MAKANA LEAP

Draft Stakeholder Contribution to the Biodiversity Framework for discussion

PROJECT PROPOSAL

Prepared by

The Working Group for Biodiversity

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Makana LEAP: Stakeholder Contribution to Biodiversity Framework

Introduction

Biodiversity supplies goods and services that are essential for human well-being (Alcamo et al., 2003). Loss of biodiversity limits local opportunities. Conservation of biodiversity is therefore crucial. The major threats to biodiversity in the Makana Municipality have been defined by a wide range of stakeholders (Table 1), and include habitat loss through preparation of cultivated lands, urbanisation, invasion by alien plants, collection of ornamental plants and harvesting of medicinal plants (Victor and Dold, 2003). Cultivation for agriculture has transformed 4.83% of the surface area of the Succulent Thicket region (Lloyd et al 2002), while urbanization (1.42%) and alien plants and commercial plantations account for 0.8%. Makana contains a significant portion of the Succulent Thicket, and the extent of degradation of the thicket vegetation due to over-grazing by domestic herbivores (Table 2) remains a significant threat to biodiversity. Similar threats have been reported in the Cape Floristic Region, another biodiversity hotspot (Rouget et al., 2003). Furthermore, they predicted that at least 30% of the currently remaining natural vegetation could be transformed within 20 years. These threats are relevant to Makana and it is clear that there is a need to monitor threats to biodiversity and **to develop and implement control programmes to limit these threats.**

Priority issues identified by Stakeholders

Table 1. Threats to the biodiversity of Makana identified by stakeholders during public consultation (February 2004-July 2004)

- Encroachment of woody shrubs
- Wetlands being drained, overgrazed and overexploited
- Deforestation and land degradation
- Threatened by alien species
- Endangered species being lost
- Unregulated extraction of medicinal plants
- Over harvesting of indigenous plants
- Absence of management of existing nature reserves (Blaukrantz / Ecca)
- Unregulated development of private game reserves
- Non-indigenous fauna being stocked on private game reserves
- Natural environment overtaken by private interests, excludes the populace
- Unsustainable veld management practices
- Overgrazing of commonage and commercial rangeland
- Ignorance about carrying capacity
- Soil erosion with loss of nutrients

Guidelines for response

There are ten broad classes of responses to loss of biodiversity (O'Connell, 2003). These are:

- . advocacy;

- . capacity building;
- . habitat creation or restoration;
- . *in situ* and *ex situ* action;
- . legislation/agreements;
- . protected areas;
- . public awareness;
- . research, and
- . site management planning.

The response adopted by the Municipality will depend on the severity of the problem and availability of funding.

Suggested Long Term Targets

Draw up a Terms of Reference, obtain quotes and raise funds to hire a biodiversity consultancy to expand on and develop:

- the establishment of benchmark data, according to identified local biodiversity priorities, with which to compare future monitoring and on which to base viable control programmes
- the nature and approach of these viable control programmes and draw up relevant budgets for long term fundraising to implement them
- specifics of the system of monitoring biodiversity in Makana
- the establishment of local biodiversity threats that require new bylaws to control
- possibilities for increasing the percentage of protected municipal land, prioritizing wetland areas in site selection
- Undertake a study in conjunction with DEAET on land utilization of private game farms for hunting purposes and private game reserves (particularly those with extra-limital species) as relates to their impact on biodiversity in the area.
- Develop a code of good biodiversity conduct for management of these areas that includes an emphasis on local economic development and investigates possibilities for reasonable access by Makana residents.

Increase the percentage of municipal land that is protected in conjunction with biodiversity consultancy in terms of sites. Including major private game reserves not used for hunting, total conserved area in Makana as per the table and map below is approximately 11.8%, but municipal protected area is a minute fraction of that – well below the national norm.

Conservation areas	**Size (ha)**
Ecca	119
Blaauwkranz	122
Thomas Baines Nature Reserve	981
Great Fish River Reserve	14648

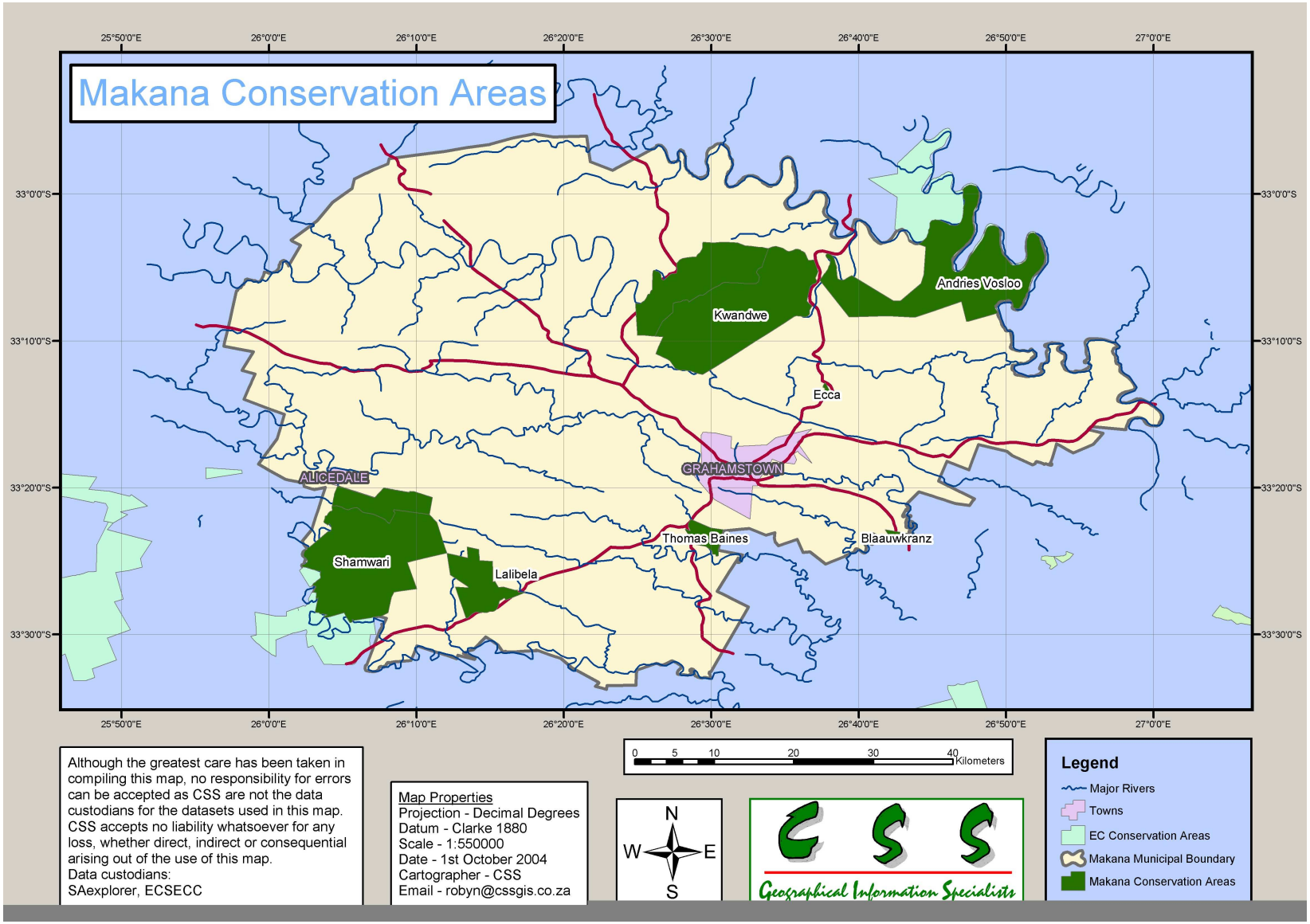
Lalibela Game Reserve	3297
Kwandwe Game Reserve	14030
Kwandwe Game Reserve	6978
Shamwari Game Reserve	16795
Total area of Makana	422241

Develop relevant bylaws. Currently, most of the extant bylaws are very outdated, with some having been written in the 1940's, and the Parks and Recreation Department largely follows Department of Agriculture and Department of Environment, Economic Affairs and Tourism regulations. A new section of bylaws dealing specifically with managing biodiversity priorities in private game farms and game reserves must be developed during this process.

Establish formal communication systems between Makana Environmental Officer and the local operations of National and Provincial Government departments such that managing biodiversity in the Makana area becomes integrated and holistic. For example, farmers are supposed to apply to the Department of Agriculture to clear natural vegetation on their properties – adequate research and monitoring will allow Makana Local Government to place advocacy pressure on National and Provincial Government departments to ensure that this is instituted in accordance with local biodiversity priorities.

Workshops with farmers and private game reserve and game farm owners as relates to new by-laws and other regulations and educate them about rare and threatened species conservation.

SANPAD has conducted extensive research on indigenous medicinal plants in the area. Umthathi Training Project's planned Africulture Centre will be researching and putting into place conservation measures and education around sustainable harvesting of medicinal (and other indigenous) plants. This planned project is already in the Makana IDP.


Makana Conservation Areas
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26°0'0"E
26°10'0"E
26°20'0"E
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26°40'0"E
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33°10'0"S
33°20'0"S
33°30'0"S
Andries Vosloo
Kwandwe
Ecca
GRAHAMSTOWN
ALICEDALE
Thomas Baines
Blaauwkranz
Shamwari
Lalibela
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Makana Conservation Areas

Suggested Short Term Targets

1. Establish a post of Environmental Officer or Biodiversity Extension Officer.
This will increase capacity of the Parks and Recreation Department of Makana and enable MM to deal with biodiversity issues. The incumbent would work with the biodiversity consultant on new by-law development, further development and implementation of the biodiversity monitoring system and enforcement of bylaws and be the point person for co-ordinating work with National and Provincial government departments. In the opinion of Kevin Bates, his department is primarily responsible for municipal biodiversity management, but is currently understaffed.

2. Improve management of existing municipal protected areas – perhaps this could also be the responsibility of the Environment Officer post in the Parks and Recreation department. Start "friends of Makana reserves" group and organize school outings to municipal protected areas to raise their profile.

3. Prepare maps and establish a database of current land area and varying types of major agricultural land use in Makana area, including Provincial and Municipal conservation areas, private game reserves and game farms (distinguishing between those with and without extra-limitals). Natural vegetation still present on private land should be included also.

4. Compile maps of alien invasive plant infestations throughout Makana.

5. Ongoing and enhanced alien invasive plant control on municipal land. This must complement the existing programme in the Parks and Recreation Department clearing aliens from municipal land.

6. Co-ordination of the Millennium Tree Planting Group. The municipality has already assigned urban greening to the Millennium Tree Planting Group. Their progress should be guided by the municipality particularly as relates to peri-urban areas vulnerable to soil erosion.

Proposed monitoring programme

For the purposes of this report indicators will be chosen at the species level and landscape scale. The choice of indicators is based on recognised threats to biodiversity (Lloyd et al 2002, Rouget et al., 2003; Victor and Dold, 2003) and those that have been chosen for the Eastern Cape State of the Environment Report (CSIR, 2004) to allow comparisons with other regions in the Eastern Cape.

The following indicators will be used for monitoring biodiversity in the Municipality:

- extent of conserved areas in the municipality;
- extent and condition of wetlands;

- habitat transformation;
- distribution and abundance of selected alien plant species;
- urbanisation;
- extent of roads;
- viability of populations of endangered endemic species;
- extinct, threatened and endemic species per taxonomic group, and the occurrence of natural disturbances (e.g. fire).
- woody species encroachment
- soil erosion

Details on the proposed monitoring of each indicator are available in the “Makana LEAP Monitoring Framework” document available on the internet and with a hard copy in the Hill Street Public Library.