

**3D OFFSHORE SEISMIC RESEARCH PROJECT IN SAVE BASIN,  
INHAMBANE PROVINCE**

PROPOSED BY:



**ENVIRONMENTAL PRE-FEASIBILITY AND SCOPING STUDY REPORT AND  
TERMS OF REFERENCE FOR THE ENVIRONMENTAL IMPACT STUDY**

**NON-TECHNICAL SUMMARY**

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**HOW TO OBTAIN ADDITIONAL INFORMATION ABOUT THE PROJECT**

The Environmental Pre-Feasibility and Scoping Study Report (EPDA), including the Terms of Reference (ToR) for the Environmental Impact Study (EIA), as well as this Non-Technical Summary (NTS), are available for consultation by interested parties on the Internet portal of IMPACTO ([www.impacto.co.mz](http://www.impacto.co.mz)). Hard copies are available for viewing at the following locations:

<b>Maputo City:</b>	<b>Inhambane Province:</b>
<ul style="list-style-type: none"><li>▪ Direcção Nacional de Ambiente (DINAB)</li><li>▪ Instituto Nacional do Petróleo (INP)</li><li>▪ IMPACTO, Lda</li></ul>	<ul style="list-style-type: none"><li>▪ Serviço Provincial do Ambiente (SPA)</li><li>▪ Serviço Provincial de Infraestruturas (SPI)</li><li>▪ Administração dos Distritos de Inhassoro, Vilankulo e Massingao</li></ul>

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## Contents

1.	Background.....	2
2.	The EIA Process .....	3
3.	Brief Project Description .....	4
3.1.	Geographic Location .....	4
3.2.	Seismic Survey Technology.....	4
3.3.	Project phasing.....	4
3.4.	Forecast Calendar.....	4
3.5.	Means of intervention and workforce .....	4
4.	Description of the Biophysical and Social Environment .....	5
5.	Potential Impacts .....	5
6.	CONCLUSIONS.....	6

## 1. BACKGROUND

In accordance with the policy of the Government of Mozambique (GoM) to promote international investment in the offshore hydrocarbon industry, an agreement was signed between Searcher Geodata UK Limited (SEARCHER) (the Proponent) and the National Petroleum Institute (INP) of Mozambique for the acquisition of high-resolution three-dimensional (3D) seismic data, in deep waters, with a view to obtaining a detailed mapping of the geological formations in an offshore area, designated "3D research area of the Save Basin".

SEARCHER is a global provider of services, technology and data. SEARCHER designs, manages and markets proprietary<sup>1</sup> and multi-client<sup>2</sup> geoscientific data to the global energy and resource industries and is ISO 9001:2015 certified for its quality management system. "The provision of geological, geophysical, geotechnical and geographical information systems (GIS) data acquisition, collection, processing and interpretation to the exploration and resources sectors inclusive of software licensing for associated data."

The proposed seismic campaign will cover open areas within an Operational Area for Seismic Research of the Save Basin (see Figure 1 below). The seismic survey will be carried out in water depths varying between 200 and 2,500 m depths, within the operational seismic survey area which is being considered in this study. It is estimated that the proposed operational area for seismic acquisition covers approximately 42.814 km<sup>2</sup>.

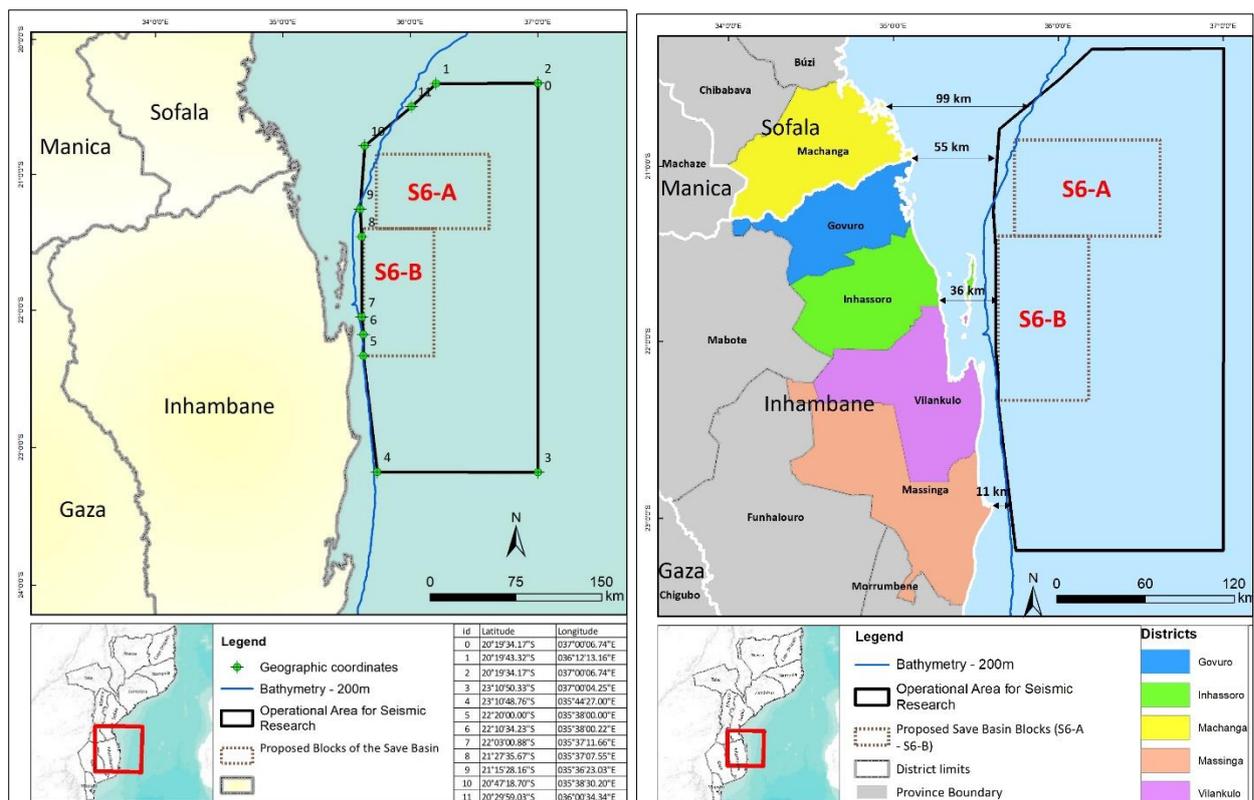


Figure 1: Project Location

<sup>1</sup> Proprietary seismic survey (also called exclusive seismic survey) is performed for a single customer on an exclusive basis.

<sup>2</sup> Multi-client (MC) seismic survey is performed by one seismic company and the seismic data is sold to multiple clients on a non-exclusive basis.

In accordance with current environmental legislation in Mozambique, the activity requires carrying out an Environmental Impact Assessment Process (EIA). Under the terms of the concession for the seismic survey, SEARCHER has the obligation to comply with the environmental legislation of the Republic of Mozambique and, to ensure compliance with this requirement, it has appointed Projectos e Estudos de Impacto Ambiental, Limitada (IMPACTO) as an independent environmental consultant, to conduct the EIA Process for its 3D seismic survey activities. This process will culminate in the issuance of the respective Environmental License (LA).

On the 6<sup>th</sup> March 2023 IMPACTO submitted the Registration documents for categorization of the proposed Project to Provincial Environment Service (SPA) of Inhambane Province.

In accordance with the letter with N/Ref.ª/322/SPA/DA/180/023, dated 22<sup>nd</sup> March 2023, from the Provincial Environment Service (SPA) of Inhambane Province, the proposed project was classified as a Category A activity, requiring an Environmental Impact Study (EIA), preceded by the preparation and approval of an Environmental Pre-Feasibility and Scoping Study (EPDA) Report and Terms of Reference for the EIA (see Letter - Annex 2).

This document presents the Environmental Pre-Feasibility and Scoping Study (EPDA) Report and the Terms of Reference (ToR) for the EIA, prepared within the scope of the EIA Process for the 3D seismic survey activities in the Save Basin, off the coast of Inhambane Province.

## 2. THE EIA PROCESS

The Environmental Impact Assessment (EIA) involves different steps that include: Project Registration (*Instrução do Processo*), for Project categorization; the EPDA and ToR for the EIA; and finally the detailed EIA. The main purpose of the EPDA is to determine whether there are fatal issues that could make the project unfeasible. The EPDA further determines the scope of the EIA, based on the ToR for the EIA, which are included in this document.

The EPDA process involved a review of existing literature on the project area and subsequently identified and listed (in **Chapter 11** of the Main Report) the potential impacts of the proposed exploration activities. It should be noted that during the EPDA no fatal environmental flaws were identified, which would point to the unfeasibility of the proposed activity, and the project can move forward with the preparation of an EIA.

Environmental issues that require further investigation during the EIA were identified and detailed ToRs were prepared for the specialist studies that will address these issues (**Annex 1**). The EIA will essentially comprise an exhaustive analysis of the published and available literature for the Study Area (Operational area for seismic research) as well as a detailed analysis of potential impacts and associated mitigating measures to minimize or eliminate potential negative impacts on the biophysical and socioeconomic environment.

### **3. BRIEF PROJECT DESCRIPTION**

#### **3.1. Geographic Location**

The proposed seismic campaign will cover an operational area for seismic research of the Save Basin located off the coast of Inhambane Province (see Figure 1 above). The seismic survey will be carried out in water depths varying between 200 and 2,500 m depths, within the operational area. The proposed operational area for seismic research is estimated to cover approximately 42,814 km<sup>2</sup> within which, currently up to 18,679 km<sup>2</sup> seismic data may be acquired.

#### **3.2. Seismic Survey Technology**

The survey will be carried out using a state-of-the-art seismic vessel with a wide range towing configuration (10 to 12 individual recording cables towed behind the vessel with a length of approximately 6,000 to 8,100 m and a wide separation of approximately 150 m between the cables and the sound wave source with a triple configuration). The vessel supplier and therefore the seismic and support vessels are yet to be confirmed at this time.

In order to maximize data content, a combination of modern acquisition/processing technologies will be provided, including deeper recording cables and high-bandwidth processing. The deep tow technique will also reduce the impact of any bad sea conditions on the data acquisition process.

#### **3.3. Project phasing**

The Project comprises the following phases:

- Mobilization of the seismic vessel and support vessels from the port of origin to the research area (the seismic vessel will not call at any port in Mozambique);
- seismic acquisition campaign; and
- demobilization of the vessels, once the seismic survey is concluded.

These surveys will allow clarification in terms of the presence of potentially marketable hydrocarbons. Thus, the resulting data will clarify subsurface features and allow the blocks to be awarded as soon as the concessionaires are in a position to enter into immediate activity (drilling of research wells and eventually the development of wells).

#### **3.4. Forecast Calendar**

The proposed seismic campaign will cover the Operational Area for Seismic Research of the Save basin as per **Figure 1** above. The seismic survey will be carried out in water depths varying between 200 m and 2500 m depths. The proposed operational area for seismic research is estimated to cover approximately 42,814 km<sup>2</sup>. In 2023/4, Searcher Plan to acquire 11,000 km<sup>2</sup> of 3D seismic within the larger EIA operational area, subject to EIA approval.

#### **3.5. Means of intervention and workforce**

Searcher will contract a Seismic Vessel and support vessel/s to complete the survey. Each vessel has its own dedicated crew on board. Additional requirement for labour force may include additional specialised technical staff which, where possible, may be sourced locally if experienced personnel are available.

#### **4. DESCRIPTION OF THE BIOPHYSICAL AND SOCIAL ENVIRONMENT**

The Project area comprises the operational area for seismic surveys in deep waters, off the coast of Inhambane Province. The Project area is located at a distance of 9 km from the closest point to the coast and at depths ranging from 200m to 2,500 m.

The Project Area, provides habitat for marine fauna including marine mammals (breeding, feeding and migratory routes) and sea turtles (migration). Sensitive habitats such as coral reefs, mangroves and seagrass beds occur on the coast and on islands located to the west, and outside of, the Project area.

There are three conservation areas located to the west of the Project area namely,

- Bazaruto Archipelago National Park (at a distance of 13 km);
- São Sebastião Total Protection Zone (at a distance of 9 km); and
- Pomene National Reserve (at a distance of 11 km).

From a socio-economic point of view, in water depths greater than 200m and at distances greater than 20 km from the coast, it is unlikely that the seismic activities will directly affect artisanal fisheries or tourism (with the exception of occurrence of an unlikely oil spill) but may affect commercial fishing and maritime navigation and traffic. However, supply and support activities, through vessels moving between the land base and the research area, may interfere with artisanal fishing and tourism, depending on the location of the land base and the routes that will be used by supply vessels.

#### **5. POTENTIAL IMPACTS**

Project activities associated with offshore seismic surveys are well defined and the associated potential impacts are well understood. **Chapter 11** of the EPDA Report lists potential impacts associated with seismic survey activities, including:

- Impacts of gas emissions into the atmosphere;
- Impacts derived from the discharge of effluents from the seismic vessel;
- Underwater noise impacts from seismic sound sources;
- Impacts on fishing activity (industrial and semi-industrial) due to the safety zone around the seismic survey vessel and recording cables; and
- Interference with maritime navigation/traffic due to the security zone around the seismic survey vessel and recording cables.

These environmental and social aspects need further investigation within the EIA, and detailed ToR. For the main Specialist Studies, they are attached to the EPDA (**Annex 1**). These studies include:

- Study of Marine Ecology;
- Socioeconomic study, including tourism;
- Fisheries Study; and
- Study on Maritime Traffic.

The assessment of impacts proceeds through an iterative process that considers four main elements:

1. Forecast the magnitude of potential impacts, i.e. the consequences for the natural and social environment that may result from the proposed activities.
2. Assessment of the significance of impacts, considering the sensitivity of environmental resources and human receptors.
3. Development of mitigation measures to avoid, reduce or manage impacts.
4. Assessment of significant residual impacts after applying mitigation measures.

Where significant residual impacts remain, additional options for mitigation may be considered and impacts will be reassessed until they are as low as reasonably practicable for the Project.

The results of the independent specialist investigations, the information on the potential impacts of the activities, as well as the proposed mitigation measures, will be presented in a Preliminary Version of the Environmental Impact Assessment Report (EIA). The Draft EIA Report will be presented to the public at selected locations prior to submission of the Final Report to the MTA. A formal public comment period will be made available prior to the finalization of the report.

The EIA Final Report will include a Public Participation Process Report, which will address all comments submitted by the public. These reports will then be submitted to the MTA for decision making.

## **6. CONCLUSIONS**

The proposed seismic survey will be carried out in an operational area in the Save Basin that covers approximately 42,814 km<sup>2</sup>. In 2023/4, Searcher plans to acquire 11,000 km<sup>2</sup> of 3D seismic data within the EIA area, subject to EIA approval. Additional data may be acquired within the EIA in future years. The EIA area represents the operational area during acquisition.

The EIA Report will provide a detailed assessment of potential environmental and social impacts and subsequently set out mitigation measures to reduce these impacts. This will culminate in the preparation of an Environmental Management Plan (EMP), containing recommendations for the mitigation, management and monitoring of environmental and social impacts.

The EIA Report and the EMP will constitute the basis on which the environmental authorities will make the final decision on the proposed Project and if approval is granted, the authorities will issue the Environmental License.

With the available data, no fatal flaws were identified during the EPDA phase that would prevent the EIA process from proceeding to the next phase (the carrying out of the Environmental Impact Study - EIA). Detailed specialist studies will be carried out during the EIA phase to determine the significance of potential impacts and to verify whether there are fatal obstacles that could impede project implementation.