

Beyond the beasts: engagement in the environmental domain

Graham Kerley



Two faces of the environment



Supporting Society

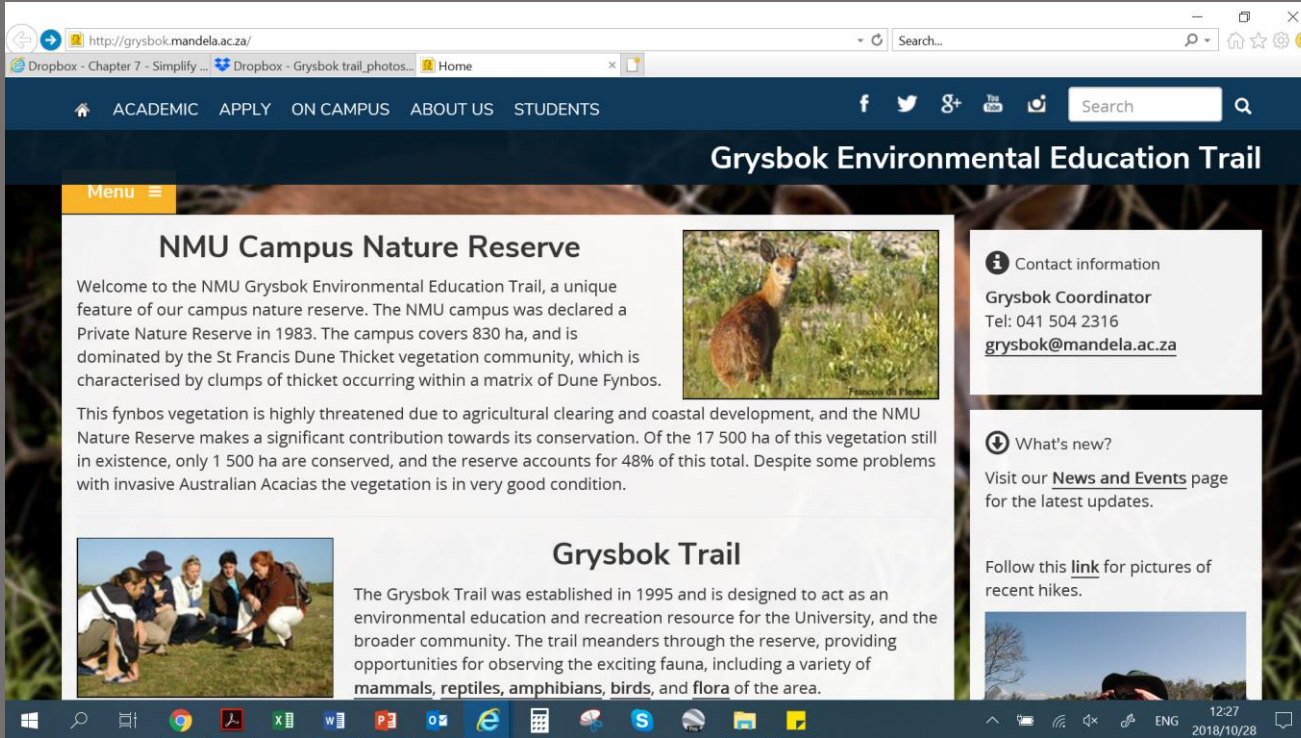


Threatening Society

Environmental Engagement will be key to supporting societal well-being

- Grysbok Environmental Education Trail
- Capacity Building for elephant decision makers
- Scientific Assessment on Livestock predation in South Africa

Grysbok Environmental Education Trail



The screenshot shows a web browser window with the URL <http://grysbok.mandela.ac.za/>. The website has a dark blue header with navigation links: HOME, ACADEMIC, APPLY, ON CAMPUS, ABOUT US, and STUDENTS. Below the header is a search bar and social media icons. The main content area is titled "Grysbok Environmental Education Trail" and features a "Menu" button. The first section is "NMU Campus Nature Reserve", which includes a welcome message, a photo of a reedbuck, and contact information for the Grysbok Coordinator (Tel: 041 504 2316, grysbok@mandela.ac.za). The second section is "Grysbok Trail", which includes a photo of a group of people and a description of the trail's purpose and location. The website is displayed on a Windows operating system, with the taskbar showing various application icons and the system clock indicating 12:27 on 2018/10/28.

NMU Campus Nature Reserve

Welcome to the NMU Grysbok Environmental Education Trail, a unique feature of our campus nature reserve. The NMU campus was declared a Private Nature Reserve in 1983. The campus covers 830 ha, and is dominated by the St Francis Dune Thicket vegetation community, which is characterised by clumps of thicket occurring within a matrix of Dune Fynbos.

This fynbos vegetation is highly threatened due to agricultural clearing and coastal development, and the NMU Nature Reserve makes a significant contribution towards its conservation. Of the 17 500 ha of this vegetation still in existence, only 1 500 ha are conserved, and the reserve accounts for 48% of this total. Despite some problems with invasive Australian Acacias the vegetation is in very good condition.

Grysbok Trail

The Grysbok Trail was established in 1995 and is designed to act as an environmental education and recreation resource for the University, and the broader community. The trail meanders through the reserve, providing opportunities for observing the exciting fauna, including a variety of **mammals, reptiles, amphibians, birds, and flora** of the area.

Contact information

Grysbok Coordinator
Tel: 041 504 2316
grysbok@mandela.ac.za

What's new?

Visit our **News and Events** page for the latest updates.

Follow this **link** for pictures of recent hikes.



Capacity Building for elephant decision makers

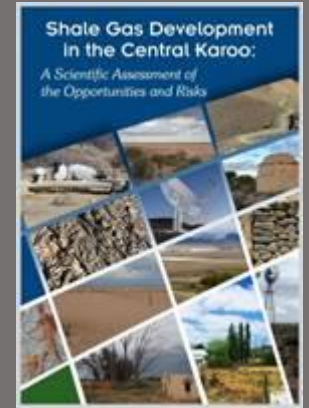
- Two courses in 2017



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Livestock Predation and its Management in South Africa: A Scientific Assessment



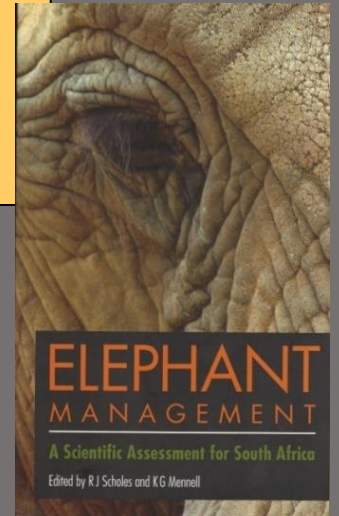
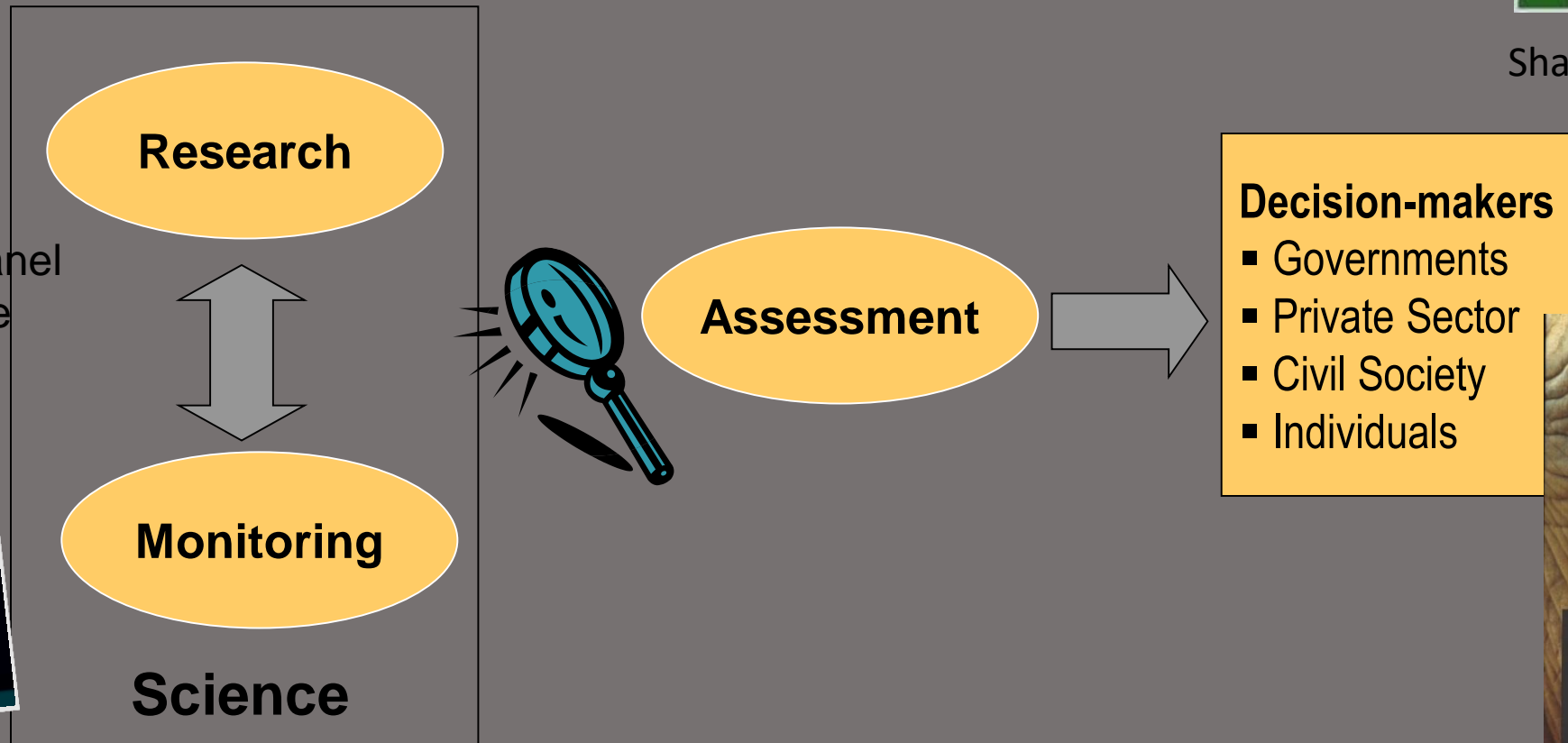
Shale Gas SEA



Intergovernmental Panel
on Climate Change
(IPCC)



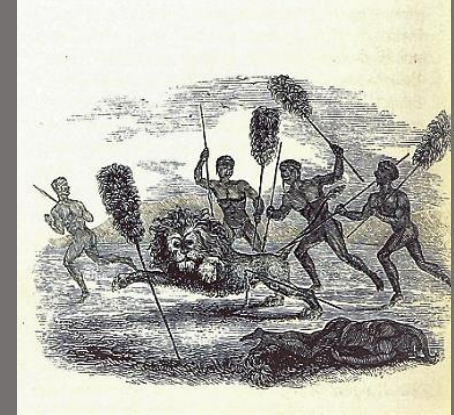
Millennium Ecosystem
Assessment



Scientific Assessment:
Elephant Management

Why Livestock Predation?

- Livestock losses > R2 billion/year
- Costs carried by individual farmer
 - ~ 2 million communal livestock farmers
 - ~ 35 000 commercial livestock farmers
- Impacts on rural livelihoods, employment and food and fibre security
 - Especially in marginal farming areas
 - contributes to social tensions
- Management approaches are contentious
 - Animal welfare
 - Effectiveness







Livestock Predation and its Management in South Africa: A Scientific Assessment

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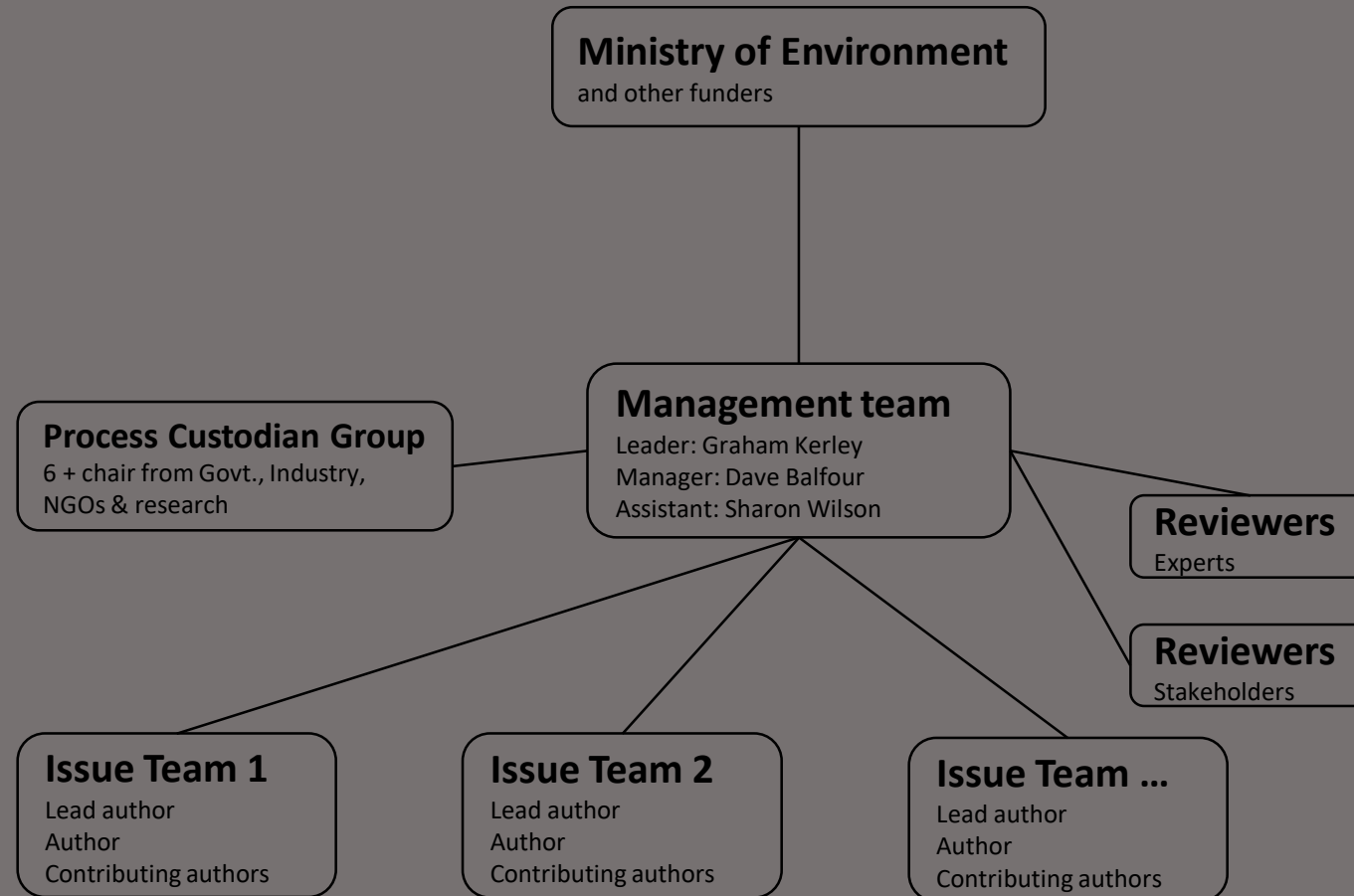
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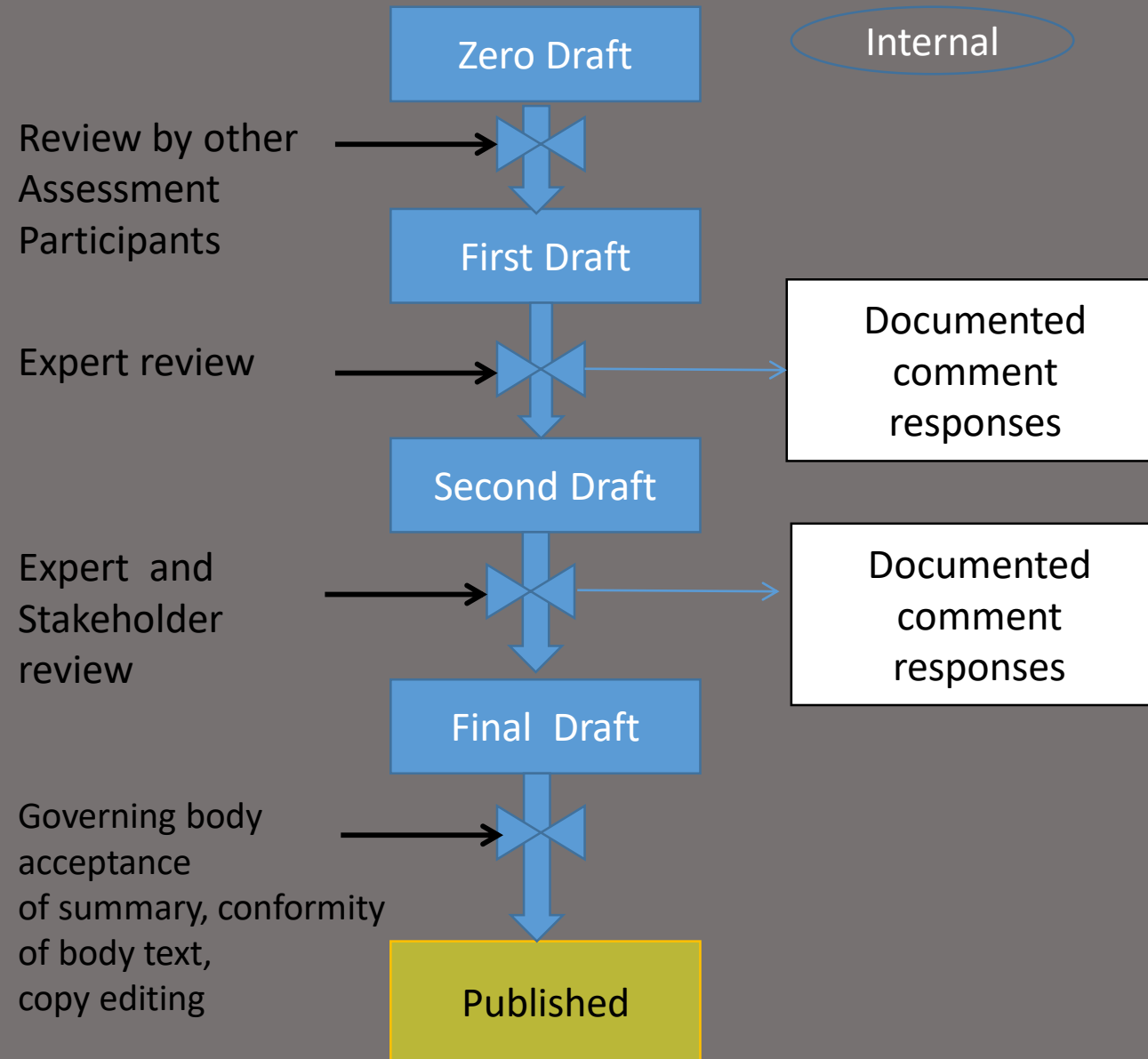
History

- 2012: Project conceived (G. Kerley, A. Aucamp, A. Boshoff)
- 2012 to 2016: funding raised;
- 2016: Team assembled (G. Kerley, D. Balfour & S. Wilson);
- 2016: Ministerial endorsement (Environment & Agric.);
- 2016: Project launched at NWGA Congress.
 - Website developed <http://predsa.nmu.ac.za/>
- 2018: Assessment completed

Process and Governance



The drafting and review process



- Compiled as a book
 - 42 authors
 - 22 institutions across SA
- Technical review
 - 24 expert reviewers
- Stakeholder review

Livestock Predation and its Management in South Africa: A Scientific Assessment

Editors

Graham Kerley, Sharon Wilson and Dave Balfour



2018

Summary for Policymakers

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Chapter 1

INTRODUCTION – THE NEED FOR, AND VALUE OF A SCIENTIFIC ASSESSMENT OF LIVESTOCK PREDATION IN SOUTH AFRICA

Chapter 2

HISTORY OF PREDATOR-STOCK CONFLICT IN SOUTH AFRICA

Chapter 3

THE SOCIO-ECONOMIC IMPACTS OF LIVESTOCK PREDATION AND ITS PREVENTION IN SOUTH AFRICA

Chapter 4

ETHICAL CONSIDERATIONS IN THE MANAGEMENT OF LIVESTOCK PREDATION

Chapter 5

LEGAL CONSIDERATIONS IN THE MANAGEMENT OF PREDATION ON LIVESTOCK

Chapter 6

PAST AND CURRENT MANAGEMENT OF PREDATION ON LIVESTOCK

Chapter 7

BIOLOGY AND ECOLOGY OF THE BLACK-BACKED JACKAL AND THE CARACAL

Chapter 8

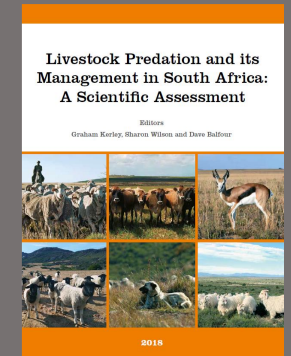
THE ROLE OF MESOPREDATORS IN ECOSYSTEMS: POTENTIAL EFFECTS OF MANAGING THEIR POPULATIONS ON ECOSYSTEM PROCESSES AND BIODIVERSITY

Chapter 9

BIOLOGY, ECOLOGY AND INTERACTION OF OTHER PREDATORS WITH LIVESTOCK

Outcomes?

- Comprehensive assessment, global first
- Economic impacts may be relatively small in terms of GDP, but high at the individual farmer scale, with impacts on the rural economy, employment and food security
- Commercial and communal livestock farmers face similar predation challenges
- Predation management rather than predator control
- No simple solution to managing livestock predation
- Legislation and regulations need overhaul
- Adaptive management approach needed to better use existing information
- Collaborative relationship between livestock managers, researchers and policymakers
- Policy needs to take into account the “shifting baselines” around the issue.



Engagement leading to scholarly outputs

Commentary
Page 1 of 3

Scientific assessment of livestock predation in South Africa

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Livestock predation in South Africa: The need for and value of a scientific assessment

Predation of livestock in South Africa has been estimated to cost in excess of ZAR1 billion in losses per year¹ and has complex social, economic and ecological drivers and consequences. In this context, livestock can be broadly defined as domesticated animals and wildlife (the former excluding poultry and the latter including ostrich, *Struthio camelus*) managed for commercial purposes or human benefit in free-ranging (or semi-free ranging) circumstances that render them vulnerable to predation. This conflict between livestock producers and predators, and the attempts to manage it, has persisted for over 350 years, with the most notable outcome being the eradication of the majority of the apex predators across much of South Africa.² In contrast, the mesopredators, black-backed jackal (*Canis mesomelas*) and caracal (*Caracal caracal*) are by all accounts thriving, at least as measured by their impact on livestock production. Increasingly, attempts to manage livestock production also include the use of predators, particularly because of the

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✓ Fully peer-reviewed
✓ DHET Subsidy

Building assessment practice and lessons from a scientific assessment on livestock predation in South Africa

Graham I.H. Kerley¹, Kevin G. Behrens², Jane Carruthers³, Marius Diemont⁴, Jurie du Plessis⁵, Liaan Minnie^{1,6}, Michael J. Somers⁷, Craig J. Tambling⁸, Jane Turpie⁹, Sharon Wilson¹, Dave Balfour¹

In prep

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