

Wilderness in an Urban Setting: Planning and Management of the Cape Peninsula National Park, Cape Town, South Africa

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Abstract—The Cape Peninsula National Park (CPNP) is unique because it is situated within the Cape Floristic Kingdom, one of the six floral kingdoms of the world, as well as within a metropolitan area with over 2.8 million people. A key challenge facing Park management is the management of the urban-wilderness interface in an open access system. Park management has adopted a number of proactive and complementary planning and management strategies to deal with urban-edge challenges. Specific initiatives have been developed and implemented to address natural hazards, development pressure, legislative shortcomings, and social problems. This paper shows that the long-term sustainability of the CPNP will depend on the ability of Park management to embrace the urban context.

The Cape Peninsula is situated on the southwestern corner of the Africa continent (fig. 1) and covers an area of approximately 471 km². This Peninsula is unique in that it lies at the heart of the Cape Floristic Kingdom, one of the six floral kingdoms in the world, as well as the Cape Metropolitan Area (CMA), a metropole of over 2.8 million people (Aberman 1997). The Cape Peninsula has a Mediterranean climate—wet in the winter (June to August) and dry and hot in the summer (November to February). However, the climatic conditions along the Cape Peninsula are dominated by the orographic influence of the mountainous peaks that run the length of the Peninsula. As a result, weather can change rapidly from sunny and clear to strong southeasterly winds with poor visibility.

The Cape Peninsula is recognized nationally and internationally as an area of outstanding natural beauty and unique biodiversity. More specifically, it contains the highest diversity of plant species (2,256), endemic plant species (90), and threatened species (141) of any similarly sized area on earth, making it one of the world's most significant conservation priorities (Environmental Evaluation Unit 1997). It is also

treasured for unique opportunities for recreation, inspiration, and relaxation in an otherwise stressful urban environment (Fuggle and others 1994). However, the rapid growth of the CMA in recent years has intensified threats to this area's unique natural heritage.

In May 1998, 16,000 ha of public and private land was proclaimed as the Cape Peninsula National Park (CPNP). This was the first step in consolidating conservation and management of the natural areas of the Cape Peninsula under one managing authority, namely the South African National Parks (SANP). The CPNP includes vast tracts of fynbos (fine bush), pristine coast line, and mountainous landmarks such as Table Mountain, Lion's Head, Devil's Peak, the Twelve Apostles, Cape Point, and Boulders Beach (the site of a mainland colony of endemic Jackass Penguins).

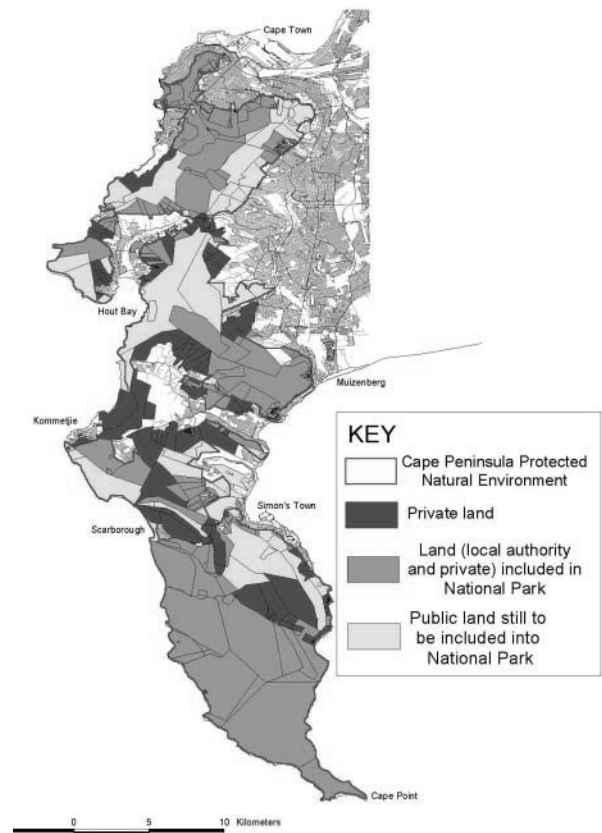


Figure 1—Map of the Cape Peninsula.

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Many cultural and historic resources such as historic buildings, military features, places of archaeological significance, and religious sites are also found within the Park boundaries.

This paper will provide an overview of developments that preceded the proclamation of the CPNP. We will also highlight some general challenges and related initiatives facing Park management before expanding on specific issues arising from the Park's urban context. Finally, this paper will indicate how wilderness can be conserved in an urban setting through the use of management strategies underpinned by effective communication and active partnerships.

Developments Preceding the Proclamation of the Cape Peninsula National Park

Certain units of land in the Cape Peninsula have received some protection since the 17th century; however, significant events led to the establishment of the Cape Peninsula National Park (CPNP). Back in 1978, the Hey Commission recommended CPNP be established, and Table Mountain and the South Peninsula be proclaimed a nature reserve under the Nature Conservation Ordinance No. 19 of 1974, or by a special Act of Parliament.

In 1989, over 60 percent (or 291 km²) of the Cape Peninsula was awarded some protection from development by the Environment Conservation Act 73 of 1989. This area was called the Cape Peninsula Protected Natural Environment (CPPNE). The creation of the CPPNE was a positive step; however, multiple ownership resulted in fragmented management of this biodiversity "hotspot."

In recognition of the need for proper management of the Cape Peninsula, the Administrator of the Cape Province commissioned a study in 1993 to determine policies for the management of the Cape Peninsula. A report entitled "Policy for the Multi-Purpose Use of the Cape Peninsula" was prepared by the Environmental Evaluation Unit of the University of Cape Town under the leadership of Professors Richard Fuggle, Roy Siegfried, and Dr. John Raimondo. The Fuggle report (1994) recommended that the CPPNE be managed by the South African National Parks (SANP).

In 1994, the Kahn Working Group recommended that should a statutory managing authority be established for the management of CPPNE, all the present responsibilities (of the existing management authorities) be reassigned and land reallocated to this statutory body.

A committee chaired by Professor Brian Huntley of the National Botanical Institute was appointed in 1995 by the Minister of Environmental Affairs. The Huntley Committee invited submissions from bodies interested in managing the CPPNE. After considering the submissions, the committee recommended that the SANP be appointed to take over the managerial custody of the area. In December 1995, the Provincial Government accepted this recommendation on the condition that the SANP make "significant progress" toward stewardship of the area by July 1996.

In January 1996, the Table Mountain Project Team was established by SANP and tasked to establish a National Park using the CPPNE as the core. This was satisfactorily achieved by the SANP. It took several months of intensive

negotiations, carefully structured compromises and agreements between the SANP, different local, provincial, and national authorities, and over 200 private landowners before all agreed on a common vision—the formation of the proposed National Park. Negotiations were somewhat complicated by heated debates that took place between the SANP and some nongovernment organizations (NGO's), mainly because of a lack of trust on both sides.

Despite these obstacles, the first agreement was signed on April 29, 1998, between SANP and the City of Cape Town, the Cape Metropolitan Council, and the South Peninsula Municipality, effectively handing over the management of portions of land to SANP. On May 29, 1998, approximately 16,000 ha was officially proclaimed a National Park in the Government Gazette. Once the process of consolidation has been completed, the CPNP will ultimately cover some 30,000 ha under the management of SANP.

Strategic Planning of the Cape Peninsula National Park

The CPNP is not home to lions, buffalo, elephant, or any of the popular game species found in most other National Parks of South Africa. Rather, the principal attraction of the CPNP is its fantastic scenic views, 2,256 indigenous plant species (Bond and Goldblatt 1984) and associated avifauna, amphibians, reptiles, invertebrates, and small mammals. Appropriate conservation of fynbos ecosystems is extremely important because over 90 species are endemic to the Cape Peninsula (Trinder-Smith and others 1996), large numbers of species have become extinct, and 141 plant species are currently threatened.

In addition to the challenges associated with managing this biodiversity hotspot, the task of managing the CPNP is made more complex because it is located within the rapidly growing Cape Metropolitan Area, with open and easy access to local communities and visitors alike to undertake activities such as walking, picnicking, rock climbing, horse riding, paragliding, and mountain biking.

Park Establishment

Establishment of the terrestrial components of the CPNP is particularly important to ensure adequate protection of the high numbers of endemic and threatened fauna and flora. Having acquired the first portions of the CPPNE, Park management remains under pressure to incorporate further conservation-worthy portions of land. Negotiations are currently underway for the transfer of some conservation-worthy pieces of public and privately owned land into the CPNP. The process of obtaining land for inclusion into the CPNP makes use of a number of strategies. For instance, people can contract land into the CPNP voluntarily or via the use of nonpermanent tradeoff opportunities, or contract land into the Park with enhanced permanent rights for a portion of the property and cession to the state of the rest of the property.

During the 1990's, there has been increasing recognition of the importance of marine and coastal areas of the Cape Peninsula (Fuggle and others 1994). Currently, only 2 percent

(or 4 km) of the coastline of the Cape Peninsula is afforded total protection from exploitation in marine protected areas (MPA's) (Prochazka 1998). This is a serious state of affairs if one considers that the Cape Peninsula lies at the junction of two major southern African biogeographic provinces: the Cool Namaqua Province to the west and warmer Agulhas Province to the east, separated by Cape Point. The waters of the Agulhas Province are especially high in marine biodiversity and endemism (Brown 1997).

The challenge is for the SANP to explore ways whereby marine resources around the Cape Peninsula can receive adequate protection and management. A small portion of the funds, received from the Global Environmental Facility (GEF), are earmarked to undertake a feasibility study to investigate ways of transferring management of marine conservation-worthy areas abutting the CPNP from the South African Department of Sea Fisheries to the SANP.

Park Funding

The expenditure of the CPNP is approximately 25 million Rand (or \$4.2 million) per annum. Without adequate funding, it will be impossible to manage the CPNP to the high standard required for such a globally important area. Both SANP and the various local and provincial authorities are facing a situation of limited financial resources and diminishing income. State subsidies also cannot be guaranteed.

Funds for the first 6 years have been secured from various sources. The former public landowners (City of Cape Town, South Peninsula Municipality, and Cape Metropolitan Council) have promised over 10 million Rand (about \$1.6 million), the GEF 46 million Rand (or \$7.7 million), and a French funding agency, the FFEM (Fonds Francais pour l'Environnement Mondial), 6 million Rand (or \$1 million). Income of approximately 12 million Rand is currently being generated from admission fees to reserves such as the Cape of Good Hope Nature Reserve, Boulders Coastal Park, and Silvermine Nature Reserve. Additional income is also derived from commercial companies that lease Park land, and for charging companies to use the Park to launch new products and to undertake commercial filming.

Increasing Tourism and Local Visitors

The Western Cape Province and the Cape Peninsula in particular are experiencing a rapid growth in tourism and this trend is likely to continue (CPNP 1998). It is significant that seven of the 10 most visited tourist destinations in South Africa are found in the Western Cape Province, three of these in the Cape Peninsula (Table Mountain Cableway, Cape Point, and Kirstenbosch National Botanical Gardens). If tourism grows at current levels, the Western Cape Province needs to accommodate 3.4 million visitors by the year 2000 and 9.3 million by 2010 (CPNP 1998). This increase in tourism as well as increasing numbers of local visitors is placing added pressure on Park facilities.

The Cape Peninsula National Park management has adopted an integrated approach, the gateway concept, to handle increasing numbers of visitors to the Park. The gateway concept aims to channel 90 percent of the visitors and their impacts to 2 percent of the Park in an attempt to meet

the needs of visitors while preventing over-exploitation of the resource base of the Park. Approximately 15 gateways are envisaged (CPNP 1998). Each gateway will offer safe and secure parking, interpretive information, and at least three well-marked circular walking routes. At some gateways, infrastructure will be available ranging from public toilets, restaurants or refreshment outlets, formal and informal trading venues, environmental education centers, and eventually public transportation. An added benefit of gateways is that they will provide trading opportunities to local communities. This is important, as local communities need to receive tangible benefits from the Park if long-term conservation goals are to be realized.

To manage increasing numbers of recreational users, a use-zone map was developed according to ecological zones (MLH 1996). Specific strategies for each recreational user group, via working partnerships with these groups, have also been initiated. For example, management guidelines were developed by sport climbers in consultation with Park management to mitigate sport-climbing impacts. Corrective action (as required) will be undertaken jointly by SANP and the sport-climbing community.

Communication and Partnerships

Of particular importance in managing a wilderness in an urban context is the establishment of trust and working partnerships with all stakeholders, including local communities, NGO's, government authorities, original user groups, and the general public. The challenge facing Park management is to engender a sense of ownership among all inhabitants of the metropole and to establish sustainable working partnerships. Park management has attempted to achieve improved communication and partnerships in a number of ways:

- Two monthly meetings held with the Cape Peninsula National Parks Committee, appointed by the National Minister of Environmental Affairs and Tourism, to monitor and advise CPNP management on policy issues. These meetings serve as a forum for the public to raise issues relating to the CPNP.
- Contractual agreements, established with private landowners and local authorities, have served to forge better working partnerships aimed at addressing urban-edge issues.
- Partnerships have been formed with groups/organizations providing specialized skills, such as a rescue service provided by the Mountain Club of South Africa, together with the South African Air Force and the Ambulance Service (Metro), and using the "Theater for Africa" group to develop programs/plays for environmental education purposes.
- An NGO forum is held every 2 months at the regional offices of the SANP.
- Volunteer programs have been initiated with local conservation groups. The first volunteer wardens have already undergone training.
- Bilateral fora have been developed around specific issues.
- A web page, regular press releases, radio talk shows, and a variety of publications inform the public about developments in and around the Park.

Managing the Urban Edge

Old-style conservation practices—such as putting up fences to keep wild animals in and people out—have no place in the new South Africa, least of all in the CPNP. In fact, urban-edge neighbors have an important role to play in effective park management. Prior to the proclamation of the CPNP, wild areas of the Cape Peninsula (excluding the Cape of Good Hope Nature and Silvermine Nature Reserve) were freely accessed by all. The people of the CMA are adamant that free access to the CPNP, as enjoyed for many years, should continue.

The CPNP shares a common open boundary with four State bodies, a provincial authority, a metropolitan authority, two local authorities, and over 200 private landowners. This situation presents Park management with a range of challenges, including natural hazards such as fire, animals, boulders, flooding and alien vegetation; social and urban problems, such as squatting and development pressure; esthetics degradation; and inadequate legislative control. Park management has adopted innovative management initiatives to address these problems. Initiatives are underpinned by effective communication and working partnerships with urban neighbors.

Natural Hazards

Fire Management—Fire is critically important to the regeneration of fynbos (Richardson and others 1994). Frequent fires, however, are undesirable, and vegetation on the urban fringe is especially prone to fires through accidental and other means. Fires, whether controlled or wild, could pose a threat to fauna, flora, people, and property within and outside the CPNP. To manage fire in an urban context, CPNP management has adopted a number of management initiatives:

- A compartmentalized burning program that makes use of artificial burning to try and simulate the natural cycle is followed. In instances of wild fires, recently burnt areas will assist in containment.
- A variety of fire breaks are used on the urban edge to limit the spread of fire between Park and urban areas.
- The CPNP has entered into negotiations with local insurance companies to increase premiums for households on the boundary of the Park when landowners do not adopt measures to protect their properties against fires. Local authorities are supporting this initiative by writing conditions into the approval of building plans for housing developments on the boundary of the CPNP.
- To reduce the large volumes of highly flammable vegetation found on the urban edge, environmental education programs are informing neighboring landowners about fire risks and fire prevention methods.

Problem Animals—As a result of the open access between natural and urban zones, some animals move freely between the Park and the urban surroundings. Domestic cats catch birds in the Park, while mongoose, baboons, and porcupines move into adjoining urban areas. In some cases, baboons have been known to attack both adults and children and have sometimes been encountered in peoples' homes. A

local metropolitan newspaper reported an incident where a baboon died of stress and exhaustion after a 2-day chase in suburban areas adjoining the CPNP (The Cape Argus 1996).

Specific tailor-made programs for the management of problem animals have been developed and are being implemented. Strategies to manage the baboon problem include:

- Use of baboon-proof dust bins.
- Establishment of a baboon task team consisting of the Society for the Protection and Care of Animals (SPCA), local authorities, and CPNP personnel.
- The removal of baboon sleeping sites close to the urban edge.
- Enforcing “no feeding of baboon” regulations.
- Patrolling boundaries to prevent baboons from leaving the Park.
- Trapping or darting rogue baboons and relocating them in the Park.
- Chasing baboons back into the Park.

Loose Boulders—The Cape Peninsula mountain chain consists of many weathered, rocky sandstone outcroppings and large boulders. Natural processes of weathering and erosion influence stability of soil and rock around boulders, sometimes resulting in boulders becoming mobile. Boulders can roll into neighboring landowners' property or public roads, causing injuries to people or damage to property. Recently, a Capetonian was badly injured by a rock fall while driving along Chapman's Peak Drive, a scenic road on the edge of the Park.

Park management has adopted a “no interference” approach to natural geomorphic processes except in instances where there has been human interference. As Park management does not accept responsibility for damage caused by rolling or falling boulders, they have initiated negotiations with insurance companies to increase premiums against damage in areas of high risk.

Flooding—Inappropriate planning and development control in certain areas abutting the Park has resulted in the construction of houses in 1:50-year flood plains. These areas are particularly at risk of flooding after the first rains of the winter season. Flooding is often exacerbated in instances where large tracts of land have been cleared of alien vegetation or after wild fires. Storm-water drainage systems in urban areas prone to flooding are often not designed to accommodate greater volumes of runoff. Park management attempts to limit flooding by:

- Reducing the size of areas cleared of alien vegetation on the urban edge.
- Using a compartmentalized fire management program.
- Negotiating with local authorities to upgrade storm water infrastructure.

Alien Vegetation—Fifty percent of the CPNP is under moderate to dense infestation by invasive alien plants, for example, *Acacia*, *Pinus*, *Eucalyptus*, *Sesbania*, and *Hakea*. Invasion by alien plant species has already resulted in the extinction of 26 plant species, and many other plant species are currently at risk (Bond and others 1992). To prevent alien vegetation from spreading into the Park, private landowners within and adjoining the CPNP are encouraged to plant indigenous vegetation. To further control the spread of

undesirable invasive vegetation, SANP has in the past proclaimed certain plant species as invasive weeds.

Social and Urban Problems

Squatting in the Park—High levels of unemployment and poverty in the CMA have contributed to increasing numbers of squatters in the CPNP. Once a piece of land has been occupied or settled, it becomes a long and costly process to remove illegal occupants because the law favors them. Authorities can only remove illegal occupants if they can provide alternative sites. This is very problematic as it is impossible to effectively patrol an open access park in search of illegal “visitors” who often enter the Park at night. Cooking fires used by squatters in the Park increase the risk of wild fires.

To discourage illegal occupation, old buildings have been locked and barred and water sources blocked in specific Park areas in an attempt to make it as uncomfortable as possible to live or “hideout” in the CPNP. Popular living caves are regularly inspected and belongings of illegal occupants removed. The local authorities in the CMA and SANP have initiated the development of a policy on squatter control.

Informal Settlements—Informal settlements neighboring the CPNP are expanding into the Park, with a consequent increase in the exploitation of natural resources and risk of fire. The Park has established partnerships with these communities in an attempt to empower them to improve their economic and social circumstances. This includes direct employment on a contractual basis in the Park, the provision of informal trading opportunities at gateways, environmental education programs, and skills training. To date, interaction with poor communities living on the edge of the Park in Ocean View and Masiphumelele has proven to be fairly successful.

Development Pressure—The scenic beauty of the Cape Peninsula continues to attract development. Urban-edge sites commanding outstanding views and vistas are especially sought by developers. Particularly controversial has been the proposal to develop a large tract of pristine land at Oudekraal on the slopes of Table Mountain overlooking the Atlantic seaboard (The Cape Argus 1998a). Oudekraal is symptomatic of the scale of development pressure threatening the integrity of the wilderness character of the Park in currently undeveloped areas.

To counter inappropriate formal urban development on the CPNP’s boundaries, Park planners actively participate in local and regional planning to assure the aesthetic appeal of the Park and its surroundings are not compromised. Park management supports Integrated Environmental Management procedures (Department of Environment Affairs 1992) and contributes comments on Environmental Impact Assessments undertaken for development proposals in close proximity to the Park.

To control development pressure in the long term, the SANP aims to proclaim as much land as is possible into a Schedule 1 National Park. Negotiations with private landowners and authorities, based on contractual agreements, are currently taking place to incorporate more land into the CPNP.

Legislative Control

The South African National Parks Act 57 of 1976 was promulgated to conserve land in National Parks situated in rural or agricultural settings. This Act, therefore, provides inadequate legislative protection for National Parks located near expanding urban areas (Environmental Evaluation Unit 1995). In areas outside the CPNP, administration of land use and town planning ordinances remains under the jurisdiction of provincial and local government. South African National Parks has no regulatory control outside the boundaries of the CPNP, and the National Parks Act needs to be revised to address this limitation (Environmental Evaluation Unit 1997). Legal advisors have been appointed by the SANP head office to investigate ways in which the SANP can exert influence outside the CPNP.

Conclusion

It is evident from the discussion above that the CPNP is faced with a myriad of strategic challenges, including Park establishment, funding, and increasing tourism. Apart from the challenges associated with managing this biodiversity hotspot, the task of managing the CPNP is made more complex because it is located within the rapidly growing CMA.

Cape Peninsula National Park management has adopted a number of proactive and complementary planning and management strategies to deal with urban-edge challenges. Specific initiatives have been developed and implemented to address natural hazards, development pressure, legislative shortcomings, and social problems.

The success of these management initiatives and indeed the very existence of the CPNP are dependent on effective communication and working partnerships with local authorities, private landowners, communities living on the edge of the Park, volunteer groups, and NGOs. Ignoring these and other metropolitan stakeholders would undermine the continued consolidation and management of the CPNP. Urban-edge issues cannot be resolved without cooperation.

The protection of terrestrial and marine ecosystems in the Cape Peninsula will ultimately depend on whether the inhabitants of the CMA take ownership of this globally significant natural resource. Ultimately, the long-term sustainability of the CPNP will depend on the ability of Park management to embrace the urban context.

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