Socio-economic benefits and risks associated with conservation land-use

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## Glossary

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<tr>
<td>BEE</td>
<td>Black Economic Empowerment</td>
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<tr>
<td>C.A.P.E</td>
<td>Cape Action for People and the Environment</td>
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<td>CTR</td>
<td>Cape Timber Resources</td>
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<td>EPWP</td>
<td>Expanded Public Works Programme</td>
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<td>GGP</td>
<td>Gross Geographic Product</td>
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<td>GR</td>
<td>Garden Route</td>
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<td>GRI</td>
<td>Garden Route Initiative</td>
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<td>MTO</td>
<td>Mountain to Ocean</td>
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<td>PPP</td>
<td>Public Private Partnership</td>
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<td>SMME</td>
<td>Small Medium and Micro Enterprise</td>
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1 Introduction

1.1 Background

While the GRI is fundamentally a conservation orientated programme designed to consolidate and expand conservation land use in the Garden Route, it is recognised that these activities take place within a challenging social, economic and political context. For the programme to demonstrate success it is not only necessary that it generates conservation benefits, but that it simultaneously contributes positively to the socio-economic development of the people in the region. In the words of the GRI:

Indeed, the biodiversity conservation activities cannot be seen as successful or politically acceptable if the wider socio-economic development needs are not being addressed at the same time, and in a manner that integrates efforts to promote greater social equity into the core work of conserving biodiversity.

An assessment of the existing and potential socio-economic benefits and risks associated with the programme needs to be informed by the following related aspects:

- the regional socio-economic context (Report 1),
- current land use in the planning domain (Report 1 and further summarised here),
- and existing and planned conservation related activities.

It also requires an appreciation of the environmental goods and services provided by different biomes/ecosystems as well as existing linkages between the natural and social environments. This includes understanding the role of natural resources in economically productive activities such as biodiversity-based industries, as well as their role in sustaining survivalist livelihoods at the household level.

1.2 Current land-use practices in the GRI domain

The Garden Route Initiative planning domain covers a vast area which includes the Mossel Bay, George, Knysna, Bitou, Koukamma and Kouga local municipalities, as well as the area south of the N9 and R62 roads to include the entire catchment areas of the rivers that drain south from the Outeniqua and Tsitsikamma mountains.

The Garden Route comprises a rich and varied natural landscape including a number of different ecosystems such as mountain fynbos water catchment areas, indigenous forests, and coastal, marine and inland aquatic systems. The area is further characterised by distinct patterns of human settlement (linked in part to the ecology) with a rainfall gradient of between 500mm and 2300mm per year. The main urban centres and associated infrastructure (e.g. national road) are located along the coastal belt.

The predominant land use types in the region comprise agriculture, tourism, forestry with light and heavy industry (Mosgas), manufacturing and services linked to the urban centres. With
regard to spatial differentiation, forestry occurs throughout the region while most agricultural activity takes place in the Mossel Bay/George area in the West and the Langkloof and Gamtoos Valley in the East. The main agricultural commodities produced include: dairy (mostly in the coastal regions), beef, sheep and ostriches (mainly in the west), horses (Knysna and Bitou), vegetables (throughout, but mostly in George, the Langkloof and Gamtoos Valley), fruit (some citrus in the west and in the Gamtoos Valley, a variety of fruit in the Langkloof, Macadamia nuts in Knysna), and wine (in the west). In addition there are a number of natural products that are farmed, albeit at a smaller scale. These include: aloes for health products and creams (Mossel Bay), wild flowers (mountain fynbos areas, forest ferns, thatching grass), essential oils (khaki bos), honeybush tea, and aquaculture.

Tourism is largely concentrated in and around the coastal belt with a focus in the central region from Tsitsikamma through Plettenberg Bay, Knysna, Sedgefield and Wilderness. Tourism activities extend into the forest fringes and a number of hiking trails traverse the mountainous inland region. The Garden Route is ranked 3rd as the most preferred tourist destination within South Africa and in 2005 tourism contributed 7.1% or R53.9 billion to South Africa’s GGP, contributing more than the gold industry per annum. The region’s popularity has led to a host of tourism-related services and activities throughout the coastal belt. Land development for tourism activities and holiday homes has been particularly prevalent within the towns of Plettenberg Bay, Knysna, Sedgefield, Wilderness and Mossel Bay. Land use for larger tourism-related activities such as Birds of Eden and Monkey Land is also prevalent within the region.

Of significance in recent years is the decrease in commercial forestry activities in the region. This follows a decision by the state to gradually exit approximately 50% of the land area currently used for commercial forestry. Much of this land is being converted to conservation forestry under the management of SANParks. In addition there is an increase in the area of privately owned farm land being registered as conservancies. The area planted with exotic trees cover an area of about 18 400ha, of which about 4 000ha will eventually be carried over as “viable” plantations under the management of CTR, with another 5 200ha being used for community forestry. This will involve these communities to manage the plantations and ultimately sell the timber. Therefore, about 9 300ha of the existing 18 400ha will remain as commercial plantations, with the remainder of the land to be transferred to SANParks. This land will form part of the Garden Route National Park. The exiting of the plantations will have a direct effect on the local downstream industries, such as sawmills and places that manufacture building material.

Downstream industries:

- High-end furniture - On average, only about 35% of the wood in each log is worked into furniture, since only best wood without stains, knots or other weaknesses has to be selected. Discarded wood and even roots are used to manufacture smaller items such as penholders, place mats and clock stands etc.
- Low-end furniture and construction material. By far the largest percentage of the exogenous timber is used for the production of construction materials and mass-furniture. (KNS TECH Report).

In 2004 Cape Timber Resources (a BEE partnership) acquired 75% of MTO shares. This package consisted of some 80 000 ha of productive, mostly pine, plantations stretching from...
Humansdorp to Tokai, including the Tsitsikamma, Knysna, Outeniqua and Boland plantations. There were also two sawmills included in the package one in George and the other near Franschoek. CTR agreed to a three year moratorium on retrenchments. However the commercial forestry sector is likely to feel the impact of the 50% downscaling that has resulted from restructuring of state forest assets. Jobs are likely to be shed as production losses have a knock-on effect through the industry.

On the other side of the coin due to the decision to withdraw from production the remaining half of the forest estate with the aim of rehabilitating it to natural vegetation creates alternative opportunities for SMME development. Rehabilitation in many cases means extracting exotic plantation trees – a process that generates employment and additional spin-offs.

The use of natural resources is also utilised for the support of local livelihoods within the Garden Route. Due to the existing forestry region wood is utilised as a heating and cooking source by numerous communities and land is used to keep livestock and for subsistence food production.

Apart from commercial forestry, the rich ecology of the Garden Route sustains a variety of smaller bio-diversity based industries. Examples of these include: Forest ferns, thatching, honey, fynbos, indigenous timber, medicinal plants, pollination services, aloe products, buchu, oyster farming, nurseries, bottled water.

1.3 Existing and planned conservation related activities in the project domain

The GRI falls under the broader GEF funded C.A.P.E. programme. The C.A.P.E. programme describes its activities as: co-ordinating and providing strategic direction to conservation functions, enabling donor funding to be channelled into new areas of work and exciting new approaches to conservation including landscape initiatives, conservation stewardship, business and biodiversity, fine-scale planning, catchment management, conservation education and strengthening institutions.

It follows that GRI activities assume much the same form. The stated GRI conservation-related activities as stated in the TOR for this assignment are the following:

- rehabilitation programmes
- tourism operations
- biodiversity resource utilization
- outreach and educational programmes
- law enforcement

Off reserve activities being undertaken include:

- protected area expansion
- a stewardship programme
- and integrating biodiversity priorities into land use planning and decision making
2 Benefits risks and opportunities from GRI conservation-related activities

The socio-economic benefits linked to conservation of the natural environment are many and varied. They range from direct benefits (e.g., conservation employment opportunities) and indirect benefits (e.g., economic opportunities linked to eco-tourism) to material benefits (e.g., access to biodiversity resources) and intangible benefits (e.g., recreational amenities). In addition, the various biomes in the Garden Route provide a number of environmental goods and services, which contribute to quality of life and sustain the natural resource base upon which much economic activity is based.

Important biomes dominating in the GR are the forest, mountain fynbos and coastal biomes. The forests are found in the mountains and in the lowlands and along river courses and along the coast. The largest remaining tract of natural forest biome in South Africa is found in the GRI area (KNS Tech Rep). Forests provide clean air, local climate regulation, flood attenuation, soil retention and recycling of soil nutrients. They also have some economic value in the form of commercial trade in timber and other forest products such as the Seven Weeks Fern. Indigenous forests are rich in biodiversity and as a result are treasured areas for the collection of medicinal plants.

Mountain fynbos is found above the plateau and in the mountains. Ericoid fynbos provides clean water at the sources of the major river systems (i.e., water quality), it is important in ensuring maximum water quantity, and proteoid fynbos is important in ensuring maximum water quality and quantity. Fynbos bees are important pollinators for the deciduous fruit industry. Fynbos honey makes up a large proportion of the South African honey trade. Fynbos also provides a number of biodiversity products such as medicines, creams, thatch, flowers and essential oils.

2.1 Rehabilitation Programmes

Rehabilitation programmes are Public Works programmes designed to create employment through tackling environmental issues in the national interest and for the common good. They may also relate to tourism safety issues. Three kinds of public works programmes are operational in the GR. These are Working for Water, Working for Fire and Working for the Coast.

Livelihood benefits

People employed by the programmes benefit in terms of cash wages and skills training.

The preferred system is one of contracting out rehabilitation work to emerging private contractors. The contractors employ a team of 13 people that they recruit from the communities. A general worker is paid R60 a day minimum wage, standards that are determined by the programmes.
The programmes normally come with training in first aid, life skills, health and safety, HIV/AIDS and primary health care.

Opportunities with the Department of Labour’s Sustainable Skills programme are being explored. These include baking bread, producing eggs and vegetable gardens.

**Economic opportunities**

The public works programme in the Southern Cape has good potential to grow. Opportunities exist within MTO who will employ more people for its ground teams as they have to clear-fell old plantations to mutually agreed standards before handing over to SANParks. SANParks will then need to upscale its labour capacity to take on the arduous task of putting in place rehabilitation works. Public works programmes will be the mechanism through which this is achieved. The employment spurred by the rehabilitation work will assist in offsetting the work lost in the down-stream economies of the local timber industry.

**Risks**

*Programme funding:* The Community Based Public Works programme has been in existence for more than 10 years and there are no indications that funding will discontinue. However those familiar with the programme will talk of fluctuating annual budgets and delays and uncertainties in funding. The programme’s future is dependent on continuing political support.

*Management capacity:* The programmes require intensive management yet operate with very few resources. Managers are under pressure to keep their costs down. Managers are sometimes SANParks employees. Up-scaling capacity in these cases would require SANParks to create more posts, something it may be reluctant to do. It is important that any such artificial barriers to up-scaling of public works programmes be removed and that management and administration capacity is upgraded.
2.2 Tourism operations

'Tourism is an industry that primarily focuses on attracting visitors to a product or series of products. Frequently these products are based around assets, such as scenery, natural features, cultural features and events' (Mountain Institute, 2000). As figure 1 suggests the majority of visitors to the Garden Route do so for holidays. Conservation activities add to the natural assets of the region and are a major contributing factor to the popularity of the region.

Figure 1 Reasons for visiting the Garden Route

![Pie chart showing reasons for visiting the Garden Route]

Source: Western Cape Tourism, 2007

Tourism operations in the Garden Route can be split into categories namely on-park and off park activities.

2.1.1 On-Park Tourism Activities

On park tourism activities can include concessions to private operators to utilise protected resources and direct tourism services offered by conservation authorities.

Concessions to protected resources

Conservation agencies have control and access over valuable natural assets which private enterprises could utilise for commercial gains. Through the use of contractual concessions to access and utilise these protected resources conservation agencies have the ability to extend socio-economic benefits to local communities though employment creation and other business opportunities. This type of activity is prevalent within the Garden Route due to the large tourism sector and for the demand for tourism services particularly activity based.
tourism. Restaurants in the parks, trails in parks and communities as well as adventure activities such as tubing are examples of these types of activities. Stormsriver adventures, an adventure based tourism entity provides an example of the potential benefits, see case study below.

Case Study  Stormsriver Adventures

Stormsriver Adventures is an adventure and activity company based in Storms River Village in the Garden Route region. It provides a number of tourist related activities including a renowned canopy tour through the indigenous forests in the Tsitsikamma. The company strives to enrich the surrounding environment and actively aims to promote the following outcomes:

- Total compatibility with sensitive environmental issues thus ensuring a sustained commitment to conservation of natural resources used in adventure products.
- Forming a synergistic relationship with all parties in the area to the mutual benefit of all role players without exclusion.
- Upliftment of the community through job creation.
- Forming of partnerships with individuals/communities through joint ventures.
- Committed resource plough-back by providing training for local inhabitants thus creating a highly professional tourist oriented community.
- Creation of mini-enterprises through the training of “Adventure Contractors”.
- Provide marketing expertise for the responsible expansion of tourism in the area and actively promote the entire area in accordance with tourism forum philosophies.
- Maintain and enhance optimal safety standards in all adventure operations without compromise.
- Expand environmental education packages in collaboration with South African National Parks, Department of Water Affairs and forestry, M.T.O. and other organisations.
- Actively assist with community fund raising projects and development of SMMEs.

Stormsriver adventures is the largest new job creator within the eco adventure industry within the country and they also self fund the training of eco-guides, since 1998 over 500 guides have been trained. In addition an empowerment company has been contracted to provide all the catering for the group which provides direct benefits to local communities. The company operates on SANParks land and thus is awarded concession to utilize their resources and the relationship between these two parties is effective and mutually beneficial.
General on-park tourism services

Direct tourism activities in conservation areas are another key mechanism to extend socio-economic benefits to local communities; activities can include accommodation, catering, conferencing facilities, guiding and retail activities. These activities lead directly to employment opportunities for local communities, for example within the Garden Route SANParks is the second largest employer with 372 permanent and 750 contract employees, many of whom are employed to service tourism related activities.

Livelihood benefits

The primary livelihoods benefits of on-park tourism are employment creation. In addition training and skills development are often linked to tourism operations in conservation areas due to the need for skilled and qualified guides/employees, thus providing local communities with an opportunity to improve their social assets.

Economic benefits

Apart from direct employment creation and overall contribution to local GGP on-park tourism activities can also contribute to economic benefits by allowing concessions to private tourism operators. Through the allocation of concessions conservations authorities can promote economic benefits by favouring operators which extend opportunities to local communities. Potential economic benefits which can be extended include:

- Creation of joint venture partnerships to link up related goods and services
- The creation of mini ventures
- Support and assistance of community SMMEs

However, this should not be done at the expense of environmentally sensitive practices and this issue should remain at the forefront of any concessions awarded in conservation areas within the Garden Route.

Risks

Potential risks to on-park tourism activities include:

- The creation of low end employment for local communities - conservation agents should look at means to offer appropriate skills development and capacity building programmes to capacitate local employees.
- Unsound environmental practices by tourism agents utilising protected assets. In terms the allocation of concessions priority should be given to operators extending maximum socio-economic benefits to local communities, although not to the detriment of the environment and sound environment practices should be the primary concern of conservation agencies when allocating concessions.

2.2.2 Off-Park Tourism Activities

Broader tourism services and activities are major contributors within the regional economy. Wholesale and retail, which includes tourism services, contributed 15% to regional
employment in 2001 (Stats SA, 2001). Whilst conservation activities do not directly influence off-park tourism, the scenic beauty of the Garden Route is a major reason for the popularity of the region as a tourist destination and hence the industry is indirectly linked to conservation activities within the GRI domain.

In regions where tourism is a major economic driver community based tourism is also an important concept. Whilst local communities will benefit through mainstream tourism activities through employment and other secondary benefits it is also important that local communities share a sense of ownership of the natural resources that bring tourists to the region to ensure that they are committed to the conservation of that particular resource.

Community-tourism attempts to focus the benefits of tourism towards marginalised communities and enables local communities to take ownership of a range of tourism related activities. Local communities are thus able to benefit through income as land managers, entrepreneurs, service providers and employees.

Examples of successful community based tourism include the Caprivi Strip, see case study and the Madikwe Initiative in the North West Province and Mothers of Creation in the Garden Route.

Case Study: Community-based tourism in the Caprivi Strip, Namibia

The Namibian Government’s White paper on tourism in 1994, stipulated that that “tourism must provide direct benefits to local people and aid conservation” (MET 1994:5). This initial commitment laid the foundation to the countries Community-Based Natural Resource Management (CBNRM) programme which in turn was the basis for community based tourism within the country. Since the 1990s a number of community-based initiatives have been implemented by communities, private entrepreneurs and NGOs including a number within the Caprivi Strip, which is rich in natural resources and wildlife and is a popular tourist destination.

Examples of specific Community based tourism activities within the Caprivi Strip include:

- **The Lizauli Traditional Village.** Within the Mudumu area in the Caprivi Strip, community involvement in conservation is addressed through four key interventions namely the: community game-guard scheme, the bed-night levy, the Lizauli Traditional Village, and the thatching grass project. The Lizauli Traditional Village is specifically a community based tourism venture which was initially developed by the private sector and subsequently handed over to the respective communities. Specific functions include local food, festivities and products. The village is liked to conservation as the success of the village depends on actual tourists and visitors through the parks hence there is a financial benefit to the community to ensure local wildlife is preserved.

- **The N/Goabaca Community Campsite** is owned by the Khwe San community and is situated at the Popa Falls along the eastern bank of the Okovango, a popular tourist destination, and consists of four individual campsites. Opened in 1997 the campsite has had numerous difficulties particularly during the political unrest between 1999 and 2002 where occupancy levels dropped to zero. However during this period support was provided by NGOs and the campsite survived and is still in operation today.

(Halstead, 2003)
Livelihood impacts

Off-park tourism offers major livelihood benefits to local communities through employment and considering that this is the primary focus of the respective municipal LED strategies its impact is significant. Additional livelihood benefits could also include:

- Skills development
- Capacity building

Community-based tourism initiatives can also impact in a number of positive ways including:

- Increased confidence
- Empowerment particularly amongst vulnerable groups
- Increased human capacity

However, these potential benefits do come with associated risks as these types of interventions often require significant resources to establish and to support with no guarantee of long term sustainability.

Economic Benefits

The tourism industry within the Garden Route creates a number of potential economic benefits for poor and marginalised communities including, employment and direct business opportunities. A number of local community group’s and individuals benefit from the tourism industry eg Mothers of Creation and house of Judah Rasta Community.

Risks

Some of the primary risks associated to off park tourism activities include:

- The majority of the employment created for local communities is low end employment, although this in itself is a positive outcome it would be beneficial if low end employment opportunities were linked to skills development initiatives to enable local communities to reap greater rewards from existing opportunities within the region.
- Local communities generally do not have the support to exploit local economic opportunities.
- Community-based tourism is difficult to promote within the Garden Route as few settlements exist within the protected areas and conservation authorities are likely to have little influence over communities living beyond park boundaries. However, they could promote community-tourism initiatives by assisting with marketing and/or advertising or by allow such operations preferential concessions to utilise protected natural assets. Employment opportunities created are given to foreigners as opposed to locals.
2.3 Biodiversity resource utilization use

Economic valuation studies of the natural resources along the Garden Route have yet to take place. As a result quantification of the value of the goods and services provided by the different biomes occurring in the region is difficult. However information does exist for the Cape Floristic Kingdom (CFK) – an area of 78555 km$^2$ stretching from north of Cape Town through to Port Elizabeth (see Figure 1). The CFK is home to the greatest non-tropical concentration of higher plant species in the world, with 9,000 species of which more than 6,200 (69 percent) are found nowhere else in the world. While broader in geographical extent than the GRI, much of the GRI planning domain is located within the CFK.

Figure 1 Map of Cape Floristic Region

Source: Source: CI/CABS
* The black square indicates the extent of the GRI planning domain.

A resource use study done by Turpie et al. in 2003 in the CFK indicates that the harvesting of fynbos products such as wildflowers and thatching reed, and forest products, timber and ferns, are worth a total of R78 million year$^{-1}$ (Turpie et al. 2003). A similar study conducted in 1999 (cited in Ashwell et al. 2007) suggests that R86 million worth of flowers were harvested from natural fynbos vegetation for the R150 million rand fynbos flower industry. R12 million worth of buchu is exported each year, the oils being used to make food flavourants and cosmetic fragrances. About R5.6 million worth of thatch was harvested in 1999 (cited in Ashwell et al. 2007). Harvesting of marine resources, such as linefish, rock lobster, abalone and bait species, in the Cape Floristic Kingdom is worth over R1300 million year$^{-1}$ (Turpie et al., 2003).

These values do not include the value certain general value of the ecosystem goods eg the value of fynbos bees to commercial fruit production, the role of the mountain fynbos in water catchment areas, etc. Using contingency studies to include these as well as option, or future use, values, the total economic value of the CFR is estimated to be R10 000 million per year, equivalent to over 10% of the regional Gross Geographic Product of the Western Cape (Turpie et al., 2003).
It is difficult to extrapolate these figures to the GRI planning domain but the significant economic contribution of biodiversity-based economic activities in the CFK (R10 000 million per annum) suggest a GGP for the GRI region based on 5% coverage to be in the region of R500 million per annum.

Such an extrapolation is not that simple however as not only is the GRI region smaller but it also has its own unique configuration of natural resource-based economies. In addition the GRI excludes many of the economic centres such as the Agulhas Plain for cut-flowers and Riversdale for thatching and subsistence fisheries such as snoek on the West Coast that constitute the greatest value areas within the greater CFK.

The GRI initiative promotes a number of biodiversity-based economic activities that contribute to improved socio-economic standing of marginalised communities. These activities include: Forest ferns, thatching, honey, fynbos, indigenous timber, medicinal plants, pollination services, aloe products, essential oils, oyster farming, nurseries, bottled water.

Conservation-related activities in the biodiversity resource utilisation sector are likely to include on-going promotion of biodiversity-based economic opportunities.

The GRI partners have their own array of biodiversity based economic activities of which the Seven Weeks Fern (Rumohra adiantiformis) has been harvested from private forests since 1970 and from State Forests since 1982 (Farabi and Associates, 2008). The fronds of this fern have been in high demand and are used in flower arranging, with a long vase-life, and have spawned a big commercial venture, with significant economic benefits for the region. It is not known what the value of this economic activity is at present, but it was reported that in 1986 before controls were introduced, the ‘industry’ generated R6 million from the harvesting of 4 million fronds (KNSTech Report). Currently little harvesting is apparently taking place - the bulk is now grown and harvested from pine plantations, shade houses and commercial nurseries - See Vermeulen (in prep). Forest Ferns is a commercial fernery in the GR that has been in existence for 23 years and provides employment for 150 people.

Indigenous timber: A limited amount (roughly 4000m3) of unprocessed timber from the indigenous forests is sold on tender or auctioned off to local furniture manufacturers. More than half of this volume consists of Australian Blackwood, with the remainder being yellowwood, stinkwood and ironwood. Harvesting is strictly controlled and only dying trees are removed. Auctions are held twice yearly. This activity generates some employment. In addition indigenous timber may be used by local people for the production of crafts.

Oyster farming: Production figures available, but income attached to Knysna Oyster Festival is significant. However has had to cut back production following opening of additional farms in the Eastern Cape Province. Is now also faced with an uncertain future in terms of leasing arrangements with SANParks (EP Herald, 3 November 2008).

Thatching industry: Thatching has a long history in South Africa and the main harvesting area lies just to the west of the GRI’s western boundary in the triangle formed by Riversdale, Bredasdorp, and Stilbaai. The capacity of the thatch industry to supply demand was pushed to its limit during the construction boom of 2002. The subsequent collapse has seen big surpluses and a drop in retail prices of thatch bundles. Commercial cultivation has been experimented with but it seems that the preferred species – Thamnocortis insignis – is
difficult to grow outside of its unique habitat and soil profile. One farm exists in the Cape St Francis area. A number of sub-communities of thatchers exist throughout the GR region plying their skills in the construction industry.

**Honey production:** The GR currently sustains and has potential for expansion in honey production. About half the honey produced in the fynbos region comes from bees collecting from fynbos flowers, amounting to about R5.8 million per year (SANBI 2006). This in a context of an increasing demand for organic and eco friendly products and a decrease in local supply due to decreasing bee populations. SANParks has identified a pilot project where 12 individuals from villages surrounding the natural forest (Bergplaas and Rheenendal area) have been trained as bee keepers. According to Farabi and Associates (2008) it is expected that the 300 hives will produce 6 000 kg per annum, with a gross revenue of R120 000. It has the potential to generate an income of R550 per month after costs. With SANParks lending their eco-friendly logo the income per beekeeper could increase to over R1000 although due to fire risks and hazards it is unclear whether this will be endorsed by SANParks.

**Medicinal plants and seeds:** A range of medicinal plants and seeds are harvested from the forest and fynbos biomes. Bulbine latifolia (Rooiwortel) is a medicinal plant in high demand. Harvesting from SANParks is limited to specific sites as identified and monitored by SANParks. The harvesting of propagation stock for community nurseries was approved such as Witfontein but illegal harvesting still occurs. Tree bark is harvested from a range of tree species including Rapanea melanophloeos, Ocotea bullata, and Curtisia dentate. Demand for plant-derived medicines has created a trade in indigenous plants in South Africa currently estimated to be worth approximately R270 million a year (Dold & Dold, 2002). Dold & Dold’s studies in the Eastern Cape indicate the value of traded plant material to be in the order of R27 million per annum. 62% of the people involved in the trade are middle-aged black Africans, 75% are women, 50% have an education level below grade eight, and 62% earn less than R500 per month. In the Southern Cape, the demographics are changing and more and more black people are settling in the region. There is also illegal and uncontrolled harvesting of medicinal material taking place from the natural forests in the Southern Cape.

**Marine resources:** The GRI comprises a rich heritage of lake systems, lagoons and shoreline supporting a range of marine and freshwater species. Bait organisms and fish are sometimes sold as a means of deriving income. Seaweed harvesting is likely to be taking place. Other subsistence use of marine resources is limited as poorer communities have progressively lost access to the coastline in the wake of the construction boom. The waters falling within the GRI support a successful commercial fishing industry. Fishing is prohibited in the Tsitsikamma National Park.

Additional natural products that are derived from the existing biodiversity along the GR include: buchu, essential oils, aloe products and bottled water.

**Aquaculture:** A few farmers are involved in the aquaculture in their dams, and it mainly involves Tilapia and Crayfish. The production unit can be designed in such a manner that it involves the entire production line from the rearing of the fish, to the harvesting, preparation and (vacuum) packaging. In this manner, maximum value is added locally. The industry offers much opportunity for further development. The units can be designed in such a
manner that they be managed and operated by the farm workers or their wives (KNS Tech Rep).

Livelihood benefits of biodiversity

Livelihood benefits naturally occur to those people and communities participating in the various biodiversity-based industries listed above. More generally, rural and peri-urban communities use biodiversity to support their livelihoods in a number of ways, e.g.:

- **Household services**: fuelwood for cooking and heating, poles and thatching grass for roofing, wood for making household utensils (spoons, mortars & pestles, bowls, etc.)
- **Health services**: medicinal plants, animal skins and other body parts
- **Spiritual services**: sacred sites, wood piles,
- **Food**: fish (including bait organisms), small mammals, veld food (herbs and fruits), honey, prickly pear, illegal hunting of bush pig,
- **Animal production**: goat and beef and dairy farming
- **Other**: grasses for weaving, wood for utilitarian items (e.g. walking sticks, handles, etc.).

Economic opportunities

Like the Western Cape, the GRI has experienced growth in the contribution of biodiversity-based industries to the GR economy. This has accompanied a general societal shift towards natural places and natural products as consumers become more aware of eco-branding and global environmental issues. Thus there is a linkage between the biodiversity-based economy and the eco-tourism economy. Tourism numbers continue to rise, although the full impacts of the global recession have yet to be felt. The 2010 World Cup is expected to tourism in SA and the GR into the future. Thus macro-factors such as government conservation programmes, changing markets trends and tourism combine to ensure that the biodiversity-based economy continues to grow consistently.

The biggest opportunities for job creation lie in the rehabilitation works that will occur on former plantation forests reassigned to SANPArks and to be managed for conservation. Another big area of opportunity lies in the utility works associated with the management of the new GRNP.

Risks

Risks to the consistent growth of the natural resources economy include the following:

- **Global events**: The global recession, swine flu pandemic and climate change have the ability to negatively impact on tourism and hence the eco-tourism market. This would have a negative impact on the growth of natural resource industries.
- **Inappropriate planning**: Rising real estate prices in the recent past resulted in the coastline of the GR coming under pressure from development companies for luxury townhouse complexes, golf estates and polo estates. Such developments lead to conversion of large
tracts of natural vegetation and cumulatively eat into the valuable coastal biodiversity. They also have questionable socio-economic benefits.

**Over harvesting and ecological damage:** One of the intricacies of a biodiversity-based economy is achieving a balance between natural resource extraction and conservation. Experience has shown that adaptive management of harvested material using a quota system is possible. Management and monitoring systems need to be robust in order to ensure that ecological thresholds are not surpassed.

### 2.4 Outreach and educational programmes

“The full support and participation of young South African people is vital for the future of conservation and national parks in our country.”

A key mandate of many conservation authorities is to involve communities and civil societies in the sustainable utilisation of biological resources. Continued sustainable use of natural resources requires that the general population see the benefits of working towards and maintaining these natural resources. In this regard environmental outreach and educational programmes play a critical role. However, the actual quantitative measurement of these benefits is extremely complex and there have been limited studies in this regard.

There are a number of outreach and educational programmes within the region by a number of GRI partners and broader stakeholders within the region.

**CapeNature**

CapeNature’s environmental education and outreach programmes have a distinct focus on the youth and key programmes in the Garden Route include:

- Marine Education Programme
- Environmental Programme
- Outdoor classrooms aimed at promoting local youth accessing the local environment.

**WESSA**

- Eco-schools, which aims to encourage curriculum-based action for a healthy environment. It is an internationally-recognised award scheme that accredits schools that make a commitment to continuously improve their school's environmental performance.
- Environmental Calendar
- Environmental Education network
SANParks

1 Programs for special interest groups and schools
   - Marine Environmental Awareness Programme
   - Khula Nam Excursions (forest excursions)
   - Kids in Parks Programme

2 Teacher Support and Development:
   - Environmental Education Networks (GREEN/TEEN)
   - Eco Schools Programme

3 Youth Development
   - Imbewu Camps (Not currently running)
   - Junior Honorary Rangers
   - Youth Outreach

4 Visitor Programmes
   - Holiday Programmes
   - Self Guided Interpretive Activities

5 Staff and Community Programmes
   - Staff Environmental Awareness Programme
   - Community Environmental Calendar Programme

6 Support Activities
   - Information Resource Development
   - Interpretive Materials, Displays and Signage
   - Eco-Guides & Volunteer Training

Livelihood benefits

The primary socio-economic benefits of outreach and educational training include:

- Increased awareness of conservation activities and the socio-economic benefits of conservation
- Promote positive perception about the value of the environment
- Increased social confidence
- Exposure to potential careers linked to conservation
- Introduction to additional livelihood strategies and income generating activities linked to conservation
- Skills development and capacity building
- Develop eco-friendly habits such as recycling etc
- Increase awareness and training to food gardens

The socio-economic profile (Report 1) highlighted that the youth within the Garden Route felt discouraged around economic opportunities and in many instances did not see the benefit of conservation activities. Environmental education and outreach programmes play a critical
role in highlighting the socio-economic and environmental benefits of conservation to the youth. However as highlighted attempting to quantify the value of this benefit is not possible.

**Risks**

The major risk around environmental education and outreach programmes is that the programmes fail to link up conservational activities to actual socio-economic benefits for poor communities. Whilst programmes directed at the youth need not actually provide tangible economic benefits it is important for the participants to see a positive correlation between the two.

Additional risks include:

- The duplication of programmes and services if outreach programmes are not co-ordinated between the various partners.

**Access to Natural Assets**

Outreach programmes are also regularly linked to **access of natural and protected assets** by local communities.

Access to natural resources is a positive socio-economic benefit derived by conservation activities within the Garden Route. Apart from access for education access can also be be related to recreational, spiritual and cultural purposes:

Access to Parks and parks for **recreational purposes** such as hiking, camping or to just enjoy the scenery is a major socio-economic benefit within the Garden Route. Whilst there have been no actual cost-benefit studies conducted of the recreational value of parks in the Garden Route the mere fact that visitors are willing to pay entrance fees highlights that the actual economic benefits. Access to local communities is achieved through a number of highlighted outreach programmes and thus also enables them to enjoy the recreation benefits of the Garden Route Parks and protected areas. There are certain risks allocated to the use of protected areas for recreational purposes and any activities which could negatively impact upon the environment needs to be adequately controlled eg fishing licenses.

Access to parks for **Spiritual and Cultural** purposes is also a major benefit within the Garden Route. In a study of the values of protected landscapes and seascapes local cultural and spiritual values carried significant value for local people and communities (IUCN, 2008) and central to many of these practices are specific cultural sites. Access to these cultural sites is thus a significant socio-economic benefit to local communities. A major risk of the use of protected areas for spiritual purposes is the potential risk of damage to the environment eg fires, litter etc. In many instances local assets may be associated to specific practices and if this is not controlled it may impact negatively on the stocks of the specific resource. Within the Garden Route there is little or no information about spiritual and cultural practices within the protected areas despite it being a major socio-economic benefit. Additional research activities would be extremely valuable towards establishing a system for managing and monitoring this type access as well as minimizing the risk associated with these practices.
2.5 Law enforcement

Benefits

Law enforcement is an important component of the overall sustainable development paradigm. It is needed to curb illegal pillaging and environmental damage by those who do not subscribe to the conservation ethic. Laws are made and enforced (generally) for the public good. In the case of protected areas there are laws to limit the kinds of activities that can be undertaken. The greatest beneficiary is the broader society.

For the rural poor living adjacent to the protected areas law enforcement is not always popular as it is seen as the government depriving people of their felt right to hunt, fish and gather building materials. Issues around access to places and resources dominate dialogues at this level.

Economic opportunities

With an expanded area under its management, SANParks will require additional park personnel including guards. There may be scope for a voluntary youth earth stewardship programme through which the youth can participate in and be exposed to nature. It would be important that the programme fulfils an accepted learning outcome and is certified eg junior rangers.

Risks

Alienation of communities: Conservation agencies in South Africa have complex and often long-standing relationships with neighbouring communities. Conservation is not always considered in a positive way partly as a result of out-dated management approaches. Law enforcement will only become viewed more positively if it is professionally and fairly implemented and goes hand in hand with visible awareness/experience of conservation benefits.

2.6 Protected area expansion

The expansion of the protected areas indirectly leads to socio-economic benefits for local communities though the extension of their conservation activities on protected land, namely:

- rehabilitation programmes
- tourism operations
- biodiversity resource utilization
- law enforcement

Thus the identified benefits and risks for these activities still hold.
2.7 Stewardship Programmes

Stewardship programmes play an important environmental role as the state of adjacent land and particularly ecological corridors impacts upon the conservation area. Essentially it creates a formal relationship between landowners and the state/state conservation authorities to undertake certain conservation related activities eg alien vegetation removal on their land, this can be purely voluntary or in exchange for various forms of tax breaks or other forms of remuneration.

A stewardship programme thus promotes and desirably leads to the sustainable management of private owned land adjacent to protected areas on critical ecological corridors.

“Biodiversity stewardship provides a powerful new tool to assist national and provincial government in fulfilling its mandate to conserve biodiversity outside of state-owned protected areas. Since acquiring land to expand protected areas is usually too expensive, stewardship provides a cost-effective alternative, by getting landowners to commit to conserving and managing the biodiversity on their own land. This includes private farms, communal lands and land owned by national/provincial government departments, municipalities, parastatals like Eskom and Spoornet and private companies.” (C.A.P.E, 2009)

Within regions such as the Garden Route stewardship programmes play an important conservation role in promoting environmental sustainability.

There are three broad types of stewardship programmes available, namely through:

- Voluntary
- Contractual
- Statutory

Livelihood impacts

Stewardship programmes can lead to livelihood benefits through employment creation generated from environmental activities on private land, vocational training for land owners and vocational training for employees eg Covey community.

In terms of extending socio-economic benefits stewardship programmes on community owned land have the potential to extend the greatest benefits though the aforementioned channels.

In addition all residents within the Garden Route will benefit though improved environmental goods and services.

Economic Benefits

Improved environmental goods such as improved water supply can lead to inward investment and potential employment in the region.
Risks

Potential risks include:
- Land owners are often sceptical about entering into agreements with government agencies and thus may decline voluntary stewardship programmes on that basis.
- Without the trust amongst all stakeholders the programme is unlikely to achieve success.
- There are major costs associated with stewardship programmes and potential benefits need to be offset against these costs.
- Unless partners can agree on specific areas or priorities these areas are under risk.

2.8 Integrating biodiversity priorities into land use planning and decision making

GRI is one of a number of biome-based conservation planning initiatives underway in South Africa. Others include Cape Action Programme for the Environment (C.A.P.E.), Succulent Karoo Ecosystem Programme (SKEP), National Grasslands Biodiversity Programme, Cape Peninsula Biodiversity Conservation Project, Greater Addo National Park, Conservation and Sustainable Use of Biodiversity on the South African Wild Coast. Conservation planning received a boost in South Africa since the establishment of the World Bank’s Global Environmental Facility following the Rio Earth Summit in 1994. Currently 13 biodiversity-related projects to the value of USD$2 million are being supported in South Africa. A further 3 projects valued at USD$126 million are being supported under its ‘Sustainable Land Management’ funding stream. The GEF was established to assist developing countries with the implementation of key international environmental conventions with the aim of fostering sustainable development.

Benefits

The main benefit of encouraging a more bio-centric spatial development framework lies in creating an enabling environment to promote sustainable development. In this scenario core biodiversity areas are protected and are ecologically linked through a system of ecological corridors. Land use is well-planned and administered with appropriate zonation for different categories of development. The economic and social value of biodiversity increases, the economy expands and the sector becomes a significant employer. Biodiversity, by virtue of its integration into the local production economy, becomes a more highly valued commodity and like other commodities is managed and traded. With effective systems in place for management and monitoring, including law enforcement, and improved scientific research capacity, as well as developed and well-managed markets, the conservation and maintenance of the environment and the goods and services it provides, is placed on a more sustainable footing (cf. SANParks Resource Use Policy).

Some of the municipalities in GRI have commissioned the preparation of Spatial Development Frameworks linked to their IDPs. The SDF done for Knysna Municipality is a good example of how biodiversity considerations can be integrated into spatial planning. Unfortunately not all the municipalities have done SDFs and/or have not done them to the same level of detail or have used different approaches. Thus a more regional and consistent SDF that covers the whole GRI area is required. The GRI SDF should provide the context and broadly inform the municipal SDFs.
An indirect benefit of the greater focus on biodiversity conservation in the GR is the fact that the proclaimed protected areas require active management which means that additional institutional capacity is drawn into often remote rural areas with limited government presence. Conservation agencies therefore have the potential to supplement local government in these areas through becoming actively involved in the development of rural economies and people.

**Livelihood benefits**

Enhanced planning attention to the biodiversity will ensure greater understanding and regard for the needs of the sector. This in turn will ensure that the needs of the people involved in the sector receive attention which will strengthen their livelihoods. Those not directly involved will also benefit from the environmental goods and services that will continue to be well managed for the public good.

For planning to become meaningful for local people it requires a commitment to participatory local development planning processes.

**Economic Opportunities**

High quality integrated spatial planning in the GRI will reap the benefits of continuing investor interest and enhanced quality of life. The maintenance of the natural environment’s ecological integrity will ensure growth in eco-tourism and other biodiversity related industries. The region’s internationally acclaimed tourism reputation as a place of unspoilt natural beauty will be secured.

Conservation development planning programmes such as GRI need to ensure that local participatory development planning processes include the identification of economic opportunities for job creation. There is also a need, as pointed out elsewhere in this report, for sustained institutional support for the establishment of livelihoods projects, SMME’s, Public Private Partnerships and BEE. This support could be in the form of mentorship programmes, micro-finance, skills development and/or product development and sales.

**Risks**

**Alienation of communities:** Conservation planning needs to ensure that regional planning is linked in with local level participatory planning and that locally developed plans are funded and implemented.

**Disease Outbreak:** Biodiversity economies have the tendency to boom and bust. This typically occurs when there is a sudden boom in a particular commodity leading to over-cultivation and followed by a disease outbreak. To safeguard against this GRI ensure that there is always diversity in the kinds of biodiversity based activities taking place.

**Governance:** Attainment of the GRI vision requires a commitment from conservation agencies as well as other civil society and government partners. It should be clear that the GRI programme forms part of good governance practice and that it should be supported.
3 Recommendations to avoid Risks from conservation-related activities and discussions

The previous section highlighted current risks and benefits of conservation land use and also identified specific recommendations to mitigate these risks. The following section highlights some of the critical recommendations made.

Key Recommendation includes:

- Despite the advantages of EPWP type programmes political support is required for funding. Constant attention needs to be paid to these relationships as the positive outcomes of programmes such as Working for water are widespread and affect the region as a whole.
- The creation of employment for local communities is socio-economic benefit derived from numerous conservation related activities. However, conservation agents should look at means to offer linked skills development and capacity building programmes to capacitate local employees to enable them to take advantage of local opportunities. It must also be noted that low end employment may simply result in immigration of foreigners and will not improve local socio-economic conditions.
- Appropriate plans and feasibility studies are needed to ensure that natural resources are not negatively impacted by socio-economic related activities.
- GRI partners should provide assistance in this regard to community groups who may not have the appropriate capacity or resources to undertake these types of activities.
- With regard to educational and outreach programmes co-ordination is required between the various stakeholders engaging in such activities. This is currently being addressed through the C.A.P.E programme.
- Law enforcement programmes should be linked to local communities to try and create a positive impression of conservation and protection of natural resources. Community consultation and planning around enforcement activities possibly employing local communities members as guards may assist in achieving this outcome.
- Conservation planning needs to ensure that regional planning is linked in with local level participatory planning and that locally developed plans are funded and implemented.
- In terms the allocation of concessions priority should be given to operators extending maximum socio-economic benefits to local communities, although not to the detriment of the environment and sound environment practices should be the primary concern of conservation agencies when allocating concessions.

Key findings included:

- Decline in livelihood options due to restricted access to resources: By its very nature, conservation introduces greater control over natural resources that previously may have been accessed more easily by local communities. While contemporary conservation policies make greater provision for controlled natural resource utilisation, getting the required permission is often a complicated and lengthy process as it requires specialist studies to determine sustainable off-take rates. As a result for many communities their experience of conservation is one of being excluded access to livelihood resources which they previously enjoyed open access to. Communities are generally not aware of the legal recourse they might have in terms of respective utilisation policies and often do not have the awareness, skills or resources to follow the legal procedures. In addition, even where procedures are followed, the amount of
resources that will be allowed to be harvested are normally less than the demand, or in some cases, access to certain types of resources is not permitted at all (e.g. hunting, some kinds of medicinal plants, etc.). As an example, in 1986 before controls where introduced to the harvesting of seven-week-ferns, the ‘industry’ generated R6 million from the harvesting of 4 million fronds. Following the introduction of sustainable off-take quotas, in 1998/99 only 1.6 million fronds were allowed to be harvested with significantly less value. This is not to argue that conservation controls are not needed – they are as experience has shown the dangers of open access to high value public resources (e.g. abalone). It is simply to assist in understanding how conservation controls – for better or for worse – can serve to influence opinions by undermining short term economic resource based activities.

- Biodiversity has economic value as demonstrated by CFK valuations.
- Growth potential is good in biodiversity–based industries is good although these types of industries are inherently problematic.
- Greatest growth potential in eco-tourism (Birds of Paradise, Monkey Land, Big Tree, Wilderness) as well as conservation and rehabilitation works.
- The bio-diversity sector will need to be supported and opportunities identified until it attains a critical mass. Structural forces, e.g. globalisation, migration, tourism are in place and will impact upon the viability of the sector. Integrated planning further supports process and should be linked to a bottom-up planning process.
- Benefits and risks associated with GRI activities, but opportunities need to be taken. Understanding the risks puts as in a better position to focus on securing the benefits. Biodiveristy-based economy is nascent but conditions are in place for its consistent growth. Integrated planning assists the process. The challenge lies in coordinating local level support mechanisms for local economic development (LED). GRI require policy and decision making guidelines on how to engage with local level projects. (Decision Making Framework report)
Annex 1 References


