

WESTERN CAPE

2022

STATE OF CONSERVATION
REPORT



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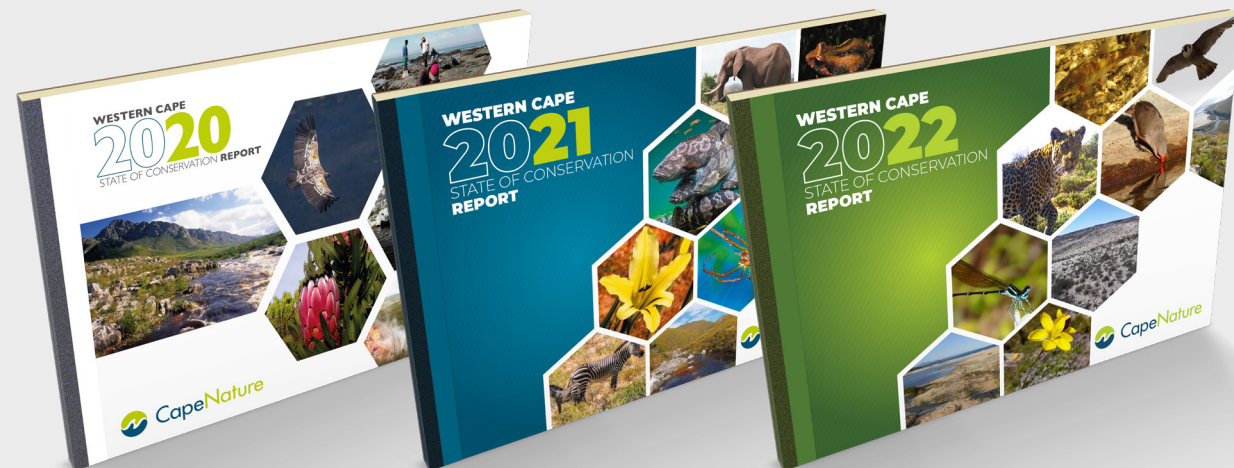
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Data & Information:

- CapeNature Field Rangers
- Conservation Managers & Officers
- Landscape Conservation Intelligence Teams
- Biodiversity Capabilities
- Photo Credit: Peregrine Falcon in flight, Kevin Shaw

Suggested Citation:

- CapeNature. 2023. Biodiversity Capabilities: 2022 Western Cape State of Conservation Report. CapeNature.





FOREWORD



This is the third State of Conservation Report to inform the periodic Western Cape State of Biodiversity Report, as mandated by the newly assented Western Cape Biodiversity Act, aimed at providing the status of indicators for assessing the global state of biodiversity.

In this regard CapeNature provides annual updates to the conservation status of species and ecosystems, highlighting outcomes in response to the global biodiversity concerns in the context of its mandate.

Highlights in the report include progress made in combatting biodiversity crime, noting that during the reporting period, 89 criminal dockets were opened and 71 fines were issued. This speaks to the dedication of our staff and excellent collaborative partnerships which include



SAPS, landowners and officials at ports of entry. Fire, while an integral component in fynbos ecological processes, is also one of the ongoing threats to biodiversity and the trend since 2016 is of a decrease in the number of hectares burnt which is indicative of a good response rate to fires. It was another good year for protected area expansion in the Western Cape and CapeNature once again exceeded targets for hectares declared in terms of the National Environmental Management: Protected Areas Act as well as the number of new stewardship sites, which demonstrates CapeNature's significant contribution to protected area expansion in South Africa.

From a global perspective, several conferences of parties that are signatories to international conventions related to biodiversity were convened during 2022. Of direct bearing



on national and provincial conservation targets was the 15th United Nations Biodiversity Conference (COP15) which concluded in Montreal, in December 2022 with a landmark agreement to guide global action on nature through to 2030. CapeNature is proud to contribute to the South African perspective where the status of biodiversity in the Western Cape impacts the outcomes of the national indicator framework.

Dr Razeena Omar
CEO



Legend

CapeNature

- ☆ Head office
- ☆ Regional office
- Reserve office
- ▲ Satellite office

- CapeNature Protected Areas
- CapeNature Marine Protected Areas
- CapeNature RAMSAR Sites
- CapeNature Estuaries

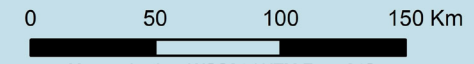
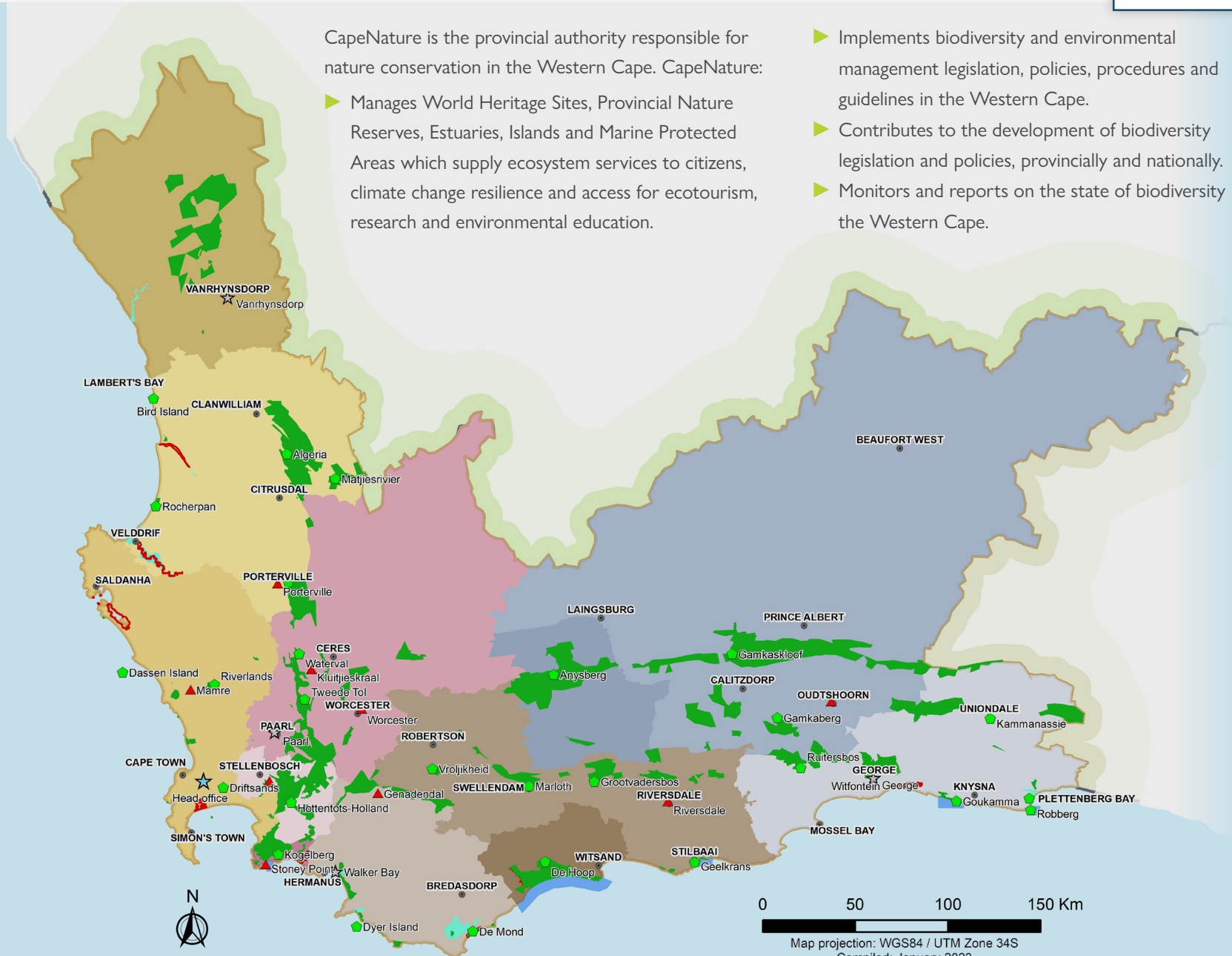
CapeNature Landscapes

- WEST
 - Matzikama
 - Peninsula
 - Ceder-Berg
- CENTRAL
 - Kogelberg
 - Witzenberg
 - Boland
- SOUTH
 - De Hoop
 - Langeberg
 - Overberg
- EAST
 - Anysberg
 - Garden Route
 - Karoo

CapeNature is the provincial authority responsible for nature conservation in the Western Cape. CapeNature:

- ▶ Manages World Heritage Sites, Provincial Nature Reserves, Estuaries, Islands and Marine Protected Areas which supply ecosystem services to citizens, climate change resilience and access for ecotourism, research and environmental education.

- ▶ Implements biodiversity and environmental management legislation, policies, procedures and guidelines in the Western Cape.
- ▶ Contributes to the development of biodiversity legislation and policies, provincially and nationally.
- ▶ Monitors and reports on the state of biodiversity in the Western Cape.



Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023

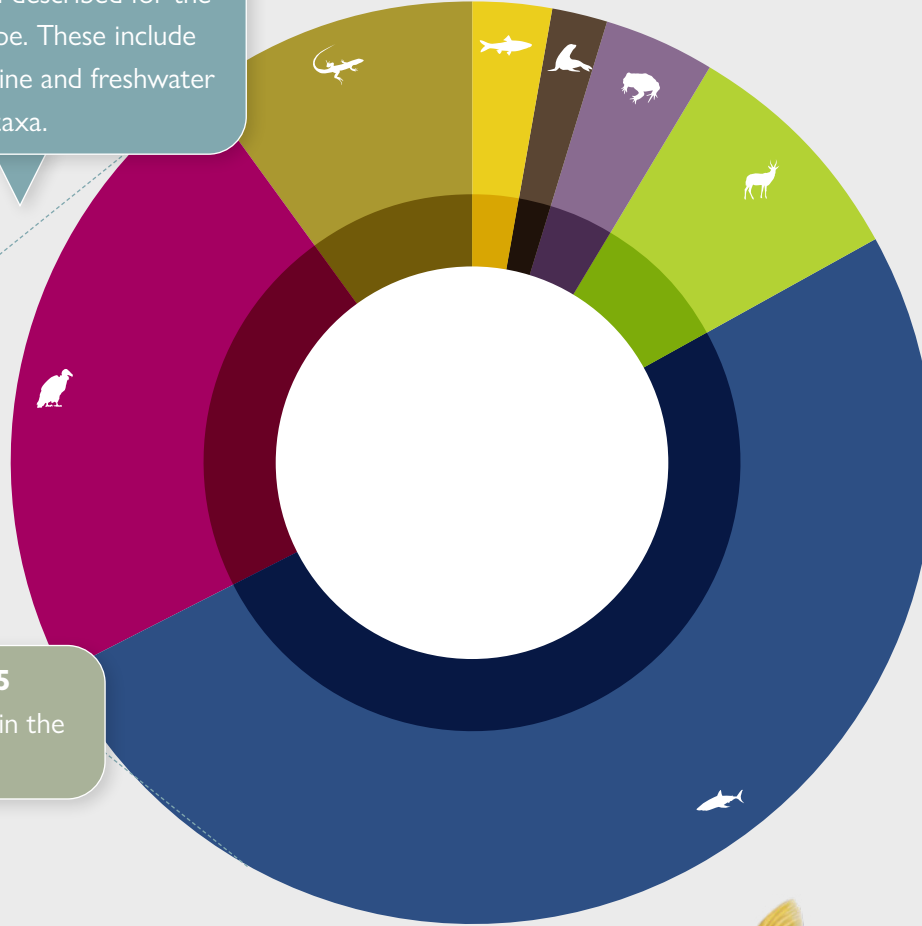
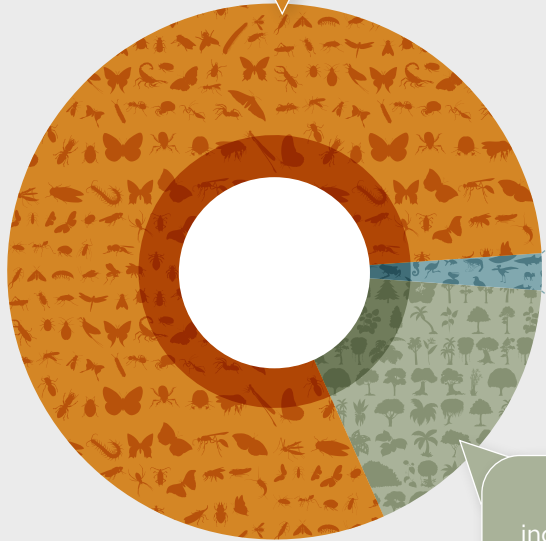


THE BIODIVERSITY OF THE WESTERN CAPE

Invertebrate fauna of the Western Cape is rich with **300** butterfly, **968** arachnid, **78** dragonfly and damselfly and **156** net-winged insect taxa* described.

More than **1500** vertebrate taxa have been described for the Western Cape. These include terrestrial, marine and freshwater taxa.

There are **10 825** indigenous plant taxa in the Western Cape.



	Fish - freshwater	44
	Mammals - marine	27
	Plants	10 778
	Amphibians	60
	Mammals - terrestrial	126
	Butterflies	300
	Fish - marine	758
	Dragonflies & Damselflies	78
	Birds	337
	Reptiles	149
	Spiders	955

Taxonomic revision of the chubbyhead barb *Enteromius anoplus* resulted in the description of two new species: *E. cernuus* which is near endemic to the Western Cape, and *E. mandelai* which has a limited distribution in the Western Cape. This brings the number of freshwater fish taxa for the Western Cape to 44.



© SAIAB

Indicates change

Note: This biodiversity inventory is not exhaustive
* Taxa: Includes species, subspecies and varieties



THE STATUS OF WESTERN CAPE ECOSYSTEMS

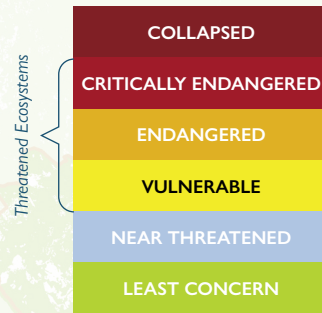


IUCN RED LIST CRITERIA FOR ECOSYSTEMS

Assess risk of collapse of ecosystem

A	DISTRIBUTION REDUCTION
B	RESTRICTED DISTRIBUTION & DECLINE
C	DEGRADATION OF ABIOTIC ENVIRONMENT
D	DISRUPTION TO BIOTIC PROCESSES
E	QUANTITATIVE ESTIMATE OF RISK OF COLLAPSE

QUANTITATIVE THRESHOLDS



WESTERN CAPE ECOSYSTEMS:

- ▶ 349 different ecosystem types (Marine, Freshwater, Terrestrial and Estuarine)
- ▶ 191 of 349 ecosystem types are threatened

109
CRITICALLY ENDANGERED

54
ENDANGERED

28
VULNERABLE

5
NEAR THREATENED

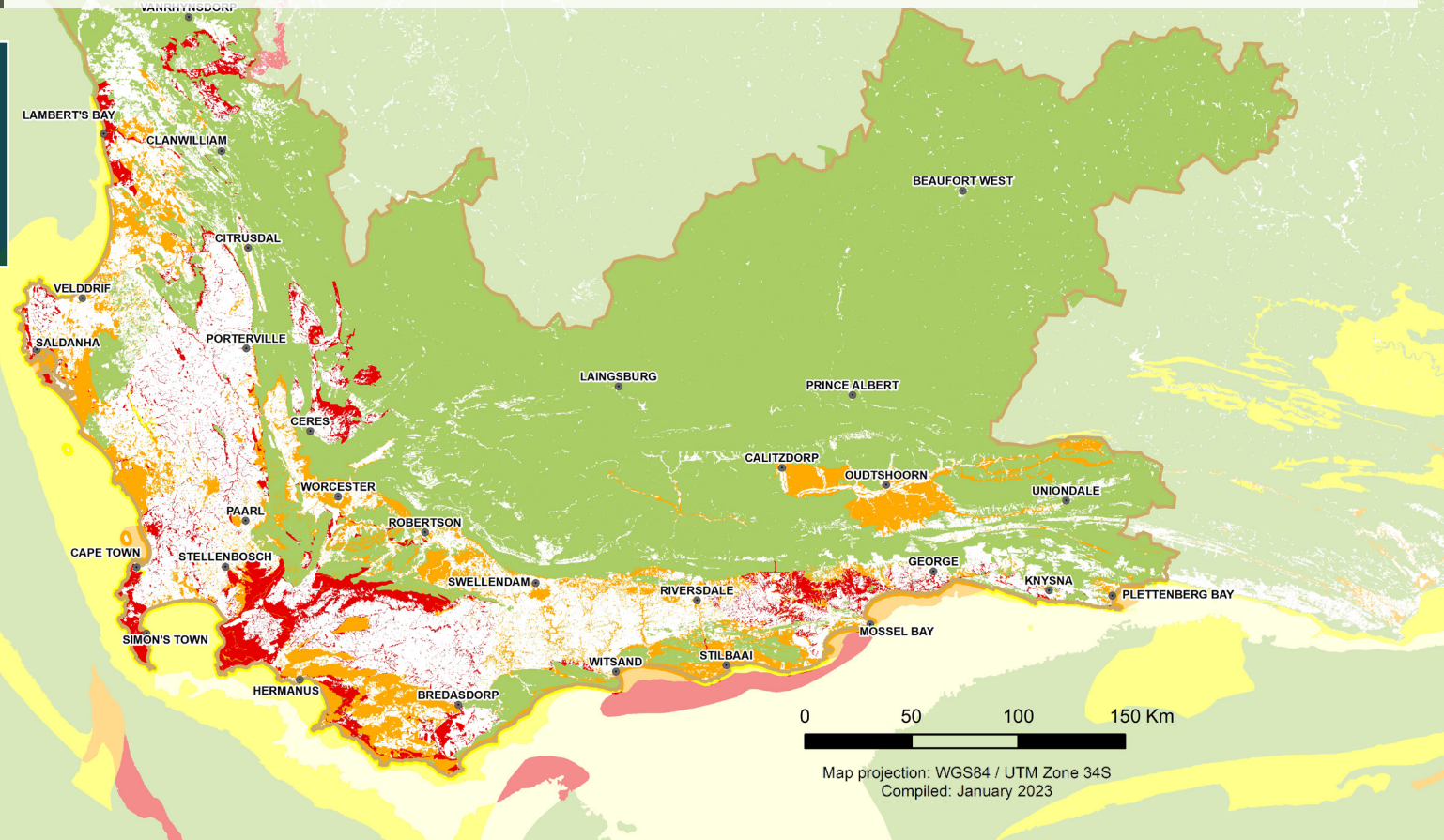
151
LEAST CONCERN

2
NOT YET ASSESSED

Ecosystems are classified according to threat status as reported in the 2018 National Biodiversity Assessment except for terrestrial ecosystems which are updated to reflect the 2022 Red List of Terrestrial Ecosystems.

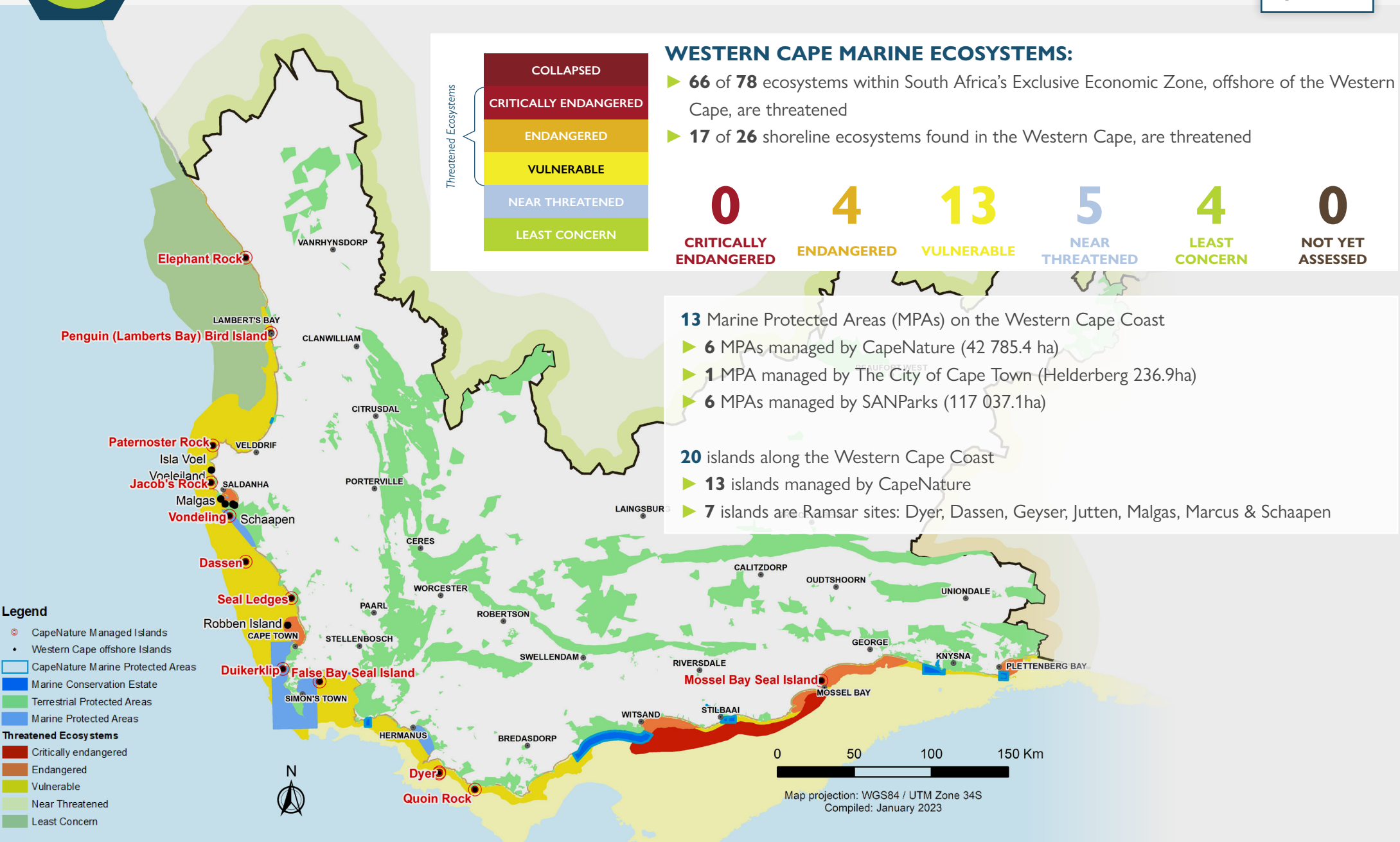
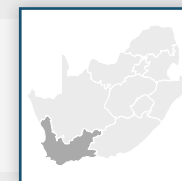
Legend

- Critically Endangered
- Endangered
- Vulnerable
- Least Concern
- 100% Modified





THE STATUS OF WESTERN CAPE MARINE ECOSYSTEMS



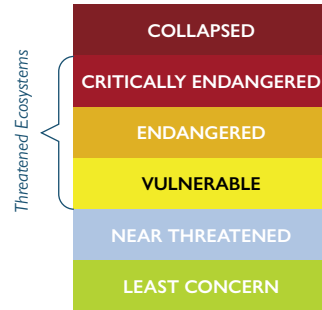


STATUS OF WESTERN CAPE ESTUARINE ECOSYSTEMS



Legend

- CapeNature Estuary
- Estuaries
- Western Cape Conservation Estate**
- Terrestrial protected areas
- Marine Protected Areas



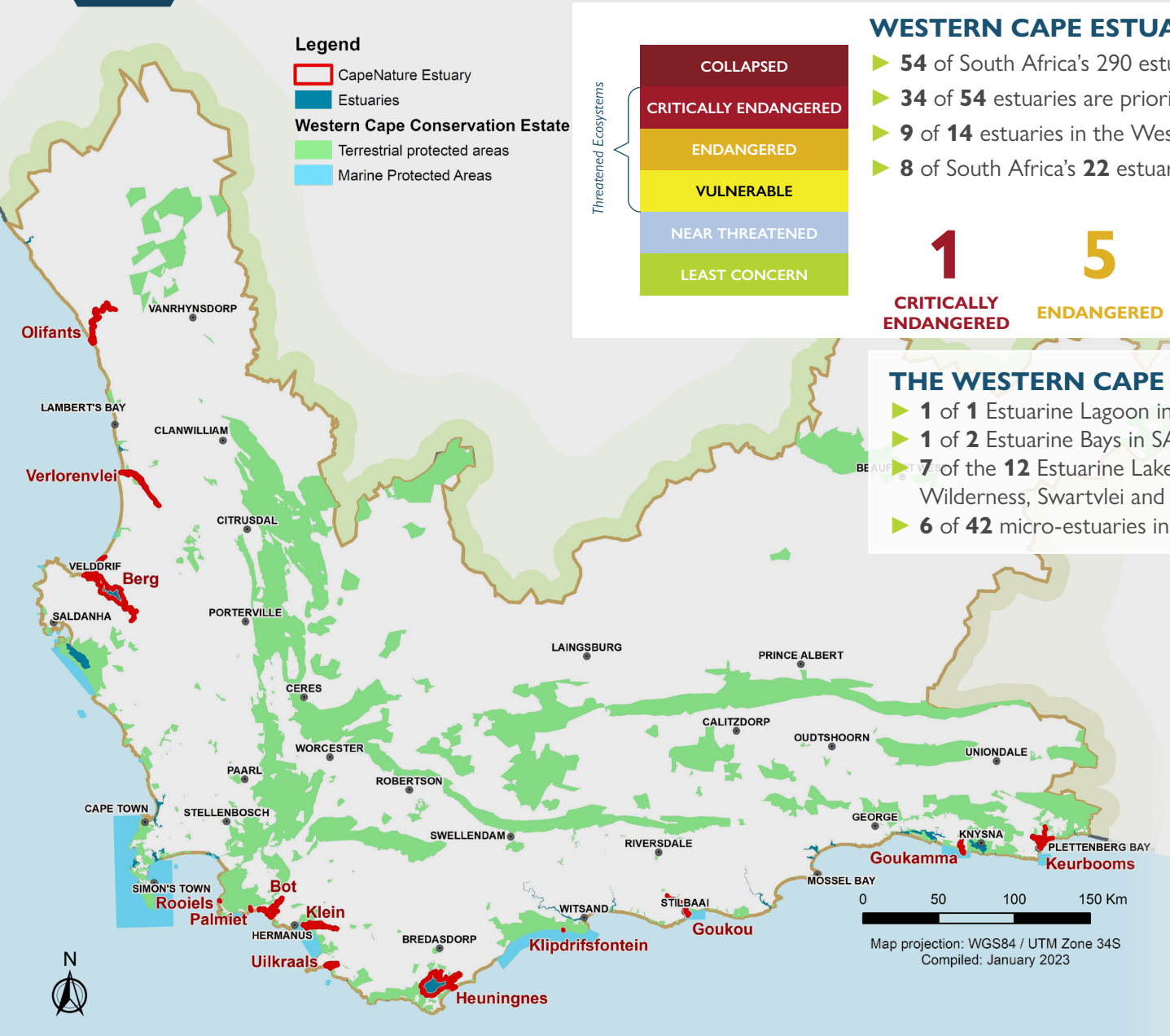
WESTERN CAPE ESTUARINE ECOSYSTEMS:

- ▶ 54 of South Africa's 290 estuaries are in the Western Cape
- ▶ 34 of 54 estuaries are prioritised with approved Estuary Management Plans
- ▶ 9 of 14 estuaries in the Western Cape are threatened
- ▶ 8 of South Africa's 22 estuary types are represented in the Western Cape



THE WESTERN CAPE ESTUARINE TYPES FEATURE:

- ▶ 1 of 1 Estuarine Lagoon in SA: Langebaan
- ▶ 1 of 2 Estuarine Bays in SA: Knysna
- ▶ 7 of the 12 Estuarine Lakes in SA: Verlorenvlei, Bot/Kleinmond, Klein, Heuningnes, Touw/Wilderness, Swartvlei and Seekoeivlei
- ▶ 6 of 42 micro-estuaries in SA



Estuary Types in the Western Cape	
Estuary Type	Number of Estuaries per Type
Arid Predominantly Closed	2
Estuarine Bay	1
Estuarine Lagoon	1
Estuarine Lake	7
Predominantly Open	10
Large Temporarily Closed	15
Small Fluvially Dominated	2
Small Temporarily Closed	16
Grand Total	54

Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023

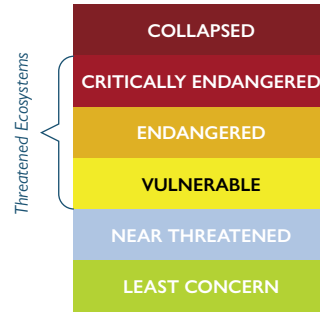


STATUS OF WESTERN CAPE FRESHWATER ECOSYSTEMS



WESTERN CAPE FRESHWATER ECOSYSTEMS:

- ▶ **101** of **138** freshwater ecosystems in the Western Cape are threatened: **64** river types, **74** wetland types
- ▶ **6** of South Africa's **22** surface water Strategic Water Source Areas are entirely in the Western Cape
- ▶ **2** Strategic Water Source Areas are partly in the Western Cape



73
CRITICALLY ENDANGERED

18
ENDANGERED

10
VULNERABLE

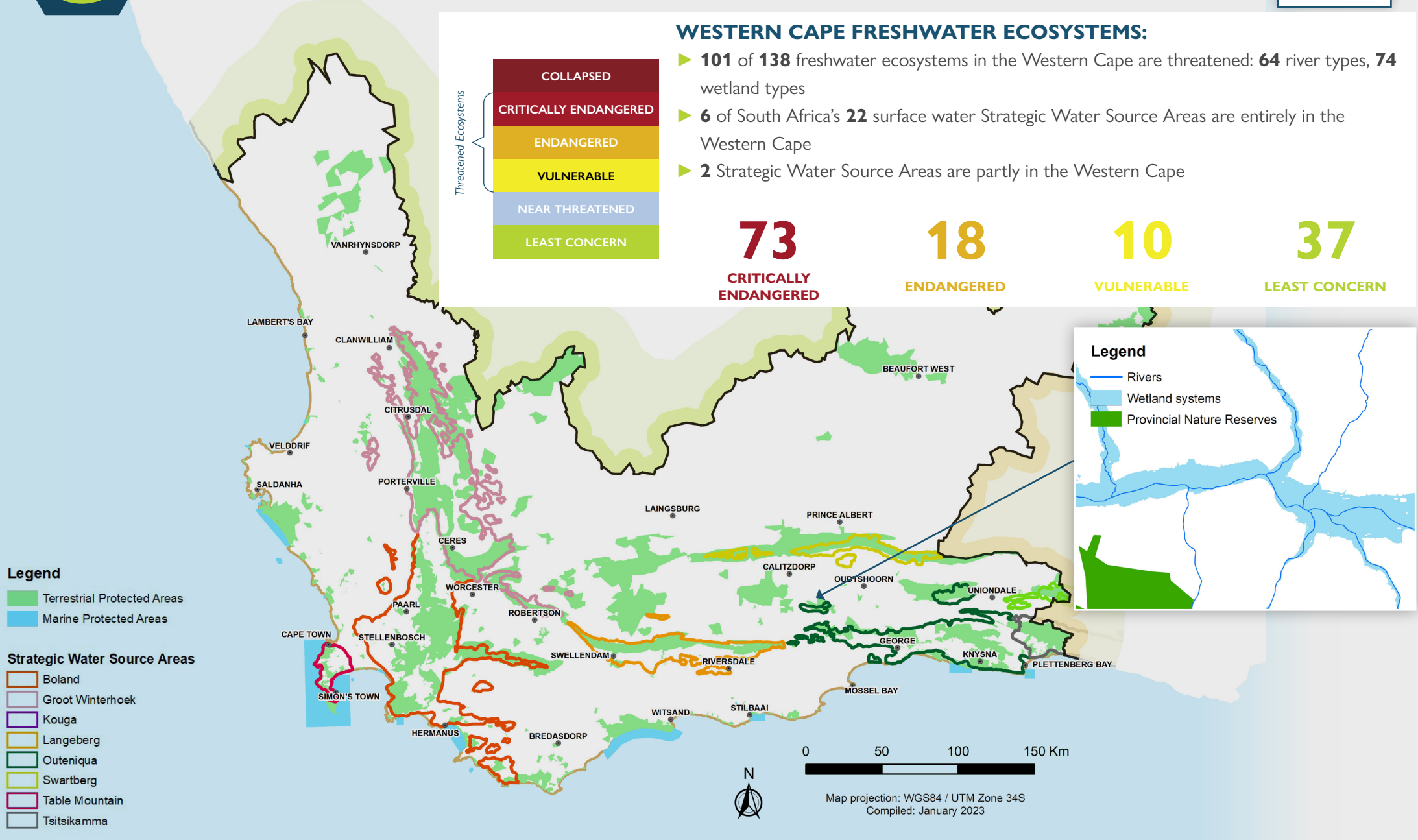
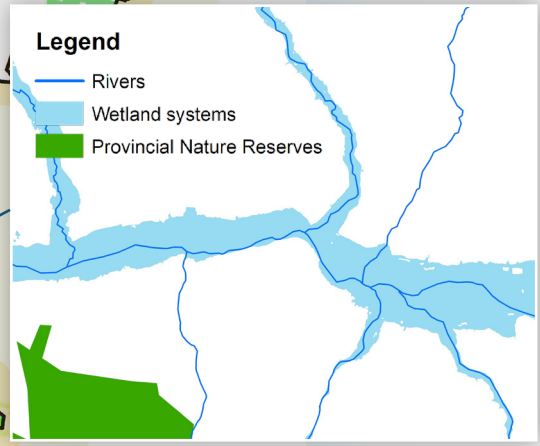
37
LEAST CONCERN

Legend

- Terrestrial Protected Areas
- Marine Protected Areas

Strategic Water Source Areas

- Boland
- Groot Winterhoek
- Kouga
- Langeberg
- Outeniqua
- Swartberg
- Table Mountain
- Tsitsikamma



0 50 100 150 Km



Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023



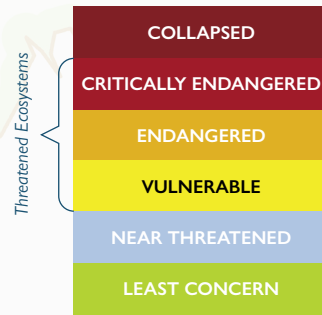
STATUS OF WESTERN CAPE TERRESTRIAL ECOSYSTEMS



2022 RED LIST OF ECOSYSTEMS

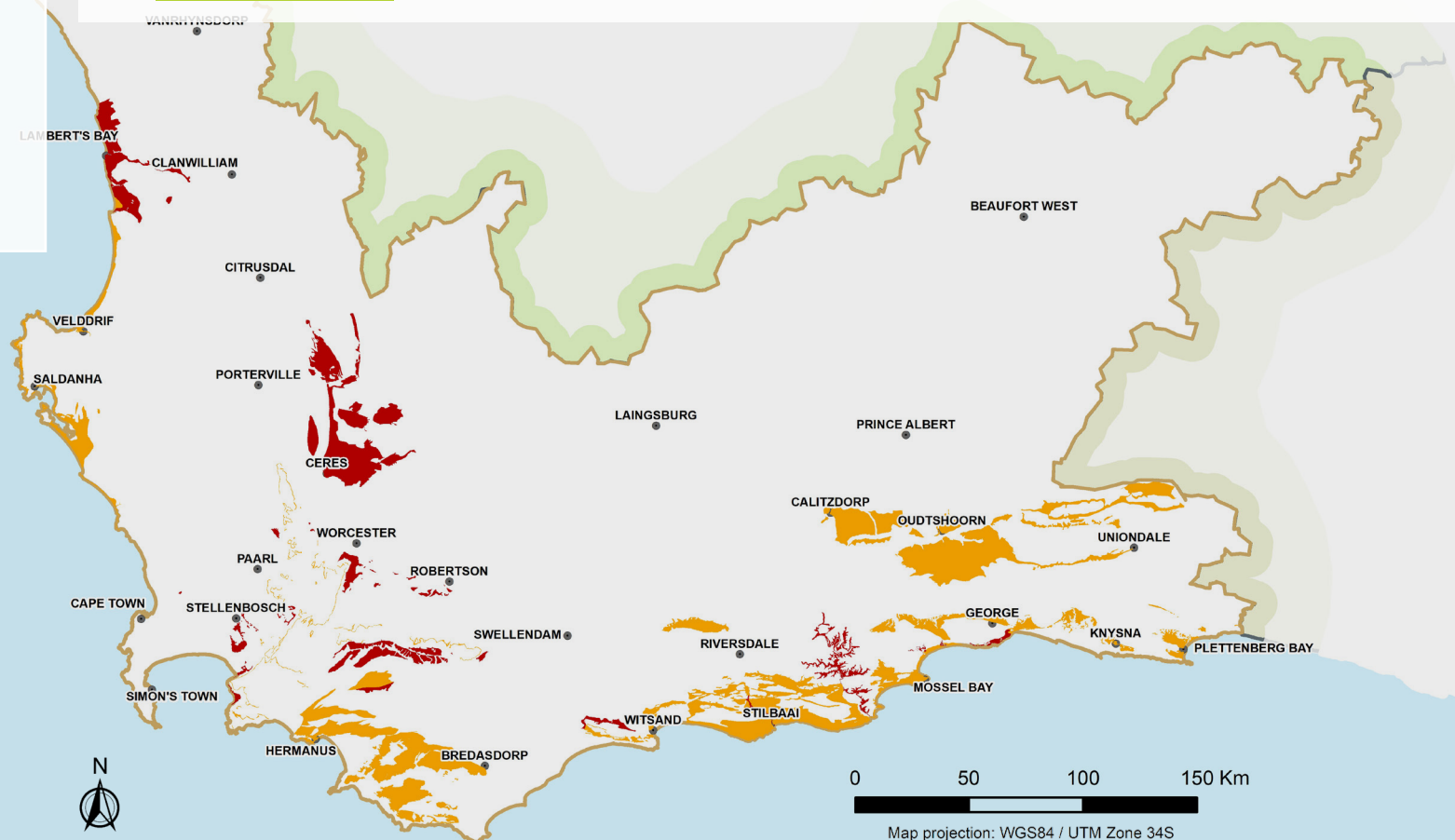
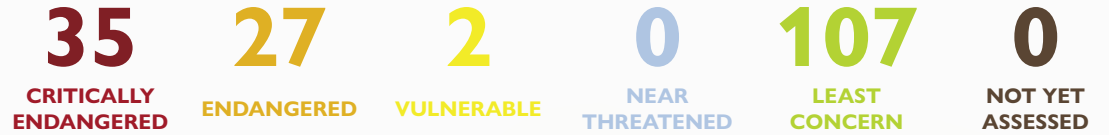
64 Terrestrial Ecosystems are listed as Threatened in terms of the National Environmental Management: Biodiversity Act, (Gazette Number **47526**):

- ▶ **35** Critically Endangered Ecosystems (changed from **25**)
- ▶ **27** Endangered Ecosystems (changed from **20**)
- ▶ **2** Vulnerable Ecosystem (changed from **9**)
- ▶ **107** Least Concern Ecosystems (changed from **115**)
- ▶ **0** Near Threatened Ecosystems (changed from **2**)



WESTERN CAPE TERRESTRIAL ECOSYSTEMS:

▶ **64** of **171** terrestrial ecosystems in the Western Cape are threatened



Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023

Legend

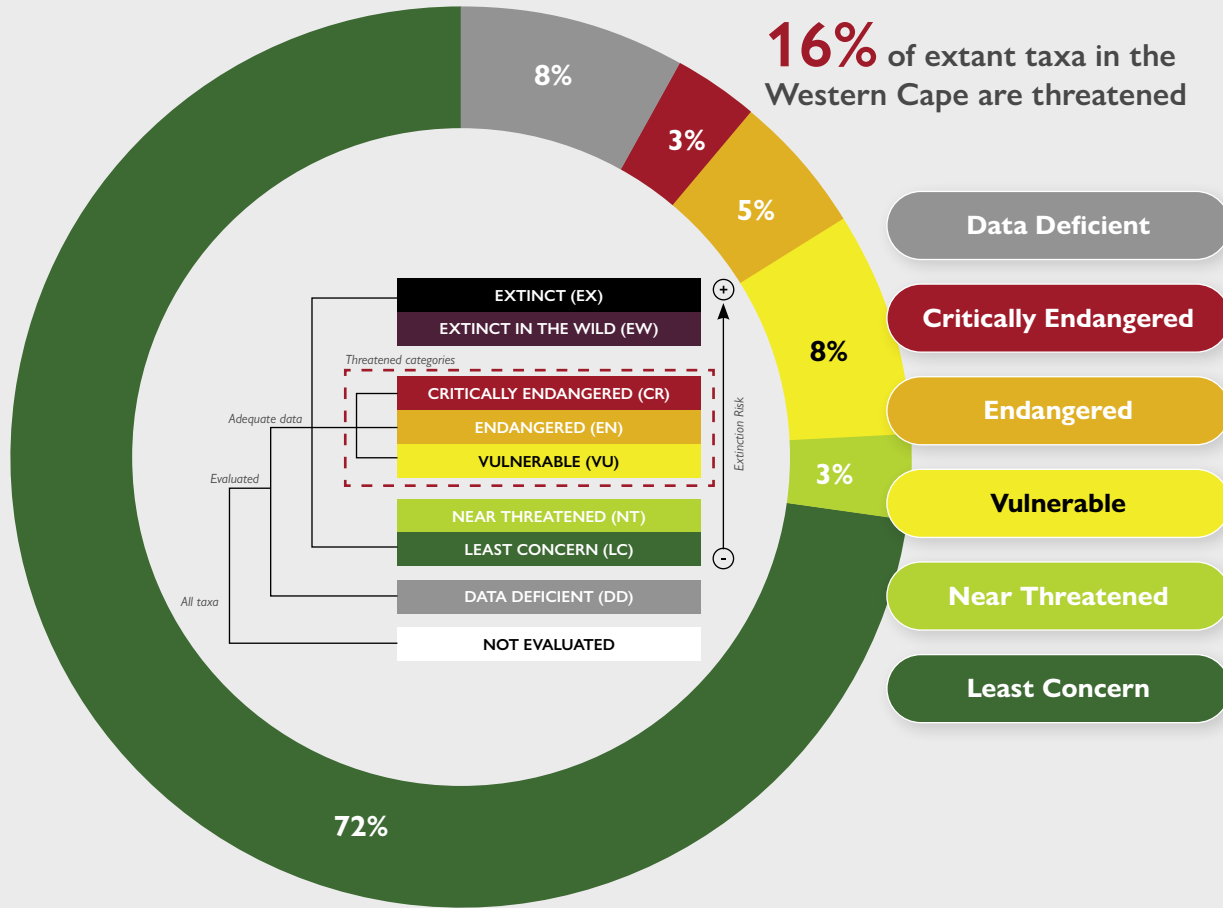
Terrestrial Ecosystems

Status changed to CR and EN

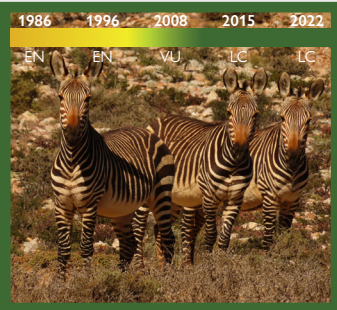
- Critically Endangered (CR)
- Endangered (EN)



STATUS OF WESTERN CAPE INDIGENOUS SPECIES



- 24 of 44 Freshwater fish taxa are threatened
- 7 of 27 Marine mammal taxa are threatened
- 1 939 of 10 778 Plants taxa are threatened
- 8 of 60 Amphibian taxa are threatened
- 16 of 126 Terrestrial mammal taxa are threatened
- 32 of 300 Butterfly taxa are threatened
- 73 of 758 Marine fish taxa are threatened
- 7 of 78 Dragonfly & Damselfly taxa are threatened
- 28 of 337 Bird taxa are threatened
- 7 of 149 Reptile taxa are threatened
- 27 of 955 Spider taxa are threatened



The Cape Vulture is globally listed as Vulnerable and regionally listed as Endangered.

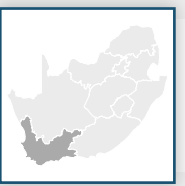
The only breeding colony in the Western Cape is at Potberg, in CapeNature's De Hoop Nature Reserve.

The Brenton blue butterfly (*Orachrysops niobe*) is potentially extinct. This Critically Endangered taxon persisted at a single site near Knysna until 2017. The butterfly relies on a host plant and a host ant taxa for completion of its life cycle. Regular surveys show no sign of the butterfly or the host ant since a few months after the Knysna fire of 2017.





STATUS OF WESTERN CAPE CONSERVATION ESTATE



CapeNature manages 16 Nature Reserve complexes, comprising a total of **828 970 ha**

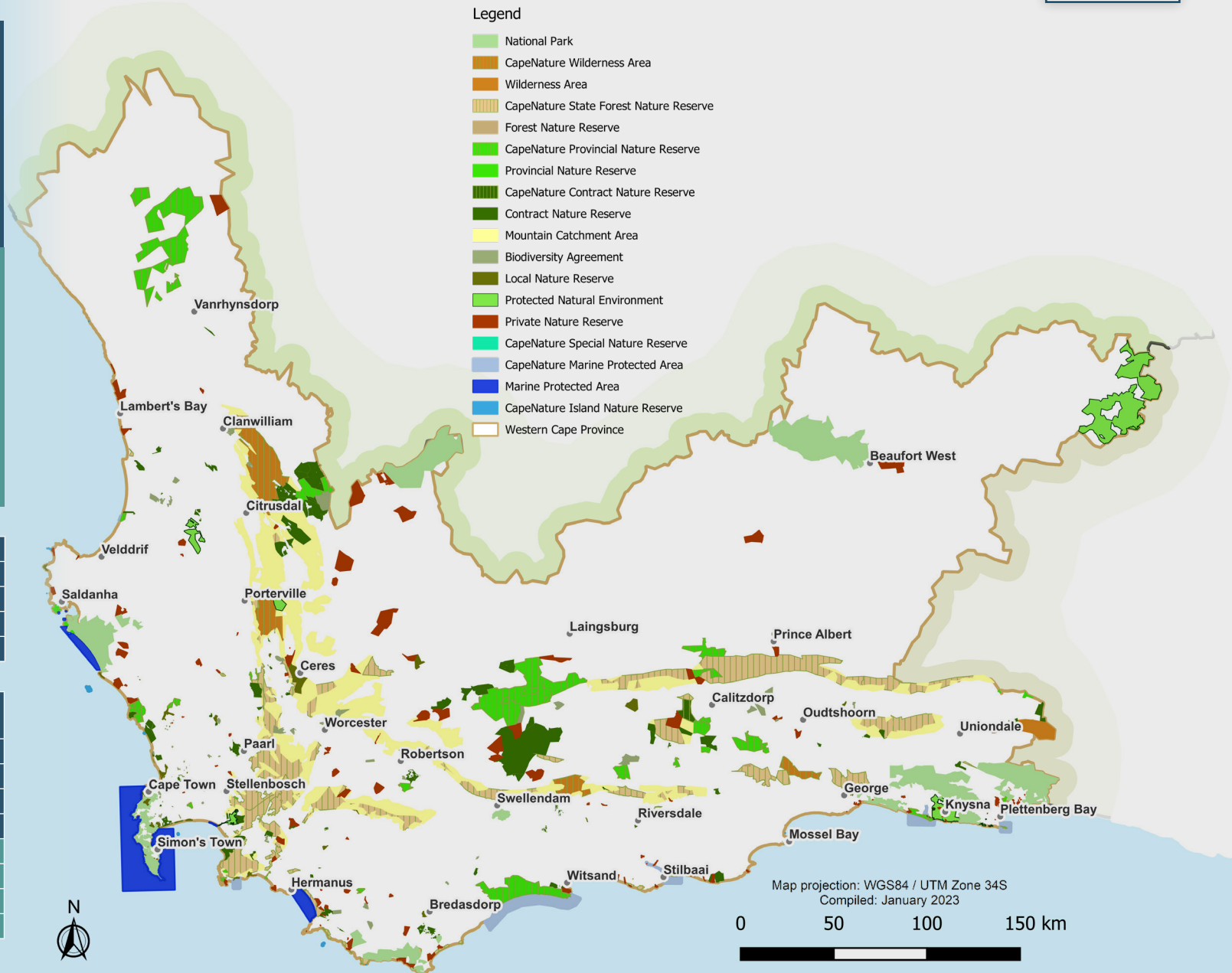
The CapeNature protected area estate totals **1 030 429 ha** which includes CapeNature managed Protected Areas and formal Stewardship sites supported by CapeNature.

Western Cape Conservation Estate Area (hectares)

CapeNature Vested State Protected Areas	659 761
CapeNature Managed Protected Area Estate	828 970
CapeNature Protected Areas Estate	1 030 429
Western Cape Protected Areas Estate	2 262 269

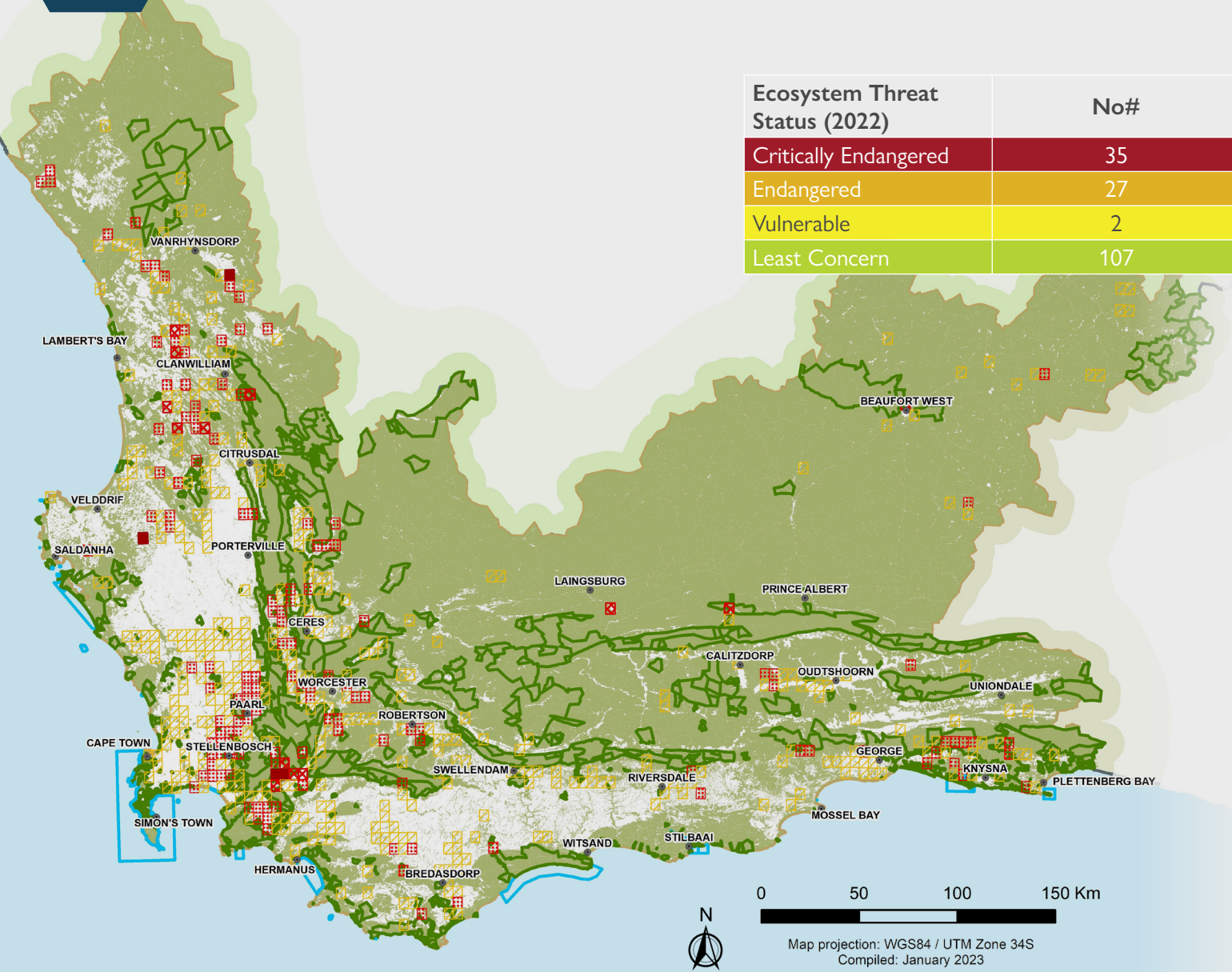
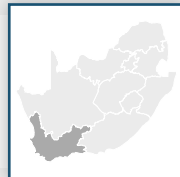
WWF SITES DECLARED 2021/22	hectares
Anysberg Nature Reserve	14 216.62
Riverlands Nature Reserve (Pella)	599.57
Thornhill Nature Reserve	5 038.68
Total hectares declared:	19 854.87

STEWARDSHIP AGREEMENTS SIGNED 2021/22	hectares
Lettaskraal Nature Reserve	6 922.61
Silflay Nature Reserve	1 280.61
Mount David Nature Reserve	715.34
Gecko Rock Nature Reserve	3 658.03
Protea Grove Biodiversity Agreement	80.05
New Glen Heatlie Biodiversity Agreement	1 302.25
Joostenbergkloof Biodiversity Agreement	101.48
Total new hectares for stewardship	14 060.37





STATUS OF WESTERN CAPE HABITAT LOSS



Ecosystem Threat Status (2022)	No#	% Remaining (2020)	Remaining ha (2020)
Critically Endangered	35	29.5	473 912
Endangered	27	45.8	908 659
Vulnerable	2	62.8	4 758
Least Concern	107	93.2	8 673 514

Habitat loss is expressed as the difference between the National Vegetation Map less the modified land-use categories extracted from the 2020 National Land Cover datasets*. The classification reflects the revised 2022 Red Listed Ecosystems.

Legend

Rate of Habitat Loss
Period 2018-2020

- 1 - 2%
- 2 - 4%
- 4 - 8%
- 8 - 14%

Western Cape Conservation Estate

- Terrestrial Protected Areas
- Marine Protected Areas
- Natural/Near Natural Habitat
- 100% Modified Habitat

0 50 100 150 Km
 Map projection: WGS84 / UTM Zone 34S
 Compiled: January 2023

* Habitat loss was calculated using the 2018 and 2020 National Land cover products amended with locally derived higher resolution datasets.



THE STATUS OF FIRE



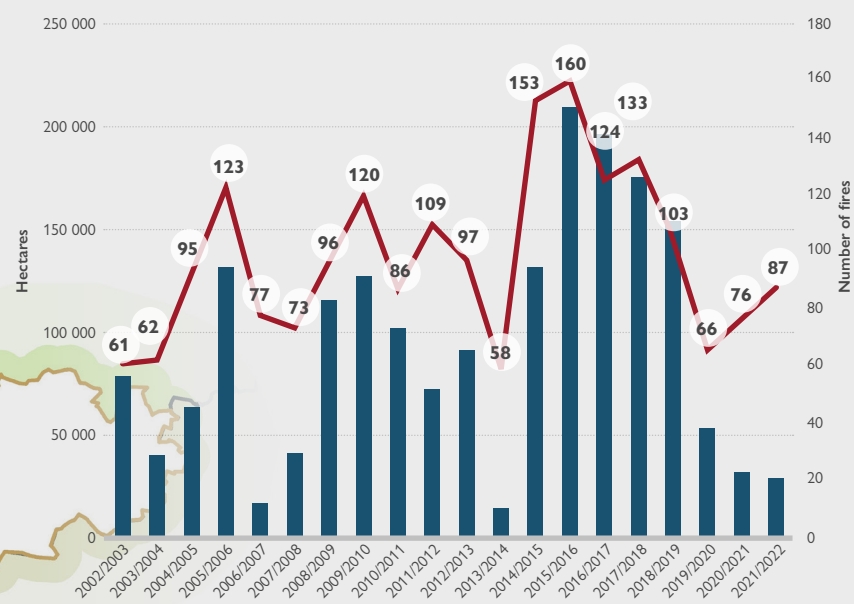
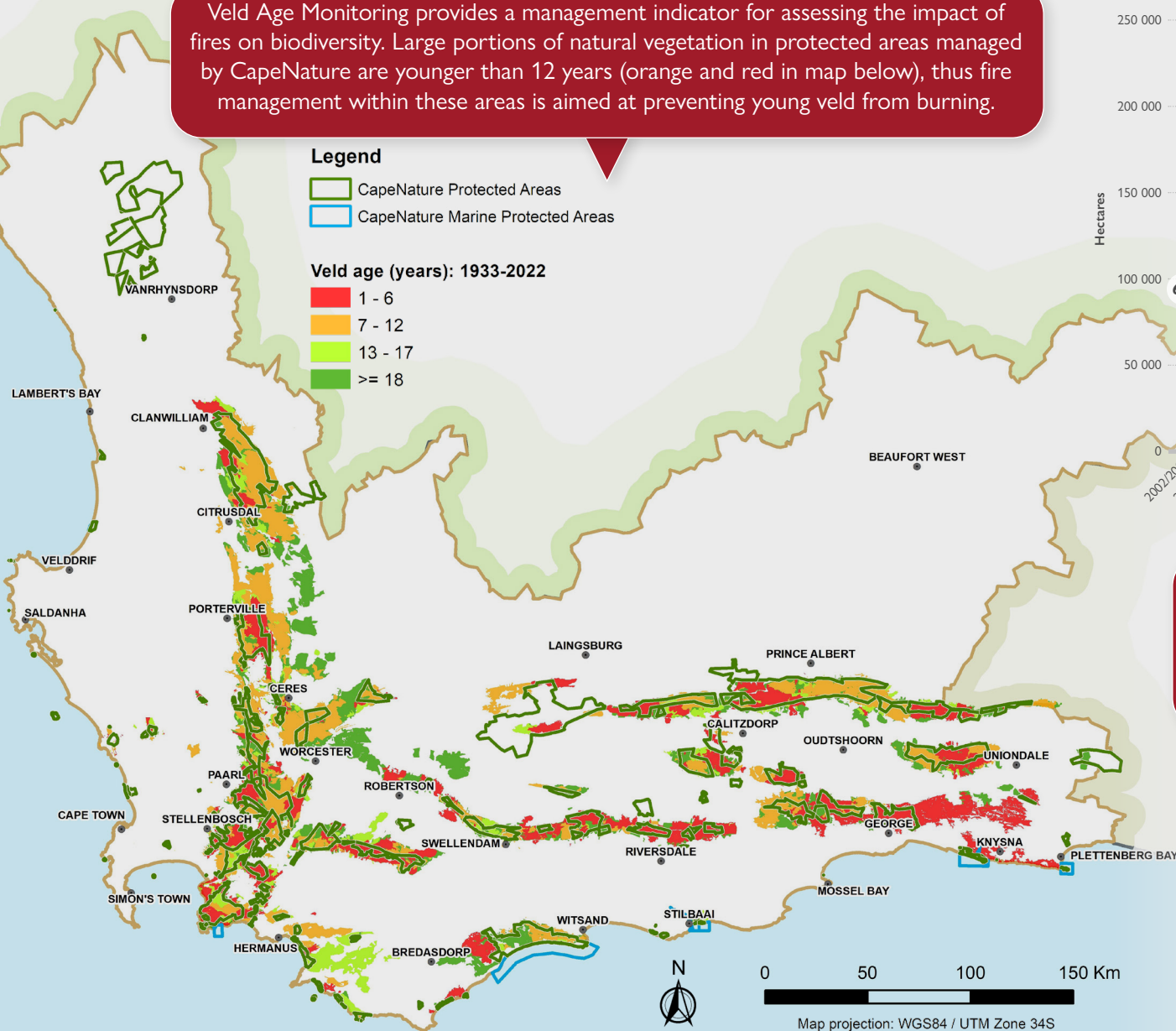
Veld Age Monitoring provides a management indicator for assessing the impact of fires on biodiversity. Large portions of natural vegetation in protected areas managed by CapeNature are younger than 12 years (orange and red in map below), thus fire management within these areas is aimed at preventing young veld from burning.

Legend

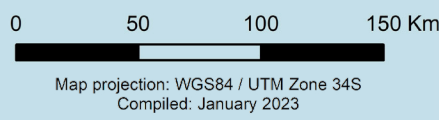
- CapeNature Protected Areas
- CapeNature Marine Protected Areas

Veld age (years): 1933-2022

- 1 - 6
- 7 - 12
- 13 - 17
- >= 18

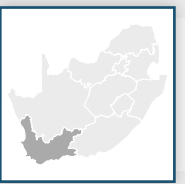


87 fires were responded to in the 2021-22 financial year, representing **29 915.8** hectares compared to **76** fires and **31 198.8** hectares burned in 2020-21. The decreasing trend in size of fires since 2016 shows a good response rate to fires.



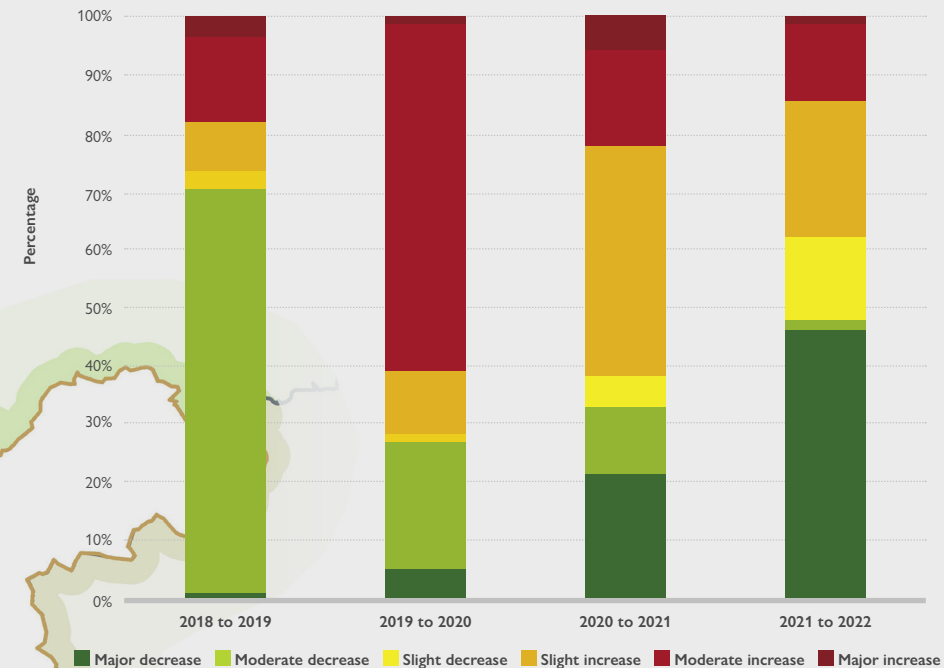
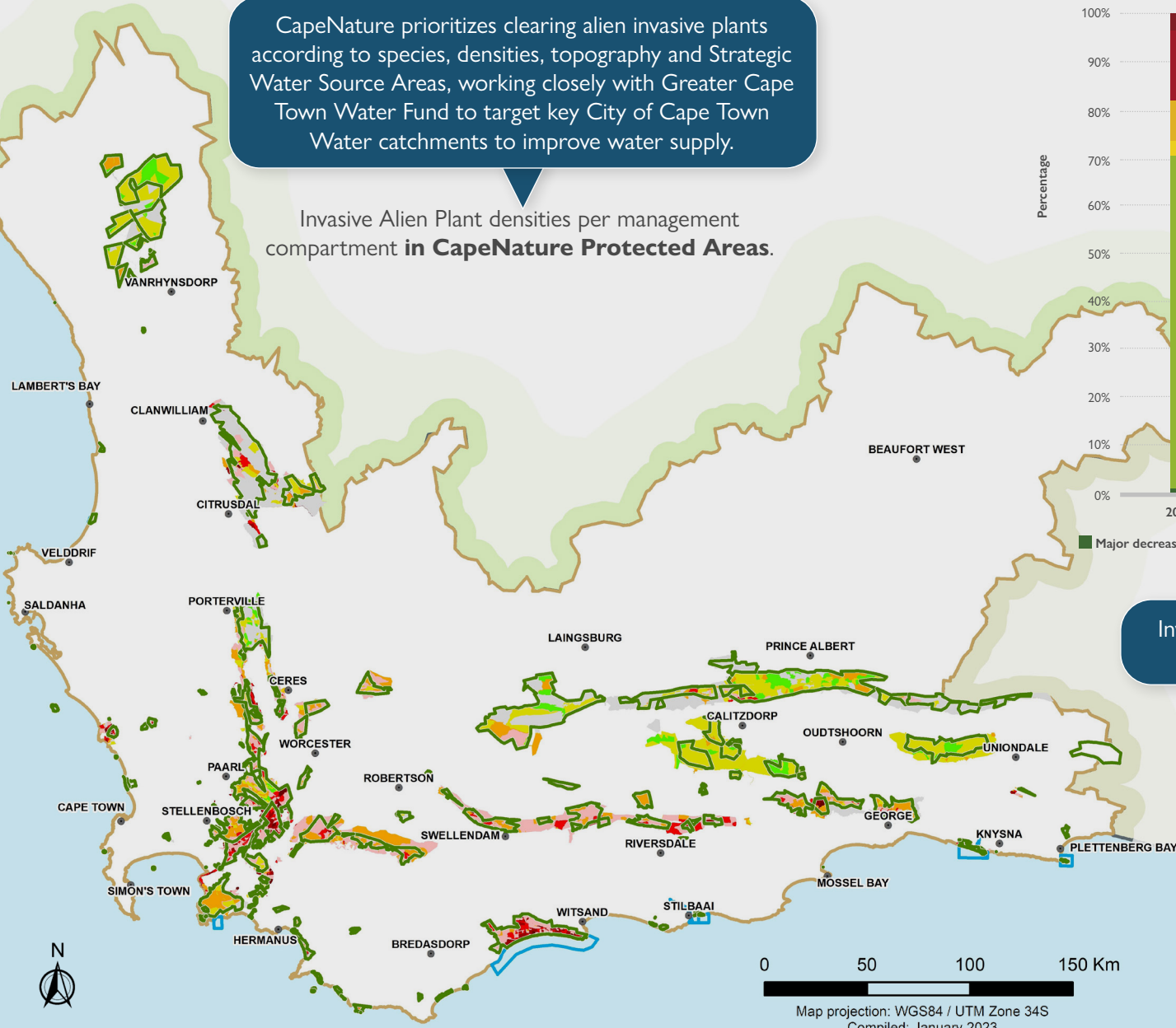


THE STATUS OF BIOLOGICAL INVASIONS: PLANTS



CapeNature prioritizes clearing alien invasive plants according to species, densities, topography and Strategic Water Source Areas, working closely with Greater Cape Town Water Fund to target key City of Cape Town Water catchments to improve water supply.

Invasive Alien Plant densities per management compartment in **CapeNature Protected Areas**.



Invasive alien plant density changes in CapeNature Protected Areas over time (2018 to 2022) per change category.

Legend

- CapeNature Protected Areas
- CapeNature Marine Protected Areas

CapeNature Invasive Alien Plant Density 2022

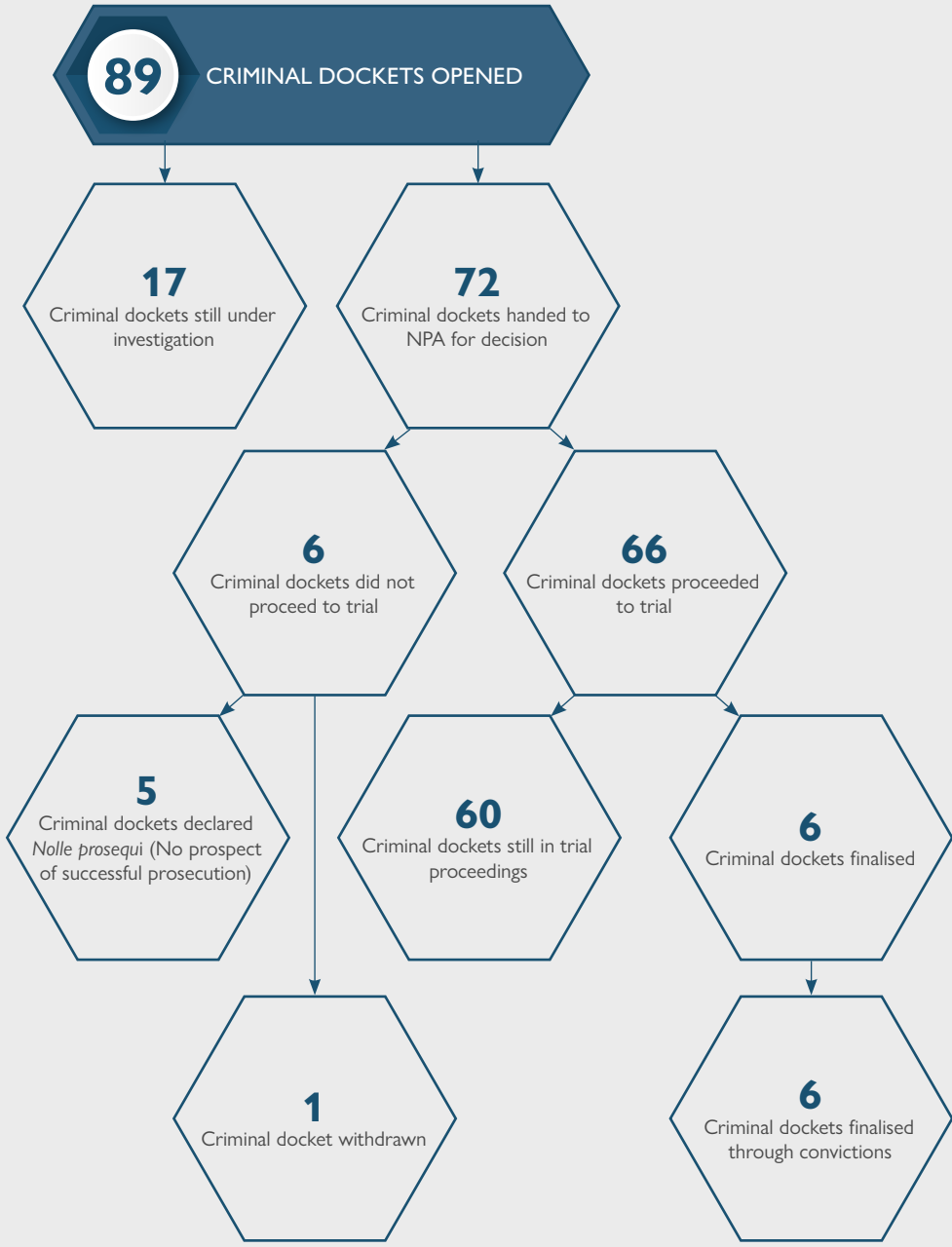
- No IAPs
- Rare
- Occasional
- Very scattered
- Scattered
- Medium
- Dense
- Closed



Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023



BIODIVERSITY CRIME RESPONSE





CLIMATE CHANGE RESPONSE

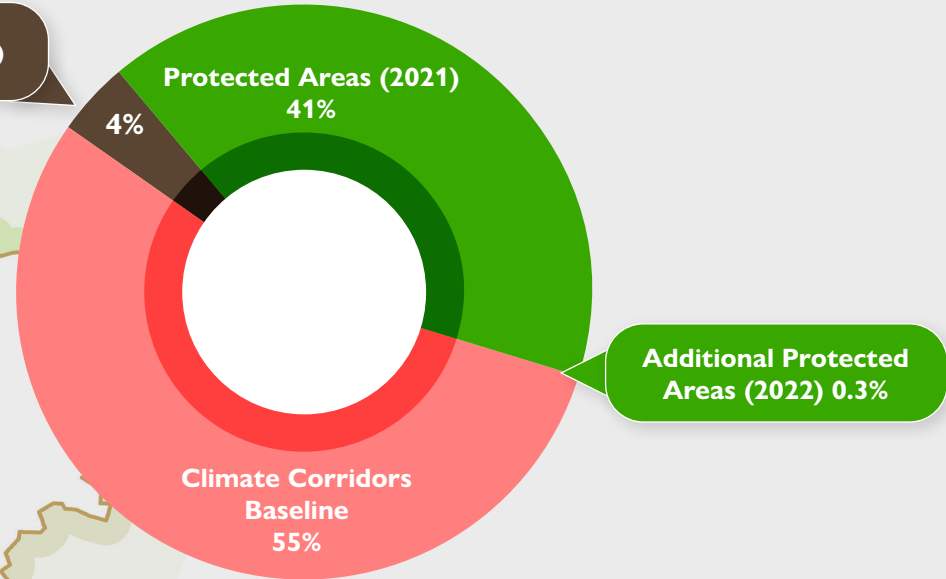


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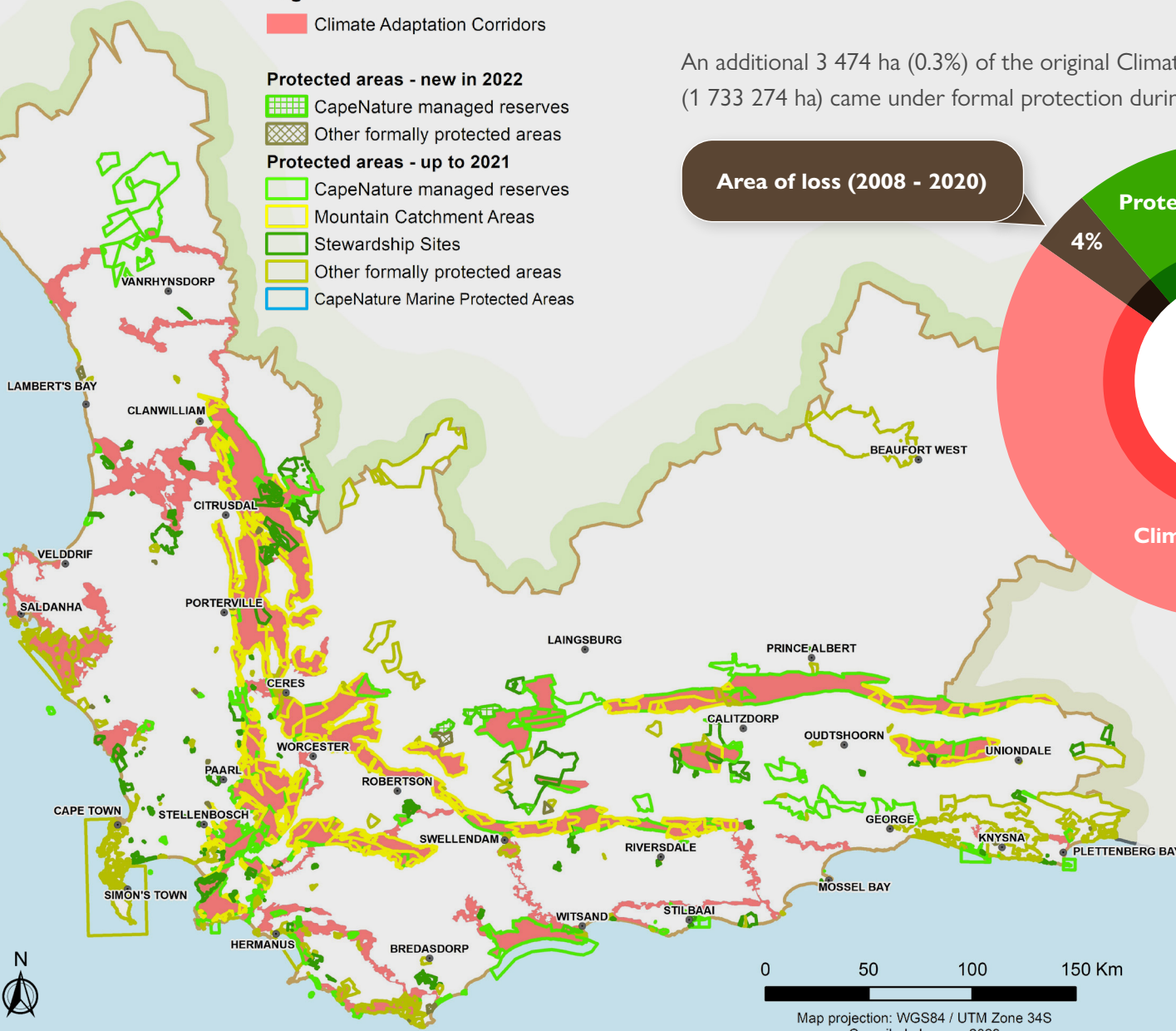
- Climate Adaptation Corridors
- Protected areas - new in 2022**
 - CapeNature managed reserves
 - Other formally protected areas
- Protected areas - up to 2021**
 - CapeNature managed reserves
 - Mountain Catchment Areas
 - Stewardship Sites
 - Other formally protected areas
 - CapeNature Marine Protected Areas

An additional 3 474 ha (0.3%) of the original Climate Change Adaptation Corridor Framework* extent (1 733 274 ha) came under formal protection during 2022.

Area of loss (2008 - 2020)



* Based on the Table Mountain Fund's delineated Climate Change Adaptation Corridor; this Framework encompasses corridors outside protected areas, as well as including Protected Areas and Mountain Catchment Areas.

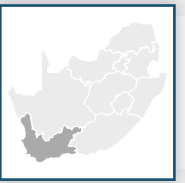


Map projection: WGS84 / UTM Zone 34S
Compiled: January 2023



MONITORING AND SURVEILLANCE

PRIORITY SPECIES: FAUNA



Surveillance

Ad hoc observations provide data on distribution, persistence and reproduction.



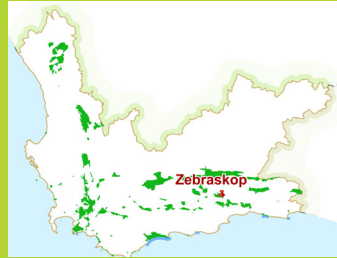
Monitoring

Fixed methods used to obtain data to detect changes over time.

Surveillance during a two day bioblitz at Zebraskop in Garden Route Nature Reserve Complex.



142 plants (5 priority)



1 fish (priority)



1 frog



31 invertebrates



16 mammals (2 priority)



5 reptiles



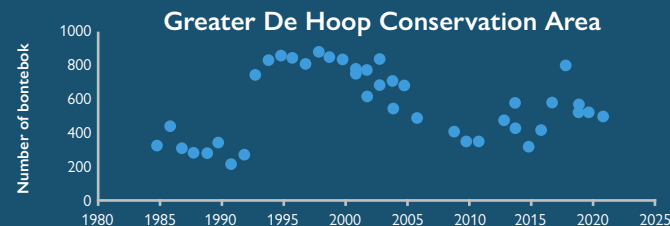
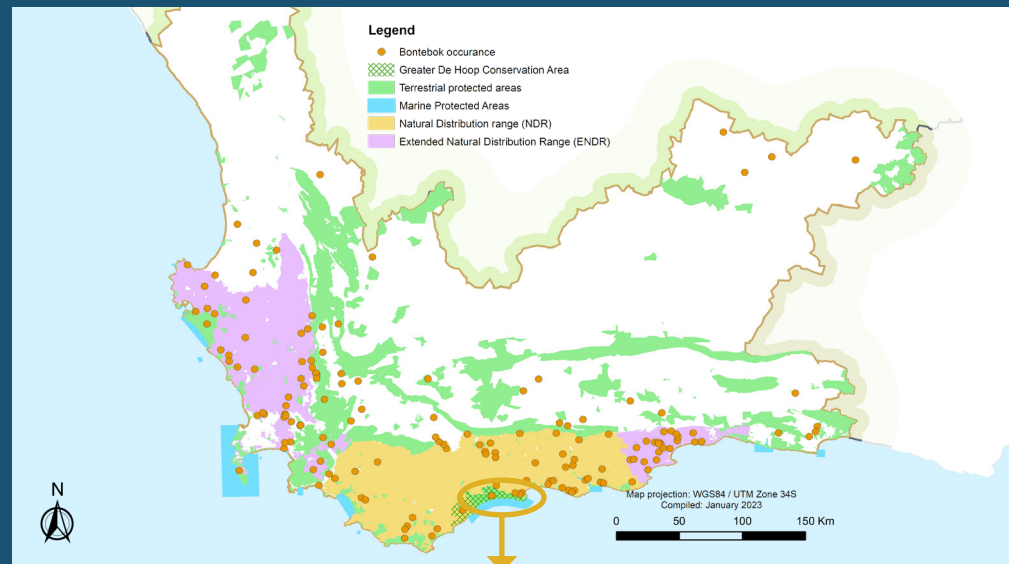
35 birds (4 priority)

Monitoring bontebok

(*Damaliscus pygargus pygargus*) Vulnerable

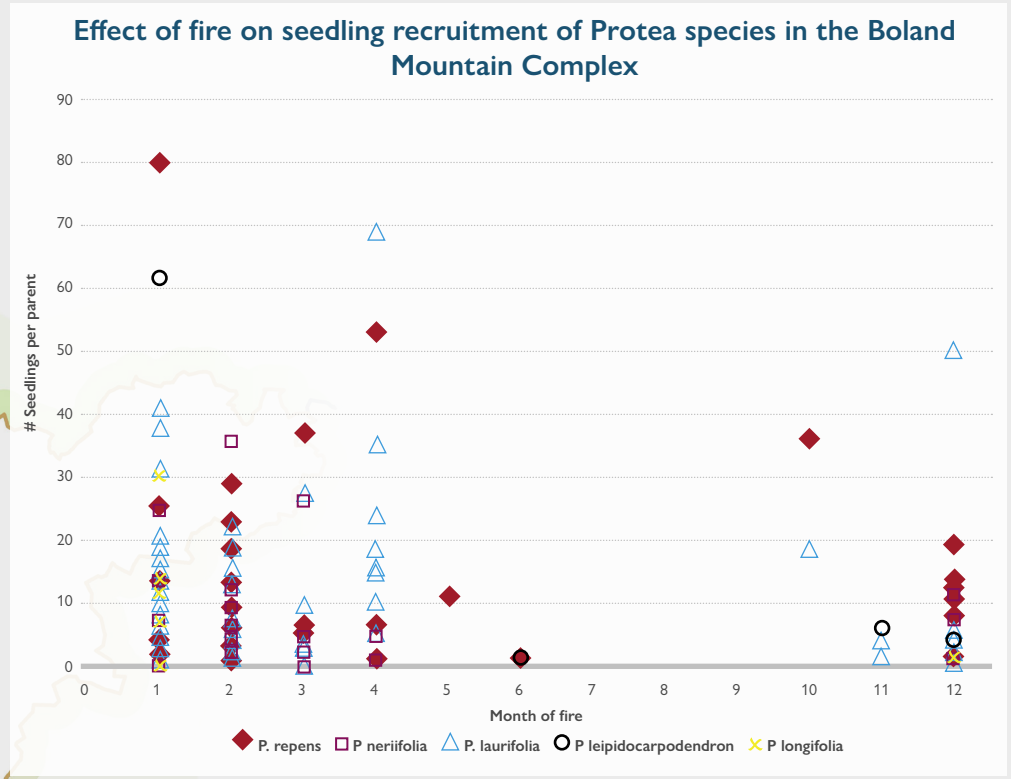
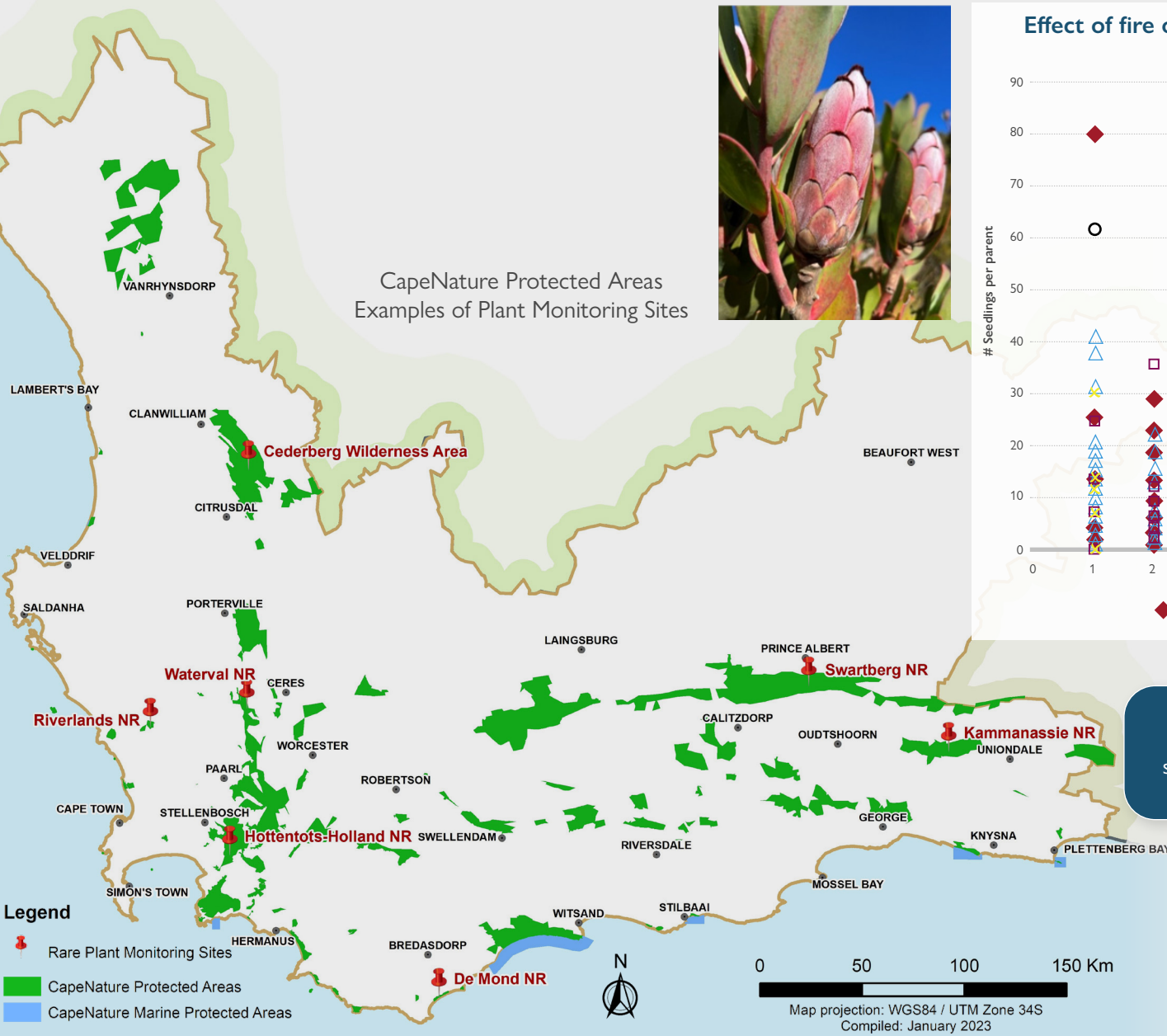
Number of Properties in the Western Cape with bontebok

	2018	2019	2020	2021
Provincial reserves	2	2	2	2
National parks	4	4	4	4
Municipal reserves	1	0	0	0
Private, NDR & ENDR	105	104	103	99
Private, extralimital	53	47	50	48
Total	165	157	159	153





MONITORING AND SURVEILLANCE PRIORITY SPECIES: FLORA



Long term Protea plot monitoring and post fire monitoring: Recruitment of proteoid shrubs (non-sprouting, serotinous Proteaceae) is best after warm season fires (summer/autumn) and worst after cool season fires (winter/spring).



CAPENATURE'S CONSERVATION TOOLS & STRATEGIES



Implementation of conservation action follows a strategic adaptive management approach, addresses the 5 broad threats to biodiversity and is guided by management tools and informants:

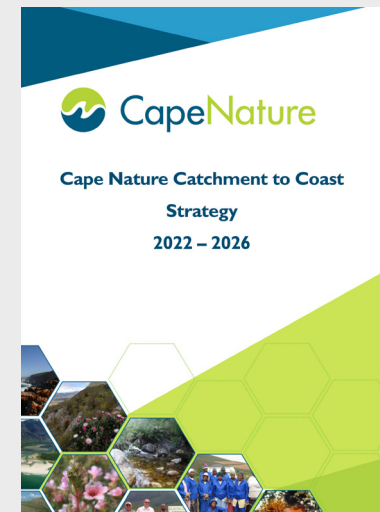
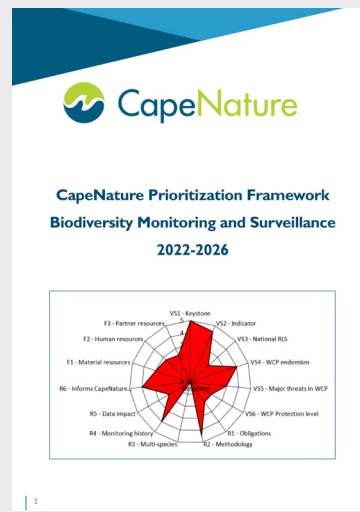
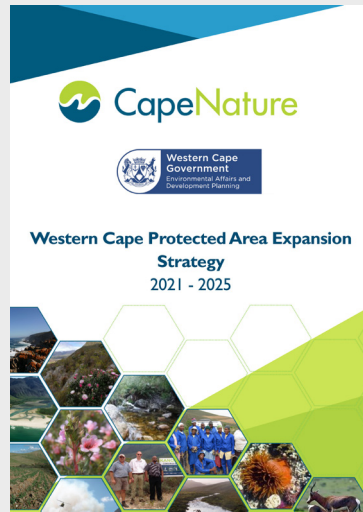
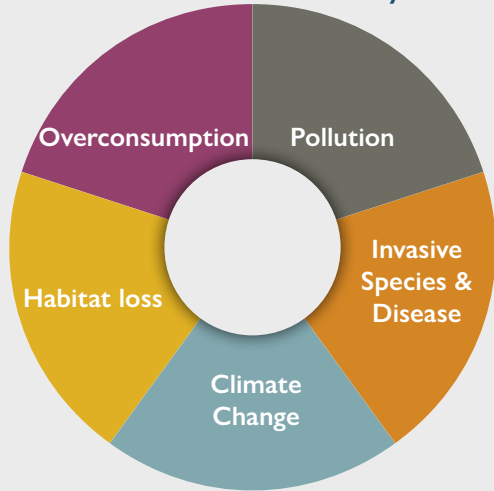


- ▶ Western Cape Biodiversity Act
- ▶ Western Cape Biodiversity Spatial Plan (WCBSBP)
- ▶ Western Cape Protected Area Expansion Strategy
- ▶ Western Cape State of Biodiversity Report
- ▶ Protected Area Management Plans
- ▶ Biodiversity Management Plans for Species
- ▶ Nature Conservation Policies
- ▶ The Provincial Biodiversity Strategy and Action Plan (PBSAP), a sector based and joint Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) and CapeNature initiative



FireWeb is a web-based incident information management and communications tool.

Threats to biodiversity





PARTNERSHIPS FOR CONSERVATION SUCCESS



CapeNature acknowledges the importance of collaboration in sustaining biodiversity conservation and the Biodiversity Economy. CapeNature values and pursues working with communities, private landowners, civil society, conservation organisations, researchers, tertiary institutions and other spheres of government to deliver on conservation targets. CapeNature engages in numerous, valued, formal and informal working collaborations.

The partners with whom the entity has formal agreements for biodiversity conservation, are listed below.





FURTHER READING BIBLIOGRAPHY



BIBLIOGRAPHY

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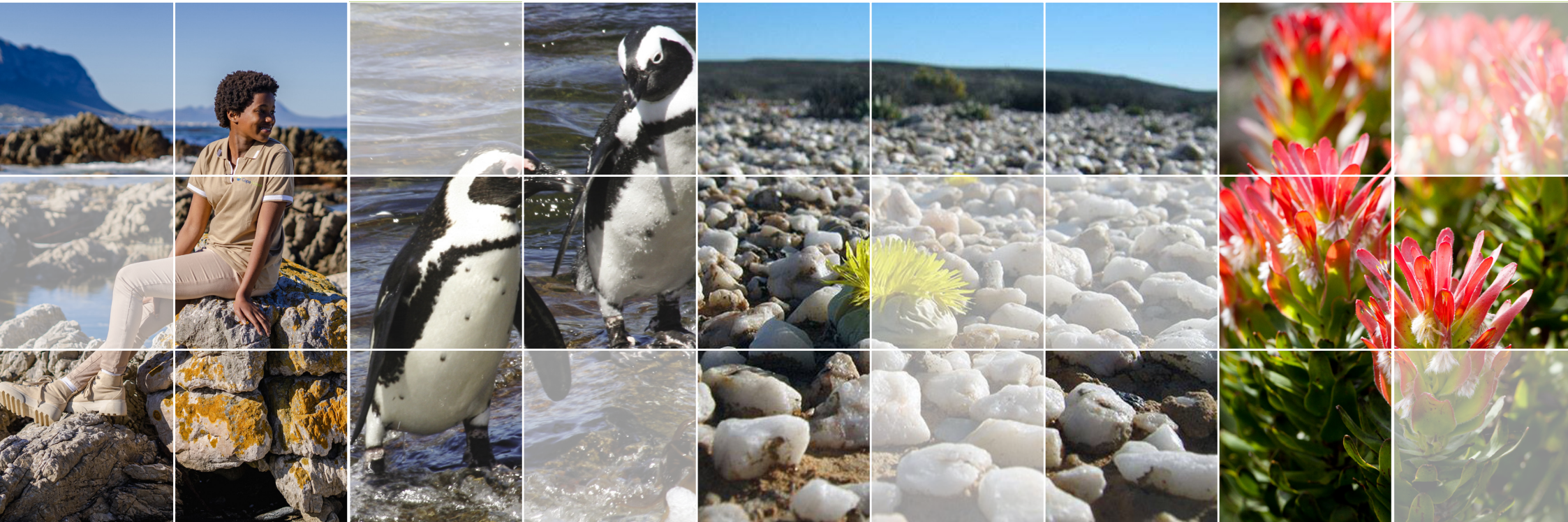
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