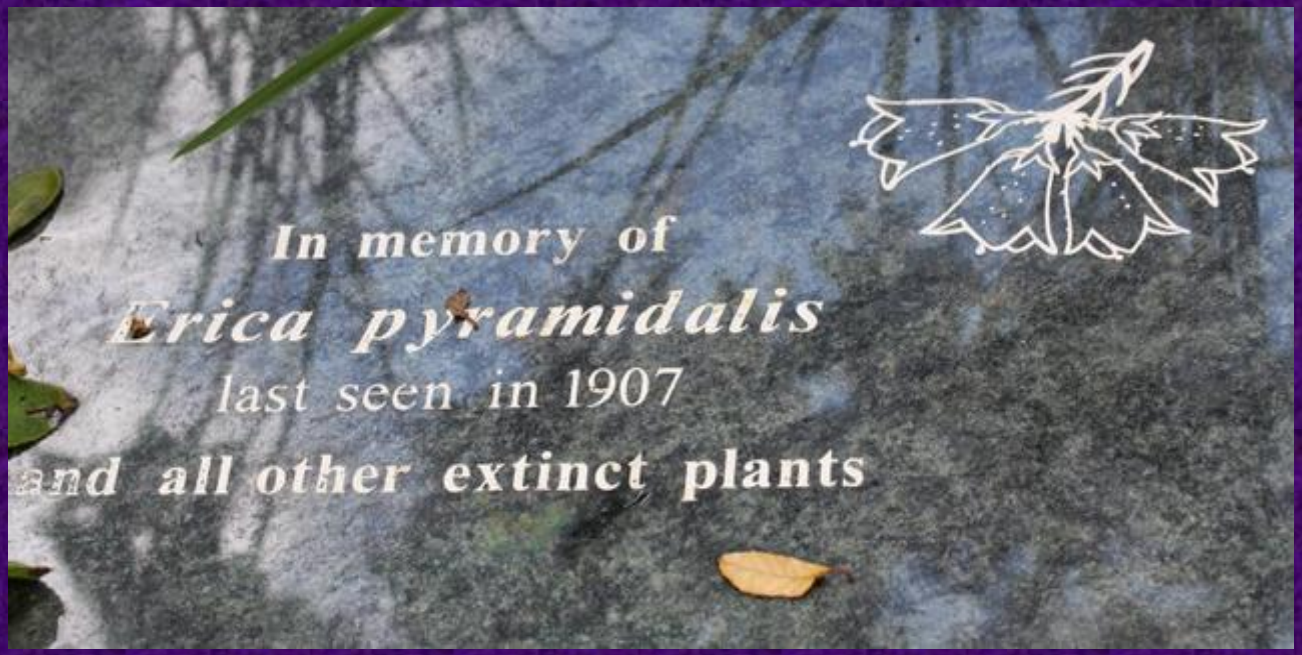
The Battle for Tokai

Only 6 countries worldwide have more threatened plant species than the City of Cape Town



Anthony Hitchcock
Nursery and Plant Collections and Threatened Species Conservation Manager Kirstenbosch National Botanical Gardens

The Rio Convention 1992

Rio Convention relates to the following three conventions, which are results of the Earth Summit held in Rio de Janeiro in 1992. These conventions are:

1. Convention on Climate Change
2. Convention on Biological Diversity (CBD)
3. Convention to Combat Desertification

In other words, its objective is to develop national strategies for the conservation and sustainable use of biological diversity

The Convention was opened for signature at the Earth Summit in Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993.

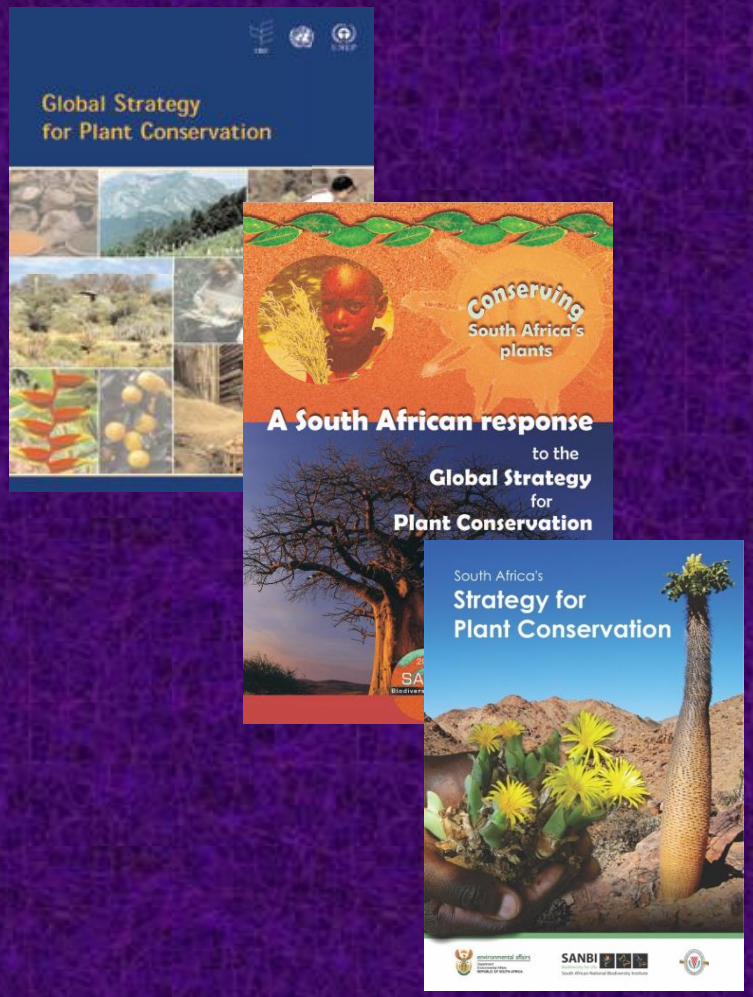
The Convention on Biological Diversity (CBD), is a multilateral treaty. The Convention has three main goals including: the conservation of biological diversity (or biodiversity); the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources.

National Biodiversity Strategies and Action Plans (NBSAP)

- The Convention requires countries to prepare a national biodiversity strategy (or equivalent instrument) and to ensure that this strategy is mainstreamed into the planning and activities of all those sectors whose activities can have an impact (positive and negative) on biodiversity.
- South Africa is a signatory to the Rio Convention

Global Strategy for Plant Conservation

- SANBI is designated focal point for the plant conservation strategy
- South Africa developed a response to the GSPC in 2006
- A strategy that directed focus to gap areas was needed – a partnership between the Botanical Society and SANBI provided the foundation to work with all botanical conservation stakeholders to produce this strategy



South Africa Context

- Total flora 20 456 plant taxa ca 13 000 are endemic, 65%
- 6% of the world's plants and world's richest temperate flora.
- Have a government institute responsible for biodiversity Conservation –SANBI part of Department of Environment Affairs.
- 100 year old NGO dedicated to plant conservation the Botanical Society.

Succulent Karoo ~ **2439** endemics

Cape Floral Region (Fynbos)
6210 endemics

Maputo-Pondoland
~ **1900** Endemics

Development process of South African Strategy for Plant Conservation

1. Workshop March 2013

2. Smaller working group meetings to develop action plans, with a champion identified to take each target forward (2013-2014)

3. Integration of strategy into the update of South Africa's National Biodiversity Action Plan (2015)

4. Endorsed by the minister of Environmental Affairs (2015)

5. Review of progress every 2 years 2016,2018,2020)

- Strategy lead by SANBI, DEA and the Botanical Society of South Africa.
- All conservation agencies, provincial and national parks involved in the strategy development. 4 Government departments.
- Academic institutions and NGOs play a large role

SANBI
Biodiversity for Life
South African National Biodiversity Institute

Implementation process of National Strategy for Plant Conservation

- South Africa's targets are relevant to the Megadiverse country context.
- Achievable outcomes and activities have been identified, with specific time frames and clearly identified stakeholders.
- Outcomes aligns with National Biodiversity Strategies and Action Plans (NBSAP)

Each Target Includes

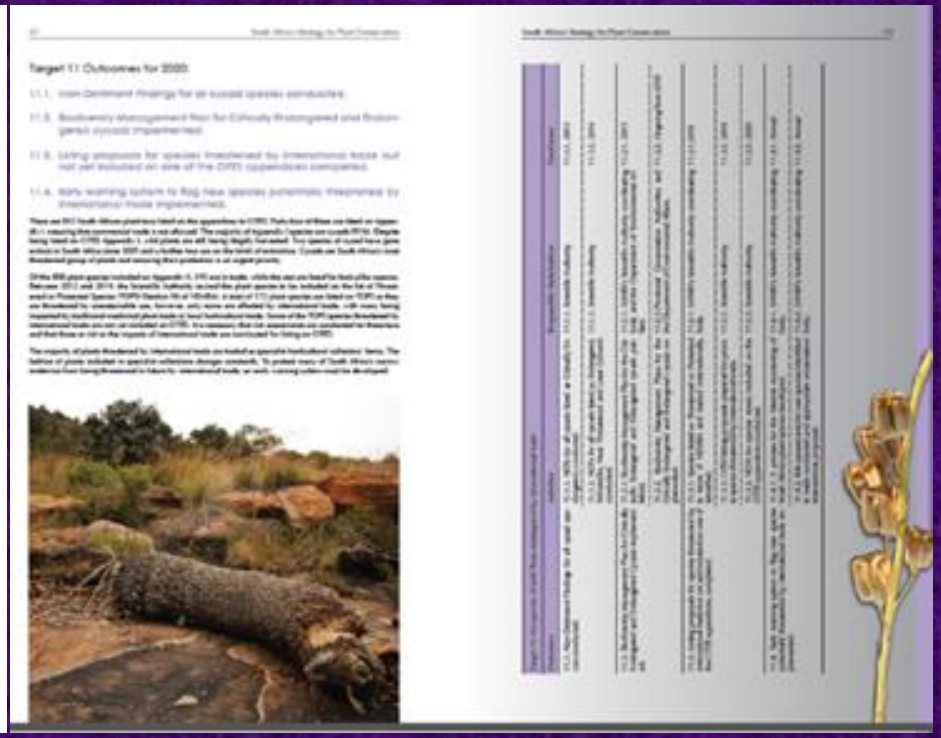
- Background on the work done to date
- Prioritise areas of work needed
- 2 – 3 major outcomes identified for 2020
- Work plan with actions, timeframes, responsible stakeholders
- Strategy must be achievable


Objective III:

Plant diversity is used in a sustainable and equitable manner

Target 11: No species of wild flora endangered by international trade

Background


Target 11 Outcomes for 2020:

11.1. Non-Detriment Findings for all traded species exhaustively

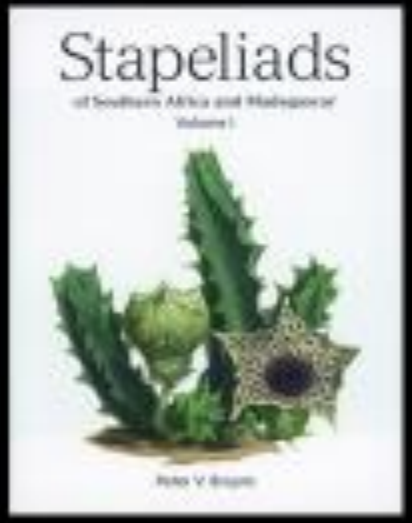
11.2. Biodiversity Management Plan for Critically Endangered and Endangered species implemented

11.3. Listing proposals for species threatened by international trade put not yet included on one of the CITES appendices completed.

11.4. Early warning system to flag new species potentially threatened by international trade implemented.

Objective 1: Plant diversity is well understood, documented and recognized

Target 1: An online Flora of all known plants

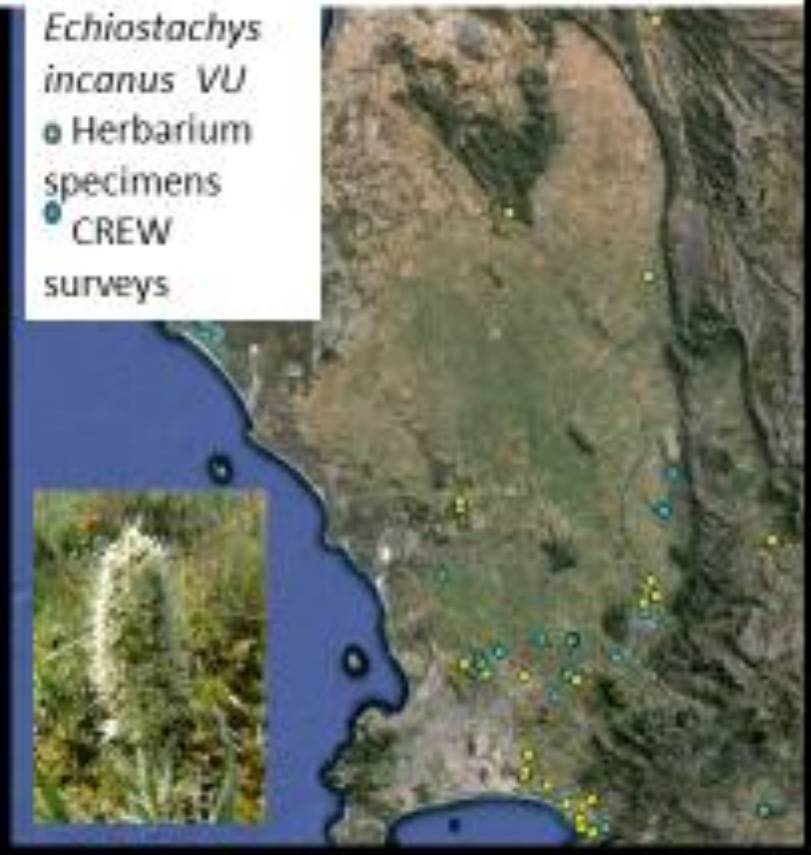


-64% of South Africa's Flora has been revised since 1970
- SANBI has an eFlora project that is leading on this target and contributing to the world flora online.

e-Flora SA

Target 2: An up to date assessment of the conservation status of all South African species

Echiostachys incanus VU
- Herbarium specimens
- CREW surveys



www.redlist.sanbi.org

Custodians of Rare and Endangered Wildflowers

Target 3. Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared

3.1. Information on plant occurrences from herbaria, provincial conservation agencies and atlasing project centralised.

- 95% of South Africa's plant specimens are based in 6 herbaria – only the national herbarium PRE is fully digitised.
- Target - 50% of South Africa big 6 herbaria digitised by 2020.

Target 3. Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared

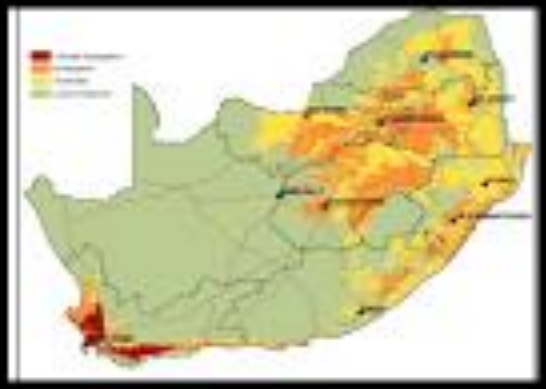
3.3. Under-sampled areas targets for surveys.

- Karoo region under sampled 3% of plant specimens from 30% of the country.

Karoo BioGaps Project

Objective II: Plant diversity is urgently and effectively conserved (ecosystem level)

Target 4: Biodiversity targets for terrestrial eco-systems secured through effective management



Target 5: Important areas for plant diversity identified and incorporated into conservation processes

Target 6: Initiatives in place to ensure the sustainable management of production lands, consistent with the conservation of plant diversity

Target 5: Important areas for plant diversity identified and incorporated into conservation processes.

1. Mapping and managing critical habitat for highly range-restricted species EOO < 10 km^2

Last remaining habitat of *Ixia versicolor* in Gordon's Bay

Objective II: Plant diversity is urgently and effectively conserved (species level)

Target 7: At least 75% of known threatened plant species conserved in situ

Target 8: At least 60% of threatened plants in ex situ collections, preferably in the country of origin, and available for recovery (restoration) programmes, with 2% in active reintroduction programmes

Target 9: The genetic diversity of crops including their wild relatives and indigenous edible plant species conserved

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

School learners exposed to importance of plants by linking to cultural uses and the school curricula.

Training at Universities on threatened plant ecology and monitoring.

Field camps for universities of technologies in situ learning sponsored by BotSoc

Target 16: Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this strategy.

16.2 Working groups for each target ensuring that specified outputs are being achieved

Tokai Restoration Trail - SANPARKS & SANBI

Rondevlei Restoration - City of Cape Town & Kirstenbosch

South African NATIONAL PARKS

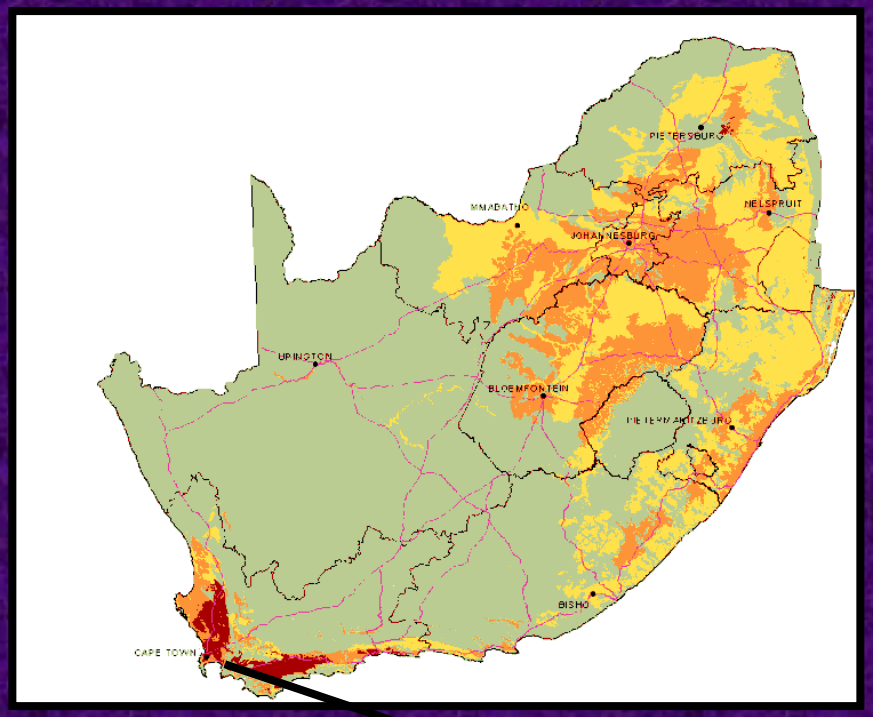
SANBI Biodiversity for Life

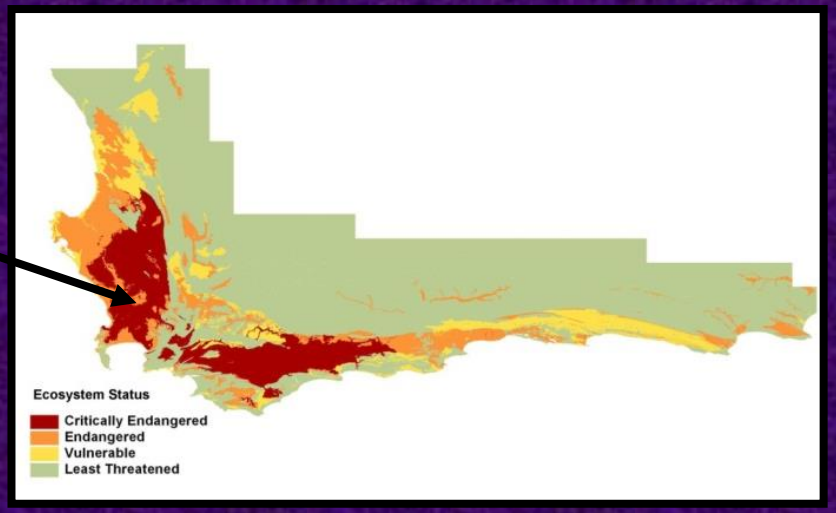
CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Why is Cape Sand Plain Fynbos at Tokai a Conservation Priority?

- National conservation
- Local conservation in Cape Town
- Importance of Tokai
- Conflicting views
- Our last chance

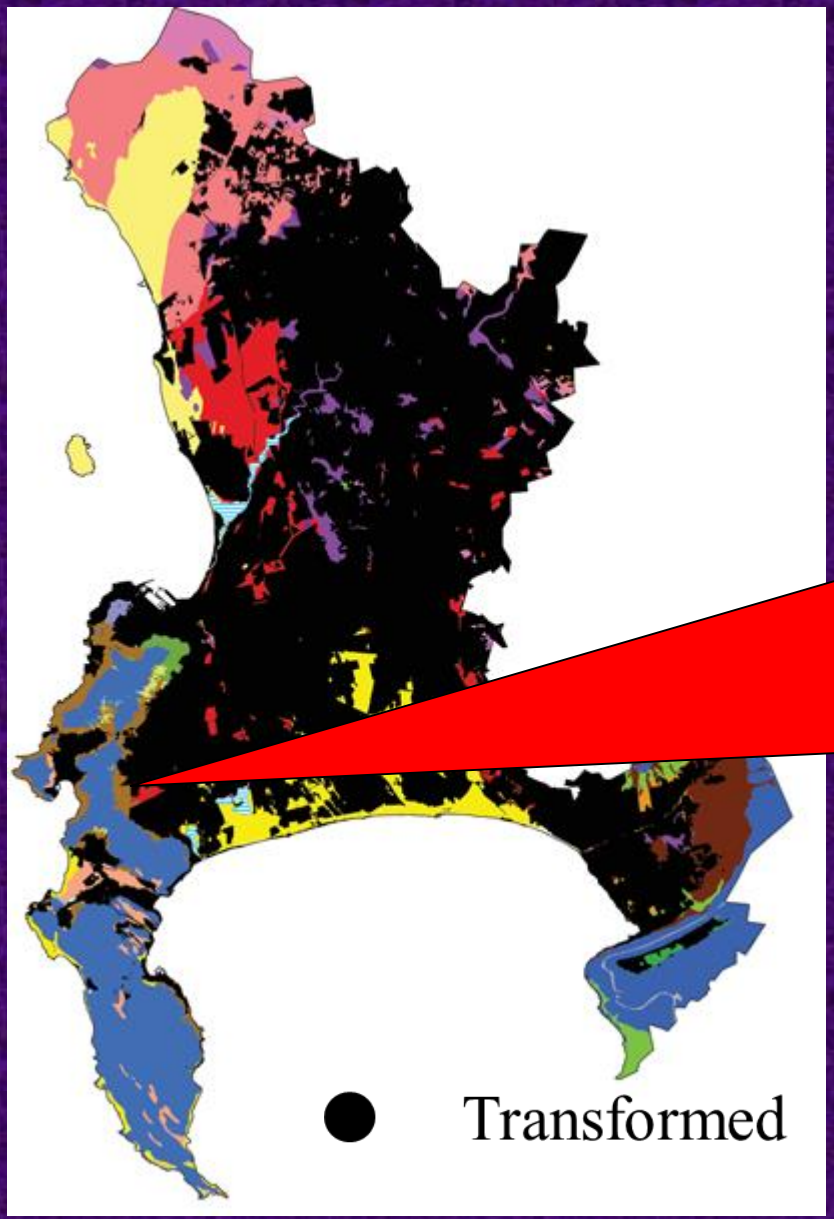
Threatened Ecosystems





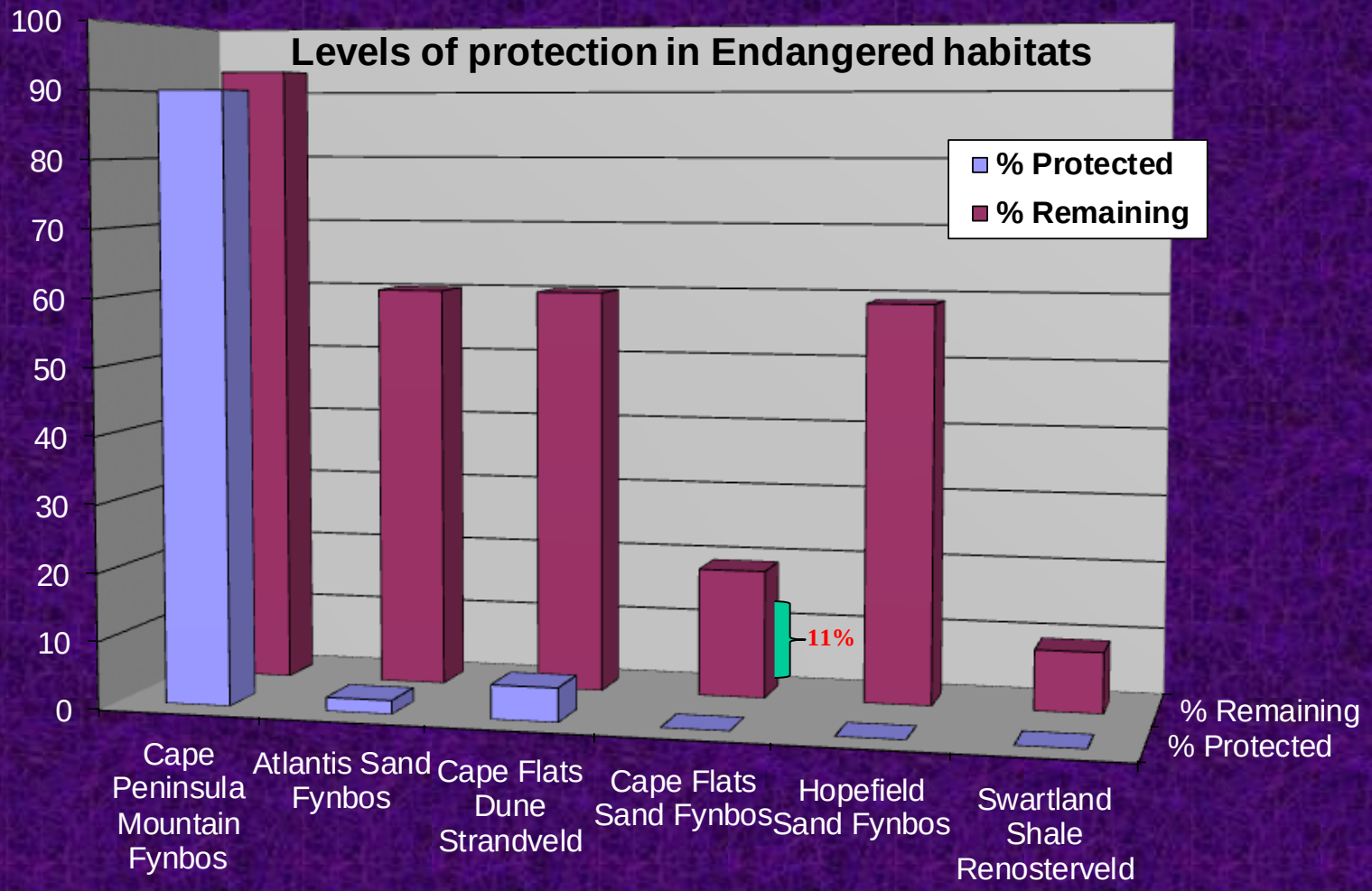
Map showing ecosystem status (Rouget et al, 2004)
For the Cape Floristic Region, South Africa

Transformation Status of Cape Town's 19 veld types caused by urbanisation, agriculture and invasive alien plants



Tokai would have been allocated for human settlement had not its conservation importance been of the highest level

Protected Vegetation Types in 2004



Minimum National target for protecting CFSF vegetation type is 30%

Community support?

If the people of Cape Town can live harmoniously together despite disparities of race, colour and creed, we believe plants can too.

1 We call upon Table Mountain National Park to change their policy and stop the removal of shade trees in Tokai and Cecilia, and to replant large shade trees.

2 Failing a satisfactory response from TMNP, we call upon the City of Cape Town to take over the management of Tokai and Cecilia in the interests of the citizens of Cape Town. We believe the City will manage these areas in accordance with the democratic wishes of the majority of the citizens who use the mountain.

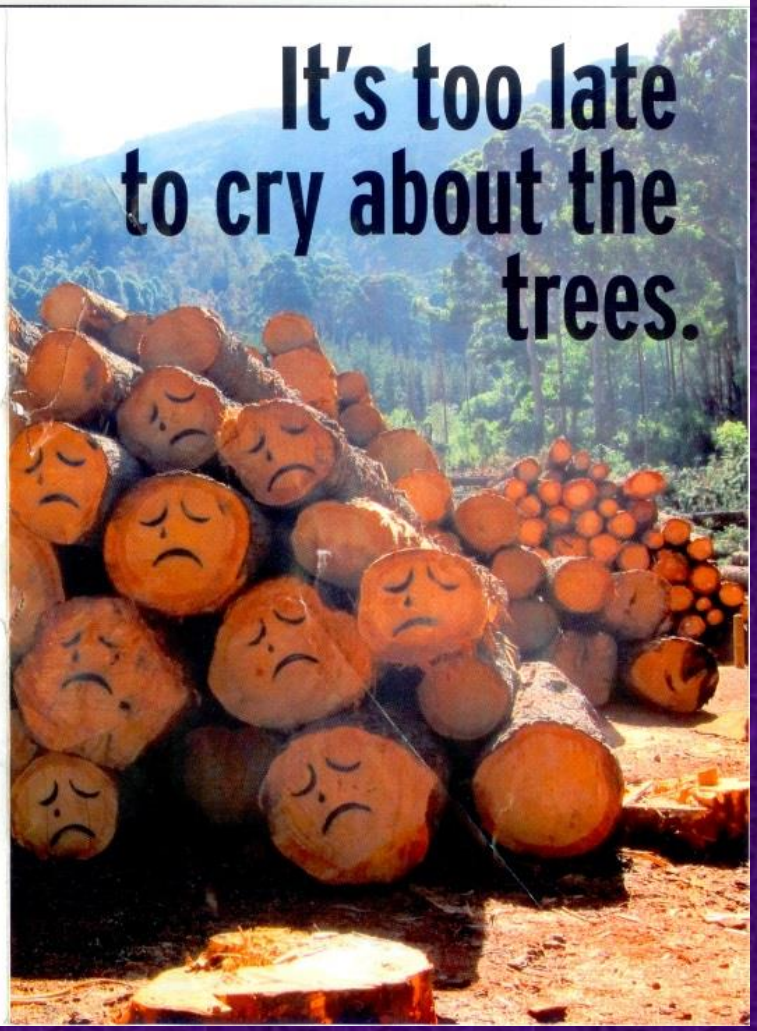
If you loved the shade of Tokai and Cecilia and want shade trees to be replanted, let your voice be heard – send an email to trees@goforit.co.za

A copy of your email will automatically be forwarded to the Management of Table Mountain National Park.

SHOUT FOR SHADE

A PUBLIC APPEAL TO REPLANT SHADE TREES ON TABLE MOUNTAIN

Sponsored by Associated Printing Group



Proposed permanent shaded parkscapes on priority conservation land

PARKSCAPE - Urban Parks for All

Seeking to create an informal, shaded and open, biodiverse and, above all safe, urban park that meets the needs of existing and new users of the Lower Tokai Park area

Parkscape

- Ramping up public opinion
- Concerns on safety
- Issue of fires
- Conflicting conservation views
- The Constitutional rights of ‘South Africans’ versus conservation as per South Africa’s Strategy for Plant Conservation
- Legal action

…an informal, shaded, above all safe, that meets the needs of existing and new users of the Lower Tokai Park area

The increasing incidence of crime and fire in the buffer zones of Table Mountain National Park pose a serious threat to the urban edge

Safety issues in TMNP are not just crime related. Fire is also a key cause for concern in the buffer zones.

Parkscape

“What it really comes down to is administrative justice”, Parkscape spokesperson Nicky Greaves (Schmidt) told Pretoria FM last week. “In 2006 we negotiated a document called the Tokai Cecilia Management Framework with SANParks and with the City of Cape Town – and that allowed for areas of shaded recreation as well as biodiversity.”

Parkscape Meeting Alphen Community Hall 2016
Prof. Eugene Moll statement

- Little patch of Sand Plain Fynbos at Tokai is very special, but
- For SPF to survive it has to have low nutrients
- There is no way there is low nutrients in that system
- Studies done by Willie Stock at Pella show that aerial pollution from the City is adding nutrients to soils
- Should read study 1958 done in Adelaide, Australia where adding nutrients killed heathland
- *Rondebosch Common is proof of this; 40 years ago it was a heathland, but nutrients have destroyed the fynbos and replaced it with alien grasses*
- I don't have the soil nutrient data for now or 100 years ago, but I state my life on it that there are higher nutrients in the soils
- I differ from my botanical colleagues in that I believe people have a place on the planet
- We not going to get the fynbos back, we can't turn back the clock
- In the end, I have grandchildren??

Rondebosch Common 1945

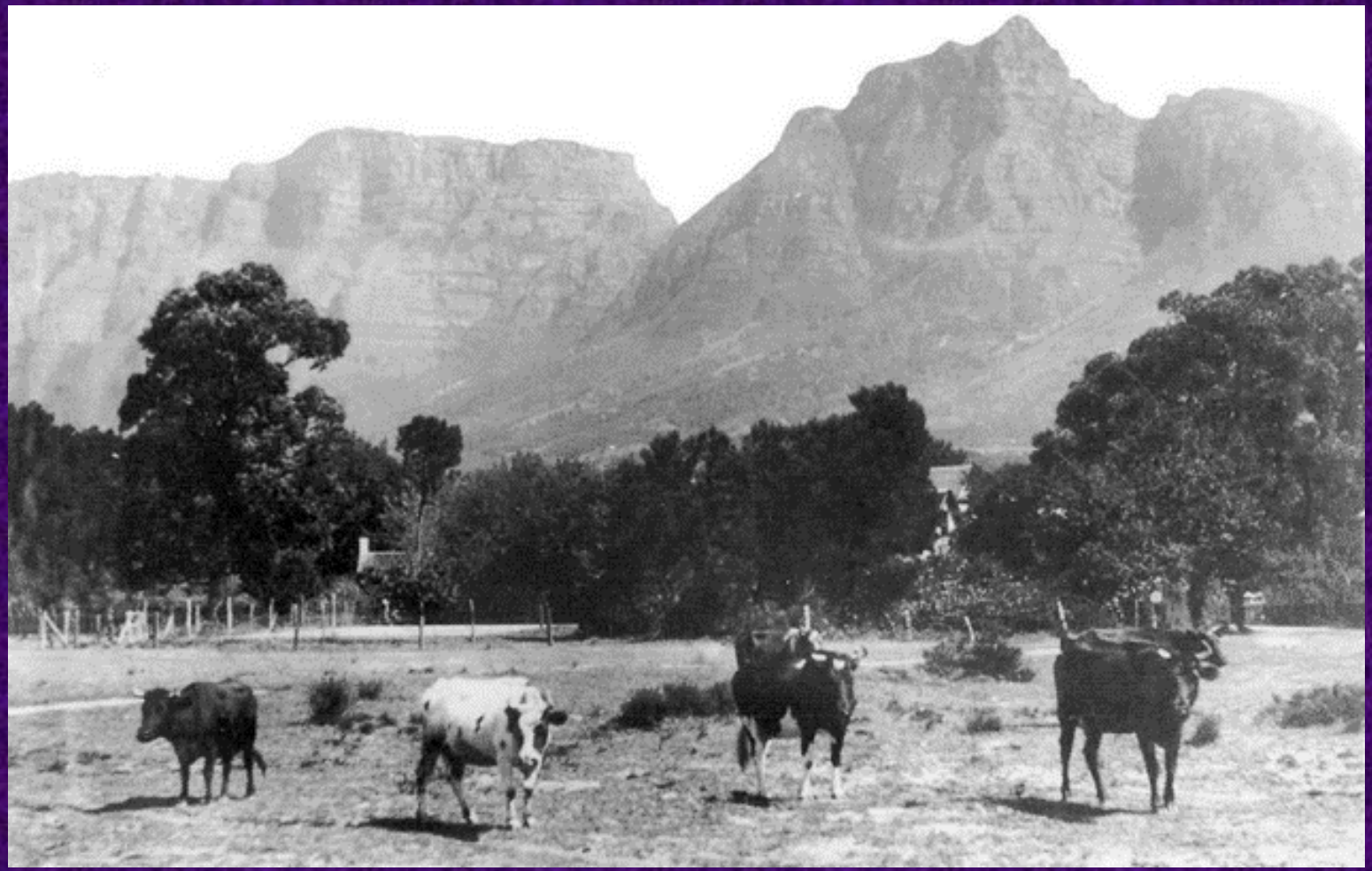
Rugby on the Common

Bishops and Rondebosch schools played their first rugby matches on the common

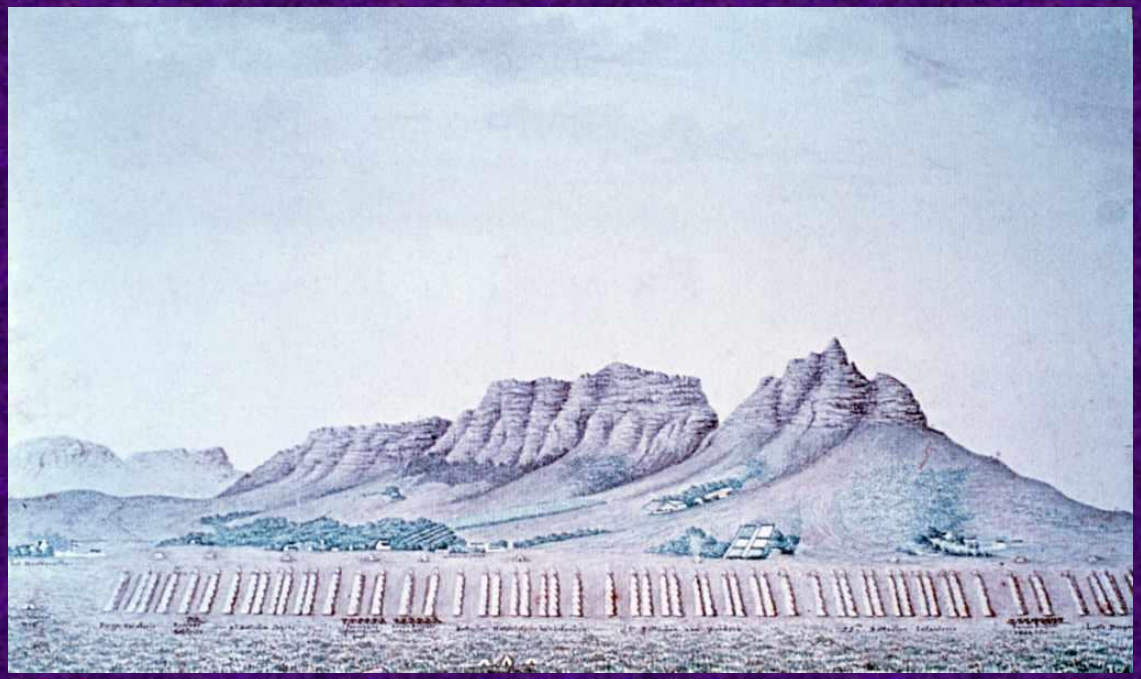
The Villagers Football Club used the common

Anglican Church ownership 1854 –1909

- St Paul's Church had exclusive grazing rights on the Common and obtained rent from other farmers who wished to graze their cattle on the land
- Two dairy farms, which were still in existence east of today's Common in the early part of 1900, grazed their cattle on the Common



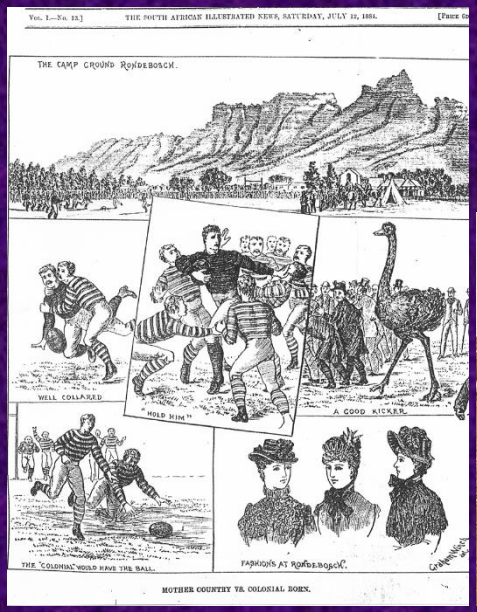
Military Camps on the Common – Campground Road



- 1795–1803 - first British occupation British troops camped in tents on the common
- In 1804 Common was used as a campsite for Batavian troops
- 1807 – 1814 camp Second British occupation
- 1899–1902 Boer War - Hospital on Common
- 1914-18 military camp: 'incalculable damage was done to the turf'

- WW2 - military used search light/ troop manoeuvres /tanks over the common.

Common used for sport: golf, cricket, rugby, athletics….



- The Cape Golf Club had its home on the Common from 1891 to 1937
- The 4th green was a municipal rubbish dump
- Horses and carts crossed the common throughout the day
- The first recorded cricket match in Cape Town took place on Rondebosch Common 1808
- Cricket played on common by military, Rondebosch and Bishops boys
- Athletics by Celtic Harriers and local schools
- Soccer played by Rondebosch school and clubs

‘The botanists and conservationists were all given the opportunity to speak, but it was apparent that they must also be challenged’, Parkscape website July 2016

Parkscape Environmental Consultant
Prof. Eugene Moll

‘We need to find African solutions to the problems and not foist Western conservation ideals onto local people’

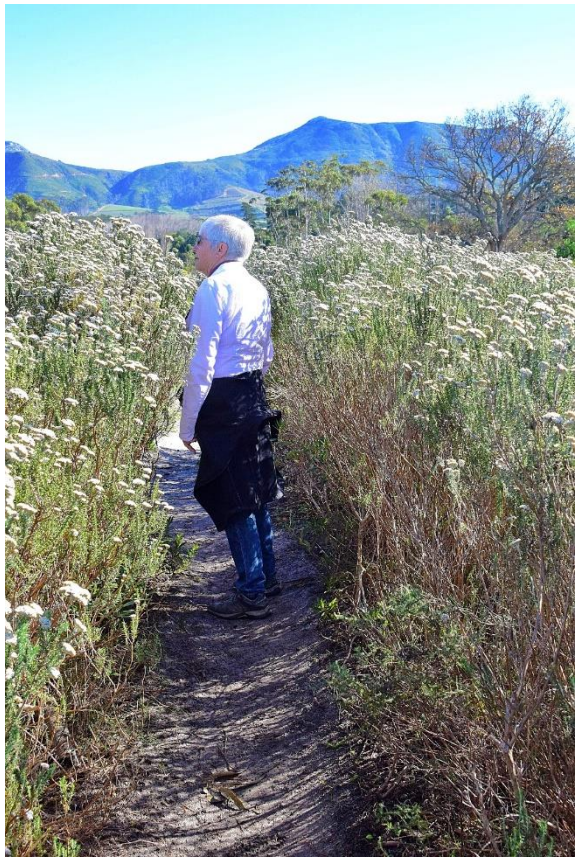
Yes I agree.

An African solution would be conserving the local African, Sand Plain Fynbos rather than planting a monoculture of alien pine trees

Some key concerns from Parkscape

- TMNP is an urban park requiring a very different and people inclusive strategy.
- Across the Park there are issues regarding management – i.e. safety, access, fees, fires, failure to engage with the public and a lack of transparency.
- In Lower Tokai the tragic murder of Franziska Blöchliger has made it apparent how much of a risk the dense fynbos poses – particularly on the urban edge.

HERE'S WHERE THE PROBLEM LIES



Tokai – Cecilia Management Framework

- Management of Tokai-Cecilia plantation areas handed over to SANParks in 2005 to manage by Minister of Forestry and Water affairs on condition:

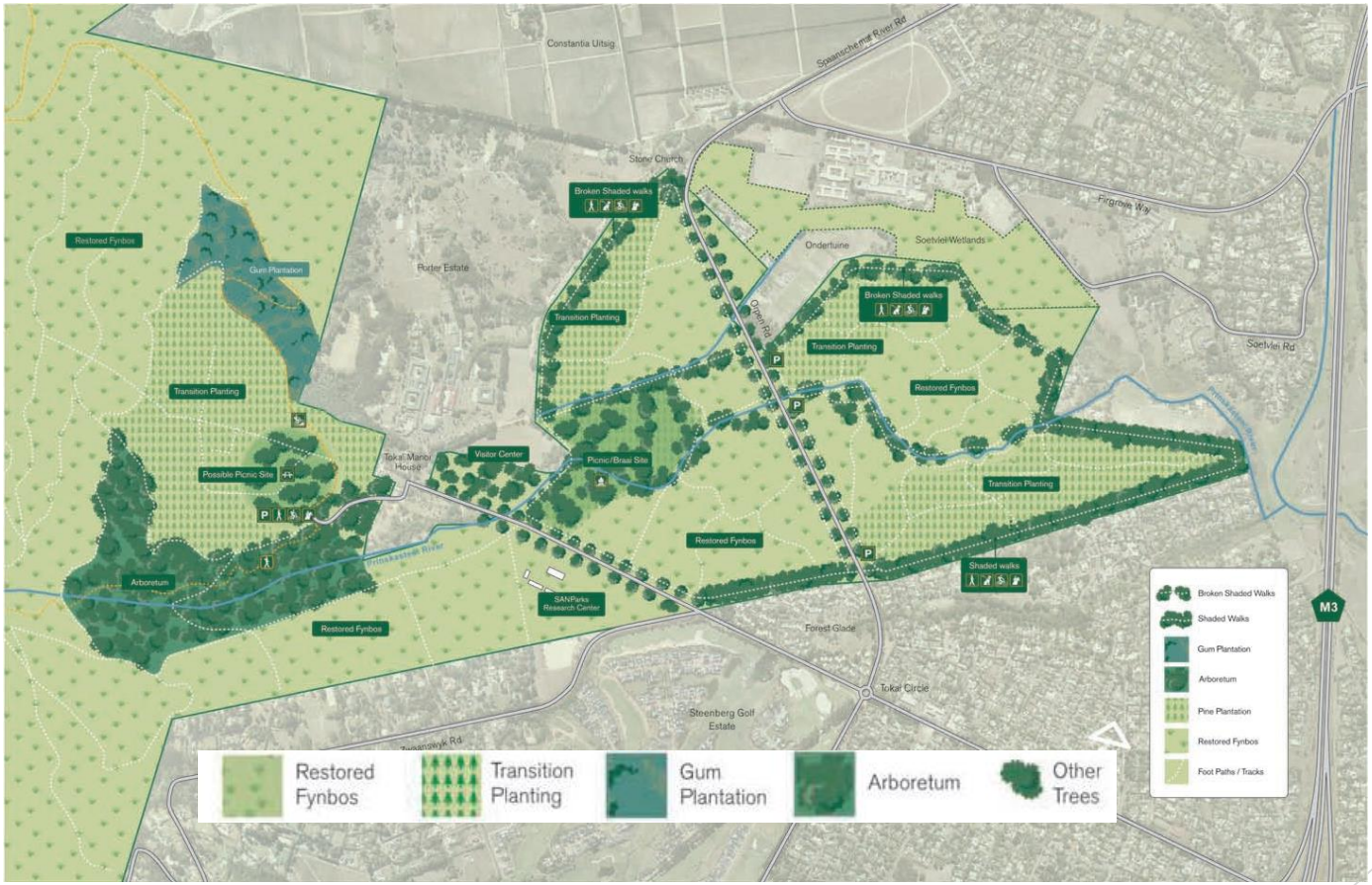
1. planned rehabilitation of the natural environment and protection of its biodiversity and
2. manage the land for conservation, ecotourism and recreation
3. MTO was given lease to harvest the plantation

- SANParks initiated public process in 2006 to prepare vision for the future and the "Tokai Cecilia Management Framework" report came out in March 2009
- Consultation went further when Mayor Zilla called a round table discussion of experts and interested parties to consider the framework.
- Facilitated by Prof Richard Fuggle (UCT) and framework was endorsed
- Some stakeholders were still not satisfied and were accommodated in a series of discussions with Parks, DEA&T and Water Affairs and Forestry
- SANParks were faced with seeking a compromise between diametrically opposed points of view
- Shaded areas versus restoration of Critically Endangered Fynbos

Concept was developed of 'transitional planting areas' where non invasive exotic trees would be planted in cyclical transition with fynbos

Tokai-Cecilia Management Framework

HOW IT SHOULD LOOK…



Transition planting as the result of public pressure

Tokai-Cecilia Management Framework

Transition Areas envisaged by the Tokai-Cecilia Management Framework see a 30-year rotation of felling, fire, fynbos rejuvenation, exotic-tree planting and shaded areas.

Not good ecosystem conservation

‘How safe will it be amongst the pines?’

Cost of plantation management?

Pines trees on the urban edge are a fire hazard
Tokai 2015

Harvesting pine will damage the ecosystem

The *concerned flora conservation sector* in response to 'Shout for Shade/Parkscape' proposal to provide permanent shaded parkscapes on priority conservation land

- Cape Flats Sand Fynbos is Critically Endangered vegetation type
- National Park status is the highest conservation status for any protected area
- It was historically the most widespread vegetation type in the City
- Only 11% is left and 2% of this vegetation is conserved
- Tokai is the largest remaining fragment of this vegetation type
- Tokai is the only CSPF linked to the mountain by a corridor which can support ecological functioning between the two
- The proposed 22 ha of permanently shaded landscapes is at the expense of threatened fynbos restoration
- The plant list for Tokai – Bergvliet area approaches 800 species
- Tokai Park has over 320 recorded plant species and counting…

Parkscape Campaign in favour of planting shaded parkscapes

- Fynbos cannot be restored
- Planting trees will make it safer
- Fynbos causes crime

Misinformation:

- Over 320 species have appeared at Tokai after pines removed
- People have been attached at Tokai and not only in Fynbos

Letter of Support for Fynbos Conservation from Prof. Peter Linder, an 'A' Grade Scientist, ex UCT Botany & University of Zurich

University of Zurich[UZH]

Institute of Systematic and Evolutionary Botany

University of Zurich
ISEB
Zollikerstrasse 107
CH-8008 Zurich
Phone +41 44 634 84 11
Fax +41 44 634 84 03
www.systbot.uzh.ch

UZH, ISEB, Zollikerstrasse 107, CH-8008 Zurich

Hans Peter Linder
Phone +41 44 634 8410
Fax +41 44 6348403
Peter.linder@systbot.uzh.ch

Zurich, 6 November 2016

Tokai

Dear Sir / Madam

I write in support of maximizing the conservation of indigenous vegetation and flora in the Tokai area. I have not been involved in the detailed discussions over the past years, or the politics, and so comment entirely from a botanical point of view.

We are obliged, and should, conserve the Cape flora, because (a) it is one of our heritages, (b) it attracts large numbers of tourists, is part of the "package" of wine, scenery and sunshine, (c) as a country we signed the Rio Convention, which places the responsibility to conserve our diversity with us.

The vegetation is the disputed area is classified as "Cape Flats Sand Fynbos". This used to be widespread around the western base of Table Mountain, with a few outliers further out. It has been almost completely eradicated by urbanization. It has a rich flora, probably close to 1000 species, of which 108 species are Red Listed, and 6 species are extinct in the wild. This is an astonishingly high loss rate, possibly a sad global record. It is evident from the attached map that the situation is worse than appears, as many of the remaining patches are tiny, often enclosed in urban areas, and so difficult to protect.

The Tokai site is obviously central to any attempt to conserve this vegetation and its flora. It backs onto a huge conservation area, there is green belt area in the vicinity, and an intensive management from both public and officialdom is possible. Due to its public accessibility and current popularity as an open-air recreational area, it is also perfectly situated to showcase this vegetation and flora, and be a centre for continuing education and information.

Such a development would also facility public use, by (a) removing plantations which could be used to hide illegal activities, (b) removing plantations which are the source of very dangerous, hot fires (eg 2000 and 2015), as compared to the cooler and much less dangerous fynbos fires, (c) provide wonderful sunny walking areas, under the blue skies and famous African sun, and (d) be integrated into the shady picnic area and cool walking routes of the Arboretum.

Replanting this area with alien trees is, from a botanical, conservation and ecological point of view, incomprehensible. Consequently we, the undersigned, strongly support the continuation of the fynbos development.

Yrs

H. Peter Linder (Professor of Botany, University of Zurich; Honorary Professor, University of Cape Town)

Page 1/1

- 'I write in support of maximizing the conservation of indigenous vegetation and flora in the Tokai area.'
- 'Tokai is central to any attempt to conserve this vegetation'
- 'Tokai perfectly situated to showcase this vegetation, be a centre for continuing education'
- 'Plantations are a source of very dangerous, hot fires as compared with cooler and much less dangerous fynbos fires'
- 'Replanting this area with alien trees is, from a botanical, conservation and ecological point of view, incomprehensible'

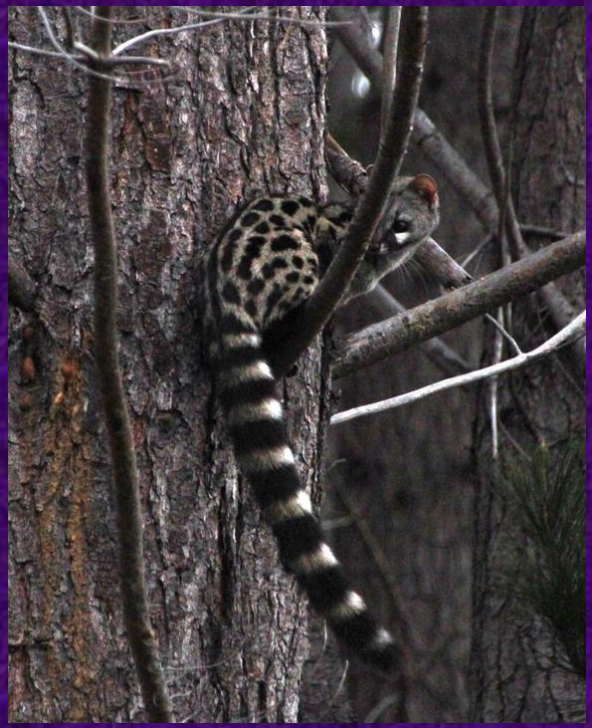
Restoring threatened species for our grandchildren

Leucadendron levisanus male

Serruria trilopha

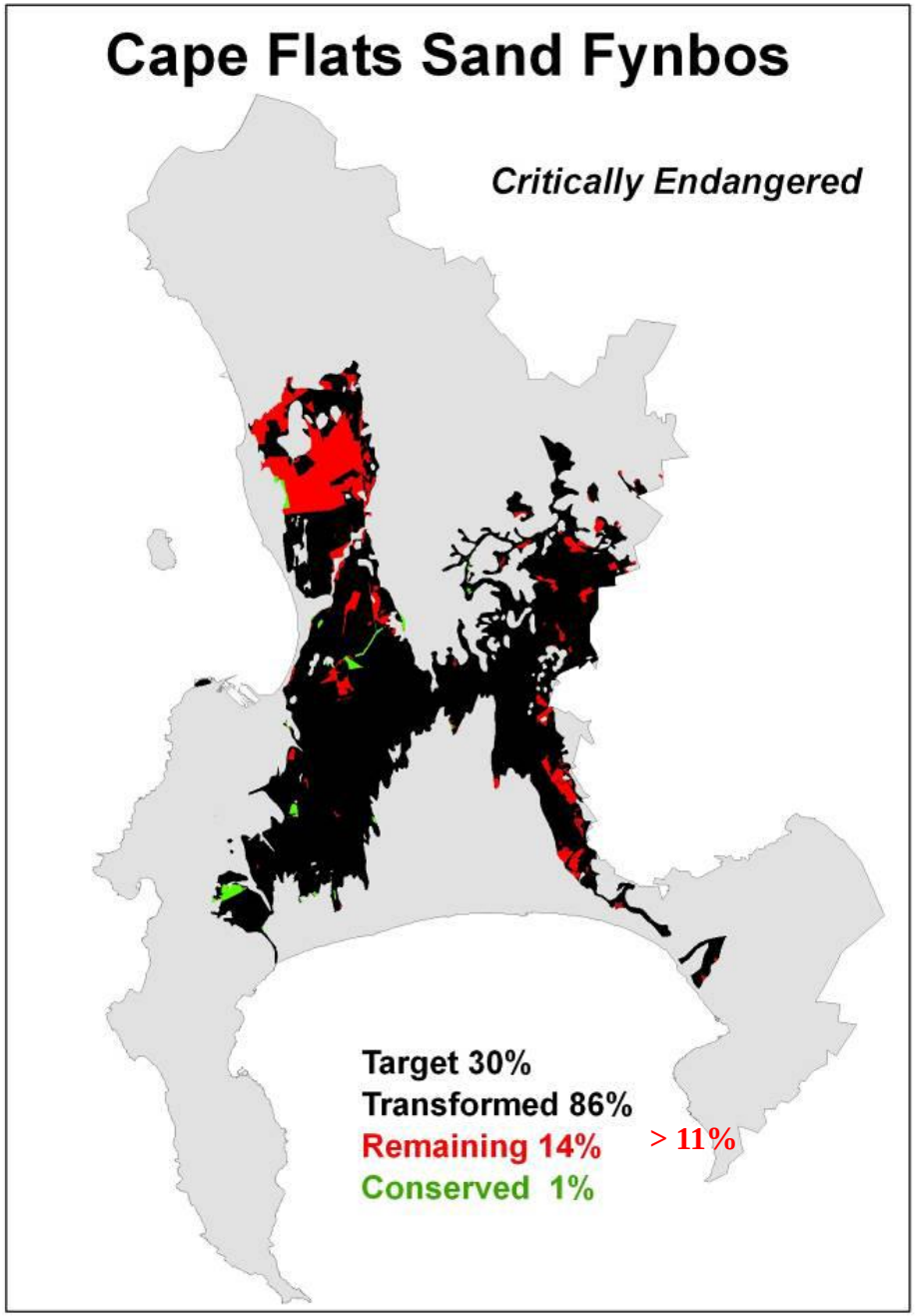
Princess Kasteel - Tokai

Biodiversity at Tokai



Educating our children about their floral heritage at Tokai

If there is any heritage left?



What do we do?

Cape Town is the Biodiversity disaster capital of the world

13 Plant species are extinct
319 Plants are threatened with extinction
19 vertebrates are threatened with extinction

Should we listen to Parkscape & Prof Moll and plant pine
or
Prof Linder and the conservation 'talibans' and try to conserve what remains of our floral heritage?

My name is *Pinus radiata* and I come from North America.
I invade fynbos, forest clearings, grasslands, usually on moist mountain slopes. I compete with and replace indigenous species. I reduce water runoff and stream flow from mountain catchments, reduce grazing, and pose a fire hazard which threatens the survival of indigenous animal and plant species and people

My name is *Erica verticillata* and I come from Cape Town. My home was destroyed by urban development. I almost became extinct, but was saved by Botanical gardens and horticulturists. I have a new home at Tokai which is helping me survive and be enjoyed by visitors to the Park. I provide nectar food for sunbirds and many other animals. Please let me live at Tokai. It is my last hope!

SANBI
Biodiversity for Life
South African National Biodiversity Institute

Thank You For Your Attention

Acknowledgements:
D. Raimondo
Prof. P. Linder
Dr. P. Holmes
Joanne Eastman