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1. GENERAL INTRODUCTION

The Addo Elephant National Park (AENP) was proclaimed in 1931 to protect the last remaining Eastern Cape elephants, living in the Addo area. A founding population of 11 elephants formed the basis of the now 340 animals. Until 1955, when the Armstrong fence was erected, the population grew slowly through periodic population control in the form of shooting by surrounding private landowners. From the park’s original size of 2 270 ha, it has now been expanded to about 120 000 ha in size.

Although the idea of a greater AENP was mooted with the Open Africa initiative in the early 1990s, the proposal by Kerley & Boshoff (1997) well articulated how such an expansion of the park could encapsulate the unique assemblage of biodiversity and tourism opportunities in the area. It recommended a linkage of the park’s separate areas, and amalgamation with other conservation areas such as Woody Cape and Tootabie Nature Reserves to form a core conservation area to protect the unique biodiversity (see Section 4.2). This greater area is referred to as The greater Addo Elephant National Park (gAENP).

The Board of the South African National Parks (SANParks) accepted the proposal for a gAENP and subsequently, with the financial support of the Global Environment Facility (GEF), in the form of a PDF Block B grant, administered through the World Bank, specialist studies were commissioned to gather information regarding the proposed gAENP (see section 3.3 for details of the specialist studies). The aim of these studies is to consolidate the available biophysical, social and economic information to prepare a full proposal to GEF for the planning and implementation of the gAENP project.

One of the commissioned studies was this Strategic Environmental Assessment (SEA), which aims to:

1. Synthesise all existing information (biophysical, socio-economic and institutional).
2. Describe the gAENP initiative.
3. Discuss the opportunities and constraints presented by the environment for the gAENP programme.
4. Describe the socio-economic and biophysical implications of establishing the gAENP.
5. Identify an option for an acceptable way forward.
6. Present this information to the public, authorities and other Interested and Affected Parties (I&APs).

The project is being co-ordinated by South African National Parks (SANParks), principally under the guidance of Dr Michael Knight, Scientific Services and the gAENP Steering Committee. Coastal & Environmental Services (CES) was commissioned to undertake the socio-economic, institutional and SEA components, while the CSIR, in conjunction with the Institute for Environmental and Coastal Management (IECM) and the Terrestrial Ecology Research Unit (TERU) at the University of Port Elizabeth undertook the biophysical component.
2. THE GREATER ADDO ELEPHANT NATIONAL PARK PROPOSAL

2.1 WHAT IS THE GREATER ADDO ELEPHANT NATIONAL PARK?

The proposed gAENP comprises an area of the Eastern Cape that contains an extremely high biodiversity, yet is poorly conserved. The area would form a continuous terrestrial conservation area of almost 200km in length, about 30km at its widest part and about 10km at its narrowest. The exact boundaries of the proposed park remain uncertain as many factors need to be considered before more consolidated proposals can be advanced. These are discussed further in section 4.7.

What is biodiversity?

Biodiversity (biological diversity) is the term given to the variety of life on Earth and the natural patterns it forms. Biodiversity is the result of billions of years of evolution, shaped by natural processes (such as fire, migration, pollination, predation, disease and herbivory, which maintain the functional properties of a healthy ecosystem. Biodiversity also includes genetic differences within species and varieties of ecosystems. Biodiversity is a complex phenomenon, is not static and not easily measured.

Biodiversity forms an integral part of our existence and has been increasingly altered by human populations who have exerted pressure on the environment for various reasons. These pressures or threats have been exerted without controls to prevent over-harvesting, over-utilisation and degradation of these resources.

At the 1992 Earth Summit in Rio de Janeiro, world leaders agreed on a comprehensive strategy for “sustainable development” – meeting our present needs while ensuring that we leave a healthy and viable world for future generations. One of the key agreements adopted at Rio was the Convention on Biological Diversity. South Africa is a signatory to this Convention and thus has a responsibility to preserve biodiversity, hence the importance of the gAENP initiative.

The Convention established three main goals:

?? The conservation of biological diversity.
?? The sustainable use of the components of biodiversity.
?? The fair and equitable sharing of the benefits from the use of genetic resources.

The study area discussed in this report, and the other specialist reports, is thus essentially a planning domain, wherein the boundaries are continuously changing as new information becomes available and relationships with private landowners develop. The planning domain includes a terrestrial area of approximately 340 000 ha (around which a 5km buffer was included to facilitate information gathering process) and a marine area of about 100 000 ha inclusive of the St Croix and Bird Island groups (Figure 2.1).
Figure 2.1: Map to show the proposed gAENP planning domain
The proposed terrestrial zone extends north and eastwards from the R75 road near Wolwefontein, in the west, to include most of the Zuurberg mountain range and the plains which abut it to the north, a section of the coastal plateau between the Zuurberg Mountains and the coast, and, further east, a coastal strip, from the Sundays River mouth to Cape Padrone, which includes the Alexandria coastal dunefield and the Alexandria forest. Although numerous towns are on the border of or within this planning domain, SANParks will not purchase any land in towns for conservation purposes.

The proposed park also includes two sections of the Sundays River, namely a section of approximately 85km in the hinterland, including the Darlington Dam (Lake Mentz), and 2km of the lowest part of the Sundays River estuary at the coast. The marine zone stretches from the mouth of the Coega River to beyond Cape Padrone, and seawards to include the Bird and St Croix island groups.

Expansion of the park would allow the re-establishment of important ecological processes essential for ensuring ecological sustainability. The important processes identified for the terrestrial and aquatic ecosystems are discussed in more detail in Section 4.3.

The proposed gAENP would be South Africa’s third largest national park, increasing the country’s terrestrial conservation area from 5.5% to 5.7% and adding to the country’s few marine conservation areas. Given the park’s unique assemblage of biodiversity (representation of six of the country’s seven biomes), and linkage with a marine protected area (MPA), the park would make a major contribution to South Africa’s commitment to the international Conventions on Biological Diversity and Combating Desertification.

The scope of the gAENP programme is envisaged to enhance regional collaboration between major stakeholders, principally SANParks and Eastern Cape’s Department of Economic Affairs, Environment & Tourism (DEAET), as well as Department of Land Affairs, Department of Labour, Local Government Structures, local communities, private enterprise, the farming community, academic institutions, non-government organisations (NGOs), and private landowners.

The Eastern Cape, with its diverse habitats, can support a number of different eco-tourism opportunities. The proposed gAENP will be able to support almost all eco-tourism experiences sought after by tourists – local and international. This will not only allow the park to generate income, but will have major spin-offs for local communities, the Eastern Cape and South Africa, as more international revenue is injected into the country, creating more employment and wealth. In addition, the park will support basic and essential life-supporting ecological services, a facet which is difficult to measure, and not often factored into analyses.

The original criteria (see below) that were used to determine the planning domain and highlight the importance of the park relate to the potential of the proposed park to achieve certain conservation and development goals. These are in line with South Africa’s developing policies and strategies on the environment. They are spelt out in detail in the Convention on Biological Diversity and the Convention on the Combating of Desertification, as well as in the country’s White Paper on a National
Environmental Policy, the ANC’s (1994) Reconstruction and Development Programme and the South African government’s GEAR (Growth, Employment and Redistribution) initiative.

The 11 criteria that were used to determined the proposed boundaries of the park (Kerley & Boshoff, 1997) are:

1. Biodiversity
2. Spatial complexity/representativeness
3. Ecosystem functioning
4. Naturalness and uniqueness
5. Protection of flagship species
6. Multi-purpose zones (buffer zones)
7. Financial viability
8. Economic potential
9. Eco-tourism
10. Management factors
11. Practical boundaries and physical characteristics

In addition, the proposal was guided by the definition, objectives and criteria for the selection and management of Category II Protected Areas (National Parks and Equivalent Reserves), as outlined in the schedule classification in the Government Gazette of 9 May 1994, Notice 449 of 1994.

2.2 RATIONALE BEHIND THE CREATION OF THE gAENP

The proposed gAENP is of bioregional, national and global importance, possessing features and conservation worthy aspects unique to this area. The inclusion of six biomes, together with a marine and estuarine component, would make the park the most diverse conservation area in southern Africa, and possibly Africa. The following points are some of the reasons the proposed gAENP planning domain is so unique, the combination of which cannot be replicated elsewhere in South Africa.

2.2.1 TERRESTRIAL ENVIRONMENT

?? The proposed gAENP planning domain already contains areas under conservation, which could be consolidated to form a core conservation area.

?? The expanded park would include representative samples of six of South Africa’s recognised terrestrial biomes (Nama-Karoo, Fynbos, Forest, Thicket, Savanna and Grassland) in the internationally recognised Albany hotspot

?? A large number of faunal species are supported by the six biomes, including the important population of the original Addo elephants which attracts a great number of tourists, the black rhinoceros (both endangered species) and the important disease-free Addo buffalo population. Lion remains to be introduced, thus completing the Big 5 eco-tourism product, in addition to their importance as process agents.

1 A major region characterised by its flora, fauna and climate.

2 A recognised biologically important area. A number of studies (Nordenstam, 1969; Croizat, 1965; Court, 1988 & Hartmann, 1991) have recognised the Albany hot-spot as an important phytogeographical centre for speciation and endemism.
The proposed Marine Protected Area would allow for the addition of two threatened and one resident whale species and the threatened great white shark, which will make gAENP the first park to offer a unique Big 7 as an eco-tourism attraction.

The elephants in Addo have reached their density limit, thus SANParks have to either expand their habitat or cull excess elephants. Expanding the habitat is the option that has been selected.

Other Red Data Book species e.g. African wild dog, brown hyena and serval are planned to be reintroduced into the park.

The proposed gAENP offers a wide range of suitable protected habitats for terrestrial birds, including some Red Data Book species e.g. ground hornbill, Cape vulture, martial eagle, Stanley’s bustard, kori bustard, grass owl and cuckoo hawk.

The Port Elizabeth-Grahamstown-King Williams Town corridor is known to have a high diversity of reptiles and amphibians including two known Eastern Cape endemic lizards (Tasman’s girdled lizard and Cape legless burrowing skink). The Zuurberg provides particularly important habitat for a high diversity of snakes.

Information on invertebrates in the planning domain is minimal. Known invertebrates that will be protected within the gAENP include the endemic dune grasshopper in the Alexandria dunefields and the flightless dung beetle specially adapted to exploit the faeces of large herbivores in the dense thicket biome. Two

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3 Elephants must be carefully managed at low densities to prevent them from damaging their habitat.
butterfly species may also be protected by the proposed gAENP. The opportunity presented for research could discover many more.

The altitudinal and biological variation available within the park offers important benefits with respect to tracking the impact of global change on the natural environment as well as important migration options for animals.

### 2.2.2 FRESHWATER ENVIRONMENT

The gAENP study domain shows exceptional diversity in landscape settings, and consequently in freshwater ecosystem types. This ranges from rivers that flow infrequently and only for a short duration at a time (in the Karoo) to swamps and marshes of the Alexandria Forests. Although substantiating data is lacking at present, it could be predicted that this exceptional diversity at landscape and ecosystem levels would also be true at the community and species levels.

The proposed gAENP is a relatively small area that shows very high biodiversity in terms of freshwater ecosystems. It is speculated that the freshwater diversity may be higher than what occurs in the entire Kruger National Park.

The gAENP is also important for conservation of the rare Eastern Cape redfin minnows. The Addo population is the most eastern population of fish, which is restricted to the Cape Fold Mountain belt. These fish are particularly vulnerable to alien predators such as the black bass.

Little information is available on the aquatic species of this region, which presents major research opportunities.

### 2.2.3 MARINE ENVIRONMENT

The existence of a marine area which includes islands (uncommon along the African coastline), a permanently open estuary (one of the few in the Eastern Cape Province), and one of the world’s largest and unspoilt coastal dunefields, makes the area a unique Marine Protected Area (MPA). In addition:

Application of the nationally developed COMPARE\(^4\) methodology (Specialist Report 3) for evaluating MPAs in South Africa affirmed the viability of a MPA in Algoa Bay. Group scores of 84%, 75% and 85% for achieving "Protection", "Fisheries Management" and "Utilisation" goals respectively, were determined.

Algoa Bay is an ideal area to protect breeding and nursery grounds of many commercially exploited linefish.

The high degree of endemism\(^5\), combined with the presence of vulnerable and threatened species, affords global significance to the proposed gAENP MPA.

The major sandy beach ecosystems of the Eastern Cape and their associated fauna are not conserved adequately, and proclamation of the proposed gAENP MPA would make an important contribution in this respect by adding about 80km of relatively pristine sandy shoreline to the existing South African MPA network, which has a poor quota of sandy beaches conserved.

The Alexandria beach is the longest contiguous and least impacted stretch of coastline in South Africa where the important diatom *Anaulus australis*\(^6\) occurs, lending it national significance.

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\(^4\) Criteria and Objectives for Marine Protected Area Evaluation.

\(^5\) Endemic species are found only in a particular and usually restricted geographic area or region.

\(^6\) Surf diatoms are an extremely important source of food to animals living within the surfzone and on adjacent sandy shore beaches. *Anaulus australis* accounts for over 95% of the primary production along the Algoa Bay shoreline.
About 280 species of macroalgae are reported from the Algoa Bay area, of which about 38% are endemic to South Africa.

Marine invertebrate species diversity and endemism of the South African coastline peaks in the Algoa Bay area, with about 45% of species endemic to South Africa. An MPA in the Algoa Bay area, in conjunction with existing marine reserves, would place over 86% of endemic marine invertebrates under protection.

A MPA sited in the Algoa Bay area would significantly increase the number of endemic coastal marine fish afforded protection.

Of the 23 seabird species regularly seen in Algoa Bay (one quarter of the seabird species recorded in South African waters), half are Vulnerable, Threatened or Near-threatened. Eight of the 15 South African resident seabird species breed in Algoa Bay, either on islands or on the shore of the adjacent coast.

The island groups of Algoa Bay support the largest population (43% of the global population) of the vulnerable African penguin, endemic to southern Africa. They also support significant populations of Cape gannet (39% of the global population), which is also endemic to southern Africa, and the roseate tern. Virtually the entire Indian Ocean breeding population of Antarctic tern also roosts on Bird Island during the winter months.

Nine of the approximately 30 South African species of whale, dolphin and seal are relatively common in Algoa Bay. During spring a large population of threatened southern right whales, *Eubalaena glacialis*, enter the bay and calve in the inshore waters of the proposed marine reserve.

The seas around Bird Island are famous for their populations of the threatened great white shark, *Carcharodon carcharias*.

The Sundays River estuary is of particular conservation significance. Of the 289 river mouths along the southern African coast, the Sundays River is one of only 37 (or 12.8%) that maintain a permanent connection with the sea. The Sundays River estuary is ranked eighth out of the 42 estuaries studied in terms of diversity (Turpie, 1995).

Algoa Bay is an area of high diversity, being in the overlap between biogeographical regions, and approximately 38% of the algal species occurring in Algoa Bay are endemic to South Africa.

2.2.4 SOCIO-ECONOMIC AND ECO-TOURISM

The Eastern Cape Province, and in particular the eastern half, with its relatively high human population (third highest in the country) and high incidence of poverty has been identified by the South African Government as one of the provinces most in need of socio-economic development. The establishment of the gAENP would assist in poverty relief and socio-economic development of the area. Chapter 5 assesses the opportunities presented by the socio-economic environment for the gAENP.

The existing AENP already has a relatively well-developed eco-tourism industry that is making a positive contribution to the regional economy. Since conservation related forms of land use (such as game farming and eco-tourism) have been found to be economically and environmentally more sustainable than livestock farming in thicket vegetation (Stuart-Hill & Aucamp, 1993), the expansion of the park potentially offers further socio-economic yet environmentally friendly development opportunities to the province as well as
employment opportunities for local people. The fact that the Eastern Cape Province now boasts over 500 game farms, twice as many as a decade ago, is significant of the economic justification for this industry.

2.3 THE MISSION AND OBJECTIVES OF THE PARK

SANParks’ mission for the gAENP is “To create a park of global significance, conserving the unique mixture of biodiversity, unsurpassed in southern Africa, in one geographic region for the benefit of all”.

Specific objectives are:

?? To conserve in perpetuity the biodiversity patterns and processes characteristic of landscapes and habitats associated with the complexity of the Eastern Cape region.
?? To enhance socio-economic benefits for the region by promoting a sustainable eco-tourism industry as an economic engine.

SANParks aims to achieve these objectives by:

?? The protection of areas with high, unique and threatened biodiversity.
?? The protection of the minimum area necessary to maintain ecological patterns and processes within the system as a whole and the separate biome components.
?? Securing the long term conservation of important components and reduce critical threats facing the park.
?? Formulating and implementing a park conservation plan.
?? Promoting a sustainable ecotourism industry based upon the biological and aesthetic resources of the park.
?? Promoting the value of conservation amongst the surrounding communities.
?? Facilitating inter-institutional cooperation and management of the project.
?? Promoting capacity building in neighbouring communities as a means of enhancing the economic potential of the region through environmentally accepted development options.

2.4 SUPPORT BASE FOR THE gAENP

2.4.1 GOVERNMENT

The national Government supports the establishment of conservation areas for the protection of biodiversity, as South Africa is a signatory to the Convention on Biological Diversity (Rio de Janeiro 1992), and therefore is duty bound to establish reserves for the conservation and sustainable use of threatened species, habitats, living resources and ecological processes.

The proposed terrestrial component of the gAENP will satisfactorily conserve biodiversity by conserving 5 of the 7 terrestrial biomes occurring in South Africa and their associated vegetation types. Some of the vegetation types are poorly conserved and the gAENP will substantially increase the percentage of these under conservation. See section 4.2 for more detail on percentages of vegetation types that will be conserved.

The implementation of Marine Protected Area (MPA) policy and an understanding that a target of 20% of the nation’s coast be protected (as recommended by the
World Conservation Union (IUCN)) has been enshrined under objectives D2.1 and D2.2 of the White Paper on Sustainable Coastal Development in South Africa (WPSCD, April 2000).

A Committee for Coastal and Marine Systems, established by the Council for the Environment, recommended 12 marine and adjacent onshore areas as candidates for special protection and management by a conservation body. One of these areas is the Woody Cape coast from the mouth of the Sundays River eastwards to Kenton-on-Sea, including the Bird and St Croix island groups (Payne & Crawford, 1989).

MPAs collectively cover 17% of the South African coastline, although only about 4.9% of the coastline has all forms of exploitation prohibited. Additionally, the conservation of representative portions of each marine and coastal ecotype has not been achieved, and the sandy shores of the Eastern Cape are not adequately protected in the current MPA network of South Africa (Attwood et al., 2000). The proposed gAENP MPA would rectify this situation.

2.4.2 FINANCIAL SUPPORT

Financial support has been forthcoming from a number of sources. The Global Environment Facility (GEF), through the World Bank, agreed to support the gAENP proposal in the form of a Project Development Fund (PDF) Block B grant to consolidate information towards drafting a full proposal to GEF. The current specialist studies and Strategic Environmental Assessment (SEA) have been funded by this grant. Information from these studies will be used to guide the expansion of the park along accepted biological and socio-economic criteria. The GEF funded project is predominantly a desktop information assimilation exercise.

DEAT has allocated just over R52 million for the Addo project. The objectives of this poverty alleviation programme include: a) Creating employment, b) Utilising labour for development of the park, c) Training, uplifting and creating SMMEs in order for local people to be able to continue with the programme even after poverty relief. Projects include erecting new fences, fence removals, rehabilitation of farmsteads, upgrading existing tourist roads and the entrance road from N2 to link up with current areas, small new rest camp, and eradication of jointed cactus. About 300 – 350 people would be employed in this phase and about 500 in the following phase.

A total of R3.2 million has been allocated to the Working for Water programme around Addo this year. A number of employment opportunities exist in this programme for the eradication of alien plants within the planning domain.

2.4.3 PUBLIC

In recognition of the environmental significance and development potential of the gAENP, a stakeholder workshop was held in February 1999 during which the following was declared:

- Support for the greater Addo Elephant National Park concept.
- Recognition of the global importance of its biodiversity.
- Recognition of the potential for sustainable social benefits at the regional, national and global levels.
**Awareness of the urgency and need for progress on the greater Addo Elephant National Park.**

**Recommendation for the continuation of the application to the Global Environmental Facility and other potential sources of funding, including national government.**

**Recognition for the need to address all issues raised at the workshop, particularly the need for a feasibility study, the incorporation of stakeholder concerns, and clarity on institutional structures and roles.**

**Calls for these issues to be integrated into a proper investigation, planning and communication process to be implemented by the restructured Addo Planning Forum.**

**Calls for the South African National Parks to drive the process in cooperation with provincial and other stakeholders.**

This same workshop also called for a reconstitution of the Addo Planning Forum to include a broader base of stakeholders. The Addo Planning Forum now meets once a quarter and includes representatives from East Cape Nature Conservation, Department of Land Affairs, Department of Water Affairs, Local Government offices, Local communities, Local Economic Development, Business (PERCCI), East Cape Tourism Board, PE tourism, Agri Eastern Cape, Sundays River Irrigation Board (SRIB) and NGOs. The main functions of this forum are:

- To ensure that stakeholder interests are known and fully considered by SANParks.
- To communicate progress and planning proposals to stakeholders.

The current public participation process has also indicated that although there are a lot of queries and concerns, overall the gAENP programme is supported (Section 8 (this volume) and Specialist Report 5 deals with public issues and mitigation measures in more detail). Certain parties will be negatively affected and ways of reducing the severity of these effects will need to be explored.

### 2.5 **WHAT GUARANTEES ARE THERE THAT THE INTERESTS OF THIRD PARTIES WILL BE CONSIDERED?**

The World Bank Safeguard Policies are designed to safeguard the interests of third parties who may be affected by Bank operations. The following policies were scoped to determine which are triggered:

- Operational Policy 4.01: Environmental Assessment
- Operational Policy 4.02: Environmental Management Plan
- Operational Policy 4.04: Natural Habitats
- Operational Policy 4.07: Water Resources Management
- Operational Policy 4.12: Involuntary Resettlement
- Operational Policy 4.11: Cultural Property
- Operational Policy 10.04: Economic evaluation of investment operations
- Good Practice 14.70: Involving non-governmental Organisations in Bank-Supported Activities
- Bank Procedure 17.50: Disclosure of Operational Information
- Operational Directive 10.70: Project Monitoring and Evaluation
Through intensive consultation with the Bank, it was agreed that OP 4.12, OP 4.11 and OP 4.01 are triggered.

**Operational Policy 4.01: Environmental Assessment**

This project falls into a Category B project as defined in OP 4.01. In the initial stages of the project, agreement was reached with the National Department of Environmental Affairs and Tourism and the Bank that whilst OP 4.01 was triggered, an SEA would be the most appropriate instrument to meet the requirements. The SEA has taken the natural (air, water, vegetation, faunal, soil, agriculture, geology and landform) and social aspects (involuntary resettlement and cultural property) into consideration. The SEA was initiated early in project design, and is closely integrated with the economic, financial, social and technical analyses of the proposed project.

This SEA meets many of the content requirements for a Category B project (OP 4.01b), although opportunities and constraints presented by the environment are considered rather than the expected impacts of the project on the environment. An Environmental Management Plan (EMP) (OP 4.02) has not been included in this SEA as this will form part of Phase 2 after public and authority concerns have been incorporated and specific projects within the gAENP initiative are implemented.

Where detailed environmental assessments may be required, South Africa’s Environmental Impact Assessment regulations will be triggered and complied with (see Section 3.1 for more detail). These are considered best practice in middle income countries and meet World Bank requirements.

**Operational Policy 4.12: Involuntary Resettlement**

A Resettlement Policy Framework (RPF), including an Income Restoration plan, has been developed as part of this project and addresses all requirements of OP 4.12. In addition Resettlement Action Plans (RAPs) have been compiled for households to be moved in the short term i.e. priority farms. The RAPs are detailed plans for each specific household. Farm labourers are generally unskilled or trained only as farm workers. Being removed from their environment will place them at a disadvantage when moved to a society where they may not have skills to compete effectively.

The RPF will be developed in parallel with a social impact assessment, with the same social scientist leading both components, and in consultation with the government and affected communities. Due to the nature of the proposed project, some people may have to be relocated and it is inevitable that some people will be adversely affected, as resettlement is a disruptive process. The RPF will strive to ensure that potentially adverse effects on most of these people are mitigated or avoided.

A Social Monitoring Programme has been developed as a part of the current studies (Specialist Report 8). This report contains guidelines on the different categories of stakeholders and criteria to be monitored. This programme will be extended and implemented as part of the Communication Strategy and the Resettlement Policy Framework.

**Operational Policy 4.11: Cultural Property**
The Bank’s general policy regarding cultural properties is to assist in their preservation, and to seek to avoid their elimination. SANParks will ensure that cultural property e.g. graves, gravesites and bushman paintings are protected as the conservation of the diverse cultural heritage is part of its business as well as the fact that it could contribute towards enhancing the tourism potential of the area.

Local graves and gravesites will not be relocated from their original positions. SANParks will allow controlled (for safety reasons from potentially dangerous animal species) access to graves and gravesites.
3. THE GREATER ADDO ELEPHANT NATIONAL PARK STRATEGIC ENVIRONMENTAL ASSESSMENT

3.1 WHAT IS AN SEA?

During discussion with SANParks, the Department of Environmental Affairs and Tourism (DEAT) and the World Bank, it was agreed that the preferred approach to planning the gAENP would be to undertake a Strategic Environmental Assessment (SEA). An SEA looks at the socio-economic and biophysical environment of a proposed programme in order that an environmentally satisfactory programme can be developed before it is adopted.

An SEA does not preclude the need to undertake separate Environmental Impact Assessments (EIAs) in terms of national EIA Regulations at the point that such regulations may need to be complied with. Further, compliance to Bank policies as evidenced by OP 4.12 will take place for the duration of the project.

In general SEAs are a widely accepted instrument for integrating environmental issues into the formulation of plans and programmes, by ensuring that these issues are addressed from an early stage and incorporated throughout the process. The main benefits of an SEA are to:

?? pro-actively inform the development of plans and programmes;
?? identify the opportunities and constraints that the environment places on development;
?? provide guidelines to ensure that the development is within sustainable limits;
?? integrate across areas, regions or sectors;
?? improve the way in which cumulative effects are dealt with in environmental assessments; and
?? focus on the maintenance and enhancement of a chosen level of environmental quality, rather than on minimising individual impacts.

The goals of the SEA for the gAENP are to incorporate environmental and social aspects into the higher level planning process to ensure these aspects are considered in the gAENP planning process by dealing with them early on in the process. This will enable all opportunities (or positive impacts) presented by the environment to be enhanced and the constraints (or negative impacts) to be minimised.

Stakeholders and other Interested and Affected Parties (I&APs) have been encouraged to become involved in the process from an early stage, to ensure that a transparent planning process is achieved.

The conservation planning, socio-economic and institutional assessments undertaken as part of this GEF funded study fed into the SEA to assist in the identification of:

?? Social, economic and biophysical resources that should be maintained and/or enhanced;
?? Social, economic and biophysical trends on all relevant scales, which will influence the maintenance and enhancement of these resources; and
The existing institutions, legislation, policies, plans and programmes that will influence the maintenance and enhancement of the environmental resources.

It should be noted that *environment* is defined broadly to include both social and biophysical aspects. This is in line with Chapter 5 of the National Environmental Management Act (NEMA) of 1998. Hence, the aim is to identify, describe and evaluate the significance of the various linkages between social and natural aspects of the environment, thereby providing better information to the decision-maker.

It should also be noted that the spatial scale of the specialist studies undertaken varied, depending on the topic under investigation. Hence, for instance, the biophysical and social assessments focus on the study area, whereas the legal, economic, tourism and institutional assessments include a broader area in order to consider the inter-linkages between the proposed gAENP and the Eastern Cape Province as a whole. This approach may be termed a *nested focus*, whereby the area including and immediately adjacent to the proposed park is the primary focus for investigation, but areas further afield are considered with respect to their interaction with that focus area.

Although only one overriding land use option is being considered, i.e. conservation, various options regarding boundaries and institutional and management strategies are considered.

### 3.2 HOW WAS THIS SEA UNDERTAKEN?

The gAENP SEA process has involved interaction with specialists, the client, authorities, the World Bank and the public. Figure 3.2 is a schematic representation of the process being followed for this SEA.
Figure 3.2: Schematic representation of the gAENP SEA process
3.3 WHO WAS INVOLVED IN THE SEA?

The study team consisted of the following institutions and members:

?? Coastal & Environmental Services (CES): Dr A.M. Avis, as project manager, was responsible for managing the socio-economic specialist studies and together with Michelle Griffith co-ordinated and managed all aspects of the SEA and synthesised and integrated the key findings into the final report. Ndumiso Nongwe was part of the social assessment team and assisted with farm surveys. Sub-consultants were assigned to various subtasks as follows:

?? Dr Charlie Shackleton, Rhodes University (Environmental Science Programme) assisted with the project management of the socio-economic specialist studies.

?? Sandy Wren and Mazizi Msutu, of Sandy and Mazizi Consulting, were responsible for the public participation process and drafted an Issues Response Trail (Specialist Report 5).

?? Teresa Connor, of T. K. Consulting, was involved with farm surveys and assessed various socio-economic aspects within the planning domain (Specialist Report 6).

?? Prof. Chris de Wet, Rhodes University (Anthropology), drew up a resettlement framework plan (Specialist Report 7).

?? Maura Andrew, Rhodes University, drew up the Social Monitoring Programme (Specialist Report 8).

?? Bev Geach assisted with the socio-economic and tourism institution studies and investigated policies applicable to the proposed gAENP (Specialist Reports 9, 15 & 17).

?? Prof. Geoff Antrobus, Rhodes University (Economics and Economic History), undertook the cost benefit analysis (Specialist Report 10).

?? Richard Davies produced economic forecasts for tourism options in the gAENP (Specialist Reports 11 – 13).

?? Herman Timmermans (Rhodes University, Institute of Social and Economic Research) and Lawrence Sisitka produced the institutional assessment of the planning domain (Specialist Report 14).

?? Imbewu was responsible for determining the legal issues regarding the expansion of the park (Specialist Report 16).

?? Prof. Robin Palmer, Maura Andrew and Sheona Shackleton, Rhodes University, were involved in various expert workshops to discuss the opportunities and constraints presented by the socio-economic environment for the expansion of the park.

?? AFRICON Engineers were responsible for including cadastral and census data into GIS databases and maps.

?? The CSIR-TERU-IECM consortium produced the conservation plan (C-Plan) for the proposed gAENP (Specialist Report 1), which included terrestrial and aquatic components. Principal CSIR participants included Dr B. van Wilgen, J. Nel, S. Davies and I. Mitchell, with substantial support from Dr M. Lombard, and were responsible for consolidating the conservation plan. The Terrestrial Ecology Research Unit (TERU – Prof R. Cowling, Dr A. Boshoff and Prof G. Kerley) focused on the terrestrial conservation planning aspects (vegetation mapping, conservation planning protocols and mammal planning exercises) (Appendices 4
& 5 of Specialist Report 1). A report on the freshwater component was produced by Albany Museum (Drs J. Cambray and F. de Moor), CSIR Environmentek (Pretoria) (Dr D. Roux) and Afridev Associates (White River) (Specialist Report 2). The Marine Protected Area report was compiled by Dr Brent Newman, Institute for Environmental and Coastal Management (IECM), University of Port Elizabeth and Dr N. Klages, Port Elizabeth Museum at Bayworld, with additional input from a variety of specialists (Specialist Report 3).

SANParks commissioned a cultural resource inventory for the planning domain through Dr L. Webley and her team, namely Dr B. De Klerk, Mrs F. Way-Jones and Mrs M. Cocks of the Albany Museum, Grahamstown. This inventory did not form part of the original Terms of Reference.

3.4 WHAT WERE THE GOALS AND OBJECTIVES OF SPECIFIC TASKS?

The gAENP objectives:

a) Consolidate and evaluate the current biological and physical information for both the terrestrial and aquatic environments in order to facilitate the development of a systematic and strategic conservation plan for the gAENP.

b) Assess the current social, economic and institutional environments of the planning domain.

c) Assess the potential opportunities and constraints presented by the environment for the proposed gAENP.

d) Assess the viability and sustainability of the proposed gAENP.

e) Draft a full project proposal to GEF using the above information.

The main deliverables were the biological, social, economic/financial, institutional, legal, tourism (Volume 1) and SEA (Volume 2) components. These components were made up of a number of subtasks, which have been undertaken by various specialists. A conservation plan for gAENP, drafted primarily from an assessment of the biophysical components, is one of the principal reports, along with the SEA, to emerge from the project.

Based on these studies, SANParks will produce a full project proposal, incorporating the findings of all the above-mentioned reports, for consideration by GEF, the World Bank and the donor community.

Thus, the scope of work involved in compiling the specialist reports and the SEA was vast. The study was divided into three main tasks, each of which was again divided into subtasks, which were undertaken by various sub-consultants. The following is a brief description of the terms of reference and goals for the various tasks and subtasks.
### Specific Terms of Reference (TORs) for project components

**TASK 1. Conservation planning**  
**Goal:** To consolidate and evaluate the current biological and physical information from both the terrestrial and aquatic environments in order to facilitate the development of a systematic and strategic conservation plan for the proposed greater Addo Elephant National Park (gAENP).

- **Subtask 1. Terrestrial component**  
  **Goal:** To consolidate and evaluate the current biophysical information associated with the terrestrial environment needed to draft a conservation plan for the gAENP.

- **Subtask 2. Aquatic component**  
  **Goal:** To consolidate and evaluate the current biological, chemical and physical information associated with the aquatic environment (marine, coastal, estuarine and freshwater), inclusive of off-shore islands and their associated terrestrial habitats, needed to draft a conservation plan for the gAENP.

**TASK 2. Strategic Environmental Assessment**  
**Goal:** To assess the opportunities and constraints of the total environment on the proposed gAENP programme, and to assess the biophysical and socio-economic sustainability of the proposal.

**TASK 3. Socio-economic and institutional assessments**  
**Goal:** To assess the potential social, economic and institutional viability of the gAENP.

- **Subtask 1. Social component**  
  **Goal:** Identify and assess the social environment in relation to the ideals associated with gAENP.

- **Subtask 2. Economic and financial component**  
  **Goal:** To determine whether the economic opportunities of the gAENP represent a viable form of land use within the planning domain, and broader provincial and national context.

- **Subtask 3. Institutional assessment**  
  **Goal:** To strengthen the institutional and regulatory framework to promote effective conservation within gAENP.

**TASK 4. Process facilitation**  
**Goal:** To streamline, focus and highlight inter-relationships between the terms of reference of the individual components through a consultative process.

**ADDITIONAL TASK: Cultural Heritage**  
**Goal:** To analyse and map all relevant and available cultural information and sites within the gAENP planning domain and catalogue this in Microsoft Access to ensure constant updates towards implementing a cultural resource management strategy for SANParks.
3.5 HOW WAS THE PUBLIC INVOLVED?

3.5.1 INTRODUCTION

Public participation by its very nature is a dynamic process with various sectors of society often having needs, values and interests that conflict. According to the Development Facilitation Act 67 of 1995, public participation is important because:

- It introduces local knowledge and understanding of local needs.
- It generates ideas.
- It broadens the debate.
- It leads to more satisfaction and inclusive decisions.
- It contributes to capacity building and reducing dependency when people have participated in the formulation of decisions.
- It can be used to transfer skills for income generating purposes.

Sandy & Mazizi Consulting were appointed as independent consultants by Coastal & Environmental Services to facilitate the Public Participation Process for the proposed gAENP programme. Specialist Report 5 contains more detail on the public participation process.

3.5.2 APPROACH TO PUBLIC PARTICIPATION

The goal of the gAENP public participation process is:

"To create opportunities for I&APs within and around the study area to receive information, participate in the process, and raise issues and concerns with regards to the establishment of the proposed greater Addo Elephant National Park so that they may be considered as part of the decision making process."

A four-phased approach to public participation was developed in consultation with the representatives of the National Department of Environmental Affairs and Tourism, Provincial Department of Economic Affairs Environment and Tourism, South African National Parks, Coastal & Environmental Services and Sandy & Mazizi Consulting.

Stage One: Identification of and networking with Interested & Affected Parties (I&APs)

The identification of I&APs in an area the size of the gAENP planning domain is a difficult task. I&APs were identified as follows:

- Existing database supplied by SANParks from the 1999 Stakeholders Workshop.
- Newspaper advertisements requesting I&APs to register.
- Networking and consultation meetings with identified I&APs.
- Advertisement in the East Cape Game Management Association Publication.
- Newspaper Advertisements were placed as follows:

...
Issues and concerns were gathered via submissions as a result of the newspaper advertisements, telephonic discussions with I&APs and networking and consultation meetings.

Networking meetings are an additional mechanism used to identify I&APs, issues and concerns. Networking meetings are one-on-one meetings between the participation consultant and key I&AP groups. In these meetings background information is provided on the project, the SEA and the participation process is explained. I&APs are also provided the opportunity and to raise issues and concerns. The proposed gAENP covers 400 000 hectares, in order to identify issues and concerns for consideration in the SEA, the networking meetings focused on the active participation of directly affected I&APs.

Out of a database of 495 I&APs, 234 were recorded as having participated in networking meetings.

The following provides an overview of the groups consulted:
Civic Organisations, Farmers Associations, Landowners, Businesses, Farm Labourers, Labour Unions, Local Authorities, Councillors, Community Based Organisations, Surrounding Landowners and Residents Associations.

Stage Two: Communication Strategy (ongoing)
Communication with I&APs is an ongoing activity that occurs for the duration of the project. This includes holding public meetings, distributing briefing papers, written communication with I&APs and networking meetings. It is a gradual process of sharing information and in so doing developing the capacity of I&APs to actively participate in the process.

To facilitate communication with I&APs, a Briefing Paper translated into English, Afrikaans and Xhosa was developed and distributed. The Briefing Paper provided I&APs with background information on the project, the process and timeframe for the SEA and Public Participation Process as well as a map of the planning domain.

As part of the ongoing communication process all I&APs on the database were notified in writing of the availability of the Draft SEA and were invited to attend Public Information Meetings where an overview of the SEA was given and an opportunity provided for comment.

All reports and project-related information have been made available on the CES website.

Stage Three: Draft SEA and Issues Report
The issues identified during stage one of the process have been forwarded to the specialist consultants and project proponent for their consideration and response. This has been included in the Issues and Response Trail as part of the interim Public Participation Report to be released for I&AP comment.
The Draft SEA, including the Participation Report, Issues and Response Trail was released at the end of March 2002 for I&AP comment. A comment period of 28 days was provided. To facilitate feedback, copies of the Draft SEA and Specialist Reports were placed at strategic locations within the study area for I&APs to view.

Due to the rural nature of the area farmers associations and local authorities were provided with copies of the Draft SEA in order to facilitate public comment. In addition, all I&APs on the database were mailed a copy of the Executive Summary of the Draft SEA and Issues and Response Trail.

During the public comment period Public Information meetings were held to provide I&APs with an overview of the Draft SEA and facilitate comment on the report. The Draft SEA was also be made available on the CES website.

**Stage Four: Final SEA and Comments Report**

This stage of the process involves the submission of the final report to the involved authority for comment. The report will contain additional comments received from I&APs during the review stage and outline the participation that has been implemented.

**3.6 WHAT ARE THE CONSTRAINTS AND LIMITATIONS OF AN SEA?**

As with most programme assessments, limitations exist due to the challenges of applying SEA guidelines to the gAENP SEA.

*Fundamental alternatives:* The most critical limitation of this SEA is that it does not adequately address fundamental alternatives. The goals for this SEA (as outlined in Section 3.1) focus on the establishment of the gAENP. Consequently, the specialist studies and the research undertaken as part of the SEA were aimed at, in part — “Identifying and assessing the social environment in relation to the ideals associated with the gAENP”. Similarly, all research on the biophysical environment has focused on conservation planning. The consequence of this is that the SEA does not adequately address the alternative of improving the status quo by, *inter alia*, providing recommendations to advance agricultural production in the area. This limitation is tempered to a certain extent by the fact that it also does not discuss the limitations to agriculture in any detail.

Furthermore, the lack of an analysis of alternatives is often the case in any development where the alternative option is usually the status quo, as neither a proponent, nor funds have been sought or offered to advance the status quo.

*Incremental alternatives:* The SEA does examine incremental alternatives in the form of various development options for the gAENP and some boundary options.

*Opportunities and constraints:* It was found to be difficult to separate opportunities and constraints for the gAENP from those of current land use. Frequently a constraint for one option could be perceived as a benefit for the other, and visa versa. Since the SEA specialist studies focused on the gAENP option, less information on current land use was collected for comparative analysis, making it
difficult to identify both opportunities and constraints. However, the cost-benefit analysis was undertaken to specifically address this limitation.

Sustainability criteria: This limitation is more specific in that criteria concerning sustainability are more readily applied to the natural environment than in a social and economic context. It is relatively easy to establish criteria of environmental quality, to decide which natural resources need to be maintained or enhanced, to consider alternative approaches and to set levels of acceptable change. It is more difficult, and in some areas impossible, to apply these criteria in assessing socio-economic sustainability in communities, and economic/financial sustainability overall.

Information gaps: One of the aims of this project was to accumulate and assess available information. Information gaps have thus been identified by the process and are presented in Section 3.7.

3.7 WHAT ARE THE MAJOR INFORMATION GAPS?

This section describes gaps in the existing knowledge base, and gaps in process and implementation of the gAENP that were identified during the course of the proposal investigation. The priority projects listed below in Table 3.7 are evenly balanced between the three managerial imperatives:

- **Understanding biodiversity (B):** This pertains to inventorisation (or pattern analysis) of the biological diversity in the gAENP.
- **Understanding its ecological function (E):** This relates to the processes behind the above diversity i.e. To make sure this biodiversity pattern is not lost.
- **Effective park management (M):** How best to manage the biodiversity to sustain it in the future.


### Table 3.7: Recommended PRIORITY environmental, and socio-economic information gaps.

<table>
<thead>
<tr>
<th>Biodiversity pattern (B), Ecological function (E), and park management (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Title</strong></td>
</tr>
<tr>
<td>1. Terrestrial Component</td>
</tr>
<tr>
<td>☒ The restoration and/or rehabilitation of degraded ecosystems</td>
</tr>
<tr>
<td>☒ The impacts of mega-herbivores</td>
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<tr>
<td>☒ The establishment of a conservation planning unit</td>
</tr>
<tr>
<td>☒ Ongoing surveys of biodiversity</td>
</tr>
<tr>
<td>☒ An evaluation and review of the gAENP conservation project</td>
</tr>
<tr>
<td>☒ The development of an environmental management system and infrastructure planning</td>
</tr>
<tr>
<td>☒ Testing the current hypotheses used in conservation planning (incl the use of surrogates)</td>
</tr>
<tr>
<td>☒ Economic model for the value of biodiversity and ecosystems services</td>
</tr>
<tr>
<td>☒ Climate change / carbon sequestration</td>
</tr>
<tr>
<td>2. Marine Component</td>
</tr>
<tr>
<td>☒ Undertake comprehensive mapping of habitat types</td>
</tr>
<tr>
<td>☒ Mapping and monitoring of biodiversity</td>
</tr>
<tr>
<td>3. Freshwater Component</td>
</tr>
<tr>
<td>☒ Develop inventory of wetlands</td>
</tr>
<tr>
<td>☒ Assess the present and potential impact of alien species</td>
</tr>
<tr>
<td>☒ Ecological reserve in rivers</td>
</tr>
<tr>
<td>☒ Assess which rivers are important as migration corridors for species such as eels and mullet and develop an implementation plan for conserving the process of migration for rivers</td>
</tr>
<tr>
<td>☒ Comprehensive Estuarine Freshwater Reserve (EFR) determination</td>
</tr>
<tr>
<td>4. Social &amp; financial</td>
</tr>
<tr>
<td>☒ Socio-economic and cultural baseline study of specific park area</td>
</tr>
<tr>
<td>☒ Resettlement framework and implementation strategy for park</td>
</tr>
<tr>
<td>☒ Development of strategies (communication &amp; marketing)</td>
</tr>
<tr>
<td>☒ Develop institutional capacity via a Park Committee</td>
</tr>
<tr>
<td>☒ Drafting and implementation of park policies (land inclusion, commercialisation, resettlement)</td>
</tr>
<tr>
<td>☒ Exploration and implementation of social and economic partnerships with private landowners, communities and business</td>
</tr>
</tbody>
</table>

#### 3.7.1 INFORMATION GAPS LIMITING THE SEA

**Cultural resources:** A cultural resource inventory was not included as part of the original Terms of Reference for this phase of the planning of the gAENP, but has been subsequently been included. The Terms of Reference for the study are included in Appendix 2.

**Tourism market analysis:** The lack of a clear understanding of present tourism trends in the Eastern Cape was an important information gap. A thorough tourism market analysis is required to accurately determine the viability of the gAENP as an eco-tourism destination. Tourism data are available, but further analysis is required to determine *inter alia* the number of tourists, where they come from, why they come, their destination, what they spend, what tourists most look for, potential for tourism to grow, job creation possibilities and possibilities for community-based tourism. There is also an inadequate understanding of micro-economic (e.g. Bed & Breakfast)
resources in the planning domain. Links with tourism organisations to plan and encourage tourism in the Eastern Cape are required.

Financial Management: The lack of available data needed to determine a robust financial model for the entire park, has also been identified. A financial model for the present (expanded) park was developed as part of this SEA (see Specialist Reports 10 – 13 and Chapter 6). This model covers a known area of 156 000ha. It is not possible to develop a robust financial model for the expanded park, as the exact boundaries are not known at this time. This is a result of the dynamic and fluid nature of the C-Plan model, which aims to optimise biodiversity conservation arising from land acquisition. Thus, as suitable land is purchased, changes to the exact boundary of the park occur.

3.7.2 INFORMATION GAPS TO BE INSTIGATED AT THE IMPLEMENTATION PHASE

Wildlife utilisation: The demand for live game, especially disease-free buffalo, in the future is unknown. As the sale of game can be a major source of income for the park, this information should be monitored. Other uses of wildlife in the Eastern Cape also need be monitored.

Legal aspects: Various gaps in legal information were identified:

- Title deed searches for servitude, usufructs, mineral rights and restriction information is required. (e.g. usufructs, servitudes and interdicts).
- Land claims searches.
- Investigations of tenure rights.
- Water use registrations and licensing investigations.
- Grazing rights associated with Darlington Dam need be assessed.
- All permits issued to third parties by national and provincial nature conservation officials need to be investigated and decisions made in regard to their retraction in certain cases and the payment of compensation. For example, permits issued for the removal of marine resources from the marine area of the park may need to be retracted.
- Although limited communal land exists in the planning domain, SANParks has no intention of purchasing any properties, but would actively consider contractual arrangements.

In spite of these difficulties and information gaps, it is possible to assess the opportunities and constraints presented by the environment for the proposed gAENP.
4. THE NATURAL ENVIRONMENT

The natural environment consists of the terrestrial and aquatic (freshwater and marine) environments. Since the main goal of the gAENP is to preserve the biodiversity of the region in perpetuity, biodiversity priority areas were determined using a strategic GIS conservation-planning tool, called C-Plan (C-Plan, 2001).

4.1 WHAT IS CONSERVATION PLANNING?

Conservation Planning is a tool used to identify conservation priorities in an area in a systematic and defensible manner. Priority areas are those areas that would ensure biodiversity pattern as well as the natural processes that support and drive it, is protected.

The conservation planning process for the gAENP conservation programme dealt with:

- The identification of existing biodiversity (Section 4.2).
- The identification and spatial representation of biophysical patterns and processes (Section 4.3) present in the planning domain.
- The identification, spatial representation and projection of current and future limitations (threats) to the preservation of biodiversity (Section 4.4).
- Setting of targets (Section 4.5) to ensure representation and persistence of biodiversity pattern and process in the gAENP planning domain.

Once the patterns, processes and limitations present in the planning domain had been determined and targets set, various options for achieving the minimal area necessary for reaching conservation targets were identified, using C-Plan. This process is a dynamic one, and as new areas are added to the reserve system or are transformed by development, the optimal alternatives for reaching conservation targets change.

It is important to note that the outputs of the C-Plan analysis represent just one of several options for achieving conservation targets. The choice of which alternative to implement will be determined by other considerations such as social and economic sustainability. The C-Plan analysis merely indicates which areas are important, but does not make recommendations as to which management models may be appropriate for implementation. Thus many areas selected to achieve conservation targets may be more appropriately managed as off-state proclaimed areas but under some form of contractual arrangement with SANParks. Deciding on appropriate forms of conservation management for each selected property is therefore an important part of implementation.

4.2 HOW BIODIVERSE IS THE PLANNING DOMAIN?

4.2.1 TERRESTRIAL ENVIRONMENT

Biodiversity of the terrestrial environment was determined by mapping the 43 identified land classes/vegetation types scattered amongst the six biomes occurring in the planning domain.
The terrestrial environment is diverse and consists of the Algoa dunefield in the southeast, which is backed by the Indian Ocean (Alexandria) forest. Moving northwards from the coast towards the Zuurberg, a variety of mesic thicket types occur, and two intrusions of mesic thicket into the Indian Ocean forest reach almost to the coast. Fynbos/grassland mosaics occur on the Zuurberg in the central area. Nama Karoo intrusions occur in the north and west of the domain (Figure 4.2a). The east-west aligned Zuurberg range dominates the central part of the planning domain. The Alexandria forest receives the highest rainfall in the planning domain and the areas north and west of the Zuurberg the least.

**Biomes**

The thicket biome is the largest biome represented within the gAENP, covering 69% of the planning domain. It is characterised by dense thicket vegetation with a broad range of plant growth forms and a high diversity of woody shrubs and succulents. Endemism is high, particularly of geophytes and succulent forbs.

The other biomes are relatively small, with Forest occupying 10%, Nama Karoo, 7%, Fynbos, 5%, Grassland, 5% and Savanna, 4%.

The presently fragmented Alexandria Forest occurring within the planning domain, is unique and endemic to the Eastern Cape. The proposed gAENP will serve to consolidate the fragments and protect them as one conservation unit. Areas of Afromontane forest will also be protected in the Zuurberg Mountains.

The Nama Karoo occurs on the semi-arid central plateau of South Africa and is characterised by dwarf shrublands. It is poorly conserved and possibly has a high degree of endemism and plant diversity. The Eastern Mixed Nama Karoo is the most degraded of all vegetation types in South Africa and supports the highest diversity of plant species recorded in the Karoo.

The Fynbos biome has an exceptionally high species diversity and endemism and occurs mainly in the mountainous areas on sandstone soils.

The vegetation type of the Grassland biome within the proposed gAENP consists predominantly of the poorly conserved Coastal Grassland type.

Although the the Savanna biome is the country’s largest biome, it is relatively poorly represented in the gAENP and Eastern Cape by the poorly conserved Eastern Thorn Bushveld.

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7 A plant with its buds situated below ground on a rhizome, tuber, bulb or corm.
Figure 4.2a: Biomes of the gAENP planning domain.
Fauna
A number of faunal species already exist in the protected areas within the planning domain. The most conspicuous and well-known is the Addo elephant (*Loxodontia africana*). The elephants are of a high conservation status and are considered to be keystone species in Subtropical Thicket. The black rhinoceros (*Diceros bicornis bicornis* and *D. b. michaeli*), both endangered species, bred so successfully given the high quality environment, that excess animals have been relocated to other areas within their range. Black rhinos are another important tourist attraction. The proposed park will also be important for the conservation of a broad suite of conservation worthy species, many of which have Red Data Book status but are overlooked purely because they lack charismatic appeal, such as the important flightless dung beetle (*Circellum bacchus*), the endemic dune grasshopper (*Acrtylus hirsutus*), hairy-footed gerbil (*Gerbillurus paeba exilis*) and butterfly such as the (*Aloeides clarki*). See Specialist report 1 (Appendix 5) for more details.

4.2.2 FRESHWATER ENVIRONMENT

Biodiversity of the freshwater environment was measured by noting the physical pattern of each aquatic ecosystem, with the major rivers classified according to 3 levels to develop unique “river signatures”.

The Sundays River and its tributaries form the most significant river system that flows though the gAENP. The Sundays River, which is of great value for irrigation in the lower Sundays Valley, extends well beyond the boundaries of the proposed park, but significant tributaries or at least their headwaters occur within the proposed park. These include the Coerney, Krom, Wit and the Klein Uie rivers. Other important river systems that flow within the planning domain are the upper Bushmans River with its tributaries, the Blou and Steins rivers (northeast), and the Boknes River and its tributaries (southeast). The Sundays and Boknes rivers are the only rivers within the planning domain that flow into the sea (Figure 4.2b).

The Darlington Dam (previously Lake Mentz) is a large (4 350 ha) impoundment within the proposed park that receives Orange River water through interbasin transfer. The Sundays River Irrigation Board manages the water release programme.

Entire river drainage systems or catchments are recognised as ideal conservation units, as they comprise discrete ecosystems and allow management of most associated ecological processes. Incorporating entire catchments into conservation areas is, however, rarely feasible, and the proposed gAENP is no exception. In this regard the subcatchments of the Sundays (Coerney, Krom, Wit and the Klein Uie rivers) remain important, as would part of the Bushmans River catchment in the gAENP.

Nine different types of waterbodies occur in the gAENP, each having a complement of biotopes with characteristic flora and fauna, that collectively add to the broad diversity of the park. The freshwater ecosystems include: perennial rivers; seasonal rivers; episodic rivers; ephemeral rivers; permanent and semi-permanent vleis; seasonal vleis: springs and seeps; episodic endorheic pans; forest swamps and marshes.

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8Species that are important for the maintenance of that particular ecological system.
Figure 4.2b: Ecoregion and rivers of the gAENP planning domain.
A number of threatened faunal species rely on these waterbodies for their survival e.g. freshwater eels require the marine, estuarine and freshwater sections of the gAENP during their complicated life cycle; redfin minnows (*Barbus afer*) are a small but very visible and attractive freshwater fish species in the clear waters of Cape Fold mountain streams and a number of unique and endemic species occur in temporary pools. A number of these species and freshwater systems are under threat from inappropriate river empoundments and developments, active introductions of alien species such as large-mouth bass, and indirect introductions of species through the interbasin transfer programme.

### 4.2.3 MARINE ENVIRONMENT

Biodiversity pattern and process of the marine environment was determined using known marine-estuarine features mapped from SA Naval Charts and expert knowledge.

**Algoa Bay**

Algoa Bay is recognised as being part of the South Coast marine biogeographical province (equivalent to the terrestrial biomes, Hockey & Buxton 1989) of South Africa. The potential to create a Marine Protected Area (MPA) along this stretch of the coast and to link up with the two offshore island groups and the terrestrial component of the park is of national and international significance, as recommended by the IUCN (Kelleher 1999). Given its biological importance in protecting a wide variety of habitats (islands, beaches and estuary), and a large number of vulnerable species (e.g. jackass penguins, roseate terns, humpback dolphins), and over-exploited fishes and critical life stages of some of these species, the area featured very highly on the national COMPARE evaluation technique used by Marine & Coastal Management in assessing the importance of marine areas (see Specialist Report 3).

The proposed gAENP-MPA will be situated along the northwest to north shoreline of Algoa Bay. The bay coastline extends for 90km between the headlands of Cape Recife in the west and Woody Cape in the east, and includes some 80km of surf-swept beaches. These beaches and their associated surfzones vary widely in physical form. Two large, perennial rivers that drain extensive catchment areas, the Swartkops and the Sundays rivers, flow into the bay. The Islands of the Cross, comprising St Croix, Brenton and Jahleel, are located between the Swartkops and Sundays river systems, 2-3 kilometres offshore. A second group, the Bird Islands consisting of Bird, Seal, Stag and Black Rocks, are located approximately 8km offshore from Woody Cape and 65km distant from Port Elizabeth harbour. Both island groups occur inside the 30m depth contour.

As Algoa Bay is at the extreme east of the Agulhas Bank, the fish fauna is made up of species found on both the east and (to a lesser extent) west coasts of South Africa (Japp *et al.*, 1994) and many are endemic to South Africa.

The marine mammal fauna of South Africa comprises in excess of 30 whale, dolphin and seal species. Nine species are relatively common in the area, albeit some only seasonally. These include populations of the bottle-nosed dolphin (*Tursiops truncates*), the nationally critically endangered humpback dolphin (*Sousa chinensis*), the southern right whales (*Eubalaena australis*) and Bryde's whale (*Balaenoptera*.
edeni). Algoa Bay alone is estimated to harbour about 10% of the South African population of humpback dolphins (see Specialist Report 3).

The seas around Bird Island are famous for their populations of the threatened great white shark (*Carcharodon carcharias*), with the reefs around the islands known to support populations of important commercially sought after reef fish. Algoa Bay is important as the number of South African endemic fish peaks off Port Elizabeth – a result of the mixing of east and west coast fishes. Furthermore, with exploitation of fish stocks having increased over the last 50 years, there has been a collapse of the line fishing industry. Of the 27 commercially exploited line fish, 19 (70%) have collapsed (see Specialist Report 3), hence the government state of emergency for this industry (Government Gazette No. 21949 of 2000). Proclamation of the gAENP MPA would assist in rebuilding these species stocks, protect nursery areas, assist with spawning areas for Chokka Squid (*Loligo vulgaris reynaudi*), protect the important soft bottom areas from trawling, and act a source for surrounding areas which in turn would help the fishing industry (both commercial and recreational).

The importance of Algoa Bay in the chokka squid industry is recognised nationally as the fourth largest fishery industry. Sustaining the important spawing grounds in the bay thus remains a priority.

**Islands**

The two island groups within Algoa Bay (Bird Island and St Croix groups) are of great historical and conservation value. The St Croix Island group currently supports the largest population of the vulnerable (Brooke 1984) jackass penguin (*Spheniscus demersus*) in the world. This is also one of the few populations of this species to be showing an increase in numbers, emphasising the conservation significance of this site.

The colony of South African gannets (*Morus capensis*) on Bird Island is the largest colony of this species, and the largest gannetry in the world. Until recently, these birds provided the basis for a lucrative (but ecologically devastating) guano harvest. The penguin and gannet colonies on the islands of the Bird Island group also represent the easternmost colonies of these species. Likewise, the colony of Cape fur seals (*Arctocephalus pusillus*) breeding on Black Rocks of the Bird Island group represents the easternmost breeding range for this species. Other seabirds of conservation significance which occur on both island groups include South Africa's most threatened marine bird, the endangered (Brooke 1984) roseate tern (*Sterna dougallii*) and the South African endemic African black oystercatcher (*Haemotopus moquini*), also classed as a keystone species, which is a near-threatened resident sensitive to human disturbance during breeding in summer.

Six of the seven islands in Algoa Bay are classed as Important Bird Areas, as they are inhabited by threatened and endangered species and because they hold more than 5 000 waterbirds (Barnes 1997), including five seabird keystone species i.e. African penguin, Cape gannet, roseate tern, Antarctic tern and kelp gull. The importance of the islands for seabirds as breeding and roosting sites derives from the fact that they are the only seabird islands along a 1 800km stretch of coastline between Dyer Island near Hermanus in the Western Cape Province and Inhaca Island in Mozambique. Bird Island remains the most important of the roseate tern's
three breeding islands along the South African coast, while it is the only summer roosting island for the Antarctic tern.

The islands, and particularly Bird Island, appear to be an important site for the heavily exploited abalone *Haliotis midae*, which is near the eastern extremity of this species, as well as a suite of other rocky shore macrofauna. The bay appears unique in that near the island group there seems to be an overlap of the two rock lobster species (*Panulirus homarus* and *Jasus lalandii*) and the deeper water South Coast Rock Lobster *P. gilchristi*.

**Dunefields**

The Alexandria coastal dunefield is the largest, most impressive and least degraded coastal dunefield in South Africa, and one of the most spectacular in the world (McLachlan, Sieben & Ascaray, 1982). The dunefield comprises 120km$^2$ of open sand, is 50km long and averages 2.2km wide, with dunes rising from the beach to heights of 150m. The dunefield is a classic example of the dynamic nature of geological processes, and it also provides a unique set of habitats which are not found in other landscapes, namely open sand, bushpockets and duneslacks, all of which support a range of specialist organisms (Kerley, McLachlan & Castley, 1996). The Alexandria coastal dunefield also supports two endemic animals, the dune grasshopper (*Acrotylos hirsutus*) and the dune hairy-footed gerbil (*Gerbillurus paeba exilis*).

The Alexandria coastal dunefield also provides breeding habitat for rare (Brooke, 1984) Damara terns (*Sterna balaenarum*) and African black oystercatchers. The population of Damara terns breeding in the Alexandria Coastal Dunefield represents nearly 25% of the total South African population (Watson & Kerley, 1995) of this highly threatened species (Brooke 1984), and is the only such colony in the Eastern Cape, the next closest colony being at De Hoop, in the Western Cape.

**Sundays River Estuary**

The proposed gAENP would include at least 2km of the Sundays River Estuary, which is relatively pristine, unlike most other large estuaries in the Eastern Cape, which have been extensively developed. Estuaries are widely recognised as being crucial breeding and nursery areas for a wide variety of fish species of commercial and recreational value, and the proposed park would therefore provide an opportunity to manage such a resource in a sustainable and unified manner with the adjacent MPA.

Estuaries are an important part of the aquatic environment, forming transitional links between rivers and the sea. Although estuaries constitute a small part of the area and an even smaller part of the volume of the total marine hydrosphere, they play a vital role in the life history and development of many marine populations. Without estuarine ecosystems, saltwater commercial and recreational fisheries would be significantly altered. In the USA, about 65% of the shellfish and fish catches depend on estuaries to complete their life cycle, hence their similar importance to the South African industry.

Estuaries rank among the environments most affected by humans. Human activities have resulted in catastrophic changes for some systems – having been dredged or
filled and transformed into seaports, marinas, industrial parks, cities and garbage dumps.

4.3 WHAT ECOLOGICAL PROCESSES WILL BE CONSERVED?

To ensure that the biodiversity pattern in all environments persists in the long term, the gAENP conservation planning exercise included important ecological and evolutionary processes e.g. fire, migration, pollination, herbivory and nutrient cycling, all of which maintain biodiversity. These processes were identified but more importantly given spatial parameters and targets essential in the conservation planning exercise e.g. how much river frontage is required to maintain the critical ecological processes and how much linkage between the biomes must there be.

4.3.1 TERRESTRIAL PROCESSES

Terrestrial processes are determined by environmental factors such as topography and climate, as well as biological processes for mammals. Key biological processes for the larger mammals of gAENP were captured in the C-Plan to ensure the persistence of these species in the landscape, and to serve as umbrella species for other taxa (e.g. smaller mammals, birds and invertebrates). Terrestrial processes were grouped into three levels:

i. Landscape-level processes
ii. Population-level processes
iii. Species-level processes

Some of these critical processes are illustrated in Figure 4.3.

**Landscape-level processes**

Fifteen key biological landscape-level processes were identified for the gAENP planning domain. These processes operate within nine spatial components indicated below:

1. **Upland-lowland gradients**: These ensure ecological diversification of plant and animal lineages along extended upland-lowland gradients; local scale adjustment of species distributions to long term climate change along extended upland-lowland gradients and regional scale adjustment of species distributions to climate change (Figure 4.3).

2. **Macroclimatic gradients**: These are important for the diversification of plant and animal lineages in relation to macroclimatic gradients. At least three types of east-west gradients are required: those running along the coastal lowland, inland lowland regions and along the Zuurberg in the upland region.

3. **Upland-lowland interfaces**: These transition zones occur between upland and lowland land classes. They have a high heterogeneity, and therefore act as surrogates for ecological diversification. Three upland-lowland interfaces were identified within the planning domain: Upland - grassland and fynbos land classes, and the Tootabie Forest; Coastal lowland - those land classes south of the Zuurberg; and Inland lowland - those land classes north of the Zuurberg.

4. **Biome interfaces (ecotones)**: These generally have a high diversity and are important ecological diversification zones. Boundaries between the forest, thicket, grassland, fynbos and Nama Karoo biomes were buffered by 500m
to derive a spatial component for this important biological process (Figure 4.3).

5. **Hybridisation zones**: Thicket interfaces are areas of high plant species hybridisation, particularly within the genera *Aloe* and *Euphorbia*. Hybridisation zones within the gAENP planning domain occur at the contact areas of Zuurberg Montane, Sundays Basin and Sundays Inland land classes. Since hybridisation is an important factor in plant speciation, these are zones of significant evolutionary change.

6. **Riparian corridors**: Riverine corridors along the Sundays and Kabouga river valleys represent important riparian corridors within the gAENP planning domain. These rivers breach the folded belt to link inland and coastal habitats, and are therefore crucial to the migration and diversification between inland and coastal biotas. Shorter riverine corridors that allow for animal migration and movement through mountainous terrain, but which do not necessarily link inland and coastal biota\(^9\) were also identified using topographical terrain, and expert knowledge of the area (Figure 4.3).

7. **Sand movement corridors**: The planning domain includes one, large sand movement corridor, namely the Algoa dunefield. It also acts as a surrogate for several key biological processes, and forms an important link between the terrestrial and marine environments (Figure 4.3).

8. **Fire**: Natural fire regimes exist in fynbos and grassland land classes. These land classes exist as islands, surrounded by non-flammable land classes. Sufficient “islands” must be included to allow for natural fire regimes to develop.

9. **Rainfall gradients**: These must be included to act as drought refuges in drought-prone habitat. Areas to the north of the Zuurberg are drought-prone and large refuges are required for the plains game living in these areas.

The Zuurberg range, particularly the eastern portion of the Zuurberg, plays a key role in the persistence of many of these processes. This is driven largely by the areas of contact between the fynbos and grassland biomes. Almost the entire coastal portion of the gAENP planning domain is key to the persistence of important biological processes, this being driven by the presence of the Algoa dunefield, as well as the biome interface between the Klipvlei Asteraceous Fynbos and Woody Cape Thicket land classes. Section 4.7 discusses in more detail how these processes have been captured in the C-Plan analysis.

**Population-level processes**

Population-level processes include demographic, genetic and evolutionary processes, and each relies on minimum-sized populations of species to maintain them. Processes at the population level focused on larger mammals and assumed that the mammals could move freely throughout the entire planning domain of the proposed park.

The outputs of the mammal population processes study are expressed as targets (see Section 4.5), and were used in the C-Plan analysis to test the effect the different land parcels have in achieving mammal targets.

\(^9\)A generic term for living organisms i.e. insects, animals, plants etc.
Only natural land within the gAENP planning domain was used in the C-Plan analysis to test the effect the different land parcels have in achieving mammal targets.

**Species-level processes**
Species-level processes focussed on larger mammals, the assumption being that these mammals qualify as ‘umbrella’ species since their minimum area requirements are likely to be at least as comprehensive as those for the remainder of the fauna.

By maintaining a viable population of each mammal species that potentially occurs in the planning domain, species-driven processes will inherently be captured. For each process identified, an assessment of the contribution the different mammal species make to that process was undertaken.

These processes potentially occur throughout all mammal habitat classes in the gAENP planning domain and a description of them can be found in Specialist Report 2.

**4.3.2 FRESHWATER PROCESSES**

Biological attributes and processes in rivers and streams are controlled by the physical and chemical attributes of the landscape through which they flow. Stream biota are therefore considered to be protected by conserving the habitat template or pattern (Southwood, 1977). To ensure long term persistence of biodiversity, four ecological and evolutionary processes were identified (see Specialist Report 2 for more detail):

1. **Hydrological regimes** include the variance in the natural flow of rivers. These components interact to maintain the dynamics of habitats and determine the distribution of freshwater and riparian species. It is also the key to the transfer of nutrients, sediment, pollutants and organisms to larger streams or estuaries. Natural disturbances, such as droughts and floods, are particularly important for maintaining the geomorphological integrity of freshwater ecosystems.

2. **Nutrient cycling** is the process whereby elements such as nitrogen, phosphorus and carbon move through an ecosystem. When considering nutrient cycling in rivers, it is important to look at all of the processes taking place in and along whole catchments.

3. **Migration** is the movement of species (migration) between habitats. Longitudinal connectivity in rivers is important for biota to move up and down the catchment to complete their life cycles (e.g. eels, mullet and many invertebrate species). Riparian corridors are important for distribution of vegetation and movement of terrestrial fauna such as otters. Local-scale movement of species is important, especially during times of habitat change or climatic disruptions, e.g. movement into refuge areas to survive during floods, droughts or the dry season.

4. **Succession and evolution.** Patterns of faunal assemblages in temporary water ecosystems are established by coloniser or pioneering species on a “first come first serve” basis. It is therefore very important to maintain a significantly large number of these types of waterbodies to keep the natural diversity of species assemblages at a sufficiently large, randomly variable
level to ensure that the overall diversity of recorded species occurring in temporary waters in the region is not impaired.

4.3.3 MARINE PROCESSES

Four key ecological processes that drive the pattern of biodiversity within Algoa Bay were spatially defined. These processes are:

1. **Freshwater-estuarine-marine linkages and exchanges.** Estuaries are defined by the mixing of fresh and seawater masses. This forms a critical process for many faunal species whose life cycles depend on the functional linkages between these water masses.

2. **Larval dispersal.** The vast majority of marine and estuarine invertebrates and fish have a pelagic larval phase in their life history, which constitutes the dispersal stage for many benthic invertebrates. Larval dispersal is also extremely important for recolonisation of disturbed areas or new habitats. Larval dispersal is poorly understood in this area, but most data indicate that most larvae within Algoa Bay are concentrated very close inshore and along western and northwestern shorelines.

3. **Aquifer discharge and associated sustenance of Anaulus australis driven surfzone ecosystems.** The surf diatom, *A. australis*, constitutes an integral component of the ecological functioning of the Sundays Beach nearshore zone, accounting for over 95% of the primary production along this shoreline. *A. australis* is in turn predated upon by a wide variety of fish and invertebrates, fuelling a complex nearshore foodweb. Standing stocks of *A. australis* along Sundays Beach are proportional to the amount of nutrient entering the surf from the adjacent Alexandria dunefield. This aquifer discharge is thus vital to the success of the surf diatom.

4. **Nutrient import to islands.** On a daily basis approximately 200 000 seabirds migrate from the islands of the Cross and Bird Islands to foraging waters throughout Algoa Bay and beyond, returning to the islands at night to roost. These foraging migrations are believed to play an extremely important role in the functioning of waters in the vicinity of the islands.
Figure 4.3: Spatial representation of major processes (1 = upland/lowland and biome interfaces, 2 = river corridors, 3 = Thicket interfaces, 4 = sand corridors)
4.4 WHAT ARE THE LIMITATIONS TO BIODIVERSITY CONSERVATION IN THE PLANNING DOMAIN?

4.4.1 INTRODUCTION

Limitations to the protection of biodiversity occur mainly in the form of land transformation whereby natural habitat is transformed into habitat that no longer supports a high biodiversity. The biophysical specialists determined the extent of the existing limitations and predicted future limitations to biodiversity. These limitations have been termed “threats” in the specialist reports and are essentially threats to the conservation of biodiversity.

4.4.2 TERRESTRIAL ENVIRONMENT

Four types of land transformation were identified as the most important spatial limitations to the future protection of terrestrial biodiversity in the planning domain. These were agriculture (grazing and cultivation), human settlement-related impact, invasive alien plants and mining.

Several land classes are currently in very good condition with little or no transformation. This is particularly true of the higher lying vegetation in the centre of the planning domain. However, several lowland land classes are severely impacted by over-grazing or development by formal agriculture. The conservation of the biodiversity of 29 of the 43 land classes (67%) is potentially limited by further transformation.

The protection of biodiversity of the Alexandria and Schelmhoek dunefields is also threatened by the introduction of alien vegetation used in stabilising the dunes thereby changing the characteristics and function of the entire system.

Development of the planned Coega harbour and industrial area adjacent to the park is expected to have considerable negative impacts in the form of general pollution (atmospheric, marine, light, invasive aliens and noise), in addition to knock-on effects such as increased road, rail traffic and other developments, all of which are largely incompatible with conservation.

4.4.3 FRESHWATER ENVIRONMENT

The key limitations to biodiversity conservation of freshwater ecosystems in the gAENP are:

?? Alteration of natural flow regimes of the rivers – including impoundments (dams and weirs), unnatural seasonal agricultural demand for irrigation, abstraction, diversions, causeways and inter-basin transfers.

?? Catchment degradation and erosion – mostly due to farming (overgrazing, drainage of wetlands, roads, quarries, use of fertilisers and pesticides), forestry and urbanisation.

?? A large proportion of the forest in the Alexandria area continues to be cleared for pastureland. Alexandria forest swamp is possibly the least known of wetlands and this is seriously threatened by these activities.

?? Alien species (fauna and flora)

?? One of the main threats to freshwater biodiversity is alien fish species such as black bass and catfish. Since river systems are longitudinal, alien fish
species, once introduced, can move up and down a river system as far as their physiological tolerances will permit them.

Alien invertebrate species could also be a threat, in particular crayfish, which displace the natural crab community and cause bank collapse because of their burrows. The invasion of rivers by the alien snails (*Lymnaea columella*), a carrier of liver flukes, and *Physa acuta*, a widespread and abundant snail in many waters, is well known. The extent of this invasion in the gAENP, and its impact on both freshwater and terrestrial biota is probably severe but very little data is available.

Alien trees such as wattles also pose a major problem. They reduce the water flow and cause bank collapse, also reducing the diversity of the riparian vegetation by excluding other species. The tamarisk *Tamarix ramosissima* around Darlington Dam, which has also invaded watercourses, is another specific problem species that has replaced much of the natural riparian vegetation in this region of the gAENP.

Information on the above limitations within the gAENP planning domain is too incomplete to allow spatial quantification. However, available information will be used during the design phase to make choices between different sites, and to use as a means of scheduling implementation.

**4.4.4 MARINE ENVIRONMENT**

Ten issues were identified as key limitations to the conservation of the marine and estuarine biodiversity of Algoa Bay.

1. Over-fishing/extraction (i.e. exploitation by man, through recreational, commercial and illegal harvesting) is probably the most important present and future limitation to the conservation of the biodiversity in Algoa Bay.

2. The proposed development of a deepwater port at the mouth of the Coega River presents a highly significant future limitation to the proposed gAENP MPA, as the eastern breakwater of this port will literally define the western border of the MPA. The port will service a proposed large back-of-port Industrial Development Zone, which could have major repercussions for the proposed MPA as well as the islands.

3. Pollution of the marine environment of Algoa Bay is, and will remain of critical concern. Domestic waste, stormwater runoff, the disposal of dredge spoil from the Port Elizabeth harbour and farming practices (use of herbicides and pesticides) are important pollutants.

4. Invasive species introduced through activities such as shipping (e.g. ballast water release) and mariculture are a major concern to the marine environment. The possible introduction of pests, primarily rats, to the islands is also a major threat to the survival of bird eggs and chicks.

5. Alterations and pollution of the Alexandria aquifer will be a major limitation to the success of surfzone phytoplankton and associated ecosystems.

6. Alterations to freshwater flow in the estuary is the key current and future threat to the Sundays River estuary, and alterations have the potential to affect almost every aspect of the functioning of these systems.

7. Ineffective policing and management of areas outside of the proposed MPA is a limitation for those animals that travel beyond its borders, as well as the potential for pollutants and unwanted organisms to travel into the MPA.
8. Tourism and recreation can be a serious limitation to the protection of biodiversity if over-utilisation of the area occurs.

9. Oil and natural gas exploration offshore of Algoa Bay would result in limitations due to increased shipping, pipeline construction, potential oil spills, and drilling activities.

10. Lack of awareness and understanding of the value, both spiritually and economically, of the natural resources of marine and estuarine environments of Algoa Bay, and indeed the entire South African coastline, are current and potential limitations to the proclamation of any protected area and to natural resources of the coastline.

4.5 WHAT ARE THE CONSERVATION TARGETS FOR THE gAENP?

Conservation targets are explicit interpretations of the broad goals of a planning exercise. The IUCN Caring for the Earth strategy (IUCN 1989) set a target for conservation of at least 10% of each biome or habitat type. This target, although arbitrary, faces growing acceptance worldwide. The 10% target is applied in this study as a minimum baseline target for each land class, and is adjusted upward by the retention target that takes into account current transformation and future limitations to the conservation of biodiversity. The outcome of this step is a set of quantitative targets that are required for conserving biodiversity pattern and ecological processes.

Targets to maintain biodiversity sustainability are driven by SANParks’ conservation planning and biophysical goals.

For terrestrial biodiversity pattern and processes, quantitative targets were set for land classes based on their conservation importance, and the levels of threat that they faced. A baseline pattern target of 10% of the area of homogenous land classes was assigned to Forest, Mesic Thicket, Grassland, Nama Karoo, Dune Pioneer and Estuarine communities, and a baseline target of 20% of heterogenous land classes was assigned to Xeric Thicket and Fynbos. The additional 10% in these areas acts as a retention that boosts rare and vulnerable target species.

Explicit targets for mammal populations within the gAENP are the minimum numbers required to maintain a viable population. A baseline target of 50 individuals for normal species and a retention target of 200 individuals for Red Data Book species has been established. The rationale for the retention target is that these are the most vulnerable to threat, and the retention would boost their baseline target. Certain gAENP species with special and rare features were also assigned a retention target, namely the disease-free buffalo, the FIV-free lions, Cape Mountain zebras, elephants, black rhinos and aardvark, to name a few. Ideally a population of 2 000

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10 The goal of the gAENP conservation planning module is to identify options for establishing an expanded park within the planning domain that will conserve, in perpetuity, representative and viable biodiversity patterns and underlying processes within the planning domain, and to accommodate resilience to threats and environmental change.

11 gAENP will conserve, in perpetuity, representative and viable biodiversity patterns and underlying processes within the planning domain of this national conservation priority, and will drive the targets required to maintain biodiversity sustainability.

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individuals is at a level that allows natural evolutionary processes to persist, but this would only be met for a few species.

The overall targets for nine land classes exceed the remaining area of untransformed habitat available, and restoration will be necessary to augment the available areas and to meet the required target. In these cases, there are no options for conserving different parts of the land class, since more than 90% of the remaining habitat will be required.

For the proposed gAENP MPA the following key features and processes are important targets for the restoration and preservation of biodiversity:

?? The *Sundays River estuary* is a critical area for recruitment and the key management issue is the maintenance of adequate flow to prevent mouth closure.

?? Removal of alien vegetation in the *Skelmhoek Dunefield* needs to be carefully managed to maintain natural sand movement processes and thereby prevent sedimentation of the estuary.

?? The productive nearshore waters are highly dependent on maintenance of water flow through the *Alexandria Dunefield*.

?? The eastern portions of *Sundays Beach and surfzone* are highly productive and it is therefore recommended that these dunes be protected by a restricted access area stretching about 10km from of the Sundays River mouth eastwards towards Woody Cape.

?? The *island groups and surrounds*, which are critical bird breeding areas, need to be protected from the introduction of rodents and disease. Only Bird Island is suitable for the development of limited public access and associated small volume tourism, though the other islands may be viewed from entirely boat-based operations.

?? The *nearshore slope to the east of the Bird Island complex* provides a complex topographic diversity, and is representative of deepwater communities which are generally poorly conserved.

?? *Nearshore reefs* are critical to fish stocks, and the *sandy corridors* connecting these reefs are vital squid spawning grounds. As the location of these reefs is not well defined, protection of the entire nearshore area needs to be a conservation target.

Formulation of targets for conserving the freshwater ecosystems of gAENP was done in conjunction with terrestrial conservation planning consultants to facilitate the development of an integrated terrestrial and aquatic conservation plan for gAENP. The following explicit targets were formulated for the conservation of biodiversity patterns and processes for rivers and streams within the gAENP planning domain:

?? At least one river with a unique signature\textsuperscript{12} of physical pattern (either Level 2 or Level 3 signatures) must be conserved. This target aims to conserve a representative spectrum of biodiversity pattern. Additionally, since the whole river is selected, important biological processes are also maintained.

?? Riparian buffer strips should be at least 500m wide on each side of the river and for at least 80% of the length of the rivers and streams that are selected under

\textsuperscript{12} Information on the type of freshwater ecosystem, ecoregion and geomorphological zone was integrated to produce a feature that represents the biodiversity pattern for main streams and rivers in the gAENP. This feature is referred to as a “signature”.

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the first target. This target recognises that river ecosystems consist of more than just the river channel and the water that flows in it, but includes the riparian ecosystems.

Where options exist, and two or more rivers had the same signature, a number of considerations were used to determine the conservation priority of each river.

Quantifiable targets could not be set for lentic ecosystems, as spatial presence-absence data does not exist for these systems. However, data that does exist for wetlands and pans was used in the conservation planning process.

4.6 WHAT ARE THE OPPORTUNITIES AND CONSTRAINTS PRESENTED BY THE NATURAL ENVIRONMENT FOR GAENP?

Opportunities and constraints presented here revolve primarily around the conservation importance of the area, and only the most obvious have been selected, thus the list is not exhaustive. Measures to optimise opportunities and minimise constraints to ensure long term sustainability are presented in Section 4.7 of this report. Table 4.6a lists the opportunities and constraints, which are described in more detail in section 4.6.1 & 4.6.2.

Table 4.6a: The opportunities and constraints presented by the natural environment for gAENP.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>?? Biodiversity conservation</td>
<td>?? Fragmentation</td>
</tr>
<tr>
<td>?? Meeting conservation responsibilities</td>
<td>?? Visibility</td>
</tr>
<tr>
<td>?? Existing conservation areas</td>
<td>?? Sundays River</td>
</tr>
<tr>
<td>?? Underdevelopment within the planning domain</td>
<td>?? Fishing</td>
</tr>
<tr>
<td>?? Minimal alien vegetation</td>
<td>?? Existing agricultural potential</td>
</tr>
<tr>
<td>?? Climate change protection</td>
<td>?? Competing land use</td>
</tr>
<tr>
<td>?? Low agricultural potential</td>
<td>?? Industrial development</td>
</tr>
<tr>
<td>?? Nama Karoo Area research</td>
<td>?? Alien species</td>
</tr>
<tr>
<td>?? Species conservation</td>
<td>?? Fish stocks</td>
</tr>
<tr>
<td>?? Islands</td>
<td>?? Sundays River</td>
</tr>
<tr>
<td>?? Eco-tourism</td>
<td>?? Sustainability</td>
</tr>
<tr>
<td>?? Sustainability</td>
<td>?? Fossil deposits</td>
</tr>
</tbody>
</table>

4.6.1 OPPORTUNITIES

Biodiversity conservation
The nature of the biophysical environment will create opportunities for conservation in a range of different habitats, which will conserve biodiversity for present and future generations thus furthering SA national and international commitments.

Meeting conservation responsibilities
Protection of the biodiversity of the area presents an opportunity for South Africa to meet economic and ecological sustainability, in addition to satisfying international and national conservation responsibilities.

13 Standing water wetlands.
Biome Conservation
Many of the vegetation types within the gAENP planning domain are not adequately
conserved. The gAENP would substantially increase the conservation of Coastal
Grassland, Central Lower Nama Karoo, Eastern Mixed Nama Karoo, Eastern Thorn
Bushveld, Spekboom Succulent Thicket, Coastal Forest and Valley Thicket (Table
4.6b, below).

Table 4.6b: Summary of vegetation types within the six biomes to be included
within the proposed gAENP.

<table>
<thead>
<tr>
<th>Southern Africa</th>
<th>Conserved % in SA</th>
<th>Area in existing Addo/WC NR</th>
<th>Contribution (%) to existing area conserved</th>
<th>Planning domain</th>
<th>Planning domain contribution</th>
<th>Increase to total SA conservation (%)</th>
<th>Expansion contribution to total SA area (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forest Biome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afromontane Forest</td>
<td>17.6</td>
<td>26.9</td>
<td>2.6</td>
<td>85.1</td>
<td>1.4</td>
<td>5.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Coastal Forest</td>
<td>9.5</td>
<td>69.9</td>
<td>77.7</td>
<td>199.1</td>
<td>21.0</td>
<td>143.6</td>
<td>90.8</td>
</tr>
<tr>
<td><strong>Fynbos Biomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassy Fynbos</td>
<td>16.1</td>
<td>135.3</td>
<td>14.1</td>
<td>372.9</td>
<td>6.3</td>
<td>24.8</td>
<td>31.2</td>
</tr>
<tr>
<td><strong>Grassland Biome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Grassland</td>
<td>1.1</td>
<td>1.5</td>
<td>4.7</td>
<td>31.0</td>
<td>1.1</td>
<td>96.5</td>
<td>51.5</td>
</tr>
<tr>
<td><strong>Nama Karoo Biome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central lower Nama Karoo</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>69.4</td>
<td>0.3</td>
<td>702</td>
<td>87.5</td>
</tr>
<tr>
<td>Eastern mixed Nama Karoo</td>
<td>1.1</td>
<td>7.4</td>
<td>0.9</td>
<td>761.9</td>
<td>1.0</td>
<td>89.8</td>
<td>47.8</td>
</tr>
<tr>
<td><strong>Savanna Biome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Thorn Bushveld</td>
<td>0.5</td>
<td>18.9</td>
<td>45.5</td>
<td>364.0</td>
<td>3.9</td>
<td>831</td>
<td>94.1</td>
</tr>
<tr>
<td><strong>Thicket Biome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dune Thicket</td>
<td>14.5</td>
<td>0.7</td>
<td>0.1</td>
<td>15.0</td>
<td>0.4</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Mesic succulent thicket</td>
<td>5.3</td>
<td>91.6</td>
<td>89.0</td>
<td>766.9</td>
<td>39.7</td>
<td>656.2</td>
<td>98.5</td>
</tr>
<tr>
<td>Spekboom succulent thicket</td>
<td>1.8</td>
<td>0.0</td>
<td>0.0</td>
<td>56.4</td>
<td>1.1</td>
<td>64</td>
<td>39</td>
</tr>
<tr>
<td>Valley thicket</td>
<td>2.1</td>
<td>4.1</td>
<td>0.8</td>
<td>123.1</td>
<td>0.5</td>
<td>24.3</td>
<td>20.2</td>
</tr>
<tr>
<td>Xeric succulent thicket</td>
<td>8.0</td>
<td>588.0</td>
<td>87.3</td>
<td>2673.1</td>
<td>31.8</td>
<td>309.6</td>
<td>96.9</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>4.5</strong></td>
<td><strong>944.3</strong></td>
<td><strong>5518.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Existing conservation areas
The prior existence of the AENP, the Woody Cape Nature Reserve and the Islands
represents an opportunity for consolidation of these important conservation areas,
thereby placing them under stronger conservation management.

Underdevelopment
The natural environment of the planning domain consists of large tracts of
undeveloped land, thus making consolidation and expansion of the existing
protected areas feasible.

Alien vegetation
The manageable number of alien species presents the opportunity for large amounts
of transformed land to be restored to its natural state and reduces restoration costs
for SANParks, in addition to placing its eradication under single managerial control.
Climate change
The size and altitudinal variation of the proposed gAENP makes it less vulnerable to future climate change than smaller and more uniform protected areas. The physical size and altitudinal variation also present opportunities to the environment to adapt to the effects of climate change on various processes e.g. animal migration.

Low agricultural potential
The farms in the less productive Zuurberg area have a low agricultural potential – for these farms in particular, participation in the gAENP represents an opportunity, since agricultural incomes are precarious and erratic. The Zuurberg also provides the altitudinal variation important in climatic change planning.

Nama Karoo area
The incorporation of a significant area of Nama Karoo into the proposed gAENP will not only increase the area conserved, but will also provide an important benchmark site which can be used to evaluate the recovery of degraded veld and the relevance of the desertification model to changing veld condition. This would be in accordance with South Africa's commitment as a signatory of the Convention to Combat Desertification.

Research
Primary research and education opportunities exist in this expanding park where issues associated with rehabilitation are important.

Species conservation
The gAENP will be able to support viable populations of endangered species such as elephants and black rhinos. Including the marine component into a protected area will allow for the protection of a high diversity of flora and fauna, including a high number of endemic and Red Data species.

Fish stocks
The area also has a high re-stocking value if protected, as it is a breeding ground for many important fishery and recreation faunal species. The combination of the islands, estuary and dunes offers critical conservation opportunities.

Islands
The islands have a high conservation and historic value as well as protecting a large number of Red Data species and the biodiversity of the marine environment.

Sundays River
The Sundays River, which runs through the proposed park, presents opportunities for catchment protection as well as availability of water and recreation in certain areas. It also forms an important linkage between terrestrial and marine conservation – an important point stressed by the IUCN.

Eco-tourism
The size and diversity of ecosystems creates opportunities for diversified ecotourism with a range of experiences. It also offers the opportunity to stock the area with indigenous game. The size will allow for viable populations of most species.
Sustainability
The majority of the conservation targets identified during the conservation planning exercise can potentially be met in the gAENP planning domain, which will ensure long term sustainability of biodiversity.

Cultural resources
The planning domain is relatively rich in rock art and artefacts. SANParks have a policy for the protection of cultural resources and in order to conform to the policy, SANParks has commissioned a more detailed study. This study has produced a draft framework, as contained in Section 4.8. This will ensure that the resources will be protected within the gAENP.

4.6.2 CONSTRAINTS

Fragmentation
The footprint is divided by servitudes for roads, railway lines and power lines. This fragmentation is aesthetically unattractive and increases management, fencing and infrastructural costs but can be overcome with either under- or over-passes.

Visibility
Game is not easily visible in thick vegetation, which makes for different tourism opportunities in different areas.

Sundays River
The Orange River inter-basin transfer makes the flow of the Sundays River largely unnatural.

Fishing
Constraints in the form of reduced or curtailed exploitation of reef fish in the proposed Marine Protected Area (MPA) against SANParks’ current policy that does not allow the fishing of reef fish in protected areas. It is highly likely that there will be major objections to the banning of this activity and that poaching will occur. This will necessitate policing of these areas. Another related constraint is the poor management of areas (e.g. Cape Recife) outside of the Marine Protected Area that are important to the birds, which could jeopardise the success of the area.

Existing agricultural potential
Some of the areas proposed for inclusion in the park have a high agricultural value (e.g. Alexandria dairy area). Traditional eco-tourism may not be able to compete in these areas. These areas are also usually highly transformed and land prices are high due to their agricultural potential. Land clearing, which enhances the agricultural value and hence potential selling price of a farm, but diminishes the conservation value of such a farm for inclusion in the gAENP, is a major constraint as the biodiversity of the area is then compromised.

Competing land use
The proposed Madiba Bay project may also provide a measure of competition for the gAENP. There is also the potential that some game species e.g. lions will conflict with some neighbours e.g. small stock farmers.
Industrial development

Incompatible activities such as the proposed Coega Industrial Development Zone, holds major biophysical constraints e.g. electricity line through the park, water extraction, pollution risk to islands, air pollution, consumptive use of resources and visual impacts.

Alien species

Inappropriate game on game farms and alien fish species are major constraints to achieving the goals of gAENP to protect indigenous processes and patterns.

4.7 CONSERVATION PLANNING OUTPUTS

The conservation planning process through the C-Plan conservation tool identifies the most optimum selection of units (in this case cadastral areas) for biodiversity conservation. Yet the challenge remains to optimally exploit the ecotourism opportunities of these biologically important areas in synergy with the conservation planning exercise. Providing sufficient opportunities for eco-tourism is essential for the gAENP as income from eco-tourism will contribute greatly to it being financially self-sustainable. Enhancing eco-tourism opportunities will also allow for sufficient economic spin-offs for the surrounding communities.

Results from the various biophysical specialist studies (Specialist reports 1-3) were used to feed a conservation planning process (C-Plan). The C-Plan provides expansion opportunities based on biological importance, limitations and vulnerability. It identifies different options for conservation that will meet the biological targets based on irreplaceability\(^4\). Figure 4.7b gives a conceptual representation of the priority areas as determined by the C-Plan analysis. It does not give exact boundaries of the proposed expansion areas. Further information is provided in Specialist Report 1. Of critical importance is the fact that the C-Plan conservation tool reassesses conservation options with every incorporation of a land unit into the park, thus making the conservation planning exercise a dynamic process.

The criteria applied in determining the size and shape of the proposed MPA were assessed in Chapter 5 of Specialist Report 2. Based on present understanding of the functioning of Algoa Bay, establishment of a MPA containing four essential spatial elements is proposed. These are the Sundays River estuary, the surf-swept beaches off the Alexandria dunefield, including the adjacent low reefs of the Black Bushes, the Islands of the Cross, Bird Island group and the surrounding rocky reefs, and the large expanse of soft-substrate in the centre of the bay with its spawning and nursery areas overlain by the pelagial. For ease of policing, the MPA should consist of one contiguous area and not be fragmented. The simplest shape that incorporates all four spatial components is indicated in Figure 4.7a. The designs also incorporate the need for coordinates of the MPA to be in vertical and horizontal lines (in terms of longitude and latitude) for ease of policing.

\(^{14}\) Irreplaceability is a measure assigned to an area (water or land), which reflects the importance of that area, in the context of the study region, for the achievement of the regional conservation targets.
Figure 4.7a: Patterns of irreplaceability across the gAENP planning domain after selection of statutory reserves.
Figure 4.7b: Priority expansion areas for gAENP.
Analysis of the patterns, process, targets and threat analyses via the C-Plan exercise produced a map of irreplaceability for the gAENP planning domain (Figure 4.7a), and indicates that most of the planning domain was of conservation value. However, to prevent speculation around specific land parcels that were highlighted as being of importance in terms of the conservation of biodiversity patterns and processes, broad areas were categorised based on the possible role that these areas could play in the development of the greater Addo Elephant National Park (Figure 4.7b).

It is important to note at the outset that all of the areas identified in the accompanying diagram have been highlighted as being of critical importance to the gAENP development in terms of meeting conservation targets set by the consultants for the conservation of biodiversity patterns and processes. These areas have also been selected as they are currently adjoining or in close proximity to the park. This provides a logical framework to approach the development from in terms of consolidation of existing statutory conservation areas. A brief description of each of these areas follows, as well as that of the categories specified in the figure legend.

**Important – high priority**
Given the nature of the possible future threats as well as the biodiversity components that these areas would conserve, a high priority rating for incorporation into the park was allocated to these broad regions. The incorporation of these areas could follow either direct acquisition initiatives by SANParks or the investigation of contractual options.

**Important – medium / low priority**
These areas were identified as being of critical importance but the urgency in terms of incorporation into the park is reduced. In these cases the possibility of including these areas through some form of contractual arrangement may be the more appropriate avenue to follow.

**Contractual – high priority**
These areas were identified in the conservation planning exercise as being critical to the conservation of biodiversity in the region. Given the currently under-represented nature of the land classes within this region, as well as the importance of the Kabouga river system, the area receives a high priority status.

**Contractual – medium priority**
This category represents those areas that have been identified as being critical to the conservation of additional thicket and bontveld habitat classes, while there are also unique features associated with some of these areas. However, these areas are not of an immediate priority for incorporation into the gAENP.

**Area 1, West of Darlington Dam**
This area is important for representation of land classes and mammals specific to the xeric thicket areas of the gAENP. Witrug Spekboomveld and Ongegund Bontveld, both high priorities for restoration, are represented, as well as some of the large grassland tracts important for the persistence of natural fire processes. Many of the arid-adapted plains’ game would be found in this area, which in turn could support future predator populations. Although SANParks has already entered into
negotiations with landowners in the region in order to consolidate some of these areas, specifically around the Darlington Dam, these should not be seen as the only options available in the areas, and contractual agreements could also be pursued.

**Area 2, Non-statutory reserve to the north of the Zuurberg/Kabouga region and surrounds**

This area protects under-represented land classes in the Nama Karoo group, and several processes (upland-lowland interfaces, drought refuges, biome interfaces); this area also protects portions of the Kabouga River (identified as the highest priority in freshwater conservation in the gAENP). An extension of the conserved land in this area would ensure the protection of both the source of the Kabouga River and its confluence with the Sundays River. SANParks have already entered into negotiations with an existing private landowner in the region to incorporate an extensive private reserve into the AENP. Further negotiations are expected to take place in the future in order to further consolidate the boundaries of these two areas.

**Area 3, Ann’s Villa region north of Zuurberg**

Key to the global significance of gAENP is its spatial heterogeneity – five biomes all meeting in the area. This area is highlighted in the analyses for its habitat diversity, linkages between upland and inland lowland biota, and biome interfaces between xeric thicket, mesic thicket, grassland, fynbos and Nama Karoo and forest elements. It represents a highly irreplaceable area in terms of ecological and evolutionary processes, and needs to be conserved in terms of the gAENP conservation planning goal. At present there are limited negotiations being undertaken by SANParks in this region as the area was not previously thought to be of critical importance. A revision of the priorities may therefore be required in order to investigate possible options (contractual arrangements, direct land purchase) for the inclusion of this area into the gAENP.

**Area 4, Enon, Slagboom, Lower Zuurberg**

This area lies to the northwest of the existing elephant camp of AENP, and would extend the reserve through the southern section of the Zuurberg and into the Enon Thicket (presently unconserved) and Addo Bontveld (highly transformed) areas between the Coerney and Wit rivers. Although not of immediate priority, SANParks has already entered into negotiations with some of the landowners in the region (Riverbend) to incorporate some of this area into the AENP on a contractual basis. Additional initiatives, which are being driven by the private sector, are also underway to consolidate the remaining area for conservation.

**Area 5, Schelmhoek Dunefield, Sundays River estuary**

This area is loosely defined by the Sundays River mouth in the east and the boundary of the planning domain in the west. It contributes to representation of two mesic and xeric thicket types (Colchester Strandveld and Coerney Spekboomveld respectively). This area is also important for mammal species that rely on thicket habitats (bushbuck, bushpig), but plays little role in conservation of processes, other than the western extreme of the Alexandria Dunefield. The Sundays River estuary was identified as being of national and global significance in the marine conservation planning exercise and the consolidation of this area would contribute to the linkage of marine, coastal and inland biota.
Collaborative off-reserve management models should be investigated to ensure that the biotic, hydrological and physical characteristics of the estuary are protected. Key players will be SANParks, the Colchester and Sundays River communities, the Sundays River Municipality, Pretoria Portland Cement (PPC) and the Department of Water Affairs and Forestry. SANParks has already initiated negotiations with some of the private landowners in the area to consolidated existing park boundaries while contractual negotiations have been discussed with PPC to consider the inclusion of the Schelmhoek dunefield.

**Area 6, Kinkelbos, N2/R72 junction**
This area lies between the existing Woody Cape Nature Reserve (which has recently been transferred to SANParks) and AENP, to the east of the Sundays River estuary. It provides one of the best options in the planning domain for securing contiguity between coastal (southern) and inland (northern) biota. The area has received a high priority status in terms of requirements for inclusion into the park and SANParks will likely enter into negotiations with landowners to discuss possible options.

**Area 7, Alexandria dunefield connections**
This area is important for consolidating the existing conserved portions of the Alexandria Dunefield and possibly even the Springmount Forest Reserve. The dunefield needs to be conserved in its entirety in order to maintain the ecological and evolutionary processes that it supports: linkage between the terrestrial and marine environments, maintenance of sediment movement (e.g. erosion, stabilisation, succession), inland movement of marine sands, maintenance of nutrient-rich groundwater discharge and animal movement into and out of the dunefield.

A number of the land classes in the area (Zuney Bontveld, Congoskraal Bontveld) and surrounding region are highly transformed and as a result highly vulnerable. The prioritisation of this area for inclusion is therefore rated as high. Some level of off-reserve management, including restoration, may need to be investigated if these habitat types are to persist. SANParks has started negotiations with a number of the landowners in the region regarding contractual arrangements, which SANParks feels the correct way to proceed in this area.

**Area 8, Alexandria north of R72**
This area is dominated by dairy farming (ploughed pastures and cultivation) in a matrix of grazing land. Management intervention is required in order to conserve some of the last fragments of highly transformed Alexandria Bontveld and Olienhout Bontveld (these land classes cannot be adequately conserved without restoration). Given the nature of the current land use and options for consolidation with existing statutory reserves, this area has been given a low priority rating although elements within the landscape remain critical for conservation. Furthermore, most of this area lies outside the designated planning domain.
5. THE SOCIO-ECONOMIC ENVIRONMENT

5.1 INTRODUCTION

The Eastern Cape is the second largest of South Africa’s nine provinces, with the third largest population (6.7 million according to the 1996 census). It is growing at a rate higher than the national average, with a large proportion of the population being under the age of 15 years. Despite the size and potential of the province, it remains the poorest partly due to historical and political reasons.

The Eastern Cape has a relatively high proportion of low paid workers and high levels of poverty. The average Gross Geographic Product (GGP) per capita is less than half that of the South African average. With approximately 710 000 poor households in the province (4.1 million people), 57% of households and 64% of individuals in the Eastern Cape live in poverty. Poverty is found particularly in the rural areas and in the eastern half of the province.

5.2 THE SOCIAL ENVIRONMENT OF THE PLANNING DOMAIN

5.2.1 DEMOGRAPHICS

Information on the demographics (Table 5.2) of the planning domain was taken from enumerator areas (EAs) falling within the planning domain only, as collected in the 1996 census, with further information from the limited farm survey undertaken as part of this project (Specialist Report 6). A weighted percentage was taken for those EAs falling partially within the planning domain.

Table 5.2 shows that 64.5% of the population in the planning domain are black and Xhosa speaking, 24% have no schooling and 44% have some primary education while only 39% of the working age of the population is employed. Poverty levels are high with average wages being between R325 and R560 per month, slightly higher wages being paid on dairy farms than on small stock farms. By comparison SANParks labourers receive between R1 301 – R2 805 per month.

Table 5.2: Demographic data for the planning domain

<table>
<thead>
<tr>
<th>Race/Group</th>
<th>Black 64.5%</th>
<th>Coloured 25.5%</th>
<th>Asian 0.4%</th>
<th>White 9.6%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>No schooling</td>
<td>Some 1st education</td>
<td>Some 2nd/matric</td>
<td>Post 2nd education</td>
</tr>
<tr>
<td>Home Language</td>
<td>Xhosa 65%</td>
<td>Afrikaans 33%</td>
<td>English 2%</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male 49.3%</td>
<td>Female 50.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>Lowest R325</td>
<td>Highest R560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Age</td>
<td>58%</td>
<td>Employed (% of working age) 39%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age profile/dependency</td>
<td>1 adult:0.54 children</td>
<td>1 worker:3.34 dependents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The GGP is a measure of the value of final goods and services produced within the geographic boundaries of the region, calculated on an annual basis.

An EA is a pocket-sized piece of country that was visited by an enumerator during the census. Geographical location and population density has an influence on the size of an EA, where an EA comprises approximately 100 households in sparsely populated areas and 200 households in densely populated areas.
5.2.2 LOCAL COMMUNITIES

The planning domain has an estimated population of 27,000 people, which includes the towns, but the people directly affected by land purchases (i.e., farm workers and their families) has been estimated to be 3,267 (Resettlement Policy Framework – see Section 8.2). The local communities in the planning domain are typical of the under-developed rural areas of South Africa. Both farmers and workers appear to have a long history of residency on the parcel of land on which they currently reside (on average, 33 years per farmer and 22 years per worker). Mean household size for workers is 3.3 and for farmers 3.4. The majority of the planning domain has a very low population density i.e. <1 person/ha (Figure 5.2) (Appendix 2). Higher population densities are found in the areas around towns and in the intensive farming areas.

Settlements, Land Use, Tenure and Livelihood Sources

On commercial farms, farm labourers live mainly in settlements that occur in clusters on demarcated sites. On dairy farms along the coast in the Alexandria area, these clusters are larger than on stock farms inland. Studies have indicated that the average dairy farm employs on average about 15 labourers (i.e. 1 per 50 ha) while small stock pastoralism normally employs about half as many labourers on six times as large a property (about 1 per 555 ha). Moreover, dairy farmers on average appeared to have a further 1.5 farms under their management while the pastoral farmers had marginally fewer, with on average 0.8 further farms. This indicates that on average about 50% of the farms in the domain are unoccupied by the landowners, which concurs with the fact that there has in fact been steady depopulation of the rural areas over the last decade, and which would account for the high formal urbanisation level of 89% for the Port Elizabeth/Uitenhage metropole.

About 25% of the 36 farms purchased by SANParks in the last five years were occupied by the landowner, tenants or a labourer. Moreover, a preliminary estimate put the number of labourers in this 40,000 ha area at less than 25 in total (i.e. 1 labourer per 1,600 ha). A similar situation was found by one of the potential contractual park owners who noted that only 2 (9%) of 23 farms purchased by them were occupied by the landowner and that there was a total of 12 labourers employed in the 16,000 ha (i.e 1 labourer per 1,333 ha). This labourer:area ratio is three times lower than that initially estimated for the small stock farming areas. This indicates the general depopulation of the small stock farming areas within the domain where most of the current SANParks expansion has taken place and into which the park is planned to further expand as part of the gAENP project.

Most workers are well housed with brick houses but very few of them have electricity. Many farm workers also have vegetable gardens. On some farms there are facilities such as farm schools, soccer and rugby fields. The farm worker’s land is used mainly for residential purposes and as a livelihood source. About a third of the farm workers have limited stock of their own on the farms, but all farm workers and their families are tenants and have no property of their own.

Mainly male farm labourers receive wages and food rations, whilst the majority of women depend on natural resources to supplement the household heads income. Women farm dwellers and children are the most vulnerable social group, and livelihood strategies are closely linked to the women’s daily activities. Except in a few
cases such as on dairy farms, women farm dwellers do not have ‘formal’ employment.

In terms of the Interim Protection of Informal Land Rights Act (109 of 1996) and other legislation, tenants are protected when evicted without adequate provisions. The Extension of Security of Tenure Act (62 of 1997) gives special rights to occupiers who are 60 years or older and who have lived on the land for 10 years or longer. Such people are called “long term occupiers”. According to the Act, long term occupiers can live on and use the land for the rest of their lives provided that they always conduct themselves within an agreed legal framework. A large proportion of the farm workers within the gAENP would be classified as long term occupiers. Another issue related to long residency of farm workers on farmlands are that family graves have been established. Graves play a very important role in the spiritual well-being of many of the local people. Access to such sites within National Parks are never denied.

**Social Structure and Institutional Framework**

Unlike in the rural areas of the former ‘homelands’ of South Africa, where male absenteeism is high, most households have intact family units. The occupancy rate in each household is 2-4 people. There are no organised local institutional structures like tribal authorities or civic organisations. The Western District Municipality provides social services such as clinics, social pensions, etc. Some farmers provide services such as water and transport.

**Skills**

The bulk of the farm workforce is unskilled and barely literate (around 24% of workers have no schooling) thereby reducing the chances of employment other than manual labour. Dairy farms employ more farm workers per unit than the mixed farms even though the dairy farms are smaller. The lack of skills amongst farm workers perpetuates the cycle of poverty as their wages are linked to their skills. Although unskilled, in general people on the farms regarded themselves as having less mobility but more security, whilst regarding relatives in town as having more freedom but less security.

**Local Economic Development**

Along with general productivity, the farm survey indicates that the profitability, land value per hectare and number of workers per farm are substantially higher in the coastal dairy farms than mixed stock farms further inland. This has implications for the number of people affected and the value of land.

The mohair producers in the Somerset East, Jansenville and Uitenhage areas produce at least one third of South Africa’s wool production. The southeastern corner of this region, within a 250km radius of Port Elizabeth, is an important bastion of Angora goat farming. The loss of certain farming areas is likely to cause the production of mohair to decline.

**Cultural Environment**

The proposed extent of the gAENP encompasses an area with significant heritage resources. In 1996, a small dinosaur called *Nqwebasaurus thwazi* (Kirky) was discovered near Kirkwood, while the very first dinosaur to be identified in South
Africa was discovered on the Bushmans River (on the edge of the Park) in 1845. Archaeologically, the area includes extensive evidence of Khoisan settlement in the past. This is reflected in the shell middens on the Alexandria coast, the rock art of the Zuurberg and the stone cairns found along the Sundays River.

The proposed area of the gAENP also has many important historic connections. Early travellers accounts provide information on the old wagon paths and the history of early elephant (and game) hunting. The settlement of the region by Xhosa-speakers and Europeans is reflected in the old farmhouses, mission stations, cemeteries and villages. There are early frontier posts associated with the successive Wars of Dispossession (Frontier Wars) and also some activity related to the South African War (Anglo Boer War).

5.3 WHAT ARE THE MAJOR ECONOMIC ACTIVITIES IN THE EASTERN CAPE AND PLANNING DOMAIN?

Economic activities were assessed at the provincial and district levels for the Eastern Cape Province since economic data is more readily available at this level than at the planning domain level. The proposed gAENP exists within the context of higher planning levels, thus this data was used to determine economic activities and indicators at the project domain level.

5.3.1 ECONOMIC ACTIVITIES IN THE EASTERN CAPE

Economic Indicators

The economic performance of a region is usually measured by its Gross Geographic Product (GGP), and in particular, the annual growth in GGP. At R19 574m, the Eastern Cape had the 5th highest GGP in 1991, but the average annual growth in GGP from 1991 to 1996 was 1.5%, less than the total average for South Africa.

The Tress Index is used to measure the sectoral composition of economic activity in a region, which indicates the level of diversification of the economy. A Tress index of 53.9 was calculated for the Eastern Cape, being the highest in South Africa and substantially higher than the national average of 39.3. This high Tress Index indicates a dependency on a few economic activities, namely manufacturing (25.8%), commerce (16.3%) and services (27.3%). This more concentrated economy is vulnerable to external variables such as adverse climatic conditions and commodity price fluctuations.

At 0.603, the Human Development Index (HDI) of the Eastern Cape is lower than the country as a whole (0.672). The HDI for certain population groups in the rural districts is comparable to the worst in the world.

Economic Sectors

The country’s economic sectors fall into nine categories, namely agriculture (including hunting, forestry and fishing), mining, manufacturing, energy and water,
construction, commerce and accommodation, transport and communication, finance and real estate, and services. Unfortunately the tourism industry is not a defined sector, and economic benefits are hidden in the commerce and agricultural sectors. This makes the contribution of tourism industries to national GDP and provincial GGP difficult to quantify. Furthermore provincial information is largely lacking for recent years.

The tourism industry is expected to be a major growth industry in the province. The Eastern Cape has diverse attractions, with more than 800 kilometres of beaches, big game fishing, mountains, hunting and game reserves.

The economic sectors most important from an employment point of view in the Eastern Cape are listed below. The percentage given in brackets indicates the percentage of people employed per sector – only the most important sectors, however, are indicated below.

Services (29.8%)
Services include community, social and personal services. Employment for this sector is largely by the government.

Manufacturing (18.1%)
The most important industry in the manufacturing sector is the motor industry, based mainly in Port Elizabeth/Uitenhage and East London. The second largest manufacturing sub-sector is the textiles, clothing and leather industry.

Commerce and Accommodation (15.7%)
These sectors are considered to be particularly important in the non-metropolitan local economies and rural areas, and comprise a significant component of the tourism industry.

Agriculture, hunting, forestry and fishing (13.2%)
The contribution of this sector to the provincial economy is relatively low. It does, however, provide the basis for manufacturing industries, such as food processing, textiles and clothing. It also provides one of the few opportunities for employment in the impoverished rural areas.

The Eastern Cape is considered to be politically stable, and has a relatively low crime rate in comparison with provinces such as Gauteng, KwaZulu-Natal and the Western Cape. Certain industry sectors have been identified as having certain comparative advantages and investment potential in the Eastern Cape (these are not ranked in order of importance):

?? Fabricated automotive and other metal components and metal beneficiation
?? Electronic appliances, machinery, hand tools
?? Leather products, textiles, weaving, knitting, clothing manufacture
?? Food processing, "innovative" foods, pharmaceutical and health products
?? Timber furniture and paper
?? Tourism and eco-tourism

In contrast to the emphasis on manufacturing and exports, there are few incentives available for the development of the tourism industry. The budget for the 2001 financial year for the Eastern Cape allocated the largest proportion of the budget to
education, welfare and health, which together received 82.77% of the budget, with tourism receiving a portion of the R248m (1.26%) allocated to Economic Affairs, Environment and Tourism.

5.3.2 ECONOMIC ACTIVITIES IN THE PLANNING DOMAIN

The proposed planning domain of the gAENP falls within four municipal areas namely Nelson Mandela Metropole, Sundays River Valley, Ndlambe and Blue Crane Route (Figure 5.3). Three of these are largely rural, and the Nelson Mandela Metropole is mainly urban. The closest towns to the gAENP are Jansenville, Somerset East, Paterson, Kirkwood, Addo, Alexandria, Port Elizabeth and Uitenhage.

Socio-Economic Indicators

Only 23% of the population is employed, with the agricultural sector being the most important sector in rural areas in terms of labour (contributing 32%), and in providing inputs to the manufacturing sector, in particular industries such as meat processing, dairy products, fruit canning, bakery and confectionary. Absolute numbers of people employed in the agricultural sector are comparable across all districts except the Nelson Mandela Metropole (Table 5.3). The greatest contributor to the GGP in the area is manufacturing.
Figure 5.3: Magisterial Districts within the Proposed GAENP boundaries:

KEY:
- EC102
- EC103
- EC105
- EC106
- ECDMA10
Social Services is the second most important employer, with 13.63% of people reliant on the government for employment. Private households also make a significant contribution to employment, followed by trade, accommodation and manufacturing (Table 5.3).

**Table 5.3:** Selected socio-economic indicators (1996) of municipal areas in the planning domain.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Blue Crane Route</th>
<th>Ndlambe</th>
<th>Sundays River Valley</th>
<th>Nelson Mandela</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed (% of total population)</td>
<td>23.05</td>
<td>21.78</td>
<td>22.33</td>
<td>25.22</td>
<td>23.09</td>
</tr>
<tr>
<td>Unemployed (% of total population)</td>
<td>11.63</td>
<td>11.13</td>
<td>10.81</td>
<td>14.28</td>
<td>11.96</td>
</tr>
<tr>
<td>Number of people employed by farming sector</td>
<td>3 287</td>
<td>3 043</td>
<td>5 471</td>
<td>4 503</td>
<td>4 076</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment by sector (as % of total employed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming</td>
</tr>
<tr>
<td>Manufacturing</td>
</tr>
<tr>
<td>Construction</td>
</tr>
<tr>
<td>Trade</td>
</tr>
<tr>
<td>Transport</td>
</tr>
<tr>
<td>Social services</td>
</tr>
<tr>
<td>Business services</td>
</tr>
<tr>
<td>Private households</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

The Nelson Mandela Metropolitan Municipality is served by good transport and communication links, with plans to upgrade the airport to international standards. This is considered vital to grow the tourism industry. The Port Elizabeth harbour is a major conduit for export products from the interior, such as vehicles, wool, mohair, citrus fruit, vegetables, flowers and leather.

Although the contribution of tourism to the provincial GGP and in particular, to the economy of the western districts is difficult to determine, it is estimated to be important and one that is showing considerable growth as reflected throughout the country.

The most important contributors to GGP in the planning domain are Alexandria (field crops (R25m) and animal products (90m)), Kirkwood (horticultural crops (R38m)), Port Elizabeth and Somerset East (animal products (R48m & R28m respectively)) and Uitenhage (animal products (R23m)). Although not reflected in the contribution to GGP, in 1995 the AENP was estimated to generate about R300-400 million into the national economy by tourists travelling to the park. The knock-on effect of this industry is seen in the burgeoning of the bed & breakfast industry in the Addo area, from 2 to 19 in a few years. Furthermore, the AENP and other eco-tourism/conservation operations appear to employ twice the labour force at four times the salary of comparable pastoral operations.
5.4 SUMMARY

The Eastern Cape population can thus be described as:

- Largely rural
- Young
- Growing fairly fast
- Having high levels of poverty
- Having a relatively high proportion of low paid workers
- Having a high rate of unemployment

Agriculture is the sector that dominates the economic environment in the planning domain, which is occupied by approximately 27 000 people. Thus the majority of the rural population are black farm workers. Most of the people living on farms in the planning domain stated that they preferred living on farms to living in towns or cities (Specialist Report 6) and on average have been resident on the farms for at least 20 years. There does appear to be a steady depopulation of the rural areas to the cities.

People are under-educated relative to the national average, with 24% of workers having no schooling. Income levels for 86.9% of people are below R500 per month, and the age profile indicates a large proportion of infants and children. Dependency ratios are high (1 worker:3.34 dependants).

Much of the socio-economic data available for the gAENP planning domain is dated, (1996) and should be updated when the results of the October 2001 census are available.

5.5 WHAT OPPORTUNITIES AND CONSTRAINTS DOES THE SOCIO-ECONOMIC ENVIRONMENT PRESENT?

Table 5.5 lists the opportunities and constraints presented by the socio-economic environment for the gAENP. These are described in more detail in section 5.5.1 and 5.5.2.

Table 5.5: The opportunities and constraints presented by the socio-economic environment for the gAENP.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>⬤ Low population density</td>
<td>⬤ Resettlement of farm labourers</td>
</tr>
<tr>
<td>⬤ Benefits to neighbouring communities</td>
<td>⬤ General concerns of people, particularly in the planning domain</td>
</tr>
<tr>
<td>⬤ Unstable agricultural sector</td>
<td>⬤ Negative perceptions of people</td>
</tr>
<tr>
<td>⬤ Availability of donor money</td>
<td>⬤ Park establishment costs</td>
</tr>
<tr>
<td>⬤ Poverty alleviating potential</td>
<td>⬤ Equitable benefits</td>
</tr>
<tr>
<td>⬤ Stable wildlife industry</td>
<td>⬤ Limited economic opportunities</td>
</tr>
<tr>
<td>⬤ Cross-subsidisation of game between National Parks</td>
<td></td>
</tr>
<tr>
<td>Optimise opportunities by</td>
<td>Mitigate constraints by</td>
</tr>
<tr>
<td>⬤ Using land reform grants (SLAGs)</td>
<td>⬤ Developing a Resettlement Policy Framework</td>
</tr>
<tr>
<td>⬤ Government assistance in poverty alleviation</td>
<td>⬤ Developing a communication strategy</td>
</tr>
<tr>
<td>⬤ Ensuring neighbouring communities benefit from the economic spin-offs from ecotourism and possibly also from natural resources in the park</td>
<td>⬤ Resolving neighbour issues</td>
</tr>
<tr>
<td></td>
<td>⬤ Minimising establishment costs</td>
</tr>
<tr>
<td></td>
<td>⬤ Creating employment options</td>
</tr>
</tbody>
</table>
5.5.1 OPPORTUNITIES

Population density
The planning domain is mainly in an area of low population density, which means that the costs associated with resettlement and compensation will be low in proportion to the overall costs of the gAENP. Furthermore, the park does not include any large settlements.

Neighbouring communities
The existence of generally poor neighbouring communities allows SANParks to not only fulfill international policies on People and Parks, but also its own social responsibility policies, which have advanced over the last five to ten years. This offers the opportunity for the proposed gAENP to potentially act as a model of how to ensure mutually beneficial relationship between protected areas and neighbouring communities and stakeholders.

Unstable agricultural sector
The dominance of an existing single and often unstable agricultural economic sector provides an opportunity to diversify the rural areas thereby generating more economic sectors. This varied source of income will enhance economic returns per hectare through a more profitable land use, attract new additional investment into the Eastern Cape and will contribute to the regional and national Forex and GDP. Furthermore, the eco-tourism/conservation industry is a viable form of land use, making better use of the province’s natural resources in a sustainable manner.

Donor money
The high conservation potential of global significance of the planning domain will attract considerable donor and foreign investment that has not been attracted into the established agricultural sector to date. The weakening Rand provides a more attractive opportunity for overseas investors to invest in the project, as well as foreign tourists to visit.

Alleviating poverty
The gAENP will assist in alleviating poverty by enhancing the human skills base/human capital, by providing training in various fields of expertise and providing a wider range of job types and opportunities for the local people than currently exist.

Wildlife industry
The growth in wildlife-based industries has essentially “paved” the way for the idea of the Eastern Cape providing a unique wildlife experience. There is also a demand for the excess game that the gAENP will produce. Containing the Big 7, which includes whales and great white shark, provides a unique marketing opportunity nationally and internationally (combined with the area’s malaria-free status).

Cross-subsidisation of game
Cross-subsidisation of game by SANParks will reduce the costs of stocking the area with suitable game species. Similarly, financial cross-subsidisation within SANParks helps develop parks with money generated elsewhere in the national parks system.
5.5.2 OPTIMISING OPPORTUNITIES

Land reform grants (SLAGs)
The use of land reform grants (SLAGs) provides an opportunity for the gAENP to enable displaced farm workers to continue in other skills development and business programmes, or possibly continue to farm, but on alternative land. It may also be a mechanism by which the costs to the gAENP of resettlement are reduced. They can optimise this by using their institutional capacity to negotiate on behalf of resettled farm workers *en masse*, rather than on a farm-by-farm basis.

Eco-tourism
The gAENP must provide additional and diverse eco-tourism experiences and infrastructure (Specialist Report 11 and section 9.4). It is estimated that this will generate additional annual income of approximately R28 million for the park alone (Specialist Report 13). Knock-on effects of the tourism industry in the area around Addo will be generated (i.e. bed & breakfasts, tourist lodges on adjacent contractual park land (see section 9.2) and craft sales would increase substantially).

As mentioned in Section 4.6, the opportunities presented by the biophysical environment for the creation of a vast array of eco-tourism experiences is unique.

Economic sectors
The gAENP must span diverse economic sectors and provide employment as well as varied sources of income. In addition, human skills would be enhanced, training in various fields provided or facilitated and a wider variety of job types and opportunities created. Moreover, the protected area would attract additional investment (foreign and local) of a sustainable nature. Thus the dominance of any existing single unstable agricultural economic sector (or the creation of another) would be avoided.

Poverty alleviation
Government assistance in poverty alleviation would be available for a number of activities, such as project infrastructure creation and maintenance. The Working for Water and Poverty Relief programmes alone have provided collectively about R3.2 million in labour intensive projects within the park. The existence of the AENP and its proposed expansion plans were some of the prime reasons behind the successful awarding of the grants, which are planned to control the expansion of alien biota and other conservation aiding projects such as fence construction, road maintenance, etc. Proximity to large towns through accessible transport would also generate opportunities for environmental education and sustainable development.

Neighbouring communities
Neighbouring communities must benefit not only from the economic spin-offs from ecotourism, but possibly also from natural resources in the park. Consumptive utilisation is, however, a highly contentious subject and SANParks will need to investigate this further.
5.5.3 CONSTRAINTS

Resettlement
The high rate of security that workers experience on farms – reasonable housing, rations in addition to wages, grazing for stock, dwelling rights and security until or unless the farm is sold, is a major constraint facing the proposed gAENP as these people would need to be resettled or otherwise employed. For many of them resettlement would be involuntary. A large number of off-farm dependants would also be affected.

General concerns
Concerns amongst the affected stakeholders include: opposition from strong commercial and recreational fishing interests to limitations or bans on access and catches in the proposed marine area; uncertainties amongst farmers and farm workers on the boundary of the park; and uncertainties about land tenure. The limited capacity of the current social ecology unit at AENP is a constraint, in that it is not intimately involved in communication and resettlement issues for the broader gAENP.

Negative perceptions
Prior to the SEA, with its extensive Public Participation Process, expansion initiatives occurred in the absence of a well-executed communication strategy and meaningful interaction with stakeholders, outside of the Addo Planning Forum. This resulted in negative perceptions of the gAENP in certain sectors.

Land claims
Three land claims have been identified in the planning domain.

Establishment costs
The development costs of gAENP will be high e.g. fencing costs, purchasing of game and land. Land purchases remain the single highest cost and this is largely dependent upon loans and government and donor support. Rising land prices as a result of speculation remains a constraint.

Equitable benefits
The majority of the domestic Eastern Cape market is poor so they cannot gain any benefit from gAENP, which will limit the number of local people visiting the park, and the park could thus be seen as not being beneficial to the majority of the people of the Eastern Cape.

Limited economic opportunities
Some areas of the proposed gAENP are ecological sensitive, e.g. islands, which limits economic opportunities, as the number of tourists to the islands would be limited.

5.5.4 MEASURES TO MITIGATE CONSTRAINTS

Resettlement Policy Framework
SANParks does not have a legal requirement to ensure that workers on land through a purchased willing seller - willing buyer contract are adequately resettled and/or compensated, this being the seller’s obligation as part of ESTA (Extension of
Coastal & Environmental Services

The gAENP Strategic Environmental Assessment: FINAL

SANParks, however, feels that it has a moral obligation and a responsibility to World Bank Operational Policy 4.12. Therefore, SANParks commissioned a Resettlement Policy Framework (RPF) including Resettlement Action Plans (RAPs), which was completed in October 2002. The RPF and RAPs can be viewed on the greater Addo Elephant National Park webpage, [www.addoelephantpark.com](http://www.addoelephantpark.com).

Land purchasing up to now has focused on consolidating park boundaries, perceived areas of biological importance, and planned business areas. It was recommended to SANParks that all purchasing of land should be frozen until the gAENP SEA process had been completed or until a resettlement plan has been developed. However, halting land purchases is not possible as land, especially in the Zuurberg area, where funding has been made available for land purchases, is available. Furthermore, the availability of Working for Water and Poverty Relief funding was seen as a form of bridging financing for affected farm labourers until such time as the comprehensive Resettlement Policy Framework was completed (end of October 2002; See Terms of Reference included in Appendix 1). Further interim measures, as recommended by the Department of Land Affairs (DLA), are that all purchases being presently undertaken or negotiated will include discussions with farm labourers, in conjunction with the DLA. Discussion should include employment opportunities to be presented by the gAENP programme, e.g. preference being given to displaced labourers in the upcoming Poverty Relief and Working for Water programmes.

**Communication strategy**

SANParks has accepted the need to develop communication strategies. This will require an appropriate budget, a professional communication and marketing team, and an increase in the numbers of staff for the social ecology section of SANParks. A Public Relations and Communication Strategy has been designed and implemented. The communication strategy will assist in communications regarding many negative perceptions the public have regarding the proposed gAENP, employment opportunities that will be available, management options that will be explored and investigated, and will also include conflict resolution strategies.

**Neighbour issues**

A number of neighbour issues will also be dealt with via the communication channel e.g. closing/restriction of fishing grounds, should the proposed MPA be approved.

SANParks will also need to maintain fencing on areas surrounded by farms; investigate forms of incentives or benefits for conservation orientated land use by adjoining private landowners; consider compensation, where applicable, for losses due to problem animals; devise mutual strategies to limit poaching and improve security as well as to prevent invasion of the land by illegal persons and promote marketing of farm-based tourism and accommodation within the broader gAENP, to encourage good relations with neighbours.

An array of potential initiatives exist with regard to previously disadvantaged communities/informal settlements within and around the planning domain. For example, promoting development in townships/settlements through arts and crafts; preferential employment of locals (after suitable training if required); introducing local
children to the gAENP in terms of environmental education; conservation outreach programmes within the communities themselves and linkages with teachers in local schools. These examples indicate some possible initiatives but it is necessary that gAENP Social Ecology devises and implements a comprehensive and holistic plan to engage residents of township and informal areas.

Careful physical planning and constructive engagement with the Coega Development Corporation can mitigate the constraint that the proposed development of the Industrial Development Zone at Coega poses on planning for tourism and optimum land use of gAENP. It will, however, remain a significant constraint.

The Social Monitoring Programme (Specialist Report 8) identified three categories of stakeholders requiring different communication strategies, as well as goals, objectives, indicators and measurements for the monitoring process.

**Establishment costs**

The project will require funding to shift it from the current status quo to a larger area of 156 000 ha, incorporating the biodiversity goals set for the project. It is estimated that this will cost approximately R270 million. This will be required for the following functions:

- re-introduce approximately R50 million in game to stock to 50% of the long term desired carrying capacity;
- a further R120 million for land purchase and infrastructure including roads, fencing, buildings, rehabilitation, planning, legal fees etc;
- approximately R100 million in tourism infrastructure, of which R65 million will be supplied by the private sector.

Most of the game will be sourced from SANParks’ existing game stocks so this cannot be seen as a direct cost. At least 65% of the tourism infrastructure will be financed by the private sector at their risk. The R120 million required for developments (e.g. fencing, roads, training programmes, rehabilitation, planning, etc) will be funded from various sources, with at least 50% from donor finance with no further financial obligations. The remainder will be funded from various sources within Government, including the Working for Water Programme, Poverty Relief Programme and SANParks Development Fund. A small proportion will be financed from loans between SANParks and financing institutions.

It is predicted that the park will be able to operate independently of external funding once operational, if the capital costs are written off. Income should more than cover the projected running expenditure. Under this framework, the return on additional or new SANParks investment will be about 6 to 7%.

The land incorporation strategy will in most instances provide neighbouring landowners who share a common boundary with the gAENP an opportunity to incorporate their land into the park under a mutually agreeable arrangement. This will diversify and increase the economic opportunities available to these landowners, as well as diversify the tourism product. For those landowners who are adjacent to Big 5 areas, it is likely that land values will increase (almost double) as has happened elsewhere in the country (Mpumalanga, North West and Northern Provinces) when land has been incorporated into Big 5 areas.
Initial indications suggest that for many landowners, except those on high potential land (arable or dairy), the net farm income from Big 5 areas is likely to exceed that of their current operations.

Employment options
It is estimated that the project will generate approximately 360 direct full time jobs in the tourism sector as well as about 150 in the conservation sector. This excludes at least 300 per annum in the development phase, but these will be of a temporary nature. These would be for example in the Poverty Relief and Working for Water Programmes as well as construction related development projects. Furthermore, the knock-on effect of creating further jobs in the tourism sector will be substantial and probably number in the thousands. It is planned to increase the number of tourists from the present 110 000 to 180 000 per annum within six years, as well as increase the number of nights spent in the park from the present one to a minimum of three. If the AENP with 75 000 tourists in 1995 generated between R300–400 million in travel costs alone, doubling the tourist numbers would substantially increase this input into the national economy, which in turn would generate a considerable number of jobs in associated and supportive industries.

Since the majority of the farm workers that will be displaced and thus eligible for employment are unskilled, skills training programmes will be included as part of the Resettlement Policy Framework.

Permanent employment opportunities in the gAENP will include:
- Tourism and managerial staff at accommodation and other tourist related facilities
- Tourist related activities e.g. guided tours
- Gate guards
- Game guards
- Fence and anti-poaching patrol teams
- Maintenance of roads, fences, waterholes etc
- Employees at the cultural and environmental education centre
- Game-capture assistants
- Support industries (retail)

Temporary employment opportunities will include:
- Fencing (removing old fences and erecting new fences)
- Construction related employment
- Installing additional infrastructure in the park e.g. waterholes and gates
- Alien vegetation clearing

SANParks is also committed to black economic empowerment (BEE), job creation and community development. This project will have a framework in place to ensure that these imperatives are addressed and implemented.
6. THE FINANCIAL VIABILITY OF THE GAENP

Financial pressures resulting from a reduction in government subsidy has resulted in SANParks placing greater focus on business efficiency within parks. Each park has become a “business unit”, where they endeavour to fund their own operations and become financially sustainable. The financial viability of the gAENP was assessed in Specialist Report 10.

6.1 IS THE PROPOSED GAENP FINANCIALLY Viable?

Results of Specialist Report 10 have shown that the Total Gross Income (TGI) from small-stock pastoralism (a land use covering approximately 60% of the planning domain), is estimated to be about R80/ha in comparison to the R103/ha from game farming (not including income from eco-tourism). These figures were calculated using an area of approximately 135 000ha of similar vegetation type and grazing carrying capacities. Areas under intensive dairy farming are estimated to have a TGI of about R177/ha, against which conservation would struggle to compete on purely financial grounds, yet provides unmeasurable ecological services not provided by the cleared agricultural land.

The TGI for game farming does not take into account any income from eco-tourism, but is dependent on significant revenues from game sales. The above figures also take into account the fact that most of the pastoralism activities are established.

Establishment costs for the gAENP are vast, and in order to determine the financial viability of the proposed park, financial requirements to make the park a viable option have been explored. These costs are projected over a 5 to 6-year time frame, which is necessary to develop the park in manageable units. These have been covered in detail in Specialist Reports 11 – 13, and a summary of the financial implications are presented below.

Many of the proposed tourist activities will be possible with minimal further capital input into the project by SANParks (±R20 million), excluding the land acquisition. However the Big 5 tourism areas will require significant investment if the full range of opportunities are to be exploited (±R168 million, including game).

6.1.1 LAND

Some of land identified for incorporation into the gAENP has already been purchased or is in the process of being purchased. It is estimated that land purchases to consolidate a core area from which the broader goals set out in C-Plan can be achieved, will cost around R56 million. To fully achieve the objectives of C-Plan more land will need to be incorporated, but this will most likely be achieved through either willing seller-willing buyer transactions or through incorporation of private land into the reserve on a contractual scheme.

19 Services provided by the environment e.g. decrease in harmful greenhouse gasses, clean water production, protection of biodiversity etc.
6.1.2 INFRASTRUCTURE

Once the land has been acquired by SANParks it will need to be developed to meet the goals and objectives of the reserve and its different components. One of the largest capital costs is fencing. This has initially been divided into different units until game numbers have increased and land consolidated. The initial fencing is estimated to cost approximately R25 million and will largely be funded through Poverty Relief funding and GEF support. This includes the cost of upgrading all areas north of the N2 to Big 5 standards. Initially the area on the coast will be excluded but the long term vision is to have a portion of this area included if the greater conservation goals are to be met. The cost also includes the expenses associated with removal of existing fence material.

6.1.3 ROADS

The park has been zoned for different tourism uses. This has been done mainly to reduce the capital requirements of road construction and maintenance. Roads and tracks can be very costly, especially if provision has to be made for access to normal sedan type vehicles. The plan takes these considerations into account and certain areas will have limited access. The total road development costs are estimated to be about R25 million. These are mostly gravel roads and include a total distance of just under 1 000km, at an average cost of about R25 000 per km. Here again, private concessionaires, Poverty Relief funding, and GEF support will absorb associated costs.

6.1.4 BUILDING AND OTHER INFRASTRUCTURE

Conservation infrastructure such as staff accommodation, entrance gates, offices, workshops etc. have been estimated to cost about 7.1 million. These will be spread over most of the park and will make use of existing structures where possible. However, large headquarters are planned for the current office complex at the existing Addo Camp and a large section of this funding will come from Poverty Relief and GEF.

6.1.5 EQUIPMENT

Additional equipment will be required over and above the existing assets. An amount of almost R2 million has been estimated for this. This figure is low and it indicates that the level of management in many areas will be very low. Plans are to access GEF funding for this aspect.

6.1.6 GAME

The introduction of game forms one of the largest cost components of the entire park development. Although there is existing game in the current AENP, this is insufficient to achieve the long to medium term stocking goals. Detailed stocking models have been developed and it is suggested that each area be stocked to 50% of its long term stocking rate. This will provide a good population base on which the game can reproduce and build up to their final numbers within 5 to 10 years. The total cost of game is estimated to be almost R51 million. Buffalo account for a large portion of this because of their high market value.
6.1.7 OPERATING COSTS

The reserve will obviously require a budget for carrying out the annual operations. This is expected to grow from its current base to a final figure of just over R12 million by year 6. This includes all the conservation related expenses including staff salaries and other operational items.

6.1.8 CONCLUSION

As projections in Table 6.1 indicate, the proposed gAENP would have a positive income as of year 6 and earn on average about R157/ha, greater than the alternative agriculture total gross margin of R120/ha.

6.2 WHAT INCOME CAN BE EXPECTED FROM THE PARK?

6.2.1 INCOME

Income is derived from several sources, including entrance fees (split tariff for foreign and South African citizens/residents), game sales, revenue from tourism operations, inclusive of concessionaires/contractual parks. Entrance fees are estimated to reach about R1.5 million by year 6 and visitor numbers to reach about 180 000 per annum. Game sales will generate approximately R14 million. These projections have been made on current prices and because of this, buffalo account for almost 80% of this income. The likelihood of buffalo maintaining their current market value is difficult to predict and the impact of price changes to buffalo must be borne in mind when making income projections for game. The likely moratorium on buffalo movements other than Addo buffalo will see the price of this group of animals escalate.

The remaining income of just over R9 million is earned from tourism. This is not the turnover but the expected return to SANParks. This is generated from several different tourism operations and these are dealt with below (Figure 6.2).

Addo

The Addo section, which extends from the N2 to the Paterson road will continue with the present SANParks controlled camp, the privately operated Gorah elephant camp (already operational), plus a further similar Gorah-type development and a new SANParks camp accommodating about 50 guests. These are estimated to earn just over R4 million for SANParks per year.

Nyati

This is an area north of the current Addo Camp and east of the Zuurberg road. An existing concession has been awarded in this area and a further two are planned, with negotiations with one already well advanced. This entire area will accommodate 84 beds and will focus on the conducted drives with no self-drive areas. Fees are likely to be higher than the current Addo camps.

Kabouga

This area will focus on the Kabouga-Sundays River area in the Zuurberg Mountains and extends. Activities and developments in this area will include a higher income camp of about 60 beds, probably on the Sundays River. In addition, a hiking trail in the mountains accommodating about 18 guests and a 4x4 trail mostly on existing tracks and using existing facilities. The income to SANParks from these areas is estimated at R1 million per year.
## Table 6.1: Table showing financial projections for gAENP over a six-year period.

<table>
<thead>
<tr>
<th>DEVELOPMENT COSTS</th>
<th>Total</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land (ha): Existing (ha)</td>
<td>156 000</td>
<td></td>
</tr>
<tr>
<td>To acquire: Phase 1 (ha)</td>
<td>31 573</td>
<td>R36 062 950</td>
</tr>
<tr>
<td>Phase 2 (ha)</td>
<td>9 024</td>
<td>R13 175 000</td>
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<tr>
<td>Phase 3 (ha)</td>
<td>5 000</td>
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<tr>
<td>New fencing (km)</td>
<td>503</td>
<td>R20 762 500</td>
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<tr>
<td>Existing fence (km)</td>
<td>174</td>
<td>R900 000</td>
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<tr>
<td>Fence removal (km)</td>
<td>955</td>
<td>R2 895 000</td>
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<tr>
<td>Roads (km)</td>
<td>24</td>
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<tr>
<td>Major</td>
<td>198</td>
<td>R12 870 000</td>
</tr>
<tr>
<td>New secondary</td>
<td>198</td>
<td>R12 870 000</td>
</tr>
<tr>
<td>Existing secondary</td>
<td>75</td>
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<td>New management, 4x4</td>
<td>100</td>
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<tr>
<td>Jetties, slipways, etc.</td>
<td>150</td>
<td>R150 000</td>
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<tr>
<td>Total development costs</td>
<td>-</td>
<td>R116 326 950</td>
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<tr>
<td>Equipment</td>
<td></td>
<td></td>
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<tr>
<td>Vehicles</td>
<td>12</td>
<td>R1 750 000</td>
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<tr>
<td>Other</td>
<td>28</td>
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<td>Workshop equipment</td>
<td>2</td>
<td>R770 000</td>
</tr>
<tr>
<td>Entrance gates</td>
<td>500</td>
<td>R2 500 000</td>
</tr>
<tr>
<td>Support infrastructure</td>
<td>100</td>
<td>R1 400 000</td>
</tr>
<tr>
<td>Offices</td>
<td>-</td>
<td>R470 000</td>
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<tr>
<td>Removal of old structures</td>
<td>675</td>
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<tr>
<td>Reclamation (ha)</td>
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<td>EIA studies</td>
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<td>R600 000</td>
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<tr>
<td>Game handling facilities</td>
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<td>R700 000</td>
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<tr>
<td>Buildings</td>
<td>-</td>
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<tr>
<td>Staff accommodation</td>
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<td>R1 098 000</td>
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<tr>
<td>Refurb. existing units</td>
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<td>Entrance gates</td>
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</tr>
<tr>
<td>Support infrastructure</td>
<td>100</td>
<td>R1 400 000</td>
</tr>
<tr>
<td>Offices</td>
<td>-</td>
<td>R470 000</td>
</tr>
<tr>
<td>Total development costs</td>
<td>-</td>
<td>R50 595 360</td>
</tr>
<tr>
<td>Tourism</td>
<td>-</td>
<td>R50 595 360</td>
</tr>
<tr>
<td>Total capital</td>
<td>-</td>
<td>R118 116 950</td>
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<tr>
<td>Total game introduction costs</td>
<td>-</td>
<td>R56 980 369</td>
</tr>
<tr>
<td>Tourism capital costs (SANP only)</td>
<td>-</td>
<td>R7 000 000</td>
</tr>
<tr>
<td>Total development costs</td>
<td>-</td>
<td>R56 980 369</td>
</tr>
<tr>
<td>OPERATING COSTS</td>
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<tr>
<td>Staff</td>
<td></td>
<td></td>
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<tr>
<td>Permanent</td>
<td>134</td>
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<td>Other</td>
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<tr>
<td>Contractual work</td>
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</tr>
<tr>
<td>Alien plant control</td>
<td>-</td>
<td>R2 500 000</td>
</tr>
<tr>
<td>Other costs</td>
<td>334</td>
<td>R2 240 000</td>
</tr>
<tr>
<td>Total annual costs</td>
<td>R9 012 580</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrance fees</td>
<td>1 534 411</td>
<td>R755 883</td>
</tr>
<tr>
<td>Accommodation</td>
<td>-</td>
<td>R720 000</td>
</tr>
<tr>
<td>Shops</td>
<td>-</td>
<td>R720 000</td>
</tr>
<tr>
<td>Restaurant</td>
<td>-</td>
<td>R720 000</td>
</tr>
<tr>
<td>Concessions</td>
<td>9 081 428</td>
<td>R2 770 867</td>
</tr>
<tr>
<td>Game income</td>
<td>13 884 903</td>
<td>R470 247</td>
</tr>
<tr>
<td>Total</td>
<td>24 500 741</td>
<td>R3 996 997</td>
</tr>
<tr>
<td>Annual income less expenses</td>
<td>R9 012 580</td>
<td></td>
</tr>
<tr>
<td>Total development costs/ha</td>
<td>R757</td>
<td></td>
</tr>
<tr>
<td>Annual expenses/ha</td>
<td>R72</td>
<td></td>
</tr>
<tr>
<td>Staff costs/ha</td>
<td>R35</td>
<td></td>
</tr>
<tr>
<td>Other costs/ha</td>
<td>R37</td>
<td></td>
</tr>
<tr>
<td>Income/ha</td>
<td>R157</td>
<td></td>
</tr>
</tbody>
</table>
Figure 6.2: Map showing the proposed management sections for GAENP
Darlington Dam
This area focuses on the Karoo plain around Darlington Dam. Here another SANParks camp is proposed similar to the one at Addo but only accommodating about 75 guests. In addition a campsite for about 10 sites will be developed and a private opportunity similar to Gorah will be made available to the private sector comprising about 24 beds. The total income is expected to be about R1.2 million per annum.

Woody Cape
Woody Cape is the area to the south of the N2 and includes the coastal strip from Sundays River to the existing Woody Cape Reserve. Here the existing trails network will be extended to cater for about 26 visitors. A private camp opportunity will be made available for a 24-bed camp, probably with access to the Addo section and a campsite near the Sundays River with beach access to be developed by SANParks. All these are expected to generate just over R1 million for SANParks per annum.

Summary
For the above plans to work, additional capital funding of about R170 million will be required. The projected income will more than cover the operational costs of this development, even if the price of buffalo falls substantially. Very few conservation areas in South Africa generate sufficient income to cover their operational costs. However, the economic benefits from job creation (over 500 directly from the operations) and other benefits such as biodiversity conservation and ecological services (clean water, carbon sinks etc.) do yield huge benefits. The spin-off effects in the area are potentially high as it gives landowners another option for their land beyond normal agriculture. If the project does attract the tourist numbers expected, a larger region will benefit significantly.

6.3 WHAT IS THE TOURISM POTENTIAL?
Since tourism will be the main source of income for the gAENP, the existing tourism and the tourism potential of the planning domain were investigated (specialist reports 12 and 15) and are summarised below.

6.3.1 ESTABLISHED ECO-TOURISM IN THE PLANNING DOMAIN
An overview of the tourism industry in the planning domain is difficult, as comprehensive marketing surveys have not been carried out. The East Cape Tourism Board (ECTB) is in the process of gathering data on tourist numbers, which will be available after the 2001/2002 summer season. The Eastern Cape has diverse attractions for tourism potential – the beaches, big game fishing, mountains, game reserves and hunting – but its share of the travel and tourism GDP is merely 8.2%, compared with 36.3% for KwaZulu-Natal, and 21.5% for the Western Cape. The potential for growth is therefore considerable. If the Eastern Cape is to increase its share of the national target market to 13%, this would lead to 65 000 more job opportunities – equivalent to the total presently employed in agriculture. The province is extremely well placed to synergise and benefit from tourists to other areas, e.g. the Western Cape generally and the Garden Route in particular. The gAENP has the capacity to capitalise on its link to the Garden Route and generate overall tourism in the region as described below.
Although nationally there appears to be a decline in tourism numbers, those to the AENP have steadily increased. SANParks have only recently begun to carry out market research and preliminary results show that there is potential to expand the tourist market to the park by increasing the variety of wildlife experiences, improving quality, diversity and efficiency of facilities and providing more background information on the area.

Addo Elephant National Park (AENP)
The AENP remains the cornerstone of tourism in the Addo area, and currently employs 39 tourism staff members to run the tourism product in the present 11 000 ha elephant section.

Tourism expansion plans as described in Section 6.2, within the proposed gAENP include adventure and outdoor activities such as game viewing, bird watching, guided night drives, horse trails, nature trails, overnight hikes and a 4x4 trail. The shop and the restaurant have been outsourced to private enterprise. At this stage, the expansion in tourism is uncertain and it is not clear how this will affect staff needs.

Inclusion of Woody Cape into the gAENP will expand tourism options in this section of the park by building on the present hiking trail and 4x4 access to the beach, which will be restricted in line with new legislation. The combination of forest and extensive dunefield, beaches, and off-shore islands offer a wide range of unique experiences to visitors.

SANParks has initiated a national concession drive in their parks, with two having been awarded in the park. Three to four additional concession opportunities and possible nodes for tourism are still to be identified. They are expected to offer better tourism opportunities and survive, with greater returns for SANParks.

Privately owned Game and Nature Reserves

?? Shamwari Game Reserve, situated along the Bushmans River, is well marketed and offers an upmarket tourism product. It is currently the southern most reserve in Africa that offers the Big 5. Day visits, overnight accommodation and other African experiences are presented. Shamwari also has an education centre and an African Arts and Culture Centre.

?? Schotia Game Reserve borders the AENP and offers a wildlife experience complete with “free-ranging” lions. Overnight accommodation is available as well as a dinner experience in an open-air lapa.

?? Burchell Game Reserve is situated in the New Year valley near Alicedale. It offers a conference venue and a thatched lodge.

?? Leopard’s Kloof is situated in the Alexandria forest and dunefields and mainly offers outdoor activities such as hiking and deep-sea cruises.

?? Several new enterprises are starting to market themselves as exclusive game lodges offering a range of eco-tourism activities.

Hunting enterprises
The Eastern Cape is a preferred destination for foreign trophy hunters. There are 500 game farms in the province, more than double the number a decade ago. Game auctions already generate substantial revenue. The gAENP would enhance eco-
tourism greatly and enable rural people to generate revenue in both core and peripheral developments.

**Coastal tourism**
The coastline stretching from Port Elizabeth to the area proposed to be incorporated within the gAENP is relatively under-utilised as most is inaccessible. Tourism PE promotes the Port Elizabeth beachfront.

Cannon Rocks holiday resort, with camping chalets and self-catering flats, is situated 135km east of Port Elizabeth. It offers access to the beach, surfing, fishing, a swimming pool and a walking trail.

**Accommodation**
Approximately 19 B&Bs occur in the Addo area, many of which are on citrus farms and more recently at Colchester. Of the most popular hotels in the area, the Zuurberg Inn, River Bend Country Lodge and Sandflats Hotel offer unique tourist experiences.

**Crafts and curios**
Four outlets selling crafts and curios occur within the Addo area and several in the Alexandria area. Three of the outlets in the Addo area expressed an interest in selling more locally produced products.

**Tour operators**
A number of tour operators, varying from small entrepreneurs to well-established companies operating nationally, occur in the area. Many have bases in Port Elizabeth and all offer unique tours around the Eastern Cape, ranging from wildlife tours, to township tours.

**Suppliers**
Suppliers to the tourism industry include manufacturers of food, beverages, crafts and curios and services. There is a long term relationship with many of the suppliers. The criteria for ordering from suppliers are price, quality, convenience and reliability of supply, with no environmental or social criteria being considered yet. SANParks have a policy stating that a certain percentage of supplied goods should be from disadvantaged suppliers. Using local suppliers, however, is difficult as an ongoing and often urgent supply needs to be guaranteed.

Tourism PE is conceptualising a Tourism Supply Chain project, which will entail persuading tourism businesses to source 20% of all their supplies from new supply chains, i.e. from disadvantaged communities. The aim is to unleash a major job creation burst from tourism, in ways that are easily attainable for new businesses. However, businesses will need incentives, such as rates rebates, and new entrepreneurs will require training (technical, management, marketing, etc.).

**Adventure tourism operators**
This sector of the tourism market is increasing in the Eastern Cape region. Seven companies in the region offer a variety of adventure-based activities e.g. bungee jumping, blackwater tubing, 4x4 trails, horse trails, microlight flights, abseiling and ballooning.
Farm tourism
Several B&Bs in the Sundays River valley are located on private farms, but do not necessarily promote farm tourism as a product. Many offer horse trails, including Happy Lands (Kirkwood) and Springmount Trails, which offer horse trails on a dairy farm, with access to the dunes and beach. In addition, they offer a guided ride by ox-wagon.

Agricultural / Horticultural tourism
Despite the predominantly agricultural nature of the land use in the Kirkwood and Alexandria districts, few such activities aimed at tourists were identified, apart from the Rose Show (Addo) and Chicory Plant tours (Alexandria).

Sport tourism
Watersports and other sport tourism activities are confined to Port Elizabeth, with polo on offer at the active Addo Polo Club.

6.3.2 THE ECONOMICS AND SUSTAINABILITY OF ECO-TOURISM/CONSERVATION AS A FORM OF LAND USE

There is an emerging demand for sustainability of all forms of natural resource use, in order to provide for quality of life for current and future generations. This has been expressed in a host of policy documents and internationally, including the Rio Declaration (June 1992) and more explicitly in the Convention for the Conservation of Biodiversity. Within South Africa, sustainability was stated to be one of the keys of the Reconstruction and Development Programme (African National Congress 1994) and features prominently in the White Paper on "An environmental policy for South Africa". However, the implementation of sustainable forms of land use has proved elusive, largely due to a lack of understanding of the implications of the various forms of land use.

Although eco-tourism/conservation is recognised as a valid form of land use and a lucrative alternative to conventional agriculture and pastoralism, this category of land use is generally ignored in economic analyses. There have also been few attempts to quantify the value of eco-tourism/conservation in either financial or economic terms (Antrobus, Fraser, Levin & Lloyd 1994).

In a financial analysis, Kerley et al. (1995) clearly showed that eco-tourism/conservation in Valley Thicket (AENP), besides being sustainable, also generated more income than a comparable pastoral operation and was generally profitable. In addition, the eco-tourism/conservation option is ecologically sustainable.

There are also indications that fynbos cannot sustain conventional agriculture or pastoralism, but that eco-tourism, water catchment and flower harvesting are sustainable forms of land use in this biome (Rebelo 1996). Similarly, forests cannot sustain pastoralism (Castley & Kerley 1996b), and are destroyed by clearing for crops. The highly threatened nature and extent of degradation of the Nama Karoo and certain grassland types suggest also that the current forms of land use need to be reappraised in terms of their sustainability in these biomes. It may therefore be concluded that eco-tourism/conservation is an ecologically sustainable, and therefore highly desirable form of land use.
Eco-tourism, if carefully planned (uses for specific areas), is a sustainable form of use of the natural environment and can be a long term economic generator without being detrimental to biodiversity conservation. The types of suitable eco-tourism activities and the areas in which they are suitable are discussed in detail in Specialist Report 11 and are summarised here.

The economic perspective shows a far higher value for eco-tourism/conservation derived from the AENP, with visitors spending a conservatively estimated R360 million travelling (flights, car hire, fuel, hotels, etc.) to the park in 1996 (Geach 1997). This figure does not include what the visitors spent in the park for accommodation, meals, supplies, game drives, tips, etc. The total Gross Geographic Product of the districts in which the proposed gAENP will fall (Alexandria, Kirkwood, Somerset East and Jansenville) was lower (R297 million in 1992, no data available for 1996) than the amount spent by visitors travelling to the AENP in 1996 (Geach 1997), although it must be recognised that the tourist figure is distributed over a far wider area (Geach 1995, 1997). Thus eco-tourism/conservation can clearly be seen to be a major economic role player in the Eastern Cape.

In terms of employment opportunities, eco-tourism/conservation also performs well, with the current AENP employing twice as many people at four times the income of a comparable pastoral operation (Kerley et al. 1995). Furthermore, onsite employment figures seriously under-estimate the employment opportunities provided by eco-tourism/conservation as a form of land use, as tour operators, service providers and other ripple effects also generate jobs. It has been estimated that each 10 foreign tourists will create one local job (Hugo 1992). This suggests that with 114 000 visitors in 2001, half of which are foreign, the AENP generates about 6 000 direct and indirect employment opportunities.

Thus, eco-tourism/conservation is clearly highly desirable in terms of wealth generation and job creation. The proposed gAENP will therefore have the potential to significantly expand the contribution of eco-tourism/conservation to the regional economy. However, it is not possible to simply extrapolate the economic contribution of the current AENP to the proposed extended park, as the value of the larger park will depend on a host of factors. These include the nature of eco-tourism developments (currently restricted to the current AENP) and the size of the eco-tourism market.

Furthermore, eco-tourism can offer greater scope for unskilled labourers to develop new skills and thus to be exposed to a wider variety of employment opportunities than agriculture would offer.

6.4 WHAT ARE THE OPPORTUNITIES AND CONSTRAINTS PRESENTED BY TOURISM?

Table 6.4 lists the opportunities and constraints presented by the existing and potential tourism opportunities of the planning domain for gAENP. These are described in more detail in sections 6.4.1 and 6.4.2.
Table 6.4: The opportunities and constraints presented by the existing and potential tourism opportunities of the planning domain for the gAENP.

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<thead>
<tr>
<th>Opportunities</th>
<th>Constraints</th>
<th>Mitigate constraints by</th>
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</thead>
<tbody>
<tr>
<td>?? Existing tourism market</td>
<td>?? Perceptions of the Eastern Cape</td>
<td>?? Tasking tourism organisations with promoting the Eastern Cape as a suitable tourist destination</td>
</tr>
<tr>
<td>?? Ecotourism opportunities</td>
<td>?? Coega development</td>
<td></td>
</tr>
<tr>
<td>?? Heritage attractions</td>
<td>?? Established tourist accommodation</td>
<td></td>
</tr>
<tr>
<td>?? Transport e.g. close proximity of airport and good roads</td>
<td>?? Lack of unsightly developments</td>
<td></td>
</tr>
<tr>
<td>?? Safety</td>
<td>?? Private sector and community involvement</td>
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</tr>
<tr>
<td>Optimise opportunities by</td>
<td></td>
<td></td>
</tr>
<tr>
<td>?? Ensuring all eco-tourism opportunities are captured</td>
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</tr>
<tr>
<td>?? Ensure involvement of the private sector and local communities</td>
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6.4.1 OPPORTUNITIES

Existing tourism market
The existing AENP (11% of the proposed gAENP) is an established and well-known destination, and attracted 114 000 tourists (over 50% from foreign countries) in 2001. The number of tourists to the park has been increasing at a steady 8% per annum since 1991 when only 51 000 tourists visited the park. Thus there is an existing market that can be extended to the gAENP, thereby reaching financial sustainability within a shorter period of time. The proximity to the Garden Route and other international tourist destinations, and the presence of the unique marketing opportunity of the Big 7 in a malaria-free country, will also help to draw tourists to the gAENP, and therefore promote financial viability.

Eco-tourism opportunities
Government has recognised the importance of tourism in the Eastern Cape as a potential economic contributor. Its target for GDP generation from tourism is 10%. The Eastern Cape has the potential to develop specific eco-attractors, and the province is a preferred destination for foreign hunting companies. The gAENP would enhance eco-tourism greatly and enable rural people to generate revenue in both core and peripheral developments. This ‘multiplier’ effect started with direct earnings from tourism will stimulate the local economy, which could produce a significant increase in the economy of the region. The eco-tourism industry will increase the skills base of the work force, making them more marketable.

The advent of a tourism college at Port Alfred with an eco-tourism emphasis and links to the private sector is an important new social opportunity for the gAENP, just as the gAENP is for the college. The AENP and the gAENP can provide training and research opportunities for staff and students in return for training that the college can provide for AENP staff.

The gAENP has an outstanding range of desirable options for tourists because of the habitat variability the area offers. These include:
Game viewing – Big 7 experience could include great white shark and whales.

Walking and hiking – best suited to areas where vehicle access is limited, where scenery and natural attractions are high and where there is no dangerous game.

Diversity of scenery and habitats, plus inclusion of an adjacent MPA makes for a unique conservation area.

4x4 tourism is best suited to areas where the costs of building normal roads are too high e.g. rugged terrain.

Open water activities and fishing are an option for the coastal areas, depending on the category of Marine Reserve proposed. Fishing will also be permissible on the Darlington Dam and the lower reaches of the Sundays River.

Hunting is not permitted under the National Parks Act in a Schedule 1 National Park, but should Schedule 2 areas be incorporated, hunting could be an option. Revision of the NPA may see this being allowed in SANParks.

Proximity to an international air and sea port.

When this range of attractions is put together as a package, the gAENP will be able to attract visitors as a major destination in its own right, on an equal basis with the Serengeti, Kruger and other great African experiences.

The climate of the Addo region is also very well suited for tourism, being generally warm temperate, with cool winters and hot summers. Port Elizabeth was voted as being one of the top ten cities in the world in terms of its climate (Anon. 1996). This allows for year-round tourism opportunities, particularly exploiting the good conditions here during the northern hemisphere winter.

*Heritage attractions*
Besides natural resources, the ‘footprint’ abounds in heritage attractions, yet to be catalogued and developed.

*Transport*
The proximity to the metropole and infrastructure provides accessible transport facilities, a high incidence of day-trippers and provides opportunities for valuable environmental education initiatives.

*Established tourist accommodation*
The existence of many private sector enterprises in the area, from well-established game farms to more recent B&Bs, provides opportunities for partnerships, without the need for significant new capital developments.

*Unsightly developments*
The lack of current unsightly developments in the area provides an opportunity for aesthetically pleasing areas within the proposed gAENP. The Coega IDZ will, however, impact on the aesthetic value of the park in the future.
Safety
The Eastern Cape is malaria-free\textsuperscript{20}, which allows for an attractive and unique marketing edge. It is also considered politically stable and has a lower crime rate than other provinces in South Africa.

Private sector and community involvement
Eco-tourism also lends itself very well to developing and building partnerships with the private sector and with communities. The array of opportunities in the gAENP presented for tourism will give communities and the private sector a wide range of tourism facilities in which to participate.

6.4.2 CONSTRAINTS

Perceptions of the Eastern Cape
The Eastern Cape is underdeveloped and is characterised by a lack of appropriate employment for the existing population, lack of capacity at all levels, from senior civil servants to grassroots level, and a resultant endemic and deepening poverty. These poor perceptions are a constraint as they hinder tourism and international investment and may discourage certain agencies from investing in the gAENP.

Coega development
The presence of the proposed Coega port and IDZ would provide visual constraints as well as the potential for oil spills.

6.4.3 MITIGATION MEASURES

Tourism organisations should be tasked with promoting the Eastern Cape as a suitable tourist destination. The institutions involved in tourism as well as recommendations as to suitable tourism institutional arrangements are discussed in Chapter 7.

\textsuperscript{20} Malaria is recognised as a major threat to tourism.
7. THE LEGAL AND INSTITUTIONAL ENVIRONMENT

7.1 WHAT IS THE LEGAL FRAMEWORK FOR DEVELOPING THE GAENP?

The Terms of Reference provided by SANParks stated that the SEA should assess resource use options according to principles of ecological, social and economic sustainability. Guidance is provided by the National Environmental Management Act (NEMA, Act No. 107 of 1998), the White Paper on an Environmental Management Policy for South Africa (Republic of South Africa 1997), the White Paper for Sustainable Coastal Development in South Africa (Coastal Management Policy Programme, 1999), the Guideline Document: Strategic Environmental Assessment in South Africa (Department of Environmental Affairs and Tourism, 2000) and the National Parks Act, as well as the South African constitution.

The constitution states that:

‘… everyone has the right to an environment that is not harmful to their health or well being: and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that 1) prevent pollution and ecological degradation; 2) promote conservation; and 3) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development’

Chapter 1 of NEMA contains the following relevant principles:

2. Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equity.

3. Development must be socially, environmentally, and economically sustainable.

4. (a) Sustainable development requires the consideration of all relevant factors including

   (i) the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

   (vii) a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions

   (f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

   (g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge. […]

   (o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people’s common heritage.’
Another important principle is contained in section 3 of the Development Facilitation Act:

“Each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservational, industrial, community facility, mining, agricultural or public use, should in advance or in general be regarded as being less important or desirable than any other use of land.”

These and other accepted principles of sustainable development, such as those stated in Agenda 21 (UNCED, 1992), provided the basis for this assessment.

At present, in South Africa, SEA has no legal status, and this SEA has not been prepared in terms of any land use planning or environmental legislation. This SEA serves as a synthesis of existing information and identifies the opportunities and constraints the environment poses for the proposed gAENP programme.

In keeping with the above, the proposed gAENP programme and the SEA take into account the opportunity for the gAENP to alleviate poverty in the region, improve living standards of disadvantaged communities, satisfactory resettlement where applicable, Black Economic Empowerment (BEE), sustainable tourism, local employment and outsourcing strategies while preserving the biodiversity of the area, thus meeting international conservation requirements.

7.2 WHAT IS THE CURRENT INSTITUTIONAL FRAMEWORK FOR CONSERVATION MANAGEMENT?

Many aspects of conservation management are shared national and provincial competencies. In most cases the activities of national institutions are geared towards the development and implementation of a national framework conservation policy. They are also central players in overseeing the provisions of a number of international conservation conventions. Provincial departments, in particular the provincial conservation authority, by contrast, have been devolved certain powers to implement national policy provisions.

7.2.1 NATIONAL INSTITUTIONS

There are currently seven national institutions active in the planning domain. These include:

?? The Department of Environmental Affairs and Tourism (DEAT): The lead agent for environmental management in South Africa. DEAT’s function is increasingly concerned with policy development and coordination of environmental management by other conservation agencies, except for the management of marine resources, which is an exclusive national government competence largely managed directly by DEAT through Marine and Coastal Management (MCM). Although many hands-on environmental management activities are assigned to the provinces, DEAT remains a key institution in the realisation of the gAENP.

?? The Department of Water Affairs and Forestry (DWAF) is focused on managing South Africa’s water and forestry resources. DWAF’s interest in the land within the domain is linked to its ownership of demarcated state forest land, the ownership of the Darlington Dam wall, the provision of water services and the conservation of water catchments.
The Department of Land Affairs (DLA) focuses on access to and the development of land. This includes land redistribution, restitution and tenure reform as well as facilitating land development. Land issues will be central to the establishment of the gAENP, particularly in land purchases.

The National Department of Agriculture (NDA) addresses a wide range of issues relating to the development of agriculture as an economic sector in South Africa. One of the issues addressed by the Department is the sustainable management of agricultural resources. The NDA is an interested party in the process of land acquisition by SANParks, as farmland will be withdrawn from agricultural use, which will require the consent of the Minister of Agriculture. The NDA’s longer-term involvement is likely to include issues affecting agricultural water use and agricultural operations in the buffer zone.

The Department of Provincial and Local Government has, under the new Constitution, a new and expanded role to play in local development planning and administration. This department provides resources and support to local authorities in compiling Integrated Development Plans (IDPs). It is important that SANParks coordinate their planning with this Department.

The Department of Minerals and Energy Affairs. SANParks will need to seek the consent of the Minister of Minerals and Energy Affairs in the process of proclaiming portions of land as part of the gAENP.

South African National Parks (SANParks) is a statutory body established under the National Parks Act 57 of 1976 and is focused on the management of South Africa’s National Parks. The mission of SANParks is ‘To acquire and manage a system of national parks that represent the indigenous wildlife, vegetation, landscapes and associated cultural assets of South Africa for the joy and benefit of the nation’. Corporate objectives that are of relevance to the gAENP project are shown in Box 7.2 (SANParks 1998).

Box 7.2: Corporate objectives of SANParks

| ?? To ensure that our national parks represent the widest possible spectrum of biodiversity, significant landscapes, natural processes and associated cultural assets. |
| ?? To identify the natural resources in national parks, and to develop proposals for their protection, including measures for enhancing environmental values, where appropriate. |
| ?? To develop and nurture good relations with communities adjacent to national parks, and to take full account of local cultural values and resources in park development and management. |
| ?? To encourage appropriate access to material, cultural, recreational and educational resources of national parks through eco-tourism. |
| ?? To work with Park Management and Social Ecology to identify areas that are suitable for privatisation and economic empowerment. |
| ?? To provide a framework for park planning which reflects the environmental values of parks (including local cultural resources), accommodates the needs of local communities and creates parameters for tourism development. |
| ?? To manage each park as a business unit in accordance with an approved business plan, with corporate policies and to world-class standards. |
| ?? To create awareness of the national parks of South Africa so that all citizens develop a pride in their natural heritage and recognise SANParks as one of its principal custodians. |
| ?? To maintain and enhance SANParks’ profile as a leader in addressing environmental issues, and integrating natural and cultural resources. |
7.2.2 NON-GOVERNMENTAL ORGANISATIONS

A number of non-governmental organisations (NGOs) play a role in conservation management. The International Foundation for Animal Welfare (IFAW) and Humane Society of the United States (HSUS), Leslie Hill Succulent Trust, and Rhino & Elephant Foundation have collectively funded the purchase of approximately 20,000 ha of land. The Wildlife and Environment Society of Southern Africa (WESSA) also takes an active interest in the proposed park and its development.

Other national environment and development NGOs whose activities potentially have a bearing on the proclamation of the proposed gAENP include: South African National NGO Coalition (SANGOCO), Rural Development Services Network (RDSN), National Land Committee (NLC), Group for Environmental Monitoring (GEM), Kagiso Trust (KT), National Development Agency (NDA), Africa Resources Trust (ART), and South African Environment Project (SAEP).

The Eastern Cape Game Management Association (ECGMA) seeks to promote and regulate the game farming and hunting sector in the province. It acts as liaison between its members and conservation authorities.

7.2.3 PROVINCIAL, DISTRICT AND MUNICIPAL INSTITUTIONS

The Eastern Cape Department of Economic Affairs, Environment and Tourism (DEAET), aims to build a sound, growing and sustainable economy which facilitates economic empowerment and delivers an optimal quality of life for all citizens of the Eastern Cape. This is to be achieved through the efficient utilisation and management of environmental resources, the promotion of investment and the strategic deployment of the human and financial resources at its disposal. Within this department are:

- The Chief Directorate: Environmental Affairs (CD:EA), primarily tasked with conservation responsibilities within the province.
- The Eastern Cape Tourism Board (ECTB), which retains conservation management responsibilities over protected areas in the former Ciskei. The ECTB Division: Game Reserves, therefore, is an interested party in the process of transferring the remaining Provincial Nature Reserves within the planning domain to SANParks.
- The Eastern Cape Development Corporation (ECDC), which plays an active role in promoting investment in the Eastern Cape and in providing soft loans to emerging entrepreneurs.

The Eastern Cape Department of Agriculture and Land Affairs (ECDALA), has the functions of carrying out land use planning at a provincial scale, generating information on the natural resources of the province and contributing to the formulation of policy and standards. The following perform various functions for the (ECDALA):

- The Sundays River Irrigation Board acts as an intermediary between DWAF and the farmers of the Sundays River Valley, and has been registered in terms of the provisions for Irrigation Boards as contained in the National Water Act.
- The Eastern Province Agricultural Union (EPAU) represents approximately 150 Farmers Associations in the Eastern Cape.
The Eastern Cape Disadvantaged Farmers’ Union represents the interests of black aspirant farmers in the province.

The Directorate of Town Planning in the *Eastern Cape Department of Housing and Local Government* is driving the Integrated Development Planning process in the province. This process involves the consideration of environmental issues.

The *Western District Municipality (WDM)* was once part of the Western District Council (WDC) and has traditionally played an important role in conservation management and land use planning in the planning domain. The WDC has now been divided into the WDM and Nelson Mandela Metropole. The WDM’s jurisdiction is now mostly the rural areas falling outside the metropole.

A number of *Local Municipalities* (Blue Crane Route Municipality, Ndlambe Municipality, Sundays River Municipality and Ikwesi Municipality) have jurisdiction over portions of the planning domain and are likely to have certain planning and conservation management authorities within their areas. Liaison between SANParks and these local municipalities is essential.

*Local NGOs* such as the Community Environmental Network (CEN) in Port Elizabeth and the Port Elizabeth Museum are local institutions that form part of the conservation framework for the gAENP. In addition, there are a number of more specialised ‘environmental societies’, e.g. the wildflower society, the herpetological society, etc in Port Elizabeth that represent public interest in conservation issues.

### 7.3 HOW EFFECTIVE IS CONSERVATION MANAGEMENT IN THE PLANNING DOMAIN?

#### 7.3.1 INTRODUCTION

The two agencies tasked with protected area management responsibilities in the domain are SANParks and the Chief Directorate: Environmental Affairs.

SANParks, with their long history of practical conservation management in a wide variety of landscapes, habitats and species, have developed technical skills and competencies. By virtue of their national park status and world-renowned conservation activities, they also draw on expertise from outside the organisation, from the international conservation world, local tertiary institutions and private consulting firms (both local and foreign).

The SANParks statutory status and financial independence has largely driven their desire to become financially self-sufficient. At present the SANParks generates about 86% of its own budget, with no other conservation body able to compete with this. A greater focus on becoming financially more efficient has necessitated various changes within the institutional arrangement of the organisation, including a capacity building programme (funded by the International Finance Corporation (IFC) and DANCED\(^{21}\)), diversifying their wildlife products through outsourcing of commercial operations, involving local communities in management and other activities within

\(^{21}\text{Danish government agency}\)
and around the national parks (which resulted in the formation of SANParks’ Social Ecology Department).

The provincial conservation agency, the Chief Directorate: Environmental Affairs (CD:EA), has also undergone considerable change, restructuring and re-naming in the past few years, and is subject to similar pressures and constraints as those experienced by SANParks. It remains cash strapped given a relatively low priority by the Provincial government, which only allocated 1.3% of the Eastern Cape’s provincial budget compared to 83% on Health, Welfare and Education. Their department lacks capacity at present given a large number of resignations over the last few years. They are also severely limited by a lack of incentives to increase their financial independence, as they are a non-parastatal organisation, a crucial step in managing one’s own financial system.

7.3.2 PROTECTED AREAS

Protected areas within the planning domain include AENP, Woody Cape Nature Reserve, Tootabie Nature Reserve and the off-shore islands. All are currently State owned.

The AENP is currently managed by SANParks and is staffed by 99 employees engaged mostly in conservation or tourism activities. The park incorporates the original AENP as well as the Zuurberg National Park.

With Tootabie Nature Reserve and Woody Cape Nature Reserve (previously managed by the Chief Directorate: Environmental Affairs) having been transferred to SANParks as of 1 April 2002, the large state-owned land falls under the SANParks, making for unified conservation under a single Act. SANParks will manage the islands although the legal transfer will follow in the near future. The Provincial staff component of 27 has transferred entirely over to SANParks.

Privately owned protected areas within the planning domain include three private game parks, three conservancies and two known heritage sites.

7.3.3 EFFECTIVENESS OF CONSERVATION MANAGEMENT

Comparing the effectiveness of conservation management of the two areas is difficult due to the diversity of landscapes and ecosystems in the planning domain, and consequently the intensity of management required.

Three criteria were used to attempt to determine the effectiveness of conservation management in the planning domain:

?? Rands spent per hectare
?? Number of conservation personnel per hectare
?? Capacity to deal with threats

**Rands spent per hectare and number of conservation personnel per hectare**

The results of the comparison showed that AENP spends R23/ha and employs 1 person per 1 860ha for conservation operations. Woody Cape Nature Reserve (WCNR) spends R19/ha and employs 1 person per 894ha for conservation
operations. Therefore, AENP spends more per hectare on conservation operations, but makes more efficient use of its staff.

**Capacity to deal with threats**

The capacity of the organisations to deal with threats to biodiversity was evaluated as a function of both legislation and institutional strength, and also a function of the nature and size of any given area, which in turn influences the ‘resilience’ of that area to threat or trauma.

In terms of legislation, the National Parks Act (57 of 1995), being nationally proclaimed legislation, would provide a protected area with a greater degree of security than provincial legislation such as the Nature and Conservation Ordinance (No 19 of 1974). For instance the Woody Cape Nature Reserve Management Plan (Briers & Powell, 1994) identifies a number of threats, most of which originate from outside the protected areas, but others, such as the over-utilisation of groundwater, or the threat of mineral extraction (calcium carbonate mining), either do, or could, take place within the reserve itself. National legislation would provide stronger protection in both these cases. The incorporation of Woody Cape, including the coastline (which below the high water mark is currently afforded no protection) and contiguous areas of forest and coastal bush into the gAENP would inevitably provide greater protection against other threats such as clearance of dune forest around the reserve borders, and the ecological threat posed by a lack of ‘mega-herbivores’, as identified in the management plan.

However, the National Parks Act does not give SANParks any authority over activities affecting conservation of land outside of national parks, whereas the provincial ordinance does. The degree of protection afforded to areas outside state proclaimed and managed reserves, however, is extremely variable as seen in the implementation of the Nature Conservation Ordinance in relation to conservancies. Although a degree of protection is afforded to some components of the biota under such legislation, this is not sufficient to meet international criteria for the conservation of biodiversity.

In terms of institutional strength, both SANParks and the Chief Directorate: Environmental Affairs are currently engaged in corporate restructuring processes. The fluidity of the institutional terrain therefore makes it extremely difficult, and possibly premature, to evaluate institutional strength. What can be said, however, is that the restructuring processes generally lead to uncertainty amongst staff members and, in some cases, may affect the systems dealing with (operational) resource allocation. Furthermore, SANParks is in the process of redrafting the National Parks Act (57 of 1976) to bring it in line with the constitution and also grant it greater acceptability, without compromising its central biodiversity conservation theme.

Both organisations have in the recent past experienced considerable financial pressures, with reductions in subsidies from either national or provincial government. SANParks has moved to a situation where most parks are now ‘business units’, which are expected, in the short term, to fund their own operations. AENP, with an expenditure of R7 million/annum against a self-generated income of R6.2 million, appears well on the way to achieving financial self-sufficiency.
The CD:EA is faced with the dual problem of a large number of supernumeraries and an acute shortage of skilled personnel, particularly scientists. They have in the past also found it difficult to manage their protected areas as business units as any monies received would be handed back to the central coffers.

Both Woody Cape and the Islands have management plans, but as they are more than five years old, they are in need of revision and updating.

Although bio-geographical influence is not a function of institutional capacity, a brief examination of the nature and size of the protected areas can serve to mediate the cruder indicators of staff numbers, costs, and even legislation, in terms of the effectiveness of biodiversity conservation.

One of the fundamental premises upon which the proposal for the gAENP has been founded is the sense that in biodiversity conservation ‘single large’ is better than ‘several small’. The larger the area under protective management, the more resilient it is in terms of its ability to respond to traumatic events, and the more potential there is for the full functioning of dynamic ecological systems, as well as greater economic opportunities. The minimum area for such viability varies considerably depending on the particular biome represented, the species within it or using it, its fragility, and on its degree of isolation from similar or complementary habitats.

In terms of the management implications for protected areas, the smaller, the more isolated and the more fragile the habitat, the more vulnerable it tends to be and the higher the level of management intervention required for its conservation.

In the context of the gAENP and the areas currently under protected area management, the habitats that could be considered most fragile and most ecologically dynamic, and therefore most vulnerable to ‘unnatural’ levels of disturbance, are probably the Woody Cape dunefield interfaces, coastal forests, islands and mesic thicket vegetation. Active management is therefore necessarily more intense than in the areas of valley thicket or karoo of which the AENP mostly comprises. The threats to these habitats posed by an increasing elephant population and alien plants also necessitate active management intervention, but the inherent robustness and resilience of these systems renders them less liable to permanent damage, and they are also less sensitive to activities or events in neighbouring areas.

The seeming disparity between the staffing levels at AENP and Woody Cape is therefore not as clear-cut as might appear.

Specific areas of capacity
Conservation – Both SANParks and the Chief Directorate: Environmental Affairs are principally concerned with the conservation of biodiversity, and the majority of their reserve staff are dedicated to the practical implementation of biodiversity conservation management. The levels of expertise displayed are difficult to establish, but in the particular protected areas under consideration, there seems to be adequate capacity to fulfil this core function, both within SANParks at AENP, and the Chief Directorate: Environmental Affairs at Woody Cape. The growth of the area under AENP management has apparently been readily absorbed within existing
conservation staff capacity (Edwin Wilson, SANParks, pers. comm.). As the park expands further, though, there will be a need for increases in conservation staffing.

The lack of capacity at a scientific level within Chief Directorate: Environmental Affairs, and a decline in the management of Tootabie and the Algoa Island Nature Reserves are combination of the organisational problems currently being experienced, the peculiar logistical challenges associated with small remote reserves and islands, and a lack of technical capacity for conservation management.

Community Liaison and Partnerships – Although this is not immediately evident as a core conservation function, developing relationships and partnerships with park neighbours is often crucial to the success of biodiversity conservation both within the park boundaries and in the surrounding areas. SANParks recognised this in the establishment of a Social Ecology Department, which has recently been transferred to operate as a unit within the conservation department. At AENP there are currently only two full-time social ecologists with one student assistant. The gAENP involves liaison with large numbers of neighbouring communities and individuals over a considerable period of time, and it would seem clear that at present, SANParks at AENP lacks the capacity, in terms of staff available, to carry out this function effectively, particularly as demands upon it are to increase with expansion of the park.

Although community liaison is identified in the Woody Cape Management Plan as an important function of the reserve, no staff are dedicated to this, and again it seems that the Chief Directorate: Environmental Affairs, too, lack capacity in this area.

7.4 WHAT ROLE DO EXISTING INSTITUTIONAL STAKEHOLDERS PLAY IN TOURISM?

As with conservation management, many aspects of tourism are shared national and provincial competencies. A number of non-governmental organisations are also involved. There is very little co-ordinated tourism support.

The provincial and local government institutions in the Addo area are currently not fulfilling their mandate in terms of stimulating and supporting tourism businesses in disadvantaged communities. This is largely due to financial and human resources constraints, while SANParks is attempting to encourage such developments through the outsourcing process (day/night drives, concessionaires).

Several sectors, including business, disadvantaged communities and farmers, argue that the current AENP is not reaching out to people enough, and linking with other local and regional tourism initiatives. The gAENP will be an international drawcard to the area, and thus it is recommended that SANParks take a proactive lead in all tourism initiatives in the region, and integrate within the tourism sector and across sectors.

7.4.1 THE NATIONAL POLICY FRAMEWORK FOR TOURISM

Government policies, such as the Reconstruction and Development Programme (RDP) (1994) and the Rural Development Strategy (1995), note the potential of tourism to encourage economic development and job creation in rural areas.
Additional objectives of the strategy are the provision of infrastructure, the promotion of local economic development, SMMEs (Small, Medium and Micro-enterprises) and small-scale agriculture. The White Paper on South African Land Policy (April 1997) stresses economic growth, development and poverty alleviation through opportunities for small-scale production. This may be achieved through release of public land for housing and recreation, and the creation or expansion of commonage for food gardens, grazing, fuelwood and eco-tourism.

The White Paper on the Development and Promotion of Tourism in South Africa (May 1996) sees the promotion of Responsible Tourism, developed in line with RDP principles, as a key opportunity for economic growth. Responsible tourism aims to achieve sustainability in terms of social, economic and environmental objectives. The Transformation Strategy for the SA Tourism Industry (February 2001) stresses the importance of community-based tourism, Black Economic Empowerment (BEE) and provision of support to tourism via SMMEs.

The National Department of Environmental Affairs and Tourism supports a National Tourism Clustering Initiative, called *South African Tourism: a Collaborative Strategy for Development and Delivery*. Eco-tourism has been identified as a key thematic cluster and the Eastern Cape, with its mix of nature-based wildlife, historical and cultural tourism is seen as having significant eco-tourism potential. Other national government initiatives such as the Sustainable Coastal Development Programme, provide a framework for sustainable development. However, the institutional framework is not yet in place at a provincial or regional level for this to form part of an effective integrated tourism strategy, but needs recognition as a formal sector in industry.

The 1996 White Paper on Development and Promotion of Tourism sets out the roles of national, provincial and local tiers of government, the private sector, labour, communities, women, NGOs, the media and conservation agencies.

Government statistics are not published for tourism as an independent industry. However, it is believed that tourism is growing at about 5% p.a. as opposed to a growth of less than 3% in the economy overall. 58% of foreign tourists visit the Western Cape compared with 14% to the Eastern Cape. South Africa’s game reserves and protected areas are a major attraction for tourists: around 58% of foreign visitors experience some form of game-viewing but only 4% of foreign tourists to the Eastern Cape in January 2002 visited game lodges in the province, compared with 19% in Mpumalanga.

The South African government has stated that its target for GDP generation from tourism is 10%. This would lead to the creation of 500 000 direct and indirect job opportunities. The contribution that tourism makes to the South African economy is not evenly spread across the provinces. The Eastern Cape has diverse attractions for tourism potential – the beaches, big game fishing, mountains, game reserves and hunting – but its share of the travel and tourism GDP is merely 8.2%, compared with 36.3% for KwaZulu-Natal and 21.5% for the Western Cape. The potential for growth is therefore considerable. If the Eastern Cape is to increase its share of the national target market to 13%, this would lead to 65 000 more job opportunities – equivalent to the total presently employed in agriculture. The province is extremely well placed
to synergise and benefit from tourists to other areas, e.g. the Western Cape generally and the Garden Route in particular. The gAENP has the capacity to capitalise on its link to the Garden Route.

7.4.2 NATIONAL TOURISM AUTHORITIES

The Department of Environmental Affairs and Tourism (DEAT) is the national tourism authority and is the lead agent for tourism policy formulation, and for creating incentives and an enabling environment to encourage tourism activities.

Many private authorities, private sector associations, NGOs and financial institutions operating at a national level do not currently have direct involvement in the gAENP area, but may be available to provide services such as training, marketing and advice regarding standards, etc. as needed.

SANParks is a statutory body, with one of its objectives being the encouragement of appropriate access to material, cultural, recreational and educational resources of national parks through eco-tourism. The national commercialisation and outsourcing strategy aims to enable the private sector to deliver certain tourism functions, such as shops, accommodation and restaurants in order to improve efficiency and contribute to local economic development.

7.4.3 PROVINCIAL TOURISM STAKEHOLDERS

The provincial tourism organisations are key players in the tourism industry. Schedule 6 of the Constitution makes specific provision for tourism to be a provincial responsibility. The provincial government, through provincial tourism organisations, has responsibility for marketing and promoting their destinations. These organisations include Eastern Cape Department of Economic Affairs, Environment and Tourism (DEAET), Eastern Cape Tourism Board (ECTB) and Eastern Cape Development Corporation (ECDC).

7.4.4 LOCAL AUTHORITIES

The functions of the local government mirror those of the provincial government, but with added emphasis on the planning, development and maintenance of many specific aspects of the tourism product. Local government is a key role player with regard to affirmative Procurement Policies, Infrastructure Investment, the national Welcome Campaign and Information Management.

District municipalities such as the Western District Council (WDC) have established tourism focus groups, such as the Western Regional Tourism Organisation (WRTO). The Transitional Councils of Paterson and Kirkwood see tourism as an important issue, but they are so under-resourced that policy development is not on the agenda. Local government has priorities in terms of delivery of basic services, as well as the function of local economic development (LED), for which tourism is seen as a local development priority.

7.4.5 LOCAL TOURISM ASSOCIATIONS

Three local tourism associations are actively involved in promoting tourism to the respective areas. Tourism PE is a well-established tourism marketing and promotion organisation, which largely confines its operation to the Port Elizabeth area. It has a
good working relationship with the East London tourism authority and has recently forged a marketing partnership with the Western Cape.

Sundays River Valley Tourism Forum (SRVTF) is a volunteer marketing and business promotion body for tourism in the Kirkwood/Addo area. The SRVTF is represented at meetings of the ECTB and Tourism PE.

Addo Tourism is actively involved with upliftment of the Addo area, including tourism opportunities and facilities.

7.4.6 PRIVATE SECTOR AND COMMUNITIES

The private sector has and will continue to play a critically important role in the further development and promotion of tourism. The private sector bears the major risks of tourism investment as well as a large part of the responsibility for satisfying the visitor. The private sector is in a position to promote the involvement of local communities in tourism ventures by, *inter alia*, establishing partnership tourism ventures with communities. The concessionaire programme (Gorah Elephant and Nyati) in Addo encourages such ventures and is in fact part of contract terms.

Established tourism businesses in the Addo area are mostly white-owned. Many small businesses and private entrepreneurs are directly involved in the tourism sector in the Greater Addo area. These include tour operators (cultural, nature-based and adventure tourism), accommodation establishments, hunting enterprises and guides. In addition, suppliers of foodstuffs, car rental companies, etc. stand to benefit from an expansion of tourism.

Several private game reserves that cater for tourists are located near to the AENP. Many of the B&Bs and other accommodation establishments market these reserves to their clients.

The Addo Liaison Committee was established in 1993 to bring together representatives of the AENP, the neighbouring community of Nomathamsanqa and local farmers associations. The forum is now called Mayibuye Ndlovu Project (MNDP), and its goals are to plan and implement conservation-based community development projects and to support emerging tourism initiatives in disadvantaged communities living around the AENP. Current and proposed projects under the MNDP include tour guide training, performing arts projects, arts and crafts projects, and capacity building. The Addo Planning Forum (APF) has taken such linkages to a higher level for the whole planning domain, with representation from local government, provincial and national departments, the business sector, tourism, local communities, NGOs and agriculture.

Linkages between local communities and established tourism businesses such as lodges and restaurants are usually limited to employment as cooks and cleaners. However, certain tourism enterprises, such as the Elephant House B&B, have stated an interest in assisting disadvantaged communities to establish their own B&Bs and in hiring cultural groups to perform for their clients. Concessionaire obligations are more orientated to capacity building.
Although provincial tourist organisations are mandated to encourage local community involvement in tourism, there appears to be virtually no co-ordinated national or provincial support framework. Disadvantaged communities perceived better linkages with Shamwari, AENP and SANParks than with the provincial and local authorities such as the Western District Council, Eastern Cape Tourism Board, Department of Economic Affairs, Environment and Tourism, and Tourism PE. The provincial and local government institutions in the Addo area are currently not fulfilling their mandate in terms of stimulating and supporting tourism businesses in disadvantaged communities, largely due to financial and human resources constraints.

7.4.7 OTHER STAKEHOLDERS IN THE TOURISM INDUSTRY

As it is usually the quality of the eco-tourism experience delivered by the labour force that determines the true quality of the tourism experience, the labour force plays a vital role in the tourism industry. Labour should be adequately trained, housed and prepared for the tourist market. Women, especially in rural communities, have a particularly important role to play in the development of responsible tourism. The employment of women can be a fundamental determinant of the development impacts of the tourism industry.

Environmental and community-based NGOs are expected to play a vital role in the development and spread of responsible tourism practices, as are the local media sources.

7.5 WHAT OPPORTUNITIES AND CONSTRAINTS DOES THE INSTITUTIONAL ENVIRONMENT PRESENT?

Table 7.5 lists the opportunities and constraints presented by the institutional environment for gAENP. These are discussed in more detail in sections 7.5.1 and 7.5.2.

Table 7.5: The opportunities and constraints presented by the institutional environment for the gAENP

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Constraints</th>
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<tbody>
<tr>
<td>?? High institutional capacity within SANParks</td>
<td>?? Government capacity</td>
</tr>
<tr>
<td>?? Institutional support</td>
<td>?? SANParks policy</td>
</tr>
<tr>
<td>?? Possibility of building partnerships</td>
<td>?? Other tourism organisations</td>
</tr>
<tr>
<td>Optimise opportunities by</td>
<td>Mitigate constraints by</td>
</tr>
<tr>
<td>?? Consolidation of conservation management under one authority (i.e. SANParks)</td>
<td>?? Consolidate tourism efforts instigated by SANParks</td>
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<tr>
<td>?? Coordination with other Government Departments involved with land and resource management particularly in the buffer zone</td>
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<tr>
<td>?? Ensure satisfactory neighbour relations</td>
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<tr>
<td>?? Diversity in land ownership</td>
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</tbody>
</table>
7.5.1 OPPORTUNITIES

High institutional capacity within SANParks
The high institutional capacity within SANParks and numerous opportunities for partnerships, coupled with the large number of tourist related initiatives in the gAENP planning domain are seen as significant opportunities. The high institutional capacity in SANParks provides an existing secure base for the development of the gAENP programme.

Institutional support
The proposed gAENP is a state-initiated and thus state-supported programme, and thus has National Government support. It also has global support in the form of GEF funding and interest from international conservation and animal welfare organisations. This support presents opportunities for partnerships, incentives and funding.

Partnerships
The possibility of building partnerships with surrounding landowners will benefit both SANParks and the landowner, as Private Public Partnerships mean greater business opportunities. This is already happening with contractual park arrangements and concessionaires.

7.5.2 CONSTRAINTS

Government capacity
The low capacity within the Eastern Cape Government remains a constraint. The administrative terrain is highly complex and fluid and the low capacity at provincial government level, including the parastatal (Eastern Cape Tourism Board) mandated to develop tourism initiatives and thus promote tourism, could provide a constraint to the park, particularly in the areas of tourism, conservation and land use zoning decisions.

SANParks policy
This current policy emphasises local community involvement advancing cultural values and empowerment. However, this may be in conflict with its business orientation, which favours commercialisation of its tourism products. These two policy foci are antithetical: the first objective usually yields a result that is not very business-like; the second tends to exclude, marginalise or distort local communities and their culture. This could pose a threat in an area where rural communities are poor and unlikely to be in a position to invest in private or commercial enterprises. SANParks commercialisation policy, however, has a strong black empowerment component that must be incorporated into the development of the gAENP.

Other tourism organisations
There is little co-ordination between the numerous tourism organisations in and around the Addo area.
7.6 HOW CAN THE OPPORTUNITIES BE OPTIMISED AND CONSTRAINTS MITIGATED?

*Conservation management*

The consolidation of conservation management under one authority (in this case SANParks) will mitigate many of the current constraints, such as poor inter-agency co-ordination, institutional weaknesses, confusion in land administration, etc. This has largely been achieved with the incorporation of Provincial reserves into the AENP.

It is important that the management capacity within SANParks is maintained and strengthened where necessary. The following recommendations are applicable:

- Pursue and implement the recommendations emanating from the capacity review process.
- Bring in new skills that are appropriate to the conservation requirements of this diversity of habitats, and provide appropriate training to develop the capacity of existing staff for the management of these areas.
- Ensure that there are sufficient numbers of skilled and suitably equipped personnel to manage community park partnerships. The minimum recommended complement is five (5) social ecologists.

*Tourism*

To address the fragmentation, confusion and conflicting mandates existing in current institutions involved with tourism, it is recommended that a workshop be convened to focus on tourism development and management in the Greater Addo planning domain. This should bring together SANParks, Eastern Cape Tourism Board, Department of Economic Affairs Environment and Tourism, Eastern Cape Development Corporation (ECDC) and other financial and marketing institutions, Sundays River Valley Tourism Forum (SRVTF), Addo Tourism, local authorities, Mayibuye Ndlovu Development Programme (MNDP), local communities with a strong potential to develop eco-tourism such as Enon, local tourism experts and consultants, and local entrepreneurs and operators.

An opportunity exists for SANParks to build relationships and to assist with capacity building in tourist orientated organisations. This will not only assist with attracting tourists to the gAENP, but also to the Eastern Cape.

*Other government departments*

Certain government departments will continue to play a role in land and resource management, but this will mostly be restricted to the ‘buffer zone’ and to certain aspects of marine and coastal management. Institutional sustainability will therefore also relate to the effectiveness of on-going co-ordination and co-operation between SANParks and these departments.

*Neighbour relations*

The success of civil-sector participation and neighbour support lies in the establishment of a strong, representative and well supported Park Management Committee and a Park Steering Committee (see section 7.7).
The sustainability of the institutional environment with respect to neighbouring previously disadvantaged communities will largely depend on the future strength and influence of the Social Ecology section based at the park. Of critical importance will be the degree to which it is able to contribute towards addressing issues of basic human needs (land, housing, water, services, etc.) and the development aspirations of neighbouring communities through interactions with appropriate government and development organisations. Institutionally this will require collaboration with relevant public and civil sector organisations. It will also require the appointment/deployment of addition numbers of skilled social ecologists as well as the implementation of the Resettlement Policy Framework.

_Diversity in land ownership_
SANParks also needs to think creatively about realising the potential of the gAENP. Innovative use of the biodiversity can flow from greater diversity in land ownership and management models for the gAENP, and preparedness to engage in contractual arrangements with neighbours, and the sustainable use of resources by these neighbours. This is very much part of SANParks' current thinking.

7.7 WHAT INSTITUTIONAL STRUCTURES ARE PROPOSED?
The gAENP programme is to be developed and implemented primarily by the SANParks, but in partnership with the provincial Department of Economic Affairs, Environment and Tourism (DEAET), national government departments (Environmental Affairs and Tourism, Land Affairs, Labour), various non-government organisations (NGOs), community-based organisations (CBOs), the farming community, academic institutions, private landowners and private enterprise.

Co-operation and integration of the various institutions will be arranged on the following basis:

_Park Management Unit (PMU)_
A PMU consisting of about three persons (Project Manager, finance, procurement and administrative officers) will be established. Its tasks will include: (i) development and co-ordinating the drafting of development, management and business plans by consultants; (ii) day-to-day management of project development and implementation of the project implementation plan (PIP); (iii) annual work plans and budget preparation based primarily upon input from SANParks; (iv) donor coordination; (v) secretariat function for the Project Steering Committee (PSC) and the Addo Planning Forum (APF); (vi) financial management including establishing a financial management system, disbursement, financial reporting, procurement of consultants goods and services for the project, as well as establishment of the management responsibility together with Addo management; (vii) development of an EMS; (viii) facilitate investor involvement; (ix) coordination of the APF and its sub-committees; (x) establishment of Park Committee (PC); (xi) coordination of project consultants; (xii) report generation (annual and as required), including reporting to the World Bank on project execution.

_Addo Planning Forum (APF)_
The APF was originally established in 1999 to ensure that stakeholder interests are known and fully considered by the project planner and to communicate progress and
planning proposals to stakeholders. Although this forum has been effective in certain areas, the majority of the affected communities are not represented, in particular the farm workforce. They are not represented by any body, and are thus a difficult amorphous group to interact with. Even established agriculture has difficulty in this regard, and many of the members do not attend the meetings.

The composition and function of the APF should be restructured according to the recommendation given in Specialist Report 14. The aims of restructuring the APF are to provide a forum with adequate and real representation while not creating a large unwieldy body; encourage full participation while not expecting representatives to necessarily engage with issues with which they are neither interested or knowledgeable; and ensure genuine input while keeping the clear responsibility for planning and management with SANParks. Specific recommendations are:

?? Greater representation of those most directly affected by the proposed gAENP needs to be secured. This should be done by direct approach to communities. The formation of specialist sub-committees to afford greater representation and dissemination of information. Three sub-committees have already been formed (NGOs, agriculture and previously disadvantaged groups). Further sub-committees should include environment and conservation; tourism and marketing; community and partnerships; information and media, and municipal interests.

?? Direct stakeholder input into the APF needs to be secured by actively encouraging their regular attendance and participation, and by their involvement in debate over issues of particular significance to them.

?? The draft constitution for the APF should serve to clarify the role and function of the forum, and needs to be adopted as soon as possible.

?? Intra-departmental government institutions having a number of separate internal structures or programmes relevant to gAENP should establish an internal mechanism for co-ordination, thereby reducing the need for the representation of numerous officials from the same department on the Addo Planning Forum.

Two specific management structures have been mooted for the management of the gAENP after final establishment and proclamation.

Park Management Committee (PMC)
This committee will take over the function of the APF. Its main function will be to enable local stakeholders to have input into the management of the park through the monitoring of its implementation (see specialist report 17 for additional information on the PMC).

The objectives of the committee will be to:

?? Provide inputs in the park management plan through consultation with the park management.

?? Advise park management on the management of the national park in terms of its management plan.

?? Assist park management to monitor the implementation of the management plan at meetings arranged for this purpose.

?? Periodically assist in reviewing the management plan.
The composition of the PMC should ideally include:

- Elected representatives of communities.
- Representatives of agencies with statutory and other interests in the park.
- Individuals from civil society whose skills can contribute to the park.

**Project Steering Committee (PSC)**
The PSC is already in the process of being established, and although it is not fully functional at present, it meets four times a year. After final proclamation of the gAENP, the purpose of the Park Steering Committee, which will comprise primarily SANParks management staff but also landowners and concessionaires within the park and invited ‘experts’, will be to discuss and agree to day-to-day technical management issues such as stocking rates, animal movements, water provision, vegetation management, game drive routes, and other practical aspects (Specialist Report 17 provides additional detail on the PSC).
8. ISSUES AND CONCERNS RAISED BY I&APS

8.1 INTRODUCTION

This chapter outlines the issues and concerns that have emerged through the public participation process. These issues have been identified through networking meetings with I&APs, written correspondence and telephonic communication.

The concept for the gAENP project emerged through a separate consultation process that is not reflected in this report and therefore the support or the recognition for the project that emerged during that process is also not reflected here. However, it is important to note that the SEA for the gAENP is as a result of this initial consultation process. A declaration in support of the gAENP emerged as a result of the initial stakeholders meeting (section 2.5.3).

8.2 SUMMARY OF KEY ISSUES AND CONCERNS

The following gives an overview of the key issues and concerns that emerged through the public participation process. Specialist Report 5 should be consulted to obtain a detailed understanding of the issues and concerns raised. Issues appear in no order of importance.

8.2.1 DISPLACEMENT AND RELOCATION OF FARM WORKERS

*Issue*

The displacement and relocation of farm workers presently employed within the planning domain has been identified as a key issue by a cross-spectrum of I&APs within and around the planning domain. A deep concern has been expressed with regards to farm workers that have already lost their employment as a result of land purchases and the future of other farm labourers within the affected area. The relocation of farm workers is presently the sole responsibility of the farm owner and there does not appear to be a mechanism in place to proactively link affected workers with the future expansion of the Park. There is further no clarity on the number of affected people or their location within the gAENP.

*Response*

A comprehensive Resettlement Policy Framework has been compiled and is available on the greater Addo Elephant National Park webpage, www.addoelephantpark.com. In order to conform to the RPF, individual Resettlement Action Plans (RAPs) have been drawn up for each individual farm purchase, including the principles set out in the RPF.

8.2.2 ONGOING UNCERTAINTY

*Issue*

Since the initiation of the project concept in 1996, affected parties within the planning domain have been living in uncertainty with very little clarity on the project process and the potential impacts. Issues regarding land have a deep personal significance for affected I&APs, in some instances farms have been passed on through generations and for many this is a way of life. Ongoing planning is required to ensure the sustainability of the livelihoods of the farmer, his/her family and farm labourers. The ongoing uncertainty around the boundaries for the gAENP and the implementation process impacts on the short and long term planning of I&APs and
adds to negative perceptions of the gAENP project. To a large degree this uncertainty arises from the fear of expropriation.

Response
SANParks is in the process of developing a comprehensive communication strategy (section 5.5.4), which will assist in communication between SANParks and all affected stakeholders. The draft communication strategy is available upon request from South African National Parks (Port Elizabeth office). SANParks is in the process of restructuring the Addo Planning Forum, as has been recommended (section 7.7).

The conservation planning exercise has determined areas of conservation importance and implementation scenarios. Landowners should have a clearer idea of the areas proposed for conservation and the land purchasing strategy (section 4.7 & 9.1). SANParks plans to only consolidate its boundaries in accordance with a land acquisition policy, and use expropriation only for those key properties (most of the owners in this regard have been contacted) as the very last option, with a willing-buyer, willing-seller the preferred route. SANParks’ actions to date demonstrates the approach of seeking the most amicable agreement.

8.2.3 IMPACT ON FARMING RELATED INDUSTRIES AND ACTIVITIES

Issue
I&APs from across the planning domain have requested that an in-depth economic assessment be done on farming related industries and activities within and around the planning domain. For example, I&APs have expressed concern for the potential negative economic and social impacts on towns within the gAENP as a result of the loss of farming activities. That is, farming activities to a large degree economically support the towns within the area.

Response
SANParks’ economic review of agricultural activities in the domain (Specialist Report 10) revealed that ecotourism could compete with pastoral systems but not with intensive dairy farming. In the light of this, high prices for land in the Alexandria area and the generally low conservation priority of this area, indicates that SANParks would need to explore innovative ways of including elements of this area into the conservation plan. This does not mean a blanket purchase of dairy land.

Not all the land in the mohair producing area is suitable for conservation, as it has been too severely grazed by small stock. Elements of conservation importance may exist on some of the farms – in this case SANParks would negotiate a management strategy suitable to both parties as a means of meeting some of the park objectives.

An economic assessment of the economically viable farming areas was recommended in the SEA as some of the farming areas are important for the economy of South Africa.

The economic assessment should include the impact of establishing the gAENP on the mohair, wool and mutton industries and should not be limited to farming that is economically viable, but should include farming that is important from a supply point of view, to South Africa and international markets.
The C-Plan indicated that the Alexandria dairy farming area was not of critical importance for conservation purposes and the socio-economic assessment determined that it would not be viable for SANParks to mitigate the constraints presented by this area. SANParks will not actively purchase land in the dairy farming area to fulfil conservation targets. It is thus recommended that the Alexandria dairy farming area be excluded from this economic assessment.

The Sundays River Estuary and the upper reaches of the Sundays River have been identified as having a high biological significance and are also economically important assets to the area. SANParks has committed itself to developing a management/zonation plan for the river in consultation with affected parties and residents to ensure that the use of the estuary and river are economically and ecologically viable.

8.2.4 LACK OF COMMUNICATION WITH AFFECTED PARTIES

Issue
Poor communication with affected parties has resulted in a deep negative perception of the project. The majority of I&APs within the gAENP are aware of the intention to implement the project but have very little information on what this may mean for their lives. This lack of information is exacerbated by the time period that has passed since the inception of the project with very little feedback to affected parties. Communication with I&APs needs to take into account the deep personal attachment that affected parties have to their land. Reports stating that “all farming land is over grazed” are potentially incorrect and detrimental to the project.

Response
See response to issue 8.2.2

8.2.5 IMPACT ON UNEMPLOYMENT AND ECONOMIC OPPORTUNITIES

Issue
This issue is linked to issue 8.2.1 above, the displacement and relocation of farm workers. A number of I&APs fear that unemployment in the area will rise as a result of the expansion of the park. In support of this statement they have stated incidences where farm labourers within the affected area have already lost their employment and livelihoods. There needs to be some indication of the number and type of jobs that will be created through the expansion of the park.

Response
Employment opportunities will be presented by the gAENP. Temporary employment will be offered using funding provided by the Working for Water Fund as well as by Poverty Relief (section 5.5.2), while the conservation developments are established. Estimates indicate that a total of 383 permanent, 71 contractual and 840 temporary jobs will be created in the park, a total of 1 job per 100 ha, greater than the agricultural ratio of 1 job per 367 ha (Table 8.2).
8.2.6 IMPACT CREATED BY THE COEGA INDUSTRIAL DEVELOPMENT ZONE

Issue
The proposed Coega Industrial Development Zone does not only have negative spin-offs for gAENP.

Response
The proposed positive benefits that could potentially be derived from the Coega Industrial Development Zone are not adequately identified or noted as opportunities in the SEA. In as much as the Coega development needs to take into account the gAENP, SANParks needs to take the Coega development into account in the planning of the Park. Some of the positive benefits that could be derived from the Coega IDZ are:

- Improvement of the infrastructure within the Metro as well as the infrastructure within the IDZ that will back feed to the Metro, e.g. doubling of the N2, Neptune Road.
- The IDZ’s primary objective is job creation, especially to those who were historically disadvantaged. This should lead to an increase in the disposable income of people within the region particularly the local people. This again creates the opportunity for the gAENP to be also enjoyed by the local people and not only the tourists from outside Port Elizabeth and abroad.
- The visual guidelines of the Coega Project have shown that impacts beyond 10km distance are not significant to the gAENP.

8.2.7 NEED FOR SOCIO-ECONOMIC INDICATORS AND TARGETS

The Draft SEA provides indicators for achieving biophysical and conservation targets but does not provide indicators for achieving socio-economic targets for the expansion of the Park. These guidelines are important to ensure that the development is within sustainable limits, socially, ecologically and financially.

The Resettlement Plan gives indicators and targets for the social aspects of resettlement, but indicators for achieving socio-economic targets for the expansion of the Park are also required.

8.2.8 COMPLIANCE WITH THE SEA REGULATIONS

Issue
Will the recommendations given in the SEA be enforced and will they be legally binding?

Response
There are currently no laws regulating the enforcement of recommendations given by a Strategic Environmental Assessment. SANParks is a statutory body with its own board that takes autonomous decisions. They report directly to the Minister and do not require permission from DEAT.

SANParks are required to take cognisance of the relevant principles in NEMA (No. 107 of 1998, particularly Chapter 5) when planning and undertaking projects. The Board is required to ensure compliance and to report to the Minister accordingly.
Table 8.2: Table indicating the potential and permanent employment opportunities that will potentially be created in gAENP.

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<td>Darlington</td>
<td>31000</td>
<td>8</td>
<td>16</td>
<td>200</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colchester</td>
<td>15000</td>
<td>2</td>
<td>8</td>
<td>80</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>156000</td>
<td>70</td>
<td>98</td>
<td>843</td>
<td>71</td>
<td></td>
<td>90</td>
<td>261</td>
<td>0</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>

Subtotal (perm. Act) | 171 | 912.3 ha/job |
Subtot (perm. Pot) | 383 | 407.3 ha/job |
Sub tot (perm) | 554 | 281.6 ha/job |
Subtot (contract) | 71 | 2197.2 ha/job |
Subtot (temp) | 843 | 185.1 ha/job |
Total | 1468 | 106.3 ha/job |
8.2.9 IMPACT ON DAIRY, BEEF AND CHICORY PRODUCTION

Issue
A cross-spectrum of I&APs in the Zuney, Nanagga and Alexandria area have raised their concerns and noted their objection to the inclusion of this area in the park. Prior to any decision being made on the project they have requested that a detailed economic and social assessment be done, which looks at the local, regional and national impacts of the loss of this area to dairy, beef and chicory production. Many I&APs have noted that this area is South Africa's primary area for the production of dairy.

Response
The C-Plan indicated that the Alexandria dairy farming area was not of critical importance for conservation purposes and the socio-economic assessment determined that it would not be viable for SANParks to mitigate the constraints presented by this area. SANParks will not actively purchase land in the dairy farming area to fulfil conservation targets, although SANParks would still consider land purchases in the area on a willing buyer - willing seller basis.

8.2.10 IMPACT ON MOHAIR PRODUCTION

Issue
I&APs in Kommadagga, Kleinpoort, Waterford and Glenconner have requested that a detailed social and economic assessment be done on the local, region, national and international markets as a result of the potential loss of mohair production. The Karoo Midlands area contributes 60% to the international production of mohair. A detailed assessment would also distinguish between the different levels of productivity of farms, as not all farms operated on the same level.

Response
Not all the land in the mohair producing area is suitable for conservation, as it has been too severely grazed by small stock. Elements of conservation importance may exist on some of the farms – in this case SANParks would negotiate a management strategy suitable to both parties as a means of meeting some of the park objectives. Should a farmer be willing to sell his farm, SANParks may negotiate.

8.2.11 LAND PURCHASE PROCESS

Issue
While the process for purchasing land does not fall within the scope of the SEA or Public Participation it has impacted on the present public participation process. Numerous negative comments have been received with regards to the approach that is presently being used for the purchasing of land and the threat of expropriation; this has in turn impacted on the perceptions of people in the area. The fact that land is being bought while the SEA and public participation process is not yet complete has further added to perceptions that the input of I&APs are of no value.

Response
SANParks are in the process of developing a Land Acquisition Policy to facilitate land purchases in the expanded park. A draft incorporation matrix is available through South African National Parks Board, Scientific Services (Port Elizabeth).
8.3 CONCLUSION

The proposal for the establishment of the proposed gAENP programme has elicited an overwhelming response from I&APs within the planning domain. While there are a number of issues and concerns that need to be taken into account in various areas most I&APs have expressed in-principle support for the project, if implemented in an acceptable, informative manner.

A project of this size, spanning 400 000 hectares, impacts directly on a number of people’s lives. Land ownership is a deeply personal matter and as such will elicit a deep personal response. This personal attachment to land needs to be taken into account when planning and implementing a project of this nature.

The diversity of the area adds a further challenge to the project and it should be considered in the planning process. That is, beef, dairy, chicory, mohair and small stock farming all take place within the planning domain. There are different levels of productivity between these different sectors as well as differences within a specific sector. That is, not all farmers operate at the same level of productivity and there have been numerous requests for this to be taken into account when developing strategies and communicating with I&APs. It is apparent that there are farmers who are willing to sell their land but there are also those that do not wish to be incorporated into the gAENP.

It is important for the project and the process that fundamental issues such as communication with I&APs is addressed and the issues raised in this report are taken into account in the future planning for the gAENP.
9. POTENTIAL DEVELOPMENT SCENARIOS

The conservation planning process identified areas of importance to conserve and focused on implementation scenarios. Some of the areas identified as conservation worthy may not necessarily be bought by SANParks, but certain management options could be entered into between SANParks and the landowner. This opens an array of opportunities for landowners who not only wish to conserve their land, but also to be associated with the gAENP and its guaranteed eco-tourism attraction.

9.1 WHAT MANAGEMENT OPTIONS ARE THERE FOR THE gAENP?

Since land acquisition is the largest cost component and since the biodiversity value of the gAENP must be optimised as new land is added, SANParks must carefully examine the areas to be acquired, and the scheduling of that acquisition and the effect of each land purchase on the roll-out plan. It would be more desirable from a management perspective to purchase all land and develop a Schedule 1 Park but the cost and social implications are so huge, that the best way of harvesting the ingenuity of people and save the environment is through a combination of means.

The significant spatial extent of the gAENP will open opportunities for all sectors. State-owned conservation land is regarded as the core area around which other role players may interact to varying degrees. Management options which make sound economic sense, while at the same time being environmentally sustainable and acceptable should guide the magnitude of this interaction. The environmental/conservation parameters should be set out in the management plan for the park, together with goals and objectives for conservation management. These have been broadly articulated in a report by Knight and Castley (1999).

The management plan should also include wider economic goals for the greater area. The policies articulated in this plan must dictate which activities and interactions are acceptable, and permissible, and which are not. The plan will inevitably involve balancing differences between various interest groups and stakeholders. In the development plan produced by Knight and Castley (1999) two key principles are laid down:

9.1.1 PRIVATE SECTOR

Including the private sector into the park reduces costs of land and game purchases, roads, perimeter fencing and tourism developments. The spin-offs for SANParks for including private land into gAENP are:

- Reduced capital fencing cost as the perimeter would now be on private land;
- Reduced fence maintenance costs;
- A larger area for game to traverse and therefore a more viable population for genetic sustainability;
- Reduced management costs for the overall area as the private sector would have to carry some of these costs; and
- Opportunities for diversifying the tourism products (e.g. hunting).

The specialist economic study (Specialist Report 13) provides further detail for various sections of the gAENP, and different visitor forecasts and alternative land
expansion possibilities. This report indicates that eco-tourism for the whole planning domain, excluding the Alexandria area, would be the best option. Eco-tourism in the Alexandria area would require a unique approach, would be very costly and is therefore not recommended.

There is also an opportunity to allow the private sector to include their land into the park under mutually agreed conditions, known as Contractual National Parks and protected under the National Parks Act. This model is widely used in South Africa and various options are available as in Marakele, Wilderness, West Coast, Richtersveld and Augrabies Falls National Parks. Issues that will need to be agreed on before this can happen include:

?? A mutually acceptable management framework for the natural resources (this should ideally vest with SANParks).
?? Agreement regarding game ownership. This will probably vest with SANParks, at least for the important species.
?? Acceptance that ownership rights are not affected, although use options may be restricted.
?? Agreement that traversing over other land must be allowed.
?? Agreement on funding of management resources.
?? Enforced access control.

This option would only be available to property that shares a common boundary with the park. There may be many advantages to this arrangement for SANParks, provided the above principles can be agreed. Benefits include the following:

?? Increasing the area available for wildlife populations and therefore increasing their genetic viability;
?? Reducing the capital costs of land purchase and perhaps fencing to SANParks, depending on how the agreements were finalised;
?? Reducing the management and maintenance costs of the fence;
?? Reducing the likelihood of the land being radically transformed by agriculture or any other form of land use;
?? Reducing social costs to SANParks; and
?? Increasing diversity of eco-tourism product.

The private landowner could benefit by not entirely enclosing their property with a game fence, and retaining open sections adjoining a neighbour or SANParks. The private landowner would then be able to gain access to certain game species, such as buffalo and black rhino, which are very expensive and probably unobtainable. Increased land size would also make the area suitable for species such as lion, elephant and wild dog, which cannot normally be kept on properties of less than 10 000 hectares.

Commercialisation, where private developers and operators are given the right to operate within Schedule 1 National Parks, is a process SANParks has recently adopted. It is financially attractive for SANParks (and fully supported by the national government) to pursue this route, and should be stated as a management strategy.
Activities such as open game drives at the existing Addo camp, restaurants and shops can be outsourced to private operators under mutually beneficial agreements.

It is possible that there are many other activities which could similarly be outsourced. These could include boat trips to the islands off the Woody Cape coast or surrounding area, game-capture operations, cleaning and maintenance of the SANParks tourism camps, garden maintenance, gate security, etc. These could be structured in such a way that small medium and micro enterprises (SMMEs) could operate many of these activities. Other activities could include the fence patrol, fence maintenance (clearing vegetation on the electric fence), basic road maintenance, alien plant clearing and vehicle maintenance, etc.

9.1.2 COMMUNITIES

Local communities must be integrated into the project if it is achieve the wider economic benefits discussed in this SEA. This can be developed through Park Committees and other forums. SANParks will need to play an active role in this regard, ensuring that communities gain access to the benefits created by the park and the private partners.

Communities can play a very important role within the gAENP, and probably their most important one is participating on the local management boards required in the development of management plans. Local communities can ensure that plans and policies for the park are structured in such a way that at least some of their needs and aspirations can be met through the establishment of communication forums between the park and their communities.

Other management options relate to SANParks initiating training sessions e.g. in the hospitality industry, thereby preparing community members for these functions. This will enable local people to gain employment and experience, and hopefully be in a position to one day manage or own their own operation.

In addition, formal arrangements with surrounding communities could be developed to empower these communities and effectively increase the size of the park. Although no communal land lies within the currently proposed ‘footprint’ for the gAENP, interest has been shown in one communal area around the Enon Mission, which adjoins the proposed boundary. Discussions are in the early stages, but it is clear that the owners collectively do not wish to sell the land, but might be in favour of some form of contractual agreement. A model that is being looked at is that of Community Conservation Areas (CCAs), or Community Conservation Game Reserves (CCGRs) as they are now called, as used in the Rictersveld National Park.

9.2 WHAT MANAGEMENT SCENARIOS HAVE BEEN SUGGESTED?

Two contrasting management scenarios, out of innumerable possibilities, have been examined. The first of these is one where the predominant area (70%) is under Schedule 1 ownership, and the second where the predominant area (again 70%) is managed as a contractual park.
These scenarios are examined by making some predictions as to how the two proposed key management structures, the Park Management Committee and the Park Steering Committee (section 7.7 and Specialist Report 12), might be expected to perform under each scenario.

9.2.1 70% SCHEDULE 1 – 30% CONTRACTUAL

In this scenario the main responsibility for management is vested in SANParks, who would have full authority over the majority of the park, with specific responsibilities, according to the precise nature and conditions of the contractual agreements, over the rest. The degree of control they would be able to exercise over activities within the park would be considerable, and they would clearly be the dominant presence in any management forum.

The Park Management Committee, however, would comprise representatives from a wide range of interest groups and institutions operating outside the confines of the park or the authority of SANParks.

The Park Steering Committee, dealing with the more practical aspects of day-to-day management, would probably function most effectively with the bias towards Schedule 1 ownership, as the management of game, vegetation, and all other biological and cultural features of the park would mostly apply on land in SANParks ownership.

9.2.2 70% CONTRACTUAL – 30% SCHEDULE 1

Here, although the legal responsibility for management of the park would continue to reside with SANParks, the reality of management ‘on the ground’ could be very different. Again, it would seem that the Park Management Committee’s (PMC) function and performance may not be particularly affected, although it may prove something of a challenge for SANParks to convey to the other members the constraints on their autonomy of management over the area resulting from a preponderance of contractual land. Other ramifications include the almost inevitable increase in competition for tourism benefits between the contractual landowners themselves, and between them and the concessions within the Schedule 1 area. This is likely to impact not only on the park management, but also on the performance of the PMC.

Within the Park Steering Committee (PSC), depending on its composition in terms of the representation of contractual landowners, the balance of influence is likely to shift away from SANParks. This could impact quite seriously on discussions concerning activities affecting the density and movement of game within the gAENP. A corollary of the increased competition for tourism benefits could be the desire by each contractual landowner for concentrations of game in ‘their’ area. The holders of concessions within the park are also likely to have similar demands, particularly as SANParks do not intend to grant ‘exclusive access’ rights over large areas of the park to concessionaires. Management of the PSC under these conditions could prove very challenging.

Not surprisingly perhaps, the first scenario, with the preponderance of land under Schedule 1 ownership and management, would appear to present the most
favourable option in terms of not only the management of the gAENP, but also the effectiveness of the two proposed management structures. It should be emphasised that the benefits of a national park in the international sense are great and management therefore needs to reside largely with SANParks for its long term security and international acceptance. The principles driving private enterprise are largely financial, and are thus very often in conflict with basic conservation principles. Thus, ideally the bulk of the area or key conservation and attraction areas need to be under SANParks’ control, around which contractual areas can hinge.

9.3 WHAT TOURISM OPTIONS HAVE BEEN SUGGESTED?

The gAENP offers a wide range of eco-tourism opportunities due to its geographic location, its associated landscapes, wildlife and biological importance and uniqueness. The tourism opportunities are differentiated into different products catering for different markets. For example, it is the only park in Africa to offer a truly Big 7 experience in addition to biodiversity *par excellence*.

1. **Coastal Areas**, where open water activities e.g. boat trips, whale and shark watching, fishing and diving are possibilities and along the coastline, whale watching, hiking, fishing and general recreation. Unique island experiences (birds, penguins, seals) would be exclusive experiences. Walking, nature based activities and overnight accommodation are suitable for the neighbouring forests. Exposure to the world’s largest coastal dunefield is another unique tourist experience.

2. **The Thicket Areas** are ideal for Big 5 tourism, with hunting in some areas\(^2\). The Zuurberg Mountains offer excellent opportunities for hiking, 4x4 trails and possibly some fishing, game-viewing and hunting.

3. **The Savanna Areas**, especially behind the dune system, offer a wide range of opportunities. The most important of these will probably include Big 5 eco-tourism and possibly hunting. Activities of a lesser importance include hiking, walking and 4x4 trails in the less accessible areas, while there are limited opportunities for fishing along certain sections of the river.

4. **The Karoo Area** has good potential for Big 5 game-viewing and associated hunting, while Darlington Dam offers opportunities for water-based activities that includes some of the best fresh-water fishing available. Hiking and 4x4 trails may be possible especially in the mountains.

The majority of these activities are mutually exclusive and some, such as hunting or even fishing in the coastal zone, are not permitted in national parks or marine reserves under the present NPA, which is under review. These opportunities have been presented merely to indicate the possibilities that exist, and in order to provide a framework for developing different ecotourism models. Table 9.3a summarises these opportunities and broadly quantifies them on a scale from 0 to 5, where zero is totally unsuited, and 5 indicates that the area is considered to be perfectly suited for the activity.

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\(^2\)Hunting can only be allowed in Schedule 2 areas.
Table 9.3a: A simple representation of the eco-tourism activities possible in each geographic area of the gAENP (5 indicates highly suitable, 0 indicates totally unsuitable). The list is not comprehensive but is used as a basis for developing tourism opportunities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Open water activities</th>
<th>Fishing</th>
<th>Walking, hiking, trails</th>
<th>Game viewing</th>
<th>Hunting</th>
<th>4x4 Trails</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEA &amp; ISLANDS</td>
<td>5</td>
<td>5</td>
<td>1 on islands</td>
<td>3 seals, whales etc</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Coast</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Coastal hinterland</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Thicket</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Mountain fynbos and grassland</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Savanna/river</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Karoo</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

A wide range of products can be offered, which can range from mass recreation, where access or user fees are relatively cheap, to exclusive access, where user costs are likely to be high. Equally, the public or private sector, or a combination can supply these products, where funding, management, marketing and operations are undertaken by a combination of private or public sector operators.

Applying these alternative approaches to the different products will lead to a wide range of permutations, but are limited to those that are most likely to be in agreement with current SANParks policies. Permissible activities were also determined in accordance with prevailing attitudes, gleaned from interviews with SANParks staff, stakeholders and internal reports.

SANParks is committed to making at least some of the products financially accessible to most South Africans (Knight & Castley, 1999). This would therefore tend to suggest that for many of the products, the emphasis must be on affordable tourism, where self-guided access is the norm, although guided access would provide a higher income for SANParks and greater benefit to the tourist and conservation goals (Table 9.3b). However, this form of eco-tourism can be further divided into self-guided access for some visitors, with guided activities for those that can afford the extra costs. In some instances, there is a trade-off between what the public pays to use a facility, the number of jobs created and overall viability. It is assumed that it is not the intention of SANParks to directly subsidise any tourism activities, except environmental education for special groups. All other tourism activities must at least cover operational expenses with income generated from the wide array of tourism products. Some cross-subsidisation may therefore be acceptable, but not at the direct expense of biodiversity conservation.
Table 9.3b: A comparison of the costs associated with a self-drive tourism facility versus a more exclusive, guided operation and the net return to SANParks. It includes road development and maintenance costs, and assumes equal sized areas with the equivalent number of roads. Note the guided option is assumed to be privately funded and managed, as well as the road costs.

<table>
<thead>
<tr>
<th>Road costs</th>
<th>Self drive</th>
<th>Guided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (ha)</td>
<td>15 000</td>
<td>15 000</td>
</tr>
<tr>
<td>No of guests</td>
<td>150</td>
<td>34</td>
</tr>
<tr>
<td>Average no of guests per vehicle</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>No of vehicles</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Km of road per vehicle</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Road network required km</td>
<td>50</td>
<td>51</td>
</tr>
<tr>
<td>Road costs per km sealed surface</td>
<td>R160 000</td>
<td>R-</td>
</tr>
<tr>
<td>Roads costs per km, gravel</td>
<td>R60 000</td>
<td>R35 000</td>
</tr>
<tr>
<td>Road costs initial</td>
<td>R4 500 000</td>
<td>R1 785 000</td>
</tr>
<tr>
<td>Road maintenance as a % of initial cost</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Road costs annual</td>
<td>R450 000</td>
<td>R267 750</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tourism facility</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of jobs</td>
<td>42</td>
</tr>
<tr>
<td>Tourism facility development cost</td>
<td>R10 500 000</td>
</tr>
<tr>
<td>Expected turnover of tourism facility</td>
<td>R5 748 750</td>
</tr>
<tr>
<td>Expected return to SANParks</td>
<td>R1 600 000</td>
</tr>
<tr>
<td>Gate fees</td>
<td>R197 100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SANParks income</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income from tourism</td>
<td>R1 797 100</td>
</tr>
<tr>
<td>less road maintenance costs per annum</td>
<td>R1 347 100</td>
</tr>
<tr>
<td>Finance costs of road over 5yrs @ 7,5%</td>
<td>R1 112 241</td>
</tr>
</tbody>
</table>

| Net income to SANParks after finance costs | R234 859 | R521 220 |
10. CONCLUSIONS

Information from the current studies indicates that conservation of the biodiversity within the gAENP would be a sustainable and economically viable form of land use for the planning domain.

The conservation of this area will be a more sustainable land use than the current situation, as much of the land has been or is under increasing threat of being degraded as a result of intensive farming methods. Protecting the unique biodiversity of the area holds numerous opportunities e.g:

- Meeting international and national conservation responsibilities and obligations.
- Eco-tourism opportunities and eco-tourism spin-offs serving as an economic generator for SANParks, Eastern Cape and South Africa.
- Eco-tourism has limited costs to the environment compared with intensive farming.
- Preservation of Red Data Species.
- Research opportunities.
- Protection of unknown medicinal plants.
- Opportunities for social and financial upliftment of the local communities.

The gAENP contains a sufficiently large area to include critical terrestrial and aquatic natural processes (biotic and abiotic) to ensure long term ecological sustainability of the natural environment. The gAENP will also conserve representatives of a wide range of landscapes, terrestrial biomes and aquatic systems.

The area has a unique combination of features affording it a high eco-tourism potential, which has been relatively unexploited. The South African government has recognised the importance of eco-tourism as an economic contributor and has stated that its target for GDP generation from tourism is 10%. The National Department of Environmental Affairs and Tourism has identified the Eastern Cape, with its mix of nature-based, wildlife, historical and cultural tourism, as having significant eco-tourism potential.

The AENP has proved to be a highly lucrative tourist destination, and with an expansion and diversification of tourist-related experiences, the gAENP will cater for a greater number and a wider variety of tourists. Its increasing attraction is evident in the 8% increase in tourists per annum, 50% of which are foreigners, more than the proportion visiting the Kruger National Park.

This is seen as important since the agricultural sector, a major contributor to the province’s GGP, is an unstable sector and the diversification of economic opportunities through the introduction of eco-tourism will create a more stable economic situation. The lack of comprehensive tourism data is, however, a constraint as the market is unknown. Since tourism does not fall into a sector on its own, it is difficult to determine the economic contribution made by tourism.

A programme this size also has negative consequences. Most importantly it will affect people living in the planning domain. The majority of the people are farm
labourers, and earn a minimal salary. However, they enjoy benefits associated with living on farms and resettlement of these people remains a major constraint.

The lack of communication between SANParks and the affected communities, especially the farmers, has created a feeling of mistrust between the affected communities and SANParks. A lot of farmers are negative about the proposed gAENP and many are not willing to sell their farms or even negotiate with SANParks.

The significant opportunities and constraints presented by the existing environment for establishing the gAENP, and how the gAENP can optimise these opportunities and mitigate the constraints are shown in the flow diagram below (Figure 10). As shown in this diagram, most of the constraints presented by the environment can be mitigated.
Figure 10: Flow diagram of the major opportunities and constraints presented by the environment for the establishment of gAENP.
11. RECOMMENDATIONS

11.1 ADOPTED RECOMMENDATIONS
SANParks has already accepted a number of recommendations that flowed from the initial specialist studies. These recommendations have either already been implemented or are in the process of being implemented:

11.1.1 RESTRUCTURING OF THE ADDO PLANNING FORUM (APF)
SANParks has initiated the recommended restructuring of the APF. Three sub-committees have thus far been formed and at the most recent meeting of the APF, a questionnaire was handed out to members to assess the functioning of the forum as well as to give recommendations for improvements. The three sub-committees are Environmental NGOs, Farmers and Communities. An additional sub-committee for Business/Marketing has also now been selected. The APF has also become more representative by including representatives for all the local governments affected by the expansion programme. Department of Land Affairs has also come on board.

11.1.2 RESETTLEMENT POLICY FRAMEWORK
A comprehensive Resettlement Policy Framework has been compiled and is available on the greater Addo Elephant National Park web page, www.addoelephantpark.com.

11.1.3 LAND ACQUISITION
It was recommended that all land acquisition be halted until the SEA has been completed and a more definite boundary has been established.

SANParks, however, has currently been buying land with donor funds to consolidate the existing conserved areas and all purchases have been on the willing seller – willing buyer basis. SANParks is also in the process of developing a Land Acquisition Policy to assist with land acquisition so that it does not have to be temporarily halted, but at the same time can use the Poverty Relief and Working for Water programmes to provide bridging finance for employment for any affected farm labourers while the RAPs are developed. It has also been agreed with DLA, as an interim measure, for a staff member of DLA to be present at negotiations with farmers to inform farm workers of their rights.

11.1.4 BOUNDARY UNCERTAINTIES
The boundary of the gAENP will never be finalised as there will always be opportunities for expansion. The CPlan, however, has determined priority areas to purchase for conservation purposes, which will also be firmed up with the completion of a land acquisition policy.

11.1.5 COMMUNICATION STRATEGY
SANParks is in the process of developing a comprehensive communications strategy (section 5.5.4), which will assist in communication between SANParks and all affected stakeholders. The draft communication strategy is available upon request.
from South African National Parks (Port Elizabeth office). SANParks is in the process of restructuring the Addo Planning Forum, as has been recommended (section 7.7).

11.2 ADDITIONAL RECOMMENDATIONS

11.2.1 TOURISM SURVEY

Since ecotourism will be the primary economic activity of the gAENP, in-depth market research and marketing campaigns must be conducted. The research should investigate the existing as well as the potential tourism opportunities of the proposed planning domain, as well as the Eastern Cape.

11.2.2 FINANCIAL ASSESSMENT OF THE EXISTING FINANCIALLY VIABLE FARMING AREAS

Kommadagga forms part of Somerset East, which is the biggest mohair producing area in the world. The Glenconner and Kleinpoort area forms part of the Karoo/Midlands, which is known to contribute 60% towards the international production of mohair. A concern has been expressed regarding the impact that the loss of mohair production would have on the local, regional and national economies and on the supply of mohair.

It is thus recommended that the local, regional and national impact of the loss of mohair production in these areas be investigated as part of a more detailed economic assessment.
12. REPORTS PRODUCED FOR THE GAENP STRATEGIC ENVIRONMENTAL ASSESSMENT

Applicable Environmental Legal Framework and Compliance Requirements. 2001. IMBEWU.

Conservation Planning for Greater Addo Elephant Park. 2001. CSIR.

Development Prospects for Communities/Private Sector/Conservation Partnerships that would be Compatible with Long Term Ecotourism Based Objectives of the Park Expansion. 2001. R. Davies.


Freshwater Component. 2001. Helen Barber-James, Jim Cambray, Ferdy de Moor and Dirk Roux.


Comments trail. 2002. Sandy & Mazizi Consulting
13. REFERENCES


