

Strategic Environmental Assessment for Shale Gas Development



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Welcome to the official website for the Strategic Environmental Assessment (SEA) for Shale Gas Development in South Africa.

The website provides the general public with the opportunity to register as stakeholders; conveys the latest information and outputs of the assessment process for review and comments; and describes the opportunities for how stakeholders can engage further in the assessment over the 24 month SEA process. The website will also serve as a 'knowledge portal' for authors and experts comprising the assessment team, by providing them with a virtual library of all relevant journal papers, reports and spatial data which will be used during SEA process.

The Need for an SEA

The potential future economic and energy security benefits of a large resource of natural gas in South Africa could be substantial; as are both the positive and negative social and environmental issues of establishing a domestic gas industry in the Karoo region.

South African government, through Cabinet and various other decision-making institutions, has made high-level public commitments to shale gas exploration. If the exploration phase occurs and yields successful hydrocarbon deposits and gas-flow regimes, it is a reasonable assumption that Government would consider development of those resources at a significant scale. DEA, along with other relevant authorities, need to be in a position to make decisions relevant to that choice in a timely and responsible fashion.

Although a substantial amount is already known about shale gas development and its consequences based on experience from around the world, very little is known about the industry in the South African context, which makes information very hard for decision-makers and stakeholders to evaluate. In order to make well-informed decisions and have some hope that decisions will be broadly accepted by stakeholders as credible and legitimate, a structured and transparent process of information sharing and scientific assessment needs to take place.

Vision, Mission and Objectives

[Vision for shale gas development in South Africa](#)

Utilising the National Development Plan (2012) and the Constitution of South Africa (Act 108 of 1996), a 20 year, overarching Vision for shale gas development in South Africa was developed:

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.

Shale Gas SEA Mission Statement

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.

To achieve the mission statement, the following project objectives have been developed:

1. Undertake a scientific assessment process grounded in transparency and participatory processes;
2. Assess the risks and opportunities of all Strategic Issues related to shale gas development using credible processes and a broadly accepted approach;
3. Draw on broad and diverse authors and experts (knowledgeable persons) to provide input into diverse Multi-Author Teams;
4. Determine sensitivities, vulnerabilities and risks across the study area considering key Sustainability Objectives and Limits of Acceptable Change (LACs); and
5. Develop policy options and guidelines for site specific assessments to be implemented if Environmental Authorisation applications for shale gas development are submitted to any relevant authority.

SEA details

Science Councils constituting the Project Team:

- **Council for Scientific and Industrial Research (CSIR)**

CSIR is one of the leading scientific and technology research, development and implementation councils in Africa. Constituted by Scientific Research Council Act (Act 46 of 1988, as amended by Act 71 of 1990) as a science council, the CSIR undertakes directed and multidisciplinary research, technological innovation as well as industrial and scientific development to improve the quality of life of the country's people.

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

- **South African National Biodiversity Institute (SANBI)**

SANBI conducts research, as well as monitors and reports on the state of biodiversity in South Africa. The institute provides knowledge and information, planning and policy advice, and best-practice management models in partnership with stakeholders.

<http://www.sanbi.org/>

- **Council for Geoscience (CGS)**

CGS is a South African National Science Council which aims to champion earth science solutions. The aim of CGS to provide expert earth-science information and services to improve the management of natural resources and the environment for a better quality of life for all.

<http://www.geoscience.org.za/>

Project duration:

- 24 Months

Project phases:

- **Phase 1: The Conceptualisation and Methodology Phase**

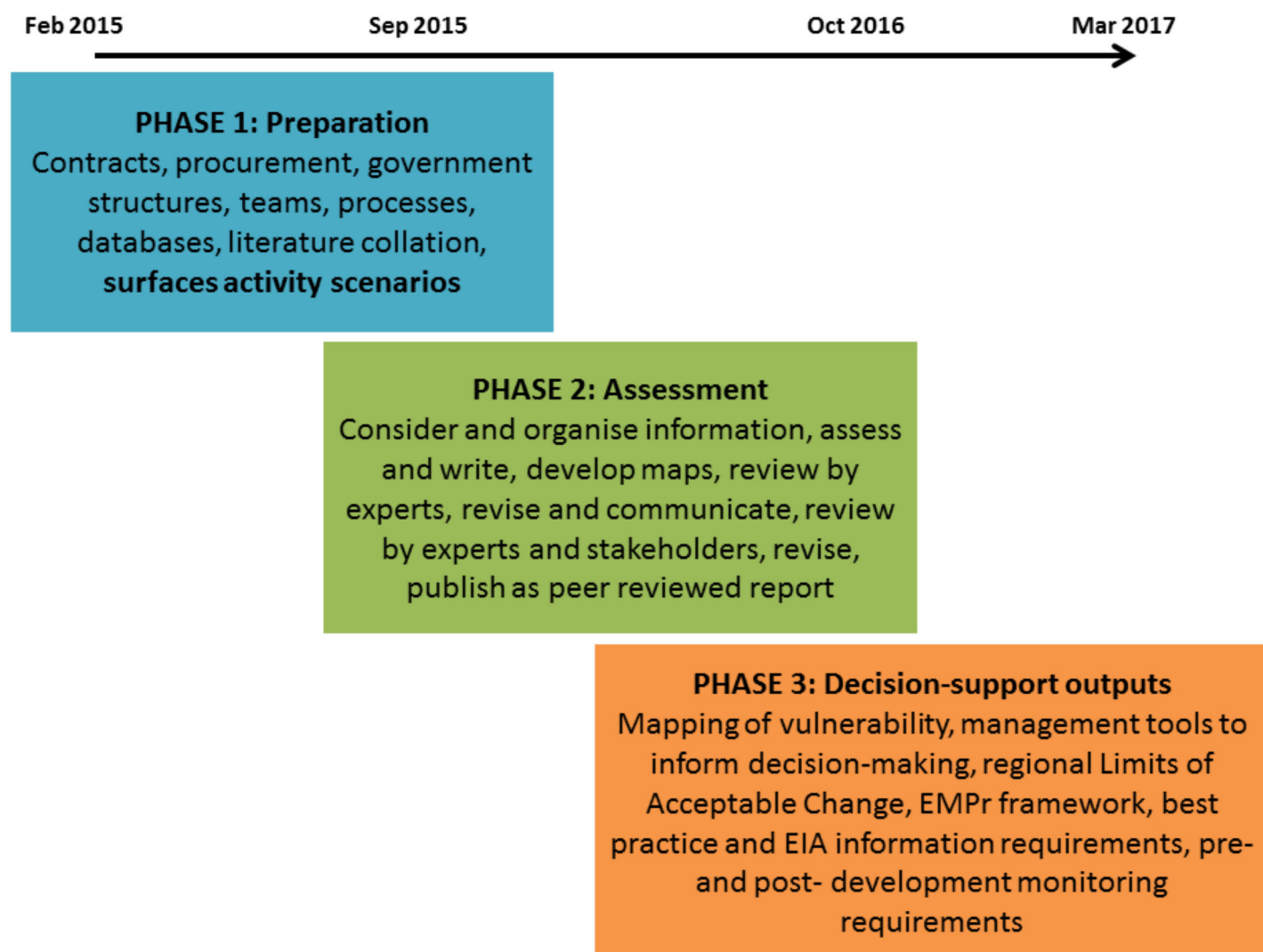
The primary purpose of this phase of the assessment is to set-up and implement all project management structures, convene the project governance groups, recruit authors and experts to the Multi-Author Teams and release a Draft Approach Report at the end of Phase 1 for expert review. This document will also be available to the public on the website.

- **Phase 2: The Scientific Assessment Phase**

This will be the component of the study where the actual scientific assessment by the Multi-Author teams for all Strategic Issues takes place. At the end of Phase 2 Draft and Final SEA reports will be released for expert and public review.

- **Phase 3: The Decision-Making Framework Phase**

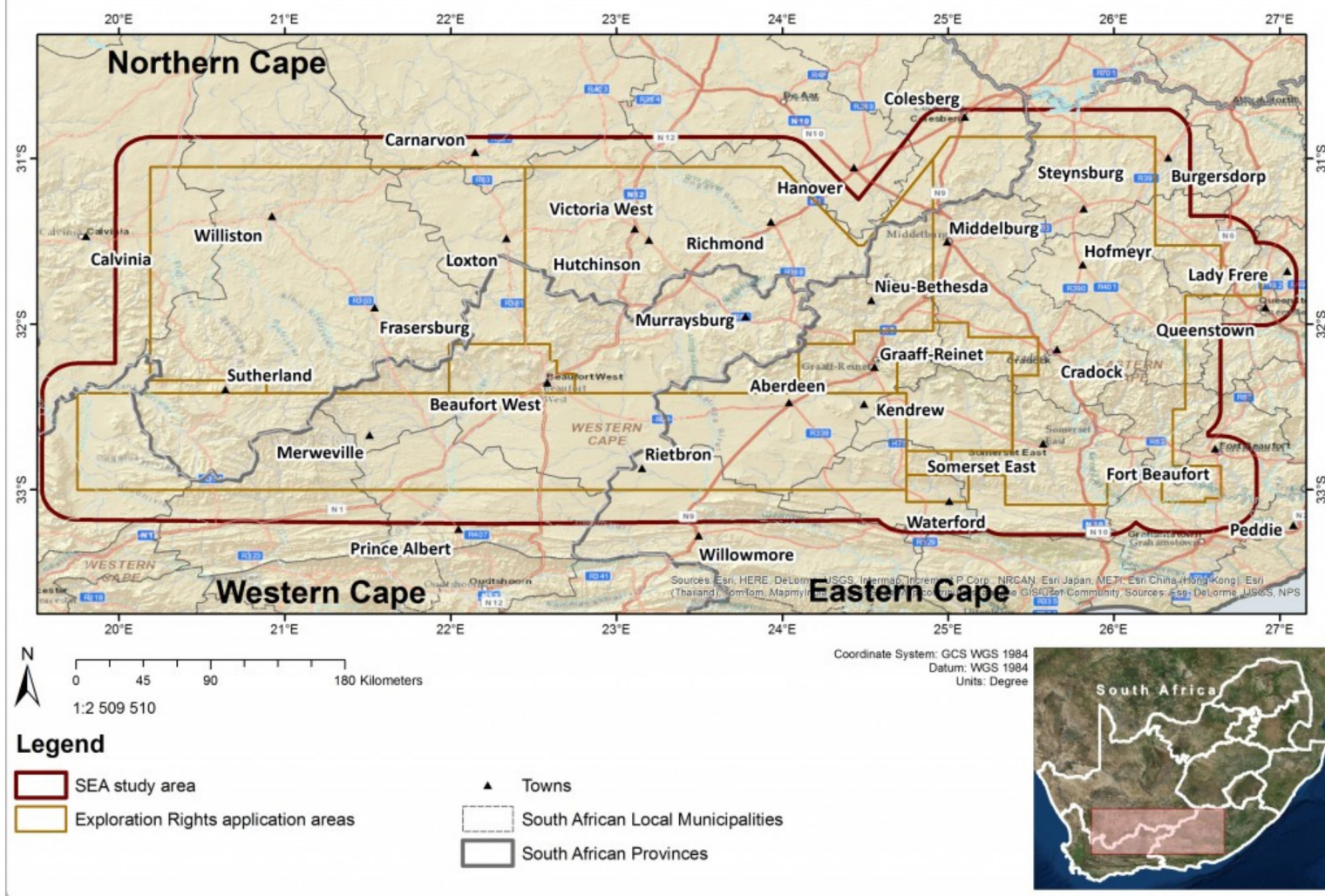
This phase will translate the outputs from Phase 2 into operational guidelines and decision making frameworks. It is undertaken by the Project Team (CSIR, SANBI and CGS) in close consultation with the various affected Departments. It commences with initial drafts after the delivery of the first draft of the Assessment report, and with final drafts after the delivery of the final Assessment report. The separation of the teams between phase 2 and 3 is to honour the assessment 'mantra' of being 'policy relevant, but not policy prescriptive'. The experts in Phase 2 are not being asked to make decisions about the development of shale gas. They are being asked to give an informed opinion on the consequences of different options. The decisions must be made by mandated authorities (i.e. government), who have contracted the science councils to help them in formulating the framework and content of such decisions



Study area:

The extent of the study area was informed by the areas currently under applications for Explorations Rights (by the operators Shell, Bundu, Falcon). In October 2014, the DMR Minister was quoted in parliament as saying “there are currently five (5) applications to explore for shale gas in the Karoo area. Applications were received from Falcon (x1), Bundu (x1) and Shell (x3). The applications have not been assessed and therefore no applications have been approved or refused”. It was acknowledged that additional Technical Cooperation Permit applications have been submitted to the Petroleum Agency South Africa (PASA) in the last 4 years for desktop studies, but that many of these have expired. Considering that PASA’s sweet spot reserve estimates are succinctly aligned with the current Exploration Right applications from Falcon, Bundu and Shell, this region represents the obvious area to initiate the first pass SEA process. The official shapefiles from PASA delineating the existing Exploration Rights applications were used to define the study area (with a 20 km buffer around existing Exploration Rights application areas). The study area includes 27 local municipalities and encompasses 171 811 km².

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