

IUCN Conservation Outlook Assessment 2017 **(archived)**

Finalised on 08 November 2017

Please note: this is an archived Conservation Outlook Assessment for Cape Floral Region Protected Areas. To access the most up-to-date Conservation Outlook Assessment for this site, please visit <https://www.worldheritageoutlook.iucn.org>.

# Cape Floral Region Protected Areas

## SITE INFORMATION

Country:

South Africa

Inscribed in: 2004

Criteria:

(ix) (x)

Site description:

Inscribed on the World Heritage List in 2004, the property is located at the south-western extremity of South Africa. It is one of the world's great centres of terrestrial biodiversity. The extended property includes national parks, nature reserves, wilderness areas, State forests and mountain catchment areas. These elements add a significant number of endemic species associated with the Fynbos vegetation, a fine-leaved sclerophyllic shrubland adapted to both a Mediterranean climate and periodic fires, which is unique to the Cape Floral Region.

© UNESCO

## **SUMMARY**

### **2017 Conservation Outlook**

#### **Good with some concerns**

Invasive alien plants species and wildfires continue to be the key threats affecting the property. CapeNature has adopted an integrated management approach to address both of these threats. The systems currently in place can be considered effective for the protection of the property and the values of the property that were identified at the time of inscription of the property on the World Heritage List are still present and maintained. However, recent reported reduction in budget and vacant posts may lead to negative consequences, and it is important to note that long term protection of the property will require sufficient allocation of budget and human resources. This will be particularly important in the face of uncertain impacts of climate change and the rise in human population that may have associated negative impacts.

### **Current state and trend of VALUES**

#### **Low Concern**

#### **Trend: Deteriorating**

Within the protected areas of the CFR, the diversity, density and endemism of the flora as well as the associated evolutionary processes are relatively stable. However uncertainty exists regarding accelerated impacts of climate change. Data available on rare species indicates that slow maturing reseeding Proteaceae are being negatively affected. Given current efforts to control invasive plants, and manage wild fires, trends are likely to be negative. This is being exacerbated by the reduced budgets resulting in a reduction in critical scientific and operational staff and their associated operating expenses.

### **Overall THREATS**

#### **High Threat**

The main problems are aggressively invasive plant species and the resulting

increased intensity of wildfires. Invasive alien plants (IAPs) pose the most severe threat for the continued existence of Fynbos ecosystems. Large areas of the property and adjacent buffering areas are affected by IAPs which pose both a direct (through displacement), cumulative (disruption of catchment water retention) and a knock on effect (in promoting the second most severe threat, excessive fires). The impacts of climate change are likely to increase in the future. The majority of the clusters offer some altitudinal buffering at a local scale; but at a larger geographic scale, there is limited ability for adaptation by southward vegetation shifts. IAPs, increased fires, and climate change impacts as well as increased human population pressure can expect to interact with each other, (threats acting in concert can result in a multiplier impact effect). Trends for all of these threats are on the increase, over large areas of the Cape Floral Region, this makes it increasingly important that the ability of the organisations to operate at optimum capacity is essential. The recent staff "reductions" are particularly worrying as they will hamper the organisations ability to deal with the ever increasing problems related to global climate change, fire and alien invasive plants.

## **Overall PROTECTION and MANAGEMENT**

### **Mostly Effective**

The key threats of alien invasive species, and the associated fire risk that these invasive plants species pose, as well as land use change are both regulated and monitored. There has been a coordinated approach to addressing the challenge of alien invasive organisms through complementary methods including biological control agents for invasive plants both inside and outside of parks. An integrated approach to fire and alien invasive management has been adopted. CapeNature has an Invasive Alien Plant Strategy which pinpoints localities in need. However due to recent budget cuts key vacancies have not been filled which hampers this system from functioning optimally.

# FULL ASSESSMENT

## Description of values

### Values

---

#### World Heritage values

► **Outstanding diversity, density and endemism of flora**

**Criterion:(x)**

A serial site – in the Eastern and Western Cape Provinces, South Africa – made up of 13 complexes of protected areas, covering 1,0947,98 ha, the Cape Floral Region Protected Areas (CFRPA) property is one of the richest areas for plants in the world. It represents less than 0.5% of the area of Africa but is home to nearly 20% of the continent’s flora. The outstanding diversity, density and endemism of the flora are among the highest worldwide. Some 69% of the 9,000 plant species in the region are endemic, with some 1,799 species identified as threatened of which 1,738 are endemic . The Cape Floral Region has been identified as one of the world’s 34 biodiversity hot spots (World Heritage Committee, 2011; State Party of South Africa, 2015).

► **Ongoing ecological and biological processes associated with the evolution of the unique Fynbos biome**

**Criterion:(ix)**

The property is considered of outstanding universal value for representing ongoing ecological and biological processes associated with the evolution of the unique Fynbos biome. These processes are represented generally within the Cape Floral Region and captured in the 13 complexes of protected areas. Of particular scientific interest are the plant reproductive strategies including the adaptive responses to fire of the flora and the patterns of seed dispersal

by insects. The pollination biology and nutrient cycling are other distinctive ecological processes found in the site. The Cape Floral Region forms a centre of active speciation where interesting patterns of endemism and adaptive radiation are found in the flora (World Heritage Committee, 2011; State Party of South Africa, 2015).

## Assessment information

### Threats

---

#### Current Threats

##### High Threat

The main problems are aggressively invasive plant species and the resulting increased intensity of wildfires. Invasive alien plants pose the most severe threat for the continued existence of Fynbos ecosystems within the CFRPA. Large areas adjacent to the property are invaded and to a lesser extent within the property. Invasive plants pose both a direct (through displacement), cumulative (disruption of catchment water retention) and a knock on effect (in promoting the second most severe threat, excessive fires).

The recent reduction in funding and resultant loss of key posts is alarming and will have major negative effects on the various organisations' ability to manage wisely.

##### ► Fire/ Fire Suppression

###### Very High Threat

Inside site, throughout(>50%)

Outside site

Too frequent fires are a major threat to fynbos, as this prevents some plants from reaching seeding age. Fire is a natural component of the Fynbos Biome but the fire frequency is greatly increased within the Cape Peninsula (Table Mountain NP), and the Boland Complex due to the proximity to the larger urban centres. In some areas fire has been suppressed unnaturally due to the proximity to the Urban interface. The Garden Route cluster faces severe

risks due to the existence of large pine plantations within the buffer which complicate the fire management in the area.

Increasing fire frequency, size and intensity is also related to the presence of invasive alien plants. Climate change, which is stimulating the growth of invasive woody plants, as well as increased drying has increased fire intensity and frequency. Fire frequency inside and outside the CFRPA is increasing and the risk of unacceptable change is increasing.

Fire management is a major issue in all clusters.

### ► **Poaching**

#### **Low Threat**

**Inside site, localised(<5%)**

**Outside site**

Small scale poaching is a problem in some areas and the indications are that it is on the increase.

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

#### **Very High Threat**

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

**Outside site**

Invasive Alien Plants (including *Pinus* spp., *Acacia* spp., *Hakea* spp. and *Eucalyptus* spp.) pose the most severe threat for the continued existence of Fynbos ecosystems. Invasive plant species have invaded large areas of the property altering the fire regime and characteristics. Species that depend on seed dispersal by ants are under threat, as indications are that the alien Argentine ant could displace the native seed-dispersing species. Other components of biodiversity such as the fynbos endemic birds are also at risk from ecosystem modification by alien plants.

### ► **Temperature extremes**

#### **High Threat**

**Inside site, throughout(>50%)**

**Outside site**

Increase in extreme climatic events, and rainfall variability are believed to be due to global/human-induced climate change. There is evidence that the increased growth rate and spread of alien invasive woody plants have increased the fuel load which in turn has contributed to larger, more frequent

and certainly more intense wild fires that negatively affect all biota, which is exacerbated by climate change. Long-term model predictions of drying and increased temperatures for the region may also lead to a southerly shift for the Fynbos Biome, with replacement by the Karoo Biome in some areas, and thus an overall loss of area of the CFR.

## ► Other

### High Threat

Inside site, throughout(>50%)

### Outside site

At the time of initial inscription in 2004, IUCN noted that invasive species were the most severe threat to the continued existence of the Fynbos ecosystems that characterize this site. In 2006, it was reported that a lack of funding was prohibiting effective management of this threat, this situation improved (The State Party report presents detailed information on the budgets allocated to the management of fire and invasive species in the site, confirming a significant additional allocation from the Provincial Treasury of R23.8million (c. USD 2.5million) in the financial year 2009/10 in addition to the R87.7 million in the 2008/09 budget. Annual Working for Water (WfW) budget is R20 million per year in Table Mountain National Park (TMNP). This situation has however deteriorated with the budget of CapeNature and Eastern Cape Parks and Tourism Agency (ECPTA) in particular being severely reduced. This to the extent that several key posts that became vacant, for a variety of reasons, have not been filled. The operational budget is not adequate to perform the essential functions as the personnel budget is once again dominant budget item. This is the motivation for not filling many of the vacated posts. This is aggravated by annual inflation related salary increases that then further reduce operational funding. The implications of this funding reduction are far reaching and negatively influence all the listed threats.

## Potential Threats

### High Threat

The impacts of climate change are likely to increase in the future. The majority of the 13 clusters offer some altitudinal buffering at a local scale; but at a larger geographic scale, there is limited ability for adaptation by southward vegetation shifts. Human population pressure will pose an increasing threat to

at least one of the major components, the TMNP, and will exacerbate climate change impacts for all sites.

### ► **Temperature extremes**

#### **High Threat**

**Inside site, throughout(>50%)**

#### **Outside site**

Predictions include a warmer climate (up to 3.7 deg C) and a shifting rainfall (10-30% decrease in Winter rainfall) by 2050. Virtually all the 13 clusters have steep altitudinal gradients and all are bordered by other conservation lands. This buffering is continuing constantly through the efforts of the Stewardship Programme to secure Private Land through contracts for conservation. These areas will help moderate some effects of climate change and a monitoring system is in place to detect what these effects will be. Predictions include that the geographic extent of Cape Fynbos may be reduced by around two-thirds, with over half of its species becoming extinct due to temperature rise. In addition to this, higher temperatures and levels of carbon dioxide in the air will increase the risk of wildfires which is exacerbated by the woody invasive alien plants in Fynbos areas.

### ► **Housing/ Urban Areas**

#### **High Threat**

**Outside site**

Human population pressures on biodiversity are expected to grow and will particularly affect the Table Mountain National Park (TMNP) and the Boland Complex, reflecting their location adjacent to the city of Cape Town and several smaller towns respectively. The current population within the Cape Peninsula region of 3.75 million is projected to grow to 6.2 million by 2020. Population pressure also results in increasing incidences of human induced fire and the TMNP is a recreational resource for urban residents. The close proximity of urban infrastructure to high fuel loads develops a climate of risk aversion resulting in controlled burns being delayed resulting eventually in wild fires. The Garden Route cluster has large commercial pine plantations adjacent to its borders that add risk and increases the level of complexity in dealing with fuel load management, IAPs and fires. This situation is not improving as climate change effects become more apparent and resources

dwindle.

## **Protection and management**

---

### **Assessing Protection and Management**

#### **► Relationships with local people**

##### **Mostly Effective**

Except for Table Mountain National Park adjoining the metropolis, and the Boland Mountain Complex, most of the component sites are nearly empty of people and buffered by lightly populated reserves, the mountainous areas with almost no population. The high population neighbouring the Table Mountain National Park have necessitated social programs to combat poverty and enlist conservation awareness through volunteer group work. There is a need to raise awareness of the dangers of not dealing with IAP and the need to do controlled burns. Due to the high risks involved, controlled burns are often delayed which results in disastrous wild fires. Many of the protected areas with the site also have active “Protected Area Advisory Committees” as required by National legislation. These ensure input from local people and concerned citizens and ensure transparent and accountable management from authorities.

#### **► Legal framework**

##### **Mostly Effective**

The component areas are managed under a region-wide conservation framework, the Cape Action for People and the Environment (CAPE) programme, established with assistance from the GEF in 2000. CAPE coordinates the work of national, provincial and local authorities (South African National Parks, Western Cape Nature Conservation Board and Eastern Cape Parks and Tourism Agency, National Department of Environmental Affairs), and private landowners, make up the “Cape Floral Region Protected Areas World Heritage Property Joint Management Committee” to promote the protection of biodiversity by integrating social, financial and conservation initiatives. Acts and legal instruments affecting the area include the World Heritage Convention Act, National Environmental Management Act,

Environment Conservation Act, National Water Act, Conservation of Agricultural Resources Act, Mountain Catchment Areas Act, National Heritage Resources Act, National Forests Act, National Veld and Forest Fire Act, the Sea-shore Act, the Marine Living Resources Act, Wetlands Conservation Bill, the Biodiversity White Paper and the National Coastal Management Bill. NEMA: Protected Areas Act, NEMA: Biodiversity Act.

## ► **Enforcement**

### **Mostly Effective**

Most of the protected areas and the surrounding landscape are inadequately staffed with regard to enforcement. But the existing staff are sufficiently effective, at this stage, to prevent major impacts on biodiversity. However small scale poaching is a problem in some areas and the indications are that it is on the increase. There is also an increase in fire arson. TMNP has problems with visitor security that it is dealing with some success.

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

### **Some Concern**

Part of national park and provincial park management systems. The 2015 extension of the CFRPA WHS is part of the National Protected Area Expansion strategy. As Protected Areas under NEMA, management authorities also have to contribute to provincial and local Sustainable Development Frameworks (SDFs) and Integrated Development Plans (IDPs). CapeNature had a dedicated staff member who dealt specifically with this integration. This post is vacant and is not going to be filled.

## ► **Management system**

### **Mostly Effective**

The Cape Floral Region Protected Areas comprises a serial property of 13 clusters of protected areas covering a total area of 1,094,798 ha. The coordination of the management of the component protected areas is through the Joint Management Committee. The national Department of Environmental Affairs chairs this committee and the three conservation agencies involved (Western Cape Nature Conservation Board, South African National Parks Board and the Eastern Cape Parks and Tourism Agency) serve on this committee. All the properties are protected in terms of various

Provincial and National legislation and are already declared or are in the process of being declared in terms of the National Environmental Management: Protected Areas Act (57 of 2003). All properties within the site have management plans and have staff to manage the properties, although staff shortages at some sites have also been reported. The State Party has been requested by the World Heritage Committee to submit a property-wide management strategy in the form of an Environmental Management Framework by 1 December 2017 (Decision 39 COM 8B.2).

### ► **Management effectiveness**

#### **Some Concern**

Monitoring and management systems are in place in all of the component sites. While these systems are considered effective the available resources to operate these systems have recently declined due to budget cuts.

An integrated approach to fire and alien invasive management is being adopted. Fire management has also improved with the implementation of more coordinated responses to fires through Incident Command Centers supported by various government, local government and private stakeholders. There has been a reported reduction in budget in recent years, which may be limiting progress with the implementation of this more integrated approach. In addition, many of the protected areas utilise the METT system - Management Effectiveness Tracking Tool - to interrogate the protected area management and ensure constant improvement.

### ► **Implementation of Committee decisions and recommendations**

#### **Some Concern**

The 2009 State Party Report outlines the actions undertaken in response to earlier Committee decisions:

a) Establishment of a single management authority:

In line with the World Heritage Convention Act, the Department of Environmental Affairs and Tourism (DEAT) was appointed as the single overall management authority for the property. Part of its authority was delegated to the three management agencies in charge of the different components, SANParks, CapeNature and the Eastern Cape Parks and Tourism Agency (ECPTA), which ensure the management of the components for which they have the lead responsibility. Coordination is ensured through a Joint

Management Committee, which includes the Chief Executive Officers of these three entities together with a representative of DEA.

b) Extension of the property:

The extension and buffering of the property was approved by the World Heritage Committee in July 2015. An assessment of protected areas suitable for inclusion within an extended property was undertaken, based on a rigorous set of criteria. The extension includes extensions of existing protected areas, inclusion of several new protected areas and an extension of buffer zones/mechanisms. These are within a number of landscape initiatives under the Cape Action for People and the Environment (CAPE) programme, which is seeking to create biodiversity corridors to increase the connectivity between the components within the property and to improve the long term viability of the protected area estate. This increased connectivity further enhances the resilience of the property to climate change.

c) Budgets to combat invasive plants and monitor fire impacts

Significant additional budget of R23.8million (c. USD 2.5million) was allocated from the Provincial Treasury in the financial year 2009/10 in addition to the R87.7 million in the 2008/09 budget.

Unfortunately this situation is no longer favourable. reportedly due to recent budget cuts.

In 2015, the Committee considered that all serial components of the property are managed in accordance with agreed management plans, however, there is a recognised need for a property-wide management strategy in the form of an Environmental Management Framework. The Committee requested the State Party to complete and submit the Environmental Management Framework by 1 December 2017.

## ► **Boundaries**

### **Mostly Effective**

The extension of the CFRPA WHS has been a critical step to further secure the CFRPA network and the associated buffering mechanisms inclusive of biodiversity corridors and biosphere reserves. The extension was approved by the World Heritage Committee in July 2015.

There is currently an initiative to further extend the CFRPA to include other protected areas that were not deemed ready for inclusion at the time the extension dossier was being compiled. These will include Stewardship

Contract Nature Reserves, local authority nature reserves and other legally protected areas. They will be exposed to the same rigorous selection process as the previous nominations. Priority will be given to consolidating the existing World Heritage property and its component parts, extending corridors and altitudinal gradients. (R11, R13)

## ► **Sustainable finance**

### **Some Concern**

All three agencies responsible for the management of the component sites are able to access additional funding to support fire management, as well as actions undertaken to combat alien invasive species, through National Environmental Protection and Infrastructure Programmes (EPIP) and other existing programmes such as “Working on Fire”, “Working for Water” and “Working for Wetlands”. These funding sources, as well as the provincial allocations, are under pressure and are not adequate to manage the threats at an acceptable level.

Sustainable funding for conservation management is under severe pressure from competing socio-economic priorities to the extent that some agencies budgets have been cut, resulting in critical posts that become vacant not being filled. Operational funding is also no longer adequate to effectively manage the external funding and operational activities at an acceptable standard. (R12, R15/23)

## ► **Staff training and development**

### **Some Concern**

Most reserves have at least one Resident Manager and qualified staff who are employed in planning and management, research and development, reinforced by in-house training and continued higher study. This capacity is however being impacted by the reduction in budget. CapeNature and ECPTA have been particularly negatively affected by this and several key staff positions remain vacant (Annual Reports). This means that mentorship and in-house training has been limited and most training is reliant on external funding.

## ► **Sustainable use**

### **Mostly Effective**

No resource use is permitted within the component sites (however there is controlled recreational marine fishing at selected sites at some coastal protected areas. These are deemed to be within the buffering areas). There is firewood harvesting at some sites which takes place in tandem with alien plant eradication.

### ► **Education and interpretation programs**

#### **Mostly Effective**

The communications departments of the reserves have a broad range of outreach and educational programmes, information pamphlets, maps, brochures, and advertising campaigns both in the reserves and in travel magazines. Promotion uses other media outlets, meetings and discussions between reserve managers and neighbours in both provinces.

### ► **Tourism and visitation management**

#### **Mostly Effective**

The Cape is a popular tourist destination, both nationally and internationally, especially the Table Mountain National Park which received in 2008 over 2 million fee-paying visitors and 2 million others. Flower, whale and penguin viewing are among the attractions. Other reserve visitation varies between 58,500 a year in the Boland Mountain reserves near Cape Town, to 18,000 a year in Cederberg and De Hoop and 1,130 in Boosmansbos. Baviaanskloof receives approximately 15 000 visitors p/a. Infrastructure and reserve facilities are generally good and effective methods are used to control visitor numbers when necessary.

### ► **Monitoring**

#### **Some Concern**

Monitoring systems are in place in all of the component sites. While these systems are considered effective the available human resources to operate these systems is no longer adequate.

The concern over the increasing fire frequency, especially, but not only, due to the proximity of the TMNP to the urban environment has led to commissioning of the Council for Scientific and Industrial Research (CSIR) to update its fire management programme and set in place scientifically based

desired measures and targets with respect to fire management. As such, an intensive fire monitoring programme, based on adaptive conservation management, is in place for all protected areas. However the scientific staff to process the data and feed back to management is inadequate. Many other essential biodiversity monitoring programmes are no longer taking place or have been reduced because of the staff/budget reduction (Annual Reports). CapeNature and ECPTA have been particularly negatively affected by this.

## ► **Research**

### **Mostly Effective**

This is one of the most intensely researched floral regions in the world. The site nomination's bibliography alone lists 290 publications on the flora, fauna and culture of southwest Africa. Three local universities and the South African National Biodiversity Institute (SANBI) sponsor constant research. The Western Cape Nature Conservation Board (CapeNature) uses GIS recording in the State of Biodiversity database to capture, store, retrieve and process biological data on species distribution and populations, alien plant eradication, fire mapping (including the development of vegetation age maps), water quality and other ecological processes, all centrally stored at the Scientific Services Headquarters at Jonkershoek. Predictive models forecasting the potential effects of climate change on each area have been prepared. This ability has however been compromised by the budget cuts and the lack of funding to fill key vacated posts within Scientific Services. The ECPTA is also developing an information system. The 13 clusters of protected areas contribute to national monitoring exercises such as the South African Bird-ringing Project, South African Bird Atlas Project 2, the Birds in Reserves Project, Frog Atlas Project, the Nest Record Card Scheme, the Information System for Endangered Plants and the Provincial Fire Records database. The 200 hectare Kirstenbosch National Botanical Garden and Institute near Cape Town have very good visitor and research facilities and are an integral and biodiverse part of the Table Mountain National Park, focussing on research and public education about the fynbos. Uniquely, the Botanic Garden is therefore included within the natural World Heritage site.

## **Overall assessment of protection and management**

### **Mostly Effective**

The key threats of alien invasive species, and the associated fire risk that these invasive plants species pose, as well as land use change are both regulated and monitored. There has been a coordinated approach to addressing the challenge of alien invasive organisms through complementary methods including biological control agents for invasive plants both inside and outside of parks. An integrated approach to fire and alien invasive management has been adopted. CapeNature has an Invasive Alien Plant Strategy which pinpoints localities in need. However due to recent budget cuts key vacancies have not been filled which hampers this system from functioning optimally.

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

##### **Some Concern**

Most of the nominated sites are in remote country, buffered by adjacent reserves and exist within a well-developed legal framework. They are part of the region-wide conservation framework. An integrated approach to fire and alien invasive management has been adopted both inside and outside of parks. This situation has deteriorated as a result of reduction in budgets which has resulted in the loss of key posts and insufficient operational funding. This has led to a decline in the ability to coordinate and manage adequately.

#### **► Best practice examples**

The integrated approach to fire and alien invasive plant management adopted both inside and outside of parks. CapeNature has adopted a Working on Fire Programme to manage fires, and has trained and equipped 1,056 fire-fighting recruits since 2004. Fire Records database and an Alien Invasive Plant database are maintained along with a Bio Control Agent database which is also being developed to add a further layer to support more efficient catchment management planning across the CFR. Unfortunately due to the budget cuts critical vacancies have not been filled and these databases are not managed optimally and analysis of the data is not always possible.

The National monitoring exercises, that include the South African Bird Atlas Project 2, the South African Bird-ringing Project, the Birds in Reserves Project, Frog Atlas Project, the Nest Record Card Scheme, the Information System for Endangered Plants

## **State and trend of values**

---

### **Assessing the current state and trend of values**

#### **World Heritage values**

##### **► Outstanding diversity, density and endemism of flora**

**Low Concern**

**Trend:Deteriorating**

No reports of any significant loss of diversity within the component sites could be found. Of particular concern are the impacts of invasive alien plant species and wild fires on rare species, particularly in light of the recent budget cuts. There are indications that slow maturing species of reseeding Proteaceae are being negatively impacted by the increased fire frequency, with knock-on impacts on fynbos endemic birds. It has been documented that the numbers of *Mimetes hottentoticus*, an extremely localised endemic listed as rare, has declined in the Boland Mountains and most populations are now confined to rocky refugia. Several other species indicate a similar trend. More widespread monitoring information concerning the conservation status of rare flora in the properties is required.

##### **► Ongoing ecological and biological processes associated with the evolution of the unique Fynbos biome**

**Low Concern**

**Trend:Deteriorating**

No reports could be found showing any significant damage to the reserves in which these processes are occurring. That said the increasing size, frequency and intensity of fires due to invasive alien woody plants and climate change is of concern particularly in light of the recent budget cuts.

## Summary of the Values

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

#### **Low Concern**

#### **Trend: Deteriorating**

Within the protected areas of the CFR, the diversity, density and endemism of the flora as well as the associated evolutionary processes are relatively stable. However uncertainty exists regarding accelerated impacts of climate change. Data available on rare species indicates that slow maturing reseeding Proteaceae are being negatively affected. Given current efforts to control invasive plants, and manage wild fires, trends are likely to be negative. This is being exacerbated by the reduced budgets resulting in a reduction in critical scientific and operational staff and their associated operating expenses.

## Additional information

### Benefits

---

### Understanding Benefits

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

Water catchment, water flow regulation, erosion control, climate amelioration. Carbon sequestration and storage, pollination for crops.

#### ► **History and tradition, Wilderness and iconic features**

Cultural and historical sites and wilderness and iconic features.

### ► Importance for research

Scientific research (important resource for building knowledge on, ecological processes, evolutionary trends, taxonomy.....)

### ► Outdoor recreation and tourism

Mountaineering and hiking, nature tourism, cultural tourism, scientific tourism

### ► Collection of genetic material

The large species diversity provides a potential genetic resource for phytochemicals and plant oils

## Summary of benefits

The site provides various goods and services and plays a critical role in water security. South Africa is a water scarce country and there is need to secure and conserve these resources. Many of the properties that make up the site form part of the upper catchment and in some cases supply water to large metropolitan areas. Some key beneficiaries are people living in urban areas such as Cape Town and Port Elizabeth. Securing ecological infrastructure including intact freshwater ecosystems is critical to ensure resilience in the face of anticipated climate change. Eco-Tourism has played an important role in job creation at the local, regional and national level. The protected areas also implement the EPIP programmes, which is primarily aimed at poverty alleviation and skills development. The 1st National Biodiversity Assessment report (NBA.2011) produced by the South African National Biodiversity Institute (SANBI) highlights the role that that protected areas play in supporting rural livelihoods in areas with marginal agricultural activities.

The Cape Floral Region WHS has a global value in securing the conservation of a large portion of the endemic flora of the Cape Floral Kingdom, a global biodiversity hotspot.

## Projects

---

## Compilation of active conservation projects

| № | Organization/<br>Individuals                             | Project<br>duration | Brief description of Active Projects  |
|---|--|---------------------|---|
| 1 | University of Cape Town: Animal Demography Unit          | From: 2009 To: 2030 | National monitoring exercises that include or focus on CFR: the South African Bird Atlas Project 2, the South African Bird-ringing Project, the Birds in Reserves Project, Frog Atlas Project, Penguin-Watch , Southern African Butterfly Conservation Assessment, Mammal Map, etc  |
| 2 | "Working for.." programs (Water, wetlands , fire)        | From: 2009          | Part of the South African Government's initiative to create jobs and to alleviate poverty by providing biodiversity related jobs, to control alien invasive plants, fight fire and improve wetlands.  |
| 3 | CapeNature : Save our fynbos fish                        | From: 2009          | The indigenous fynbos fish of the Western Cape are under severe threat. The greatest threat comes from invasive alien fish, which prey on them (e.g. smallmouth bass), compete for resources (e.g. banded tilapia) and degrade their habitat (e.g carp).  |
| 4 | CapeNature : Cederbeg amphibians and reptiles project    |                     | The Greater Cederberg Biodiversity Corridor (GCBC) is one of the corridors proposed for the Cape Floristic Region (CFR). To ensure that the Cederberg Corridor will make a significant contribution to the conservation of the amphibians and reptiles in the CFR, a detailed survey of the greater Cederberg area is first required. |
| 5 | CapeNature : The Greater Cederberg Biodiversity Corridor |                     | The GCBC aims to establish biodiversity corridors across its landscape to ensure the establishment of healthy connected corridors of natural vegetation. These corridors include formally protected areas and natural vegetation on privately owned land  |
| 6 | ECPTA Biodiversity Stewardship program                   |                     | Biodiversity agreements entered into with private landowners where their properties are included in the conservation landscape and are managed by owners under guidance of a management plan and supported by ECPTA   |

| <b>Nº</b> | <b>Organizati on/ individual s</b>                    | <b>Proj ect dur ation</b> | <b>Brief description of Active Projects</b>   |
|-----------|---|---------------------------|---|
| 7         | ECPTA Baviaanskloof Mega Reserve Landscape Initiative |                           | The Baviaanskloof Mega Reserve landscape Initiative is one of the corridors proposed for the Cape Floristic Region (CFR). The Baviaanskloof Mega Reserve Initiative seeks to have a landscape where conservation, agriculture and eco-tourism combine to work together for the benefit of all stakeholders in the landscape.  |
| 8         | CapeNature Stewardship Programme                      | From: 2009 To: 2020       | This programme has four levels of agreements ranging from "loose" to "contractual", that can be entered into with private landowners whose properties have conservation value. These properties then become a formal part of the conservation estate. Those entering into a contract have the same status as a formally Protected Area. They are managed by owners under guidance of a management plan and supported by CapeNature. |

## Compilation of potential site needs

| <b>Nº</b> | <b>Site need title</b>                    | <b>Brief description of potential site needs</b>   | <b>Support needed for following years</b> |
|-----------|---|--|---|
| 1         | Valuation of Ecosystem Services           | Evaluation of economic value of ecosystem services with particular emphasis on the value of water and the wise management of the catchment areas for water production and pollination. This with the view to justifying the improvement of financial support for this wise management.   | From: 2017 To: 2020                       |
| 2         | Early Warning System for Invasive Species | Development of an early warning system for new invasive species that are likely to emerge as climates change.  | From: 2017 To: 2022                       |
| 3         | Improved Monitoring of Rare Species       | Improved monitoring of change in rare and sensitive species and ecosystems in particular with regard to climate change and associated impacts such as Invasive Alien Plants and a changing fire regime. Particular emphasis to be given to slow maturing reseeding Proteaceae and vulnerable wetland specialists of various biota. | From: 2017 To: 2030                       |
| 4         | Strategic Adaptive Management Plan.       | Develop and formalise a strategic adaptive management plan for each of the protected areas. This to deal with the coordination of an adaptive response to the fire and alien invasive plant problem in particular.   | From: 2017 To: 2020                       |

| <b>No</b> | <b>Site need title</b>   | <b>Brief description of potential site needs</b>   | <b>Support needed for following years</b> |
|-----------|--|--|---|
| 5         | Raise awareness of the need to control IAPs and managed fires. | There is a need to improve the awareness of the need to control/eradicate IAP and the need to manage fuel loads with fire for both ecological processes and infrastructure protection, with the general public and the "administrators". | From:<br>2017<br>To: 2020                 |

## REFERENCES

| <b>Nº</b> | <b>References</b>   |
|-----------|---|
| 1         | CapeNature (2011) Cederberg Nature Reserve Complex Management Plan.   |
| 2         | CapeNature (2014) Annual Report 2013/2014 .   |
| 3         | CapeNature (2015) Annual Report 2014/15   |
| 4         | CapeNature (2016) Annual Report 2015/16 .   |
| 5         | Current and possible future impacts and vulnerabilities associated with climate variability and climate change for Africa.<br>Source: Adapted from IPCC Fourth Assessment Report (2007), Working Group 2: Impacts, Adaptation and Vulnerability, Chapter 9. |
| 6         | Eastern Cape Parks and Tourism Agency (2016) Annual Report 2015/16 .  |
| 7         | IUCN (2015) World Heritage Nomination - IUCN Technical Evaluation, Cape Floral Region Protected Areas (South Africa). .   |
| 8         | Midgley, G.F., Rutherford, M.C., Bond W.J. and Barnard, P. (2007) The Heat is on: impacts of climate change on plant diversity in South Africa. South African National Biodiversity Institute.  |
| 9         | Palmer, G., Maree, K. and Gouza, J. (2015) Buffer mechanisms for managing diversity and world heritage in the Cape Floral Region (South Africa). in Harvey, D. C. and Perry, J. eds. The future of heritage as climates change. London: Routledge.          |
| 10        | South African National Parks (2008) Table Mountain National Park: Park Management Plan, March 2008.   |
| 11        | South African National Parks (2014) Approved Plans [website] .  |
| 12        | South African National Parks (2015) Annual Report 2014/2015   |
| 13        | South African National Parks (2016) SANParks Annual Report 2015/16.   |
| 14        | State Party of South Africa (2009) Report of the State Party to the World Heritage Committee on the state of conservation of Cape Floral Region Protected Areas (South Africa). .   |

**No**    **References**

---

15        State Party of South Africa (2015) Nomination of the Extension of the Cape Floral Region Protected Areas World Heritage Site of South Africa. .

---

16        Turner, A.A. (ed.) 2012. Western Cape Province State of Biodiversity 2012. CapeNature Scientific Services, Stellenbosch. ISBN. 978-0-621-41407-3

---

17        UNEP-WCMC (2011) Cape Floral Region Protected Areas, South Africa. UNEP-WCMC World Heritage information Sheets. Cambridge, UK: UNEP-WCMC.

---

18        Van Wilgen, B.W., Forsythe, G.G., Le Maitre, D.C., Wannenberg, A., Kotze, J.D.F., van den Berg, E. and Henderson, L. 2012. An assessment of the effectiveness of a large national-scale invasive plant control strategy in South Africa. *Biological Conservation* 148(1):28-38.

---

19        World Heritage Committee (2011) Decision 35 COM 8E Cape Floral Region Protected Areas, Adoption of retrospective Statements of Outstanding Universal Value (South Africa). .