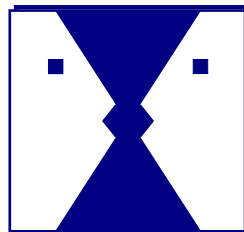


# Proposed Motouane 386 Exploration Right Application

---

## Social Impact Assessment Report



Prepared by:

Equispectives Research & Consulting Services

Contact person: Dr Ilse Aucamp

Prepared for:  
EIMS

**March 2026**



## Executive Summary

This document provides a comprehensive baseline description of the socio-economic environment surrounding the proposed Motouane 386 Exploration Right Application and identifies potential social impacts associated with the project. The exploration area is situated within the Matjhabeng Local Municipality and Moqhaka Local Municipality of the Free State Province, encompassing towns such as Welkom, Henneman, Ventersburg, and Odendaalsrus. The local economy primarily relies on the gold mining sector and agriculture; however, both sectors have experienced a prolonged decline, contributing to persistent socio-economic challenges including high unemployment, poverty, infrastructural decay, and poor service delivery.

The proposed exploration project presents both opportunities and risks for host communities. While it has the potential for short-term job creation, skills development, and enhanced local procurement during the exploration phase, significant concerns have emerged regarding the interference with existing farming livelihoods, damage to infrastructure such as farm roads, biosecurity risks, and the overlap with existing renewable energy projects. Primary stakeholders affected by the project include local farmers and farm workers, who are particularly vulnerable in an already strained socio-economic context.

Given that the direct benefits of the project to local communities are limited, it is crucial that local social impacts are managed and monitored diligently, as those bearing the social costs may not benefit from the development. Moreover, the duality of energy developments in the same area further complicates the socio-economic landscape, raising fears about land access, rights, and the cumulative impacts of concurrent mining and renewable energy activities.

Key potential social impacts identified include:

- Impacts on farming livelihoods and land uses
- Risks related to water contamination and groundwater safety



- Infrastructure damage
- Distrust stemming from past development projects for similar activities in the area (not necessarily Motouane projects)
- Increased poaching incidents and safety concerns
- Uncertainty regarding property values and land use rights
- Gender and social inclusion challenges
- Job creation expectations
- Overlapping land use implications

To address these challenges effectively, the study presents several key recommendations, including:

1. **Community Engagement:** Appoint a designated Liaison Officer to maintain communication with landowners, establish fair compensation procedures, and ensure transparency throughout the exploration process.
2. **Water Safety:** Conduct baseline water quality assessments and implement monitoring measures to safeguard local water resources from contamination.
3. **Infrastructure Protection:** Formalize road maintenance agreements with farmers and evaluate infrastructure pre-activity to mitigate damage risks.
4. **Building Trust:** Engage directly affected landowners individually to explain project activities and co-develop rehabilitation agreements that address past grievances.
5. **Nuisance Management:** Implement dust suppression and noise control measures to minimize disturbances during exploration work.
6. **Poaching Prevention:** Enforce access control measures and conduct regular checks to prevent unauthorized access to farming properties.



7. **Safety Enhancement:** Collaborate with local security groups and ensure contractor identification for improved safety during project operations. This should include fire prevention and management.
8. **Land Use Coordination:** Develop agreements with renewable energy stakeholders to clarify land use rights and prevent conflicts.
9. **Property Value Assurance:** Negotiate clear land access agreements and address existing conflicts over land use.
10. **Gender Inclusion:** Promote equal participation in decision-making and hiring practices that enhance women's employment opportunities.
11. **Expectation Management:** Communicate actively with the community about job opportunities available and provide project updates to foster realistic expectations.

By implementing these recommendations, Motouane can proactively manage the social impacts of the exploration activity, helping to ensure the well-being of local communities while navigating the complexities of overlapping land uses and socio-economic challenges.



## **Declaration of Independence**

Equispectives Research and Consulting Services declare that:

- All work undertaken relating to the proposed project was done as independent consultants.
- They have the necessary required expertise to conduct social impact assessments, including the required knowledge and understanding of any guidelines or policies that are relevant to the proposed activity.
- They have undertaken all the work and associated studies in an objective manner, even if the findings of these studies were not favourable to the project proponent.
- They have no vested interest, financial or otherwise, in the proposed project or the outcome thereof, apart from remuneration for the work undertaken under the auspices of the above-mentioned regulations.
- They have no vested interest, including any conflicts of interest, in either the proposed project or the studies conducted in respect of the proposed project, other than complying with the relevant required regulations; and
- They have disclosed any material factors that may have the potential to influence the competent authority's decision and/or objectivity in terms of any reports, plans or documents related to the proposed project as required by the regulations.



## Record of Experience

Ilse Aucamp, San-Marié Aucamp and Alex Msipa compiled this report.

Ilse Aucamp holds a Doctor of Philosophy (D Phil) in Social Work from the University of Pretoria (2015) and a Master's Degree in Environmental Management from Potchefstroom University with Cum Laude (2004), following her BA in Social Work from the University of Pretoria (1994). She frequently guest lectures in various academic programs and specializes in social impact assessments, social management plans, social auditing, and public participation. A co-author of the *IAIA's Guidance Document on Social Impact Assessment (2015)*, she is recognized for her expertise in the field.

San-Marié Aucamp is a registered Research Psychologist with over 20 years of experience in social research and is active in guest lecturing on social impact assessments. Her work spans sectors such as mining, manufacturing, and financial services, focusing on social impact assessments and social and labour plans. She contributed to the IAIA's international guidance document on social impacts and is currently pursuing her PhD in Consulting Psychology.

Alex Msipa is a social consultant with a Master's Degree in social work, specializing in the relationship between land degradation and the livelihoods of small-scale farmers. He holds a Professional Development Certificate in Social Impact Assessment from IAIA and has worked on various projects in Southern Africa, focusing on social development, human rights, and community empowerment. He specializes in social impact assessment, stakeholder engagement, land use assessment, and social management plans.



## Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
<b>2</b>	<b>SCOPE OF WORK .....</b>	<b>9</b>
<b>3</b>	<b>METHODOLOGY .....</b>	<b>10</b>
<b>3.1</b>	<b>Information base.....</b>	<b>10</b>
<b>4</b>	<b>LEGISLATIVE AND POLICY FRAMEWORK.....</b>	<b>11</b>
<b>4.1</b>	<b>The Constitution of the Republic of South Africa 1996 .....</b>	<b>11</b>
4.1.1	The National Environmental Management Act 107 of 1998 .....	12
4.1.2	The National Water Act 36 of 1998 .....	14
4.1.3	The Mineral and Petroleum Resources Development Act 28 of 2002 .....	14
4.1.4	The National Heritage Resources Act 25 of 1999 .....	17
4.1.5	Promotion of Administrative Justice Act 3 of 2000 .....	18
4.1.6	Gas related legislation .....	19
<b>4.2</b>	<b>National and international standards.....</b>	<b>20</b>
4.2.1	ISO 26000:2010/SANS 26000:2010 .....	20
4.2.2	International Social Performance Standards/Initiatives .....	21
4.2.3	International Principles for SIA.....	23
<b>4.3</b>	<b>Additional governance tools.....</b>	<b>24</b>
4.3.1	Integrated Development Plans.....	24
4.3.2	Provincial Growth and Development Strategies .....	27
4.3.3	National Development Plan .....	29
4.3.4	Sustainable Development Goals.....	31
<b>5</b>	<b>RECEIVING ENVIRONMENT .....</b>	<b>32</b>
<b>5.1</b>	<b>Description of the area.....</b>	<b>33</b>
5.1.1	Free State Province .....	34
5.1.2	Lejweleputswa District Municipality .....	34
5.1.3	Matjhabeng Local Municipality .....	35
5.1.4	Fezile Dabi District Municipality .....	35
5.1.5	Moqhaka Local Municipality .....	36
<b>5.2</b>	<b>Description of the population .....</b>	<b>36</b>
5.2.1	Population and household sizes .....	38
5.2.2	Population composition, age, gender and home language .....	42
5.2.3	Gender .....	45
5.2.4	Language .....	46
5.2.5	Education.....	47
5.2.6	Employment .....	48
5.2.7	Household Income.....	50
5.2.8	Housing.....	51
5.2.9	Household Size .....	54
5.2.10	Access to water and sanitation.....	55
5.2.11	Energy .....	58



5.2.12	Refuse removal .....	59
<b>6</b>	<b>STAKEHOLDER IDENTIFICATION AND ANALYSIS.....</b>	<b>60</b>
6.1	Approach.....	60
6.2	List of stakeholders .....	60
6.2.1	Stakeholder perspectives .....	63
<b>7</b>	<b>DESCRIPTION OF POTENTIAL IMPACTS.....</b>	<b>65</b>
7.1	Social Impact Assessment .....	65
7.3.1	Impact on farming community livelihoods and interference with existing land uses.....	73
7.3.2	Water contamination and groundwater safety.....	77
7.3.3	Damage to farm roads, existing services and infrastructure.....	81
7.3.4	Distrust from previous development projects .....	84
7.3.6	Increase in poaching incidents and livestock theft .....	88
7.3.7	Impacts on safety and security of local residents .....	91
7.3.8	Overlapping land use with renewable energy projects.....	94
7.3.9	Uncertainty around property values and land use rights.....	96
7.3.10	Gender and social inclusion impacts .....	100
7.3.11	Job creation and local economic expectations .....	104
7.4	Impact Ratings .....	107
<b>8</b>	<b>STAKEHOLDER ENGAGEMENT PLAN.....</b>	<b>108</b>
<b>9</b>	<b>PROPOSED GRIEVANCE MECHANISM.....</b>	<b>110</b>
<b>10</b>	<b>CONCLUSION AND RECOMMENDATIONS.....</b>	<b>112</b>
<b>11</b>	<b>REFERENCES .....</b>	<b>116</b>





## List of Figures

Figure 1-1: Locality of proposed Motuoane 386 Production Right. ....	6
Figure 5-1: Location of the proposed Motuoane Exploration Right.....	33
Figure 5-2: Population distribution (shown in percentage, source: Census 2011, Census 2022) .....	42
Figure 5-3: Age distribution (shown in percentage, source: Census 2011), Census 2022 .....	44
Figure 5-4: Gender distribution (shown in percentage, source: Census 2011, Census 2022) .....	45
Figure 5-5: Language distribution (shown in percentage, source: Census 2011, Census 2022).....	46
Figure 5-6: Education profiles (those aged 20 years or older, shown in percentage, source: Census 2011, Census 2022) .....	47
Figure 5-7: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011) .....	48
Figure 5-8: Employment sector (those aged between 15 - 65 years, shown in percentage, source: Census 2011, Census 2022) .....	49
Figure 5-9: Annual household income (shown in percentage, source: Census 2011) .....	50
Figure 5-10: Dwelling types (shown in percentage, source: Census 2011, Census 2022) .....	52
Figure 5-11: Tenure status (shown in percentage, source: Census 2011, Census 2022) .....	53
Figure 5-12: Household size (shown in percentage, source: Census 2011, Census 2022) .....	54
Figure 5-13: Water source (shown in percentage, source: Census 2011, Census 2022) .....	55
Figure 5-14: Piped water (shown in percentage, source: Census 2011, Census 2022) .....	56
Figure 5-15: Sanitation (shown in percentage, source: Census 2011) .....	57
Figure 5-16: Energy source for lighting (shown in percentage, source: Census 2011, Census 2022) ....	58
Figure 5-17: Refuse removal (shown in percentage, source: Census 2011, Census 2022) .....	59

## List of Tables

Table 5-1: Population density and growth estimates (sources: Census 2011, Census 2022) .....	38
Table 5-2: Household sizes and growth estimates (sources: Census 2011, Census 2022 .....	39
Table 5-3: Dependency ratios (source: Census 2011;2022). ....	40



Table 5-4: Poverty and SAMPI scores (sources: Census 2011 and Community Survey 2016).....	41
Table 5-5: Average age (source: Census 2011, Census 2022).....	42
Table 5-6: Geotypes (source: Census 2011, households).....	51
Table 6-1: Detail of Stakeholder Groups. ....	60
Table 6-2: Stakeholder matrix. ....	62
Table 7-1: Criteria for determination of impact consequence. ....	67
Table 7-2: Probability/ likelihood scoring.....	68
Table 7-3: Determination of significance .....	69
Table 7-4: Significance scores.....	69
Table 7-5: Criteria for determining prioritisation. ....	70
Table 7-6: Determination of prioritisation factor.....	71
Table 7-7: Final significance rating .....	72
Table 7-8: Potential mitigation for impacts on community livelihoods and interference with existing land uses.....	75
Table 7-9: Potential mitigation for impacts on water contamination and groundwater safety. ....	78
Table 7-10: Potential mitigation measures for impacts on damage to farm roads, existing services and infrastructure.....	82
Table 7-11: Mitigation addressing distrust from previous development projects .....	85
Table 7-12: Potential mitigation of nuisance factors.....	87
Table 7-13: Potential mitigation of impacts as a result of increase in poaching and livestock theft. ....	89
Table 7-14: Potential mitigation impacts on safety and security. ....	92
Table 7-15: Potential mitigation impacts on education, skills development and training. ....	95
Table 7-16: Potential mitigation impacts on safety and security. ....	97
Table 7-17: Potential mitigation for impacts as a result of gender biases or social exclusion .....	102
Table 7-18: Mitigation measures suggested for job creation and local economic expectations .....	106
Table 7-19: Impact rating table .....	107



## 1 Introduction

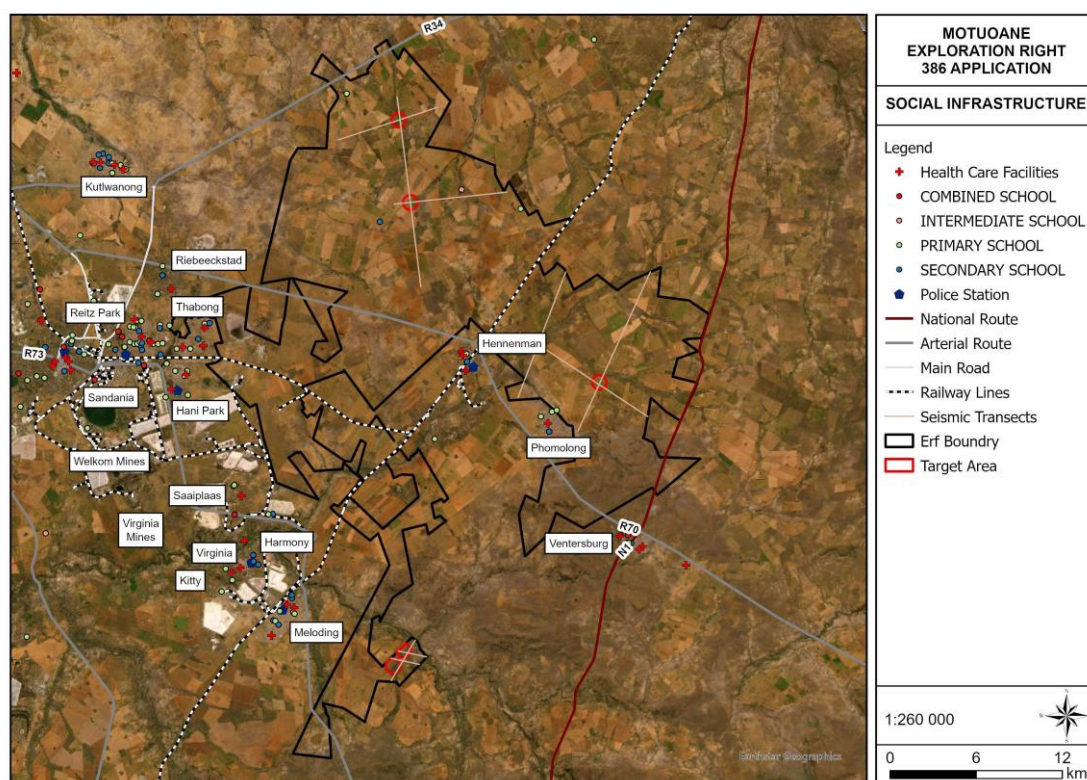
Motuoane proposes to explore all saleable gases including but not limited to Methane, Carbon Dioxide, Helium, and Nitrogen in the licensed area. Published reports, general experience, experience within Motuoane and contacts with individuals familiar with the area indicate the presence of potentially commercial quantities of these gases. Direct evidence includes gas-emitting boreholes, nearby commercial gas productions, gas encountered during drilling and underground mining operations. Due to the large area and complex exploration methodology, the ER will be required for an initial period of three years with the option to renew three additional periods of two years resulting in a total of nine years.

Exploration Right 386 is a consolidation of Technical Cooperation Permit (TCP) 235 and 240 & Exploration Right Application (ERA) 341 which were tenures in 2024 before ER386 application was submitted to PASA on the 8<sup>th</sup> of October 2024. TCP235 & TCP240 were granted in October 2023 for a 12 Month Term, an ER application was applied for in October 2024. ERA341 was an application previously submitted to PASA which was held up due to changing legislation and subsequently withdrawn. The areas (ERA341, TCP235 and TCP240) were then consolidated to one ER (ER386). Motuoane's application for an Exploration Right (ER) for hydrocarbons was accepted on the 22<sup>nd</sup> of October 2024 in terms of Section 79 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 – MPRDA, as amended). The accepted application for an Exploration Right (ER386) is located over an area of approximately 58 000 hectares (ha), covering various farm portions in Welkom near the towns of Virginia, Hennenman and Odendaalsrus, Free State Province. The boundaries of ER386 are 28°13'28.95"S; 26°55'2.76"E in the South, 27°57'37.57"S; 26°48'49.15"E in the West, 27°59'13.57"S; 27°11'13.06"E in the East and 27°46'34.45"S; 26°57'44.05"E in the North, the central coordinates are approximately 27°58'23.27"S; 26°59'38.94"E.

Figure 1 shows the proposed location for the project within municipal context.



**Figure 1-1: Locality of proposed Motuoane 386 Production Right.**



The proposed activities to be undertaken as part of the exploration activities include the following:

- Identifying existing blowers within the ER, undertaking well workover and intervention if necessary.
- The undertaking of new core exploration well drilling and undertaking well workover and intervention where necessary (at preidentified / new areas of interest).
- Undertaking seismic survey and/or magnetotellurics survey activities (at preidentified / new areas of interest).
- Clearance of an area of 300m<sup>2</sup> or more of indigenous vegetation within specified geographical area.
- Clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation; and



- Perform gas composition analysis on gas from existing boreholes and newly drilled wells on the ER.

The main activities are exploration drilling and seismic survey activities. The proposed approach is to first determine and map the geographic extent of all boreholes currently emitting gas on and near the ER area. Then measure rates and monitor pressures where possible and perform gas composition analysis. The geophysical wireline logging of existing boreholes (where possible) will include monitoring of water levels. If no existing gas emitting boreholes are identified near a target area, new drilling activities are proposed within that area using percussion or rotary drilling method. Although up to five (5) target areas (TA) with 500m buffer (1km corridor) within the exploration right may be undertaken over the 9-year period, the current Works Program caters for only three (3) drilling wells. It must be noted that there may be a single, multiple or no drilling activities within some of the target areas. Should more than 3 drilling wells be required within the ER, the current Works Program will be required to be updated accordingly.

There are at least 14 approved renewable energy projects from various applicants located within ER386. TCP 144 was granted in 2017 over the area of ERA 341, demonstrating security of tenure over the application area before the renewable energy developments were granted any authorisation over the same area. Additionally, the 14 projects were only recently brought to the applicant's attention through the scoping phase screening process. Motuoane and the affected renewable energy applicants should discuss the way forward and/or make necessary arrangements to coexist.

The purpose of this report is to provide baseline information regarding the socio-economic environment, to identify possible social and economic impacts and to suggest ways in which these impacts can be mitigated. This will assist decision-makers on the project in making informed decisions by providing information on the potential or actual consequences of their proposed activities. The process entailed the following:



- A baseline socio-economic description of the affected environment.
- Identification of potential social and economic change processes that may occur as a result of the project; and
- Identification of potential social and economic impacts.

One of the ways in which social risk can be managed is by conducting a social impact assessment (SIA). Such an assessment can assist with identifying possible social impacts and risks. Disregarding social impacts can alter the cost-benefit equation of development and in some cases even undermine the overall viability of a project. A proper social impact assessment can have many benefits for a proposed development (UNEP, 2002) such as:

- Reduced impacts on communities of individuals.
- Enhanced benefits to those affected.
- Avoiding delays and obstruction – helps to gain development approval (social license).
- Lowered costs.
- Better community and stakeholder relations; and
- Improved proposals.

EIMS was appointed to manage the Environmental Impact Assessment for the project, and they appointed Equispectives Research and Consulting Services to perform a social impact assessment for the proposed project. This report represents the findings and recommendations of a social impact assessment.



## 2 Scope of Work

The purpose of the SIA is to provide input in the Environmental Impact Assessment (EIA)/ Environmental Management Programme (EMPr) Report for the proposed Motuoane Exploration Right application. The scope of work for this Social Impact Assessment included the following key components:

- A desktop description of the baseline receiving environment specific to the field of expertise (general surrounding as well as site specific environment).
- Identify individuals/groups within the Project Area of Influence with existing vulnerabilities or who may experience adverse impacts from the Project more acutely than others.
- Field visit to collect qualitative data through key stakeholder interviews with landowners, local residents and other key stakeholders.
- An in-depth analysis of the potential social impacts - both positive and negative of the Motuoane Exploration Right application.
- The identification and provision of mitigation measures for negative impacts, along with recommendations for enhancing the positive outcomes. Preparation of a Social Impact Assessment Report including a social impact management plan that details the findings, recommendations, and conclusions from the assessment.



### 3 Methodology

Scientific social research methods were used for this assessment. To clarify the process to the reader, this section will start with a brief explanation of the processes that have been used in this study.

#### 3.1 Information base

The information used in this report was based on the following:

- A literature review (see list provided in **Section 11**).
- Data from Statistics South Africa; and
- Professional judgement based on experience gained with similar projects.

In terms of the way forward, it is believed that a participatory approach is the best way to approach social research in the South African context. The World Bank Social Standards, IFC standards, Equator Principles, International Principles for Social Impact Assessment, as well as the guidance document for assessing and managing the social impacts of projects of IAIA will guide the study. It must be noted that international standards and principles will be adapted to ensure that it can be applied in the local social context. Apart from obtaining environmental permits as required by law, any proposed project would also require “social license to operate” from the community where it will be situated. This is seen to be a crucial element to ensure the successful implementation of the recommendations resulting from the environmental studies. The methodology proposed therefore focus on involving the affected public in the research and planning where it is realistically possible and executable. Different methodologies will be utilised to ensure the affected communities are consulted in the way that is most appropriate to the community. Information obtained through the public processes will inform the writing of the social report.





## 4 Legislative and Policy Framework

Although there are no explicit acts referring directly to SIA, there are many acts and policies that require specific social outcomes that can be related to this project, and these are discussed in the section below.

### 4.1 The Constitution of the Republic of South Africa 1996

The current Constitution of the Republic of South Africa 1996 can be regarded as one of the most progressive constitutions in the world. Human rights are enshrined in the South African Constitution, which forms the basis of all the country's legislation. Chapter 2 consists of a Bill of Rights, which explicitly spells out the rights of every South African citizen. Human rights and dignity are fundamental to SIA, and it recognises fundamental human rights and the prerogative to protect those rights as core values (Vanclay, 2003). The human rights relevant to the environmental management field that are safeguarded by the Constitution of the Republic of South Africa 1996 in the Bill of Rights, include:

- Right to a healthy environment.
- Right of access to land and to security of tenure; and
- Right to adequate housing and protection against evictions and demolitions.

The right to a protected biophysical environment, the promotion of social development and trans-generational equity is explicitly included in the Constitution of the Republic of South Africa 1996, which states:

“Everyone has the right -

1. To an environment that is not harmful to their health and wellbeing, and
2. To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:
  1. *Prevent pollution*
  2. *Promote conservation, and*



3. *Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

When considering an environment that is not harmful to peoples' health and wellbeing, it is important to reflect on the interconnectedness of biophysical, economic, and social aspects. The impact of development on people, and the true cost of development, as well as the consideration of “who pays the price?” versus “who reaps the benefits?” cannot be ignored in a discussion about human rights and the environment.

The right to a generally satisfactory environment is increasingly seen as a human right in Africa (Du Plessis, 2011), and South Africa's environmental legislation supports this.

#### 4.1.1 The National Environmental Management Act 107 of 1998

The National Environmental Management Act (NEMA) 107 of 1998 states that the State must respect, protect, promote, and fulfil the **social**, economic, and environmental rights of everyone and strive to meet the needs of previously disadvantaged communities. It states further that sustainable development requires the integration of **social**, economic, and environmental factors in the planning, evaluation, and implementation of decisions to ensure that development serves present and future generations.

Chapter 1 of NEMA contains a list of principles and states clearly that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural, and social interests (NEMA, 1998). It states further that negative impacts on the environment and on peoples' environmental rights must be anticipated and prevented, and if they cannot be prevented, they should be minimised and remedied. It elaborates further on the equity of impacts, and the fact that vulnerable communities should be protected from negative environmental impacts. It refers to the principle that everyone should have equal access to environmental resources, benefits, and services to meet their basic



human needs (NEMA, 1998). Therefore, there is a clear mandate for environmental and restorative justice in the act, something that must be considered in this project.

Another important aspect of NEMA is the principle of public participation. It states that people should be empowered to participate in the environmental governance processes, and that their capacity to do so should be developed if it does not exist. All decisions regarding the environment should take the needs, interest, and values of the public into account, including traditional and ordinary knowledge (NEMA, 1998). There are also specific environmental management acts that fall under NEMA, such as the National Environmental Management, Air Quality Act 39 of 2004 (NEM: AQA), and the National Environmental Management, Waste Act 59 of 2008 (NEM: WA). These acts require similar public participation processes to NEMA and the principles of NEMA also apply to them (Department of Environmental Affairs & Development Planning [DEA&DP], Provincial Government of the Western Cape, 2010).

Chapter 6 of NEMA elaborates on the public participation requirements. This is supplemented by the EIA regulations published in GN 982 of 4 December 2014, which contained requirements for public participation (GN 982 in GG 38282 of 4 December 2014). It provides requirements for the public participation, the minimum legal requirements for public participation processes, the generic steps of a public participation process, requirements for planning a public participation process and a description of the roles and responsibilities of the various role players. A compulsory Public Participation Guideline that was published in 2012 (GN 807 of 10 October 2012) in terms of section J of NEMA (NEMA, 1998) complements these requirements. According to the guidelines, public participation can be seen as one of the most important aspects of the environmental authorisation process. Public participation is the only requirement of the environmental impact assessment process for which exemption cannot be given, unless no rights are affected by an application. This stems from the requirement in NEMA that people have a right to be informed about potential decisions that may affect them and that they must be given an opportunity to influence those decisions.



The principles of the National Environmental Management Act 107 of 1998 declare further that community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, sharing of environmental knowledge and experience and any other appropriate means. It states that the social, environmental, and economic impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions taken must be appropriate given the assessment and evaluation. NEMA 107 of 1998 recognises that the environment is held in public trust for the people, and therefore the beneficial use of environmental resources must serve the peoples' interest and protect the environment as the peoples' common heritage.

NEMA takes a holistic view of the environment, and promotes the consideration of social, economic, and biophysical factors to obtain sustainable development and achieve effective management of the biophysical environment.

#### **4.1.2 The National Water Act 36 of 1998**

Chapter 1 of the National Water Act (NWA) 36 of 1998 states that sustainability and equity are identified as central guiding principles in the protection, use, development, conservation, management, and control of water resources. It affirms that the guiding principles recognise the basic human needs of present and future generations and the need to promote social and economic development using water. Chapter 2 of the NWA states amongst others that the purpose of the act is to ensure that everyone has equitable access to water, and that the results of past racial and gender discrimination are redressed. It aims to promote the efficient, sustainable, and beneficial use of water in the public interest, and to facilitate social and economic development. The NWA recognises that the nations' water resources are held in public trust for the people, and therefore the sustainable, equitable and beneficial use of water resources must serve the peoples' interest.

#### **4.1.3 The Mineral and Petroleum Resources Development Act 28 of 2002**

The Mineral and Petroleum Resources Development Act (MPRDA) 28 of 2002 is the only environmental act that explicitly requires a social development output, in



addition to a public participation process, in the form of a Social and Labour Plan (SLP). In the preamble to the Act, it recognises the need to promote local and rural development and the social upliftment of communities affected by resource development. In Section 2 it states that some of the objectives of the act are:

- To substantially and meaningfully expand opportunities for historically disadvantaged persons, including women, to enter the mineral and petroleum industries and to benefit from the exploitation of the nations' mineral and petroleum resources;
- To promote economic growth and mineral and petroleum resources development in the Republic;
- To promote employment and advance the social and economic welfare of all South Africans, and
- To ensure that holders of mining and production rights contribute towards the socio-economic development of the areas in which they are operating.

The MPRDA acknowledges that mineral and petroleum resources are the common heritage of all the people of South Africa and that the State is the custodian thereof for the benefit of all. It states that the Minister of Mineral Resources must ensure the sustainable development of South Africa's mineral and petroleum resources within a framework of national environmental policy, norms and standards while promoting economic and social development (MPRDA, 2002).

In Section 37 of the Mineral and Petroleum Resources Development Act 28 of 2002 it endorses the principles set out in Chapter 1 of the National Environmental Management Act 107 of 1998. In Section 39 of the MPRDA the act explicitly requires a social impact assessment as well as an environmental impact assessment when it states that applicants must:

“...investigate, assess, and evaluate the impact of his or her proposed prospecting or mining operations on:



- (i) The environment;
- (ii) The **socio-economic conditions of any person** who might be directly affected by the prospecting or mining operation...”

Section 3, Chapter 2, Part I, of the regulations (Government Notice 527, 23 April 2004) published under the MPRDA refers to the public participation process, which must be followed according to the Act. It includes advertising and an invitation to comment on the process.

Sections 40 to 46, Chapter 2, Part II, of the regulations published under the MPRDA deal with the Social and Labour Plan (SLP) requirements (Government Notice 527, 23 April 2004). The Department of Mineral Resources provided guidelines for the development of the SLP (Department of Mineral Resources, 2010). The guidelines specify the objectives of the SLP as:

- Promote economic growth and mineral and petroleum resources development in the Republic;
- Promoting employment and advancing the social and economic welfare of all South Africans;
- Ensuring that holders of mining or production rights contribute towards the socio-economic development of the areas in which they are operating as well as the areas from which the majority of the workforce is sourced, and
- To utilise and expand the existing skills base for the empowerment of Historically Disadvantaged South Africans and to serve the community (Department of Mineral Resources, 2010).

The crux of this section is that the SLP requires applicants for mining and production rights to develop and implement comprehensive Human Resources Development Programmes including Employment Equity Plans, Local Economic Development Programmes, and processes to save jobs and manage downscaling and/or closure (MPRDA 28 of 2002). According to the regulations, the above programmes are aimed



at promoting employment and advancement of the social and economic welfare of all South Africans whilst ensuring economic growth and socio-economic development. The management of downscaling and/or closure is aimed at minimising the impact of commodity cyclical volatility, economic turbulence and physical depletion of the mineral or production resources on individuals, regions or local economies. All mines in South Africa are required to compile an SLP, and they must report compliance on a yearly basis (MPRDA, 2002). Compiling an SLP must be done in a participatory manner, and local economic development initiatives must be aligned with the municipal integrated development planning processes. An SLP is not a social impact management plan per se, although it does aim to manage some negative social impacts. The guideline is very clear about the fact that measures put in place for the mitigation of impacts cannot be seen as mine community development projects (Department of Mineral Resources, 2010).

#### **4.1.4 The National Heritage Resources Act 25 of 1999**

Although the National Heritage Resources Act (NHRA) 25 of 1999 is not an environmental act per se, it is relevant in the field of environmental management. The NHRA affirms that every generation has a moral responsibility to act as trustee of the national heritage for later generations and that the State is obliged to manage heritage resources in the interest of all South Africans. The general principles for heritage management in Chapter 5 of the Act state that in order to ensure that heritage resources are effectively managed, the skills and capacities of persons and communities involved in heritage resources management must be developed. The Act further elaborates on the fact that heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

The general principles (Chapter 5) state that the identification, assessment, and management of the heritage resources of South Africa must:

- Take account of all relevant cultural values and indigenous knowledge systems;



- Take account of material or cultural heritage value and involve the least possible alteration or loss of it;
- Promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;
- Contribute to social and economic development, and
- Safeguard the options of present and future generations.

The National Heritage Resources Act 25 of 1999 therefore protects the cultural rights and heritage of the people of South Africa. It does not require explicit public participation or give any guidelines on how the public should participate. It does refer, like the National Environmental Management Act 107 of 1998 and the National Water Act 36 of 1998, to social and economic development. Public participation processes may be requested by the South African Heritage Resources Agency if it deems it necessary for a specific project.

#### **4.1.5 Promotion of Administrative Justice Act 3 of 2000**

The Bill of Rights in the Constitution of the Republic of South Africa 1996 states that everyone has the right to administrative action that is legally recognised, reasonable and procedurally just. The Promotion of Administrative Justice Act (PAJA) 3 of 2000 gives effect to this right. The PAJA applies to all decisions of all State organisations exercising public power or performing a public function in terms of any legislation that negatively affects the rights of any person. The Act prescribes what procedures an organ of State must follow when it takes decisions. If an organ of State implements a decision that impacts on an individual or community without giving them an opportunity to comment, the final decision will be illegal and may be set aside. The Promotion of Administrative Justice Act 3 of 2000 also forces State organisations to explain and give reasons for the manner in which they have arrived at their decisions and, if social issues were involved, and how these issues were considered in the decision-making process.

The Promotion of Administrative Justice Act 3 of 2000 therefore protects the rights of communities and individuals to participate in decision-making processes, especially if these processes affect their daily lives.





#### 4.1.6 Gas related legislation

The introduction of natural gas into South Africa's mainstream energy supply is an important step in the fulfilment of one of the major objectives of the White Paper on Energy Policy.

The Department of Energy has formulated:

- **The Gas Act 2001, Act 48 of 2001** and the Government/Sasol regulatory agreement referred to in section 36 of the Act, which aims to:
  - Promote the orderly development of the piped gas industry;
  - Establish a national regulatory framework; and
  - Establish a National Gas Regulator as the custodian and enforcer of the national regulatory framework.
- **Gas Amendment Bill:** Introduced in 2024, this bill aims to update the Gas Act of 2001, enhancing the regulatory framework, promoting skills development, and facilitating cooperation between the private and public sectors
- **The Gas Regulator Levies Act 2002, Act 75 of 2002**, which provides for the imposition of levies for the functioning of the national gas regulator and for matters connected therewith.
- **Piped Gas Regulations.** After the establishment of the National Energy Regulator, the Department of Energy has promulgated the Piped Gas Regulations, 2007, to promote the orderly development of the piped gas industry
- **Gas Act Rules, 2021:** These rules provide detailed guidelines for the implementation of the Gas Act, including methodologies for approving maximum gas prices and other operational procedures



## 4.2 National and international standards

National and international industry standards aimed at sustainable development and social justice specifically have become abundant in the last decade. Many industries use these standards as indicators for best practice. The discussion below highlights only a few of these standards.

### 4.2.1 ISO 26000:2010/SANS 26000:2010

Performance standards have long been a voluntary tool used by industry to achieve certain outcomes. The first standard on social responsibility, ISO 26000 was published on 1 November 2010 (ISO, 2010). It was developed using a multi-stakeholder approach involving experts from more than 90 countries and 40 international or broadly based regional organisations involved in different aspects of social responsibility (ISO, 2010).

The South African Bureau of Standards (SABS), a statutory body that is mandated to develop, promote, and maintain South African National Standards (SABS, [sa]) adopted the ISO 26000 Standard as a South African National Standard (SANS) 26000:2010.

Social responsibility is defined in the standard as the responsibility of an organisation for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that contributes to sustainable development, including health and welfare of society; takes into account the expectations of the stakeholders; complies with applicable law and is consistent with international behaviour norms, and is integrated throughout the organisation and practiced in its relationships (ISO, 2010).

The document identifies seven principles for social responsibility and seven core subjects that should be addressed by organisations. The seven principles for social responsibility are accountability, transparency, ethical behaviour, respect for stakeholder interests, respect for the rule of law, respect for international norms of behaviour and respect for human rights (ISO, 2010). The core subjects that should be addressed include organisational governance, human rights, labour practices, environment, fair operating practices, consumer issues and community involvement



and development (ISO, 2010). Economic aspects, health and safety and the value chain are dealt with throughout the seven core subjects, and gender issues are considered.

ISO 26000 is a good introduction to what social responsibility is and what measures should be taken to move towards being a more socially responsible company. It deals with equity issues and can encourage social development initiatives by companies through activities such as social investment projects, employment creation, skills development, and income creation. Any company operating in area where people are affected by their activities has a social responsibility towards the affected community, and as such it would be in the interest of the project to address the core subjects as suggested by ISO 26000:2010.

#### **4.2.2 International Social Performance Standards/Initiatives**

There is a profusion of global initiatives aiming at assisting companies to make their operations more sustainable. Human rights, environmental protection and social justice are gaining support from industry. The social agenda forms an important part of this trend. Only a few relevant initiatives will be mentioned in this section.

The Global Reporting Initiative (GRI) is a leading organisation in the sustainability field that promotes sustainability reporting as a way for companies to become more sustainable and contribute to sustainable development. A company publishes a sustainability report to report the economic, social, and environmental impacts of its everyday activities, present its values and governance model and explain the link between its strategy and its commitment to sustainable development (GRI, [sa]). The GRI have strategic partnerships with the United Nations Environment Programme, the United Nations Global Compact, the Organisation for Economic Co-operation and Development and the International Organisation for Standardisation, amongst others (GRI, [sa]). The social category relates to the impact of the company on the social systems in which it operates. The social category consists of four subcategories namely labour practices and decent work; human rights; society; and product responsibility. Each of the categories is unpacked by using a number of aspects that should be



considered (GRI, [sa]). GRI Focal Points are national offices that drive the initiatives in particular countries and regions.

Many of the multi-lateral funding agencies such as the World Bank have social standards that they must uphold. The most frequently used in the EIA industry is the International Finance Corporation's (IFC) principles (IFC, 2012). The IFC is a member of the World Bank group, and as a part of their sustainability framework they created performance standards on environmental and social sustainability (IFC, 2012). The standards relevant to the social environment are the following:

1. Environmental and Social Standard 1. Assessment and Management of Environmental and Social Risks and Impacts
2. Environmental and Social Standard 2: Labour and Working Conditions
3. Environmental and Social Standard 4: Community Health and Safety
4. Environmental and Social Standard 5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
5. Environmental and Social Standard 8: Cultural Heritage
6. Environmental and Social Standard 10. Stakeholder Engagement and Information Disclosure (World Bank, 2016)

Issues such as gender, climate change, water and human rights are addressed across the standards. A guidance note accompanies each standard (IFC, 2012:4). Environmental and social risks and impacts must be managed by using an Environmental and Social Management System. The standard applies to all the activities funded by the IFC for the duration of the loan period. A number of private banks adopted most of the IFC standards in an initiative known as the Equator Principles (Esteves, Franks & Vanclay, 2012).



### 4.2.3 International Principles for SIA

The practice of SIA is guided by a set of *International Principles* that defines the core values, fundamental principles for development and principles specific to SIA practice (Vanclay, 2003). When the *International Principles* are considered, it is clear that SIA aspires to more than just assessing the impact of development on people and includes sustainable outcomes. The following specific principles refer to these sustainable outcomes (Vanclay, 2003):

1. Development projects should be broadly acceptable to the members of those communities likely to benefit from, or be affected by, the planned intervention.
2. The primary focus of all developments should be positive outcomes, such as capacity building, empowerment, and the realisation of human and social capital.
3. The term “environment” should be defined broadly to include social and human dimensions, and in such inclusion, care must be taken to ensure that adequate attention is given to the realm of the social.
4. Equity considerations should be a fundamental element of impact assessment and of development planning.
5. There should be a focus on socially sustainable development, with the SIA contributing to the determination of best development alternative(s) – SIA (and EIA) has more to offer than just being an arbiter between economic benefit and social cost.
6. In all planned interventions and their assessments, avenues should be developed to build the social and human capital of local communities and to strengthen democratic processes.
7. Local knowledge, experience and acknowledgement of different cultural values should be incorporated in any assessment.
8. Development processes that infringe the human rights of any section of society should not be accepted.



In addition to the *International Principles*, the international SIA community produced a document titled: *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay, Esteves, Aucamp & Franks, 2015) in April 2015. The purpose of this document is to provide advice to various stakeholders (including proponents) about good practice SIA and social impact management (Vanclay et al., 2015). This document aspires to provide a much-needed benchmark for SIA practice across the globe.

### 4.3 Additional governance tools

Legislation is not the only tool that authorities can use to achieve sustainable development and social development outcomes. There are several tools, policies and strategic planning instruments that can contribute to this.

#### 4.3.1 Integrated Development Plans

For the purpose of this project, Integrated Development Plan (IDP) documents of two municipalities need to be considered: the Lejweleputswa District Municipality, the Matjhabeng Local Municipality, the Moqhaka Local Municipality and Fezile Dabi District Municipality

The Lejweleputswa District Municipality IDP (2022-2027) indicates that key sectors for **local economic development** include **agro-processing, manufacturing, renewable energy (particularly solar energy), tourism, real estate, and consulting engineering services**. In addition to economic growth, **basic service delivery and infrastructure development** remain priorities, focusing on **water, sanitation, waste management, electricity, roads, and sports and recreation facilities** to enhance community well-being and sustainability.

The key priorities for the Matjhabeng Local Municipality (IDP 2024/25) are:

- **Water:** Addressing water leakages, replacing meters, and ensuring water connections.
- **Sanitation:** Fixing collapsed sewer networks and eradicating bucket systems.
- **Electricity:** Installing and maintaining high mast lights and streetlights.



- **Road and Stormwater:** Paving, gravelling, and resealing roads, fixing potholes, and constructing stormwater drainage systems.
- **Waste Management:** Removing illegal dumping, ensuring consistent refuse collection, and providing dustbins.
- **Human Settlement:** Allocating residential and business sites, providing RDP houses, and issuing title deeds.
- **Local Economic Development (LED):** Supporting SMMEs with training and funding, and creating business opportunities.
- **Education:** Providing bursaries, learnerships, and internships, and building new educational facilities.
- **Health:** Expanding and maintaining clinics, and ensuring access to healthcare services.
- **Community Facilities:** Building and maintaining community halls, sports facilities, and parks.
- **Safety and Security:** Ensuring visible policing, enforcing by-laws, and building new police stations.
- **Agriculture:** Protecting river systems from pollution, promoting sustainable agricultural practices, and developing agro-processing projects.
- **Built Environment:** Prioritizing road linkages, promoting densification, and providing diverse housing options.
- **Revenue and Financial Management:** Enhancing revenue collection, managing expenditures, and ensuring financial sustainability.
- **Performance Management:** Implementing a robust performance management system to monitor and improve service delivery.
- **Integration and Coordination:** Ensuring integrated development planning and aligning projects with national and provincial strategies.
- **Infrastructure Development:** Developing and maintaining essential infrastructure such as water, sanitation, energy, and transport systems.
- **Replacement of Ageing Infrastructure:** Replacing old and deteriorating infrastructure.
- **Housing Accreditation:** Achieving housing accreditation.



- **Internal Capacity Building:** Building internal capacity.
- **Climate Change Strategy:** Developing climate change strategy, adaptation, and mitigation.
- **Private-Public Partnerships:** Improving private-public partnerships for growth and development.
- **Economic Corridors:** Developing economic corridors linking six towns.

The Fezile Dabi District Municipality's (IDP 2022 – 2027) priorities are organized into five Key Performance Areas:

- **Municipal Transformation and Institutional Development** focuses on employee retention, labour relations, administrative capabilities, employee wellness, regulatory compliance, and sector planning.
- **Basic Service Delivery and Infrastructure Investment** addresses roads, housing, emergency services, health initiatives (including HIV/AIDS prevention), poverty reduction, and essential utilities (water, sanitation, electricity, roads).
- **Local Economic Development** supports business development, arts, tourism, vulnerable groups, agriculture, and job creation.
- **Financial Viability and Financial Management** ensures sound financial practices, regulatory compliance, accurate reporting, asset management, revenue optimization, and effective procurement.
- **Good Governance and Community Participation** promotes governance standards, community engagement, stakeholder capacity building, intergovernmental cooperation, and accountability.

The Moqhaka Local Municipality's (IDP 2022 – 2027) priorities cover:

- **Financial Management:** Asset renewal and maintenance, balanced budgeting, proper budget funding, capital program alignment, operational efficiencies, and disciplined project planning that requires business plans for funding.
- **Core Infrastructure:** Service delivery focusing on basic utilities (water, sanitation, electricity, roads), housing development, transport infrastructure, and waste management.





- **Community Development:** Local economic growth, job creation, SMME support, social services, recreational facilities, and sports development.
- **Governance and Safety:** Public participation, transparent governance, institutional capacity building, safety and security, emergency services, law enforcement, and public nuisance control.
- **Environmental Stewardship:** Climate change mitigation, environmental sustainability, and maintenance of parks and cemeteries.

This comprehensive approach balances financial discipline with infrastructure development, economic growth, community services, and environmental responsibility.

#### 4.3.2 Provincial Growth and Development Strategies

The Free State Provincial Growth and Development Strategy (FGDS) is based on six pillars, each with its own set of drivers (FSDF, 2012). The drivers and pillars are:

1. Inclusive economic growth and sustainable job growth creation
  - a. Diversify and expand agricultural development and food security.
  - b. Minimise the impact of the declining mining sector and ensure that existing mining potential is harnessed.
  - c. Expand and diversify manufacturing opportunities.
  - d. Capitalise on transport and distribution opportunities.
  - e. Harness and increase tourism potential and opportunities.
2. Education, innovation and skills development
  - a. Ensure an appropriate skills base for growth and development.
3. Improved quality of life
  - a. Curb crime and streamline criminal justice performance.



- b. Expand and maintain basic and road infrastructure.
  - c. Facilitate sustainable human settlements.
  - d. Provide and improve adequate health care for citizens.
  - e. Ensure social development and social security services for all citizens.
  - f. Integrate environmental limitations and change into growth and development planning.
- 4. Sustainable rural development
  - a. Mainstream rural development into growth and development planning.
- 5. Build social cohesion
  - a. Maximise arts, culture, sports and recreation opportunities and prospects for all communities.
- 6. Good governance
  - a. Foster good governance to create a conducive climate for growth and development.

The Free State Provincial Spatial Development Framework (FSDF) supplements the FGDS as guidance document for the province to use resources in a way that will ensure sustainable outcomes based on provincial development needs and priorities (FSDF, 2012). The FSDF outlines Vision 2030, a collective response to the need for the province to describe and map its future destiny through long-term development planning, and to forge a common and shared development agenda across a wide spectrum of service delivery mechanisms. The Free State Vision 2030 envisages that, *by 2030, the Free State shall have a resilient, thriving and competitive economy that is inclusive, with immense prospects for human development anchored on the principles of unity, dignity, diversity, equality and prosperity for all* (FSDF, 2012).



Encouraged by this vision, the Free State of 2030 will be characterised by an economy that encourages the development of new growth sectors with emphasis on the knowledge-based industries and the green economy (FSGDS).

*The Free State Vision 2030 furthermore envisages that, by 2030, ownership and control patterns of the economy will be transformed, spatial under-development will be addressed, basic services such as healthcare, education, electricity, water and sanitation will be equitably accessed by the people of the province. In the quest for inclusive economic growth and development, the environment will be protected for future generations. Lasting responses to climate changes will be part of the landscape of the development of the province. Steeped within the democratic principles, the Provincial Government will be accountable, transparent, effective, efficient, responsive to people's needs, and corruption will be eliminated (FSDF, 2012).*

#### **4.3.3 National Development Plan**

On 11 November 2011 the National Planning Commission released the National Development Plan: Vision for 2030 (NPC, 2012) for South Africa and it was adopted as government policy in August 2012. The National Development Plan (NDP) was undertaken to envision what South Africa should look like in 2030 and what action steps should be taken to achieve this (RSA, 2013). The aim of the NDP is to eliminate poverty and reduce inequality by 2030. The report identifies nine central challenges to development in South Africa:

1. Too few people work.
2. The standard of education for most black learners is of poor quality.
3. Infrastructure is poorly located, under-maintained and insufficient to foster higher growth.
4. Spatial patterns exclude the poor from the fruits of development.
5. The economy is overly and unsustainably resource intensive.
6. A widespread disease burden is compounded by a failing public health system.



7. Public services are uneven and often of poor quality.
8. Corruption is widespread.
9. South Africa remains a divided society (NPC, 2012).

The plan focuses on creating an enabling environment for development and wants to shift from a paradigm of entitlement to a paradigm of development that promotes the development of capabilities, the creation of opportunities and the involvement of all citizens (NPC, 2012). The National Development Plan (NPC, 2012) wants to achieve the following:

1. An economy that will create more jobs.
2. Improving infrastructure.
3. Transition to a low-carbon economy.
4. An inclusive and integrated rural economy.
5. Reversing the spatial effects of apartheid.
6. Improving the quality of education, training and innovation.
7. Quality healthcare for all.
8. Social protection.
9. Building safer communities.
10. Reforming the public service.
11. Fighting corruption.
12. Transforming society and uniting the country.

Each of the points above is a chapter in the plan and contains a range of targets and proposals. Some are general statements of policy intent, while others are specific policy proposals, actions or processes that should take place (NPC, 2012). Through its



contribution to the economy, the project will assist with achieving the goal of creating an economy that will create more jobs.

#### 4.3.4 Sustainable Development Goals

All 189 Members States of the United Nations, including South Africa, adopted the United Nations Millennium Declaration in September 2000 (UN, 2000). The commitments made by the Millennium Declaration are known as the Millennium Development Goals (MDGs), and 2015 was targeted as the year to achieve these goals. The United Nations Open Working Group of the General Assembly identified seventeen sustainable development goals, built on the foundation of the MDGs as the next global development target (UN, 2014). The sustainable development goals include aspects such as ending poverty, addressing food security, promoting health, wellbeing and education, gender equality, water and sanitation, economic growth and employment creation, sustainable infrastructure, reducing inequality, creating sustainable cities and human settlements, and addressing challenges in the physical environment such as climate change and environmental resources (UN, 2014). These aspects are included in the NPD, and it can therefore be assumed that South Africa's development path is aligned with the international development agenda.



## 5 Receiving environment

According to the National Environmental Management Act (NEMA, 1998) environment refers to the surroundings in which humans exist. When viewing the environment from a socio-economic perspective the question can be asked what exactly the social environment is. Different definitions for social environment exist, but a clear and comprehensive definition that is widely accepted remains elusive. Barnett & Casper (2001) offers the following definition of human social environment:

*“Human social environments encompass the immediate physical surroundings, social relationships, and cultural milieus within which defined groups of people function and interact. Components of the social environment include built infrastructure; industrial and occupational structure; labour markets; social and economic processes; wealth; social, human, and health services; power relations; government; race relations; social inequality; cultural practices; the arts; religious institutions and practices; and beliefs about place and community. The social environment subsumes many aspects of the physical environment, given that contemporary landscapes, water resources, and other natural resources have been at least partially configured by human social processes. Embedded within contemporary social environments are historical social and power relations that have become institutionalized over time. Social environments can be experienced at multiple scales, often simultaneously, including households, kin networks, neighbourhoods, towns and cities, and regions. Social environments are dynamic and change over time as the result of both internal and external forces. There are relationships of dependency among the social environments of different local areas, because these areas are connected through larger regional, national, and international social and economic processes and power relations.”*

Environment-behaviour relationships are interrelationships (Bell, Fisher, Baum & Greene, 1996). The environment influences and constrains the behaviour of people,

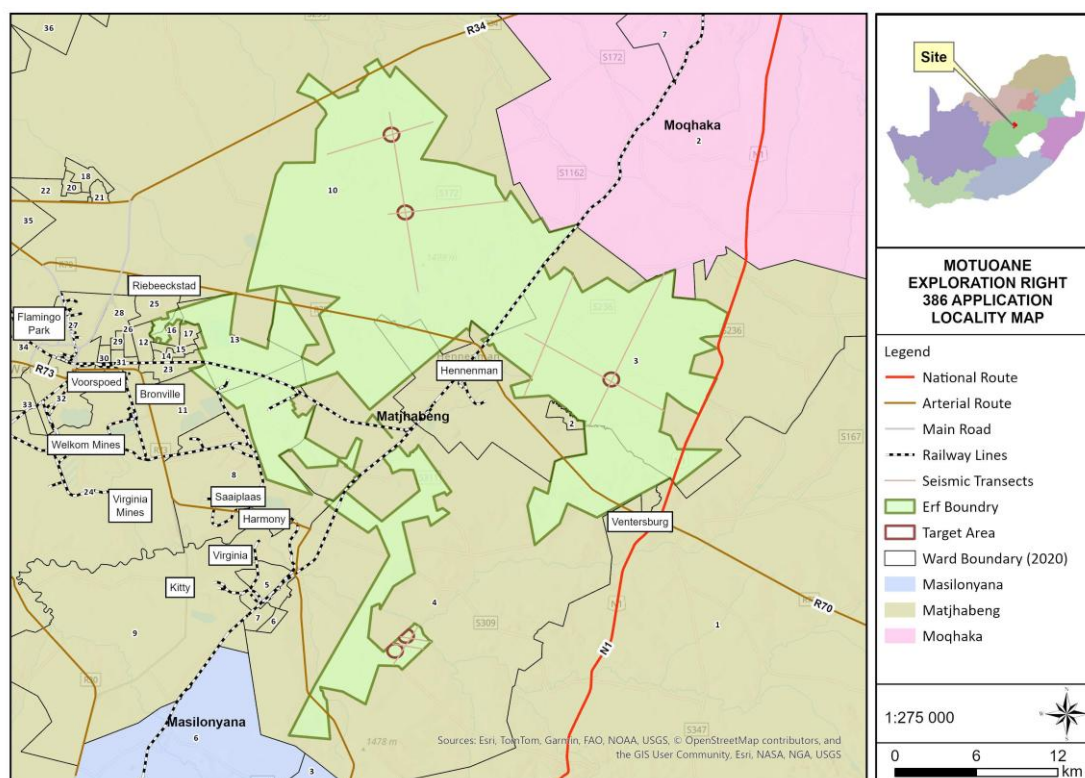


but behaviour also leads to changes in the environment. The impacts of a project on people can only be truly understood if their environmental context is understood. The baseline description of the social environment will include a description of the area within a provincial, district and local context that will focus on the identity and history of the area and a description of the population of the area based on a number of demographic, social and economic variables.

## 5.1 Description of the area

The proposed project is located in Wards 1, 2, 3, 4, 8, 10, 11, 12, 13, 15, 16, 17, 23 and 25 of the Matjhabeng Local Municipality that forms part of the Lejweleputswa District Municipality and Ward 2 in the Moqhaka Local Municipality which falls in Fezile Dabi District the in the Free State Province. The baseline description of the environment will include these areas. [Figure 5.1](#) shows the location of the proposed project as well as social and physical infrastructure in the area.

**Figure 5-1: Location of the proposed Motuoane Exploration Right**





### 5.1.1 Free State Province

The Free State province lies in the centre of South Africa between the Vaal River in the north and the Orange River in the south. The province borders on the Northern Cape, Eastern Cape, North-West, Mpumalanga, KwaZulu-Natal, and the Gauteng province. It also shares a border with Lesotho. With a total area of 129 825 km<sup>2</sup>, the Free State is the country's third-largest province but has the second-smallest population ([www.municipalities.co.za](http://www.municipalities.co.za)).

The Free State is a rural province, and its economic activities are dominated by mining, agriculture, and manufacturing. The province is the fifth-largest producer of gold in the world and is also home to Sasol, a large synthetic fuels company.

About 90% of the Free State is used for crop production ([www.municipalities.co.za](http://www.municipalities.co.za)). About 34% of the total maize production of South Africa, 37% of wheat, 53% of sorghum, 33% of potatoes, 18% of red meat, 30% of groundnuts and 15% of wool is produced in the Free State.

Bloemfontein is the capital of the Free State and South Africa's judicial capital. The province is divided into one metropolitan municipality (Mangaung Metropolitan Municipality) and four district municipalities, namely Fezile Dabi, Lejweleputswa, Xhariep and Thabo Mofutsanyane. Other important towns in the Free State include Welkom, Kroonstad, Sasolburg, and Bethlehem.

### 5.1.2 Lejweleputswa District Municipality

The Lejweleputswa District Municipality (LDM) is situated in the north western part of the Free State and borders the North West Province to the north; the Fezile Dabi and Thabo Mofutsanyane District Municipalities to the north-east and east respectively; the Xhariep District Municipality and Mangaung Metropolitan Municipality to the south; and the Northern Cape Province to the west. The LDM is accessible from Johannesburg, Cape Town, Klerksdorp, and Kimberley through one of South Africa's main national roads, the N1. The district covers an area of 32 286 km<sup>2</sup> and makes up almost a third of the Free State province. It consists of the Masilonyana, Matjhabeng, Nala, Tokologo and Tswelopele Local Municipalities ([www.lejweleputswa.co.za](http://www.lejweleputswa.co.za)).





The economy of the district relies heavily on the gold mining sector which is dominant in the Matjhabeng and Masilonyana Local Municipalities (Lejweleputswa DM IDP 2021/22). The mining sector is on a downward trend and many businesses that have traditionally depended on the mining sector have either closed down or are in the process of closing down. The other municipalities are dominated by agriculture.

#### **5.1.3 Matjhabeng Local Municipality**

The main towns in the Matjhabeng Local Municipality are Welkom, Odendaalsrus, Virginia, Hennenman, Allanridge and Ventersburg ([www.matjhabeng.fs.gov.za](http://www.matjhabeng.fs.gov.za)). The economy of the municipality is centred on mining activities in and around Welkom, Allanridge, Odendaalsrus and Virginia. Manufacturing aimed at the mining sector exists to a limited extent in the above towns, with other activities being limited. Other main economic sectors include manufacturing, tourism, agriculture, gold jewellery, transportation (logistics), and retail (Matjhabeng LM IDP 2022/2023).

#### **5.1.4 Fezile Dabi District Municipality**

The Fezile Dabi District Municipality covers an area of approximately 20,668 km<sup>2</sup>. The main towns in the district are Kroonstad, Parys, Sasolburg, Heilbron, Frankfort, Villiers, Deneysville, Oranjeville, Vredefort, Steynsrus, Viljoenskroon, Edenville, Koppies, Tweeling and Cornelia. These towns are distributed across the four local municipalities within the district, namely the Metsimaholo, Mafube, Mopahla, and Ngwathe Local Municipalities. The economy of Fezile Dabi District Municipality is diverse, with agriculture (crop farming and livestock) and manufacturing (particularly chemical and petrochemical industries in Sasolburg) serving as primary sectors. Mining contributes to the economy but is less dominant than agriculture and manufacturing. Tourism utilizes natural and cultural attractions to support local businesses and employment. The service sector, including community and social services, plays a crucial role. Trade represents the largest share at 22% of economic activities, while households contribute 13%. Other significant sectors include finance (7%), construction (6%), and transport (5%). This economic profile shows a balanced mix of primary industries, manufacturing, and service sectors with trade being the most significant individual component (Fezile Dabi DM IDP 2022-2027).



### 5.1.5 Moqhaka Local Municipality

The main towns in the Moqhaka Local Municipality are Kroonstad, Viljoenskroon, Steynsrus, Vierfontein and Renovaal. The economy of the Moqhaka Local Municipality is primarily based on agriculture, including crop farming and livestock farming. Other significant sectors include mining, industrial activities, manufacturing, trade, services, and tourism. Public services, such as the Department of Correctional Services and military bases, also contribute to the local economy. There is ongoing local economic development initiatives aimed at promoting economic growth, job creation, and poverty reduction (Moqhaka LM IDP 2022-2027).

## 5.2 Description of the population

The baseline description of the population will take place on three levels, namely provincial, district and local. Impacts can only truly be comprehended by understanding the differences and similarities between the different levels. The baseline description will focus on the Matjhabeng Local Municipality in the Lejweleputswa District Municipality in the Free State Province (referred to in the text as the study area), as these are the areas that will be most affected by the proposed project. Where possible, the data will be reviewed on a ward level. The data used for the socio-economic description was sourced from Census 2022, Community Survey 2016, and Census 2011. Both Census 2022 and Census 2011 were de facto censuses where individuals were counted based on where they were on the census reference night. For Census 2022, the reference night was the night of 2 February 2022 and for Census 2011 it was the night of 9 October 2011. The results should be viewed as indicative of the population characteristics in the area and should not be interpreted as absolute.

StatsSA released limited data for Census 2022 on 10 October 2023 and will release more detailed data in future following a phased approach. ***The data that was released are only available up to local municipal level, and not on ward level.*** As such the data from Census 2022 will be supplemented by data from Census 2011 and Community Survey 2016. Census 2011 that contains the latest ward level data has been categorised according to the 2016 ward delineations, but not according to the current



ward delineations. For this reason, the baseline data according to ward level will be analysed according to the 2016 delineations (Figure 5), which in this instance are the same as the latest ward delineations.

Perhaps the most striking feature of Census 2022 is the very high undercount of 31% of people and 30% of households. While census undercounts are the norm rather than the exception (about a 5% undercount is acceptable), the undercount of this census may set a new international record ([www.wits.ac.za](http://www.wits.ac.za)). At aggregate level Census 2022 is robust, but at sub-national, and especially sub-provincial, levels it might be less so.

In terms of Census 2011, the following points must be kept in mind ([www.statssa.co.za](http://www.statssa.co.za)):

- Comparisons of the results of labour market indicators in the post-apartheid population censuses over time have been a cause for concern. Improvements to key questions over the years mean that the labour market outcomes based on the post-apartheid censuses must be analysed with caution. The differences in the results over the years may be partly attributable to improvements in the questionnaire since 1996 rather than to actual developments in the labour market. The numbers published for the 1996, 2001, and 2011 censuses are therefore not comparable over time and are different from those published by Statistics South Africa in the surveys designed specifically for capturing official labour market results.
- For purposes of comparison over the period 1996–2011, certain categories of answers to questions in the censuses of 1996, 2001 and 2011, have either been merged or separated.
- The tenure status question for 1996 has been dropped since the question asked was totally unrelated to that asked thereafter. Comparisons for 2001 and 2011 do however remain.
- All household variables are controlled for housing units only and hence exclude all collective living arrangements as well as transient populations.



- When making comparisons of any indicator it must be considered that the time period between the first two censuses is five years and that between the second and third census is ten years. Although Census captures information at one given point in time, the period available for an indicator to change is different.

### 5.2.1 Population and household sizes

According to the Census 2022, the population of South Africa is approximately 62 million and has shown an increase of about 19.8% since 2011. The household density for the country is estimated on approximately 3.48 people per household, indicating an average household size of 3-4 people for most households, which is down from the 2011 average household size of 3.58 people per household. Smaller household sizes are in general associated with higher levels of urbanisation.

The greatest increase in population since 2011 has been on local level ([Table 5.1](#)), but still lower than the national average. Population density refers to the number of people per square kilometre and the population density on a national level has increased from 42.4 people per km<sup>2</sup> in 2011 to 50.8 people per km<sup>2</sup> in 2022. In the study area the population density has increased since 2011 with the highest density in the Matjhabeng LM.

**Table 5-1: Population density and growth estimates (sources: Census 2011, Census 2022)**

Area	Size in km <sup>2</sup>	Population 2011	Population 2022	Population density 2011	Population density 2022	Growth in population (%)
Free State Province	129,825	2,745,590	2,964,412	21.15	22.83	7.97
Lejweleputswa DM	31,930	624,746	679,746	19.35	21.05	8.80
Matjhabeng LM	5,155	407,020	439,034	71.53	77.16	7.87
Fezile Dabi DM	20,674	488,036	509,912	23.61	24.66	4.48
Moqhaka LM	7,925	160,532	155,410	20.26	19.61	-3.19

The number of households in the study area has increased on all levels ([Table 5.2](#)), except in the Moqhaka LM where it decreased. The proportionate increase in households were smaller than the increase in population on all levels and below the



growth in households of 12.3% on a national level. The average household size has shown an increase on all levels, which means households have more members.

**Table 5-2: Household sizes and growth estimates (sources: Census 2011, Census 2022)**

Area	Households 2011	Households 2022	Average household size 2011	Average household size 2022	Growth in households (%)
Free State Province	823,285	845,250	3.33	3.51	2.67
Lejweleputswa DM	182,247	189,807	3.43	3.58	4.15
Matjhabeng LM	123,382	126,068	3.30	3.48	2.18
Fezile Dabi DM	144,971	145,539	3.37	3.50	0.39
Moqhaka LM	45,661	42,789	3.52	3.63	-6.29

The total dependency ratio is used to measure the pressure on the productive population and refer to the proportion of dependents per 100 working-age population. As the ratio increases, there may be an increased burden on the productive part of the population to maintain the upbringing and pensions of the economically dependent. A high dependency ratio can cause serious problems for a country as the largest proportion of a government's expenditure is on health, social grants and education that are most used by the old and young population.

The total dependency ratio in 2011 in the Matjhabeng LM was lower than on district or provincial level ([Table 5.3](#)). The same trend applied to the youth, aged and employment dependency ratios. Census 2022 showed that the total dependency ratio in the Free State has decreased, but in the Matjhabeng LM it has increased. Employed dependency ratio refers to the proportion of people dependent on the people who are employed, and not only those of working age. The employed dependency ratio for the Matjhabeng LM is lower than on district and provincial level. Wards 1 and 2 had the highest dependency ratios in 2011, suggesting higher levels of poverty in these wards.

**Table 5-3: Dependency ratios (source: Census 2011;2022).**

Area	Total dependency	Youth dependency	Aged dependency	Employed dependency
Free State Province	52.88	44.48	8.39	76.34
Free State '22	50.67	40.15	10.52	
Lejweleputswa DM	51.33	43.71	7.61	77.16
Lejweleputswa DM '22	51.70	41.74	9.96	
Matjhabeng LM	46.93	40.09	6.85	75.46
Matjhabeng LM '22	49.67	40.19	9.48	
Ward 1	57.50	48.40	9.10	81.53
Ward 2	59.94	52.77	7.17	83.65
Ward 3	50.87	39.24	11.63	73.16
Ward 4	50.93	45.96	4.98	80.53
Ward 8	40.72	35.26	5.46	65.32
Ward 10	52.08	46.18	5.90	75.77
Ward 11	50.06	45.31	4.75	78.19
Ward 12	44.02	38.75	5.27	73.10
Ward 13	44.30	40.34	3.96	78.30
Ward 15	46.53	42.89	3.64	77.24
Ward 16	46.89	42.93	3.96	77.35
Ward 17	52.26	47.85	4.41	80.69
Ward 23	46.56	44.12	2.44	79.72
Ward 25	43.89	36.96	6.93	61.53
Fezile Dabi LM	51.94	42.70	9.24	75.88
Fezile Dabi LM '22	52.56	42.45	10.10	
Moqhaka LM	50.50	40.65	9.85	77.55
Moqhaka LM '22	54.43	44.10	10.33	
Ward 2	44.80	34.72	10.07	63.66

Poverty is a complex issue that manifests itself in economic, social, and political ways and to define poverty by a unidimensional measure such as income or expenditure would be an oversimplification of the matter. Poor people themselves describe their experience of poverty as multidimensional. The South African Multidimensional



Poverty Index (SAMPI) (Statistics South Africa, 2014) assess poverty on the dimensions of health, education, standard of living and economic activity using the indicators child mortality, years of schooling, school attendance, fuel for heating, lighting, and cooking, water access, sanitation, dwelling type, asset ownership and unemployment.

The poverty headcount refers to the proportion of households that can be defined as multi-dimensionally poor by using the SAMPI's poverty cut-offs (Statistics South Africa, 2014). The poverty headcount has increased on all levels since 2011 ([Table 5.4](#)), indicating an increase in the number of multi-dimensionally poor households.

The intensity of poverty experienced refers to the average proportion of indicators in which poor households are deprived (Statistics South Africa, 2014). The intensity of poverty has increased slightly on all levels. The intensity of poverty and the poverty headcount is used to calculate the SAMPI score. A higher score indicates a very poor community that is deprived on many indicators. The SAMPI score in the Matjhabeng LM area has decreased between 2011 and 2016, suggesting an improvement in some respects relating to poverty in this area. In the Moqhaka LM the SAMPI score has increased, indicating an increase in poverty in the area. SAMPI scores based on the 2022 Census data is not yet available.

**Table 5-4: Poverty and SAMPI scores (sources: Census 2011 and Community Survey 2016).**

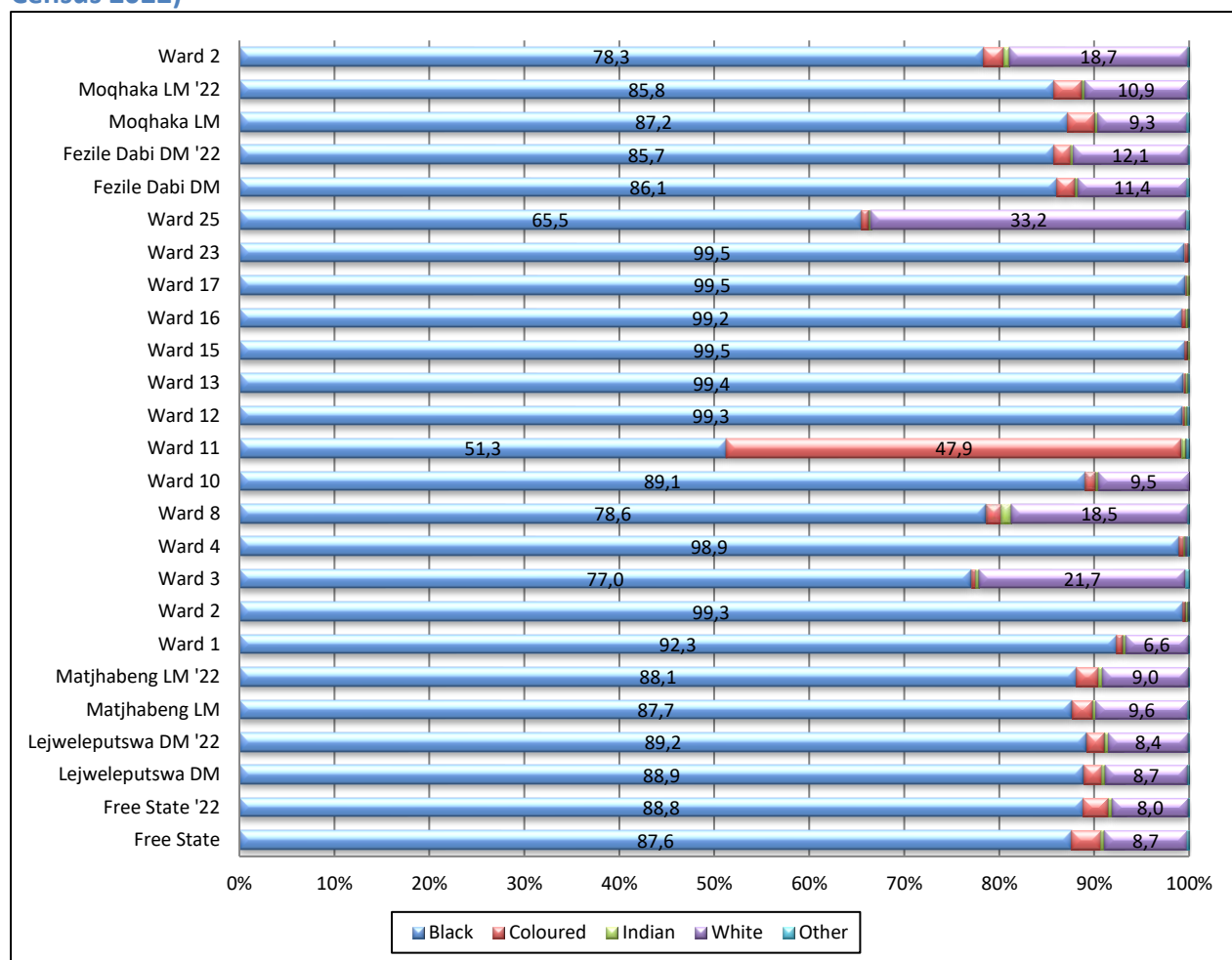
Area	Poverty headcount 2011 (%)	Poverty intensity 2011 (%)	SAMPI 2011	Poverty headcount 2016 (%)	Poverty intensity 2016 (%)	SAMPI 2016
Free State Province	5.5	42.2	0.023	5.5	41.7	0.023
Lejweleputswa DM	5.6	42.8	0.024	4.8	42.2	0.020
Matjhabeng LM	5.5	43.0	0.024	4.3	41.8	0.018
Fezile Dabi DM	4.4	42.2	0.019	4.9	41.9	0.021
Moqhaka LM	2.7	41.4	0.011	2.9	42.7	0.012



## 5.2.2 Population composition, age, gender and home language

In all the areas under investigation, the majority of the population belongs to the Black population group (Figure 5.2), except in Ward 11 where almost half of the population belongs to the Coloured population group.

**Figure 5-2: Population distribution (shown in percentage, source: Census 2011, Census 2022)**



The average age is very similar on local, district and provincial level (Table 5.5), with an increase between 2011 and 2022. The average age on a ward level varied.

**Table 5-5: Average age (source: Census 2011, Census 2022).**

Area	Average Age (in years)
Free State Province	28.38
Free State Province '22	30.61
Lejweleputswa DM	28.52
Lejweleputswa DM '22	30.28



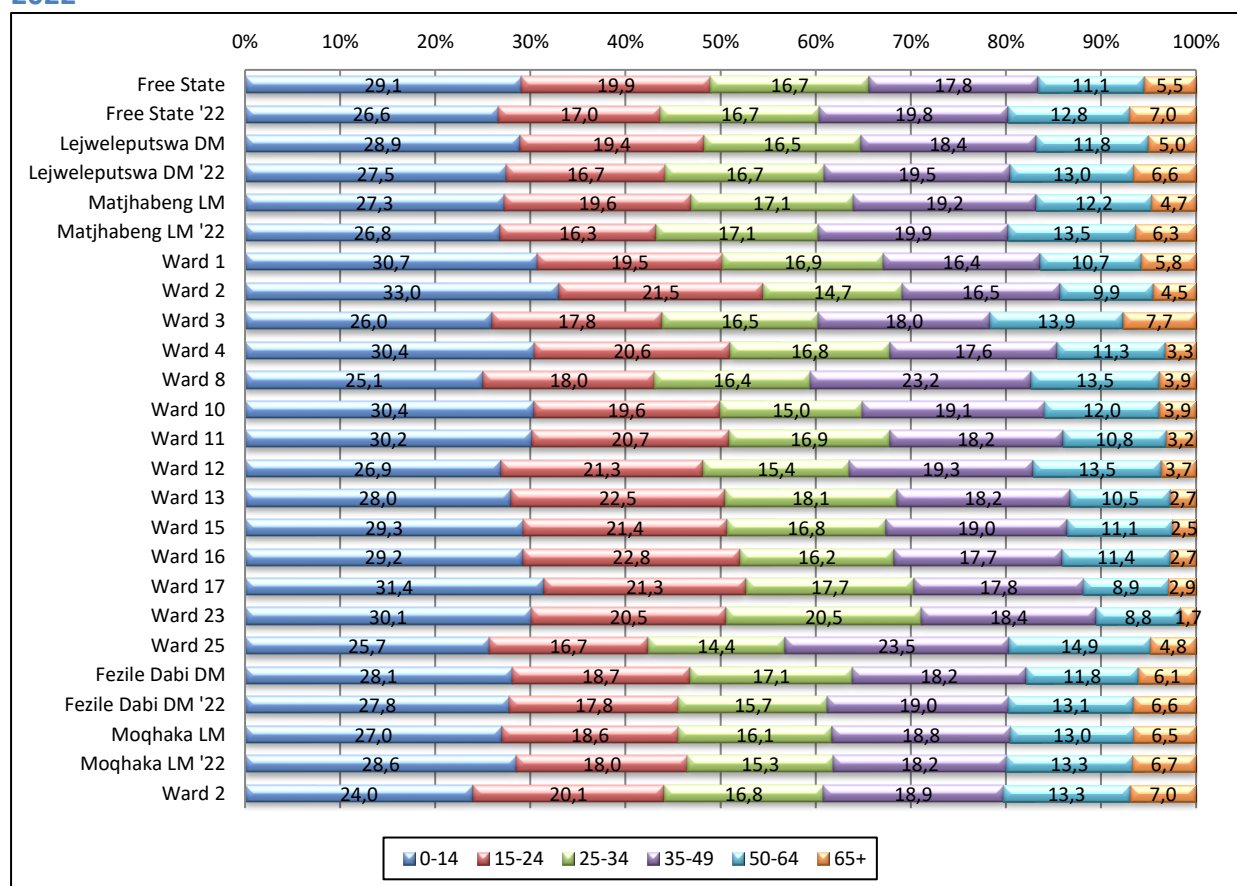


Area	Average Age (in years)
Matjhabeng LM	28.89
Matjhabeng LM ' 22	30.53
Ward 1	30.20
Ward 2	26.93
Ward 3	30.46
Ward 4	27.93
Ward 8	26.40
Ward 10	31.03
Ward 11	26.89
Ward 12	30.20
Ward 13	27.75
Ward 15	26.93
Ward 16	28.73
Ward 17	27.00
Ward 23	27.03
Ward 25	26.87
Fezile Dabi LM	29.22
Fezile Dabi LM '22	31.83
Moqhaka LM	30.11
Moqhaka LM '22	32.31
Ward 2	30.80



The age distribution of the areas under investigation shows that the population on local, district or provincial level tend to be slightly older, with older populations in Wards 3, 8, and 25 of Matjhabeng LM and Ward 2 of Moqhaka LM (Figure 5.3).

**Figure 5-3: Age distribution (shown in percentage, source: Census 2011), Census 2022**

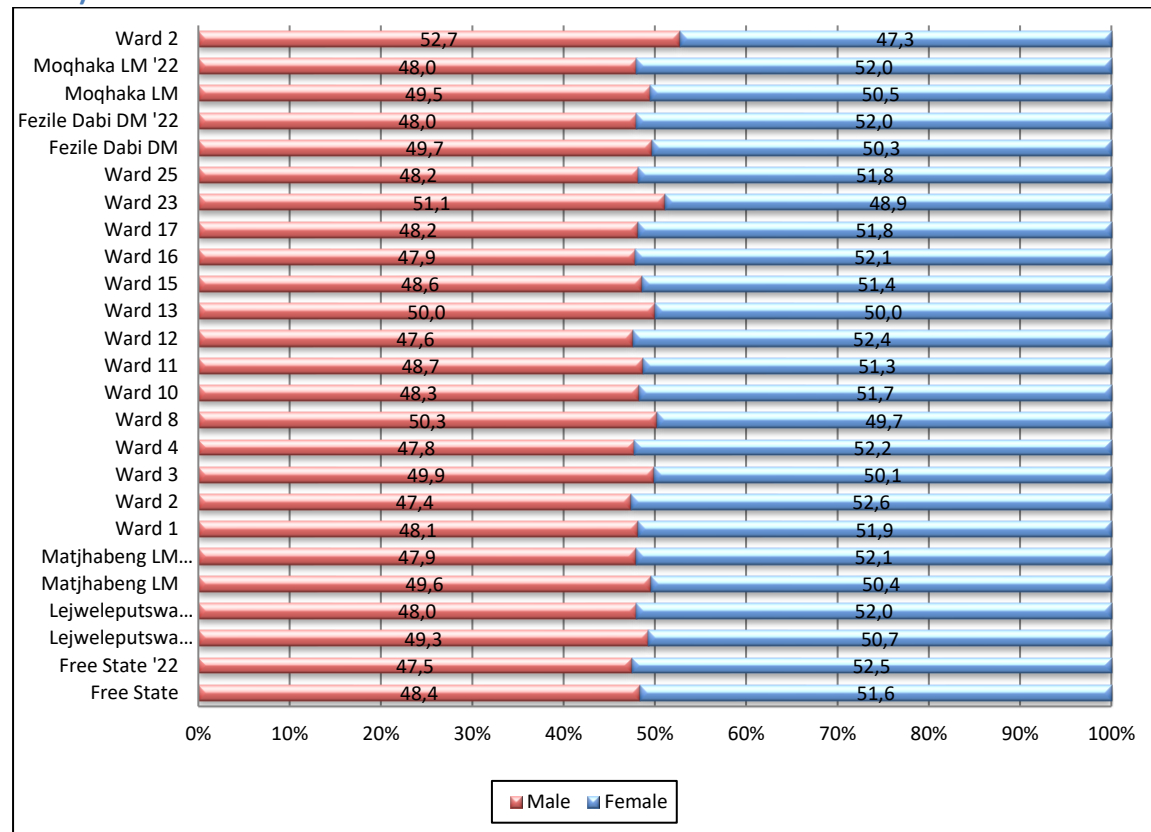




### 5.2.3 Gender

The gender distribution on provincial, district and local level is balanced (Figure 5.4), but on a ward level the profiles show a slight bias towards females in most wards.

**Figure 5-4: Gender distribution (shown in percentage, source: Census 2011, Census 2022)**

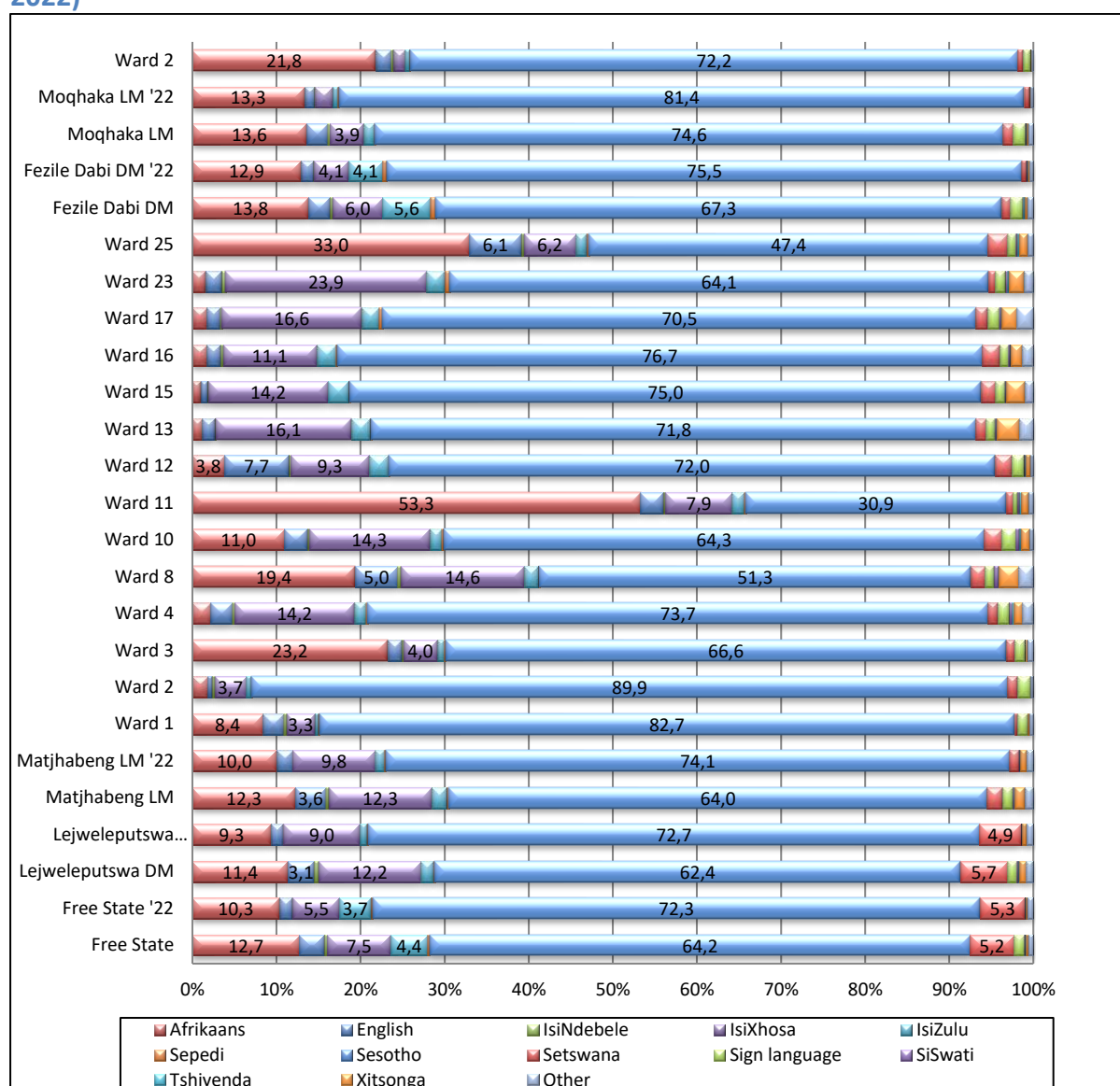




## 5.2.4 Language

The majority of people in the area under investigation have Sesotho as home language (Figure 5.5), except in Ward 11 where more than half of people have Afrikaans as home language. Wards 3, 8 and 25 also have a relatively high incidence of people with Afrikaans as home language. Home language should be taken into consideration when communicating with the local communities and based on the profile of the area communication should take place in Sesotho, Afrikaans, and English.

**Figure 5-5: Language distribution (shown in percentage, source: Census 2011, Census 2022)**

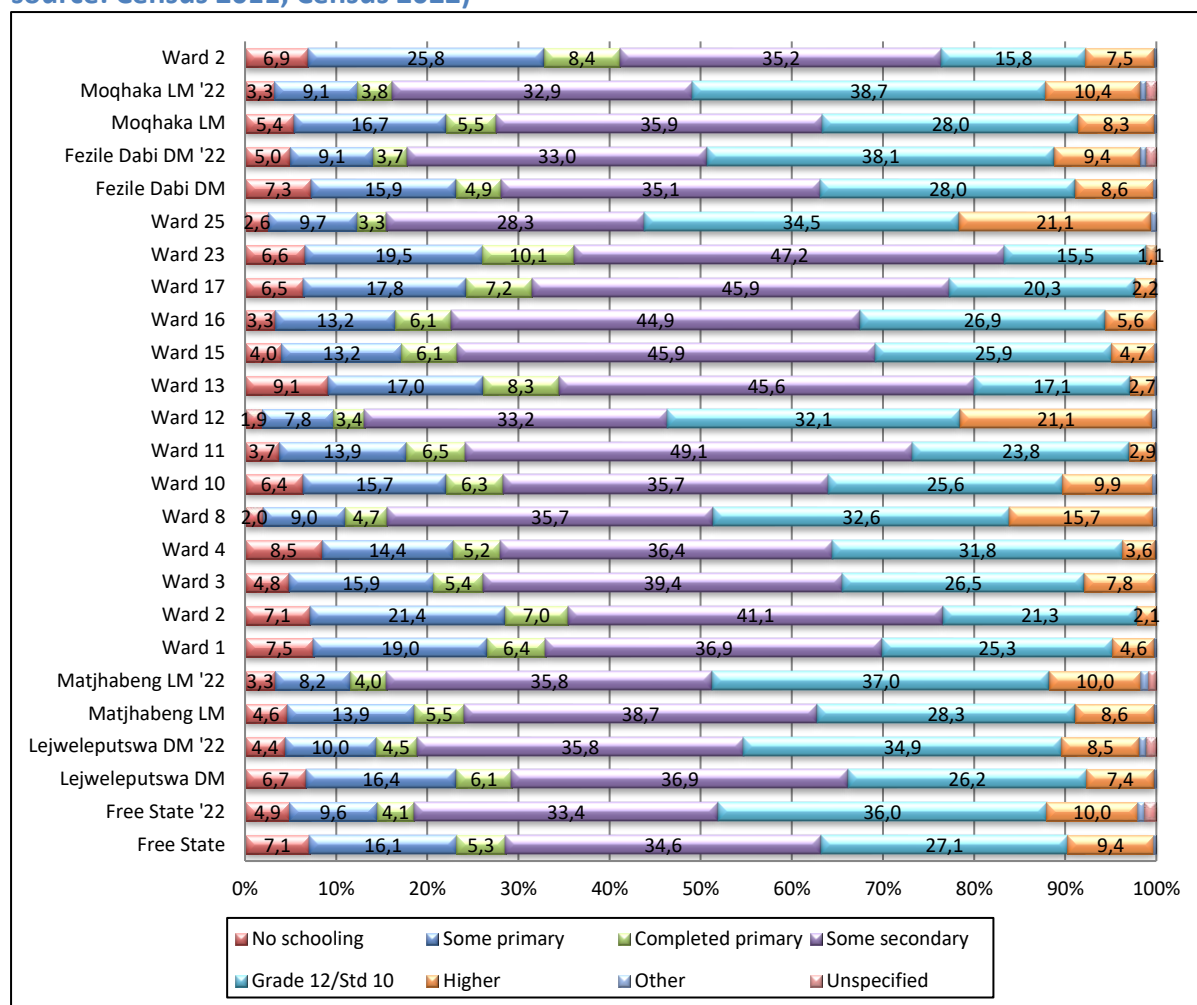




## 5.2.5 Education

Figure 5.6 shows the education profiles for the areas under investigation for those aged 20 years or older. In 2011 the literacy levels varied on a ward level, with the highest levels of literacy in Wards 8, 12, and 25.

**Figure 5-6: Education profiles (those aged 20 years or older, shown in percentage, source: Census 2011, Census 2022)**

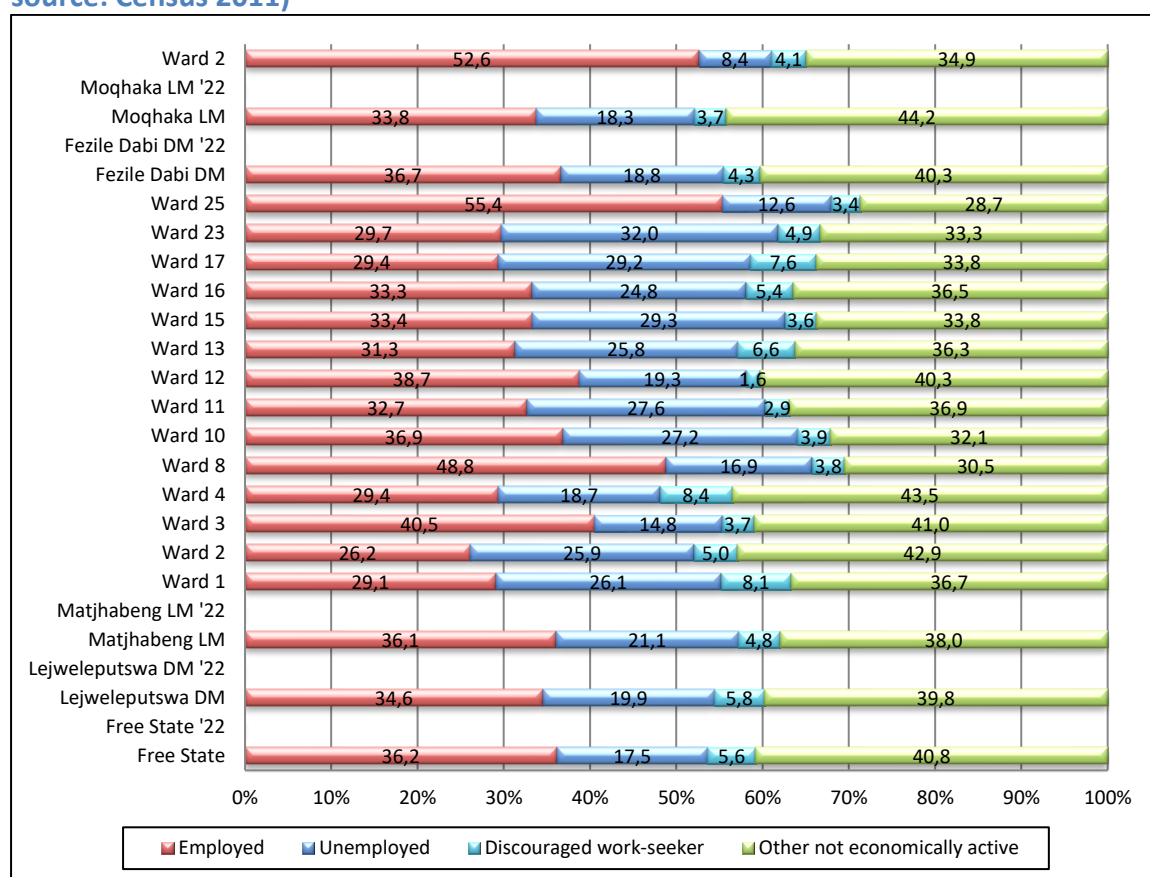




## 5.2.6 Employment

In 2011 Wards 3, 8, and 25 had the highest proportion of people of economically active age (aged between 15 years and 65 years) that were employed (Figure 5.7), while Ward 2 had the lowest. Since 2010 employment in the gold mining industry, which is a major employer in the area, showed a steady decline from 157 019 in 2010 to 93 841 in 2022 ([www.mineralscouncil.org.za](http://www.mineralscouncil.org.za)). As such the proportion unemployed people in the area are likely to have increased since 2011.

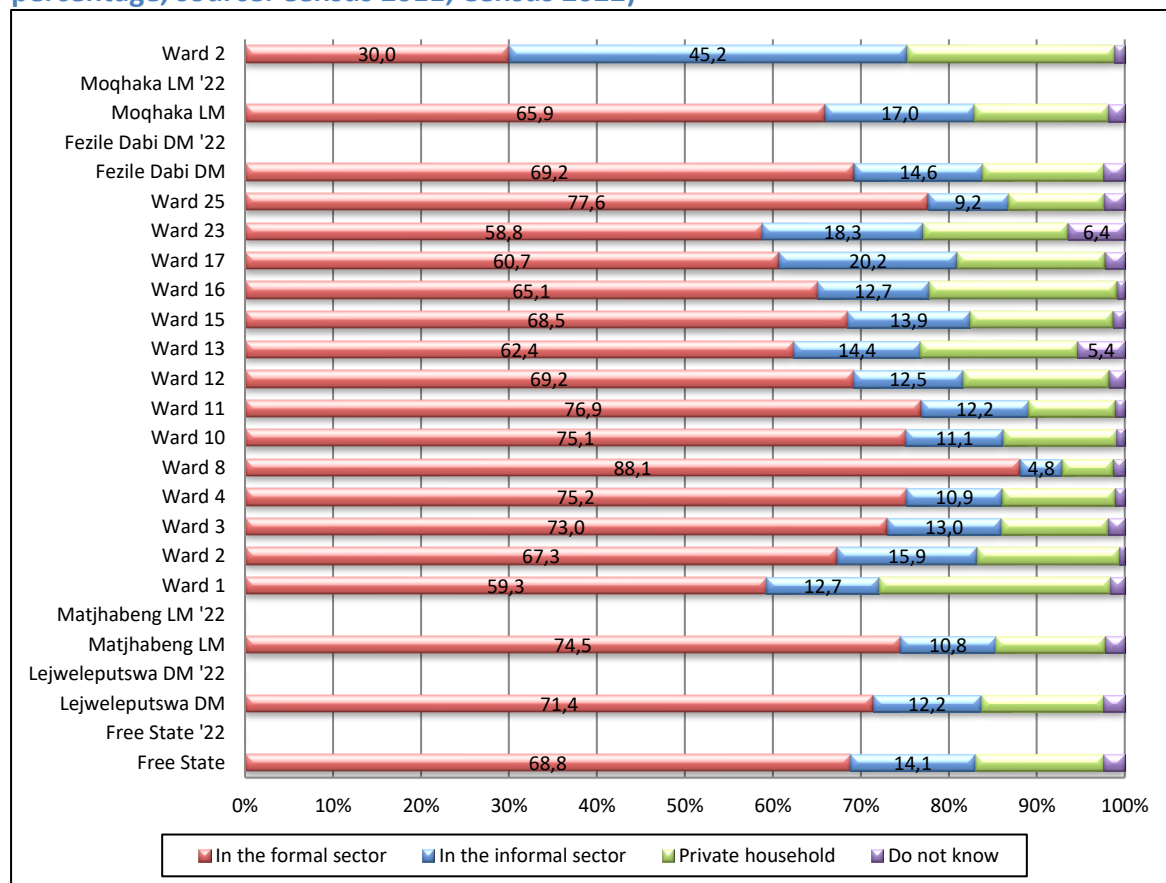
**Figure 5-7: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011)**





The majority of the employed people in the areas under investigation work in the formal sector (Figure 5.8). Ward 8 has the highest proportion of people working in the formal sector.

**Figure 5-8: Employment sector (those aged between 15 - 65 years, shown in percentage, source: Census 2011, Census 2022)**

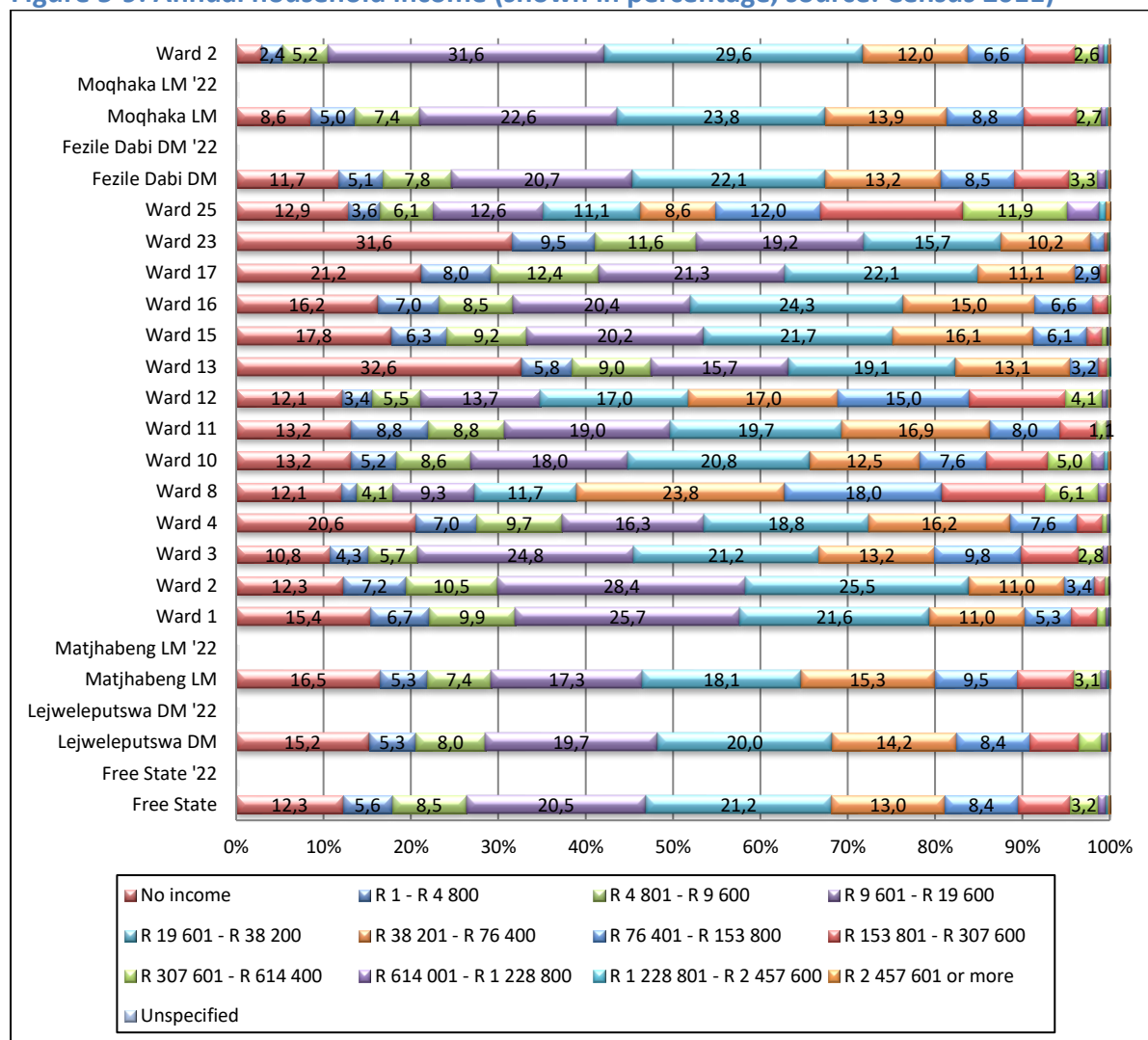




## 5.2.7 Household Income

In 2012 Ward 8 has the highest average household income (Figure 5.9), followed by Ward 12 and 25.

**Figure 5-9: Annual household income (shown in percentage, source: Census 2011)**







### 5.2.8 Housing

On a ward level the majority of households live in areas classified as urban. In Wards 1, 3, 4, and 10 of the Matjhabeng LM and Ward 2 of the Moqhaka LM there are households that live on land classified as farmland ([Table 5.6](#)). The majority of households of Ward 2 of the Moqhaka LM live on land classified as farmland.

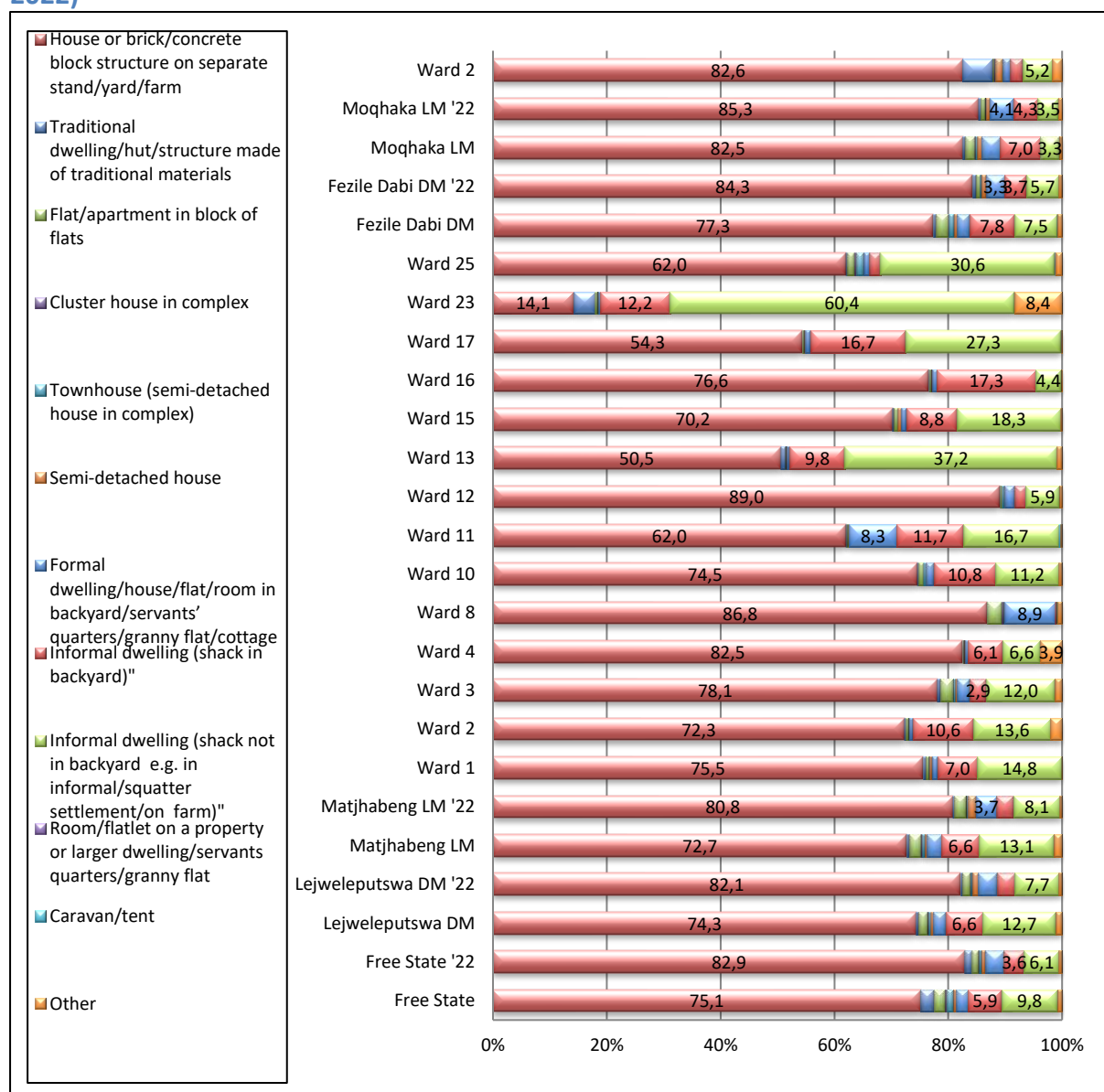
**Table 5-6: Geotypes (source: Census 2011, households)**

Area	Urban	Tribal/Traditional	Farm
Free State Province	84.5	8.8	6.7
Lejweleputswa DM	93.86	-	6.14
Matjhabeng LM	97.67	-	2.33
Ward 1	88.83	-	11.17
Ward 2	100.00	-	-
Ward 3	81.49	-	18.51
Ward 4	98.74	-	1.26
Ward 8	100.00	-	-
Ward 10	92.92	-	7.08
Ward 11	100.00	-	-
Ward 12	100.00	-	-
Ward 13	100.00	-	-
Ward 15	100.00	-	-
Ward 16	100.00	-	-
Ward 17	100.00	-	-
Ward 23	100.00	-	-
Ward 25	100.00	-	-
Fezile Dabi DM	92.47	-	7.53
Moqhaka LM	89.08	-	10.92
Ward 2	19.37	-	80.63



Most of the dwellings in the area are houses or brick/concrete block structures that are on a separate yard, stand or farm (Figure 5.10). Almost three quarters of households in Ward 23 live in informal dwellings in 2012.

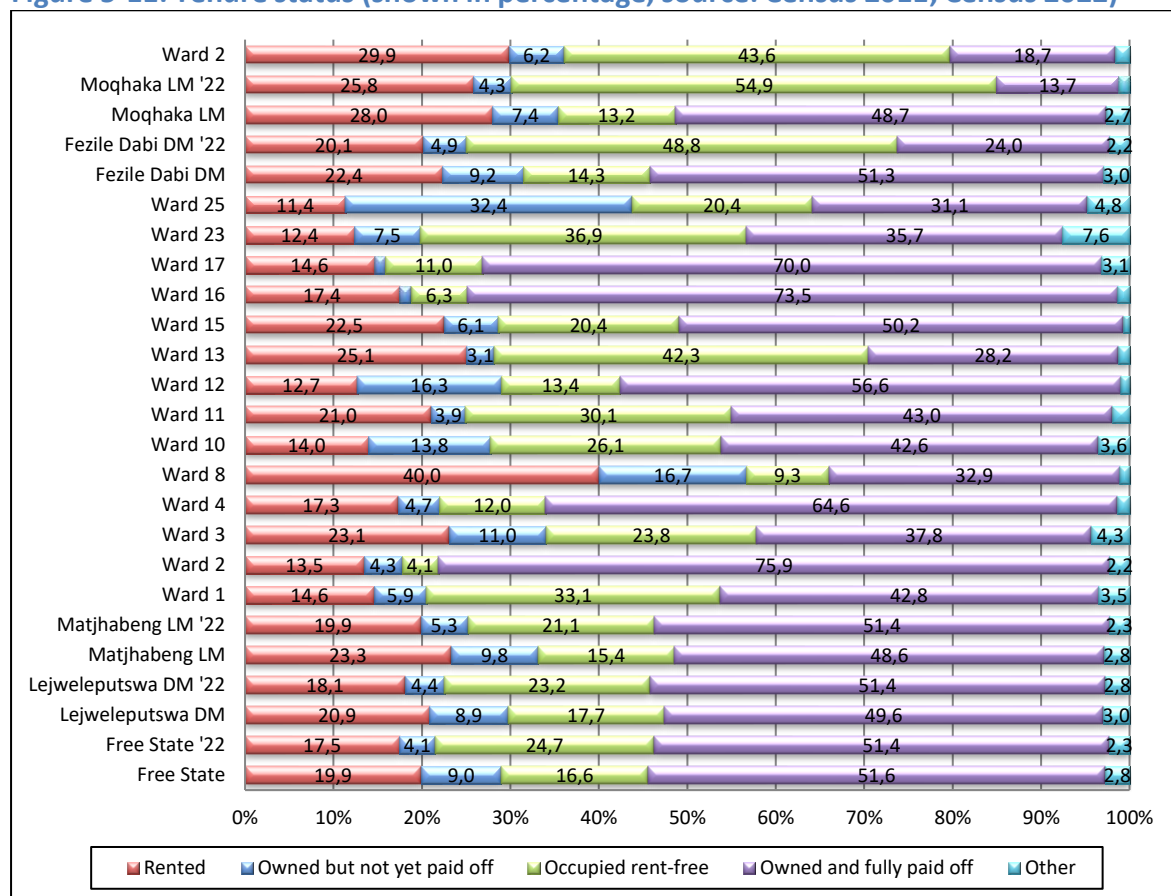
**Figure 5-10: Dwelling types (shown in percentage, source: Census 2011, Census 2022)**





Ward 8 had the largest proportion of households that are renting their dwellings in 2012 (Figure 5.11), with about 40% of the households renting their dwellings.

**Figure 5-11: Tenure status (shown in percentage, source: Census 2011, Census 2022)**

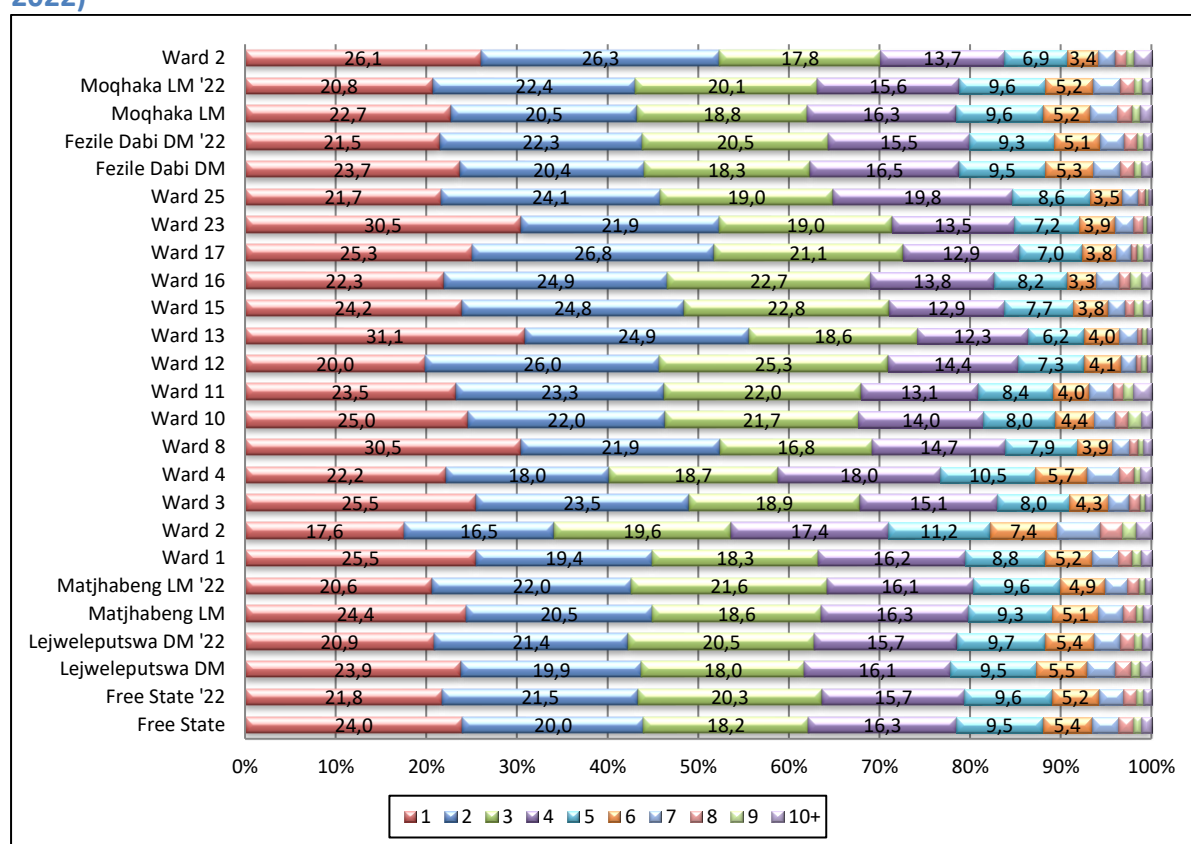




### 5.2.9 Household Size

Household sizes on a ward level in the Matjhabeng LM varies (Figure 5.12), with approximately 50% or more of households in Wards 13, 17 and 23 in the Matjhabeng LM and Ward 2 in the Moqhaka LM. consisting of one or two people, compared to just over 40% on local, district and provincial level. This is very typical in mining areas where there are migrant workers. In Ward 2 less than 40% of households consist of only one or two members.

**Figure 5-12: Household size (shown in percentage, source: Census 2011, Census 2022)**

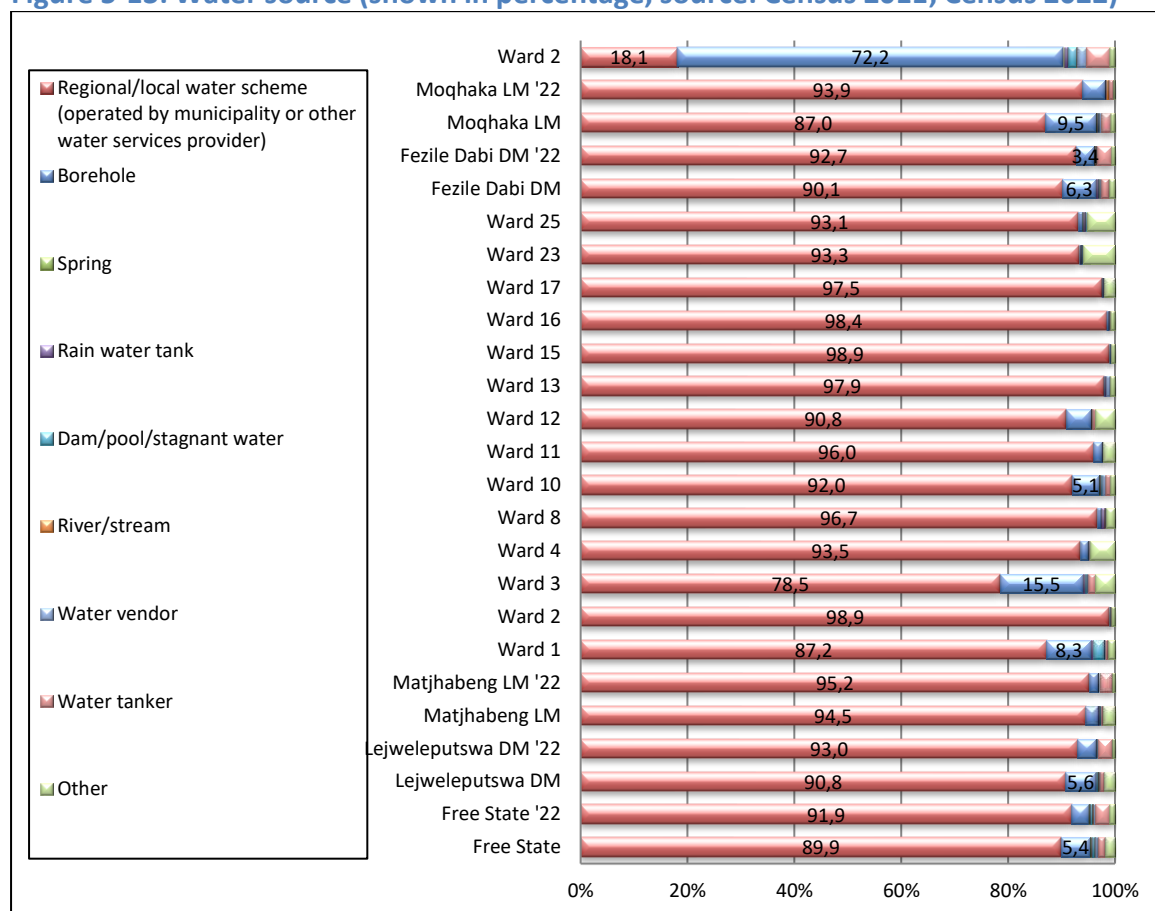




### 5.2.10 Access to water and sanitation

Ward 2 of the Moqhaka LM has the lowest incidence of households that access to water from a local or a regional water scheme, but the highest incidence of households that get their water from another source (Figure 5.13). Census 2011 does not specify what the 'other' water sources include. Almost 16% of households in Ward 3 get their water from a borehole.

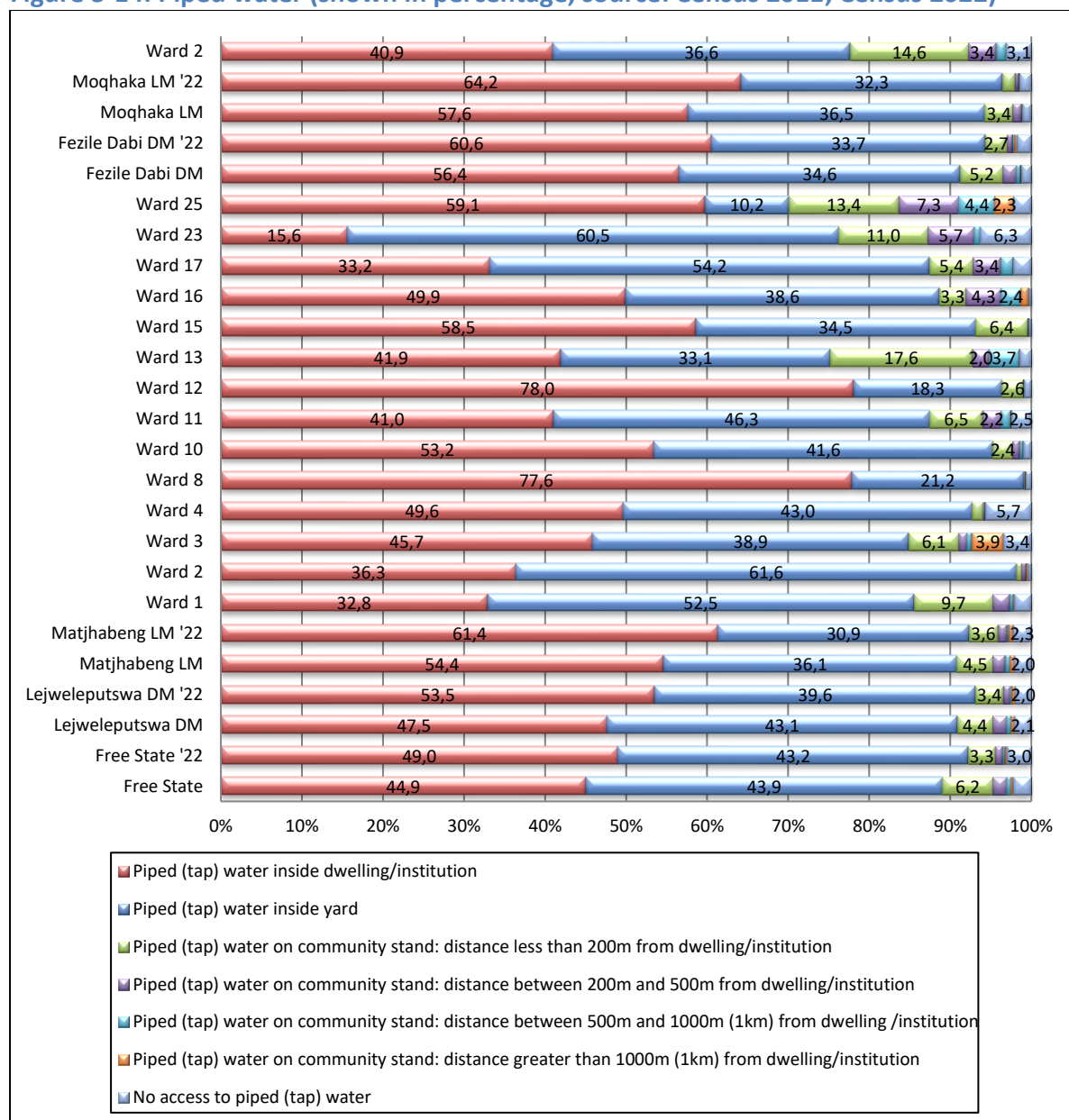
**Figure 5-13: Water source (shown in percentage, source: Census 2011, Census 2022)**



Access to piped water, electricity and sanitation relate to the domain of Living Environment Deprivation as identified by Noble et al (2006). Just over three quarters of households in Ward 8 has access to piped water inside the dwelling (Figure 5.14). This is much higher than on local, district and provincial level. The proportion of households in Wards 1, 2, 17, and 23 with access to water inside their dwellings are much lower than on local, district and provincial level.



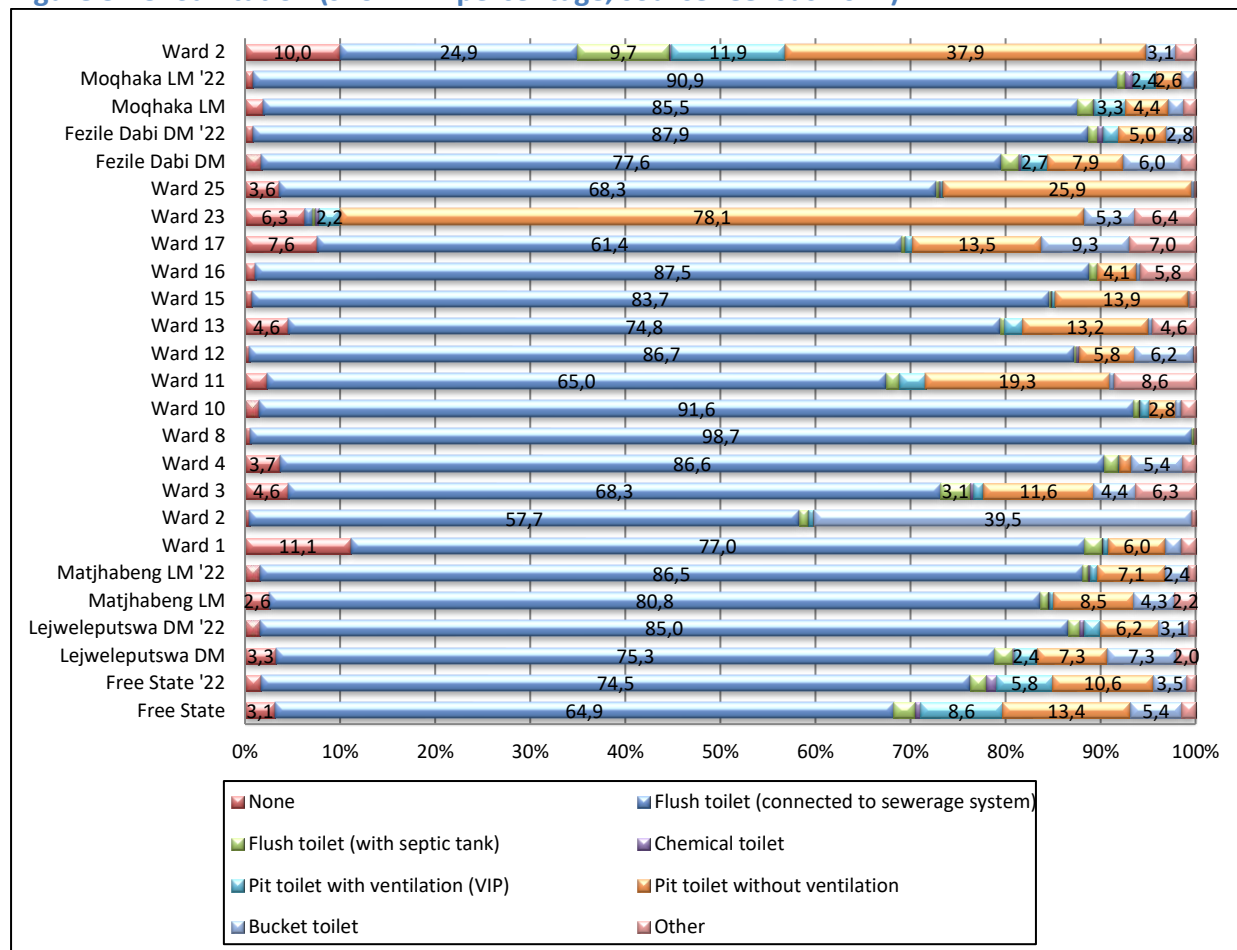
**Figure 5-14: Piped water (shown in percentage, source: Census 2011, Census 2022)**





The majority of households in Ward 23 have access to a pit toilet without ventilation (Figure 5.15). The level of access to flush toilets that are connected to a sewerage system varies between the wards.

**Figure 5-15: Sanitation (shown in percentage, source: Census 2011)**

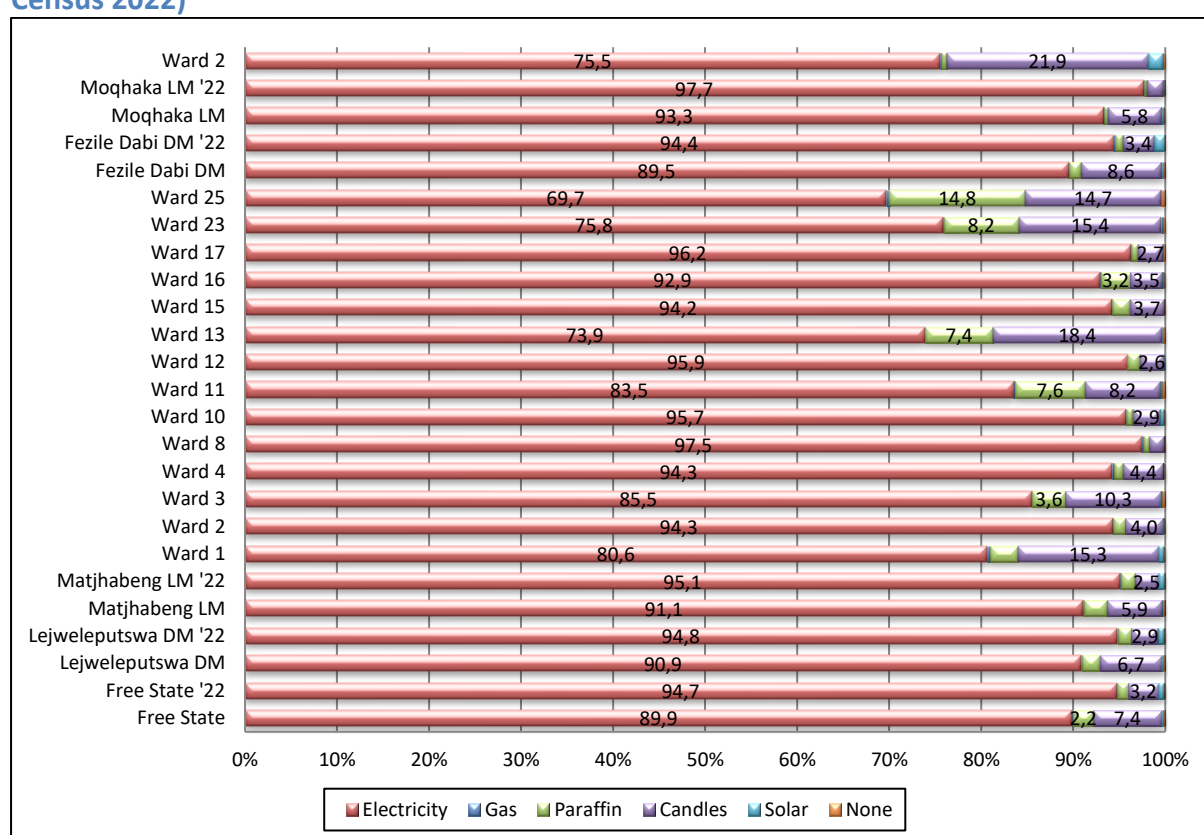




### 5.2.11 Energy

Electricity is seen as the preferred lighting source (Noble et al, 2006) and the lack thereof should thus be considered a deprivation. Even though electricity as an energy source may be available, the choice of energy for cooking may be dependent on other factors such as cost. Wards 13, 23 and 25 of Matjhabeng LM and Ward 2 of the Moqhaka LM have the lowest proportion of households with access to electricity as energy source for lighting (Figure 5.16).

**Figure 5-16: Energy source for lighting (shown in percentage, source: Census 2011, Census 2022)**



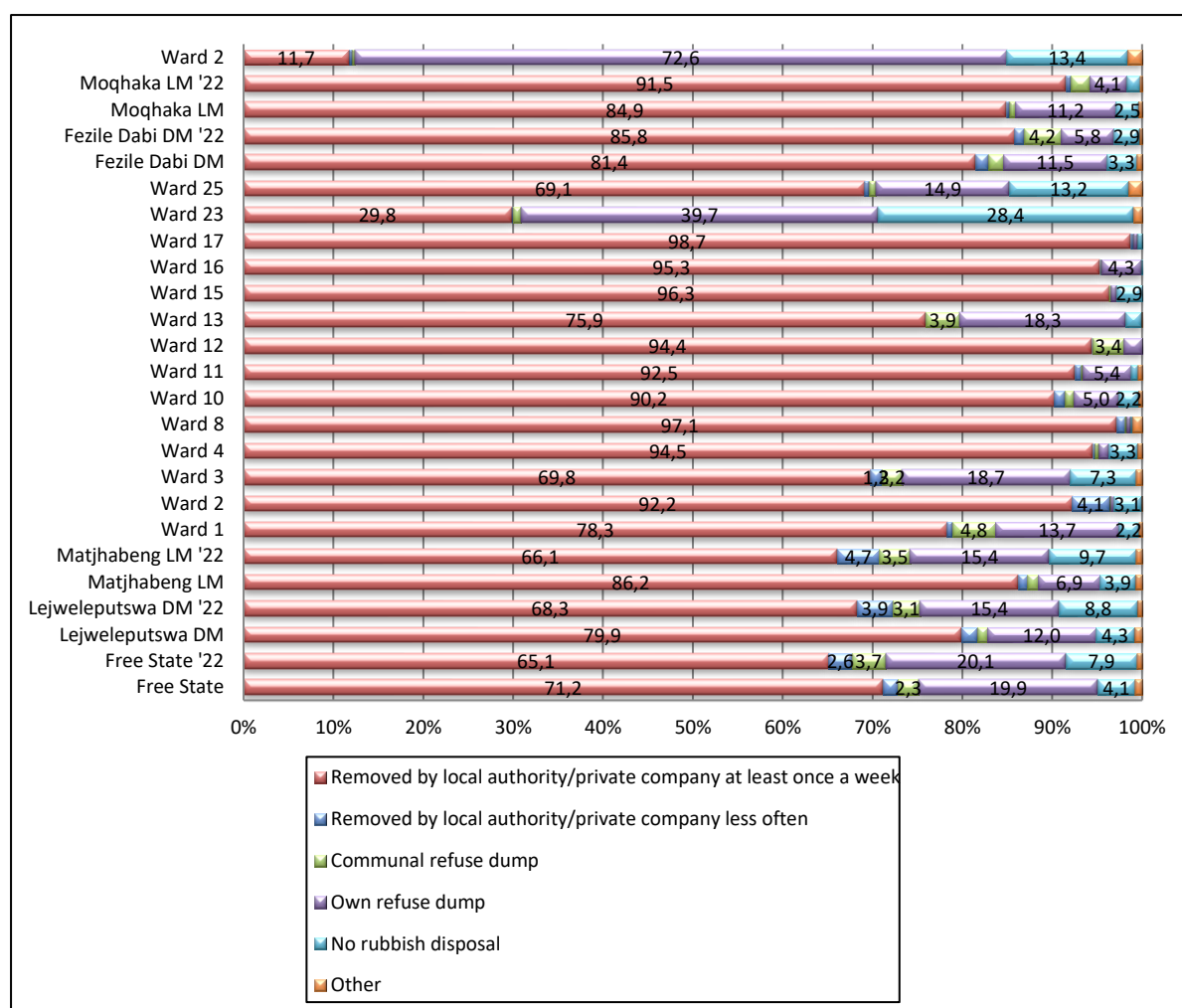




### 5.2.12 Refuse removal

The incidence of households that have their refuse removed at least once a week by a local authority or private company (Figure 5.17) is the lowest in Ward 2 of the Moqhaka LM and Ward 23 of the Matjhabeng LM.

**Figure 5-17: Refuse removal (shown in percentage, source: Census 2011, Census 2022)**





## 6 Stakeholder Identification and Analysis

### 6.1 Approach

Stakeholders include all individuals and groups who are affected by, or can affect, a given operation. Stakeholders consist of individuals, interest groups and organizations (Vanclay, Esteves, Aucamp & Franks, 2015). Stakeholder analysis is a deliberate process of identifying all stakeholders of a project - the individuals and groups that are likely to impact or be impacted by it - and understanding their concerns about the project and/or relationship with it (Vanclay et al., 2015). Stakeholder analysis assists the proponent with understanding the local cultural and political context. It is acknowledged that different stakeholder groups have different interests, and that there are individual differences within stakeholder groups. The purpose of this section of the report is to introduce the stakeholder groups that will be affected by the proposed projects. The following stakeholder groups were identified and their interest in the projects will be discussed briefly in the section below.

### 6.2 List of stakeholders

The following stakeholders that may have an interest in or affected by the proposed Motouane exploration right project have been identified:

**Table 6-1: Detail of Stakeholder Groups.**

Stakeholder Grouping	Organisation
<b>Internal Stakeholders</b>	
Motuoane Energy (Pty) Ltd	Motouane Staff involved with the project Motouane shareholders
<b>Government</b>	
Governmental departments and directorates	<ul style="list-style-type: none"> <li>• Free State Provincial Government</li> <li>• Petroleum Agency of South Africa</li> <li>• National Energy Regulator of South Africa (NERSA)</li> <li>• Department of Environment, Forestry and the Fisheries</li> <li>• Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs</li> <li>• Free State Department of Water and Sanitation</li> <li>• Free State Department of Community Safety, Roads, and Transport</li> <li>• Department of Mineral and Petroleum Resources</li> <li>• Lejweleputswa District Municipality</li> <li>• Fezile Dabi District Municipality</li> <li>• Moqhaka Local Municipality</li> <li>• Matjhabeng Local Municipality</li> </ul>



Stakeholder Grouping	Organisation
	<ul style="list-style-type: none"> <li>South African Heritage Resources Agency (SAHRA)</li> <li>Free State Provincial Heritage Resources Authority</li> </ul>
State-owned entities and regulators	<ul style="list-style-type: none"> <li>Eskom Holdings SOC Ltd</li> <li>National Transmission Company of South Africa</li> <li>South African National Roads Agency Limited (SANRAL)</li> </ul>
Business	
Local Businesses	Various in Virginia, Welkom, Thabong, Henneman, Phomolong, Ventersburg and Riebeeckstad Free State Goldfields Chamber of Business
Contractors / Suppliers	Contractors providing sub-contracting services to Motouane Suppliers of goods to Motouane Suppliers receiving agricultural produce from the farmers in the project affected area Suppliers of agricultural goods to farmers in the project affected area
Other industries	Mulilo, Red Rockett Energy and other renewable energy developers in the area
Environmental	
Environmental Interest groups	Endangered Wildlife Trust WESSA Birdlife South Africa Centre for Environmental Rights FrackFree South Africa Federation for a Sustainable Environment (FSE) Mining and Environmental Justice Community Network of South Africa (MEJCON) Mining Affected Communities United in Action (MACUA)
Societal	
Social Organizations	Community forums (e.g., employment, youth)
Residents/ Community	
Residents	Residents of informal settlements, homeowners/tenants Virginia, Welkom, Thabong, Riebeeckstad, Henneman, Phomolong and Ventersburg
Local farmers	Farmers and farm workers on farms directly affected by boreholes or other infrastructure and neighbouring properties Other farmers and farm workers in the area

The identified level of interest of each stakeholder helps assist with designing the stakeholder engagement strategy for the project, and to decide how much time to devote to engaging with each stakeholder or group. This is a qualitative analysis that should ideally be done by the stakeholder engagement team and revisited as needed, as the interest of stakeholders may change after the exploration phase. The engagement levels required for each group of stakeholders as revealed through this analysis may be more than consultation, for example they may include partnerships,



involvement in community development plans or community monitoring, strategic planning, or any other activity. Knowing the needs, issues and expectations of affected stakeholders assist with building and retaining good relationships with them, and with managing their expectations.

Table 6-2 below plots the stakeholders according to their ability to influence the company's activities (horizontal axis) and the degree to which they are affected by the proposed Motouane exploration activities, whether the impact is social, economic or environmental (vertical axis). In instances where the impact or influence is potentially significant individual stakeholder groups/organisations have been used. All other groupings are used in general.

**Table 6-2: Stakeholder matrix.**

Degree to which they are impacted on	High	Local Businesses Contractors / Suppliers Directly affected farm workers	Contractors Directly affected farmers	
	Medium	Neighbouring farmers and farm workers	State-owned entities and regulators Environmental Interest groups	Governmental departments and directorates
	Low	Social organisations Local residents		
		Low	Medium	High
Ability to influence company's activities				

Directly affected local farmers or landowners, businesses, contractors and suppliers are most likely to be the stakeholders to experience both positive and negative impacts from the gas exploration activities. Despite being the most impacted by the project, these stakeholders have limited influence over Motouane's decisions and operations during the pre-exploration and active exploration phases. There are two groups of directly affected farmers. The first group have been affected by previous gas exploration and production activities from earlier and on-going projects such the Tetra4 Phase 1 and Phase 2 projects. The second group has not been impacted before



and will experience the impacts for the first time. This means that the same impact will be a new impact for the one group, and a cumulative impact for the second group.

Another group of stakeholders that may be impacted on significantly are the renewable companies with existing environmental approvals. Depending on the phase of construction of these facilities, exploration activities may have a negative impact on their construction and operation and could cause conflict and delays in all the processes that may be affected.

### 6.2.1 Stakeholder perspectives

The stakeholder perspectives for the proposed exploration right were informed by two groups of stakeholders, that is the local landowners or farmers and community members. The two stakeholder groups had diverse range of views shaped by the different uses of the land, historical experiences with extractive industries, and expectations about the future of development projects in the area. Among the landowners, who primarily use their properties for farming, ranging from maize and soya cultivation to livestock and game farming, there was a consistent concern about the impact of exploration activities on their agricultural productivity and the integrity of their land. Many landowners described past experiences where drilling and mining activities disrupted their farming operations, leading to reduced crop yields and lingering soil disturbances that remained visible in stunted plant growth. These farmers were mainly concerned about the timing of exploration activities, emphasising that drilling should not occur during planting, growing, or harvesting seasons to avoid further disrupting their livelihoods.

A shared concern among landowners revolved around water resources, which are critical for both crop irrigation and livestock use. Many pointed to historical pollution from mining activities that had already compromised local water quality, highlighting the risk of further contamination from gas exploration. The farmers' reliance on boreholes, some quite shallow and vulnerable, intensified their worries about potential spills, leaks, or accidents that could affect both human and animal health. This was compounded by fears of biosecurity risks, especially in the light of the current foot-and-mouth disease breakout in South Africa. Farmers stressed the importance of



strict hygiene protocols to prevent the spread of disease among livestock and wildlife. The need for thorough cleaning of drilling equipment and vehicles as well as controlled movement across different parts of the farms was highlighted, especially given the presence of buffalo and other high-value or regulated species on some properties.

In contrast to the landowners' concerns (mainly around agricultural and environmental concerns), community members expressed hopes that the project would provide much-needed job opportunities, given the high levels of unemployment in the region. Despite the fact that gas exploration is not labour-intensive, there are very high expectations amongst community members. They highlighted historical grievances of economic exclusion, describing how past mining projects had failed to deliver local benefits, leading to increased poverty, crime, and social instability. Gender-based challenges were also a priority, with some community representatives advocating for greater inclusion of women in any job creation initiatives linked to the exploration activities. These community voices emphasised the need for transparent, equitable recruitment processes to prevent elite capture of opportunities and ensure that historically disadvantaged groups would benefit directly.

Both groups agreed on the need for consistent communication, transparency, and the fair treatment of stakeholders. The landowners stressed that past experiences with other developers, particularly in the mining sector, had left them distrustful of any promises made to them by these groups, underlining the importance of regular updates, clear points of contact, and inclusion in the planning processes. Community representatives similarly requested meaningful participation in the project's development, and decision-making processes, to protect the basic rights of local residents and ensure accountability.



## 7 Description of potential impacts

### 7.1 Social Impact Assessment

*“Almost all projects almost always cause almost all impacts. Therefore, more important than predicting impacts is having on-going monitoring and adaptive management.” Frank Vanclay*

Considering the statement above, it must be considered that some social impacts will not be discussed in detail and that the focus will be on the most severe impacts. It must be considered that the social environment is dynamic and adapts to change and it is highly likely that impacts predicted in this report will change throughout the life of the project. The focus should rather be on the active management of social impacts than on the prediction and once-off mitigation thereof. Successful mitigation and management of social impacts require long-term commitment and involvement and should form part of the strategic planning and management of the project until decommissioning. Suggestions for the management of social impacts are included in the report in the form of a social impact management plan (SIMP). The implementation of the relevant management suggestions should start as soon as possible, since the social impacts of the project started when the project was announced. Another important consideration in this project is the social context in which it will be executed. Impacts are assessed from a community perspective, and where it will influence a specific group of stakeholders it will be indicated as such. An attempt was made to simplify the impact assessment and to focus on aspects that can aid the decision-making process.

Social impacts are the result of social change, and to fully understand the potential impacts it is important to know the impact pathways. A social change process is a discreet, observable and describable process that changes the characteristics of a society, taking place regardless of the societal context (that is, independent of specific groups, religions etc.). Social change processes can be measured objectively. The way in which social change processes are perceived, given meaning or valued, depend on the social context in which various societal groups act. Some groups in society are able to adapt quickly and exploit the opportunities of a new situation. Others (e.g.



vulnerable groups) are less able to adapt and will bear most of the negative consequences of change. These social change processes may, in certain circumstances and depending on the context, lead to the experience of social impacts. Social impacts are therefore completely context-dependent (Vanclay, 2003).

## 7.2 Impact assessment criteria

It must be stated that the impact tables and ratings were adapted from the environmental sciences and that it is not always possible to compartmentalise the social impacts. For the sake of consistency this has been attempted, but it is not innate to social sciences. Allowance for the changing and adaptive nature of social impacts should be made when interpreting the impact tables.

The impact significance rating methodology as provided by EIMS, is guided by the requirements of the NEMA EIA Regulations 2014 (as amended). The broad approach to the significance rating methodology is to determine the risk (R) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/ likelihood (P) of the impact occurring. This determines the Risk. In addition, other factors, including cumulative impacts and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the R to determine the overall significance (S). The impact assessment will be applied to all identified alternatives. Where possible, mitigation measures will be recommended for impacts identified.

The final significance (FS) of an impact or risk is determined by applying a prioritisation factor (PF) to the post-mitigation environmental/social significance. The significance is dependent on the consequence (C) of the particular impact and the probability (P) of the impact occurring. Consequence is determined through the consideration of the Nature (N), Extent (E), Duration (D), Magnitude (M), and Reversibility (R) applicable to the specific impact.

For the purpose of this methodology the consequence of the impact is represented by:





$$C = \frac{(E + D + M + R) * N}{4}$$

Each individual aspect in the determination of the consequence is represented by a rating scale as defined in [Table 7-1](#) below.

**Table 7-1: Criteria for determination of impact consequence.**

Aspect	Score	Definition
Nature	- 1	Likely to result in a negative/ detrimental impact
	+1	Likely to result in a positive/ beneficial impact
Extent	1	Activity (i.e. Highly localised, limited to the area applicable to the specific activity)
	2	Site (i.e. within the development property or site boundary, or the area within a few hundred meters of the site)
	3	Local (i.e. beyond the site boundary within the Local administrative boundary (e.g. Local Municipality) or within consistent local geographical features, or the area within 5 km of the site)
	4	Regional (i.e. Far beyond the site boundary, beyond the Local administrative boundaries within the Regional administrative boundaries (e.g. District Municipality), or extends into different distinct geographical features, or extends between 5 and 50 km from the site).
	5	Provincial / National / International (i.e. extends into numerous distinct geographical features, or extends beyond 50 km from the site).
Duration	1	Immediate (<1 year, quickly reversible)
	2	Short term (1-5 years, less than project lifespan)
	3	Medium term (6-15 years)
	4	Long term (15-65 years, the impact will cease after the operational life span of the project)
	5	Permanent (>65 years, no mitigation measure of natural process will reduce the impact after construction/ operation/ decommissioning).
Magnitude/ Intensity	1	Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected)
	2	Low (where the impact affects the environment in such a



		way that natural, cultural and social functions and processes are slightly affected, or affected environmental components are already degraded)
	3	Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; moderate improvement for +ve impacts; or where change affects area of potential conservation or other value, or use of resources).
	4	High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease; high improvement for +ve impacts; or where change affects high conservation value areas or species of conservation concern)
	5	Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease, substantial improvement for +ve impacts; or disturbance to pristine areas of critical conservation value or critically endangered species)
Reversibility	1	Impact is reversible without any time and cost.
	2	Impact is reversible without incurring significant time and cost.
	3	Impact is reversible only by incurring significant time and cost.
	4	Impact is reversible only by incurring very high time and cost.
	5	Irreversible Impact.

Once the C has been determined the R is determined in accordance with the standard risk assessment relationship by multiplying the C and the P. Probability is rated/ scored as per [Table 7-2](#).

**Table 7-2: Probability/ likelihood scoring.**

Probability	1	Improbable (Rare, the event may occur only in exceptional circumstances, the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions; <5% chance).
	2	Low probability (Unlikely, impact could occur but not realistically expected; >5% and <20% chance).
	3	Medium probability (Possible, the impact may occur; >20% and <50%



		chance).
	4	High probability (Likely, it is most probable that the impact will occur- > 50 and <90% chance).
	5	Definite (Almost certain, the impact is expected to, or will, occur, >90% chance).

The result is a qualitative representation of relative significance associated with the impact. Significance is therefore calculated as follows:

$$S = C \times P$$

**Table 7-3: Determination of significance**

Consequence	5- Very High	5	10	15	20	25
	4- High	4	8	12	16	20
	3- Medium	3	6	9	12	15
	2- Low	2	4	6	8	10
	1- Very low	1	2	3	4	5
		1- Improbable	2- Low	3- Medium/ Possible	4- High/ Probable	5- Highly likely/ Definite
			Probability			

The outcome of the significance assessment will result in a range of scores, ranging from 1 through to 25. These significance scores are then grouped into respective classes as described in [Table 7.4](#).

**Table 7-4: Significance scores.**

S Score	Description
≤4.25	Low (i.e. where this impact is unlikely to be a significant environmental risk/ reward).



S Score	Description
>4,25, ≤8.5	Low-Medium (i.e. where the impact could have a significant environmental risk/ reward).
>8.5, ≤13.75	High-Medium (i.e. where the impact could have a significant environmental risk/ reward).
>13.75	High (i.e. where the impact will have a significant environmental risk/ reward).

The impact significance will be determined for each impact without relevant management and mitigation measures (pre-mitigation significance), as well as post implementation of relevant management and mitigation measures (post-mitigation significance). This allows for a prediction in the degree to which the impact can be managed/mitigated.

Further to the assessment criteria presented in the section above, it is necessary to consider each potentially significant impact in terms of:

1. Cumulative impacts; and
2. The degree to which the impact may cause irreplaceable loss of resources.

To ensure that these factors are considered, an impact prioritisation factor (PF) will be applied to each impacts' post-mitigation significance (post-mitigation). This prioritisation factor does not aim to detract from the significance ratings but rather to focus the attention of the decision-making authority on the higher priority/significance issues and impacts. The PF will be applied to the post-mitigation significance based on the assumption that relevant suggested management/mitigation impacts are implemented.

**Table 7-5: Criteria for determining prioritisation.**

<b>Cumulative Impact (CI)</b>	Low (1)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is unlikely that the impact will result in spatial and temporal cumulative change.
	Medium (2)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is



		probable that the impact will result in spatial and temporal cumulative change.
	High (3)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is highly probable/ definite that the impact will result in spatial and temporal cumulative change.
Irreplaceable Loss of Resources (LR)	Low (1)	Where the impact is unlikely to result in irreplaceable loss of resources.
	Medium (2)	Where the impact may result in the irreplaceable loss (cannot be replaced or substituted) of resources but the value (services and/or functions) of these resources is limited.
	High (3)	Where the impact may result in the irreplaceable loss of resources of high value (services and/or functions).

The value for the final impact priority is represented as a single consolidated priority, determined as the sum of each individual criteria represented in [Table 7-5](#). The impact priority is therefore determined as follows:

$$\text{Priority} = CI + LR$$

The result is a priority score which ranges from 2 to 6 and a consequent PF ranging from 1 to 1.5 (Refer to [Table 7-6](#)).

**Table 7-6: Determination of prioritisation factor.**

Priority	Prioritisation Factor
2	1
3	1.125
4	1.25
5	1.375
6	1.5

In order to determine the final impact significance (FS), the PF is multiplied by the post-mitigation significance scoring. The ultimate aim of the PF is an attempt to increase the post mitigation environmental risk rating by a factor of 0.5, if all the



priority attributes are high (i.e. if an impact comes out with a high medium environmental risk after the conventional impact rating, but there is significant cumulative impact potential and significant potential for irreplaceable loss of resources, then the net result would be to upscale the impact to a higher significance).

**Table 7-7: Final significance rating**

Significance Rating	Description
<-25	<b>Very High (Impacts in this class are extremely significant and pose a very high risk. In certain instances these may represent a fatal flaw. They are likely to have a major influence on the decision and may be difficult or impossible to mitigate. Offset's may be necessary.</b>
<-13.75 to -25	High negative (These impacts are significant and must be carefully considered in the decision-making process. They have a high risk or impact and require extensive mitigation measures).
-8.5 to -13.75	Medium-High negative (i.e. Impacts in this class are more substantial and could have a significant social/environmental risk. They may influence the decision to develop in the area and require more robust mitigation measures).
<-4.25 to <-8.5	Medium- Low negative (i.e. These impacts are slightly more significant than low impacts but still do not pose a major risk. They might require some mitigation measures but are generally manageable).
-1 to -4.25	Low negative (i.e. Impacts in this class are minor and unlikely to have a significant social/environmental risk. They do not influence the decision to develop in the area and are typically easily mitigated.
0	No impact
1 to 4.25	Low positive
>4.25 to <8.5	Medium-Low positive
8.5 to 13.75	Medium-High positive
>13.75	High positive

The significance ratings and additional considerations applied to each impact will be used to provide a quantitative comparative assessment of the alternatives being considered.



### 7.3 Social impacts and mitigation

In this section each impact will be described and the phases of the project where the impact will take place will be identified. Mitigation measures for each impact that are relevant through the specific phases will be discussed after each impact.

#### 7.3.1 Impact on farming community livelihoods and interference with existing land uses

The proposed exploration activities within ER386, which include gas well drilling, seismic surveys, and vegetation clearing, pose an impact on the livelihoods of the local farming communities. A livelihood refers to the way of life of a person or household and how they make a living, in particular, how they secure the basic necessities of life, e.g., their food, water, shelter and clothing, and live in the community (Vanclay et al., 2015). The project area is characterised by high levels of commercial agriculture which is the main livelihood sources for affected communities in the area who are primarily involved in crop farming (mainly maize, soya, sunflowers) and livestock farming (cattle, game, and sheep). These activities are highly dependent on the sustainable use of land, soil quality, water availability, and uninterrupted access to farming areas throughout specific agricultural seasons.

Interference with existing land use patterns emerged as a prominent concern among stakeholders. Most farmers indicated that agricultural land is used cyclically, alternating between planting, growing, harvesting, and grazing periods and that any disturbance during these critical periods could result in substantial financial loss. The affected communities also include farm workers who not only earn their livelihoods (food and shelter) and income from the farm but also consider it their home. Any factor that affects a farmer's ability to make a living from their land directly impacts their livelihood.

The proposed Exploration Right (ER386) covers approximately 58,000 hectares and includes various farm portions near the towns of Welkom, Virginia, Hennenman, and Odendaalsrus in the Free State Province. As part of the current phase of the project, up to 5 potential drilling targets have been identified; however, initial activities will be limited to the development of three wells. Each well will require vegetation clearance



within a footprint of approximately 50 by 50 metres. While this disturbance may seem minimal, farmers report that experience from previous exploration activities in the region indicates that even small-scale drilling operations can alter soil structure. Such changes have, in some instances, impacted crop yields, leading to concerns among local landowners about the potential long-term effects of drilling and seismic operations on agricultural productivity.

Drilling in a farmer's field or part of the field can render the land unusable for agricultural production for up to two years, primarily due to soil compaction caused by heavy machinery. This physical disruption affects not only soil health but also the farmer's ability to sustain regular planting cycles, impacting financial resource and livelihoods. The land typically requires rehabilitation, often through mechanical loosening before it can support crops again. Empirical studies have shown that such impacts can persist for multiple growing seasons, with some farmers experiencing crop yield reductions of up to 25% two years after initial disturbance (Baumhardt et al., 2016). Farmers invest significant amounts in measuring soil chemistry and preparing the soil to get the best possible harvest. Farming is approached from a scientific perspective and a seasonal endeavour. If a farmer misses a planting season, he can only plant his crops again in the next season. Preparing, planting, fertilising, and harvesting activities means that the farmers work their land all year long, there are never times when it just lies fallow. Due to the lack of information and timeframes, the farmers are uncertain about how long their fields will be occupied and how permanent the impact will be.

Any negative impact on the livelihood of a farmer impacts on farmworkers, who are much less resilient and have limited livelihood diversification strategies<sup>1</sup>. Many of the affected people have dependents such as elderly parents and young children. Impacts on livelihoods are seen as some of the most significant impacts from a social perspective, as the ripple effect of this impact can be felt on so many levels, and people always experience this impact severely on a personal level.

---

<sup>1</sup> Livelihood diversification involves engaging in both on-farm and off-farm activities to generate additional income beyond the primary household agricultural activities. This can include producing other agricultural and non-agricultural goods and services, selling waged labour, self-employment in small businesses, and other strategies aimed at spreading risk.



**Table 7-8: Potential mitigation for impacts on community livelihoods and interference with existing land uses.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Motuoane must appoint a public / landowner liaison officer that must continue to deal with the affected landowners throughout the life of the project	All phases	Throughout the life of the project	Motuoane Liaison Officer	The Liaison Officer must keep records of all the communication with affected landowners throughout the life of the project	Establish good relationships with the affected landowners and protect their interests	Communication register, social risk and incident register.
2.	If any existing livelihood activities will be affected negatively, Motuoane must enter into negotiations with the affected parties prior undertaking activities to ensure the affected parties are compensated fairly or can make additional arrangements. Interference with existing livelihoods should be avoided if possible. If any new activities are planned for a property, Motuoane must consult with the landowner and obtain his consent to execute the activity on his/her land.	All phases	Before the exploration commence	Motuoane Liaison Officer	Ad hoc – Liaison Officer must keep records and produce on request	Protect the livelihoods of landowners against negative social impacts	Proof of communication about prospective activity (minutes of meeting, e-mail, SMS) Written agreements
3.	If any interference takes place and there are actual losses, the landowner should be compensated for their losses. Motuoane must have a claims procedure that is communicated to all affected	All phases	Commence in the planning phase and continue	Motuoane Liaison Officer	As required – claims received by Liaison Officer and records of all claims must be kept	Ensures that landowners do not suffer actual losses because of	Claims procedure distributed to all land owners Claims register



	landowners. There must be specific timeframes dealing with response times and time it takes to close out complaints. In order to receive compensation, the claim forms must be submitted to the Motuoane Liaison Officer Compensation should follow the IFC principles, which states that market related prices should be paid, and if anything is restored, it must be to the same or better standards than before.		throughout the life of the project			the project.	Completed claim forms
5.	If areas are fenced, the fences must be checked for snares on a daily basis for the duration of the exploration activities. All incidences must be reported to the closest police station. Anti-poaching toolbox talks should form part of the induction process of all the fencing teams. Any contractor or employee caught poaching should be removed from site.	All phases	Throughout the exploration period	Motuoane	Daily	To ensure no poaching events take place or harm is done to livestock	Record of inspections Toolbox talk records



### 7.3.2 Water contamination and groundwater safety

Concerns about water contamination and the safety of groundwater came up consistently during community consultations, with many affected stakeholders viewing it as one of the most serious risks of the proposed gas exploration activities. In the project area which includes both urban townships and nearby farms around Welkom, Virginia, Hennenman, and Odendaalsrus people rely heavily on boreholes for drinking water, farming, and daily household use. For many landowners and workers, borehole water is not just a supplementary or backup resource but often the sole reliable water source for households, livestock, and crops, especially in areas where municipal service delivery is inconsistent or absent. In this context, the potential for contamination due to gas exploration activities is perceived as a direct threat to livelihoods and public health.

Farmers and residents expressed concern that the drilling of core wells, installation of casing and cement barriers, and execution of seismic surveys could lead to unintended breaches or leakage pathways that allow contaminants whether chemical residues, dust, disturbed heavy metals, or surface pollutants to enter the groundwater system. Even though Motuoane plans to seal the wells with steel pipes and cement after exploration, there is a concern about whether these measures will hold up over time. Some boreholes in the area are quite shallow (as little as 17 meters deep, according to one farmer), and landowners fear they would easily be contaminated if the drilling and exploration process is not well managed. Research has shown that poorly constructed or aging well infrastructure can result in vertical migration of contaminants into aquifers, particularly in regions with high water dependency and shallow groundwater tables (Vidic et al., 2013).

**Table 7-9: Potential mitigation for impacts on water contamination and groundwater safety.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring (frequency) party	Target	Performance indicators (monitoring tool)
1.	Conduct a water quality assessment of all identified boreholes and surface water sources near the exploration sites before any field activity begins. Share results with landowners.	Pre-Exploration (Planning and design)  Exploration phase	Throughout the life of the project	Motuoane	Independent Environmental Control Office (ECO) appointed by Motuoane. Motuoane Liaison Officer  Before and after drilling activities in line with the Geohydrologist recommended frequencies as agreed with land owners	Establish good relationships with the affected landowners and protect their interests.  No contamination of boreholes or groundwater resources.	Laboratory testing reports using water samples (before, during, and after exploration).  Landowners or their representatives to be invited to observe water sampling and receive monitoring reports.
2.	Establish a minimum setback distance (e.g., 50m - 100m) between drilling sites and existing boreholes or sensitive water points, unless otherwise agreed with landowners.	Exploration phase.	Commence in the planning phase and continue through the exploration phase of the project	Motuoane ECO Liaison Officer	As prescribed by specialists  Meetings with affected landowners to discuss the appropriate set back distance.	Minimise any contamination of boreholes or groundwater resources.	Monitoring results from relevant specialist studies.  Practical solutions and barriers implemented by



No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring (frequency) party	Target	Performance indicators (monitoring tool)
							Motuoane
3.	The specification of the cement and steel casing that will be used to secure the drilled well and prevent fluid migration and protect freshwater aquifers must be according to the key international standards and best practices.	All phases	Commence in the planning phase and continue through to exploration phase of the project	Motuoane ECO	As prescribed by specialists.	Minimise any contamination of boreholes or groundwater resources.	Monitoring results from relevant specialist studies.
4.	Develop and implement a Spill Prevention and Response Plan, with adequate resources and capacity in place to ensure its effective implementation. The plan should address potential spill scenarios involving gas, chemicals, and fuel, originating from fixed facilities, transportation vehicles, loading and unloading operation. Ensure onsite staff are trained on emergency spill procedure.	All phases	Commence in the planning phase and continue throughout the life of the project	Motuoane ECO Occupational Health and Safety (OHS) Officers	As prescribed by specialists.	To prevent the release of hazardous substances into the environment, including water storage areas.  To enable quick identification, containment, and control of spills to limit their spread and potential	Weekly monitoring and reports throughout drilling and seismic activity.



No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
						contamination of boreholes or groundwater resources.	



### 7.3.3 Damage to farm roads, existing services and infrastructure

Motuoane exploration activities will need to use the existing farm road to access the identified drilling wells. Farm roads, which are often unpaved or only lightly maintained gravel pathways, are integral to the day-to-day operations of agricultural enterprises. They facilitate the movement of agricultural machinery, transportation of produce, and access to critical resources such as water points, feed storage, and livestock enclosures. Unlike public roads maintained by local authorities, these roads are typically privately maintained by farmers themselves and are therefore more vulnerable to deterioration under the pressure of heavy machinery and increased vehicle traffic associated with exploration activities.

The introduction of large and frequent vehicle movements, such as trucks transporting drilling equipment, seismic survey machinery such as Vibroseis trucks, and other operational support vehicles, places stress on these roads. This can lead to potholing, rutting, dust generation and surface erosion.

Infrastructure damage, in this context, refers to the unintentional physical impact on above or below-ground facilities such as water pipelines, boreholes, cattle watering points, gates, and fencing. For example, a broken water pipeline due to heavy vehicle crossing can interrupt irrigation cycles or create water scarcity for livestock. Similarly, damage to fencing could lead to the mixing of livestock herds, increase disease transmission risks, or cause security concerns on game or livestock farms. These forms of infrastructure are not only economically valuable but also integral to the biosecurity, productivity, and safety of agricultural operations.

It is essential that there be an assessment of the load-bearing capacity of existing roads prior to mobilisation and commitment to repairing any damage caused. In some cases, temporary access roads or alternative routes may be necessary to avoid the most vulnerable or heavily used farm infrastructure. Formal access agreements, including terms for repair and maintenance, can help avoid conflict and ensure minimal disruption to farming livelihoods during the exploration phase.

**Table 7-10: Potential mitigation measures for impacts on damage to farm roads, existing services and infrastructure.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	If private roads are affected by project activities, it is the responsibility of Motuoane to maintain these roads as long as they use it. Motuoane should engage with the relevant farmers about road maintenance. The road maintenance agreements must be formalised before exploration and drilling commences to ensure all parties involved are protected and know their rights and responsibilities. Motuoane must make sure that all compacting and rehabilitation are done to the specifications in the Environmental Management Plan. It is recommended that exploration and drilling be planned for the dry / sunny days to avoid causing additional damage and/or erosion of the gravel access roads due to movement of heavy machinery. Motuoane must provide all the affected landowners with exploration and drilling schedule to ensure that they know when construction will take place on their properties. Any changes to the exploration and drilling schedule must be	Design and planning, Exploration.	Before exploration commence, throughout the life of the project	Motuoane Liaison Officer	Road inspections with landowners and Liaison Officer prior and after exploration equipment are brought on their properties.	Ensure that Motuoane's activities does not impact negatively on existing roads at the cost of the affected landowners	Signed road maintenance agreements Exploration schedule Proof of communication of changes in exploration schedule (E-mail, SMS, minutes of meeting)





No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
	communicated to the farmers at least a week in advance.						



#### 7.3.4 Distrust from previous development projects

Local landowners and farmers expressed a sense of distrust stemming from past experiences with other development projects mainly mining and renewable energy projects. There is a shared sentiment among farmers that previous developers often neglected to restore the land to its original condition after project activities concluded, resulting in long-term negative effects on agricultural productivity. For example, in areas previously disturbed by drilling, landowners observed diminished crop yields and changes in soil performance, which directly affect their income and food production capabilities. This poor follow-through on environmental restoration commitments has not only led to financial losses but has also created a perception that companies prioritise extraction over sustainable land stewardship.

This lingering distrust is compounded by the perception that external developers tend to approach local engagements with a “tick-box” mentality, obtaining agreements or access without adequate follow-up, accountability, or ongoing communication. Several farmers indicated that they or their family members had previously signed agreements without fully understanding the long-term implications, leading to unfavourable outcomes that now serve as cautionary tales. Consequently, affected parties are now demanding stronger assurances, including written documentation outlining the scope and limits of exploration activities, clearly defined timelines, and commitments to meaningful post-activity restoration. The expectation going forward is that exploration proponents such as Motuoane must not only meet technical and environmental standards but also rebuild confidence through transparency and consistent, respectful engagement.

**Table 7-11: Mitigation addressing distrust from previous development projects**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	<p>Prior to any site entry, conduct one-on-one meetings with affected landowners to explain the exact scope of exploration activities.</p> <p>Co-develop Access and Rehabilitation Agreements outlining duration, extent of disturbance, rehabilitation obligations, biosecurity protocols, and opt-out clauses for landowners.</p>	Pre-Exploration (Planning and design phase), exploration, and decommissioning	<p>Must be compiled before exploration and drilling commences.</p> <p>Access and Rehabilitation Agreements must be signed prior to any development start and revisited at the closure of the exploration and drilling phase.</p>	Motuoane Liaison Officer	<p>Monthly during active exploration periods.</p> <p>Use WhatsApp groups and SMS alerts to inform farmers of upcoming site visits, personnel movements, and activity changes in real time</p>	<p>Establish stakeholder trust through demonstrable transparency and adherence to mutually agreed commitments.</p> <p>Ensure all stakeholders are fully informed, consulted, and respected throughout the project lifecycle.</p>	<p>Signed Access Agreements and Rehabilitation Contracts. Regular stakeholder meeting minutes, WhatsApp communication logs, shapefile distributions</p>



### 7.3.5 Nuisance factor due to increase in ambient dust and noise levels

Nuisance factors refer to aspects that may be within the legal limit but still causes a nuisance or irritation to the receptors. The drilling activities will create dust. In areas used for both crop cultivation and livestock grazing, the dust may have a direct impact on productivity and animal health. Dust may also affect the wellbeing of farm workers and residents living near drilling sites, especially during dry and windy periods.

Drilling is an inherently noisy activity. Although this is a temporary impact, it will create a major nuisance whilst happening. This level of noise may disrupt the generally quiet farm environment, especially in areas where farming and game management require minimal disturbance to livestock and wildlife.

**Table 7-12: Potential mitigation of nuisance factors.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	The relevant specialists will provide scientific mitigation measures for this aspect. Practical, visible solutions such as putting shade nets against fences close to dwellings during drilling activities should be investigated. No drilling must take place on weekends (unless agreed upon with the affected landowners) or between sunset and sunrise.	Design and planning, exploration	Commence in the planning phase and continue through all phases of the project	Motuoane EO Liaison Officer	As prescribed by specialists Meetings with affected landowners to discuss issues	Minimise the nuisance impact on affected landowners	Minutes of CLO meetings Monitoring results from relevant specialist studies. Practical solutions implemented by Motuoane
2.	Dust suppression measures will be important. Limit the size and number of vegetation clearings to only what is necessary. Ensure that vehicles and equipment are well-maintained and do not emit excessive exhaust or dust.	Design and planning, exploration	Commence in the planning phase and continue through all the phases of the project	Motuoane EO Liaison Officer	Meetings with affected landowners to discuss issues.	Minimise the nuisance impact on affected landowners	Minutes of CLO meetings Monitoring results from relevant specialist studies. Practical solutions implemented by Motuoane



### 7.3.6 Increase in poaching incidents and livestock theft

There are game and livestock farms located within the exploration right area with wells indicated to be drilled on their properties. Exploration activities typically involve the movement of personnel, vehicles, and equipment across multiple farm portions, which can create new access points to previously secure or isolated areas. This increased movement on and off properties if not properly regulated, can weaken existing security systems, making it difficult for landowners to monitor who is entering or leaving the farm. With multiple contractors and vehicles present, unauthorised individuals can exploit the operational cover to trespass or target livestock without immediate detection. Livestock or game farm properties that host vulnerable animal populations such as sheep, valued for their meat and often lightly guarded may be at risk during periods of active exploration.

**Table 7-13: Potential mitigation of impacts as a result of increase in poaching and livestock theft.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring (frequency)	party	Target	Performance indicators (monitoring tool)
1.	If areas are fenced, the fences must be checked for snares on a daily basis for the duration of the activity. All incidences must be reported to the closest police station. Any contractor or employee caught poaching should be removed from site.	Exploration	Throughout the Exploration period	Motuoane	Daily		To ensure no poaching events take place or harm is done to livestock	Record of inspections, Toolbox talk records, Contractors' agreement.
2.	Motuoane must implement a clear access control system on all farm portions affected by the exploration activities. All vehicles and personnel entering or exiting a property must be pre-authorised, logged, and visibly identified using uniforms, badges, or marked vehicles. A record of personnel movements should be kept and shared with landowners on request.	Exploration	Throughout the Exploration period	Motuoane	Daily		To ensure no poaching events take place or harm is done to livestock	Record of inspections, Toolbox talk records,
3.	Maintain regular and proactive communication with landowners to inform them of daily activities, schedules, and any changes to personnel or site access. Communication channels such as WhatsApp groups or SMS alerts should be used to notify landowners of contractor movement and presence. This ensures that any unfamiliar presence can be	Exploration	Throughout the Exploration period	Motuoane	Daily		To ensure that landowners and affected stakeholders are fully informed, involved, and able to identify and	Number of stakeholder alerts or updates sent per month (e.g., via WhatsApp/SMS/email).



No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
	quickly identified and verified.					verify all personnel and activities on their property, thereby reducing the risk of unauthorised access and potential poaching	





### 7.3.7 Impacts on safety and security of local residents

Safety and security emerged as a significant concern among all affected landowners. Given the prevailing socio-economic and political conditions in South Africa, individuals residing in remote farming areas are particularly vulnerable to crime and violence. The introduction of unfamiliar personnel through the project may increase this risk, as these individuals could unintentionally share sensitive information about local conditions with outsiders or opportunistic criminals. With farms often stretched over large areas and having multiple entry points, the absence of clearly communicated access arrangements could compromise both the personal safety of residents and the security of their property, including crops, livestock, and equipment.

Farmers noted the importance of knowing who is entering their property, for what purpose, and for how long. Without this information being shared in advance, it becomes difficult to distinguish between authorised project-related movements and unauthorised intrusions. The residents expressed concern that the burden of safeguarding both their property and the project's equipment might unintentionally fall on them, unless the proponent establishes a clear, accountable site security plan. There is a need for a dedicated contact person responsible for ongoing updates and rapid response to security concerns. In previous developments in the region, poor communication often led to misunderstanding, fear, and resistance.

**Table 7-14: Potential mitigation impacts on safety and security.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Motuoane should work with the existing and preferred farmers' security group and implement the AgriSA farm access protocol (or equivalent protocol) for everybody that need to access the properties. Pictures, make and registration numbers of all vehicles used by Motuoane on site should be provided to the farmer's security group and distributed to all affected landowners to ensure that they will be able to identify these vehicles if they access their properties. Farmers emphasised that they need to know of people accessing the farm ahead of time. All access arrangements should be made at least 24 hours before access is required. Motuoane must meet with the landowners before the exploration phase commence and formalise security arrangements. This should be done in writing and include the existing forums that the landowners know and trust.	All phases	Commence in planning throughout the life of the project	Motuoane Local security groups Liaison Officer	Security check-ins should be done on a weekly basis to ensure all aspects are attended to.	Ensure the safety and security of affected land owners.	Signed formalised security agreements with existing security groups. Drilling schedule distributed to farmers
2.	All contractors and employees need to wear photo identification cards. Vehicles should be marked as construction vehicles and should have Motuoane's	All phases	Commence in planning throughout	Motuoane Local security groups	Security check-ins should be done on a weekly basis to ensure	Ensure the safety and security of affected land	All contractors and employees issued with photo identification



No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
	logo clearly exhibited. Entry and exit points of the site should be controlled during the exploration and drilling phase.		the life of the project	Liaison Officer Health and Safety officer	all aspects are attended to.	owners.	cards. All vehicles marked Access control on site
3.	All equipment (e.g., rigs, sensors) stored on farms must be secured in fenced, locked areas, with responsibility for protection falling on the project proponent, not the landowner.  Install motion-sensor lights or portable CCTV units around high-value installations during exploration periods to discourage intruders and protect the property of farmers and the applicants. These units should be temporary and removed post-operation.		Before construction commence, throughout life of project.	Motuoane	Daily	To prevent the theft, vandalism, or unauthorised use of exploration equipment and materials.  To reduce the security burden on landowners	Daily review of the CCTV camera activity particularly during the night.



### 7.3.8 Overlapping land use with renewable energy projects

A key concern raised during consultations was the overlap between the proposed gas exploration areas and land portions already earmarked, authorised or leased for renewable energy projects mainly solar farms and vice versa. Several landowners indicated that they have signed option agreements or are in advanced discussions with solar energy companies. This overlap introduces a layer of complexity in land management and planning, as it may compromise the implementation of already approved renewable energy projects or limit the available land area for these developments.

These overlapping claims raise legal and social concerns for landowners, who feel they are now caught up in the middle of competing development interests. Without clear agreements, landowners are placed at risk of reputational damage, legal disputes, or income loss especially if one project delays or undermines the viability of another. This uncertainty can discourage investment in renewable energy, disrupt contractual obligations between landowners and energy developers, and create tension between project proponents (gas and solar) vying for use of the same land (Hurlbert & Gupta, 2016).

In addition, if proper coordination is not achieved, the perceived prioritisation of extractive activities, such as gas exploration, over renewable energy projects may undermine public trust in environmental governance structures and raise broader environmental and social justice concerns (McCauley, & Heffron 2018). Communities may question whether development decisions truly align with national sustainability goals or are instead influenced by short-term economic interests. This issue is particularly relevant in South Africa, where there is a growing shift toward clean energy as part of the country's Just Transition framework.

**Table 7-15: Potential mitigation impacts on education, skills development and training.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	To prevent conflicts between gas exploration activities and pre-existing or planned renewable energy developments, site-specific coexistence agreements must be negotiated with affected landowners and renewable energy developers prior to any on-site activities.	Pre-construction	Planning and throughout duration of the exploration activities.	Motuoane	Will be monitored as part of the EMPr	Prevent spatial conflicts and ensure responsible siting of gas exploration activities	Signed land use agreements, compliance reports, reduction in land use conflict complaints, photographic records of buffer zones and site condition.



### 7.3.9 Uncertainty around property values and land use rights

The proposed gas exploration activities may result in uncertainty and concern regarding property values and land use rights. Several landowners expressed fears that exploration could affect the long-term usability of their land, particularly if drilling leads to soil disturbance or contamination that impacts crop production. In areas where land is used for both grazing and cultivation, any decline in land productivity could reduce its market value. The lack of clarity on whether exploration may transition into production also contributes to landowners' hesitation to align with project, as they want assurance that their land rights will be respected and protected throughout the project's lifecycle. Some of the landowners have lived on the properties for generations and also see it as future inheritance for their children and grandchildren. The uncertainty has a psychological impact on the farmers as well and is a source of stress and worry. Addressing these concerns through transparent agreements and ongoing engagement will be crucial to maintaining landowner trust and cooperation.

**Table 7-16: Potential mitigation impacts on safety and security.**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	<p>Motuoane must negotiate and sign formal, written land access agreements with all affected landowners before any on-site activities begin. These agreements must clearly state the purpose of access (exploration only), duration, area affected, compensation terms, and conditions for site rehabilitation.</p> <p>The written information must include:</p> <p>1.1. Rights and Responsibilities of Landowners and I&amp;As</p> <ul style="list-style-type: none"> <li>○ Clarification that the application is for exploration only.</li> <li>○ Landowners retain their ownership and usage rights.</li> <li>○ Right to participate in the process and submit comments or objections.</li> <li>○ Rights to fair and prior compensation for any disturbances.</li> </ul> <p>1.2. Information about well heads and boreholes:</p> <ul style="list-style-type: none"> <li>○ How long does it take to drill a</li> </ul>	All phases	Commence in the planning phase and continue throughout the life of the project.	Motuoane	The Liaison Officer must keep records of all the communication with affected landowners throughout the life of the project.	Establish good relationships with the affected landowners and protect their interests	Written information sheet Communication register, social risk and incident register



No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
	<p>borehole?</p> <ul style="list-style-type: none"> <li>○ Can more than one borehole be drilled with the same drill point?</li> <li>○ What happens if no gas is found at a borehole?</li> <li>○ Will unproductive boreholes be investigated again later?</li> <li>○ What will happen if there is a change in the infrastructure presented to the landowners?</li> </ul> <p>1.3. Project phases and timelines.</p> <ul style="list-style-type: none"> <li>○ Pre-construction (planning and permitting).</li> <li>○ Exploration activities (with estimated timelines).</li> <li>○ Rehabilitation and closure.</li> <li>○ Potential next steps (clarify that production is not part of this application).</li> </ul>						
2	Identify and map all overlapping land uses (e.g., existing solar farm options, agricultural activities).	All phases	Commence in the planning phase and	Motuoane Holders of environmental	Ad hoc – Liaison Officer must keep records and produce on request.	Align exploration activities with existing land uses	100% of project activity sites mapped and coordinated with





No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
	<p>Establish a conflict resolution protocol that aligns project activities with ongoing land use and avoids spatial or agricultural seasonal conflicts.</p> <p>Commence with negotiations with solar companies with approved environmental authorisation to find the best possible outcome in a constructive manner.</p>		continue throughout the life of the project.	authorisation for renewable energy.		to avoid disruptions to ongoing or planned developments	existing land uses



### 7.3.10 Gender and social inclusion impacts

One of the key social dimensions identified during the consultation process is the issue of gender inequality and the exclusion of women and other vulnerable groups from decision-making processes and the distribution of project benefits. Although communities living within and around the ER386 exploration area are hopeful about potential job creation, particularly if the project moves to production phase, participants noted that women are often left out when these opportunities arise. This exclusion reinforces existing gender inequalities, particularly in rural and farming communities where access to diverse income-generating activities, land rights, and technical training is already limited for women.

The consulted stakeholders noted that women are being left out of job opportunities or engagement processes, despite their active roles in farming households and community life. In many rural settings, women are not only caretakers but also central to agricultural production, small-scale enterprise, and environmental stewardship. Failing to consider their roles and perspectives risks undermining their insights and experience which might aid to the sustainability of the project. The IFC recommends early engagement of women in project planning and implementation to avoid reinforcing systemic exclusion and to leverage their unique insights, especially in relation to environmental resource use, household livelihoods, and community health, issues particularly sensitive in agricultural regions like those covered under ER386.

The project presents an opportunity to promote gender inclusion by ensuring that both men and women are actively involved in all stages of the project consultation, monitoring, employment, and capacity building. Addressing gender-based disparities through inclusive employment practices not only improves social equity but can also contribute to reducing gender-based violence (GBV), which is often linked to economic dependence and marginalisation. Women in the area are already underrepresented in formal employment and when opportunities related to new projects become available, they are disproportionately offered to men. Women



should be given priority consideration for skills development, employment, and leadership roles.

**Table 7-17: Potential mitigation for impacts as a result of gender biases or social exclusion**

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Ensure that women are equally represented and heard in all engagement and decision-making forums related to exploration activities. This includes organising consultation sessions at times and venues that are accessible to women (e.g., outside of caregiving hours), using local languages, and ensuring that women feel safe and respected in the consultation space.	All phases	Commence in planning throughout the life of the project	Motuoane Liaison Officer	The Liaison Officer must keep records of all the communication with ALL stakeholders.	Ensure that women engaged, involved and informed consulted on all phases of the project.	Communication records, meeting register and minutes.
2	Motuoane should adopt a formal recruitment policy that ensures equal access to employment and training opportunities for women and other marginalised groups. This includes setting clear targets for female participation in exploration-related roles (e.g., environmental monitoring, community liaison, administration), ensuring job advertisements are circulated through accessible and inclusive channels, and avoiding bias in selection criteria that favour traditional male-dominated skill sets. Design roles that accommodate both men and women, including flexible or part-time opportunities.	All phases	Commence in planning throughout the life of the project	Motuoane Liaison Officer Human Resources Management	Monthly internal monitoring of recruitment data during exploration phase.	Equal opportunity for all job applicants regardless of gender, with clear documentation of fair hiring practices.	Recruitment and procurement log with disaggregated data



	Include gender equality clauses in subcontractor and supplier contracts to promote consistent standards.						
--	--	--	--	--	--	--	--



### 7.3.11 Job creation and local economic expectations

In the long run, the outcomes of the proposed project may create positive economic impacts in the area. The communities around the proposed area have high expectation for job creation as a direct result of the proposed gas exploration activities. In a context marked by widespread unemployment, particularly among youth, stakeholders indicated that the project is seen as a potential avenue for employment, skills development, and improved livelihoods. This expectation is rooted not just in economic necessity, but also in the hope that new development initiatives will offer long-term socioeconomic benefits to local people, especially as legacy mining operations such as Harmony which have predominantly employed majority of people in local communities begin to wind down. Given that the exploration activities will create very limited opportunities, it is critical that the community expectations about job creation must be managed.

Beyond direct employment, the project presents a short-term limited opportunity to stimulate local business development and procurement. Small and medium enterprises (SMEs) involved in catering, accommodation, transport, construction, and equipment supply can benefit through local sourcing agreements. Prioritising procurement from black-owned, women-owned, and community-based businesses can contribute to the limited developmental benefits of the project.

The unrealistically high expectation about opportunities that will be created in the exploration phase is coupled with concerns around equity and fairness in opportunity distribution. There is a sentiment among stakeholders that historically employment and procurement processes were dominated by personal networks, raising fears that only a select few might benefit from the exploration phase, while the majority of disadvantaged and unemployed residents are left out. There is a call for Motuoane to prioritise local hiring, especially for disadvantaged groups, including women and youth. Stakeholders recommended that job creation efforts be coordinated with legitimate, registered community organisations or Trusts to ensure that opportunities



are fairly and equitably shared. This measure will help to manage expectations and build trust with local communities.

While community members acknowledge that exploration activities are not as labour-intensive and long-term based as full-scale production phase, they still expect to be engaged early in any short-term work opportunities, such as land clearing, security, or logistics support. Overall, they see the project is seen as a potential catalyst for socio-economic upliftment provided that employment processes are well-structured, transparent, and inclusive.



Table 7-18: Mitigation measures suggested for job creation and local economic expectations

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Motuoane should develop and implement a Local Employment and Procurement Plan (LEPP) in consultation with local stakeholders. This plan must outline clear procedures for advertising job opportunities, selection criteria, and the prioritisation of local labour and service providers. The plan must also indicate provisions to ensure that employment quotas for local residents are met including women and youth.	Exploration, decommission, closure and rehabilitation	Throughout the project from planning to rehabilitation.	Motuoane Liaison Officer	Review the LEPP and apply it each respective phase of the project as required.	To ensure Motuoane contribute to the local economy through fair employment and procurement process	Number of jobs created that fairly prioritised local communities and services providers.
2.	<p>Motuoane must manage community expectations about job creation in the exploration phase actively. The following activities should be considered:</p> <ul style="list-style-type: none"> <li>• Host community meetings to explain the exploration process, potential job opportunities, and limitations.</li> <li>• Provide clear and consistent information on what the exploration phase entails and the types of jobs that are realistically available.</li> <li>• Organize workshops to educate the community about the gas industry, the exploration phases, and the different types of employment they may expect.</li> <li>• Provide information on any possible contract opportunities for local businesses during the exploration phase.</li> <li>• Offer periodic updates on the project's progress and employment statistics to show how many jobs were created, if any.</li> <li>• Build trust through openness about the changing nature of job opportunities as the project evolves.</li> <li>• Actively counter misinformation and unrealistic claims circulating in the community through targeted communication strategies.</li> <li>• Use media channels (social media, local news) to provide factual updates about the project.</li> </ul>	Start in planning phase, continue through exploration phase	Planning phase	Motuoane Liaison Officer	Monthly updates via various media – social media, ward councillors, Liaison Officer	<p>To manage community expectations and educate the community about the gas industry.</p> <p>To build social cohesion.</p>	<p>Minute of meetings</p> <p>Attendance register for workshops</p>





## 7.4 Impact Ratings

Table 7-19: Impact rating table

Impact	Phase	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score
Impact on farming community livelihoods and interference with existing land uses	Exploration	-1	3	2	4	4	4	-13	Medium to high -	-1	2	1	2	3	3	-6	Medium to low -	High	2	2	1,25	-5,00
Water contamination and groundwater safety	Exploration	-1	2	1	4	4	3	-8,25	Medium to low -	-1	2	1	2	2	2	-3,5	Low -	Medium	3	2	1,38	-4,81
Damage to farm roads, existing services and infrastructure	Exploration	-1	4	1	4	4	5	-16,25	High -	-1	1	1	3	3	4	-8	Medium to low -	High	2	2	1,25	-5,00
Distrust from previous development projects	Planning	-1	3	2	4	3	3	-9	Medium to high -	-1	3	1	2	2	3	-6	Medium to low -	High	2	2	1,25	-7,50
Nuisance factor due to increase in ambient dust and noise levels	Exploration	-1	2	1	2	2	3	-5,25	Medium to low -	-1	2	1	2	2	2	-3,5	Low -	High	2	1	1,13	-3,94
Increase in poaching incidents and stock theft	Exploration	-1	3	1	4	3	4	-11	Medium to high -	-1	3	2	2	2	2	-4,5	Medium to low -	Medium	2	3	1,38	-6,19
Impacts on safety and security of local residents.	Exploration	-1	3	1	3	3	4	-10	Medium to high -	-1	3	1	2	2	3	-6	Medium to low -	High	2	2	1,25	-7,50
Uncertainty around property values and land use rights	Planning	-1	3	1	3	3	2	-5	Medium to low -	-1	2	1	2	2	2	-3,5	Low -	High	2	2	1,25	-4,38
Overlapping land use with renewable energy projects	Exploration	-1	3	3	3	3	3	-9	Medium to high -	-1	2	1	2	3	3	-6	Medium to low -	Medium	2	1	1,13	-6,75
Gender and social inclusion impacts	Exploration	-1	3	2	3	3	2	-5,5	Medium to low -	-1	3	1	2	1	2	-3,5	Low -	Medium	1	1	1,00	-3,50
Job creation and local economic expectations	Planning	1	3	1	3	3	2	5	Low to medium +	1	3	1	3	3	3	7,5	Low to medium +	High	1	2	1,13	8,44



## 8 Stakeholder Engagement Plan

Social impacts already start in the planning phase of a project and as such it is imperative to start with stakeholder engagement as early in the process as possible. A stakeholder engagement plan will assist Motuoane to outline their approach towards communicating in the most efficient way possible with stakeholders throughout the life of the project. Such a plan cannot be considered a once off activity and should be updated on a yearly basis to ensure that it stays relevant and to capture new information. Stakeholders must provide input in the Stakeholder Engagement Plan.

The Motuoane Stakeholder Engagement Plan should have the following objectives:

- To identify and assess the processes and/or mechanisms that will improve the communication between land owners, local communities, the wider community and Motuoane.
- To improve relations between Motuoane's staff and the people living in the local communities.
- To provide a guideline for the dissemination of information crucial to the local communities in a timely, respectful, and efficient manner.
- To provide a format for the timely recollection of information from the local communities in such a way that the communities are included in the decision-making process.

The Stakeholder Engagement Plan should be compiled in line with International Finance Corporation (IFC) Guidelines and should consist of the following components:

- Stakeholder Identification and Analysis – time should be invested in identifying and prioritising stakeholders and assessing their interests and concerns.
- Information Disclosure – information must be communicated to stakeholders early in the decision-making process in ways that are meaningful and



accessible, and this communication should be continued throughout the life of the project.

- Stakeholder Consultation – each consultation process should be planned out, consultation should be inclusive, the process should be documented, and follow-up should be communicated.
- Negotiation and Partnerships – add value to mitigation or project benefits by forming strategic partnerships and for controversial and complex issues, enter into good faith negotiations that satisfy the interest of all parties.
- Grievance Management – accessible and responsive means for stakeholders to raise concerns and grievances about the project must be established throughout the life of the project.
- Stakeholder Involvement in Project Monitoring – directly affected stakeholders must be involved in monitoring project impacts, mitigation, and benefits. External monitors must be involved where they can enhance transparency and credibility.
- Reporting to Stakeholders – report back to stakeholders on environmental, social and economic performance, both those consulted and those with more general interests in the project and parent company.
- Management Functions – sufficient capacity within the company must be built and maintained to manage processes of stakeholder engagement, track commitments and report on progress.

It is of critical importance that stakeholder engagement takes place in each phase of the project cycle, and it must be noted that the approach will differ according to each phase. The stakeholder analysis done in Section 6 of this report must inform the stakeholder engagement strategy.



## 9 Proposed Grievance Mechanism

In accordance with international good practice Motuoane should establish a specific mechanism for dealing with grievances. A grievance is a complaint or concern raised by an individual or organisation that judges that they have been adversely affected by the project during any stage of its development. Grievances may take the form of specific complaints for actual damages or injury, general concerns about project activities, incidents and impacts, or perceived impacts. The IFC standards require Grievance Mechanisms to provide a structured way of receiving and resolving grievances. Complaints should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities and is at no cost and without retribution. The mechanism should be appropriate to the scale of impacts and risks presented by a project and beneficial for both the company and stakeholders. The mechanism must not impede access to other judicial or administrative remedies.

The grievance mechanism should be based on the following principles:

- Transparency and fairness.
- Accessibility and cultural appropriateness.
- Openness and communication regularity.
- Written records.
- Dialogue and site visits; and
- Timely resolution.

Based on the principles described above, the grievance mechanism process involves four stages:

- Receiving and recording the grievance.
- Acknowledgement and registration.



- Site inspection and investigation; and
- Response.



## 10 Conclusion and recommendations

The aim of this report is to identify the potential social impacts associated with the proposed Motouane ER386 application. The affected area includes high-value agricultural land and vulnerable communities already facing socio-economic challenges such as poverty, high unemployment, and limited access to services. Many landowners and residents are uncertain about what the project will mean for their properties, their rights, and their livelihoods. The job creation benefits, both primary and secondary are not significant. Therefore, it is of utmost importance that the local social impacts must be managed and monitored to the best of Motouane's ability, since the parties who pay the social cost of the development will not be beneficiaries of the development.

The situation is made more complex by the fact that parts of the area already have approvals in place for renewable energy projects. Having two different energy developments overlapping on the same land adds to confusion and raises real concerns about long-term land access and use. Concerns have already been raised by landowners, farmers, and communities about the possible disruption to land use, uncertainty about future land access, and potential cumulative effects alongside existing mining and renewable energy activity in the area.

The proposed project will require access to private land, including areas where farming activities are taking place. This creates concern for landowners about the impact on their infrastructure, their safety, and their ability to continue using their land productively. There are no fatal flaws that would prevent the project from going ahead, but it is clear that these social concerns must be addressed early and carefully. If not managed properly, they could result in resistance, reputational harm, and unnecessary conflict.

Based on the provided information, here are the key recommendations from the study:

**1. Addressing Community Livelihoods:**

- Appoint a Liaison Officer to maintain relations with affected landowners throughout the project, ensuring effective communication and documentation.
- Engage with affected parties early to negotiate fair compensation for any loss of livelihoods due to exploration activities.
- Implement a transparent claims process for landowners to report losses and receive compensation, adhering to international standards.

**2. Mitigating Water Contamination Risks:**

- Conduct baseline assessments of local water sources and regularly monitor water quality during and after exploration activities.
- Establish minimum distances between drilling sites and sensitive water points to minimize contamination risks.
- Develop a Spill Prevention and Response Plan to effectively manage potential spills of hazardous materials.

**3. Protecting Infrastructure:**

- Formalize agreements with farmers for road maintenance to address damage caused by heavy machinery during exploration.
- Evaluate existing road and service infrastructure before project activities commence to ensure protection against damage.

**4. Building Trust and Addressing Distrust:**

- Hold one-on-one meetings with landowners before exploration to explain project activities and co-develop rehabilitation agreements.
- Establish regular and inclusive communication channels for stakeholders to foster trust and address past grievances.

**5. Managing Nuisance Factors:**

- Implement dust suppression methods and limit noise by scheduling operations during acceptable hours to minimize disruption.
- Engage specialists to develop targeted, scientific solutions for nuisance impacts.

**6. Securing Farms Against Poaching:**

- Enforce strict access control measures for exploration activities to prevent unauthorized access and enhance security for livestock and crops.
- Regularly check for snares and report incidents to the authorities to prevent poaching.

**7. Enhancing Safety and Security:**

- Collaborate with local security groups to adhere to safety protocols and maintain communication regarding site access and security.
- Ensure all contractors wear identification and use marked vehicles to easily identify authorized personnel.
- Compile and implement fire prevention and control plan.

**8. Coordinating Land Use Conflicts:**

- Develop agreements with stakeholders involved in renewable energy projects to prevent conflicts over land use and clarify development rights.
- Establish procedures for addressing any land use disputes that may arise during the exploration process.

**9. Addressing Uncertainty Around Property Values:**

- Negotiate clear agreements with landowners outlining land access terms and information regarding exploration to mitigate anxiety over land use rights and property values.





- Identify existing land uses and establish protocols for resolving potential conflicts.

**10. Promoting Gender and Social Inclusion:**

- Develop hiring practices that promote gender equality and provide opportunities for training and employment for women.

**11. Managing Job Creation Expectations:**

- Create a comprehensive plan outlining local hiring and procurement processes to support community businesses and ensure fair access to opportunities.
- Actively inform the community about the nature of job opportunities during the exploration phase and provide updates on project progress to manage expectations effectively.



## 11 References

Baka, J., 2013. **The Political Construction of Wasteland: Governmentality, Land Acquisition and Social Inequality in South India.** *Development and Change*, 44(2):409–428.

Barnett, E. & Casper, M. 2001. **Research: A definition of “social environment”.** *American Journal of Public Health*. 91(3): 465.

Baumhardt, R. L., Lascano, R. J., & Staggenborg, S. A. 2016. **Soil compaction and crop response following pipeline installation in a clay loam soil.** *Soil and Tillage Research*, 158, 131–139

Bell, P.A., Fisher, J.D., Baum, A. & Greene, T.C. 1996. **Environmental Psychology – Fourth Edition.** Florida: Harcourt Brace College Publishers.

**Constitution of the Republic of South Africa, 1996**

Du Plessis, A. 2011. **South Africa’s constitutional environmental right (revisited): Procedural fairness and democratic engagement as the foundation for environmental justice.** *Macquarie Journal of International and Comparative Environmental Law*, 7(1), 41–61.

Du Preez, M. & Perold, J. 2005. **Scoping/feasibility study for the development of a new landfill site for the Northern Areas of the Metropolitan Municipality of Johannesburg. Socio-Economic Assessment.** Mawatsan.

Esteves, A.M., Franks, D. & Vanclay, F. 2012. **Social impact assessment: The state of the art,** *Impact Assessment & Project Appraisal* 30(1): 35-44

**Fezile Dabi District Municipality Integrated Development Plan 2022 – 2027.**

Global Reporting Initiative. [Sa] **Focal Point South Africa.** Available: <https://www.globalreporting.org/network/regional-networks/gri-focal-points/fp-southafrica/Pages/default.aspx>



Hurlbert, M., & Gupta, J. 2016. **Adaptive governance, uncertainty, and risk: Policy framing and responses to climate change, drought, and flood**. Risk Analysis, 36(2), 339-356.

IFC. 2007. **Stakeholder Engagement: A Good Practice Handbook for companies doing business in Emerging Markets**. Washington

IFC. **Stakeholder Engagement: A Good Practice Handbook for companies doing business in Emerging Markets**. Washington.

International Association for Impact Assessment. 2003. **Social Impact Assessment: International Principles**. Special Publication Series no.2. IAIA; Fargo.

International Finance Corporation, 2012. **Performance Standards on environmental and social sustainability**. Washington, DC: International Finance Corporation.

International Finance Corporation. 2002. **Handbook for preparing a resettlement action plan**. Washington, DC: World Bank Group.

International Organisation for Standardisation, 2010. ISO 26000 **Guidance on Social Responsibility**. Geneva: International Organization for Standardization.

Interorganizational Committee on Principles and Guidelines for Social Impact Assessment. **US Principles and Guidelines – Principals and guidelines for social impact assessment in the USA**. Impact Assessment and Project Appraisal, 21(3):231-250.

**Lejweleputswa District Municipality Draft IDP 2022-2027.**

**Matjhabeng Local Municipality Integrated Development Plan Final Review 2024-2025.**

McCauley, D., & Heffron, R. 2018. **Just transition: Integrating climate, energy and environmental justice**. Energy Policy, 119, 1–7.

**Mineral and Petroleum Resource Development Act 28 of 2002**. Mineral and Petroleum Resource Development Act 28 of 2002

**Moqhaka Local Municipality Integrated Development Plan 2022 – 2027.**

**National Environmental Management Act no 107 of 1998 (NEMA).** Mineral and Petroleum Resource Development Act 28 of 2002

**National Heritage Resources Act 25 of 1999.** Republic of South Africa.

National Planning Commission. 2012. **National Development Plan 2030: Our future—make it work.** Pretoria: National Planning Commission.

**National Water Act 36 of 1998.** Republic of South Africa.

**Promotion of Administrative Justice Act 3 of 2000.** Republic of South Africa

Statistics South Africa. 2014. **The South African MPI: Creating a multidimensional poverty index using census data.**

Statistics South Africa. 2015. **Methodological report on rebasing of national poverty lines and development on pilot provincial poverty lines – Technical Report.** Pretoria: Statistics South Africa.

Statistics South Africa. 2016. **Community Survey 2016 Provinces at glance.** Pretoria: Statistics South Africa. Pretoria: Statistics South Africa.

Statistics South Africa. **Census 2011.**

UNEP, 2002. **EIA Training Resource Manual.** 2<sup>nd</sup> Ed. UNEP.

United Nations. 2013a. **Overview of the UN Global Compact.** Available: <https://www.unglobalcompact.org/AboutTheGC/index.html>

Vanclay, F. 2003. **Conceptual and methodological advances in Social Impact Assessment.** In Vanclay, F. & Becker, H.A. 2003. *The International Handbook for Social Impact Assessment.* Cheltenham: Edward Elgar Publishing Limited.

Vanclay, F., Esteves, A.M., Aucamp, I. & Franks, D. 2015. **Social Impact Assessment: Guidance for assessing and managing the social impacts of projects.** Fargo ND: International Association for Impact Assessment.



Vidic, R. D., Brantley, S. L., Vandenbossche, J. M., Yoxtheimer, D., & Abad, J. D. 2013. **Impact of shale gas development on regional water quality**. Science, 340(6134), 1235009.

**World Wide Web:**

<http://www.lejweleputswa.co.za> (accessed 27/04/2025)

<http://www.matjhabeng.fs.gov.za> (accessed 27/04/2025)

<http://mineralscouncil.org.za> (accessed 27/04/2025)

<http://www.municipalities.co.za> (accessed 27/04/2025)