



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



**water & sanitation**

Department:  
Water and Sanitation  
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**energy**

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**Council for Geoscience**



Strategic Environmental  
Assessment for Shale Gas  
Development in South Africa

**BACKGROUND  
INFORMATION  
DOCUMENT**

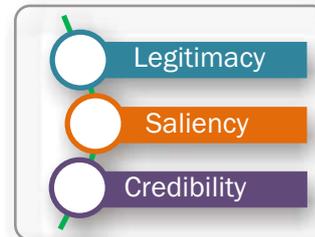
## INTRODUCTION

CSIR, in partnership with the South African National Biodiversity Institute (SANBI) and the Council for Geosciences (CGS) have been appointed by the national Department of Environmental Affairs to undertake a Strategic Environmental Assessment (SEA) for Shale Gas Development (SGD) in South Africa. The execution of this SEA is mandated by the South African cabinet, with the Department of Environmental Affairs (DEA) as the responsible department. The SEA was formally and collectively launched in the media by the national Department of Environmental Affairs, Science and Technology (DST), Mineral Resources (DMR), Energy (DoE) and Water and Sanitation (DWS) in Parliament on 12 May 2015.

The mission statement of the SEA is:

**“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”**

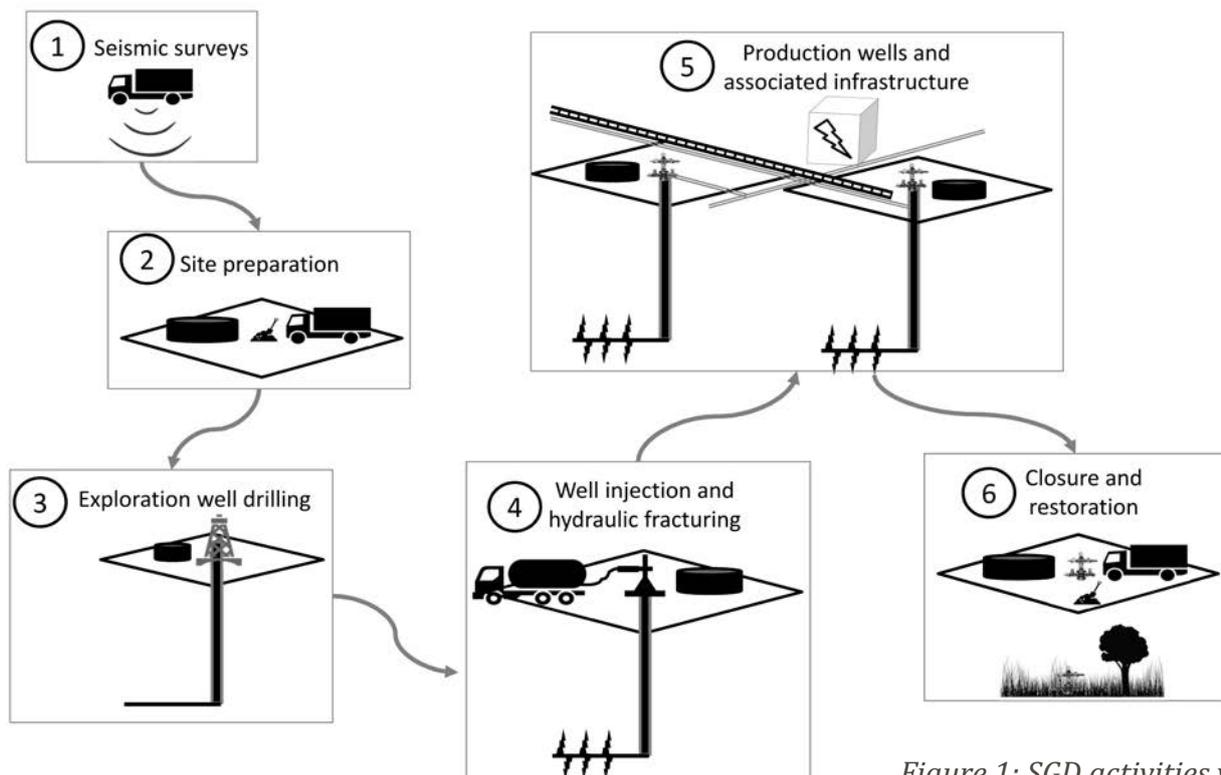
The 'philosophy' of the SEA is based on global best practice in scientific assessment theory and implementation. The SEA will undertake a 'scientific assessment process' that is grounded in transparency and participatory processes; in order to satisfy the principles of *legitimacy*, *saliency* and *credibility*.



The objective of the SEA is to inform the decision maker's (in this case the South African cabinet, and specifically the Ministers of Environmental Affairs, Water and Mineral Resources) understanding of the risks and opportunities of SGD, based on the evaluation by acknowledged experts of the best available information by teams of credible experts.

## WHAT ASPECTS OF SGD WILL BE CONSIDERED?

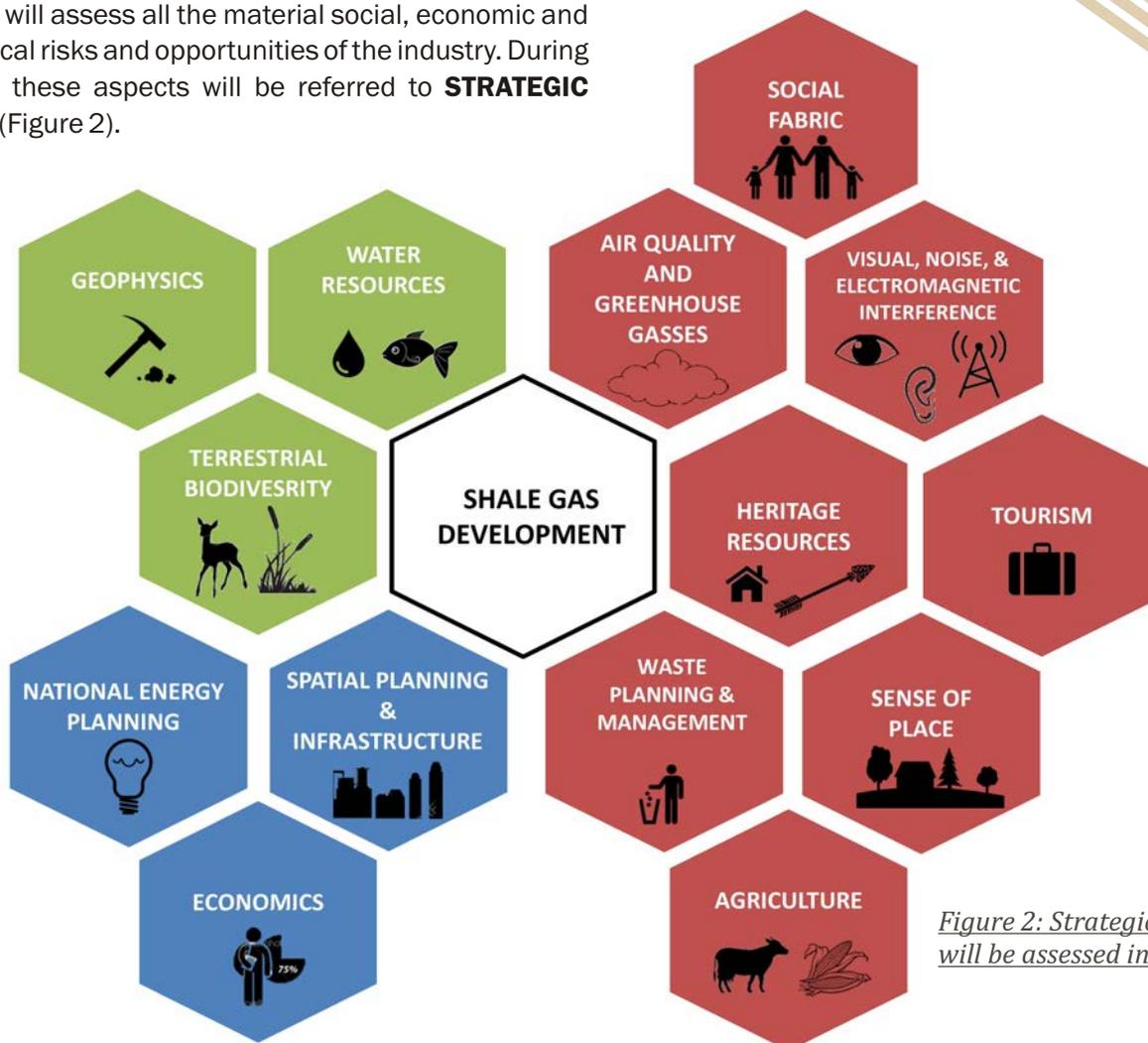
The SEA will consider both the **EXPLORATION AND PRODUCTION** related activities of SGD (i.e. the entire life-cycle, up to and including eventual closure of facilities and restoration of their sites) (Figure 1).



*Figure 1: SGD activities which will be considered in the SEA.*

## WHAT ENVIRONMENTAL, SOCIAL AND ECONOMIC ASPECTS WILL BE ASSESSED?

The SEA will assess all the material social, economic and biophysical risks and opportunities of the industry. During the SEA these aspects will be referred to **STRATEGIC ISSUES** (Figure 2).



*Figure 2: Strategic issues that will be assessed in the SEA.*

## WHO ASSESSES THE STRATEGIC ISSUES?

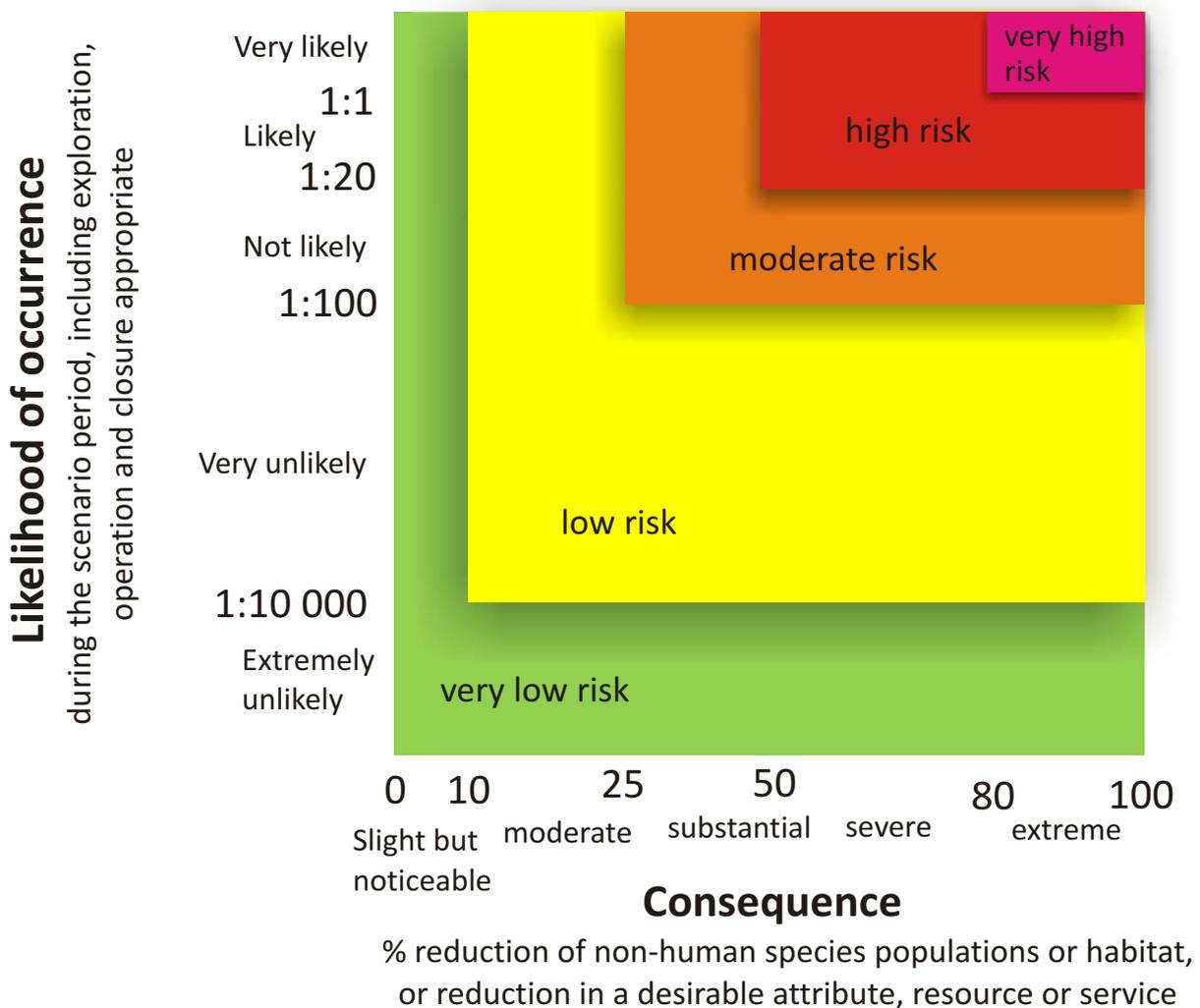
In order to advance the principles of balance and comprehensiveness, the Strategic Issues in the assessment will be addressed by **MULTI-AUTHOR TEAMS**. Each of the Strategic Issues will have a team of three to six authors selected on the basis of their acknowledged expertise in the respective Strategic Issues, understanding of the region and scientific credibility. **INTEGRATING AUTHORS** will lead each of the Strategic Issues, supported by **CONTRIBUTING AUTHORS** and **CORRESPONDING AUTHORS**. Integrating Authors working on the assessment are allocated a nominal time stipend to cover some of their time; Contributing Authors who are self-employed receive a modest

honorarium fee, while Corresponding Authors receive no payment. Over 60 Integrating and Contributing Authors will be working on the assessment, following the inclusion of selected Corresponding Authors, there will be in the region of 100 experts making inputs into the assessment (excluding Expert Reviewers).

The first draft SEA chapters of each of the Strategic Issues written by the Integrating, Contributing and Corresponding Authors will be reviewed by external **EXPERT REVIEWERS**. Authors will consider, address and integrate the expert reviewers' comments to compile second draft chapters, which will be available for broad **STAKEHOLDER REVIEW (please see below how to register as a STAKEHOLDER in order to review second draft chapters)**.

## HOW ARE THE STRATEGIC ISSUES ASSESSED?

The **RISK ASSESSMENT APPROACH** (Figure 3) takes its point of departure from the fact that there is residual uncertainty about all aspects of the future, even after that uncertainty has been constrained by rigorously assessing the evidence. The risk assessment, which is based on a transparent expert judgement process, is an approach for considering all aspects of an issue in a common way, and in a spatial context. It is based on an interpretation of existing spatial and non-spatial data in relation to the proposed activity, to generate an integrated picture of the risks related to a specified activity in a given location, with and without mitigation. Risk is assessed for each significant stressor (e.g. physical disturbance), on each different type of receiving entity (e.g. the rural poor, a sensitive wetland etc.), qualitatively (undiscernible, very low, low, moderate, high, very high) against a predefined set of criteria.



*Figure 3: Risk Assessment Approach - guide to assigning risk levels in relation to likelihood and consequence.*



## WHICH AREAS OF SOUTH AFRICA ARE BEING ASSESSED?

The extent of the study area was informed by the areas currently under applications for Explorations Rights. The official shapefiles from the Petroleum Agency of South Africa (PASA) delineating the existing Exploration Rights applications were used to define the study area (with a 20 km buffer around existing application areas). The **STUDY AREA** traverses the Eastern, Northern and Western Cape and includes 27 local municipalities encompassing 171 811 km<sup>2</sup> (Figure 4).

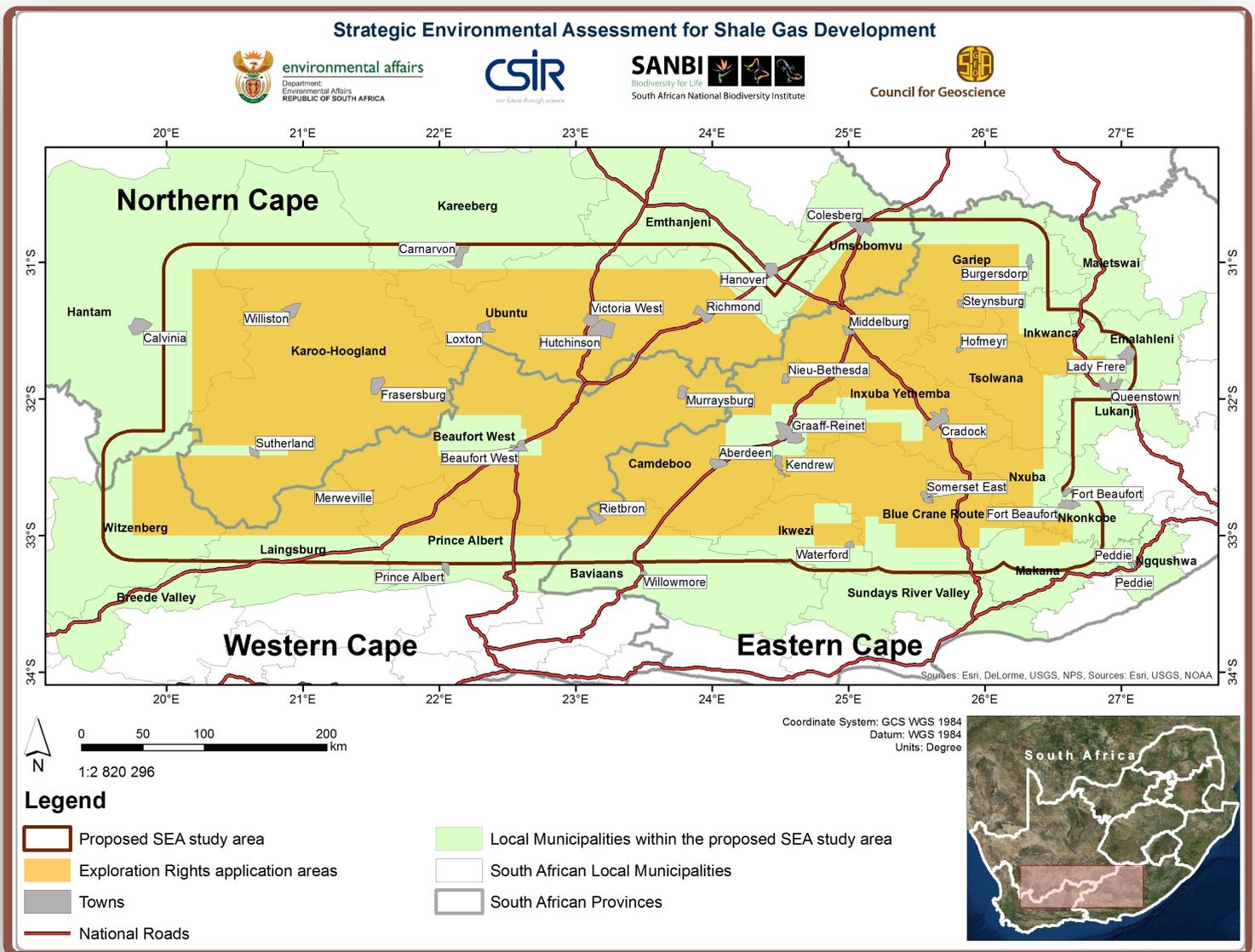


Figure 4: The SEA study area.

## PHASES OF THE SEA

The SEA process has been designed in three overlapping phases (Figure 5).

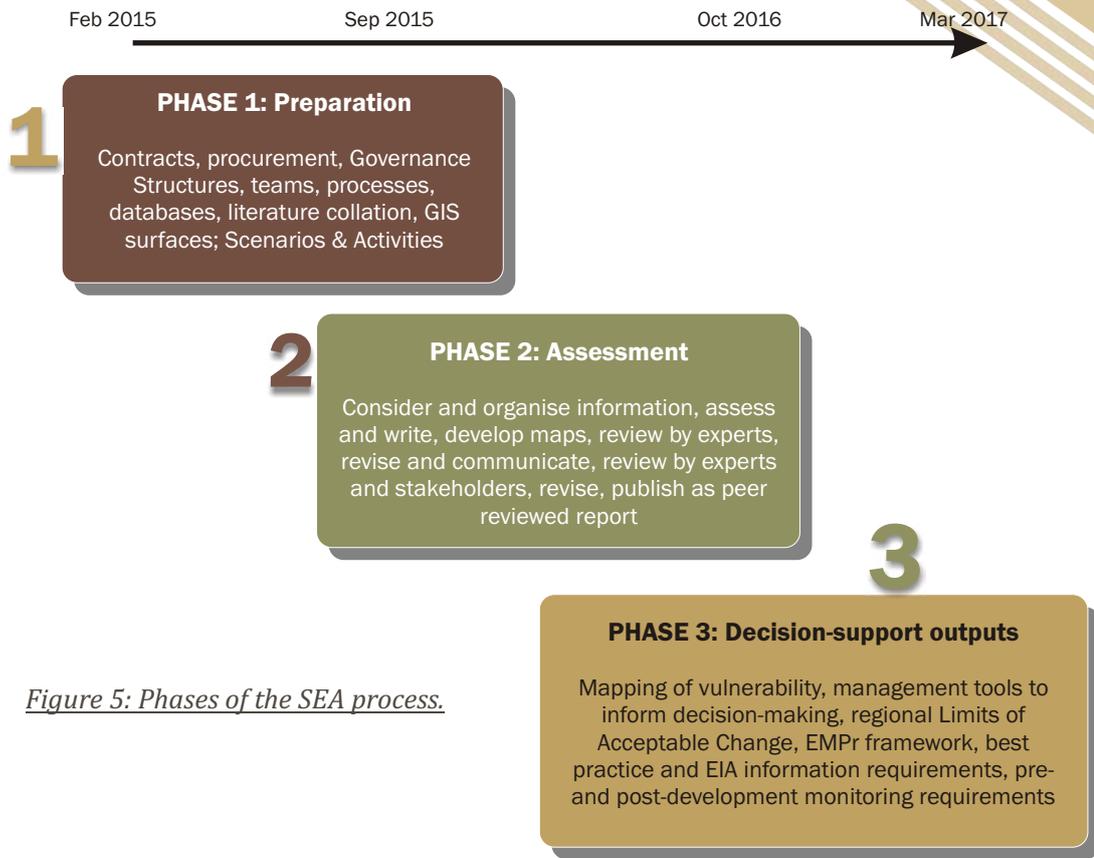


Figure 5: Phases of the SEA process.

## GOVERNANCE OF THE SEA

The governance structure for the SEA is illustrated in Figure 6.

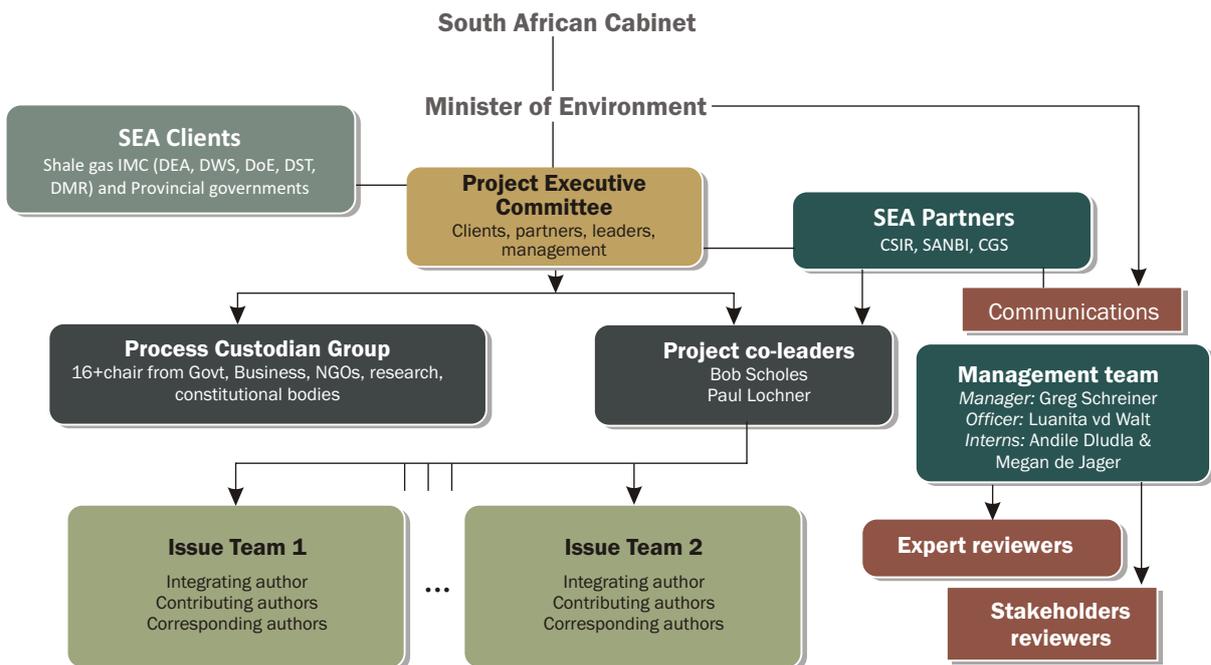
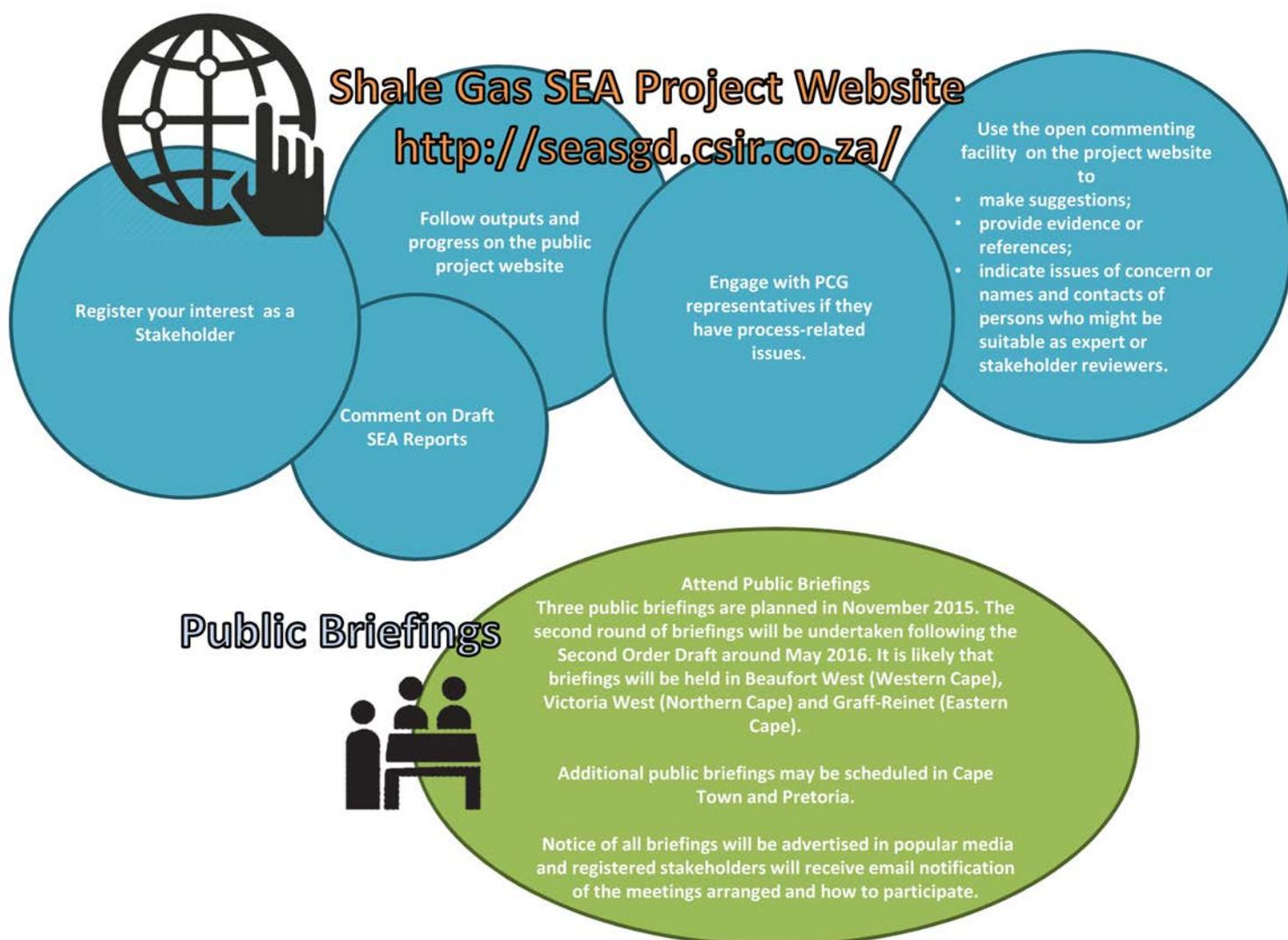


Figure 6: Governance structure for the SEA.

The two key governance structures are **PROJECT EXECUTIVE COMMITTEE** (PEC) and the **PROCESS CUSTODIANS GROUP** (PCG). The PEC consists of representatives of the authorities commissioning the SEA, and those who will be the main users in government. The PEC is responsible for ensuring that the SEA is delivered according to the contract and within the timeline and budget. The PCG is a key innovation in this assessment, designed to ensure that it is independent, thorough and balanced. The PCG consists of 16 people, drawn approximately equally from government, NGOs, the private sector and the research community. The PCG will meet at key junctures during the assessment to ensure that the process has been fair and rigorous.

## HOW CAN I GET INVOLVED?

Stakeholders can get involved in the Shale Gas SEA through the Project Website (<http://seasgd.csir.co.za/>) and through attending public briefing and outreach rounds (Figure 7).



*Figure 7: Information-sharing during the SEA process.*

The purpose of the public briefings is to inform people of the SEA process, preliminary SEA findings and explain the mechanisms available to them for engaging in the process. The primary mechanism of substantive engagement is internet based, however special provision will be made to facilitate access by individuals and communities with poor or no internet access or skills.

### **CONTACT THE PROJECT MANAGEMENT TEAM**

To register as a Stakeholder, please fill out the online registration form on the SEA Project Website at <http://seasgd.csir.co.za/iap-portal/>

For enquiries please contact us via the Contact Us page on the SEA Project Website (<http://seasgd.csir.co.za/contact-us/>) or contact us via

*Email:* seashalegas@csir.co.za

*Tel:* 021 888 2482

*Fax:* 021 888 8693

*Postal address:* Attention: CSIR Environmental Management Services  
P.O. Box 320  
Stellenbosch  
7600

### **MEDIA ENQUIRIES**

The spokesperson role for the SEA is restricted to DEA, who may empower the assessment leaders to do so on their behalf in some instances. Media issues are handled by a communications team: the contact person from DEA is Albi Modise ([AModise@environment.gov.za](mailto:AModise@environment.gov.za)) and from CSIR are Biffy van Rooyen ([BvRooyen@csir.co.za](mailto:BvRooyen@csir.co.za)) and Tendani Tsedu ([MTsedu@csir.co.za](mailto:MTsedu@csir.co.za)).

For more information visit <http://seasgd.csir.co.za/>