

# 1. INTRODUCTION

This chapter provides detail on the background to the proposed project, assumptions and limitations, and describes the structure of the report.

## 1.1 BACKGROUND

TOTAL Exploration & Production South Africa B.V. (hereafter referred to as “TEPSA”) is the operator and holder of an existing Exploration Right for undertaking seismic surveys and exploration well drilling in Block 11B/12B. This block is approximately 18 734 km<sup>2</sup> in extent and is located off the South Coast of South Africa roughly between Mossel Bay and St Francis Bay, approximately 130 km to 70 km offshore, respectively in water depths of between 500 m and 2 000 m. Following a farm-in to the Exploration Right, TEPSA has assumed operatorship of Block 11B/12B from CNR International (South Africa) Limited (hereafter referred to as “CNRI”), who has retained a 50% working interest in the block.

Prior to TEPSA’s involvement, CNRI obtained the Exploration Right for Block 11B/12B in terms of the Mineral and Petroleum Resources Development Act, 2002 (No. 28 of 2002) (MPRDA). As part of the process of applying for the Exploration Right, an Environmental Management Programme (EMPr) was compiled and approved for the undertaking of seismic surveys and exploration drilling within the licence area. Exploration drilling also received Environmental Authorisation under the National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), as amended. Both seismic surveying and exploration well drilling have been undertaken within the licence area to date.

TEPSA is now proposing to undertake additional exploration activities, including sonar surveys and seabed sediment sampling over selected areas of the licence block at various times over the Exploration Right validity period. TEPSA is thus required to apply for an amendment of the approved EMPr in order to undertake these proposed activities.

TEPSA has appointed CCA Environmental (Pty) Ltd (CCA) to compile this EMPr Addendum to meet the relevant requirements of the MPRDA and the Regulations thereto.

## 1.2 ASSUMPTIONS AND LIMITATIONS OF THIS EMPr ADDENDUM

This EMPr Addendum was prepared with the following assumptions and limitations:

- The study assumes that CCA and the appointed specialists have been provided with all relevant project information required in order to produce accurate and unbiased assessments;
- There will be no significant changes to the project description or surrounding environment between the completion of the report and implementation of the proposed project that could substantially influence findings, recommendations with respect to mitigation and management;
- The assessment is based, to a large extent, on a generic description of sonar survey techniques and sediment sampling as the specific details were not available at the time of writing this report (e.g. survey vessels, exact timing and duration of surveying / sampling, exact location of survey lines / sampling target areas, etc.); and
- The study assumes that all mitigation measures incorporated into the project description would be implemented by the proponent.

These assumptions and limitations, however, are not considered to have any negative implications in terms of the results of the study or the required management actions included in this EMPr Addendum.

### 1.3 STRUCTURE OF THIS REPORT

This report consists of eight chapters and seven appendices.

Section	Contents
Executive Summary	Provides an overview of the main findings of the EMPr Addendum.
Chapter 1	<b>Introduction</b> Provides background to the proposed project, the Terms of Reference for the study, the assumptions and limitations of the study, and describes the structure of the report.
Chapter 2	<b>Approach and Methodology</b> Covers the legislative requirements of the EMPr Addendum process and presents the process undertaken.
Chapter 3	<b>Project description</b> Provides a generic description of sonar surveys and sediment sampling.
Chapter 4	<b>Description of the affected environment</b> Describes the existing biophysical and social environment that could be affected by the proposed project.
Chapter 5	<b>Environmental Impact Assessment</b> Describes and assesses the potential impacts of the proposed project on the affected environment. It also presents mitigation measures that could be used to reduce the significance of any negative impacts or enhance any benefits.
Chapter 6	<b>Conclusion and recommendations</b> Provides conclusions to the EMP Addendum and summarises the recommendations for the proposed project.
Chapter 7	<b>Environmental Management Programme</b> Provides an Environmental Management Programme for the proposed activities.
Chapter 8	<b>References</b> Provides a list of the references used in compiling this report
Appendix 1	<b>Public Participation Process</b> Appendix 1.1 I&AP database Appendix 1.2 Notification letter, Background Information Document and Registration & Comment Form Appendix 1.3 Advertisements Appendix 1.4 I&AP correspondence Appendix 1.5 Issues and Responses Trail
Appendix 2	<b>Specialist Studies</b> Appendix 2.1 Marine Faunal Assessment Appendix 2.2 Fishing Industry Assessment
Appendix 3	Convention for assigning significance ratings to impacts
Appendix 4	Financial Provision
Appendix 5	Environmental Policy
Appendix 6	Extract from Emergency Response Plan
Appendix 7	Undertaking by Applicant

TEPSA: Proposed Sonar Surveys and Seabed Sediment Sampling in Block 11B/12B

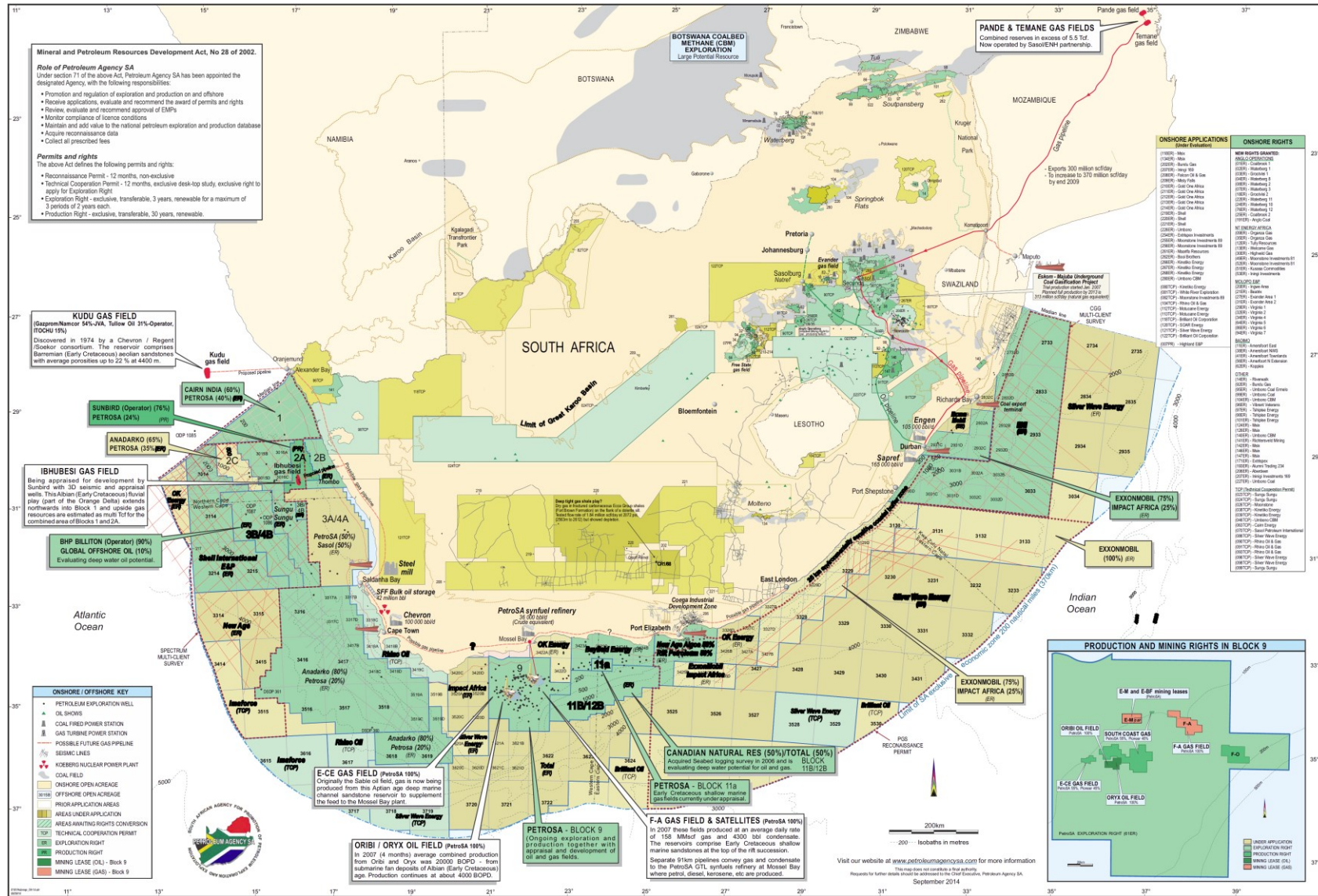
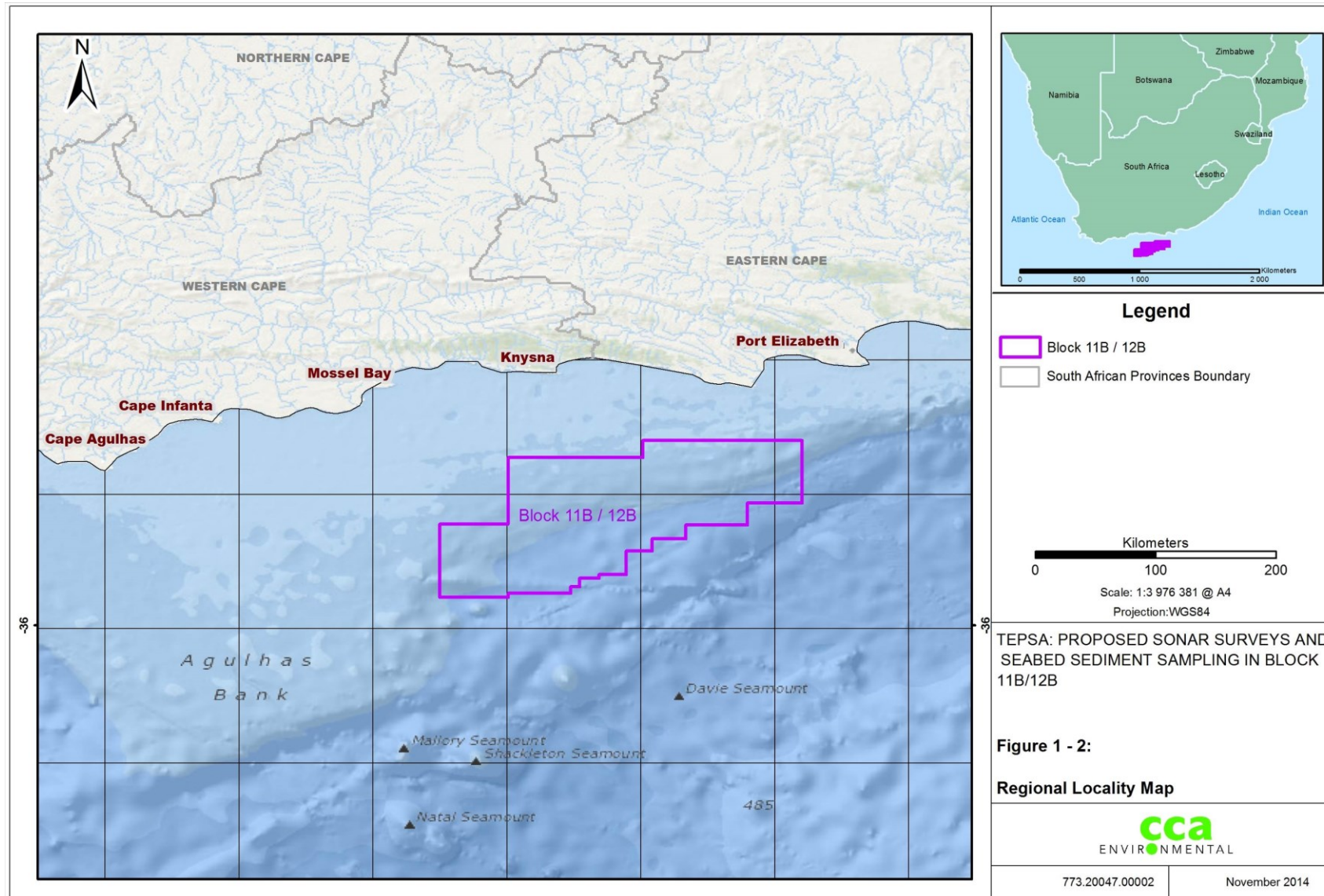


Figure 1-1: Map showing location of Block 11B/12B in relation to other offshore blocks (from PASA website. November 2014)





**Figure 1-2: Locality of Licence Block 11B/12B off the South Coast of South Africa.**

## **2. EMP APPROACH AND METHODOLOGY**

This chapter outlines the legislative requirements for the EMPr Addendum, and outlines the methodology and Interested & Affected Parties (I&APs) consultation process followed in the study.

### **2.1 LEGISLATIVE REQUIREMENTS**

#### **2.1.1 OVERVIEW OF THE “ONE ENVIRONMENTAL SYSTEM”**

In 2007 / 2008, the Department of Environmental Affairs (DEA) and the Department of Mineral Resources (DMR) agreed that environmental regulation would be removed from the scope of the MPRDA and would be regulated under NEMA, which will give rise to a “One Environmental System” for the country relating to mining and related activities. The implementation of this was given effect by the National Environmental Management Amendment Act, 2008 (No. 62 of 2008) (NEMAA) and the Mineral and Petroleum Resources Development Amendment Act, 2008 (No. 49 of 2008) (MPRDAA) (Webber Wentzel 2014).

In terms of Section 14(2) of the NEMAA, any provision relating to prospecting, mining, exploration and production would only come into operation on a date 18 months after the date of commencement of Section 2 of NEMAA or the MPRDAA, whichever is the later. As the MPRDAA was the later enactment coming into effect on 7 June 2013, any provision relating to prospecting, mining, exploration and production and related activities would come into effect on 8 December 2014. This meant that the requirement for both an Environmental Authorisation under NEMA for triggered listed activities and an EMPr under the MPRDA were to remain in place for the 18 month period.

The 18 month period was, however, deleted by the promulgation of the National Environmental Management Laws Amendment Act, 2014 (No. 25 of 2014) (NEMLA 3) on 2 September 2014. Thus any provision relating to prospecting, mining, exploration and production and related activities in NEMAA also effectively came into effect on this date.

However, as the effective implementation of the “One Environmental System” is dependent on various related regulations being in place, DEA issued a media statement on 3 September 2014 that the South African Government has taken a decision that the “One Environmental System” will only be implemented from 8 December 2014, when the whole suite of legislation and subordinate legislation necessary for the implementation of the “One Environmental System” will be in effect. Thus, applications for Environmental Authorisation under NEMA and an Exploration Right under the MPRDA will continue as previously undertaken.

#### **2.1.2 MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (NO. 28 OF 2002)**

In terms of the MPRDA, an Exploration Right must be granted prior to the commencement of the exploration activities. A requirement of obtaining an Exploration Right is that an EMPr, must be compiled in terms of Section 39 of the MPRDA and submitted to the Petroleum Agency South Africa (PASA) for consideration and approval by the Minister of Mineral Resources. As noted earlier, an Exploration Right has been issued for Block 11B/12B and an EMPr has been approved for the associated exploration programme.

In terms of Section 102 of the MPRDA, an EMPR may be amended with the written consent of the Minister. Thus this EMPr Addendum has been prepared for the proposed sonar surveys and sediment sampling in terms of Section 102 in order to meet the requirements of Section 39 and Regulation 52 of the MPRDA.

In terms of Section 39 (3)<sup>1</sup> of the MPRDA an applicant who prepares an EMP must:

- (a) Establish baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives;
- (b) Investigate, assess and evaluate the impact of the proposed project on:
  - (i) The environment; and
  - (ii) Any national estate referred to in Section 3(2) of the National Heritage Resources Act (No. 25 of 1999), with the exception of the national estate contemplated in Section 3(2)(i)(vi) and (vii) of that Act; and
- (c) Describe the manner in which the applicant intends to:
  - (i) Modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
  - (ii) Contain or remedy the cause of pollution or degradation and migration of pollutants; and
  - (iii) Comply with any prescribed waste standard or management standards or practices.

In terms of Regulation 52 of the MPRDA an EMP must include the following:

- 2 (a) A description of the environment likely to be affected by the proposed exploration;
- (b) An assessment of the potential impacts of the proposed exploration on the environment, socio-economic conditions and cultural heritage, if any;
- (c) A summary of the assessment of the significance of the potential impacts, and the proposed mitigation and management measures to minimise adverse impacts and benefits;
- (d) Financial provision;
- (e) Planned monitoring and performance assessment of the EMP;
- (f) Closure and environmental objectives;
- (g) A record of the public participation process undertaken and the results thereof; and
- (h) An undertaking by the Applicant regarding the execution of the EMP.

### 2.1.3 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO. 107 OF 1998)

The Environmental Impact Assessment (EIA) Regulations promulgated in terms of Chapter 5 of the National Environmental Management Act (No. 107 of 1998) (NEMA) provide for the control of certain activities that are listed in Government Notices (GN) R544 (listing Notice 1), R545 (listing Notice 2) and R546 (Listing Notice 3). Activities listed in these notices must comply with the regulatory requirements listed in GN R543, which prohibits such activities until written authorisation is obtained from the competent authority.

The proposed project is not a listed activity in terms of GN No. R544 and R545, and as a result no Basic Assessment or Scoping and EIA process is required.

### 2.1.4 OTHER RELEVANT LEGISLATION

In addition to the foregoing, TEPSA must also comply with the provisions of other relevant international and national legislation and conventions, which includes, but not limited to, the following:

#### International Marine Pollution Conventions

- International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL);

<sup>1</sup> Subsection (7) of Section 39 states that “The provisions of subsection (3)(b)(ii) and subsection (3)(c) do not apply to the applications for reconnaissance permissions, prospecting rights or mining permits.” In addition, Subsection (2)(b)(vii) of Section 69 states that “prospecting rights, must be construed as a reference to exploration rights”. Therefore, the provisions of Subsection (7) of Section 39 would also apply to the current application for an Exploration Right.

- Amendment of the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) (Bulletin 567 – 2/08);
- International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC Convention);
- United Nations Convention on Law of the Sea, 1982 (UNCLOS);
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention) and the 1996 Protocol (the Protocol);
- International Convention relating to Intervention on the High Seas in case of Oil Pollution Casualties (1969) and Protocol on the Intervention on the High Seas in Cases of Marine Pollution by substances other than oil (1973);
- Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (1989); and
- Convention on Biological Diversity (1992).

#### **Other South African legislation**

- Carriage of Goods by Sea Act, 1986 (No. 1 of 1986);
- Dumping at Sea Control Act, 1980 (No. 73 of 1980);
- Hazardous Substances Act, 1983 and Regulations (No. 85 of 1983);
- Marine Living Resources Act, 1998 (No. 18 of 1998);
- Marine Traffic Act, 1981 (No. 2 of 1981);
- Marine Pollution (Control and Civil Liability) Act, 1981 (No. 6 of 1981);
- Marine Pollution (Prevention of Pollution from Ships) Act, 1986 (No. 2 of 1986);
- Marine Pollution (Intervention) Act, 1987 (No. 65 of 1987);
- Maritime Safety Authority Act, 1998 (No. 5 of 1998);
- Maritime Safety Authority Levies Act, 1998 (No. 6 of 1998);
- Maritime Zones Act 1994 (No. 15 of 1994);
- Merchant Shipping Act, 1951 (No. 57 of 1951);
- Mine Health and Safety Act, 1996 (No. 29 of 1996);
- National Environmental Management: Air Quality Act, 2004 (No. 39 of 2004);
- National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004);
- National Environmental Management: Integrated Coastal Management Act, 2008 (No. 24 of 2008);
- National Environmental Management: Waste Act, 2008 (No. 59 of 2008);
- National Heritage Resources Act, 1999 (No. 25 of 1999)
- National Ports Act, 2005 (No. 12 of 2005);
- National Water Act, 1998 (No. 36 of 1998);
- Nuclear Energy Act, 1999 (No. 46 of 1999);
- Occupational Health and Safety Act, 1993 (No. 85 of 1993) and Major Hazard Installation Regulations;
- Sea-Shore Act, 1935 (No. 21 of 1935);
- Sea Birds and Seals Protection Act, 1973 (No. 46 of 1973);
- Ship Registration Act, 1998 (No. 58 of 1998); and
- Wreck and Salvage Act, 1995 (No. 94 of 1995).

## **2.2 EMPR ADDENDUM PROCESS**

### **2.2.1 OBJECTIVES**

The objectives of the EMPr Addendum process are:

- To provide a reasonable opportunity for I&APs to be consulted on the proposed project;

- To ensure that all potential key environmental issues and impacts that could result from the proposed project are identified;
- To identify feasible alternatives to the implementation of the proposed project;
- To assess potential impacts related to the proposed project;
- To present appropriate mitigation or optimisation measures to minimise potential impacts or enhance potential benefits; and
- Through the above, to ensure informed, transparent and accountable decision-making by the relevant authorities.

## **2.2.2 PROCESS UNDERTAKEN**

### **2.2.2.1. Public Participation Process**

The public participation process involved an open, participatory approach to the study and involvement of I&APs to ensure that all impacts were identified and that planning and decision-making takes place in an informed, transparent and accountable manner.

Steps undertaken during this phase are summarised below and all supporting information is presented in Appendix 1:

- A preliminary I&AP database of authorities, Non-Governmental Organisations, Community-based Organisations and other key stakeholders was compiled using databases of previous studies in the area. Additional I&APs were added to the database based on responses to the advertisements and notification letter (see below). To date 159 I&APs have been registered on the project database (see Appendix 1.1);
- A notification letter / email and Background Information Document (BID) were distributed for a 21-day registration and comment period from 5 November 2014 to 26 November 2014 (see Appendix 1.2 for letter/email, BID and proof of distribution). The purpose of the letter / email and BID was to convey information on the proposed exploration programme and to invite I&APs to register on the project database and provide initial comment. To simplify the registration process, a Registration and Comment Form was distributed with the BID; and
- Advertisements announcing the proposed project, the availability of the BID and I&AP registration / comment period were placed in the Cape Times (Western Cape), Die Burger (Western Cape), Die Burger (Eastern Cape) and The Herald (Eastern Cape) on 5 November 2014 (see Appendix 1.3).

All Registration and Comments Forms and other written correspondence received from I&APs during the registration and comment period are presented in Appendix 1.4. Comments have been collated, and responded to, into an Issues and Responses Trail (see Appendix 1.5).

### **2.2.2.2. Specialist Studies**

Two specialist studies were undertaken to address the key issues that required further investigation, namely the impact on fishing and marine fauna (see Table 2.1 below).

The specialist studies involved the gathering of data relevant to identifying and assessing environmental impacts that may occur as a result of the proposed project. These impacts were then assessed according to pre-defined rating scales (see Appendix 3). Specialists also recommended appropriate mitigation / control or optimisation measures to minimise potential negative impacts or enhance potential benefits, respectively.



**Table 2-1: List of specialist studies and specialists.**

No.	Specialist study	Specialist/s	Qualifications	Company	Appendix
1	Marine fauna	Dr Andrea Pulfrich	PhD (Fisheries Biology), Christian-Albrechts University, Kiel, Germany	Pisces Environmental Services (Pty) Ltd	2.1
2	Fishing	Mr Dave Japp	MSc (Ichthyology and Fisheries Science), Rhodes University	Capricorn Marine Environmental (Pty) Ltd	2.2
		Ms Sarah Wilkinson	BSc (Hons) (Botany), University of Cape Town		

### 2.2.2.3. Report Compilation

The specialist information and other relevant information have been integrated into the EMPr Addendum. Many of the issues associated with the proposed exploration activities are generic in nature and have been assessed based on previous seismic survey programmes off the coast of South Africa and the Generic EMP<sup>2</sup> prepared for oil and gas exploration in South Africa. Recommendations proposed were based on specialist input (see Section 2.2.2.2) and are in line with the Generic EMPr and the general principles of the Joint Nature Conservation Committee (JNCC) guidelines. Information was incorporated into the draft EMPr Addendum in order to ensure compliance with Section 39 and Regulation 52 of the MPRDA.

The EMPr Addendum aims to present all information in a clear and understandable format and suitable for easy interpretation by authorities.

The EMPr Addendum will be distributed for a 30-day review and comment period and any comments received will be forwarded directly to PASA for consideration.

<sup>2</sup> Crowther Campbell & Associates and Centre for Marine Studies (2001) Generic Environmental Programme Reports for oil and gas exploration off the coast of South Africa. Generic Manual for the preparation of a Lease Specific Environmental Management Programme Report for seismic surveys. Petroleum Agency of South Africa, Cape Town, South Africa.