A Scientific Assessment:
Small Livestock and Predators in South Africa

Graham Kerley

THE PROBLEM OF STOCK LOSS TO PREDATORS

Initial problem formulation

- Extensive loss of livestock
- Solutions are not simple
- Costs may exceed R1 billion *per annum*
- Costs are carried by the individual stock farmer
- Threatens food security, fibre production and the rural economy

The current approach

- Has had limited local success
- Uncoordinated and falls under a variety of government policies
- Uncertain conservation consequences
- Challenged by animal rights groups

THE PROBLEM OF STOCK LOSS TO PREDATORS

Societal need

A scientifically-sound, defensible and applicable way forward that deals with the complexity of the issues and assists in managing the problem and can guide the formulation of policy and legislation

Solution

A National Scientific Assessment of Predator Livestock Issues

WHAT IS AN ASSESSMENT?

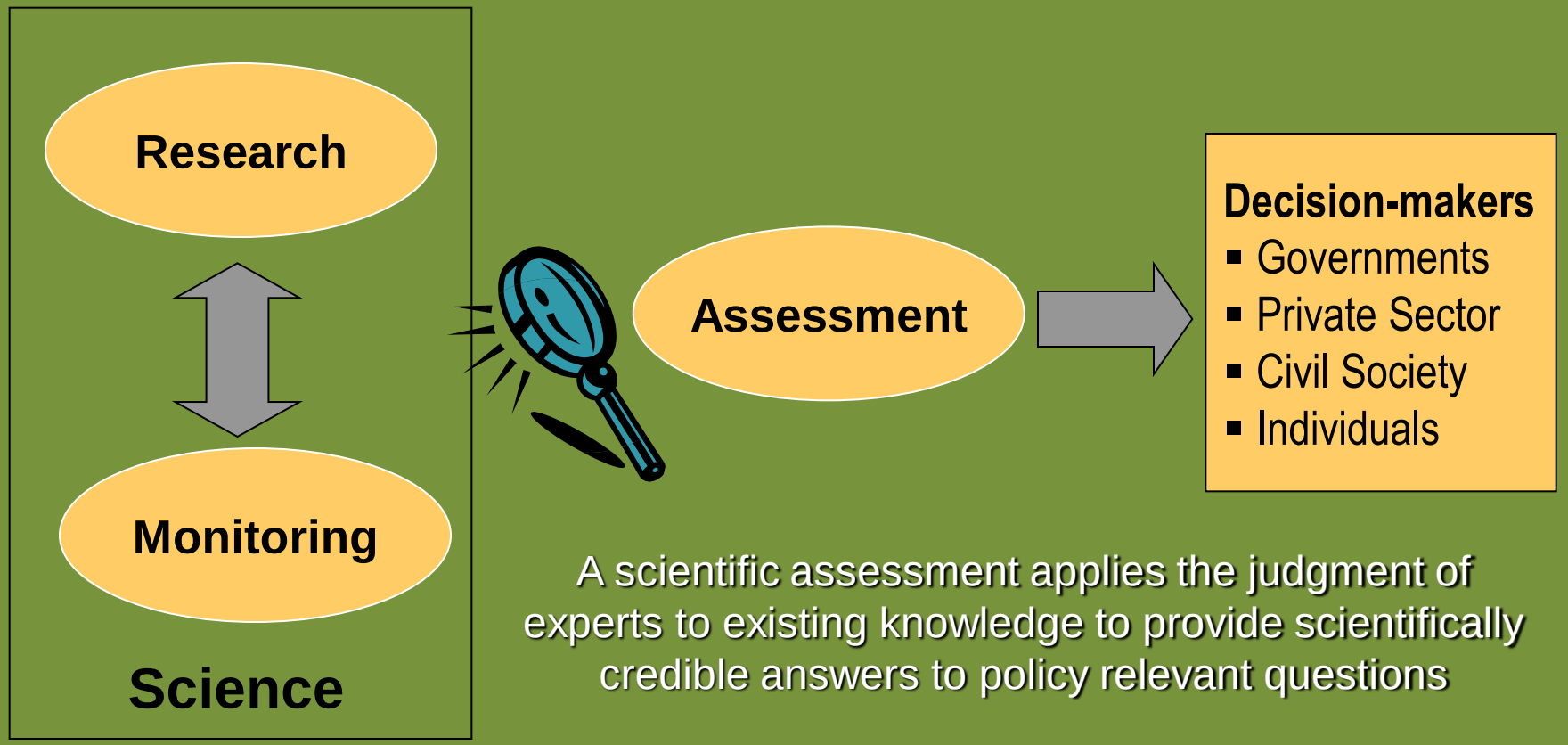
- A social process designed to bring the findings of science by relevant experts to bear on the needs of decision-makers

Importantly

- The topic is defined by the stakeholders - typically decision-makers
- Assessments are policy relevant, but not policy prescriptive
- Conducted by a credible group of experts, with a broad range of disciplinary and geographical experience, in a balanced and transparent way
- Not original research
- Reduce complexity and add value by summarisation, synthesis and sorting what is known and widely accepted from what is not known (or not agreed)
- Science policy interface that can be repeated (e.g. IPCC)

Scientific Assessment

A social process designed to bring the findings of science to bear on the needs of decision-makers



A scientific assessment applies the judgment of experts to existing knowledge to provide scientifically credible answers to policy relevant questions

Science Policy Interface

An assessment is not…

- A research project
  - Most data should already be collected, peer-reviewed and in the public domain
  - Gap filling, research on assessment, new runs of old models and synthesis are permissible
- A review paper
  - Focussed on policy
  - Judgement, clearly labelled as such, is required
- An advocacy piece
  - Must be balanced and evidence-based
- An opportunity to promote your pet topics or own work

- But may serve as a vehicle to develop a research agenda

Assessment vs Review

	Review	Assessment
Audience	**Scientists**	**Decision-makers**
Done by	**One or a few**	**Large and varied group**
Topic	**Simple and narrow**	**Broad and complex**
Identifies gaps in	**Research: curiosity-driven**	**Knowledge for implementation: problem-driven**
(Un)certainty statements	**Not required**	**Essential**
Judgement	**Hidden**	**Required but clearly flagged**
Coverage	**Exhaustive, historical**	**Sufficient to deal with main range of uncertainty**
Synthesis	**Not required**	**Essential to reduce complexity**

Assessment Characteristics

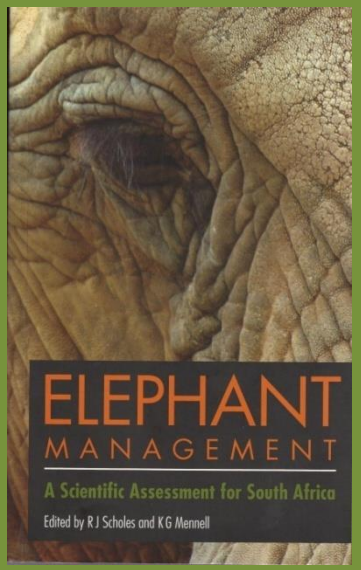
- Involve experts in the preparation and peer-review – ownership of the process and results is essential
- Conducted according to an open, transparent, representative and legitimate process
- Findings to be policy relevant, not policy prescriptive; use “if …then” approach
- It must be technically accurate
- Incorporate different views
- Take a spatially relevant perspective
- Risk assessment, management and communication

Criteria for successful assessments

- ✓ Legitimacy
- ✓ Scientific Credibility
- ✓ Saliency – Focus on User Needs

Millennium Ecosystem Assessment

Intergovernmental Panel on Climate Change (IPCC)



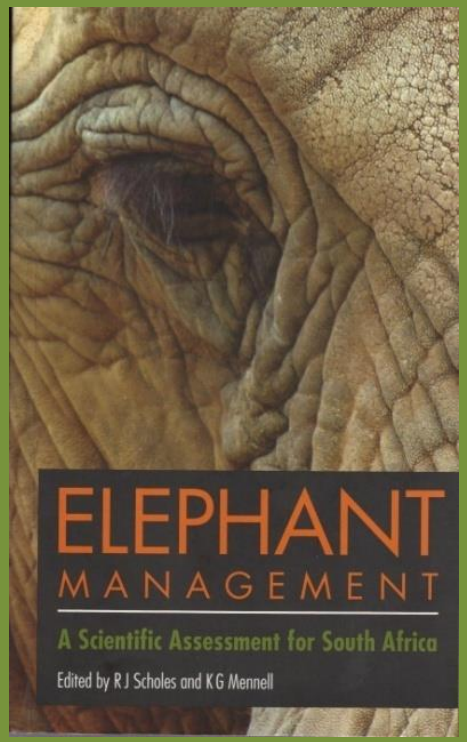
Scientific Assessment: Elephant Management

Shale Gas SEA ……

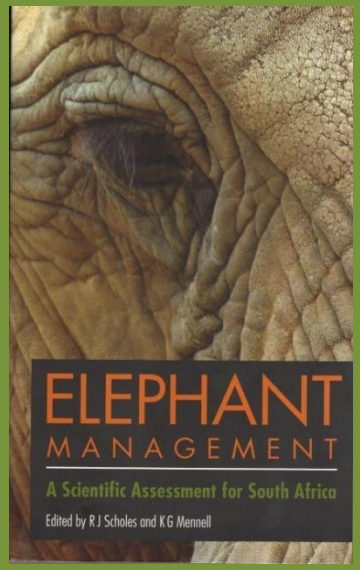
Example: Elephant Management (RSA)

Coverage

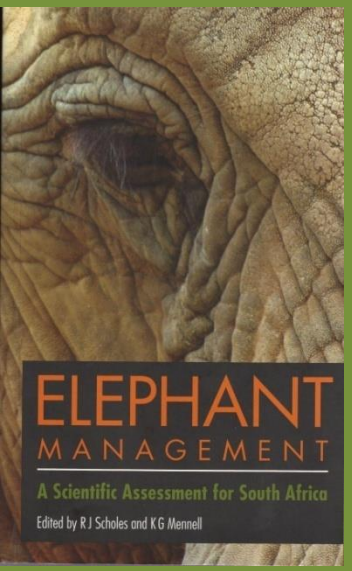
- History and distribution
- Population biology and ecology
- Effects on ecosystems and biodiversity
- Interactions: elephants and people
- Reproduction
- Translocation
- Reproductive control
- Controlling distribution
- Lethal management
- Ethical considerations
- Economic value
- National and International law
- Towards integrated decision making



The elephant debate before the assessment



- Contentious and value-laden debate
- Centred around culling and elephant rights
- Numerous public and stakeholder meetings



Process

- At the request of the Minister: DEA
- Conducted in 2007
- 63 contributing authors
- 56 independent reviewers
- Ran parallel with the development of the elephant norms and standards

Outcomes

- Defused the debate around elephant management
- Provided a valuable Executive Summary in the form of a "Summary for Policymakers"
- Informed the N&S
- Provided a conceptual framework for research

Why a Stock Predation Assessment?

- Polarised perspectives around predator management

Livestock Industry – Government - Animal Rights Groups

- Aims to guide policy and legislation and research

- Extension and Training resources needed

Process to date

- Proposal and budget developed in 2012
- Financial commitment from DEA, DAFF, Cape Wools, Mohair SA, Woolworths
- Approximately 85% of budget funded
- Now process initiated and expertise mobilized

High level process

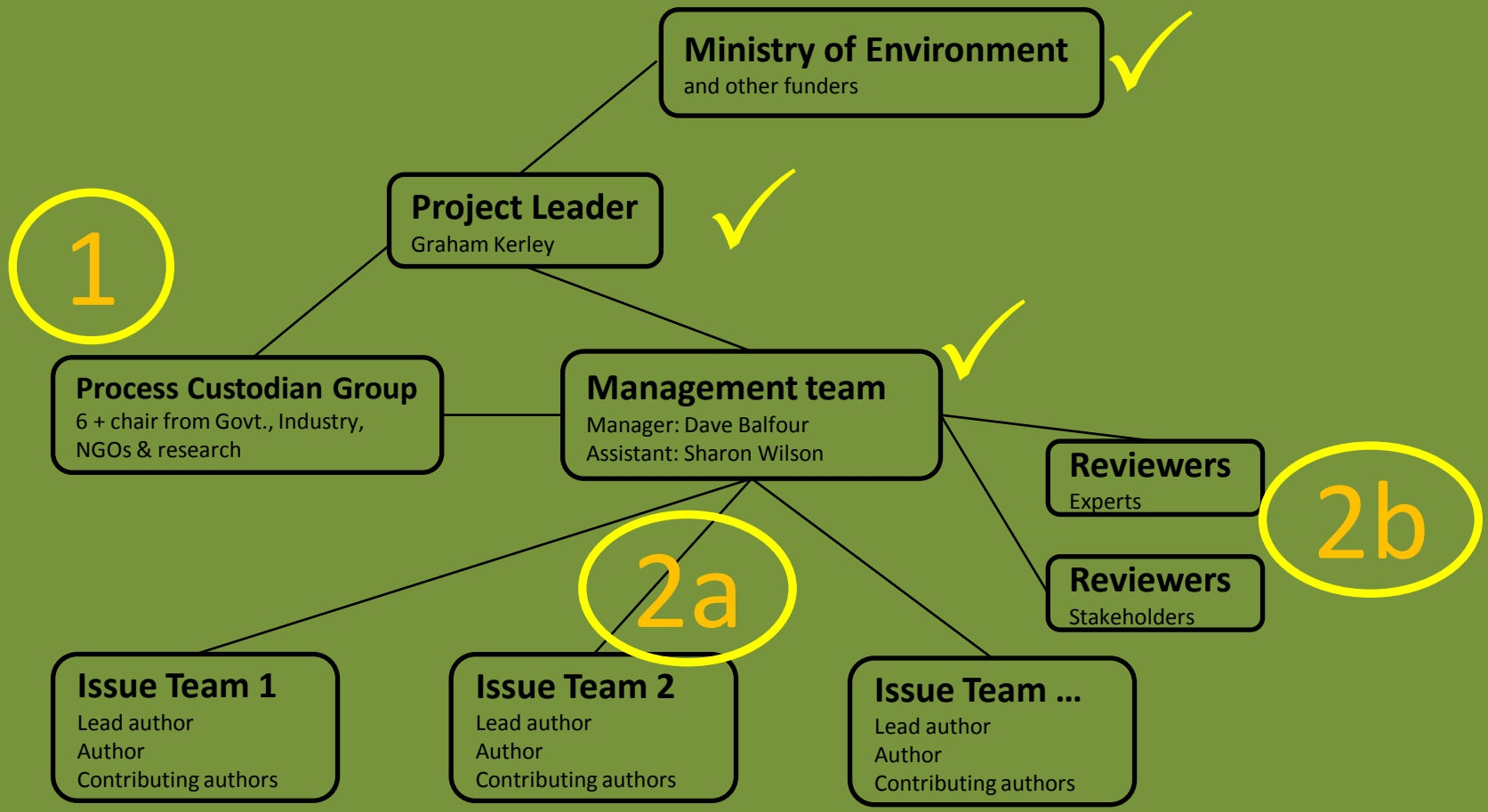
April 2016 — Aug 2016 — April 2017 — Mar 2018

PHASE 1: Preparation
Consolidate funding, recruitment, contracts, governance structures, processes, databases

PHASE 2: Assessment
Consider and organise information, assess and write, review by experts, revise and communicate, review by experts and stakeholders, revise and publish

PHASE 3: Decision support
Development of guidelines for policy makers using best practice approach

Governance


Ministry of Environment
and other funders
Project Leader
Graham Kerley
1
Process Custodian Group
6 + chair from Govt., Industry, NGOs & research
Management team
Manager: Dave Balfour
Assistant: Sharon Wilson
Reviewers
Experts
Reviewers
Stakeholders
2b
2a
Issue Team 1
Lead author
Author
Contributing authors
Issue Team 2
Lead author
Author
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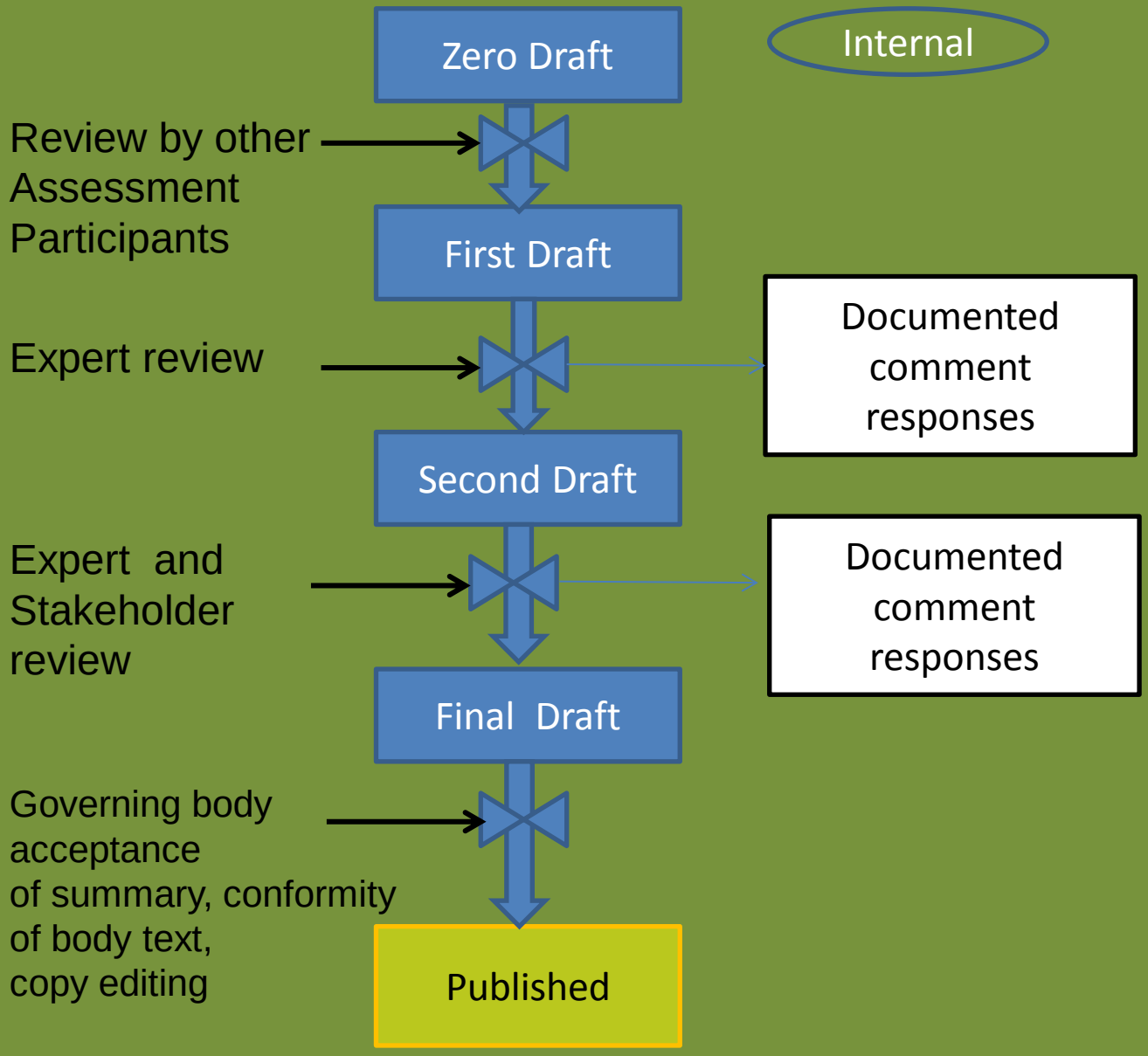
Author
Contributing authors

The review process