

Strategic Environmental Assessment for Shale Gas Development in South Africa

Process Custodians Group (PCG) Meeting #3 on 3 May 2016
Project Executive Committee (PEC) Meeting #3 on 4 May 2016

CSIR Pretoria – Demo Room

Process Custodians Group (PCG) Mandate

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

1. The has been followed within the guidelines set out in the SEA process document;
2. The author teams have the necessary expertise and show balance;
3. The assessment covers the material issues;
4. The identified expert reviewers are independent, qualified and balanced; and
5. The review comments received from expert and stakeholder reviewers have been adequately addressed and documented.



Project Executive Committee (PEC) Mandate

The PEC is a project management structure mandated to:

1. Ensure that the project remains on scope, timelines and budget
2. Check that strategic and policy level questions are addressed sufficiently
3. Evaluate feedback from the Process Custodians Group (PCG)
4. Coordination and conduit of information e.g. through Provincial forums



Purpose of the Meeting: PCG & PEC #3

1. Welcome and introductions
2. Adoption of previous meeting notes
3. Progress on the SEA
 - a) Outreach feedback and programme
 - b) Scenarios and Activities Second Order Draft
 - c) Peer Review Process for First Order Draft
4. Preliminary feedback on First Order Drafts
5. Key dates going forward
6. Other matters and next meeting



Timeline of entire SEA

Feb 2015 Sep 2015 Oct 2016 Mar 2017

Preparation Phase

Contracts, structures, teams, processes
databases, literature collation,
information collation, GIS surfaces,
Scenarios and Activities Document

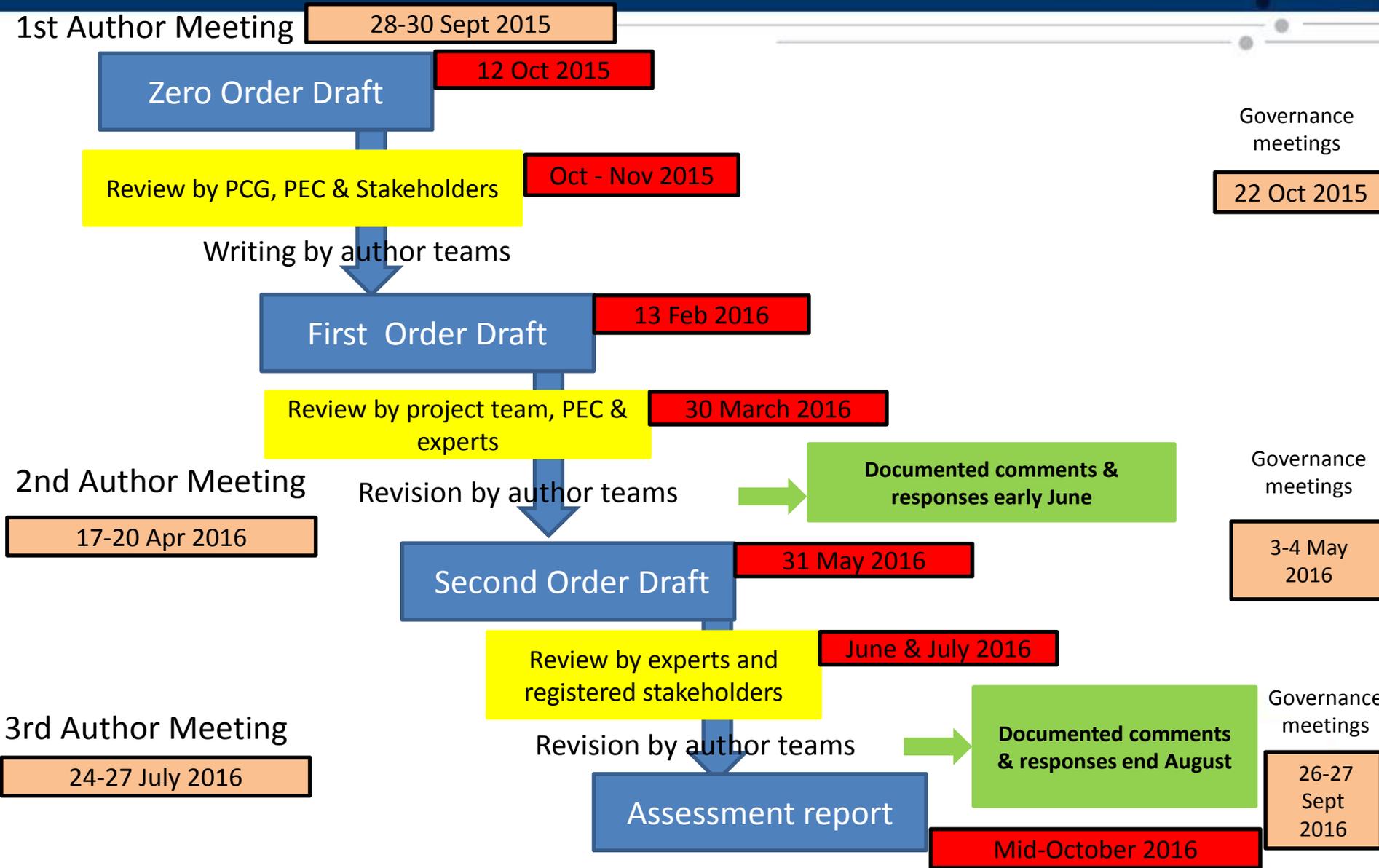
Scientific Assessment

Organise relevant information, investigate strategic
issues, assess and write-up outcomes, review by
experts, revise and communicate, review by
experts and stakeholders, revise, release

Decision Making Framework
Risk mapping, EMPr principles,
best practice, limits of
acceptable change

Stakeholders, governance, media engagement, SANBI biodiversity bioblitz

Scientific Assessment (Phase 2) timing



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Feedback on outreach program

SEA Progress - Feedback on Nov 2015 Outreach

- ~ 450 stakeholders registered on the database receiving project updates, presentations, documents for comment
- Zero Order Draft published for comment 12 Oct 2015
- 1st round of public outreach (Round 1a):
 - 09 -13 Nov 2015
 - Graaff Reinet, Beaufort West and Victoria West public briefings
 - Cape Town full day workshop for Registered Stakeholders
- Common concerns: involvement of municipalities and wards prior to and at meetings, governance / policing of regulations, the 17 strategic issues



NOTIFICATION OF PUBLIC BRIEFINGS FOR THE STRATEGIC ENVIRONMENTAL ASSESSMENT FOR SHALE GAS DEVELOPMENT IN SOUTH AFRICA

The Department of Environmental Affairs has appointed a project team, consisting of the Council for Scientific and Industrial Research, the South African National Biodiversity Institute and the Council for Geoscience, to undertake a Strategic Environmental Assessment for shale gas development. As part of the process, 3 public briefing sessions and 1 registered stakeholder workshop have been arranged in the study area.

KENNISGEWING VAN PUBLIKE UITREIKING VIR DIE STRATEGIESE OMGEWINGS-STUDE VIR SKALIEGASONTWIKKELING IN SUID AFRIKA

Die Departement van Omgewingsake het 'n projekspan, bestaande uit die Raad vir Wetenskap en Nywerheids Navorsing, die Staat Akademiese Nasionale Biodiversiteit Instituut en die Raad vir Geowetenskap, aangestel om 'n Strategiese Omgewings-Ondersoek vir skaliegasontwikkeling af te sit. As deel van die proses is daar 3 publieke sessies aangekondig en 'n werksaamheid vir geregistreerde belanghabehede wat in die studiegebied gaan plaasvind.

ISAZISO NGAMASUNTSHWANA EENDABA KU-WOMKEWONKE NGOAVAVANYO OLUCWANGCHIRWEYO LWENVELO' NGOPUMYANISO LWE SHALE GAS EMZANTSI AFRIKA

Ibucandele beandlovu boripula Council ye Scientific ne Industrial Research, South African National Biodiversity Institute kunye ne Council ye Geoscience okuba baphela uhlelo lovavanyo okwengqweso bekweto ngqanwaniso lwe Shale Gas. Malunga nokutheleka, kuzobandakanya amaqanaba anabathu eentabeni ezinxaxaxileyo ezinxaxaxileyo ngokuchaphazela i-actobaxela endaweni ezinxaxaxileyo.

Province	Town	Venue	Date and Time
1 Eastern Cape	Gosill- Forest	Mossakhe Community Hall	09 November 2015, 16:00 - 19:00
2 Northern Cape	Victoria West	Victoria West Town Hall	10 November 2015, 16:00 - 19:00
3 Western Cape	Beaufort West	Beaufort West Community Hall, de Vries Street	11 November 2015, 16:00 - 19:00
(Registered Stakeholder workshop)	Cape Town	Soko Museum	13 November 2015, 10:30 - 15:00

Website: <http://energy.gov.za> | Email: seasahlgas@sa.gov.za | Tel: 021 888 2482 | Fax: 021 888 8885



Key learning for Outreach going forward

What is the learning from the Graaff Reinet and Beaufort West meetings?

- **Experience:** Our communication path to provincial structures and then Municipalities was not an effective option in all provinces
- **Learning:** Provide letters from national DEA Minister to Municipal Managers to facilitate a constructive response and participation
- Additional notice provided via sms and local newspapers
- Normal notice provided via registered stakeholders, radio, social media, governance groups, SALGA



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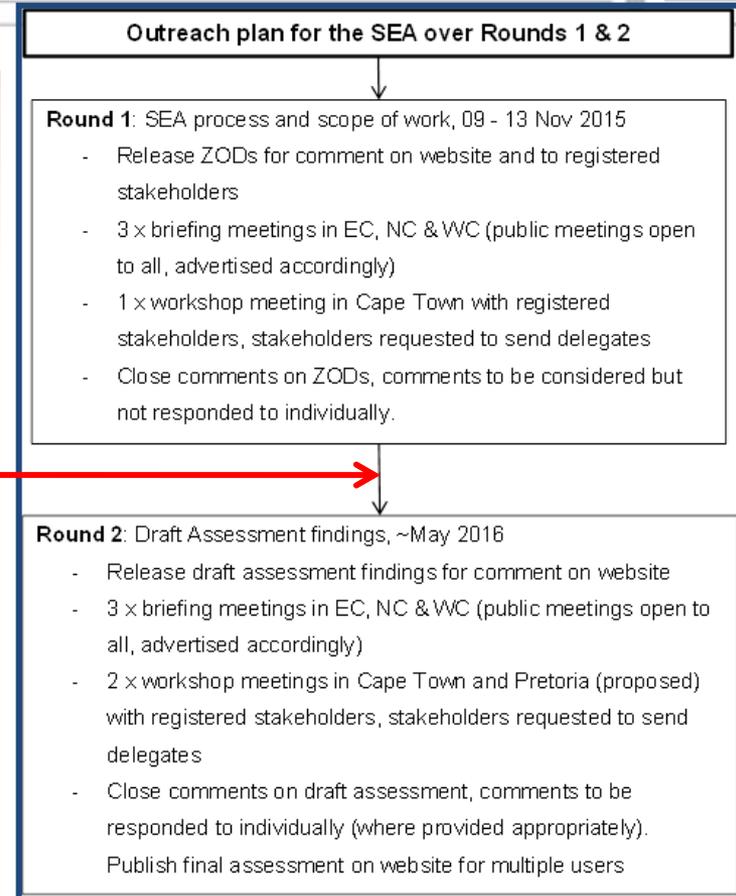
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Future public outreach

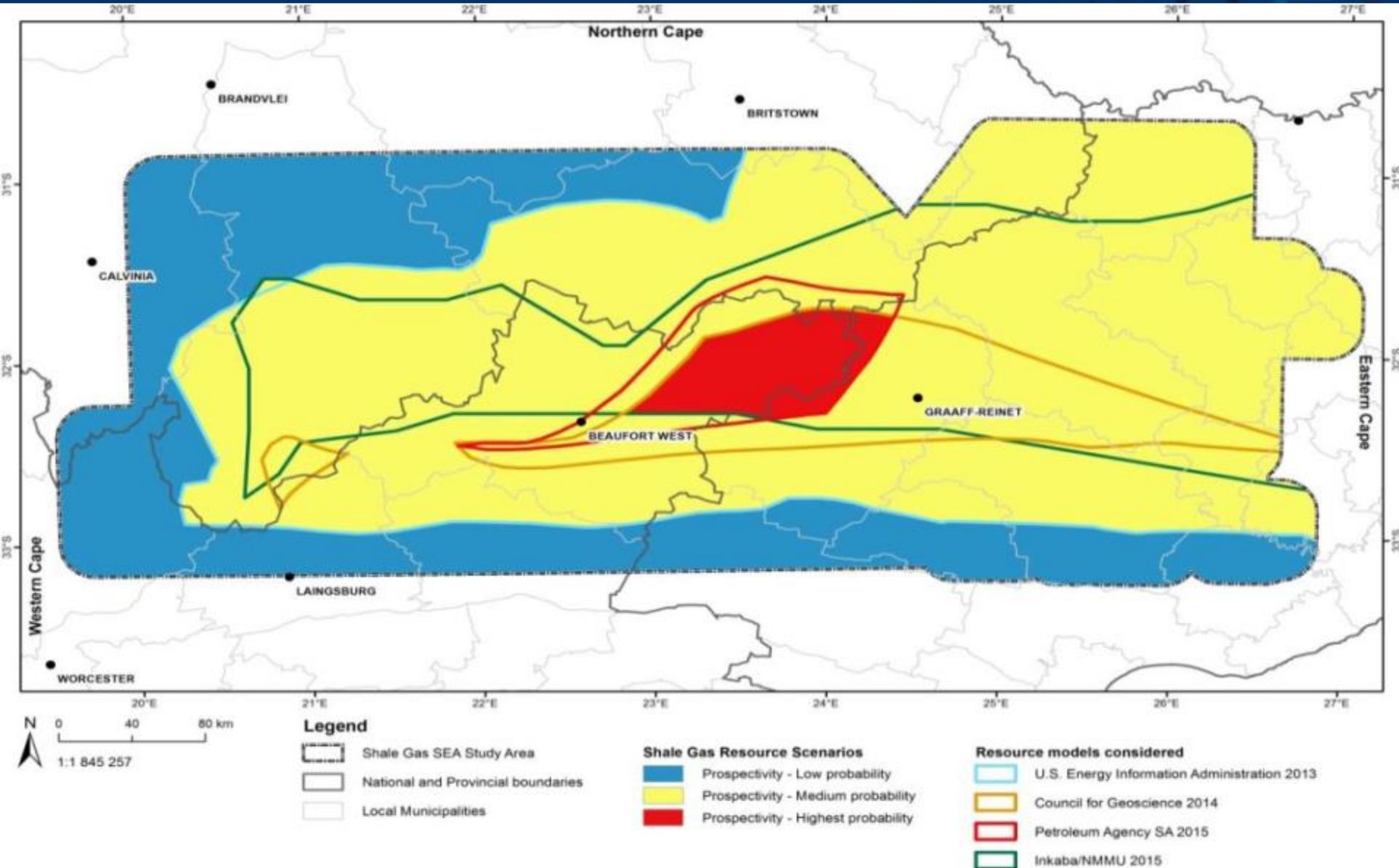
- **Additional round of public meetings (Round 1b)**
 - 16 and 17 May 2016
 - Graaff Reinett & Beaufort West
- **Ministerial letters sent to Municipalities**
- **Pre-meeting with Municipalities**
- **SOD's released for public comment mid-June 2016**
 - 4 weeks comment period
- **Round 2 public briefings**
 - Planned for week of 18-22 July 2016
 - Graaff-Reinet (EC), Beaufort West (WC) and Victoria West (NC) public meetings
 - Cape Town workshop
 - PEC workshop

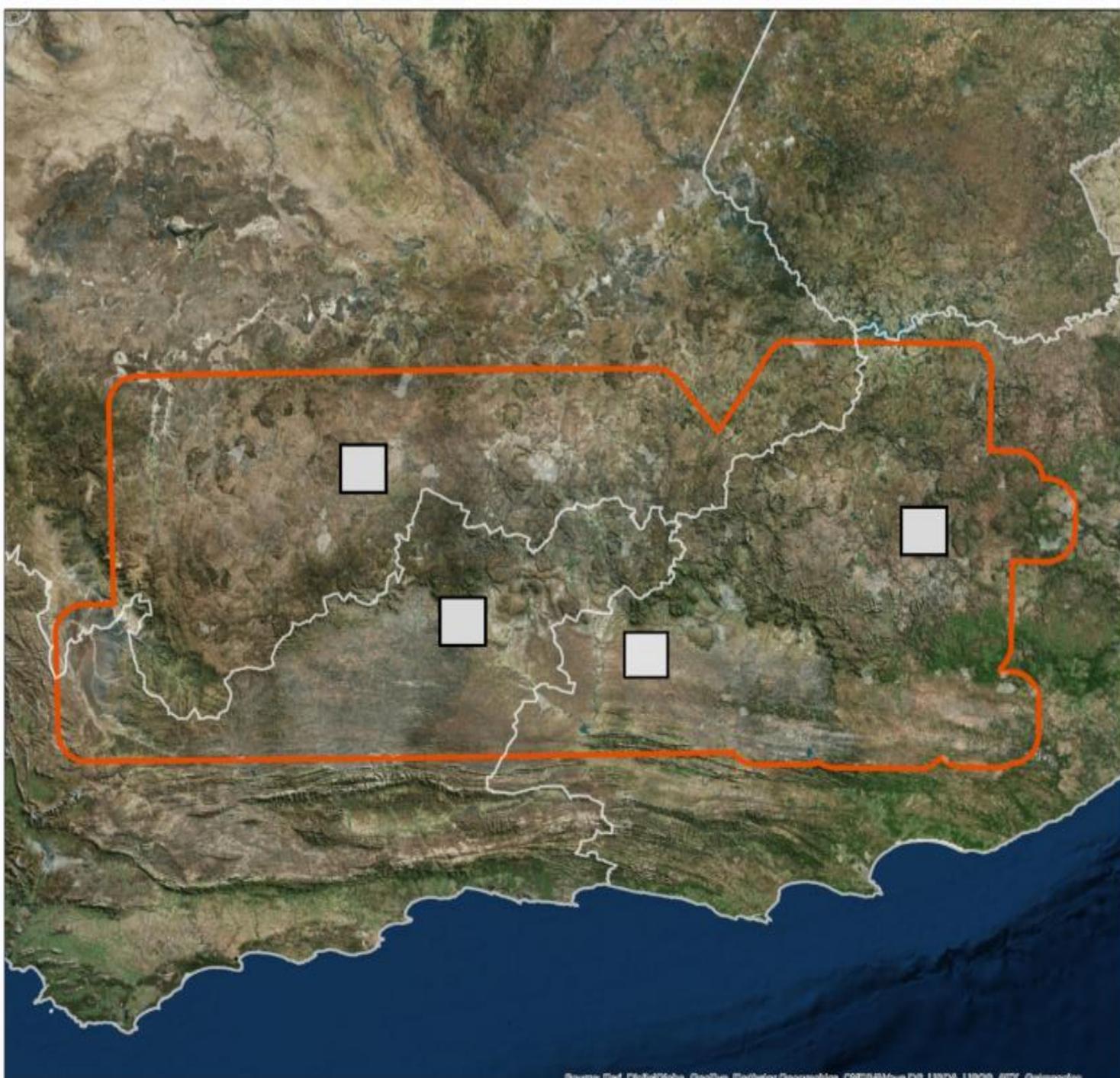


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Feedback on Scenarios and Activities

Resource probability

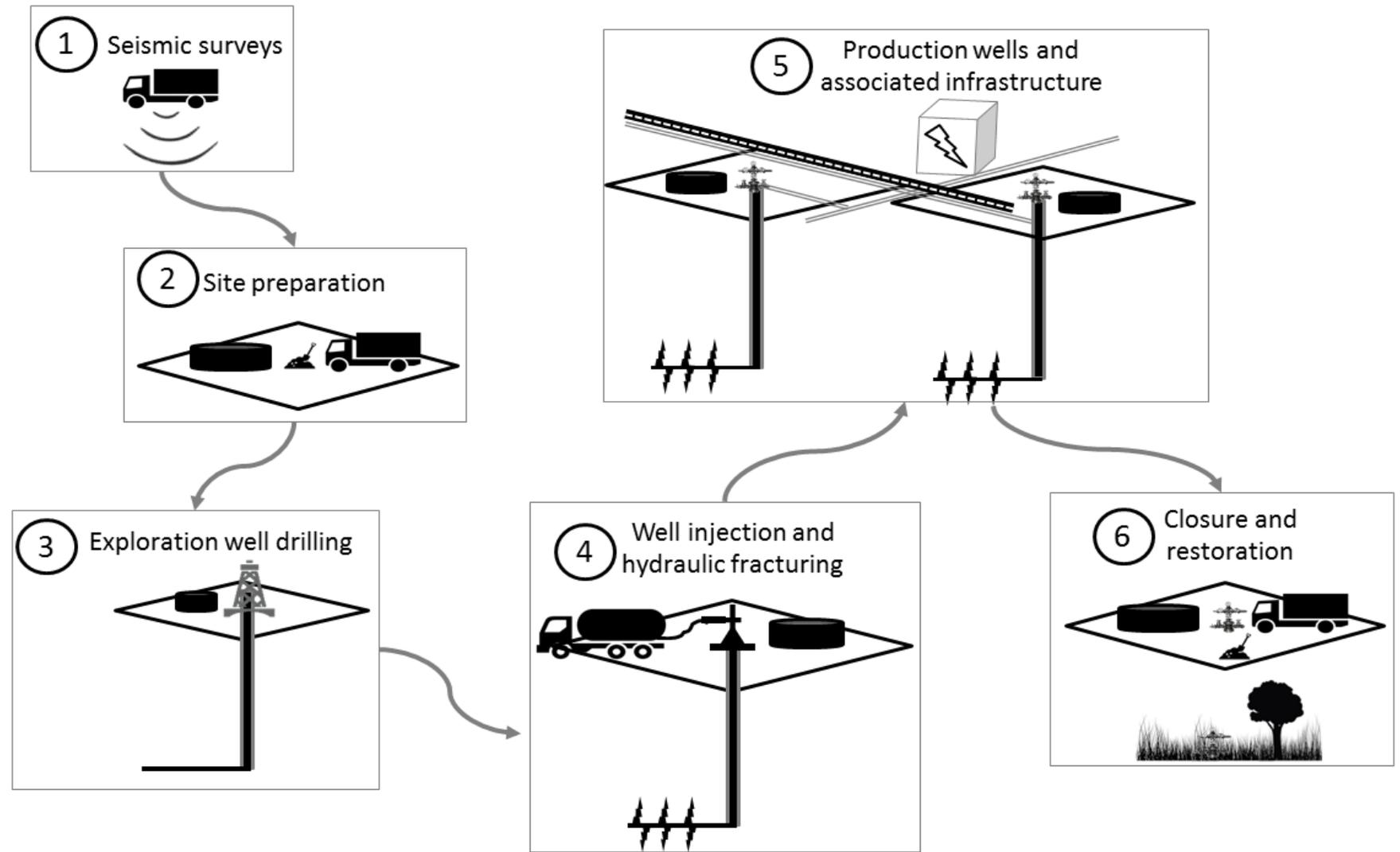




Legend

-  Notional 30 km x 30 km area
-  Shale Gas SEA Study Area

Scenarios and Activities: The full lifecycle quantified



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Peer review process of FODs

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Impacts on National and Local Economic Performance.....	23
Electromagnetic Interference with Radioastronomy.....	27
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Impact on Sense of Place Values.....	31
Impacts on Waste Planning and Management.....	34
Impacts on Land, Infrastructure and Settlement Development.....	37
Impacts on Agriculture.....	40
Impact on Cultural Heritage.....	44
Impacts on Tourism in the Karoo.....	47
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Peer Review Process

FODs received from author teams

FODs sent for DTP formatting

Formatted FODs sent to Peer Reviewers for comment

Comments received from Peer Reviewers

Comments were consolidated into one document per chapter

Consolidated comments sent to author teams for response.

- Peer Reviewers were identified from:
 - scientific publications
 - nominations from stakeholders, the PCG, PEC and authors
- Minimum of 2 Peer Reviewers per chapter
- Up to 6 Peer Reviewers for more complex chapters e.g. Water Resources, AQ&GHG
- 71 Peer Reviewers responded, Ave = 4 per Chapter
- 43 International and 24 South African Peer Reviewers
 - USA, Australia, The Netherlands, France, Canada, UK and Japan
- FODs sent with Letter of instruction, ZOD of the full SEA, FOD of Scenarios & Activities Chapter and Comment template form
- ~ 3 weeks for commenting
- Additional material (e.g. papers/ reports) were indicated on the comment spreadsheets

Peer Review Process

- PCG and Project team to check manner of authors responses
 - Have all comments been responded to adequately?
 - Have comments been incorporated in SODs where applicable?
- Comments and the author responses open for public review.
- Authors are required to provide a response to every comment that has been made by the Peer Reviewers. Examples of responses:

Peer reviewer name	Page range	Line/s	Table/Fig/Plate	Peer Reviewer Comment	Responses to Peer Review comments by Authors
Reviewer x	4	12		Gavins and Komers 2006 - Not in lit cited	This reference was added
Reviewer x	4	12		Other indirect effects are edge-related effects associated with fragmentation and habitat loss. Edge related changes might include an increase in nest predation or change in community structure as human associated species become more common. Review literature on habitat fragmentation in grassland and arid environments.	Literature on fragmentation and habitat loss reviewed, section on these potential impacts added
Reviewer x	4	22-31		Yes- Agree - This is an important point. References to back this up would be useful.	The following references were added to support this statement: Jones et al. (2017); Smith (2005)
Reviewer x	18	35		This statement is not correct, see Broadly (2017)	This statement is widely supported by Jones & Smith (2016), Ryans (2015), McGee (2007), and was therefore left as is. However, the opinion of Broadly (2017) was noted.

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Preliminary feedback on First Order Drafts

Chapter - Structure

Topic – eg. Tremors and Earthquakes

1.) Executive Summary

2.) Introduction and Scope

- 2.1) *What is meant by this topic?*
- 2.2) *Overview of International Experience*
- 2.3) *Special Features of the Karoo Environment*
- 2.4) *Relevant Legislation, Regulation and Practice*

3.) Key potential Impacts and their Mitigation

4.) Risk Assessment

- 4.1) *How the Risks (and Opportunities where appropriate) are measured*
- 4.2) *Limits of Acceptable Change*
- 4.3) *Risk Assessment*

5.) Best Practice Guidelines and Monitoring Requirements

- 5.1) *Planning*
- 5.2) *Construction*
- 5.3) *Operations*
- 5.4) *De-Commissioning*
- 5.5) *Monitoring and Evaluation*

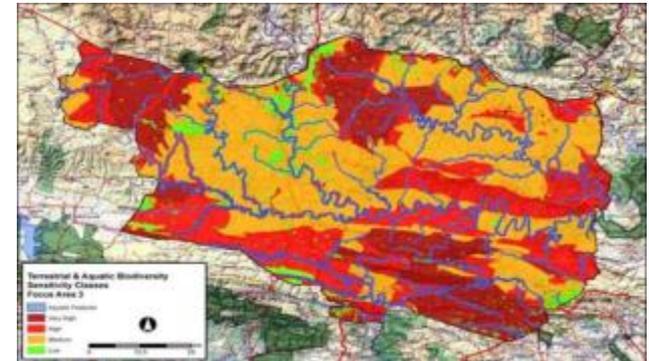
6.) Topic on which information is inadequate for decision-making

7.) References



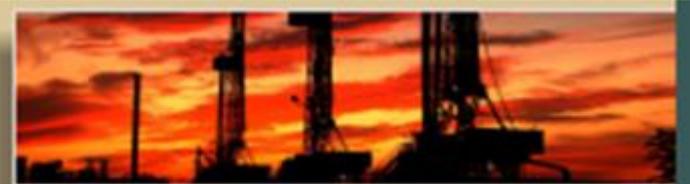
Risk Assessment: Step by step

1. Define the nature of the impact
2. Map substantially different receiving environments
3. Define and list mitigation technologies, rules, institutions
4. Define consequence levels (slight, moderate...extreme)
 - a) What proxy indicators can you use?
 - b) What established norms/standards exist
 - c) Link to levels of acceptable change.
5. For each impact type
 - a) For each scenario
 - 1.) For each unique area
 1. Estimate likelihood over entire scenario, at area scale
 2. Estimate consequence level
 3. From 1 x 2 the risk level emerges: test it against your instincts and experience
 - 2.) Repeat 5.1.1 with mitigation as specified in 3
6. Project team will use the tabulated outputs of (5), with the map in (2) to create a risk surface for each impact type
7. Project team will create a composite risk map using the maximum rule applied to the with mitigation surfaces, and another risk map without mitigation.



Key dates going forward

- Second Order Drafts (SODs) and responses to peer review - 31 May 2016
- Release of SOD for stakeholder comment, mid-June
- 4 weeks public comment (mid-June to mid-July)
- Collate all public/stakeholder comments and send to specialists, mid-July
- Public outreach planned for week of 18-22 July → additional comments
- Specialist workshop (AM#3) on 25-27 July at Goudini
- Final draft Scientific Assessment by 22 August
- PCG and PEC meetings #4 on 26 & 27 Sept 2016 to present final draft
- Phase 2: Scientific Assessment (final outputs), mid-October 2016
- Phase 3: Decision-Making Framework (draft outputs), Dec 2016
- Phase 3: Decision-Making Framework (final outputs), Feb 2017



Thank you

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