example of ecological processes in an environment that is characterized by an extreme climate with ‘summer every day and winter every night’. The forested lower slopes (below 2,400m) are not included in the site, but the vegetation zones of higher elevations (bamboo, tree heather, Afro-alpine and Nival zones) each has its own special characteristics and associated flora and fauna. This altitudinal zonation and diversity is the

product of ongoing ecological interactions, and is in a continuing state of change in response to the erosive force of water and ice, and climate change (SoOUV).

Other important biodiversity values

► Rich montane flora, with many endemic species

The park has a rich montane flora, including many endemic species. The giant heather and Afro-alpine vegetation zones that extend from around 3,500m to the snowline (at around 4,400m) represent the rarest vegetation types on the African continent. Prominent constituents of this extraordinary vegetation are several endemic (or near-endemic) giant groundsels (Senecio) and Lobelias (IBA Factsheet, 2012). The forested lower slopes (outside the World Heritage Site) support a number of rare shrubs and the climber, Rubus keniensis.

► Rare, threatened and endemic fauna

Mount Kenya is an Important Bird Area (IBA) with 53 of Kenya’s 67 African Highland biome species, including the rare and threatened Abbott’s Starling. It is home to 6 of the 8 bird species that are endemic to the Kenyan Mountains Endemic Bird Area (GMP, 2010). Mammals of global concern include elephant, bongo, black rhino (probably locally extinct) and a local race of the black-fronted duiker (Cephalophus nigrifrons hooki), as well as four globally- threatened small mammals (IBA Factsheet, 2012). Two reptiles (a snake and a chameleon) are endemic to the high altitude zones of Mount Kenya and the nearby Aberdares, while another snake (Atheris desaixi) is endemic to Mount Kenya’s forested lower slopes.

► Water catchment

Mount Kenya serves an invaluable role as a water catchment, maintaining biodiversity and life-support systems downstream, as well as economically important hydro-electric facilities and irrigation schemes.

Assessment information

Threats

Current Threats

Low Threat

The site covers steep, cold, high altitude land with little potential for commercial forestry or agricultural use, and has never been subject to significant pressure for any other forms of consumptive use. . However, uncontrolled fires, often of anthropogenic origin, are a frequent threat during drier periods, destroying extensive areas of forest and heath. Poaching and illegal logging also continue to impact on the site, alongside the negative influence of invasive alien species Tourism is increasing and there are some associated problems with litter, waste management and trampling of vegetation. Climate change is likely to impact on the site which is expected to cause the disappearance of the glaciers within a few decades (Mission Report, 2008), and result in a general shift in vegetation zones to higher elevations, reducing the area of the unique Afro-alpine communities. The recent development of a specific climate change adaptation plan is thus an important step to reduce potential impacts. Finally, the ecological resilience of the site is dependent on sustainable management of natural forests at lower elevations beyond its current boundary, and the threat of land excisions and conversion to agriculture cannot be ignored.

► Invasive Non-Native/ Alien Species

Data Deficient
Inside site, extent of threat not known
Outside site

This is a widespread problem in the wider Mt Kenya ecosystem and so far the efforts have been unable to significantly improve the situation (Report on the Mount Kenya National Park & Natural Forest Stakeholders Meeting,

September 2013).

► Fire/ Fire Suppression

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

Wild fires are a major problem and may be started accidentally or deliberately. As much as 10% of the natural forest (mostly outside the World Heritage Site) was lost to fire in 2012 alone (Mount Kenya Trust, pers. comm.). Deliberate fires are sometimes set by neighbouring communities in the hope of being allowed to cultivate the area affected once it has been destroyed by fire (IBA Factsheet, 2012). More financial and human resources are required to implement then Fire Management Plan that was developed, particularly to have a dedicated aircraft to carry out daily surveillance of the park.

► Poaching

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

Low-level subsistence hunting is carried out in the forested lower slopes, and to a lesser extent at higher elevations where its impact is limited due to the extremely rugged terrain and difficulty of capturing prey species (Mission Report, 2008). However, elephants and rhinoceros remain at high risk due to ivory poaching and illegal trafficking of rhino horn.

► Tourism/ Recreation Areas

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

With some 20-25,000 visitors annually, tourism numbers are still low compared with Mount Kilimanjaro. Nevertheless some areas are affected by unsustainable firewood collection; litter and waste management; and trampling of vegetation (GMP, 2010).

► Other Biological Resource Use

Data Deficient

Inside site, extent of threat not known
Outside site

Minor forest produce, notably bamboo, natural fibres, mushrooms, honey and the like, make an important contribution to local livelihoods, but there are few data on which to base sustainability decisions and harvesting quotas (Mission Report, 2008, GMP, 2010)

► Other

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

The site is ‘buffered’ from adjacent settlements by a 5-10 km wide belt of protected natural forest and plantations, but the land beyond this (below about 2,000 m) is becoming more intensively settled and cultivated, eliminating previous landscape connectivity with nearby natural habitats, especially to the west (Aberdares), north-west (Laikipia plateau), north (Ngare-Ndare Forest Reserve, Lewa Conservancy) and north-east (Imenti Forest Reserve, Meru National Park) (Mission Report, 2008). Thus historical migration routes of keystone species, such as elephants, have been lost. The forested slopes at elevations of 2,000 to 2,400 m (which lie outside the World Heritage Site but serve as a de facto ‘buffer zone’) have been significantly degraded through (i) conversion to forestry plantations, (ii) cultivation (which may be allowed on a rotational basis as a way of establishing forestry plantations) and (iii) land excision to satisfy growing land hunger (25 km2 at Ragati, Hombe and Sirimon were excised in 2001, IBA Factsheet, 2012)). Such degradation reduces the functioning and ecological resilience of the entire ecosystem (Gathaara, 1999). Other significant threats in the forest zones (outside the World Heritage Site) include illegal grazing, charcoal production, illegal water abstraction and the spread of invasive exotic plants (GMP, 2010). Cannabis plantations have also resurged after having effectively been suppressed thanks to aerial patrolling and now require attention again. (Report on the Mount Kenya National Park & Natural Forest Stakeholders Meeting, September 2013).

► Habitat Shifting/ Alteration

High Threat
Inside site, scattered(5-15%)

Outside site

Increasing temperatures as a result of climate change is melting the park's glaciers, which are expected to disappear altogether with the next few decades. Climate change is likely to cause a general shift of vegetation zones to higher elevations reducing the area of the rare high-altitude Afro-alpine vegetation communities. There may also be an increased incidence of landslides and flooding if precipitation falls as rain instead of snow (Mission Report, 2008). While data is deficient to assess these potential developments, the Mount Kenya World Heritage Site Climate Change Adaptation Programme was developed in June 2013, which recommends a number of activities to help reduce the potential impacts of climate change.

Potential Threats

High Threat

The construction of a power line could certainly impact on the site and is incompatible with the WH criteria. The increasing water abstraction can also lead to a significantly negative development both in and outside the WH site if not managed properly. t

► Utility / Service Lines

Low Threat
Inside site, localised(<5%)

A license has been granted by the National Environmental Management Authority to the Kenya Police to build a power line from the meteorological station to Naro Moru. Despite the Kenya Wildlife Service clearing stating that such a power line is unacceptable within the WH property, a recommendation to bury the line has thus far been ignored (Report on the Mount Kenya National Park & Natural Forest Stakeholders Meeting, September 2013).

► Dams/ Water Management or Use

Low Threat
Inside site
Outside site

Water abstraction from the Mt Kenya catchment has reached unsustainable levels. If this continues unchanged, this development could significantly

harm the wildlife, ecosystem health and the communities. Moreover, a water shortage lower in the catchment could result in people moving higher into the catchment which then may result in clashes over water resources. This could threaten the future of the site (Report on the Mount Kenya National Park & Natural Forest Stakeholders Meeting, September 2013).

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

Community relations are generally good in respect of the World Heritage Site, with the economic benefits of tourism accruing to local people who provide porter and guiding services. The World Heritage Site borders protected forest land and is at least 5km from the nearest area of settlement. However, there are significant issues of human-wildlife conflict adjacent to the lower forest boundary where elephant crop damage and livestock depredations occur. There has been a long-standing programme to design and build an electric fence to minimize such conflict, and work on 397 km of new fence is progressing (SP Report, 2010). The long term future of the WH Site is dependent on the ability of the management approach ensuring that the site can continue to generate benefits to the local communities living around it. While so far this has been successful, more efforts are needed given the growing pressures. Moreover, local communities require capacity building and support to be able to successfully manage and co-manage wildlife and protected areas.

► Legal framework

Some Concern

The legal framework is fairly strong. Originally protected as a Forest Reserve in 1932 the uppermost section of the mountain (715 km2, mostly above the 3,200m contour) became a National Park in 1949 (with extensions in 1968). The entire Forest Reserve was designated as a National Reserve (2124 km2) in 2000 following a landmark aerial survey which exposed the extent of

encroachment and degradation of the ecosystem (Gathaara, 1999). This conferred co-management status on the lower part of the World Heritage Site (between 2,400 and 3,200m) as well as the forested flanks of the mountain below it (between 2,000 and 2,400m). No cultivation or settlement is permitted within the Forest/National Reserve, except under special permit (which may be granted as a way of clearing land in preparation for the establishment of forestry plantations under the controversial ‘shamba’ system). The national park is managed by the semi-autonomous Kenya Wildlife Service (KWS), while the Forest/National Reserve portion is co-managed by KWS and the newly-formed Kenya Forest Service (KFS). Both organizations have their own Board of Trustees and financial sustainability is based on full revenue retention.

► Enforcement

Some Concern

There is need to increase law enforcement officers(Rangers) and equipments for surveillance (Gichuhi,2015).

► Integration into regional and national planning systems

Mostly Effective

The site is managed together with other protected areas within the KWS and KFS regional management structures.

► Management system

Mostly Effective

Following the designation of the National Reserve, KWS drafted a new management plan in 2002, but it was not until 2010 that a General Management Plan for the entire Mount Kenya Ecosystem (MKE) was agreed between the KWS and KFS managers. Management is structured around seven programmes focused on ecological management, forest resources, water resources, security, protected area operations, tourism and community partnerships (GMP, 2010). Significantly, the MKE plan encompasses three important areas at lower elevations, beyond the boundaries of the Mount Kenya Forest/National Reserve, namely the Ngare Ndare and Imenti Forest Reserves and the Lewa Conservancy. Operationally, KWS divides the area into 4 sectors, while KFS has 16 management sectors (GMP, 2010). The GMP

provides for six management zone categories, of which the World Heritage Site includes Wilderness Activity, Low Use and High Use areas, while Plantations, Multiple Use Zones and ‘Influence’ Zones all lie outside the Site in the wider MKE area (GMP, 2010).
Most of the threats mentioned earlier have received considerable management attention and are incorporated into the overall management plan.

► Management effectiveness

Mostly Effective

Management is significantly constrained by budgetary and staffing levels (SOC, 2011). Despite this, however, the World Heritage Site is characteristically resilient and requires only relatively low levels of management input to retain its values and ecological integrity.The use of the Management Effectiveness tracking too l(METT) to improve on the management is recommended(Gichuhi,2015).

► Implementation of Committee decisions and recommendations

Mostly Effective

Recent committee decisions and recommendations have focused on (1) fencing the lower boundary of the natural forest to create a ‘de facto’ buffer zone around the Site; (2) extending the Site to include more natural habitat at lower elevations; (3) completion of the GMP and improvement of management effectiveness (4) development of a sustainable financing strategy and (5) mitigation of climate change impacts. Progress is reported on all these issues (SP Report, 2010; SP report, 2011; SOC, 2011). Fencing is ongoing and making significant progress and Rhino Ark (a local NGO, www.rhinoark.org) aims to complete the fence within five years. The proposal to extend the site was approved by the WHC in 2013. . The GMP was completed in 2010 and is now being implemented (SP Report, 2011). The stakeholders meeting in September 2013 directly engaged with the recent committee recommendations and a report by the SP is expected by February 2014 (Report on the Mount Kenya National Park & Natural Forest Stakeholders Meeting, September 2013).

► Boundaries

Mostly Effective

The site is not demarcated, its boundary following approximately the 2,400m contour, within the Mount Kenya National/Forest Reserve. It encloses the Mount Kenya National Park, a smaller area covering the peaks above 3,200m. The lower boundary of the National/Forest Reserve is partially demarcated at around 2,000m, providing protection for natural forest and plantations on the mountains mid-level slopes, below the Site (serving as a buffer zone). There is need to extend the Site to include some of the lower elevation forested slopes in order to maintain animal migration corridors and improve ecological resilience to climate change. The fence currently being constructed will ideally follow the boundary of the site and thus facilitate the demarcation.

► Sustainable finance

Some Concern

Under existing arrangements, both management agencies (KWS and KFS) are self-financing semi-autonomous agencies so revenue generated from tourism and forestry activities are retained and can be re-invested in site management. There remain significant unmet management needs and concerns over sustainable financing.
Although the Site has a high degree of natural protection against human influence on account of its remote and inhospitable location at the very top of the mountain, a higher level of management intervention could improve its protection. The World Heritage Site (approximately 1,420 km2; UNEP-WCMC, 2012) is not managed as a discrete unit, falling within the much broader Mount Kenya Ecosystem (MKE) management unit (which covers an area about twice the size, and includes adjacent natural forest and forestry plantations connected via a narrow corridor to a low-lying savanna wildlife conservancy; GMP, 2010-20).

► Staff training and development

Data Deficient

Present staffing levels are considered to be inadequate (SOC, 2011), but no plan for staff development was available for this assessment. Parks Canada

has been providing assistance for staff training in recent years (SOC, 2011)

► Sustainable use

Data Deficient

The protected natural forest and lands of the mid-slopes (below the World Heritage Site) are extensively used by local communities for a variety of timber and non-timber forest products, and for (illegally) grazing livestock. The Site itself, lying some 5-10km from the nearest areas of settlements is under much less pressure for resources, but bamboos and other products are harvested. Under the MKE GMP, Community Forest Associations are to be established, and community use of forest products allowed within designated multiple-use zones (all of which lie outside the Site in the ‘buffer zone’).

► Education and interpretation programs

Mostly Effective

Community Partnership and Education is one of the seven core programmes described in the 2010-20 management plan (GMP, 2010). The aim is to ensure that nearby communities are supporting conservation and their livelihoods are improving as a result of sustainable use of resources. There is no recent information on the extent of implementation of prescribed GMP actions. Conservation awareness activities are supported by several NGOs including the Mount Kenya Trust, William Holden Education Centre, Nature Kenya and the Wildlife Clubs of Kenya (GMP, 2010)

► Tourism and visitation management

Data Deficient

Tourism Development and Management is one of the seven core programmes described in the 2010-20 management plan (GMP, 2010). No recent visitor statistics are available, but 20-25,000 visitors (including those serving as porters) were reported for the year 2000 (UNEP-WCMC, 2012), which figure seems to be consistent with those for 2002-7 reported in the GMP. Tourism for the ecosystem as a whole is estimated to generate the equivalent of approximately US $ 750,000 and provide employment to 1000 people (GMP, 2010).

► Monitoring

Data Deficient

Ecological monitoring has been carried out on an ad hoc basis for some time, but a more systematic approach is advocated in the GMP (GMP, 2010). This would include establishment of baseline data through natural resource surveys, creation of a database and establishment of a long-term ecological monitoring programme (GMP, 2010). There is no indication of recent progress in the implementation of this programme.

► Research

Data Deficient

Thirteen priority research topics have been identified to aid management decision-making (GMP, 2010). These include studies on topics as diverse as fire ecology, hydrological systems and invasive species. It is not known how many of these research topics are currently being investigated.

Overall assessment of protection and management

Mostly Effective

The remote and rugged nature of the terrain ensures a high degree of natural protection against unsustainable resource use, so the need for management intervention in this respect is limited. There is a good current management plan for the wider ecosystem, and the wider Mt Kenya Ecosystem Management Plan is coming up for review with the possibility to then include the WHS Climate Change Adaptation Plan to the management plan. Lack of financial and staff capacities are, however, the main limiting factors for the success of the management plans. Improved protection and restoration of forest on the mid-slopes of the mountain, and construction of an electric fence at lower elevations to minimize conflict between the protected area and adjacent communities are effectively reducing threats from outside the site. Efforts need to be continued to ensure benefits for local communities and to support them in their ability to effectively manage and co-manage the protected areas.

► Assessment of the effectiveness of protection and management in

addressing threats outside the site

Mostly Effective

The development of a comprehensive management plan that considers the World Heritage Site in a wider ecosystem context will facilitate further required action to mitigate the effects of climate change. Improved protection and restoration of forest on the mid-slopes of the mountain, and construction of an electric fence at lower elevations to minimize conflict between the protected area and adjacent communities are effectively reducing threats from outside the site.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Spectacular mountain scenery

Low Concern
Trend:Deteriorating

For many visitors a significant element in the scenic values of the site is the existence of glaciers and snowfields very close to the equator. Their disappearance will reduce the scenic value and visual impact of the site. Furthermore, as visitor numbers increase there will be a need for further infrastructure, including visitor accommodation, bridges and walkways through the high altitude bogs, all of which may compromise the wilderness values of the hiking experience around the central peaks (UNESCO/ IUCN Mission Report, 2008)

► Diversity of evolving habitats

Low Concern
Trend:Improving

Although there are no long-term studies of vegetation change or climate change impacts on Mount Kenya, it is likely that vegetation communities are evolving at a faster-than-normal rate, with species and communities being driven to higher elevations. It is possible that the area suitable for Afro-alpine

vegetation (that characterizes the bog-filled glacial valleys below the peaks) will be significantly reduced in the medium to long-term as a result of global warming (UNESCO/ IUCN Mission Report, 2008). Due to the extension of properties to include the Lewa Conservancy and Ngare Ndare forest, then their ecosystems have added value to the heritage (World Heritage Committee,2013).

Summary of the Values

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

Low Concern

Trend: Data Deficient

World Heritage values are largely being maintained on account of the remote location and rugged terrain of the site. However, on one side, climate change could potentially alter the scenic values of the site, epitomized by the occurrence of glaciers and snowfields on the Equator, are being compromised as the ice melts (the glaciers are expected to disappear altogether within a few decades). Although difficult to substantiate, it is likely that conditions in the high-elevation habitats are warming and may become less suitable for the iconic Afro-alpine species that now characterize the high glacial valleys and bogs. On the other side, some of the current threats, such as fires, unsustainable water abstraction, poaching and invasive alien species all have the potential to deteriorate the values of this site if not managed appropriately.

► Assessment of the current state and trend of other important biodiversity values

Data Deficient

Trend: Data Deficient

The biodiversity values of the site are likely to be responding to (1) climate change and (2) improvements in the protection of habitat in the forested ‘buffer zone’. However, there are no data to substantiate this. Water catchment values are also likely to have improved as a result of the restoration of forest cover on the mid-slopes of the mountain over the past

decade.

Additional information

Benefits

Understanding Benefits

- **History and tradition, Sacred natural sites or landscapes, Sacred or symbolic plants or animals, Cultural identity and sense of belonging**

  the mountain is symbolic to the culture and religious beliefs of the people. Also the mt. Kenya communities belief the that the mountain is sacred and should be conserved for that purpose. The communities benefited from the mountain ecosystem.(Akker,2016).

  Reduction of the above negative factors will improve the cultural and spiritual values. The local communities will embrace and share the sacred belief from generation to generation

- **Access to drinking water**

  provision of portable water for domestic and irrigation uses

  the above factors are due to population increase and global warming

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

  These benefits are all part of the ecosystem services provided by Mt. Kenya Heritage site.

  The reduction of the above negative factors will improve on the environmental services

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

Communities benefit through working as tour guides and porters to tourists.They also benefit from infrastructure community projects initiated by the park management.

The reduction of the negative impacts will increase benefits to the local economy.

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

this contributes to the well being and aesthetic values to the community

Reduction of the impacts will improve on the resources being used for the aesthetic,medicinal and research purposes

Summary of benefits

1. Cultural and spiritual values
2.Water
3.Environmental Services
4.Contribution to the local economy

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	USAID		Forest Restoration and Rangeland Management Project was formerly involved in forest rehabilitation and assisted management planning (Mission Report, 2008)
2	EU-funded		Community Environment Facility has supported community-based environmental projects throughout the Mount Kenya region
3	UNDP		Community Management of Protected Areas (COMPACT) project provided small grants for ‘buffer zone’ forest rehabilitation from 2001-4 (Mission Report, 2008; UNEP-WCMC, 2012)

№	Organization/ individuals	Project duration	Brief description of Active Projects
4	Mount Kenya Trust		Support to KWS/KFS in-kind and through donor funds. This involves joint surveillance programmes on anti-poaching, fencing, education and awareness and management support
5	GEF Funded		Mount Kenya East Pilot Project for Natural Resources Management (2007-2012) has been involved in fencing, rehabilitation of degraded forest, KWS institutional support and other activities in the forest lands of the ‘buffer zone’ (Mission Report, 2008)

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