

Portfolio Committee Briefing 16 November 2021

Status on Biological Invasions in South Africa



SANBIs mandate on invasive species

National Environment Management Biodiversity (Act 10 of 2004) (NEMBA)

S11 (1) The Institute:

(a) must monitor and report regularly to the Minister on:

(iii) the status of all listed invasive species;

(m) must coordinate and implement programmes for:

- **the prevention, control or eradication of listed invasive species;**

NEMBA Alien and Invasive Species Regulations (A&IS)

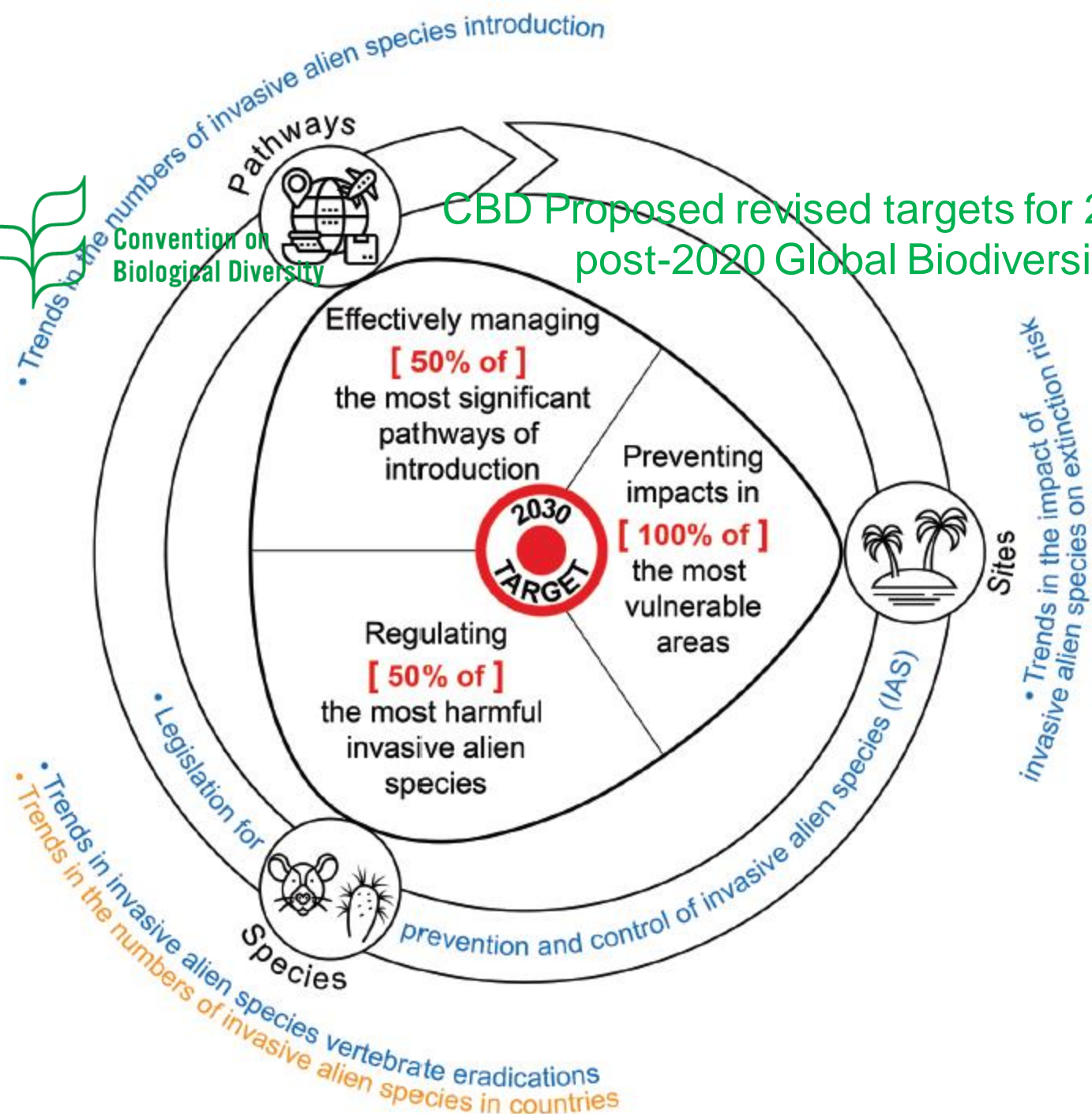
National status reports

The Institute or a body designated by the Institute must, for the purpose of reporting as contemplated in section 11(1)(a)(iii) of the Act, submit a report on the status of listed invasive species to the Minister within three years of the date on which these regulations come into effect, and at least every three years thereafter.

Related legislation: Conservation of Agricultural Resources Act (CARA) the mandate of the Department of Agriculture Land Reform and Rural Development also addresses the issue of weeds

for the status report

CBD Proposed revised targets for 2030 and 2050 in the post-2020 Global Biodiversity Framework



Global assessment on invasive alien species underway

Biological invasions are the third largest driver of biodiversity loss (National Biodiversity Assessment)

Pine trees



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Prosopis trees



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Parthenium weed



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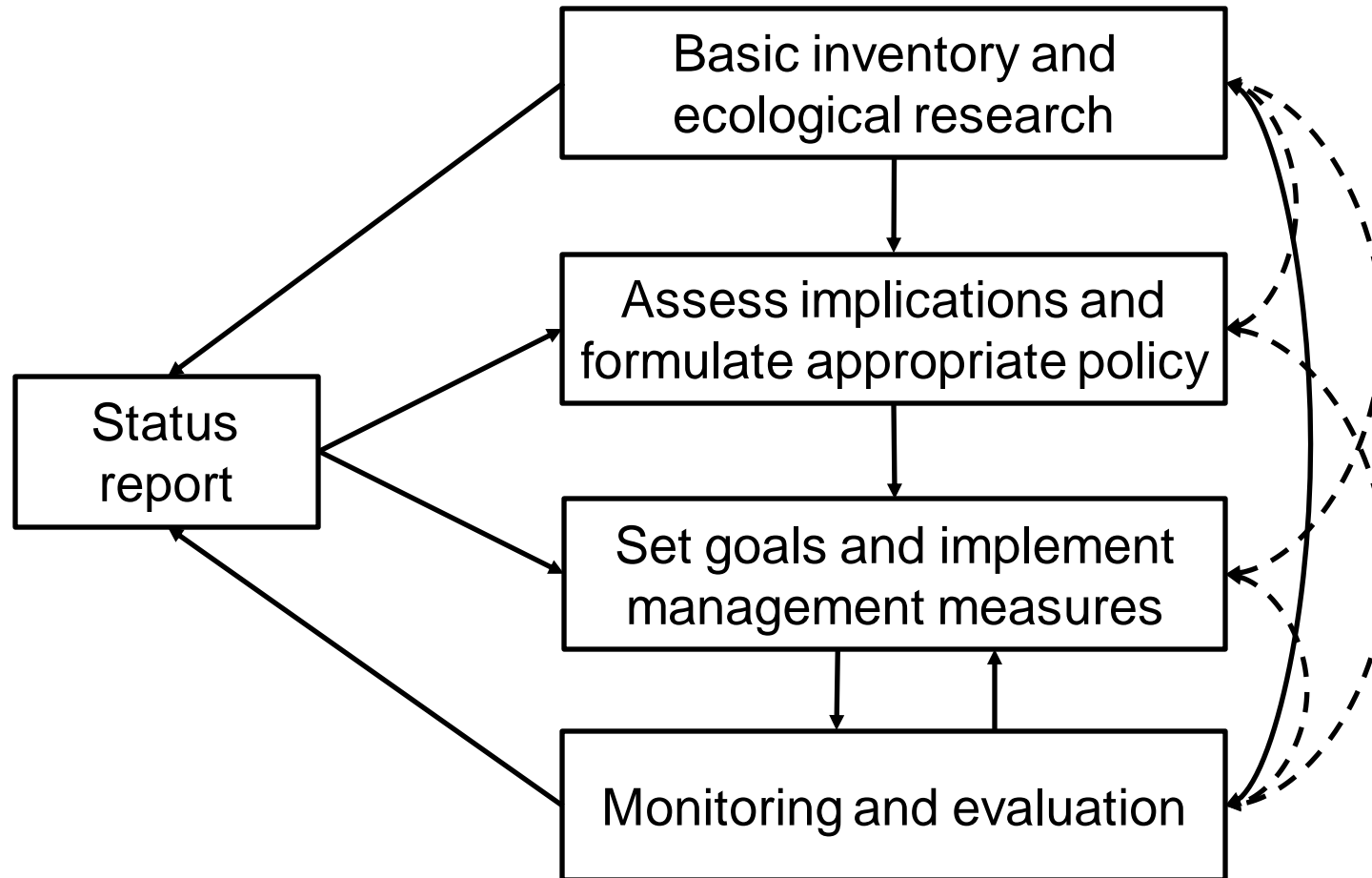
Alien freshwater fishes

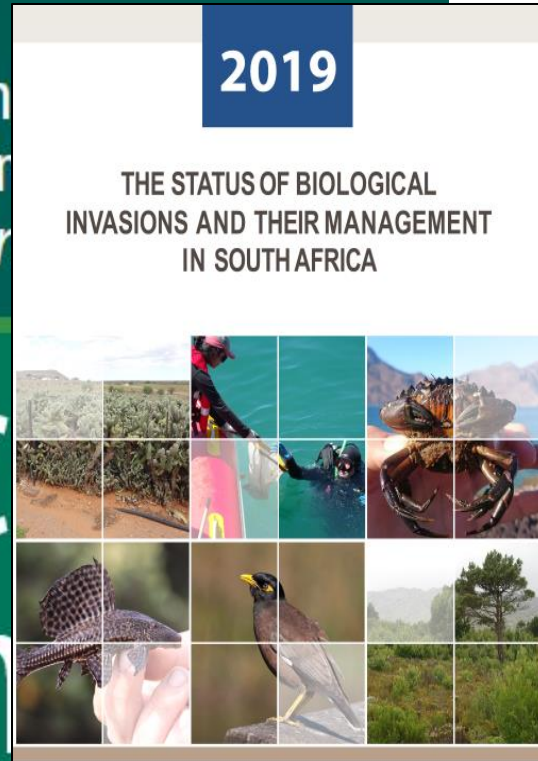
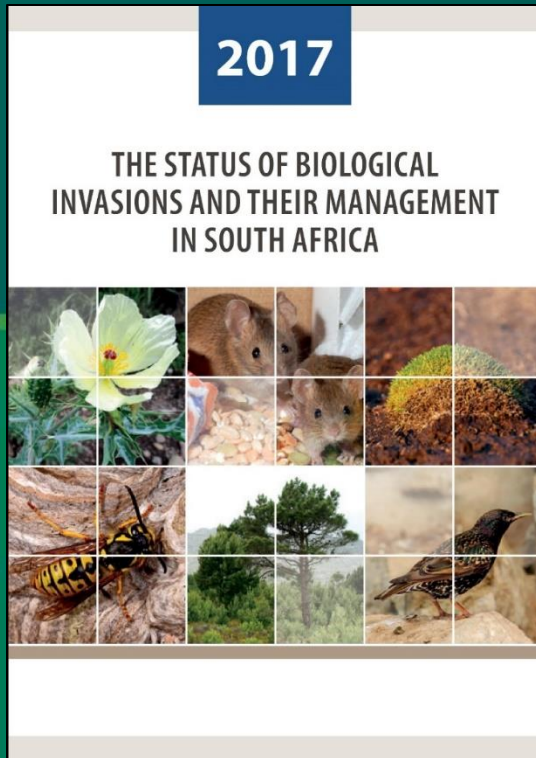


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Why is a report needed?





Key links:

The report: <http://iasreport.sanbi.org.za/>

The Centre for Invasion Biology:
<https://blogs.sun.ac.za/cib>

The funders: www.environment.gov.za/

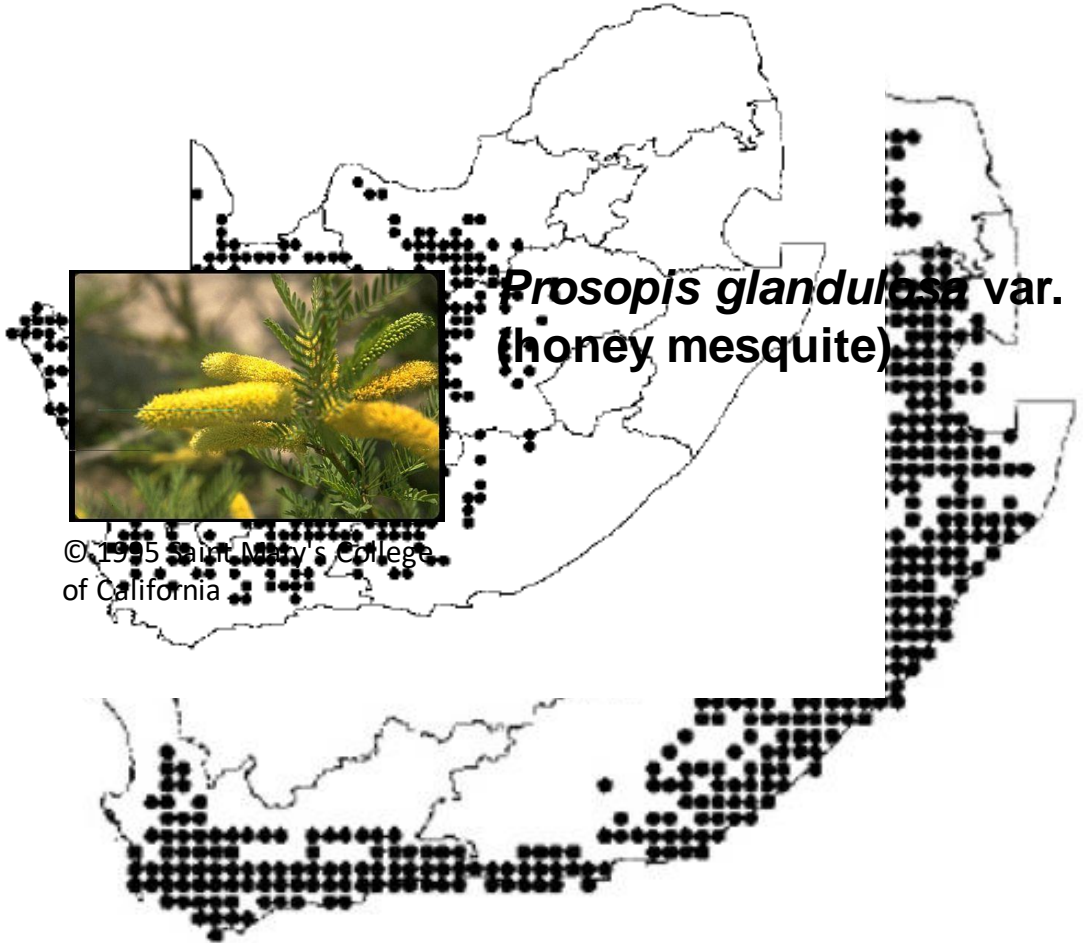
Historical investment in clearing:
<https://sites.google.com/site/wfwplanning>

General RSA web-site on biological invasions:
www.invasives.org.za

For the latest information on the PSHB:
<https://www.fabinet.up.ac.za/ps hb>

South Africa

Roles of widespread plant invasions



Acacia mearnsii (black wattle)

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Site-based intervention responses

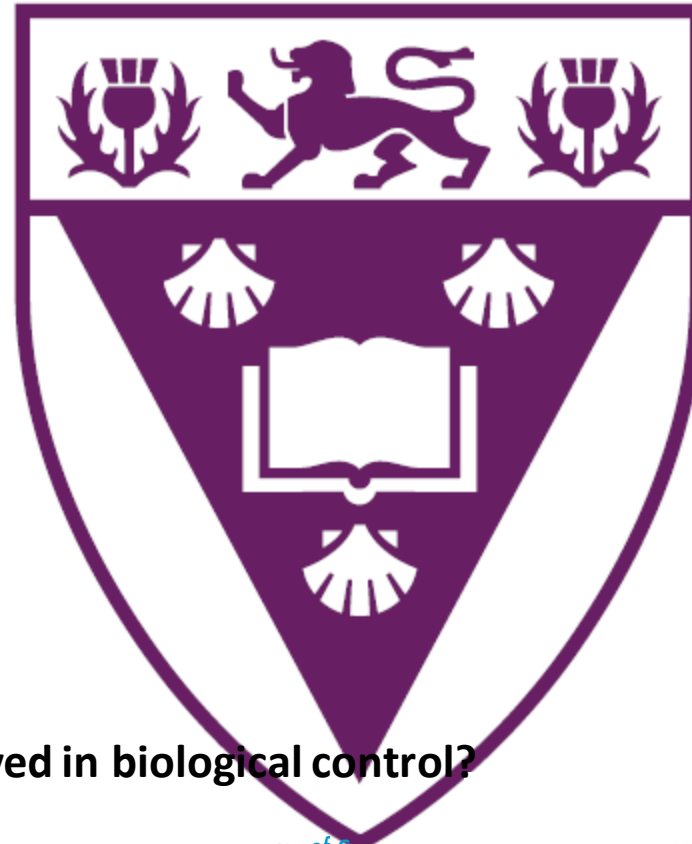


Government-supported teams treat ~160 000 ha of invaded land each year, creating >10 000 jobs per year (Extended Public Works Programme – Working for Water)

The effectiveness has been formally estimated in a few studies—it is possible to clear heavily invaded sites; but at many sites invasions are getting out of control

SANBI has a programme of work focused on early detection and eradication of invasives – to mitigate against the spread of new invasions





Who is involved in biological control?

RHODES UNIVERSITY



agriculture, land reform & rural development
Department: Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA



Interventions: Legislation, Implementation, Research

- **Regulations**

- NEMBA and AIS Regulations (*input from SANBI*)
- Deliberate legal introductions are well regulated (see pathways)
- Permit applications process well-established and functional (~40 permits are issued per month)



- **Compliance & Enforcement**

- The first successful prosecution for not clearing invaded land

- **National Strategy**

- A national strategy on biological invasions is currently in development by the DFFE. This will help guide the implementation of control measures.

- **Operations**

- Working for Water Programme - Clearing of invasive species (Ecological, Social and Economic Outcomes); early detection and rapid response (*SANBI*)
- Use of Biological Agents

- **Research**

- Regular assessments (*SANBI*)
- Risk Analyses (*SANBI*)



Interventions: Management Plans

- 35 out of 44 introduction pathways have management plans in place
- Species-level plans prepared for a few widespread invasive species and several eradication targets, yet to be formally adopted
- Plans in place to manage invasions at sites have increased, but still only cover 4.5% of the country
- Existing plans could be made more comprehensive
- The first phase of a control programme to eradicate invasive mice from Gough Island was completed in 2021. Efforts to eradicate mice from Marion Island are due to start in 2023.





Key findings

- Biological invasions
 - have had severe impacts on all sectors of society;
 - are a major threat to South Africa's biodiversity, economy, and sustainable development; but
 - can be dealt with if effective control measures are implemented
- We need to have a collaborative strategic approach that cuts across sectors and keeps investing to secure our future
- South Africa is a global leader in understanding and managing invasions



- This report is one of many initiatives to improve how South Africa responds to this challenge

Key findings

- Rate of introductions down (though still significant new introductions)
- NEM:BA A&IS Regulations are being enforced
 - Lawful, intentional import of alien species regulated
 - Prosecutions for failing to manage invaded land
 - Permitting process in place and functional
- Several success stories for control
 - Massive returns on investment for classical biological control of invasive plants
 - Invasive freshwater fish removed from stretches of river, with recovery of native fish species
- Bold plans to eradicate mice from Marion Island in place for 2023
- South Africa a global leader in invasion science

Key findings *and responses*

- Alien species continue to arrive accidentally.

Biosecurity capacity and inspections have increased. Major project to increase biosecurity capacity and inter-departmental collaboration to be funded through the Global Environment Facility.

- Some alien species have significant benefits for some, but damage for others, creating conflicts of interest. This has negatively impacted ability to manage uncontested invasive taxa.

Evidence base for regulation being improved, and processes needed to resolve disputes

- Control efforts are not keeping pace with invasions in some priority areas

Formal programmes to monitor the effectiveness of interventions in terms of outputs and outcomes would allow the efficacy of control to be demonstrated, and control measures to be compared and improved.

Key findings *and responses*

- The implementation of control measures currently occurring without guiding documents.

A National Invasive Species Strategy and Action Plan is under development and a policy process has been initiated. These documents will provide inter-departmental vision to address the societal problem.

- Historical investment in research has provided the necessary foundation for management and policy, but is under threat.

Investment in the research foundation will ensure South Africa can continue to detect and manage future biological invasions and provide the evidence base to discuss conflicts of interest and inform the allocation of limited resources.

Acknowledgements



SANBI



Biodiversity for Life

South African National Biodiversity Institute

Thank you!

