



environmental affairs

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Environmental Affairs
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Strategic Environmental Assessment for Shale Gas Development

Overview

*Process Custodians Group Meeting
22 July 2015*



SANBI
Biodiversity for Life



Council for Geoscience

Outline

1. Background
2. Guiding principles
3. Vision & mission
4. SEA objectives
5. Timeline and phases
6. Specialist teams and roles
7. Strategic issues
8. Writing and reviewing process
9. Risk Assessment Approach
10. SEA outputs

In brief

- South African government has made high-level public commitments to shale gas exploration
- If the exploration phase reveals viable resources, government may well consider permitting development of those resources
- South Africa needs be in a position to make the decisions relevant to that choice in a responsible manner
- DEA has commissioned a 24 month Strategic Assessment to provide the evidence and framework to guide such decisions

What this SEA is NOT

- A research project
- An EIA
- A decision-making body
- A public relations exercise

Guiding principles

- Adopt the ‘three hallmarks of successful assessment’
 - **Salience**: must address all the material issues
 - **Legitimacy**: authorised and seen to be an independent, transparent and fair process
 - **Credibility**: evidence-based, conducted by multi-author expert teams, reviewed independently

Vision & Mission

Vision:

If shale gas development occurs, it is guided by evidence based policies, robust regulatory frameworks and capacitated institutions in a manner that is ethical, responsible and transparent.

SEA mission:

To provide an integrated assessment and decision-making framework to enable South Africa to establish effective policy, legislation and sustainability conditions under which shale gas development could occur.

SEA objectives

- Undertake a scientific assessment drawing on all available evidence, evaluated by multiple experts
- Address all material issues, risks and opportunities
- Identify high risk activities and sensitive/vulnerable areas under a range of plausible development scenarios
- Define limits of acceptable social and ecological impact at regional scale
- Provide a decision-making framework for the regulation of shale gas activities

Timeline and phases

Feb 2015 Sep 2015 Oct 2016 Mar 2016



Preparation

Contracts, structures, teams, processes
Databases, Literature collation,
Information collation, GIS surfaces
Activity scenarios

Assessment

Consider and organise information, assess and
write, review by experts, revise and
communicate, review by experts and
stakeholders, revise, publish

Decision support

Guidelines, monitoring
requirements, processes,
communication

Specialist Author Teams

- Each strategic issue will be assessed by a balanced team of **experts** on the issue
- Each specialist teams will consist of 3 – 5 authors per strategic issue, including the integrating author
- Authors are selected based on their acknowledged expertise on the topic and willingness to participate
- Outputs from specialist teams are subjected to expert review, revision, then expert plus public review, followed by final revision. All comments will be documented and responded to in the public domain.

Composition of the Multi-author Teams

Role	Job description	PCG role
Integrating Author (one per issue). Expenses plus token stipend acknowledging time investment	Chairs the team meeting discussions, allocates writing tasks, ensures they are done on time and to specification, allocates reviewer response tasks, ensures they are done. Experienced expert in own right, part of overall summary/synthesis team	Approves IA selection based on expertise, experience, credibility, availability
Contributing Authors (4-5 per issue) Expenses only, modest stipend for self-employed	Collate, evaluate and summarise available information. Lead writer of an allocated section, participates in team discussions on entire topic and takes collective responsibility for it. Responds to reviewer comments in allocated section and revises drafts accordingly.	Approves author team based on expertise and balance, can suggest authors
Corresponding Author (no limit: as needed) No fee	Provides short input text on area of narrow or special expertise. May be asked to respond to reviewer comments on the material provided.	Notified of corresponding authors
Expert reviewer (>3 per issue) No fee, many are international experts	Reads first and second draft and provides written, specific and evidence-based, referenced comments	Approves list of expert reviewers, can suggest names

Strategic issues

This is the broad list going into the 1st author meeting. 1AM produces the 'Zero Draft', a detailed outline which defines topic and subtopic coverage and the limits and boundaries between issues

Surface and ground water resources
Air pollution and GHGs
Biodiversity
Spatial planning and infrastructure
Sense of place
Agriculture
Social fabric

Noise, visual and electromagnetic disturbance
Energy planning
Economic effects
Heritage resources
Waste
Geophysics and seismic effects

Writing and Review process

1st author meeting

Zero Order Draft
(outline)

Internal review

Writing by author teams

First Order Draft

Review by experts

2nd author meeting

Revision by author teams

Documented Comment
responses

PCG
approve

Second draft

Public
communication

PCG
approve

Review by experts
and stakeholders

3rd author meeting

Revision by author teams

Documented
Comment
responses

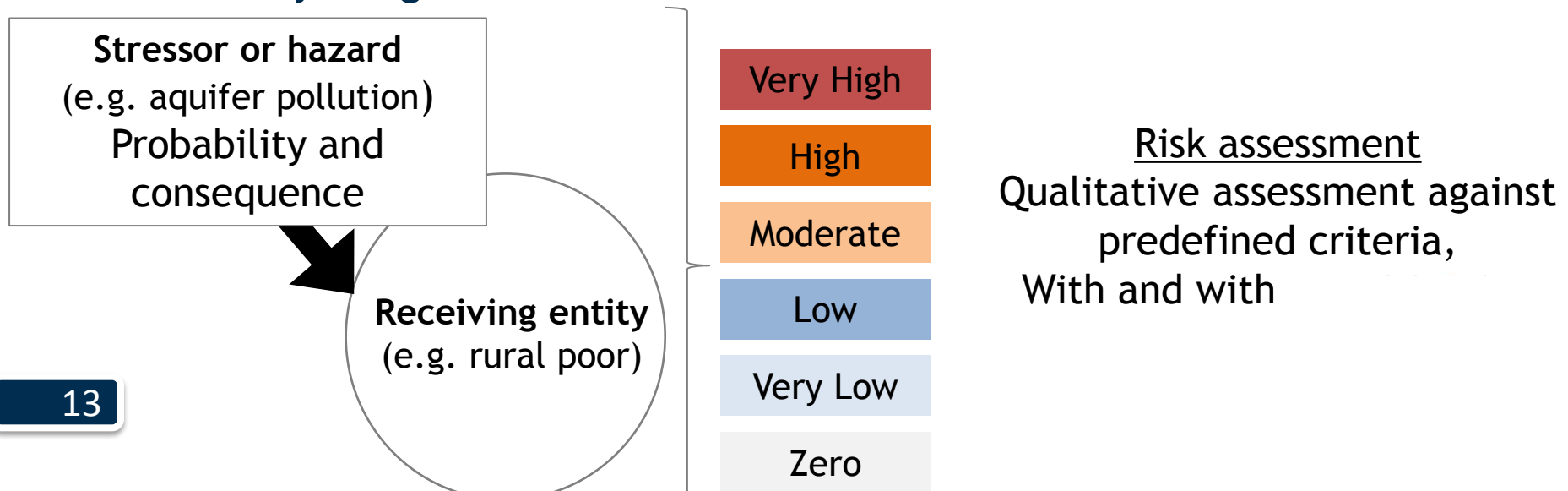
PCG
approve

Assessment report

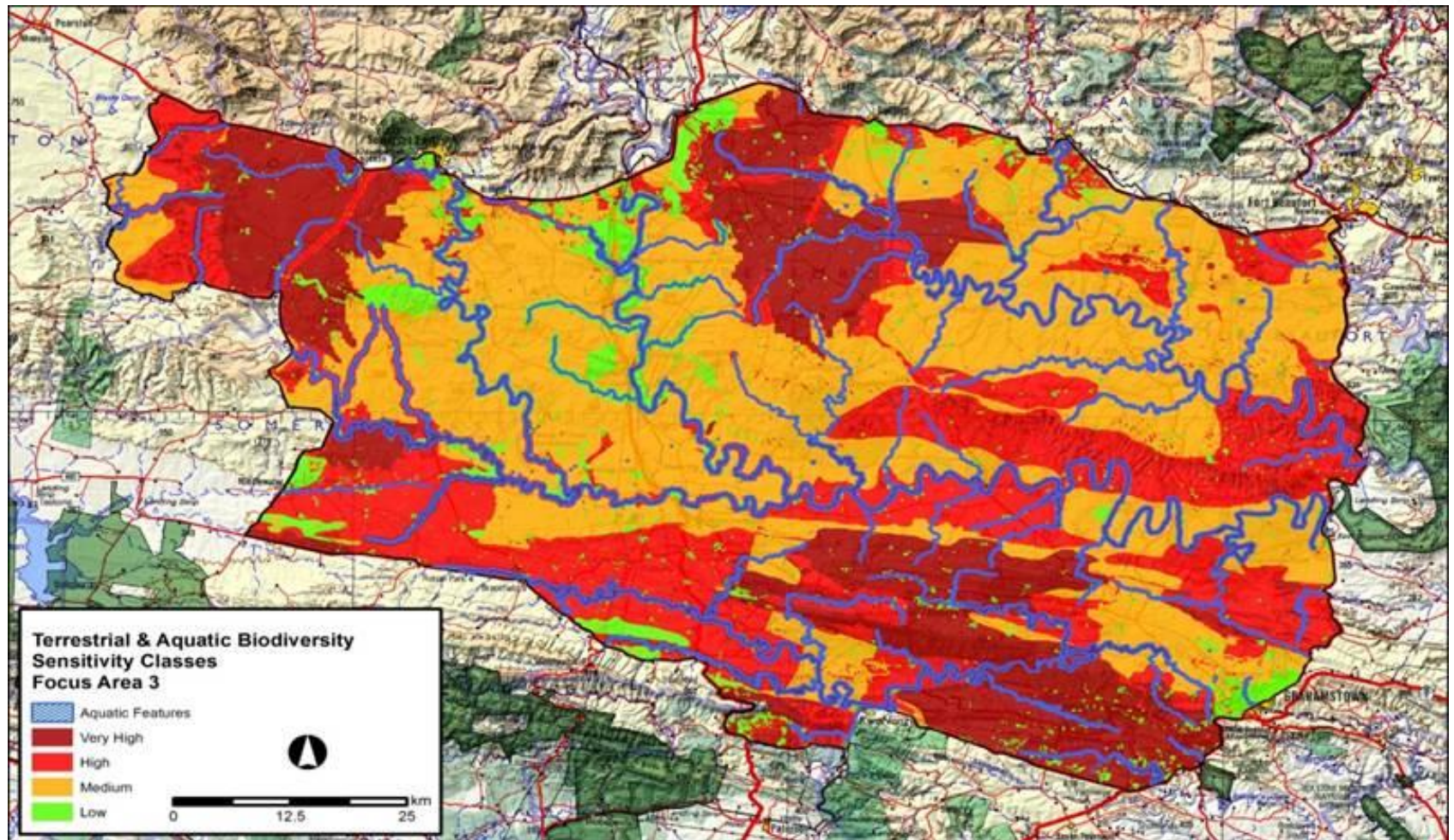
Publication and
communication

Risk Assessment Approach

- Acknowledges that there is uncertainty about the future even after best current evidence is considered. Decisions in this context requires an informed judgment, based on risk.
- Consider range of issues in a consistent manner and in a spatial context
- Integrate a wide range of information addressing the likelyhood, severity, consequences in relation to receiving entity and its sensitivity, to get a risk assessment



Example vulnerability map: Wind & Solar SEA



SEA outputs

For each strategic issue

- **Risk assessment** using consistent approach
Hazard, vulnerability, mitigation potential
- **Sensitivity** (vulnerability) spatially represented
- **Limits** of acceptable change at regional scale

The specific information need to inform

- **Guidelines** for permitting processes
- **Monitoring** protocols
- **EMPr & EIA** principles and requirements



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Strategic Environmental Assessment for Shale Gas Development

Project governance

*Process Custodians Group Meeting
22 July 2015*



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Outline

1. SEA project governance
2. PCG selection principles and process
3. PCG Terms of Reference
4. Stakeholder engagement

SEA project governance

PEC

‘Project management’

- Department of Environmental Affairs
- Department of Water and Sanitation
- Department of Mineral Resources
- Department of Energy
- Department of Science and Technology
- Department of Agriculture, Forestry and Fisheries
- Provincial Government Eastern Cape
- Provincial Government Western Cape
- Provincial Government Northern Cape
- The Project Team

PCG

‘Process oversight’

- Department of Environmental Affairs
- Department of Performance Monitoring and Evaluation
- Department of Economic Development
- South African Local Government Agency
- PetroSA
- South African Tourism Association (*declined, no capacity*)
- Business Unity South Africa
- Onshore Petroleum Agency South Africa
- AgriSA
- South African NGO Coalition (*declined, required travel costs*)
- Treasure the Karoo Action Group
- South African Faith Communities Environment Institute
- WWF - South Africa
- Nelson Mandela Metropolitan University
- Water research Commission
- Square Kilometre Array
- Human Sciences Research Council
- South African Human Rights Commission
- The Project Team
- International Association of Impact Assessment – South Africa (IAIA-SA)

Project Team

Specialists / Experts
+
Stakeholders

PCG selection principles and process

- **Selection principles**

- *Representation*: the organisation represents a broad and important constituency of people in South Africa through legitimate structures; and
- *Credibility*: the organisation represents the views of their sector and are collectively knowledgeable on matters that affect the interests of their sectors

- **Selection process**

- PCG Nomination process facilitated by DEA
- Invitation letters sent to representatives from DEA DG on 23 June
- Responses and logistics arranged by Project Team

PCG Terms of Reference

The PCG verifies that the assessment process is credible, legitimate and salient

- Check that the issues being considered are appropriate;
- Confirm that the selection of author teams who will conduct the assessment is credible, sufficient and balanced;
- Ensure that the expert reviewers selected are independent and credible
- Confirm that the authors have addressed all of the comments received in a fair and balanced way
- Ensure that the findings are communicated in an accessible and clear fashion

Stakeholder engagement

- Project website serves as ‘knowledge portal’ for stakeholders

<http://seasgd.csir.co.za>



- SEA outputs will be subject to stakeholder comment via the project website
- Briefings and outreach meetings (x 6 meetings) will be open to the public



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Strategic Environmental Assessment for Shale Gas Development

SEA Scope, Issues and Specialist Teams

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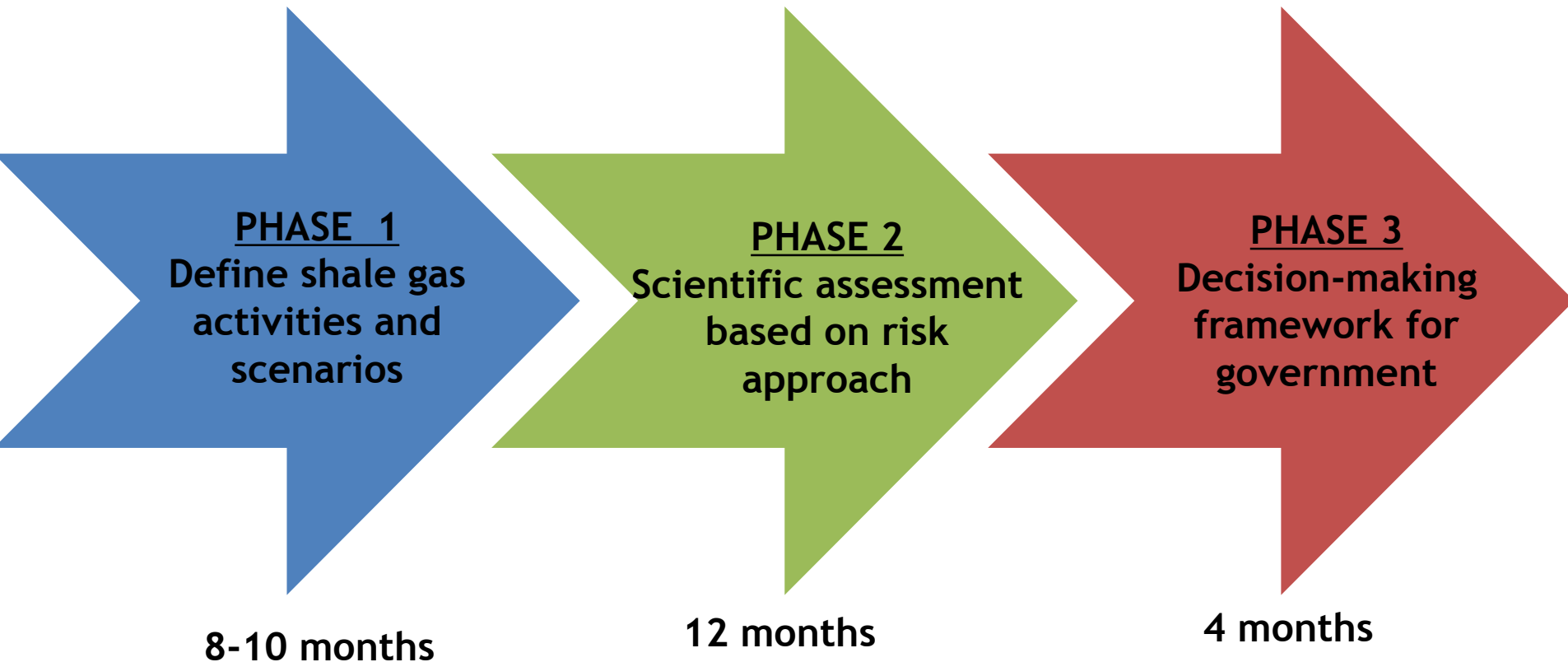


Council for Geoscience

Outline

1. SEA process
2. Study area
3. Strategic issues
4. Specialist Teams
 - Scenarios and activities
 - Strategic issues
 - Specialist Team workshops

SEA process



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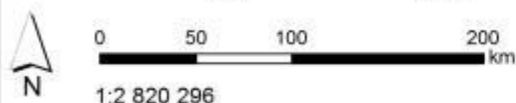
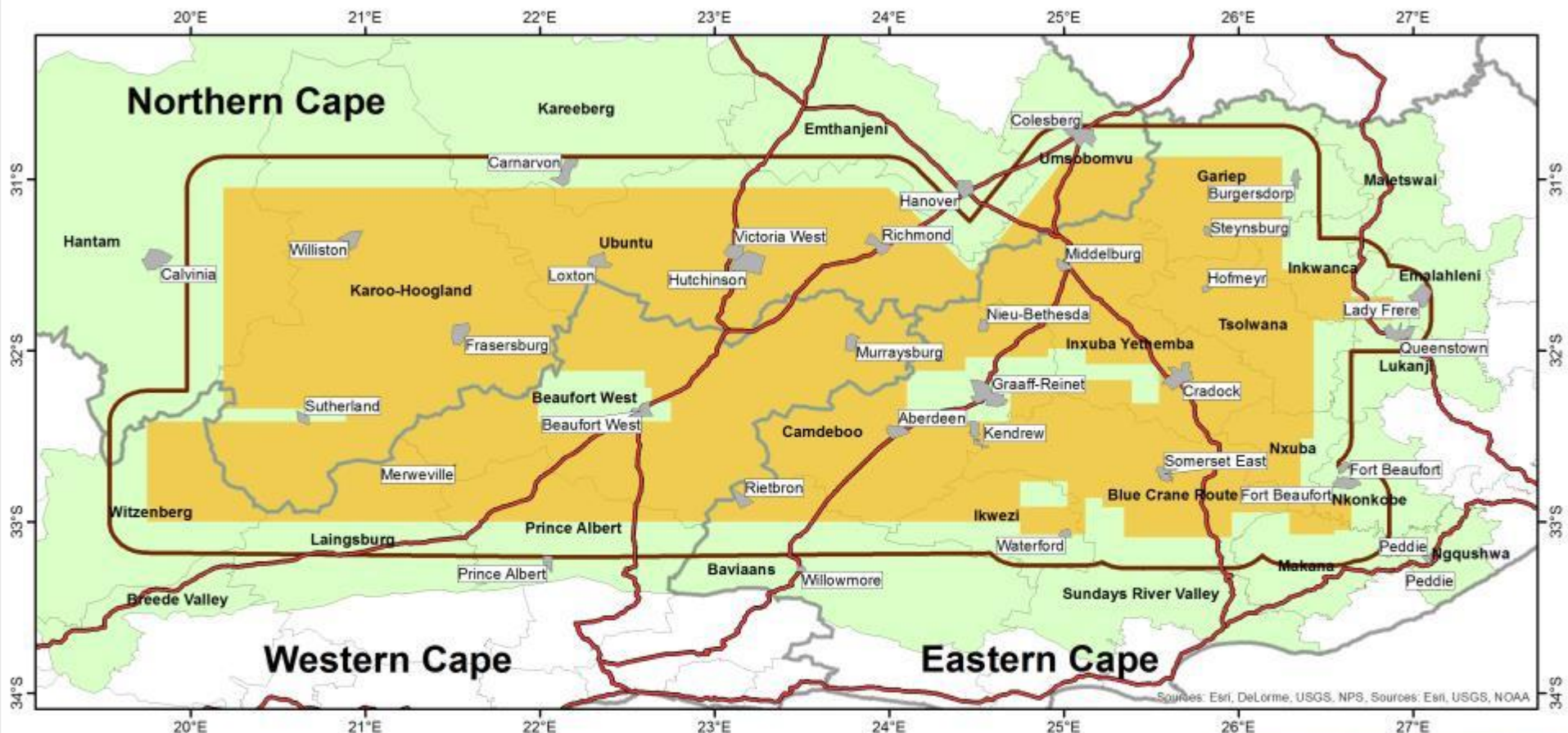
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Biodiversity for Life

South African National Biodiversity Institute



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Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

Legend

- Proposed SEA study area
- Exploration Rights application areas
- Towns
- South African Local Municipalities
- South African Provinces
- National Roads
- Local Municipalities within the proposed SEA study area



Strategic issues

- The 'Environment' includes social, economic and biophysical spheres. Strategic Issues include:

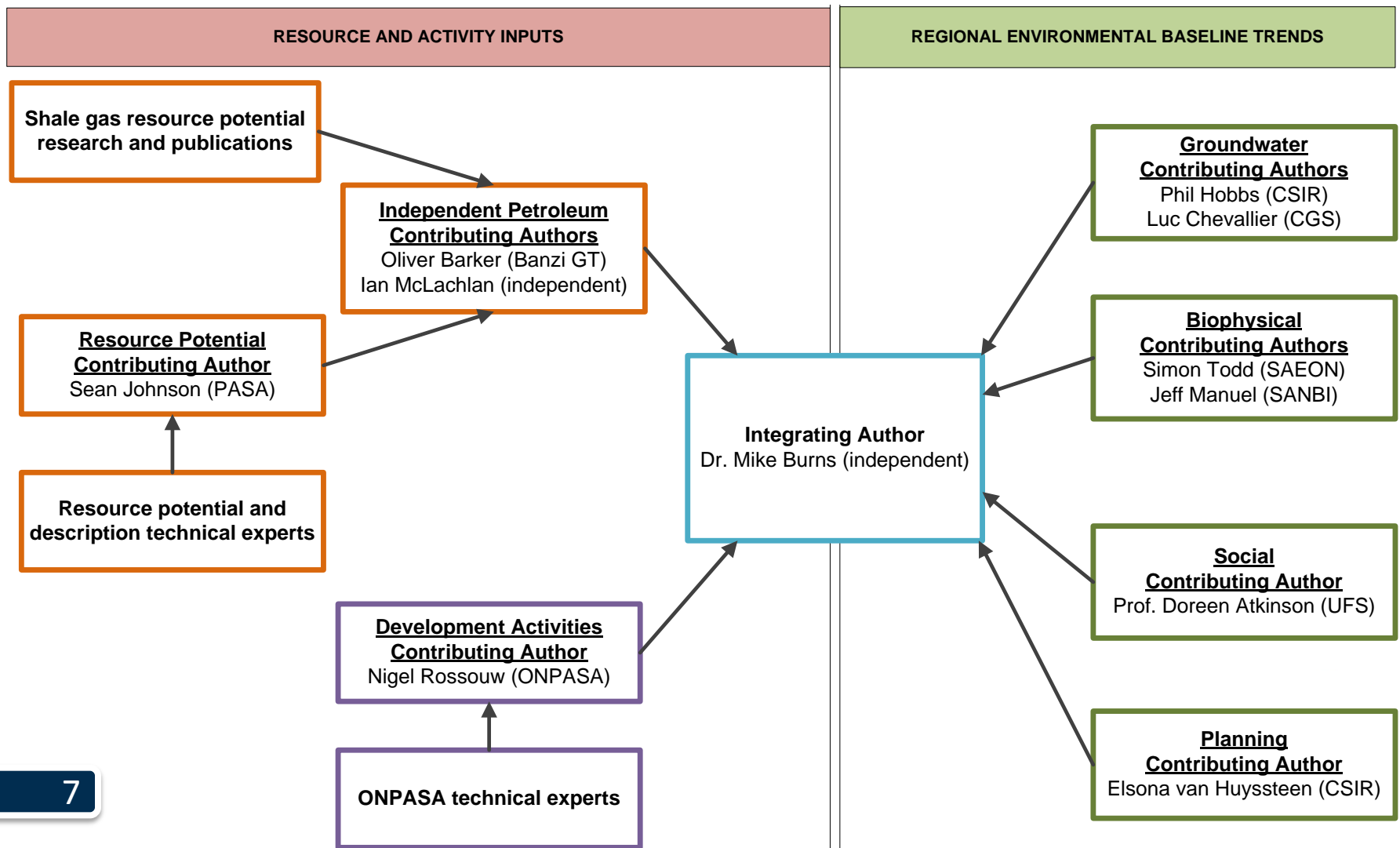
- ☐ Scenarios and Activities
- ☐ Biodiversity and Ecosystem Services
- ☐ Air Quality & GHG Emissions
- ☐ Social Fabric
- ☐ Geophysics
- ☐ Heritage Resources
- ☐ Visual, Noise & Electromagnetics
- ☐ Waste Management
- ☐ Spatial Planning
- ☐ 'Sense of place' (values assessment)
- ☐ Economics (including tourism)
- ☐ Energy Planning
- ☐ Agriculture
- ☐ Water Resources (Surface & Subsurface)

Scenarios and activities

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Scenarios & Activities document

SHALE GAS SEA SCENARIOS AND ACTIVITIES DOCUMENT



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Specialist Team workshops

- Opportunity to discuss the approach to the assessment, inter-topic issues, intra-topic issues and the delivery of key assessment outputs
- Attended by Integrative- and Contributing Authors
- First workshop scheduled for September 2015



Thank you

Scenarios & Activities document

- Primary input for specialist teams assessing strategic issues.
- **Status quo** of the Karoo includes many trends of land-use change due to factors such as:
 - Urbanisation
 - Migration
 - Climate change
- Shale gas development = **Introduced driver of change**
- Inputs from industry experts to describe:
 - Shale gas resource potential in the Karoo
 - Technical aspects of exploration, production and decommissioning activities