SURVEY & ANALYSIS

THE JUST ENERGY TRANSITION: FROM THE PERSPECTIVES OF SOUTH AFRICAN MINING COMMUNITIES

JULY 2024







Towards a Just,
Inclusive & Participatory
Energy Transition

Seriti
A Development Facilitation Agency

UNDP

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LIST OF ACRONYMS

CBO	Community-Based Organisation
JET	Just Energy Transition
LED	Local Economic Development
UNDP	United Nations Development Programme

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.01 EXECUTIVE SUMMARY

1. EXECUTIVE SUMMARY

The Just Energy Transition (JET) project, led by the Seriti Institute and supported by the UNDP, aimed to gather and analyse community responses from coal mining towns across South Africa.

The project's goal is to ensure an inclusive and participatory transition towards sustainable energy, reflecting the voices and concerns of those most affected by the shift from coal to greener alternatives.

1.1 Objectives

- **Community Engagement:** Provide a platform for people to share their views and perceptions on JET and its impacts on their lives.
- **Informed Transition Planning:** Ensure that the preferences of miners and communities are considered in the planning and implementation of the transition.
- **Economic Diversification and Social Justice:** Support a well-managed transition that promotes economic diversification, social justice, and poverty eradication.
- **Public Participation and Awareness:** Enhance public participation and awareness around JET and climate change.

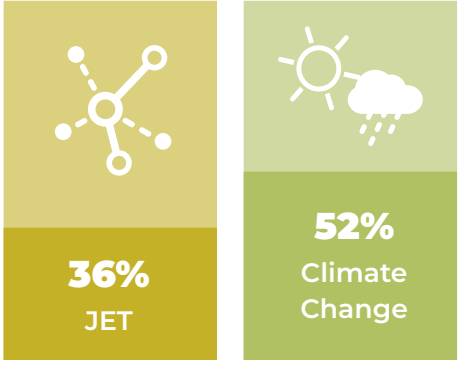
1.2 Survey Methodology

- **Design and Development:** Surveys were designed to capture a wide range of community insights.
- **Data Collection:** Conducted across multiple townships in Mpumalanga, Limpopo, Free State, and KwaZulu-Natal, involving 89 Field Data Surveyors and 10,000 respondents.
- **Data Analysis:** Both quantitative and qualitative data were analysed to identify key trends, insights, and community perceptions.

1.3 Key Findings

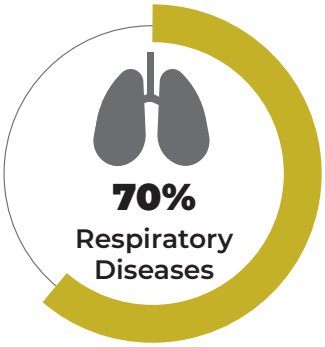
AWARENESS AND PERCEPTIONS:

- **36% of respondents are aware of JET**, with significant variations across different towns.
- **52% are aware of climate change**, associating it with extreme weather conditions and industrial pollution.



COMMUNITY IMPACT:

- **Employment:** A significant portion of the community relies on coal mining for employment, with 61% directly or indirectly employed in the sector.
- **Health:** 70% reported experiencing coal-related illnesses, primarily respiratory diseases.



CONCERNS AND ASPIRATIONS:

- **Job Loss and Relocation:** Many respondents are concerned about losing their jobs and needing to relocate if coal mines close.
- **Education and Skills:** There is a strong interest in acquiring new skills for alternative employment, particularly in renewable energy, agriculture, and technical trades.
- **Entrepreneurship:** 39% have considered starting their own business, with interests in hospitality, retail, and agriculture.

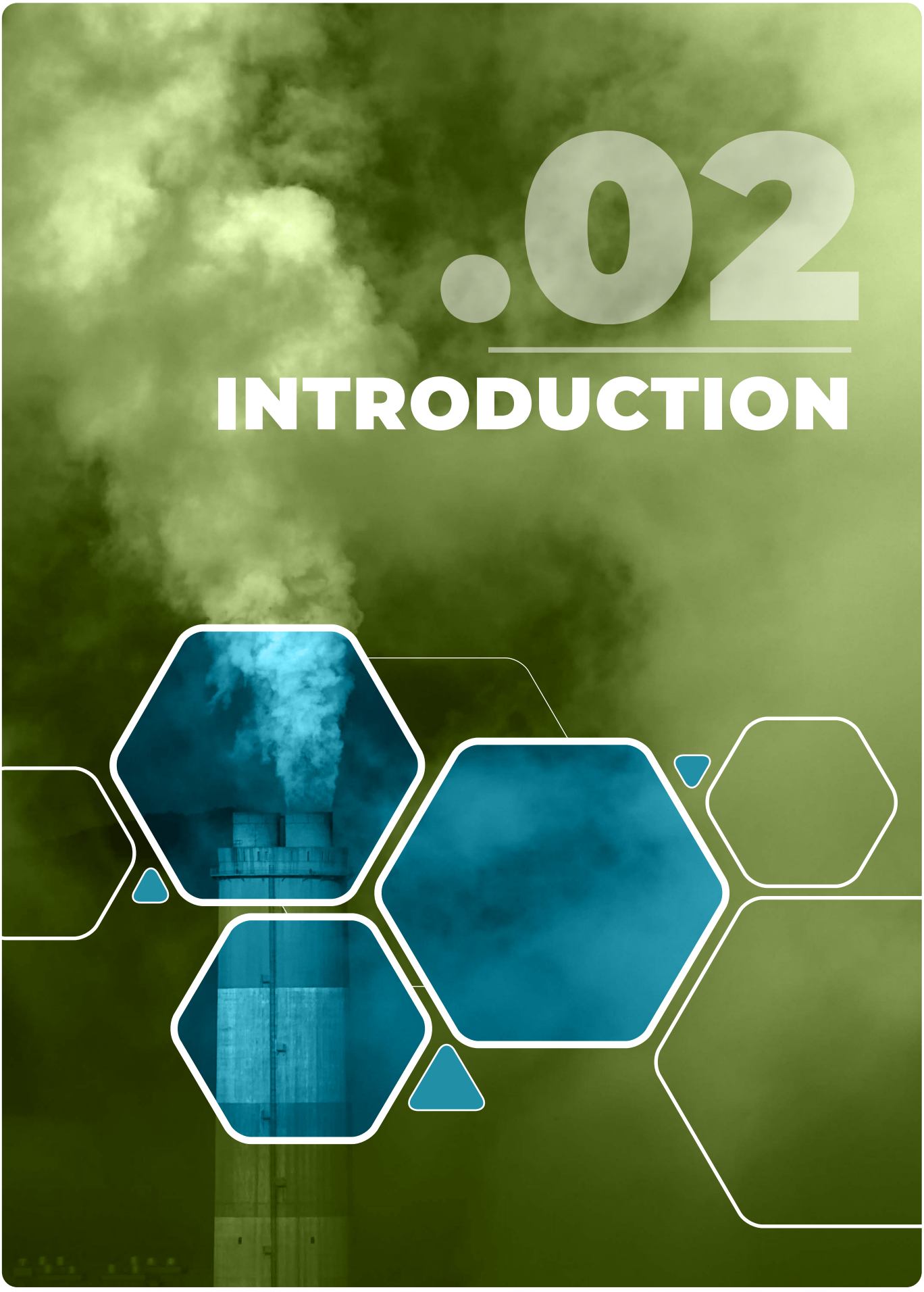
COMMUNICATION AND INVOLVEMENT:

- **Information Sources:** The media is the preferred source of information about JET, followed by local councillors and government channels.
- **Community Involvement:** 58% feel that the community is not adequately involved in decisions related to the energy transition.

The document provides background information on the Just Energy Transition project and its goals. It outlines the scope of the survey work, including the target geographic areas in Mpumalanga, Limpopo, Free State and KwaZulu-Natal provinces.

Details of the site visit process, stakeholder engagement, recruitment, and training of Field Data Surveyors are included to provide comprehensive background information on the process followed. It also provides a breakdown of the number of Field Data Surveyors recruited and trained across different towns/regions and describes the survey roll-out, targets, monitoring, and data validation processes.

Finally, the document includes a detailed report on the overall findings from analysing the data from the survey conducted with recommendations for the way forward.



.02
INTRODUCTION

2. INTRODUCTION

Seriti
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Towards a Just, Inclusive & Participatory Energy Transition

UNDP

The Just Energy Transition (JET) project, led by the Seriti Institute and supported by the UNDP, aimed to gather and analyse community responses from coal mining towns in South Africa.

2.1 Introduction

The Just Energy Transition (JET) in South Africa aims to transition the country's energy system toward sustainable and clean energy sources while ensuring social and economic impacts on communities are considered. South Africa is among the top 15 global emitters of greenhouse gases, with coal accounting for 80% of electricity production and the coal mining sector employing around 90,000 people.

The project targeted communities in **Mpumalanga, Free State, Limpopo, and KwaZulu-Natal**, focusing on coal miners, their families, and other community members dependent on the coal value chain. This report overviews the project's activities, findings, and impact on the communities involved.

2.2. Objectives of Survey & Analysis Exercise

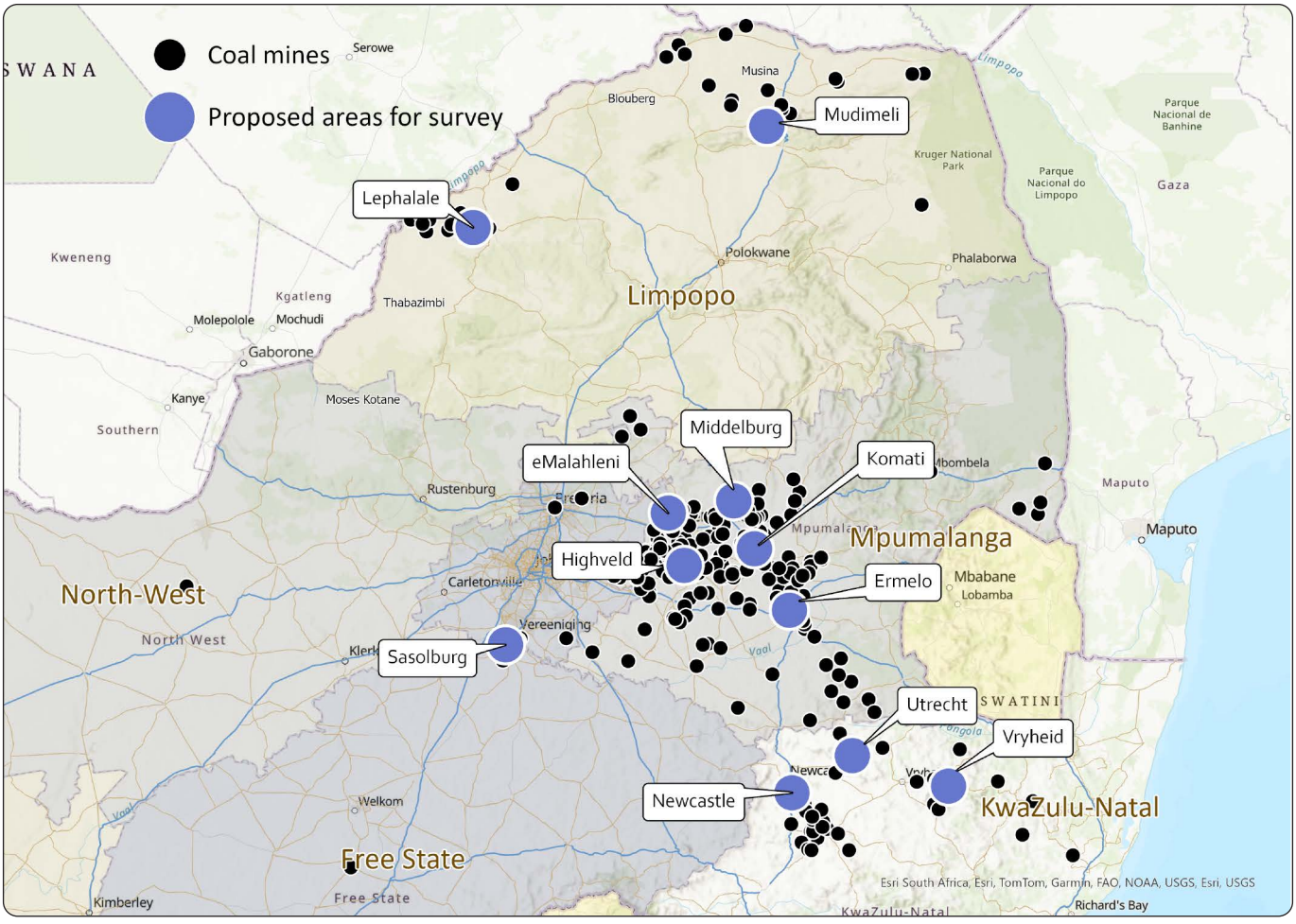
- Providing a platform for people to share their views, perceptions, etc., on the JET and how it affects and will affect their lives.
- Create a mechanism to report findings to the relevant parties responsible for the JET and ensure that miners' and communities' preferences are considered in the transition's planning and implementation.
- Contribute towards a well-managed transition that can be a strong driver for economic diversification, social justice, and poverty eradication.
- To support enhanced public participation and awareness around the JET and climate change, generate a public debate, and create a platform for coal miners and surrounding communities to voice their opinions on what change and interventions they would like to see regarding alternative livelihoods.
- To contribute to the Government's JET efforts and ongoing initiatives to ensure its implementation is 'bottom-up', i.e., inclusive and people-centered to leave no one behind, especially the most vulnerable.
- Codifying collective learning on climate change and the practice of Collective Intelligence deployed by the broader network of UNDP Accelerator Labs.

The following geographic areas were identified as locations for the surveys to be conducted:

- Lephalale
- Emalahleni
- Witbank
- Ermelo
- Komati
- Highveld
- Kliprivier
- Soutpansberg
- Utrecht
- Vereeniging
- Sasolburg
- Vryheid

As indicated on the map below, these are all locations in and around coal mines, with communities directly and indirectly dependent on them for employment and livelihoods.

All areas are known for coal mining or fuel and energy production. Many people are reliant on coal mining for employment and economic activity. The transition away from coal could lead to job losses in the coal mining sector, potentially affecting the livelihoods of thousands of people. It is, therefore, crucial to implement strategies to support affected workers, such as reskilling for diversified growth in new economic sectors.



2.3 About Seriti

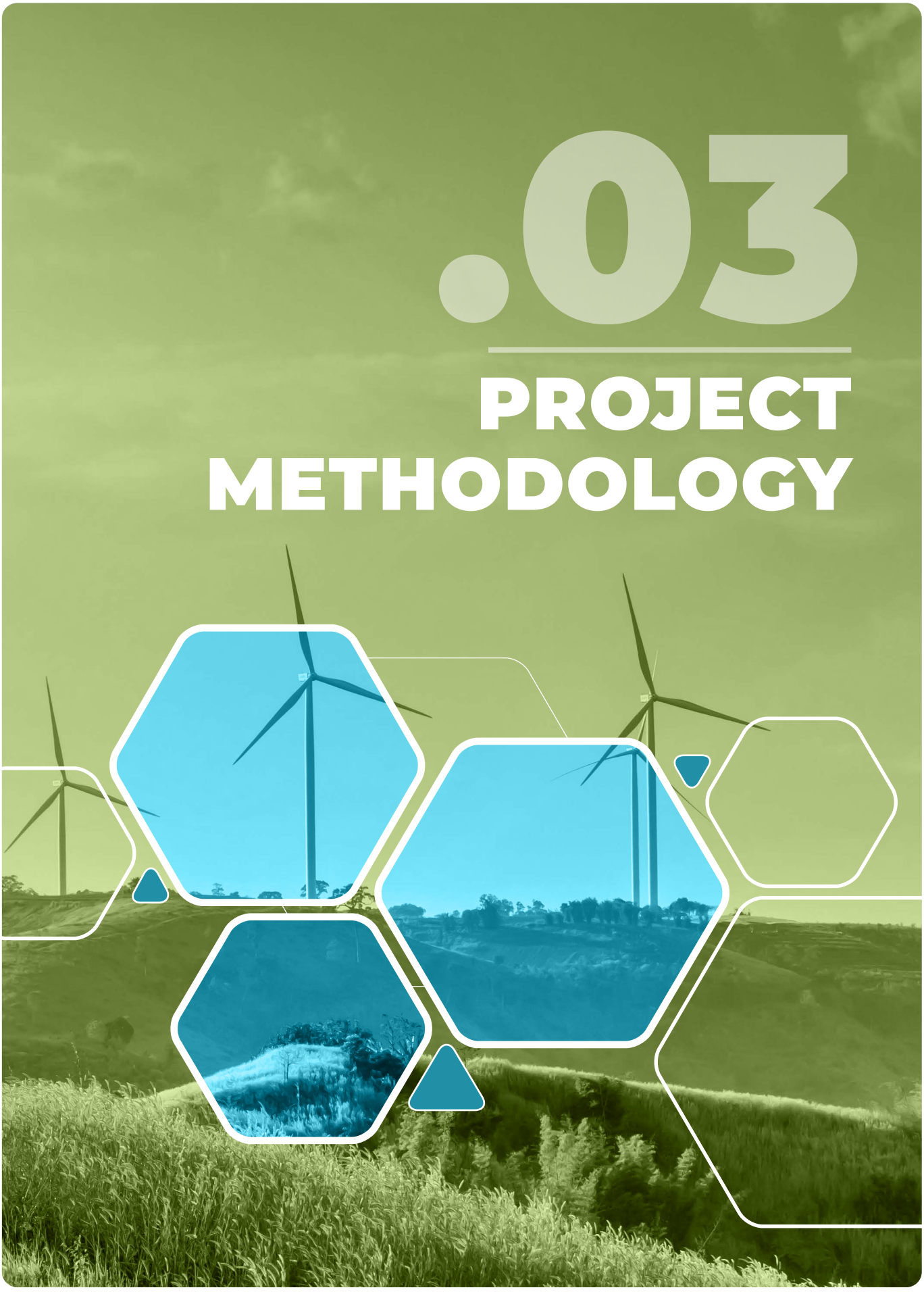
Seriti
A Development Facilitation Agency

Seriti is a non-profit and public benefit organisation established in 2009. We build resilient communities, powering futures. We aim to help vulnerable people gain self-sufficiency and build meaningful lives for themselves and their families.

Our approach is collaborative: we work with communities and social partners to help them achieve their goals. We focus on delivering innovative and sustainable solutions that positively impact socioeconomic outcomes. This includes technical support, programme management, implementation services, facilitated learning, and promoting community-driven change.

At Seriti, we are more than just an organisation. We are a collective effort to create job opportunities, reduce poverty and inequality, strengthen caregivers, and foster resilient, food-secure communities. Our community-driven design approach reflects our commitment to this cause, cultivating self-respect, dignity, and the freedom to seize and create new economic opportunities.

Seriti is a Level 1 B-BBEE-compliant social enterprise committed to supporting large numbers of beneficiaries in rural and peri-urban communities. Our Board and sub-committees closely monitor all projects and programmes to ensure their success, while our Audit Committee oversees financial operations and conducts an annual independent audit. With 15 years of experience, we specialise in managing large-scale projects using a people-centred design approach. Our skilled team is dedicated to implementing projects efficiently and effectively, always prioritising the needs and well-being of the communities we serve.



.03
PROJECT METHODOLOGY

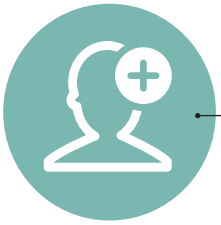
3. PROJECT METHODOLOGY

After conducting desktop research, Seriti engaged with local municipalities and Local Economic Development managers for introduction meetings and site visits. From mid-January to mid-February 2024, Field Data Surveyors were recruited, screened, contracted, and trained on the mobile data capturing application and questionnaire.

KEY ACTIVITIES INCLUDED

- **Survey Design:** Conduct desktop review, design the survey, and engage stakeholders.
- **Field data Surveyor Recruitment and Training:** Recruit and train local community members to conduct the survey, focusing on survey objectives, methods, and ethical considerations.
- **Survey Design Testing** – test the survey with local people in the communities to gauge ease of use, time required, ease of interpretation, and other elements, to enable fine-tuning of the design.
- **Survey Roll-Out:** Conduct surveys with supervision and spot-checks and implement feedback mechanisms to surveyors on an on-going basis as part of the survey process to ensure data quality assessment.
- **Survey Analysis:** Compile and analyse data, providing insights and recommendations.
- **Project Management:** Implement management, financial, and risk policies, track progress, and reimburse fieldworkers.

3.1 Recruitment and Training:

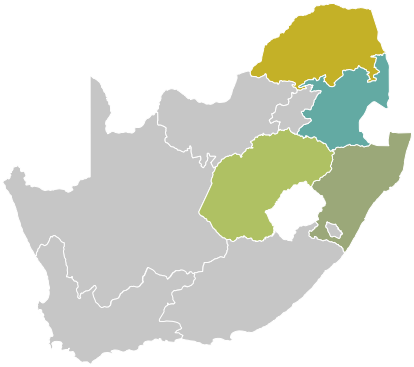


89

Field Data Surveyors

- 89 Field Data Surveyors were recruited from local communities, as detailed in the table below.
- Surveyors signed contracts and submitted necessary compliance documents.
- Each agent received R30 per completed survey, as well as 2GB of data to upload the surveyed data to the cloud.
- Induction training covered survey objectives, methods, ethics, and mobile tools.
- The mobile data capturing application was pre-tested.
- Recruitment occurred through Community Centres and Ward Councillors.
- Training included handling queries about UNDP, Seriti, and government relations.

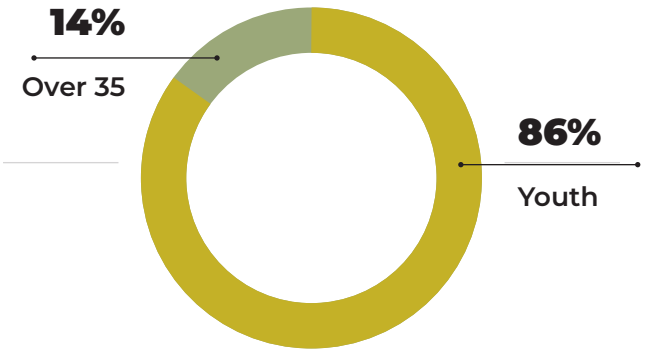
3.1.1 Breakdown of Field Data Surveyors Contracted per Province & Region



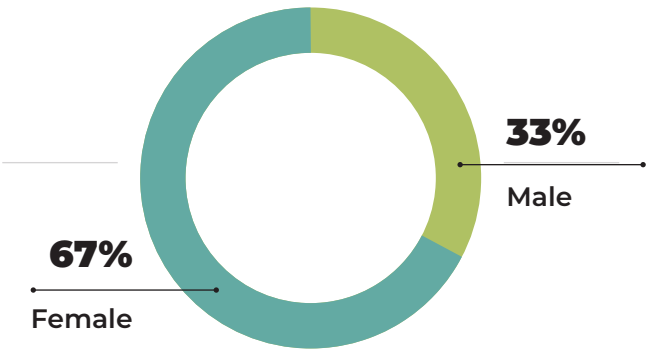
Province	Region	Field Agent #	Male	Female
Mpumalanga	Witbank / Emalahleni	13	2	11
	Highveld	10	3	7
	Middleburg	5	2	3
	Ermelo	10	4	6
	Komati	5	2	3
Kwa-Zulu Natal	Vryheid	10	1	9
	Utrecht	6	2	4
	Newcastle	6	6	0
Free State	Sasolburg	8	4	4
Limpopo	Lephalale	10	3	7
	Mudimeli	6	2	4
GRAND TOTAL		**89**	**31**	**58**

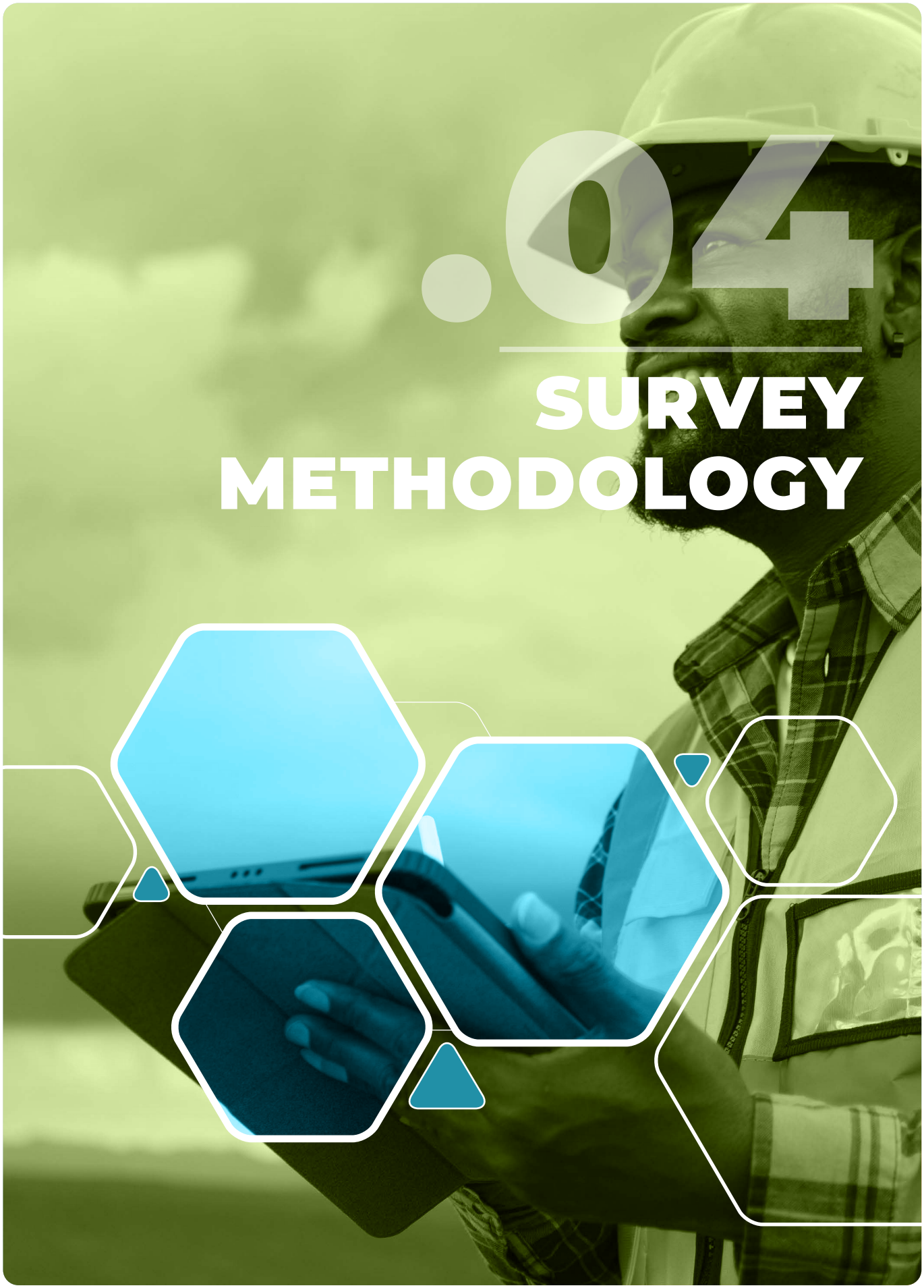
This streamlined process involved thorough planning, stakeholder engagement, and comprehensive training, which ensured efficient and effective project implementation. We fostered community involvement and built trust by recruiting and training local community members as Field Data Surveyors. The careful design of the survey, continuous supervision, and robust feedback mechanisms were maintained to ensure data accuracy and reliability.

AGE CATEGORY - FIELD SURVEYORS



GENDER - FIELD SURVEYORS





.04 SURVEY METHODOLOGY

4. SURVEY METHODOLOGY

4.1. Survey design and development

The survey questionnaire underwent an iterative design process. The initial draft was based on the questionnaire created during the initial pilot study, with minor additions and alterations having taken into account the broader proposed objectives. The final draft questionnaire was then reviewed by the UNDP team for input, and adjusted until the final version was approved.

Question formats included multiple-choice questions, rating scales, ranking preferences, etc., to enable quantitative analysis. Open-ended questions were limited to capture qualitative insights.

The survey had distinct sections: Introductory background; coal dependency; JET awareness and opinions; impact assessments; and recommendations, among others aspects.

Epicollect was the ideal mobile-based data-capturing application for the JET survey because it allowed for efficient, real-time data collection in the field, even in areas with limited network coverage. Field Data Surveyors could capture offline and only upload captured data once they are in an area with better mobile connection. Epicollect's built-in features, such as skip logic, validation rules, and mandatory questions, ensured accurate data. It also enabled a streamlined survey process, making it not only user-friendly, but also secure for both surveyors and respondents.

A questionnaire was designed based on the objectives to assess awareness, opinions and impacts related to JET. This was done in collaboration with the UNDP team.

The mobile survey enabled field data agents to conduct interviews and capture data efficiently. For areas with poor network coverage, data can be uploaded once they are in an area with better mobile connection.

4.2. Survey Roll-Out

Field Data Surveyors guided respondents in completing the questionnaire and interviewing them in their respective communities, going door-to-door to access households and in common areas such as business areas, shopping centres and taxi ranks.

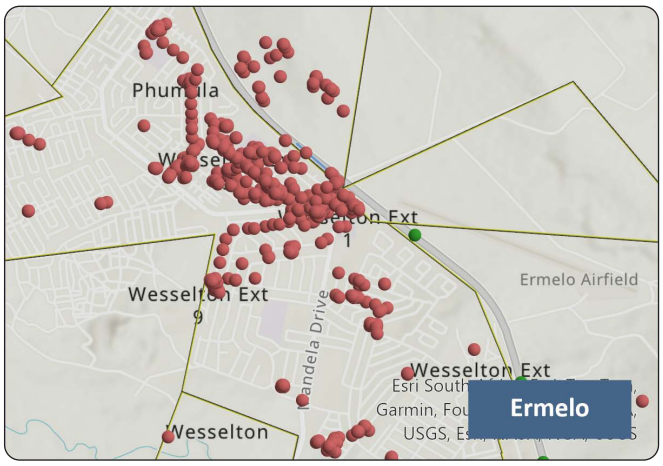
- The target was to reach a sample size of 10,000 miners and mining community members across focus regions.
- Seriti Project Supervisors/Coordinators oversaw data quality through data queries and spot checks.
- The Seriti team consistently monitored data quality, verified captured information, and provided feedback to field teams.
- Data collected was reviewed to assess whether adjustments in implementation were needed.
- Data validation rules and verification processes were implemented to ensure early detection of errors on the dataset.

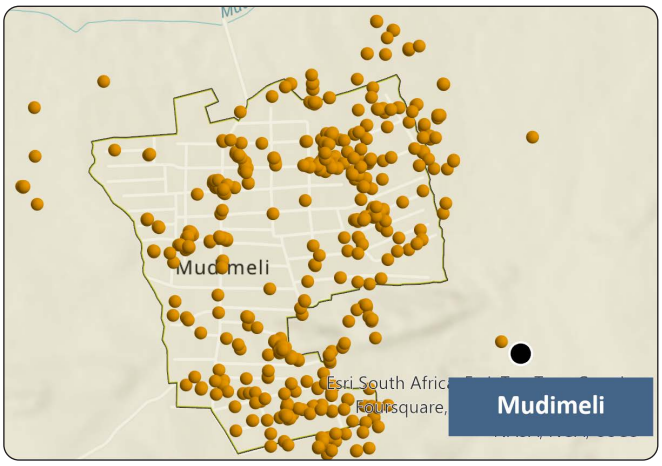
4.3. Data collection

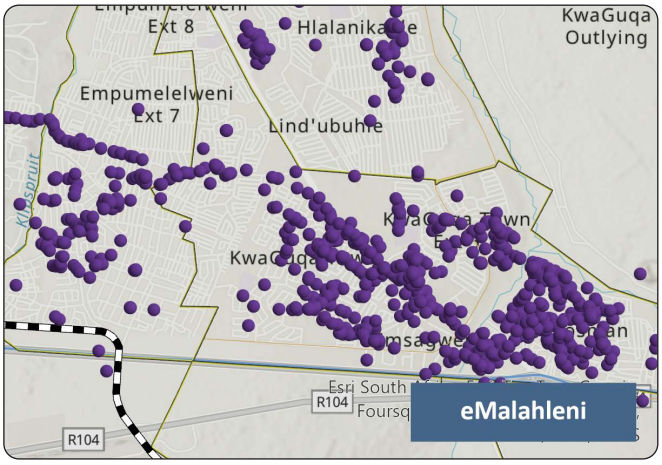
Ten thousand and seventeen (10,017) survey responses have been collected from community members residing in mining towns and villages near coal operations.

Data was collected over a defined period, with Field Data Surveyors guiding respondents through the questionnaire to ensure clarity and completeness. The use of mobile-based surveys enabled real-time data capture and validation, enhancing the overall quality of the data collected. The accompanying map illustrates the data collected using Epicollect. The application ensured that each respondent's location was accurately recorded via GPS coordinates. This method allowed for a comprehensive distribution of survey responses across the entire community, ensuring that the data captured reflects a true representation of the geographic spread of participants. The detailed mapping further enhances the reliability and depth of the Just Energy Transition (JET) survey by providing spatial context to the responses gathered.

10,017
Survey Responses







4.4. Data Analysis

The methodology outlines the approach used to analyse the survey data collected for this project. The analysis aimed to understand the socio-economic impacts, awareness, and perceptions of the JET among different population groups. The following methods were employed: Thematic Analysis, Content Analysis, and Narrative Analysis.

The data was collected through a structured survey executed by Field Data Surveyors. The survey included both quantitative and qualitative questions, covering topics such as employment status, awareness of JET, perceptions of coal, and the anticipated impacts of the energy transition. Once data collection was completed, the data was cleaned and analysed using both descriptive and inferential statistical methods. The analysis focused on identifying key insights and trends related to community awareness, perceptions, and the potential impact of the JET.

THEMATIC ANALYSIS was used to identify and analyse patterns or themes within the qualitative data.

- **Familiarisation with Data:** Reading through the responses multiple times to become thoroughly familiar with the content.

- **Coding:** Systematically coding the data by assigning labels to significant words, phrases, or sentences.
- **Generating Themes:** Grouping similar codes to form overarching themes.
- **Reviewing Themes:** Checking the themes against the data to ensure they accurately reflect the dataset.
- **Defining and Naming Themes:** Clearly define each theme and name them to capture their essence.
- **Writing Up:** Summarize the themes and support them with direct quotes from the data.

CONTENT ANALYSIS was employed to systematically code and categorise the content of the qualitative data to quantify the presence of certain words, themes, or concepts. The process included:

- **Coding:** Similar to Thematic Analysis, coding was done to identify significant words, phrases, or sentences.
- **Categorising:** Codes were then categorised into broader themes.
- **Quantifying:** Counting the frequency of each theme or concept to understand their prevalence within the data.
- **Interpreting:** Analysing the quantified data to conclude the overall content and its implications.

NARRATIVE ANALYSIS

- Narrative Analysis focused on examining respondents' stories and personal accounts to understand how they make sense of their experiences. It interpreted the meanings and implications of these narratives to gain insights into the respondents' perspectives and feelings about the JET initiative.

The combination of Thematic Analysis, Content Analysis, and Narrative Analysis provided a comprehensive understanding of the survey data. This methodology enabled the identification of key themes, quantifying content, and interpretation of personal narratives, offering valuable insights into the socio-economic factors affecting respondents within the context of the JET initiative. These findings will inform the development of targeted strategies to address the community concerns and improve the awareness and acceptance of the Just Energy Transition in South Africa.

4.5. Ethical Considerations

The survey adhered to ethical standards, including informed consent, confidentiality, and the right to withdraw from the survey at any time. Community members were informed about the purpose of the survey and how their data would be used, ensuring transparency and trust.

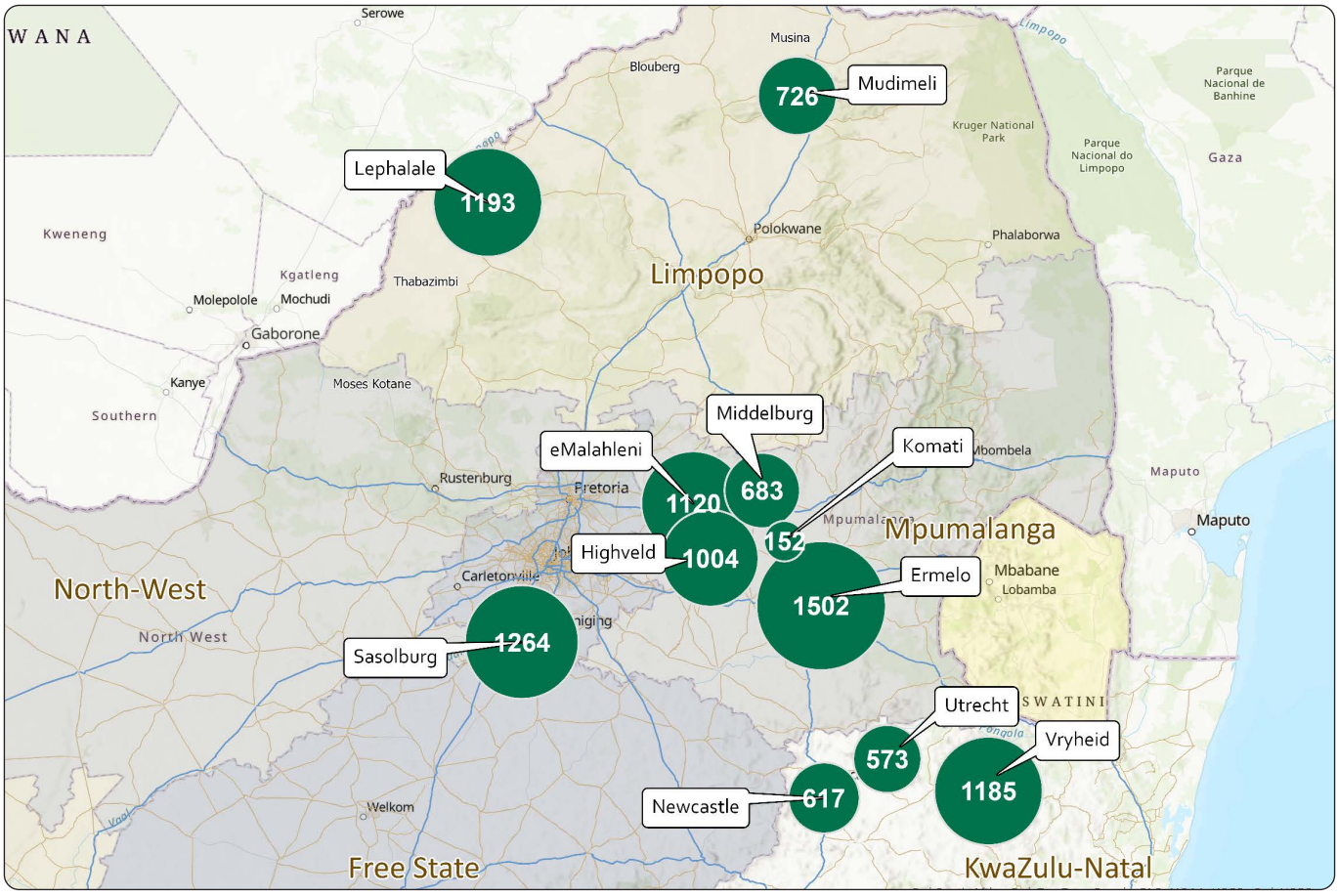
.05

SURVEY OUTCOMES & FINDINGS

5. SURVEY OUTCOMES & FINDINGS

5.1. Spatial distribution of the number of surveys completed per local community

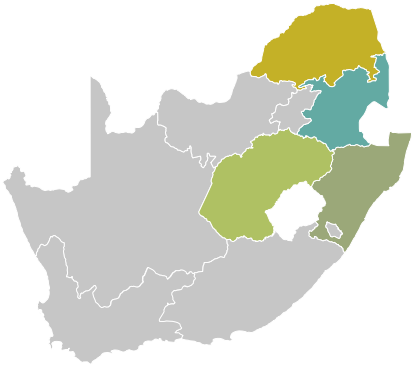
The map below indicates the number of surveys completed per mining community, as indicated in point 4.3 above.



As indicated by the table below, a wide range of communities were incorporated into the survey sample for each survey area to ensure a diverse range of viewpoints and perspectives. Surveying a single township could introduce bias, as the specific characteristics of that township might overly influence the findings; therefore, including multiple townships in the survey helps mitigate this risk, leading to more balanced and accurate data. At the same time, a larger and more diverse sample size improves the reliability of the survey results by acknowledging that even within a small geographic area, there can be significant variations in awareness, attitudes, and experiences related to JET.

> By surveying multiple townships, the data collection process is more robust and less susceptible to anomalies.

5.1.1 Number of surveys completed per province and local community



Mpumalanga has the highest number of respondents, totalling 4,430, as half of the sites identified for surveying were from mining towns within the Mpumalanga province. Free State has the lowest number, with 1,268 respondents, as only one town (Sasolburg) was surveyed. KwaZulu-Natal (3 sites) and Limpopo (2 sites) have intermediate respondent counts, with 2,378 and 1,941 respectively.

Province	Location	No. of Surveys Completed	No. per Province
Free State	Amedia	100	1,268
	Harry Gwala	412	
	Zamdela	756	
KwaZulu-Natal	Annadale	110	2,378
	Annandel Farm	302	
	Bhekuzulu	1081	
	Dooringkop Farm	101	
	Emgundeni Farm	101	
	Enzimane	171	
	KwaMdakane	101	
	KwaMgidazi	104	
	Luthilunye	100	
	Novemberdrift Farm	103	
	White City	104	
Limpopo	Marapong ext 1,3,4	1193	1,941
	Mudimeli	748	
Mpumalanga	Acerville	100	4,430
	Empumelelweni	604	
	Emsagweni	230	
	Emsangweni	93	
	Hlalanikahle	305	
	Komati	200	
	Kwa-Guqa	205	
	kwa-Guqa	201	
	Mhluzi	683	
	Vosman	502	
	Wesselton ext 1,2,3	1307	
		Grand Total	**10,017**

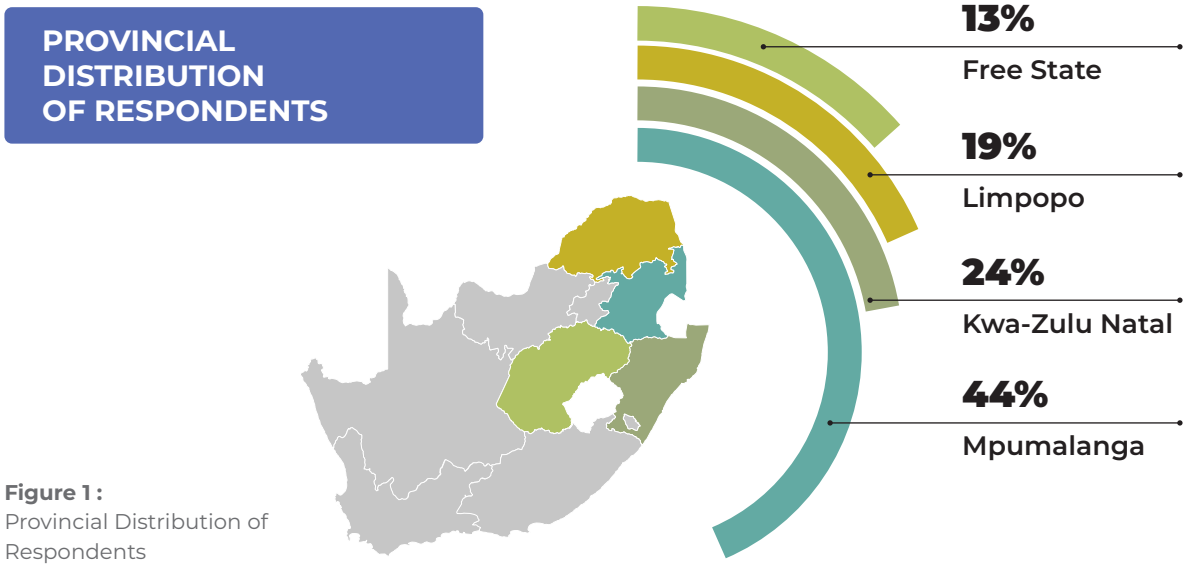


Figure 1 : Provincial Distribution of Respondents

5.2. Age and gender distribution

The survey received feedback from across all age groups, with a very small segment from the over-60 category. The majority of respondents (60%) were youth members between the ages of 18 and 35, corresponding to the communities' demographic age profile.

The survey represents a reasonably equal gender distribution among respondents, with 51% identifying as male, 48% identifying as female and 1% undisclosed.

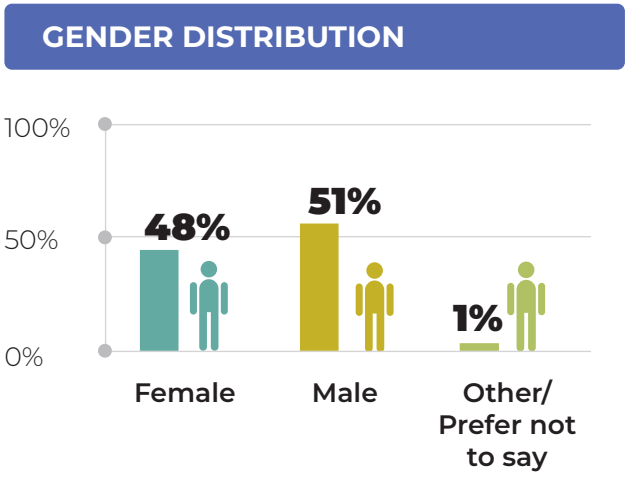


Figure 2 : Gender Distribution

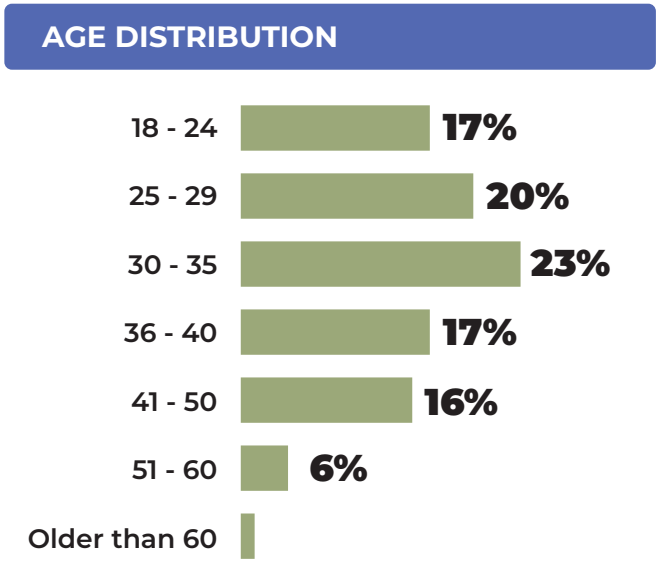


Figure 3 : Age Distribution

5.3. Disability profile

Most respondents do not have a disability, with **only 375 (4%) confirming a known disability**. Where the nature of the disability was disclosed, blindness and visual impairment were the most common, followed by mobility-related disability, mental health, and learning disabilities.

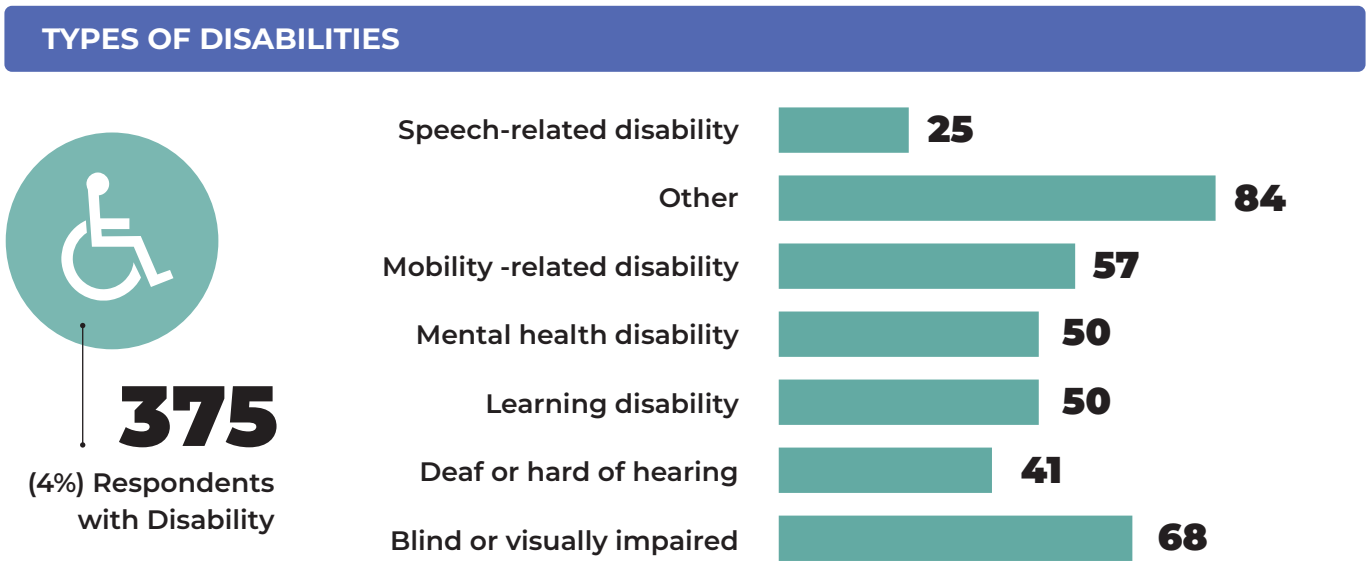


Figure 4: Disability Profile

5.4. Nationality

The vast majority (99%) of respondents are South African, suggesting that the survey predominantly reflects the views and concerns of the local South African population. Therefore, understanding local issues and designing policies specifically tailored to the South African context will be beneficial.

The distribution of the 1% of respondents who identified as non-South Africans is as follows: Nine (9) from Lesotho, 34 from Mozambique, 18 from Swaziland, and 33 from Zimbabwe.

5.5. Familial living arrangements

> Out of 10,017 respondents, a substantial majority (76%) live with their direct family.

This highlights close familial living arrangements within the surveyed communities and confirms their interdependent socio-economic connectedness through family dynamics and support systems.

In many communities, living with direct family members can reduce living costs, such as rent, utilities, and groceries. Family homes often serve as a base until individuals are financially stable. The limited availability of affordable housing within close proximity to employment opportunities can also influence living arrangements and may necessitate living with family members. This is particularly important in areas with high unemployment rates or low-income levels.

> These factors should also be taken into account when considering the broader impact of JET on the communities at large.

Figure 5:
Familial Living Arrangements

5.6. Household employment profile

The next section of the survey focuses on determining respondents' household income diversity to assess individual households' potential resilience to adapt to changes within the mining sector.

5.6.1 Employment status of respondents

Among the respondents, 43% reported being employed. While the remaining respondents indicated they were currently unemployed, many noted previous employment in the mining sector or in roles related to it. The mining sector directly employs 14% of respondents, and an additional 5% work for companies that supply the mines, reflecting an indirect reliance on mining for their livelihoods. Together, these two groups represent 61% of all employed respondents, underscoring the local economy's strong dependence on the mining industry.

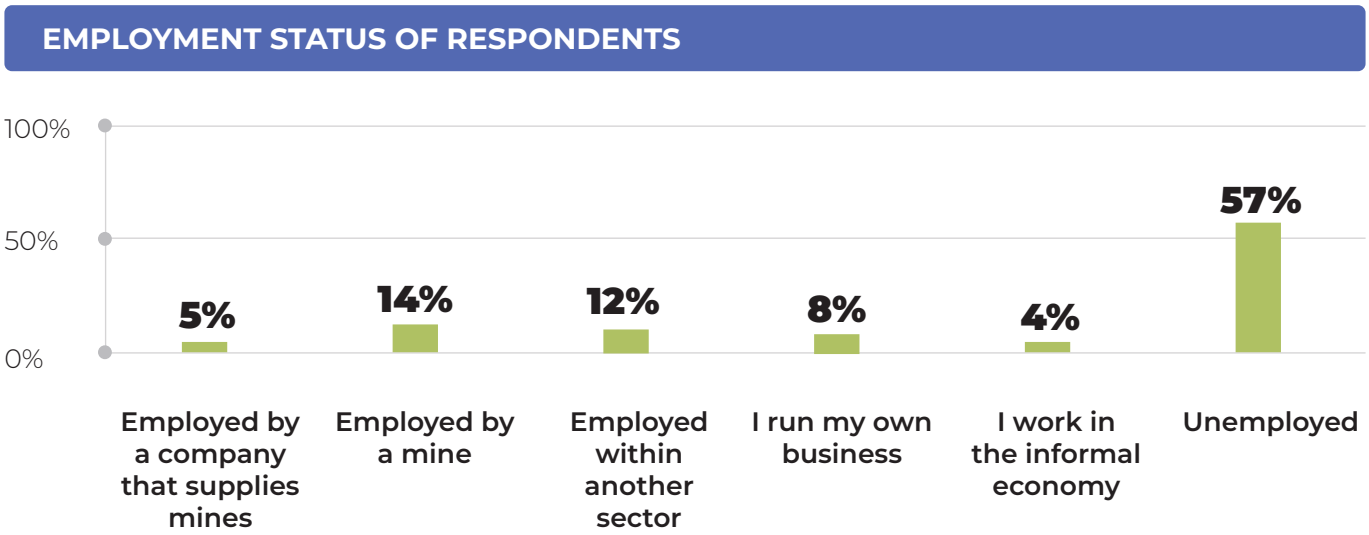


Figure 6: Employment Status of Respondents

> Strategies to support these companies and/or their employees in transitioning to alternative industries will be essential since both these groups will face potential job displacement as and when the mining sector changes.

Of those employed, 12% are employed in other sectors, which demonstrate some economic diversity. Efforts to expand and strengthen these sectors could provide alternative employment opportunities for those affected by changes in the mining industry. Bearing in mind that the sustainability of these sectors may also be impacted by the cessation of mining activity within the area, consideration should be given to this fact when considering how and in what format support could be given.

Eight (8) percent of the participants are entrepreneurs running their own businesses. Supporting small businesses and fostering entrepreneurship could be vital to the JET strategy, offering a viable pathway for economic growth and job creation. A small number (4%) of respondents work in the informal economy. These individuals may lack job security and access to benefits, making them particularly vulnerable during economic transitions. Tailored support and formalisation of informal businesses could enhance their economic resilience. In addition, 57% are unemployed, underscoring the pressing need for immediate economic interventions and job creation strategies under the JET initiative.

> Urgent action is required to ensure the socio-economic stability of these communities during the transition.

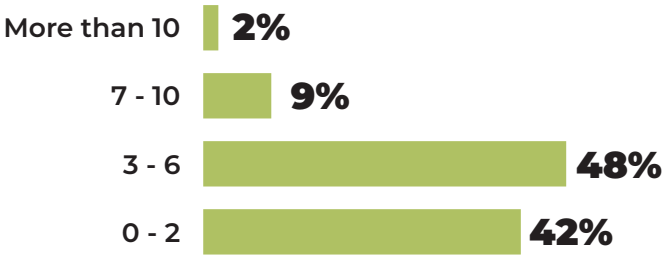
Further detailed analysis of the employment data about age and education levels indicates a strong correlation with the national employment trends in this regard. The majority of unemployed respondents are youth (between 18 and 24), while the majority of employed respondents are between the ages of 30 and 50. The survey also indicated that respondents with a post-matric qualification were mainly employed, compared to those with secondary or primary education, who were more likely to be unemployed.

5.6.2 Household income source diversity

Slightly more than half (51%) of respondents live in households with only one breadwinner. Notably, a majority of these households (59%) have more than three dependents, with 48% having between 3 and 6 dependents, 9% with 7 to 10 dependents, and 2% with over 10 dependents. **These figures highlight the significant vulnerability of these communities, which heavily rely on the stability and security of a single income.** This dependence underscores the substantial risk that employed respondents face due to potential changes in the communities surveyed, particularly in the context of the Just Energy Transition and potential disruptions in the mining sector.

ARE YOU THE SOLE BREADWINNER IN YOUR FAMILY?

NUMBER OF DEPENDENTS



> Although only 30% of household breadwinners work directly for the mines or mine-related industries, the broader influence of the mines as primary economic driver within the region cannot be ignored.

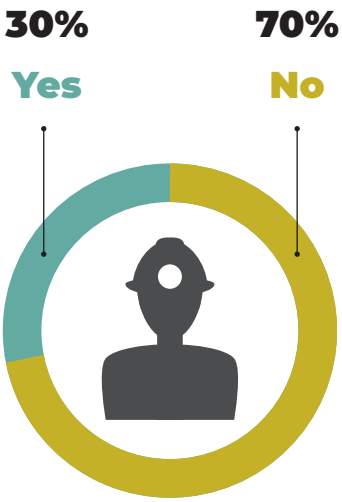
Supplementary service industries, such as medical facilities, educational institutions, retail, commerce, construction and transport services all came into being as a result of the demand created by the presence of the mines and their employees in the area. These indirect or secondary industries play a vital role in supporting primary mining activities and sustaining the economic health of mining communities. Their reliance on the mining sector means that their fortunes are closely linked to the industry's performance and the closure of the mines would therefore also impact significantly on these industries. **Understanding this relationship is essential for developing strategies that promote economic stability, community well-being, and long-term sustainability in mining towns.**

From a positive perspective, the survey does reveal a diverse employment landscape for those not employed within the mining and mining-related sector. 28% of respondents work in the construction industry, followed by contributions from retail, hospitality, manufacturing, and general service-based sectors. Typically, service-based employment related to Cleaners, Security Officers, Sales persons, Drivers, Cashiers, Nurses, Receptionists. Health services, education, and transport create further employment opportunities while providing essential services to the community.

The respondents represent various job titles and roles, from administrative services to technical and manual labour. The general nature of the job descriptions, such as clerical work, security services, cleaning services, and drivers, is a positive indicator of being adaptive to change from one sector to another. Some respondents with specialist technical skills, such as engineers, fitters, electricians, artisans, and welders, indicate opportunities for potential entrepreneurial development within these speciality fields.

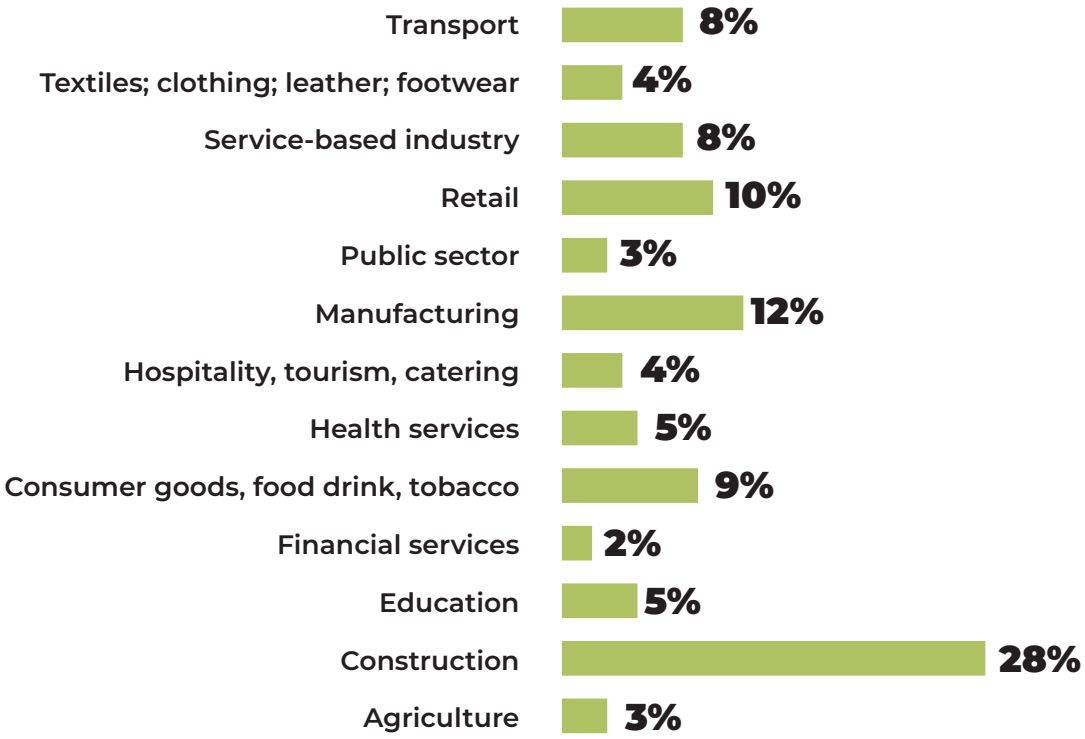
A small but noteworthy number of respondents operate in the entrepreneurial space, with 8% being self-employed individuals or small business owners and 4% being economically engaged in the informal small-scale trade sector.

IS THE BREADWINNER WORKING FOR THE MINE / MINE-RELATED INDUSTRY?



In conclusion: mining and its related activities remain a crucial part of the employment landscape. Over the years, the day-to-day needs of mining employees created further spin-off employment opportunities within the auxiliary services space, creating a broad spectrum of diverse employment types and skill sets. The ongoing sustainability of these sectors in the event of a mine closure requires further investigation in a site-specific context. It does, however, **demonstrate the potential for adaptive change to incorporate alternative industries into the community** and that there is substantial representation in administrative roles, community support services, skilled and labour-based services, as well as self-employment that could be incorporated into the JET.

NON-MINE RELATED EMPLOYMENT SERVICE SECTOR



5.6.3 Duration of Employment

Most employed respondents (65%) reported moderate job stability, having been employed for more than one year, with an additional 23% demonstrating the potential for employment stability, having been employed between 6 months and a year. A smaller yet significant group has shorter employment durations, which may reflect recent hires or transitional job roles. This distribution highlights the overall stability of the employment landscape while also indicating areas where workforce support and retention strategies could be beneficial.

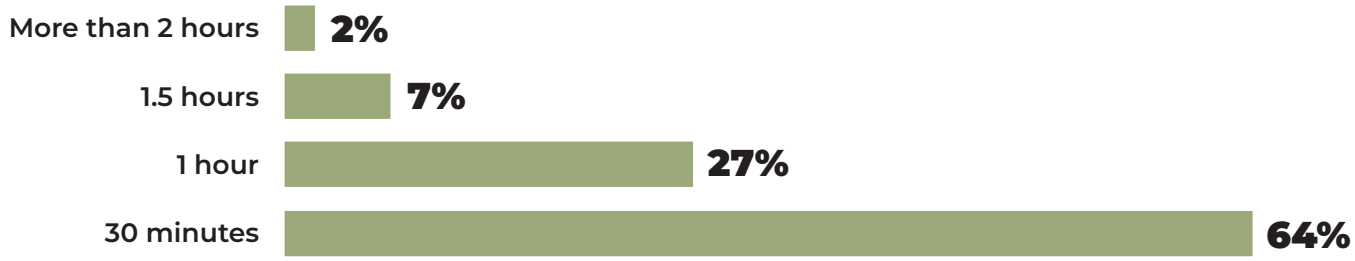
DURATION OF CURRENT EMPLOYMENT

5.6.4 Travelling time to work

The survey reveals that more than 90% of respondents commute less than 60 minutes to work, with the majority (65%) residing 30 minutes or less from their place of employment, indicating a high concentration of jobs near the mines and mining areas. This confirms the close relationship between the non-mine related sources of employment with the mines in the area.

While the short commute times suggest convenience and reduced travel costs for most workers, it also indicate the necessity to live close to employment hubs to avoid high transportation expenses, further limiting access to affordable housing options**. Hence, socio-economic factors such as the availability of affordable housing in close proximity to job opportunities and cost of travel are critical determinants of residential choices – which directly influence travel time to work, affordability of commuting and subsequently, access to employment opportunitie**s. Addressing these socio-economic challenges could further improve the living and working conditions of people working in these areas.

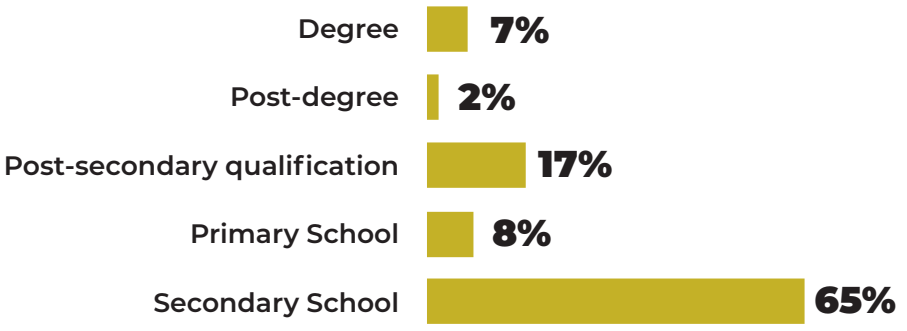
TRAVEL TIME OF EMPLOYED RESPONDENTS



5.6.5 What is your highest level of education?

The majority of respondents (91%) completed their secondary school education, with 26% having furthered their education with a post-matric qualification. This not only reflects the current educational landscape but also presents a significant potential for further skills training and entrepreneurial development within the JET economy, offering a promising outlook for the future.

EDUCATION LEVEL



5.7. JET Awareness

The next section of the survey focuses on matters specifically related to the JET and climate change awareness in general.

5.7.1 Climate change

It's concerning that only slightly more than half of all respondents (52%) are aware of climate change, indicating a significant gap in understanding and awareness of the situation.

> This should serve as a call to action for all stakeholders to increase education and intervention in this crucial area.

48% of respondents expressed their concern about the effects of climate change on their daily lives

Those aware of climate change mainly associate it with changes in weather conditions. Still, a small proportion of respondents acknowledged their awareness of the influences of human activities on climate change, explicitly mentioning industrial pollution, deforestation and the burning of fossil fuels. They also expressed concern about how these activities contribute to environmental degradation, such as air pollution and Green House Gas (GHG) emissions. They used terminologies such as "global warming," "greenhouse gases," and "fossil fuels" to describe climate change. Many respondents also associate climate change with extreme weather conditions, such as floods, droughts and heatwaves, especially in terms of changes in frequency and intensity thereof.

DO YOU HAVE CONCERNS REGARDING CLIMATE CHANGE?

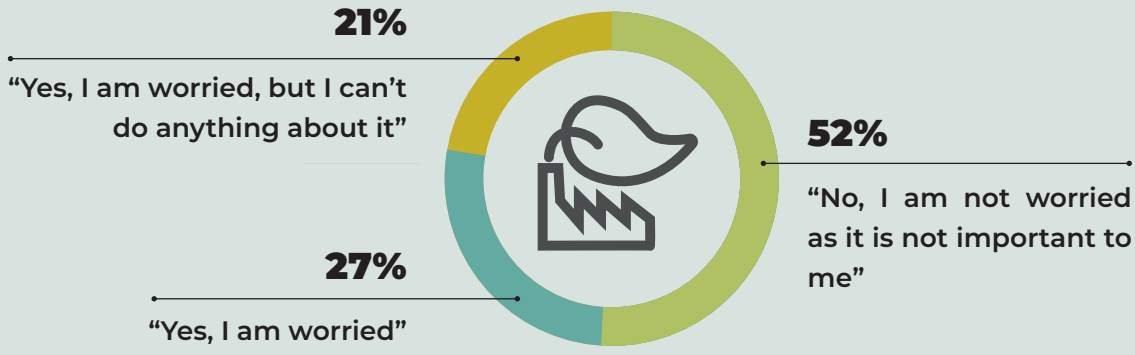


Figure 7:
Concerns towards Climate Change

REFERENCE WAS MADE TO THE FOLLOWING CONCERNS:

- **Health concerns:** Several responses connect climate change to health issues, mentioning respiratory problems, allergies, and general health deterioration due to pollution;
- **Socioeconomic Effects:** Respondents also touch on the broader social impacts, including job losses in specific sectors, food security concerns, and the need for livelihood adaptation.
- **Concern and Anxiety:** There is a pervasive sense of concern and anxiety about the future and the impacts of climate change, specifically relating to extreme weather conditions and increases in natural disasters affecting crop production;

KEY FINDING

From the concerns raised, those who are aware of climate change call for more sustainable practices and policies to mitigate these adverse effects and secure a better future for future generations.

RECOMMENDATION

There is an opportunity here to tap into this group to implement sustainable practices, who in turn, can spread the message and teach others.

Notably, a substantial proportion of survey respondents (48%) need to be made aware of climate change, and a further 21% are aware and concerned but feel they need the means to take action. A small number also expressed scepticism about climate change and its severity. This re-affirms the urgency and ongoing need to further public awareness on the topic of climate change and what small-scale interventions can be practised on an individual scale to mitigate the effects of climate change.

5.7.2 Community perception of coal

Most respondents (65%) do not consider coal a problem for the country and have a positive association with coal as a provider of essential employment opportunities in their community. Since many individuals are employed in coal mines or related industries, coal is considered a vital source of livelihood for them and their families. Conversely, respondents who view coal as a problem are aware of its health and environmental risks and its impact on climate change. Concern for potential job losses associated with transitioning away from coal was also raised as a primary concern.

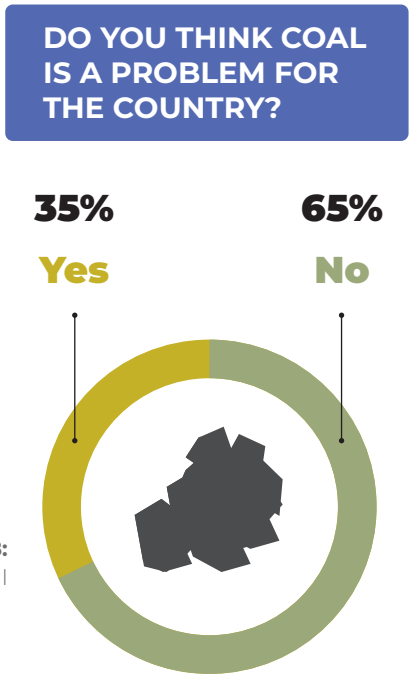


Figure 8: Community Perception of Coal

5.7.3 Community Awareness about the Just Energy Transition

Only 36% of respondents are aware of JET, highlighting that there is currently a considerable gap in awareness about the JET initiative amongst community members.

This confirms the need for enhanced communication and outreach efforts to educate the community on this topic.

Further detailed analysis of the responses per geographic distribution indicates that substantial inroads have been made in growing JET awareness in Komati, where more than 50% of respondents confirmed knowing about it. The high level of awareness here may be ascribed to the early community engagement that was undertaken prior to the closure of the power plant station in 2022, which aimed to prepare the community on the impact of the closure. Focussed information sharing was conducted, with specific reference also to the potential of green energy solutions.

It would also be beneficial to investigate what created the higher incidences of awareness as recorded in Witbank and Sasolburg,

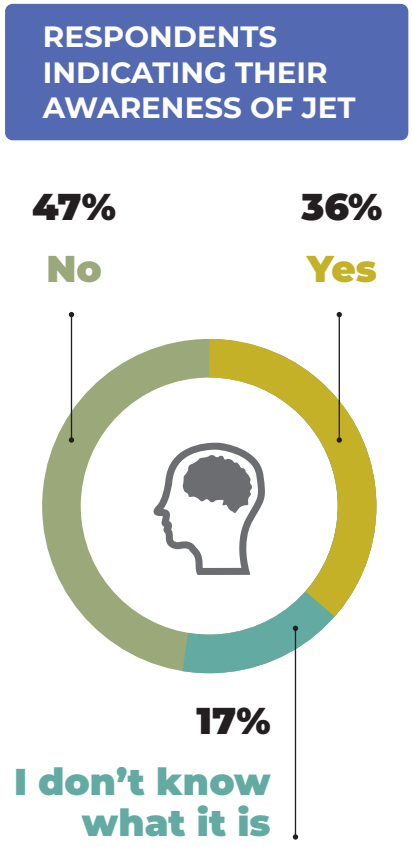


Figure 9: Community Awareness of JET

where also more than 50% of respondents confirmed knowing it. Newcastle, Lephalale, and Mudimeli have the lowest rates of awareness, with as few as 10-20% of respondents being aware of JET.

The data also indicates a strong correlation between levels of education and having JET awareness, with nearly 50% of post-matric qualified respondents having an awareness of JET, as opposed to less than 35% of those without post-matric qualifications.

This trend suggests a notable knowledge gap amongst those with access to higher education than those without, and a targeted approach is needed to ensure that information about the JET reaches this segment of the community as well.

WHERE HAVE YOU HEARD ABOUT JET?

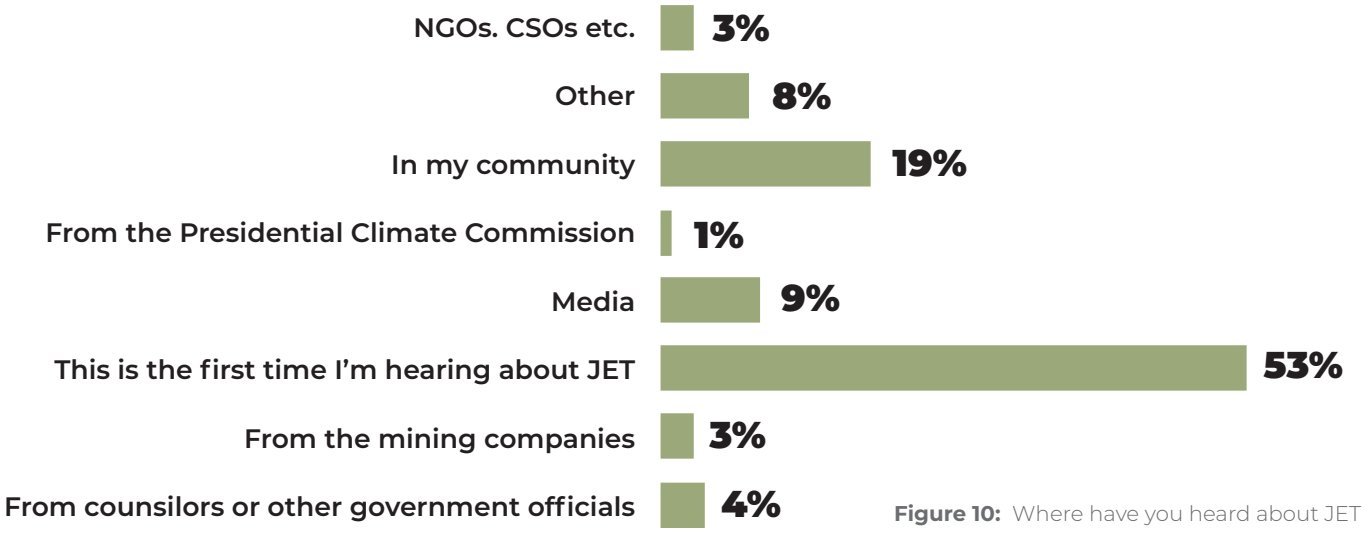


Figure 10: Where have you heard about JET

Regarding information dissemination, most respondents who are aware of JET received their information from other community members (19%) and the media (9%). In comparison, a small number were informed by councillors/government officials (4%), NGOs (3%) and the mining companies (3%).

The data clearly indicates that while the media is a relatively important source of information and plays an important role, it needs to be sufficiently widespread to make a sufficient impact. **Local community discussions, however, are a key source of information and underscore the importance of grassroots communication and local networks in spreading awareness.**

The small proportion of respondents who heard about JET from councillors and other government officials indicates limited direct communication from local government representatives. Even fewer respondents received information about JET from mining companies, which confirms the minimal role these companies played in disseminating information about the transition.

The information disseminated through these channels touched on vital topics such as:

- Impact on employment
- Climate change and environmental impact
- Transition from coal to renewable energy and
- Government policies and strategies

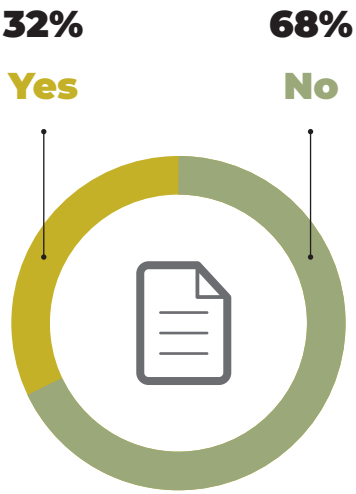
The fact that 53% of respondents are hearing about JET for the first time indicates a significant need for more awareness and information dissemination about the Just Energy Transition. Furthermore, most respondents (68%) have yet to receive any information or resources explaining the goals and implications of the transition to date. This signifies the need for improved communication on the matter to support the effective implementation and acceptance of the JET initiative.

In general, most respondents do not think the JET will have an impact on their employment or livelihoods, which may once again be attributed to the fact that majority of respondents were hearing about the JET for the first time. A deep dive analysis per town reveals that respondents from towns where there was a comparatively high level of awareness about JET, e.g. Komati, Utrecht and Witbank also showed a higher level of concern for the impact JET may have on their livelihoods. Notably, the towns of Newcastle, Lephalale and Mudimeli have received minimal information on the matter, and as a result had very little knowledge about it

Across the board, respondents strongly desired more detailed and clear information about JET and its implications. A thirst for further knowledge on the subject was notably stronger amongst post-matric qualified respondents. At the same time, those with primary school qualifications only indicated the slightest interest in learning more about JET.

Of further significance to note is that while 39% of respondents from Komati, where formal information sharing sessions were conducted due to the power plant closure in 2022, believed that JET would impact on their employment and livelihoods, only 28% confirmed they received information on JET. They were also the least interested in receiving more information, suggesting a potentially negative and uncertain sentiment towards the transition that may need to be addressed in a more targeted approach.

HAVE YOU RECEIVED INFORMATION OR RESOURCES EXPLAINING THE GOALS AND IMPLICATIONS OF THE TRANSITION?



Ensuring a widespread understanding of the goals and implications of the JET is crucial for gaining public support to facilitate a smooth transition.

Further engagement with the Komati community revealed the sentiment that none of the promises forthcoming from the community consultations regarding the JET came into fruition yet and that they are not interested in receiving further information on the topic until they see the realisation of the positive outcomes of introducing JET into their lives.

> In general, respondents want more comprehensive explanations and reassurances about the future.

In response to this, the following communication strategies may be implemented:

- **Targeted Campaigns:** Develop and implement targeted communication campaigns to reach the 68% of respondents who are currently uninformed. To disseminate information widely, utilise various channels such as community meetings, social media, local radio, and television.
- **Create easy-to-understand materials** that explain the goals and implications of the JET. These should be available in multiple languages and accessible formats to cater to diverse audiences.
- **Community Engagement through workshops and Seminars:** Organise workshops and seminars in local communities to provide detailed information about the JET. These sessions should allow for interactive discussions, addressing any questions or concerns the community members might have.
- **Partnerships with Local Organisations:** Collaborate with local NGOs, community leaders, and other stakeholders to facilitate information dissemination and ensure that the resources reach a wider audience.
- **Feedback Mechanisms:** Surveys and Feedback Forms: Implement follow-up surveys and feedback forms to assess the effectiveness of the information dissemination efforts. This will help identify any remaining gaps and areas for improvement.
- **Community Feedback** Sessions: Hold regular community feedback sessions to gather insights and address any ongoing concerns related to the transition. This participatory approach can help build trust and ensure that the transition process is inclusive.
- **Engaging the already informed group as ambassadors** could help disseminate information more broadly within the community.

5.7.4 Community Perception of the Just Energy Transition

The following section dives deeper into establishing the respondents' current perception of aspects relating to the JET.

Respondents had varied perceptions of the Just Energy Transition when asked to describe it. There is significant awareness that JET involves transitioning from coal to renewable energy (39%) and that this may lead to mine closures (27%). However, there needs to be more recognition of the broader benefits, such as understanding the environmental rationale behind JET, its relation to climate change mitigation, and reducing greenhouse gas emissions.

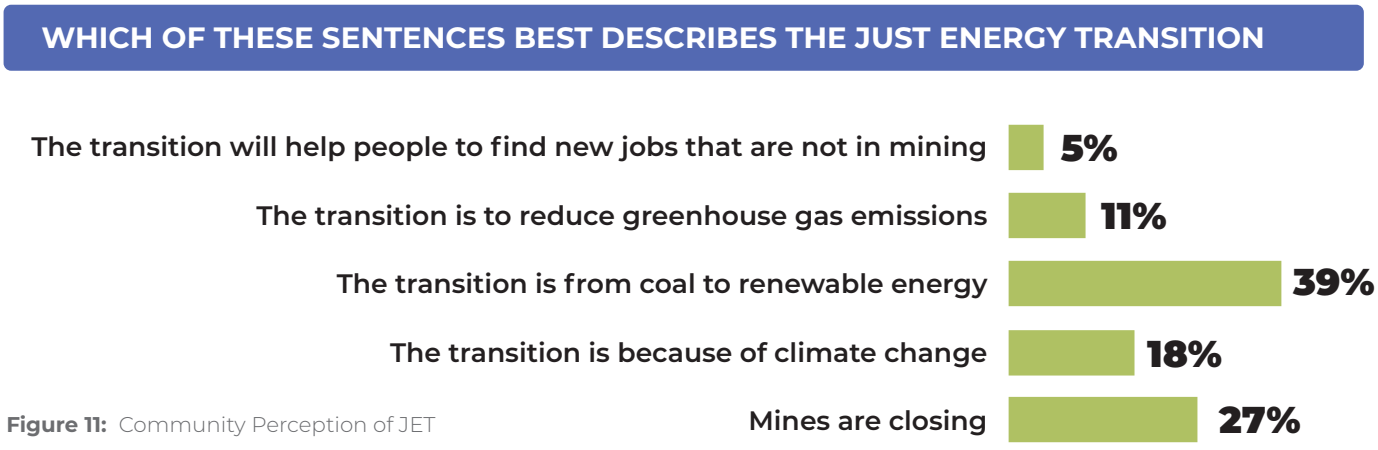


Figure 11: Community Perception of JET

> Further education on how combating climate change can lead to long-term economic and health benefits and creating new job opportunities outside mining (5%) could strengthen support for the initiative.

When asked what they think and feel about the Just Energy Transition, most respondents explicitly stated they do not know what JET is or have never heard of it, while some also expressed their desire to learn more about the subject. Common phrases include "I don't know," "never heard," "no idea", "not familiar with JET", and "I need more information to understand it."

While the majority expressed their uncertainty about JET, a few responses also focussed on the positive aspects of the JET, such as creating new job opportunities, improving social justice, and helping eradicate poverty. The transition is also seen as a way to reduce energy bills, industrial costs and dependency on imported energy, leading to greater energy efficiency. Many feel that the transition to renewable energy will reduce harmful emissions, provide cleaner and more reliable electricity, improve public health and mitigate climate change. Some believe the transition will bring about overall community development, improving the quality of life and reducing pollution-related problems. Health workers expressed relief that their workload might decrease as fewer patients would be affected by coal-related illnesses. Overall, there is hope that the transition will bring technological advancements and better environmental governance.

Respondents also expressed their fears and scepticism about the feasibility and implementation of JET. They are unsure about the government's plans and worry about corruption. A significant number of respondents are concerned about losing their jobs and the potential increased unemployment and poverty, which may negatively affect the local economy. This perception is particularly strong among those working in coal-related industries.

The analysis clearly shows that a significant portion of the community needs more awareness and understanding of the Just Energy Transition. Respondents' collective hopes and fears about what the JET may bring indicate that comprehensive educational campaigns and information dissemination are crucial to ensure the community is well-informed about JET, its purpose, and its potential impacts.

Addressing the knowledge gap makes it possible to foster more informed discussions and decision-making within the community.

> Emphasising the positive effects of JET on the environment and economy and providing clear pathways for job transition can foster a more comprehensive understanding and support for the initiative.

Targeted educational campaigns and informational programmes could help bridge this knowledge gap and increase awareness of the benefits of transitioning to cleaner energy sources. This will be crucial in garnering public support for the Just Energy Transition (JET) initiative.

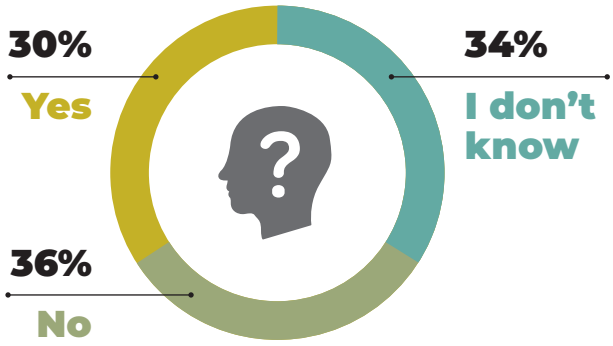
5.7.5 Community perception of JET's impact on employment and livelihoods

Respondents were highly uncertain about whether the JET would impact their livelihoods, with a three-way split between "yes," "no," and "I don't know."

The detailed analysis per geographic distribution suggests that respondents from Komati, Ermelo, Utrecht and Witbank had the highest expectation that JET would impact their employment and livelihoods. Notably, except for Ermelo, all of these towns had a reasonably high awareness of JET. On the contrary, the towns with the lowest awareness of JET, namely Newcastle and Mudimeli, also had the lowest expectation that there would be any impact on their lives.

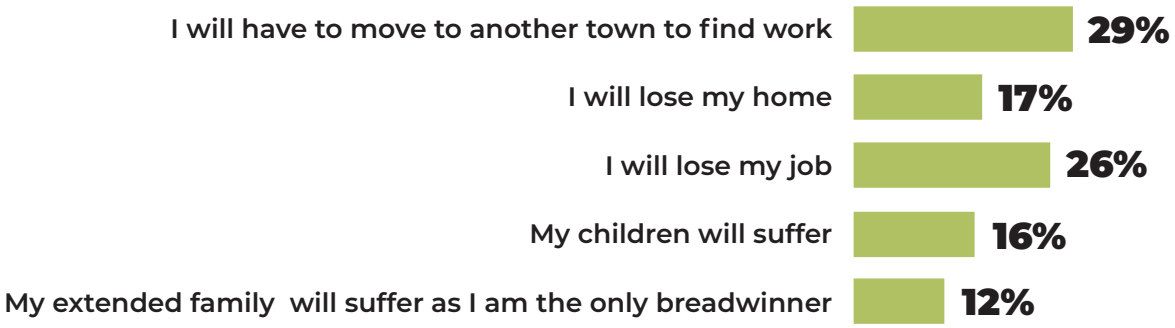
Respondents were then asked to choose from a list of potential scenarios they thought would most likely impact their lives.

DO YOU THINK THE JUST ENERGY TRANSITION MIGHT IMPACT YOUR EMPLOYMENT OR LIVELIHOOD?



29% of respondents indicated they expect to need to move elsewhere, while 26% voiced their fear of losing their jobs.

IN WHICH WAY DO YOU THINK IT MIGHT IMPACT YOUR EMPLOYMENT OR LIVELIHOOD?



This indicates a substantial concern about the availability of local job opportunities post-transition. Addressing this requires creating new employment opportunities within the existing communities or providing support for relocation if necessary.

- **Implementing reskilling and job placement programmes will be crucial to mitigate these fears and ensure a smooth transition for affected workers.**

17% are concerned about losing their homes and the potential loss of housing due to job loss or relocation.

- **This underscores the need for comprehensive support systems, including housing assistance and economic aid, to prevent displacement and ensure stability for affected families.**

28% believe either their children or extended family will suffer due to the transition. Concerns about children's well-being and potential job loss as a single breadwinner highlight the broader social impact of economic changes and that this impact could be widespread.

- **Strategies to support entire families and diversify income sources will be essential in mitigating these effects, and providing support, including educational assistance and childcare services, will be necessary to address these fears.**

The data indicates significant concerns among respondents about the potential negative impacts of the Just Energy Transition (JET) on their jobs and livelihoods. A large portion of the workforce fears job loss (26%) and the need to relocate for work (29%), with additional worries about losing their homes (17%) and the well-being of their children (16%) and extended families (12%).

- **Addressing these concerns requires a multifaceted approach, including creating local job opportunities, implementing reskilling programmes, providing housing and economic support, and ensuring comprehensive family support systems.**

By addressing these fears proactively, the JET initiative can help secure a just and equitable transition for all affected individuals and their families.

> There is clearly also a need for effective communication and support strategies to address uncertainties and concerns. Providing clear information, reskilling opportunities, and transition assistance will be crucial to ensure that all community members can navigate the changes brought by JET and benefit from new economic opportunities.

5.7.6 Interest in obtaining more information about the Just Energy Transition

The vast majority (72%) of respondents expressed a desire to receive more information about the JET. This indicates a strong community interest in understanding the implications and opportunities associated with the transition.

- **Respondents indicated that their preferred form of communication to receive information on the JET should come from the media (57%), highlighting the media's significant role in disseminating information.**

Given that the media is the most popular source of information by a significant margin, it is clear that media outlets will play a crucial role in informing and educating the public about the Just Energy Transition. The importance of ensuring that media coverage is accurate, comprehensive, and accessible cannot be overstated.

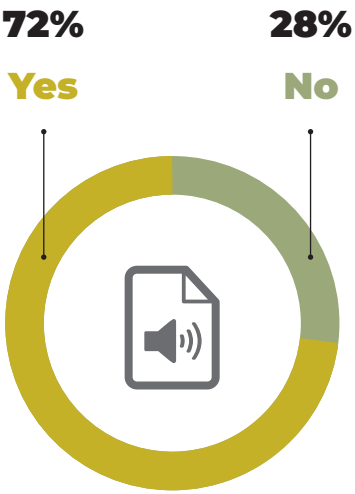
- **A collective 21% indicated they would be willing to receive information through Government and local councillors.**

Official sources such as these are clearly also perceived as reliable sources of information, which underscores the community's trust in and reliance on local governance in local leadership for community-specific details. This trust is a testament to the effectiveness of local leadership in providing reliable information about the JET.

- **Employers and unions were the least preferred sources of information, indicating limited trust or relevance perceived in unions and the workplace for information in this regard.**

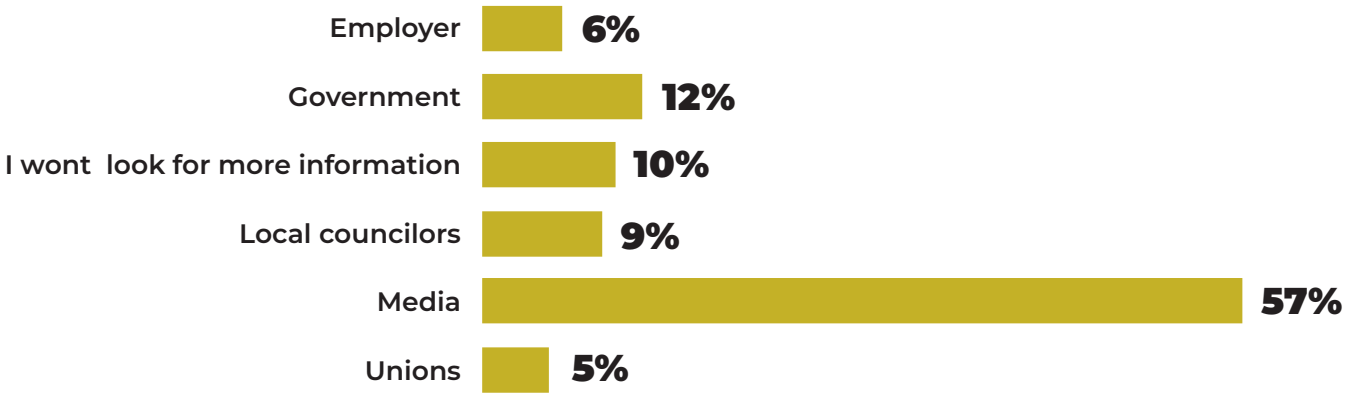
While not the primary source, employers still play a significant role. Companies involved in the transition should actively communicate with their employees about changes, impacts, and opportunities.

ARE YOU INTERESTED IN GETTING MORE INFORMATION ABOUT JET?



This underscores the media's significant influence in shaping public perception and understanding of the JET.

WHERE WILL YOU LOOK FOR ADDITIONAL INFORMATION ON THE JUST ENERGY TRANSITION?



RECOMMENDATIONS

- Media channels should be utilised effectively by collaborating with trusted media outlets to ensure accurate and comprehensive coverage of the Just Energy Transition. ***Use multiple formats, including articles, interviews, documentaries, and social media campaigns***.
- Develop a robust Government communication strategy that includes regular updates, detailed reports, and interactive platforms where the public can ask questions and get responses from Government representatives.
- Empower local councillors with the necessary information and resources to play a pivotal role in communicating effectively with their communities. This involves organising community meetings and informational sessions and distributing printed materials through local offices.
- It's crucial to encourage employers to participate in information dissemination actively. This could include internal newsletters, information sessions, and workshops to keep employees informed and involved in the transition process.
- Implement strategies to reach those less likely to seek out information. This could involve direct mail campaigns, community bulletin boards, and local organisations' partnerships to distribute information. Work with unions to enhance their communication strategies and ensure they effectively convey the Just Energy Transition information to their members. This could involve training union representatives and providing them with detailed informational materials.

By addressing these recommendations, it is possible to ensure that accurate and comprehensive information about the Just Energy Transition reaches a broad audience, supporting informed decision-making and community engagement.

5.7.7 Preferred communication channels related to the Just Energy Transition

A clear majority of respondents indicated that they would prefer to receive more information about JET from the media, particularly TV and radio.

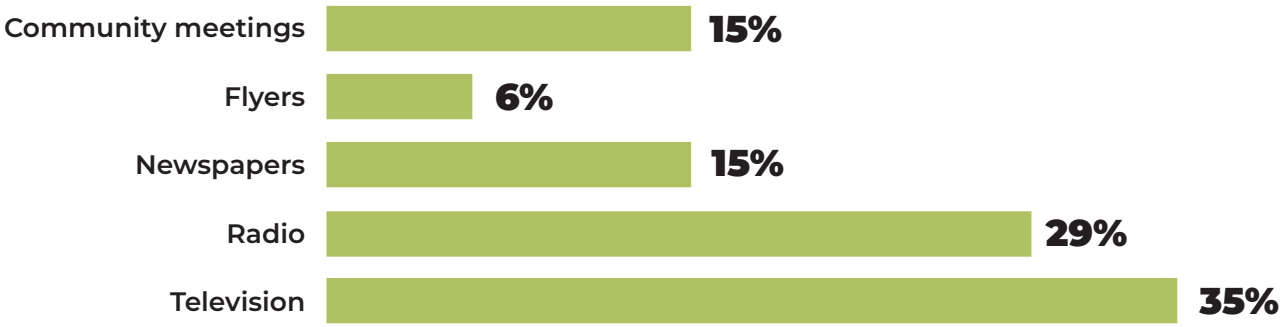
Respondents would also look towards the media to provide them with additional details on JET.

As can be expected, there was a notable distinction in preferences between different age groups:

- **Under-40:** TV is the preferred media
- **Over-40:** Radio is the preferred media, which increased in preference incrementally with age.

In addition to the above, the over-60 age group also indicated that they would look towards their local councillors for additional information, indicating a certain level of trust in community engagement for further information dissemination.

COMMUNICATION CHANNELS OR RESOURCES THAT WOULD BE MOST EFFECTIVE FOR YOU TO STAY INFORMED ABOUT THE TRANSITION



While residents from Witbank, Mudimeli, Sasolburg, and Newcastle indicated a strong preference for TV, residents from Lephalale, Mhluzi, and Vryheid would rather receive information via radio.

Residents from Komati indicated a notably strong interest in community meetings, confirming once again that this community requires some interactive engagement following the implementation of JET.

This is also a strong indicator that once a community understands the basics of JET, and they experience the implementation thereof in their community, they have more pressing queries that need to be addressed by community leaders, potentially on job pathways and other matters / concerns that may have a direct impact on their livelihoods.

The most effective communication channels and resources for disseminating information about the JET are as follows:

- **TV is the most effective channel**, reaching the largest audience. Its visual and auditory appeal makes it a powerful tool for conveying complex information compellingly.
- **Radio is the second most effective channel.** It has a broad reach, especially in areas with limited TV or internet access. It's also accessible to people on the move.
- **Community meetings are highly effective for direct engagement** and addressing specific community concerns. They provide a platform for interactive communication and feedback.
- **Newspapers** are also effective, particularly for reaching literate audiences who prefer detailed written information. They can be referred to multiple times and have a lasting presence in households.
- **Flyers are the least effective among the listed channels.** They are helpful for quick, targeted communication but may not provide comprehensive information and are quickly discarded.

Since all communication channels did receive some traction, a multi-channel approach should be utilised for maximum reach and impact. **Community meetings for interactive engagement should complement a focus on TV and radio for broad dissemination**. Newspapers should be used to provide detailed information, and flyers can support these efforts by offering quick, concise messages in targeted areas.

5.7.8 Community involvement in decision-making related to the energy transition

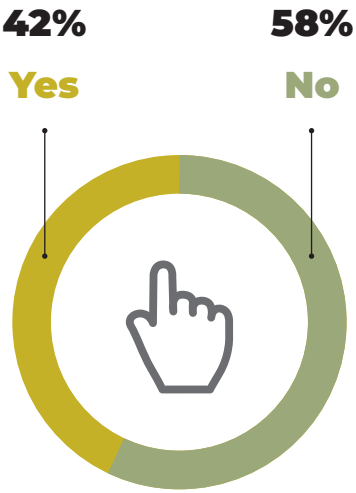
Since most respondents had not heard of the JET before participating in the survey, it is understandable that the majority (58%) feel that the community is not adequately involved in decisions related to the energy transition.

However, unpacking the 42% minority response suggesting that their community is adequately involved reveals some interesting aspects. Communities such as Komati, Ermelo, and Mudimeli show extremely low involvement in the decisions related to energy transition, particularly with reference to Komati, where formal engagement with the community occurred. This suggests that the strategies previously employed to engage with the community and to make the community feel more involved in the decision-making process were unsuccessful.

On the other hand, a significant component of the respondents from Sasolburg, Utrecht, Vryheid and Witbank felt that their communities are adequately involved in decisions related to the energy transition. It would be insightful to develop a more comprehensive understanding as to why these communities feel more included and involved in the decision-making process.

The data, therefore, highlights the need for more effective communication strategies and engagement initiatives to ensure that a more significant portion of the community feels informed and included in the decision-making process. This could involve more transparent information sharing, regular updates, and open forums for discussion.

DO YOU FEEL THAT THE COMMUNITY IS ADEQUATELY INVOLVED IN DECISIONS RELATED TO THE ENERGY TRANSITION?



RECOMMENDATION

- Increasing community involvement can help build trust and support for the energy transition initiatives. Ensuring that community feedback is heard and visibly acted upon can foster a more collaborative environment.
- While overall strategies should be inclusive, targeted interventions may be necessary for sub-groups within the community that feel notably excluded. This could involve focused group discussions, community leaders' involvement, and grassroots-level initiatives. Increasing the frequency and scope of community meetings can ensure they are

accessible to all members of the community. The meetings could also be used to provide updates, gather feedback, and address concerns.

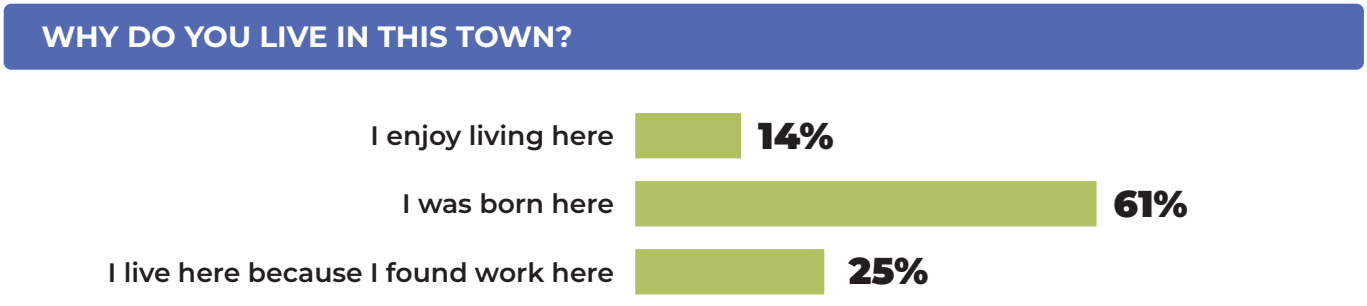
- The most effective communication channels (TV, radio, community meetings) should be leveraged to disseminate information about community involvement opportunities and decision-making processes. Clear and easy-to-use feedback mechanisms should be established so that community members can express their opinions and see how their input is incorporated into decisions.
- Partnering with local organisations, NGOs, and community leaders can help bridge the gap between decision-makers and the community.
- Addressing these areas can enhance the perception and reality of community involvement in energy transition decisions, leading to more inclusive and effective outcomes.

5.8. Employment and relocation considerations

This section reflects on respondents' reasons for their current residency, their perception of local job opportunities and their considerations for potential relocation.

5.8.1 Motivation for living in the area

The largest group of respondents (61%) live in the community because they were born there, while a significant portion (25%) of respondents live in the community primarily for work.



This suggests that community members have a strong sense of roots and possibly generational ties to the area. They benefit from a local economy that has been able to provide long-term job opportunities, which has simultaneously been a strong motivator for people to migrate to the area for job opportunities.

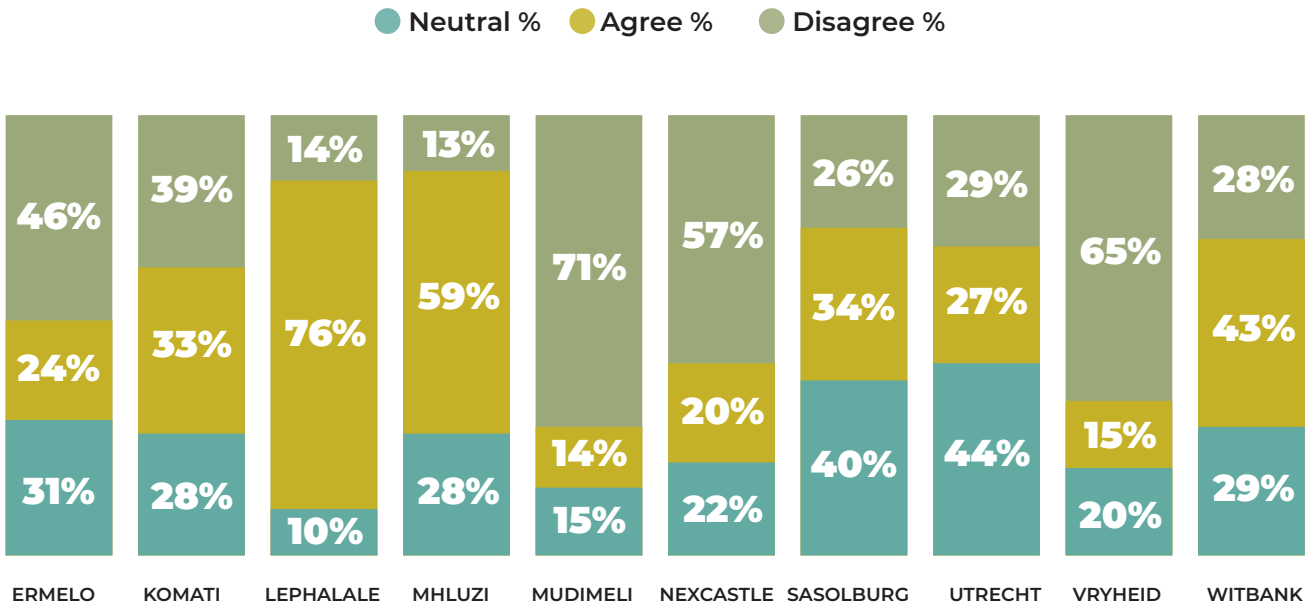
With only 14% of residents expressing that they enjoy living there, efforts to improve the quality of life could be beneficial. Enhancing local amenities, recreational facilities, and overall community engagement might increase this number and lead to a more satisfied population. Investment in community amenities and services may increase the percentage of people who enjoy living there. This could involve improving infrastructure, creating green spaces, and offering cultural and recreational activities.

Since a large proportion of the community was born there, they might have solid attachments and potentially resist changes brought by JET. Their historical and emotional ties to the area mean their support will be crucial for the success of any transition efforts. Therefore, it is essential to understand their concerns and involve them in the transitional decision-making process. Clear communication about the benefits of JET and how it will positively impact the community while offering support services for those who might be adversely affected by the transition may ensure they feel valued and supported during the change.

Providing training and education for new skills relevant to JET can help those whose primary reason for living in the area is work. This may also ensure that any employment opportunities lost due to the transition to renewable energy are replaced with new, stable jobs.

5.8.2 Community perception of availability of job opportunities in this area

THERE ARE MANY JOB OPPORTUNITIES IN THIS TOWN



Since this question is particularly related to the locality, responses were analysed per individual town to determine a clear perception of each surveyed area. It is evident from the above graph that respondents from Lephalale and Mhluzi have an extremely positive outlook on future employment prospects and a strong, positive perception of job availability. Witbank and Sasolburg also reflect a reasonably positive outlook on their future prospects, with 43% and 34% of respondents concurring with the statement. **These areas may be best suited for JET pilots, since job loss concerns are lower which may indicate a potentially more positive support for the JET.**

Areas with a predominantly negative perception of job prospects include Mudimeli (71%), Newcastle (57%), and Vryheid (65%), since the majority disagree with the statement. To a lesser extent, Ermelo also shows a strong inclination towards a negative outlook, with nearly half of the respondents disagreeing.

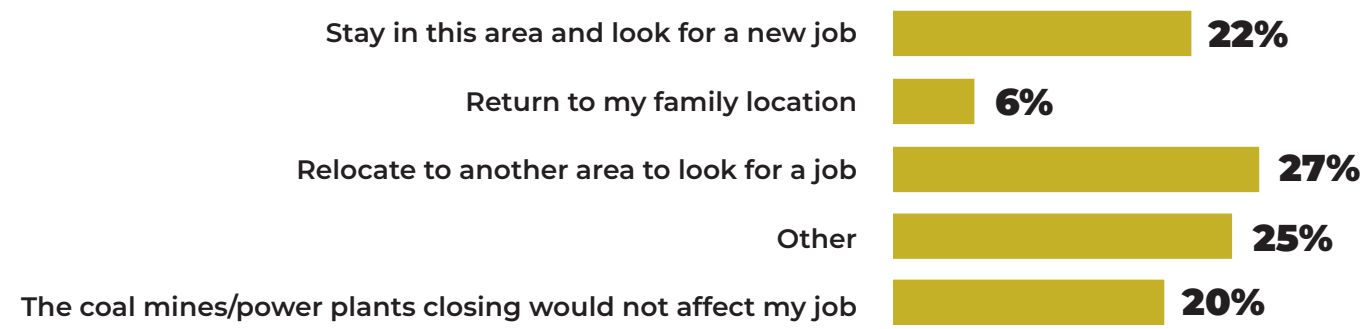
The perceptions of job availability in Komati, Sasolburg, and Utrecht could be clearer. A significant number of respondents in these areas expressed uncertainty, with a high percentage of neutral responses. In Utrecht, in particular, the majority of respondents are neutral, indicating a significant level of uncertainty about job availability.

5.8.3 Alternative Job Aspirations

Respondents provided a widely varied response to the question of what they would do if the coal mine/power plant closed down, with 22% indicating their willingness to stay and find alternative employment. In comparison, 27% of respondents indicated they would relocate to find work elsewhere.

> Even though 20% indicated that the closure of the mines would not affect their jobs, further investigation would be required to determine the indirect socio-economic effect the closure of the mines may have on non-mine-related industries within the community.

IF THE COAL MINES/COAL POWER PLANTS CLOSED TODAY, WHAT WOULD YOU DO FOR WORK?



The data clearly show that many community members are heavily reliant on the coal industry for their livelihoods. Despite generational solid ties to the area, the potential closure of these facilities could lead to significant out-migration and a rise in unemployment. This underscores the urgent need to introduce alternative sources of employment to the area.

Only 6% of respondents would return to their family location, suggesting that a relatively small number of people view this as a viable option.

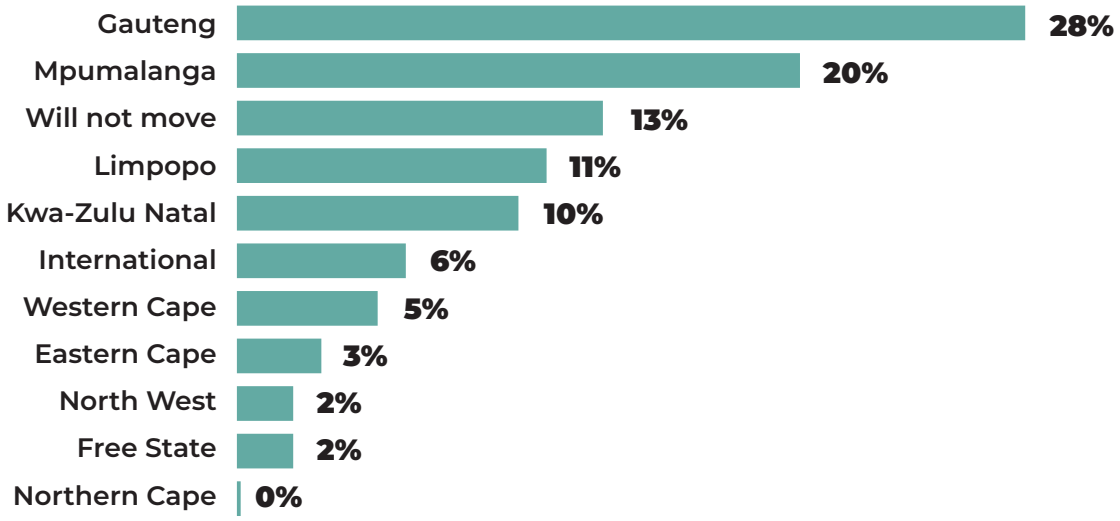
From a positive perspective, 22% indicated they would remain and look for an alternate job, while the 20% who believe they are not affected by the closure demonstrate the importance of economic diversification for the sustainability of livelihoods in the area.

This suggests that alternate job opportunities may already exist within these mining towns, and that an encouragement for growth of other sectors within these areas may reduce overall community vulnerability to industry-specific changes.

5.8.4 Employment migration

The majority of people indicated that they would choose to move to Gauteng (28%), an ever-popular jobseeker's choice as the economic epi-centre of South Africa, if they had to move because of mine/coal industry closure. The second most popular choice was Mpumalanga (20%). With abundant mining activity in both these provinces, respondents may also consider their chances of finding similar work to what they are currently doing. Of interest to note is that 13% of respondents would choose not to move from their current location, which implies that they are positive about their chances of finding alternative employment in their current location.

POTENTIAL RELOCATION



5.8.5 Employment mobility

Respondents demonstrated their willingness and interest to diversify into sectors not directly related to the mining sector, including agriculture (13%), clean energy sources (13%), transport (9%) and tourism (9%). Most respondents selected 'Other' as their preferred sector, demonstrating a potential lack of interest and/or knowledge of the sectors related to the JET.

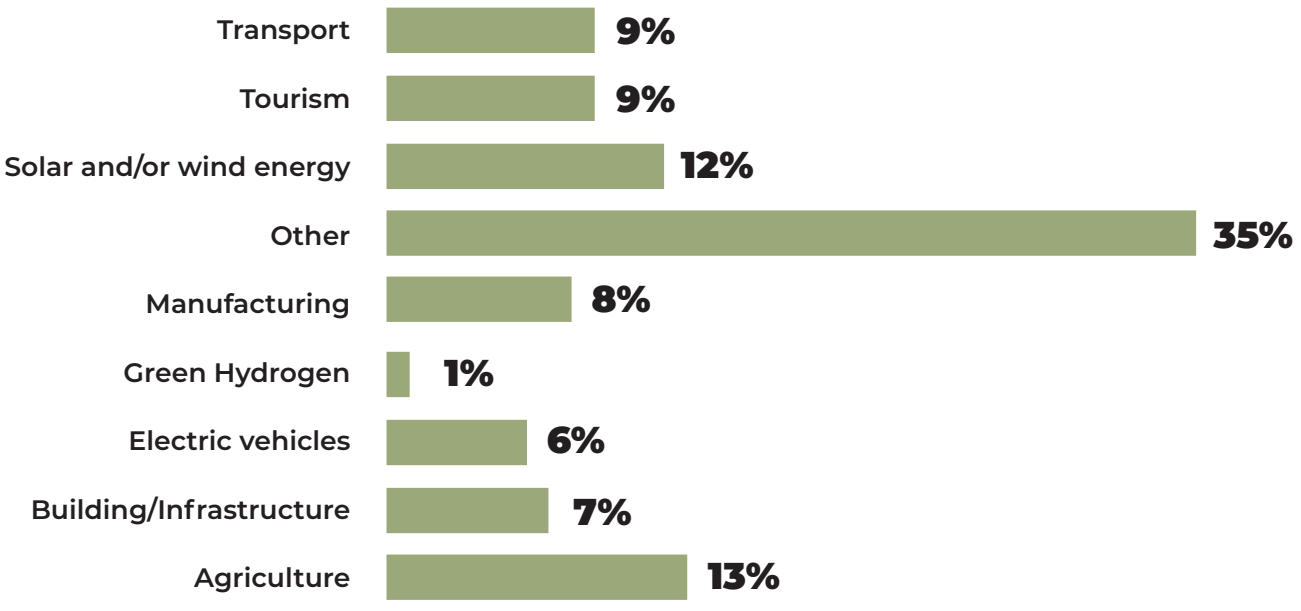
The question was followed by an open-ended opportunity for respondents to elaborate on this selection by providing open-ended answers describing their current skills.

> A significant number of respondents reported having no experience. Frequent responses to this question were answered by "I don't have any experience" (2121), "I have no experience" (43), and "No knowledge" (19). Some respondents rely on self-taught skills or informal learning. People did, however, express a genuine willingness to learn despite lacking experience, saying, "I don't have any, but I am willing to learn" (16) and "I do not have, but I will love to learn more about it" (11).

Of those respondents having some experience and knowledge, most fall within a non-specialised category. Many respondents indicate they have experience as drivers, cleaners, and general workers, with a few purporting to have experience in security, administrative, and agriculture work.

The data clearly indicate that a strong focus of upskilling will be required to move people from their current skill set towards the skill set needed to fulfil roles within the JET sector.

WHICH SECTOR WOULD YOU MAINLY WANT TO WORK IN?



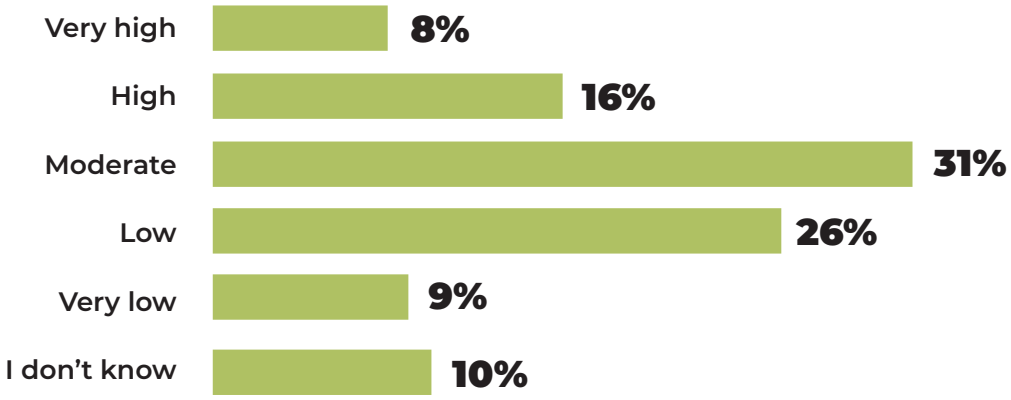
5.8.6 Perceived prospects for re-employment

Respondents had mixed feelings about their prospects of finding a job unrelated to coal mining or at a company that is not dependent on coal mines or power plants.

While 24% of respondents are confident in their ability to find alternative employment and 32% have a moderate but cautiously optimistic expectation about their ability to transition into other sectors, a significant segment of respondents (45%) estimates their chances of being low, uncertain, or none to find employment outside the coal mining sector.

Implementing job training programmes focused on skills in demand in sectors unrelated to coal mining, emphasising areas such as renewable energy, construction, healthcare and technology, will improve the prospects of community members transitioning to other industries successfully.

HOW DO YOU ASSESS YOUR CHANCES OF FINDING A JOB UNRELATED TO COAL MINING?



> Career counselling services may also assist individuals in identifying their strengths and potential career paths. Job placement services can help in matching individuals with available opportunities. Specific attention should be given to those who feel they have no chance of finding alternative employment.

Understanding their concerns and barriers to employment can help in designing inclusive and effective support mechanisms. Businesses that hire individuals transitioning from the coal industry could be incentivised through tax breaks, subsidies for training and support for creating new job opportunities.

Throughout the process, community engagement through information sessions, workshops, and seminars will keep the community informed about the opportunities available in other sectors and the resources provided to support their transition.

5.8.7 Barriers to finding alternative employment

> Most respondents signified that their lack of experience (21%) and level of education (18%) are the most significant barriers that may prevent them from finding alternative employment.

This suggests that many individuals may need support in upskilling their qualifications or experience to find jobs outside their current sector.

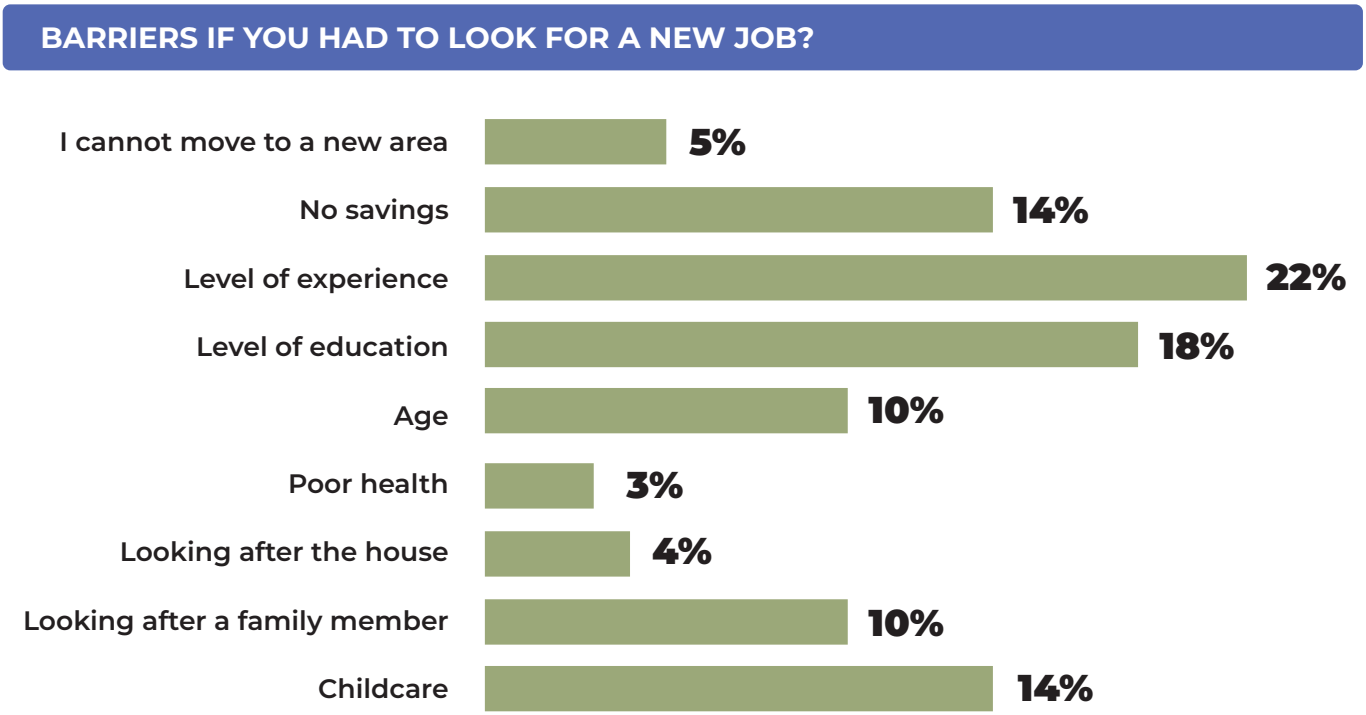


Figure 12: Barriers to New Jobs

- Caring for their children or another family member was also a prevalent barrier, with 24% of respondents indicating this may prevent them from seeking new employment.
- Many respondents (14%) also highlighted financial insecurity as a significant concern when transitioning to new employment. With savings, individuals may be able to support themselves during job searches or while retraining and may be able to fund transport and relocation expenses for jobs further afield.
- Of notable concern were also those respondents who consider their age (10%) or health (3%) their most significant barrier, which suggests that older individuals and those with health issues may feel disadvantaged or discriminated against in the job market with limited job opportunities available to them.

5.8.8 Desired skills to fit job aspirations

Respondents expressed their desire to learn new skills across a wide variety of sectors, demonstrating the community's interest in upskilling and pursuing career paths in industries other than mining and its affiliated sectors. The fact that they struggled to indicate possible future sectors of work may indicate that they believe a transition into a different sector may not be possible due to their current lack of skills required for this sector.

Respondents expressed interest in learning new skills in the following areas:

- Agriculture
- Environmental management and sustainable practices, such as "renewable energy," "solar and wind energy skills," and "green hydrogen conservation"
- Technical and trade skills, such as welding, plumbing, machinery operation, carpentry, manufacturing and general construction
- Engineering
- Business management, finance and accounting
- Information technology and digital literacy
- Healthcare and Social Work
- Creative and artistic skills, such as fashion design, baking and music
- Manual labour skills that can be applied in various practical settings.

5.8.9 Entrepreneurial aspirations

61% of respondents have never thought about starting their own business. This aligns with the general entrepreneurial trend in South Africa, where many individuals face significant barriers to starting their own businesses. These barriers include limited access to capital and a need for more entrepreneurial education. According to the Global Entrepreneurship Monitor (GEM) South Africa report, many potential entrepreneurs cite financial constraints and fear of failure as significant deterrents to starting a business.

> There is however a significant minority interested in Entrepreneurship – 39% of respondents indicated they had considered starting their own business.

There is a growing interest in entrepreneurship, especially among the youth, to overcome high unemployment rates. The youth in South Africa are increasingly looking towards entrepreneurship as a viable career path.

Initiatives like the National Youth Development Agency (NYDA) and the establishment of business incubators and accelerators aim to nurture this interest and provide the necessary support to young entrepreneurs.

By aligning efforts with these trends and addressing the identified barriers, it is possible to nurture and expand the entrepreneurial ecosystem in South Africa, ultimately contributing to economic growth and job creation.

The responses to the question "What business ideas do you have?" reveal various entrepreneurial aspirations among the respondents. Respondents proposed the following:

- **Hospitality:** A significant number of respondents are interested in starting catering and fast-food businesses and opening their own restaurants.
- **Retail and Sales:** Many respondents supported selling clothes or other specific product sales, while many were interested in opening general stores to serve the community's needs.
- **Agriculture and Farming,** specifically poultry or other livestock farming
- **Beauty and Personal Care:** Opening beauty salons is a common aspiration.
- **Taxi Services:** Several respondents are interested in taxi and transportation businesses.
- **Construction:** Some respondents are interested in construction businesses.
- **Manufacturing:** There is interest in various manufacturing businesses.
- **Education and Childcare:** Opening daycare centres and schools is a notable interest.
- **Technology and IT:** Some respondents mentioned starting internet cafes and providing IT-related services and products.
- **Healthcare:** Several respondents were interested in starting healthcare-related businesses, such as private nursing and clinics.
- **Wellness and Beauty:** Starting wellness centres and beauty spas.
- **Creative and Artistic Ventures:** Some respondents expressed interest in creative businesses like fashion design, crafts and art.
- **Media and Entertainment:** A few mentioned starting businesses in the media and entertainment industries

The survey results reflect the broader trends in the South African entrepreneurial landscape, where significant barriers to enter exist, but there is also a growing interest and support for entrepreneurship.

5.9. Community perception on how their community would be affected if the coal mine/ power plant closed and what would happen to their community

The responses indicate a community heavily reliant on the coal mine or power plant for economic stability and employment. The primary concerns revolved around the impact the closure would have on the community economically, socially, health-wise and in terms of overall infrastructure. A small segment of the respondents believes that the community will not be significantly impacted by the closure, possibly indicating a perception of resilience or alternative sources of livelihood.

- **ECONOMIC IMPACT:**

  Respondents were primarily concerned with job loss, indicating a significant dependence on the coal mine or power plant for employment. This reflects the direct economic impact on individuals and families.

  There is a concern that a mass migration of people from the area in search of employment elsewhere may lead to further economic decline due to potential depopulation. This could also lead to a possible failure of the local economy due to decreased spending and business closures.

  Fear of increased poverty was also cited, leading to broader economic hardships.

- **SOCIAL IMPACT:**

  Respondents are worried about a potential **rise in crime due to increased unemployment** and poverty.

- **HEALTH IMPACT:**

  Health issues are expected to rise due to the stress of unemployment , lack of access to healthcare, and the potential increase in unhealthy coping mechanisms.

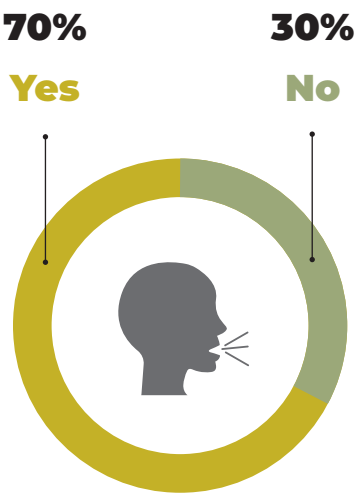
- **INFRASTRUCTURE IMPACT:**

  Respondents believe that the closure of the mines will exacerbate load-shedding issues, affecting power availability and reliability. Worsening power outages will affect daily life and economic activities.

5.10. Community perception of members of their community experiencing any coal-related illness due to the mining activities

A significant majority (70%) of respondents indicated that they or members of their community have experienced coal-related illnesses due to coal mining activities. This highlights a prevalent concern about the negative health impacts of coal mining on the community.

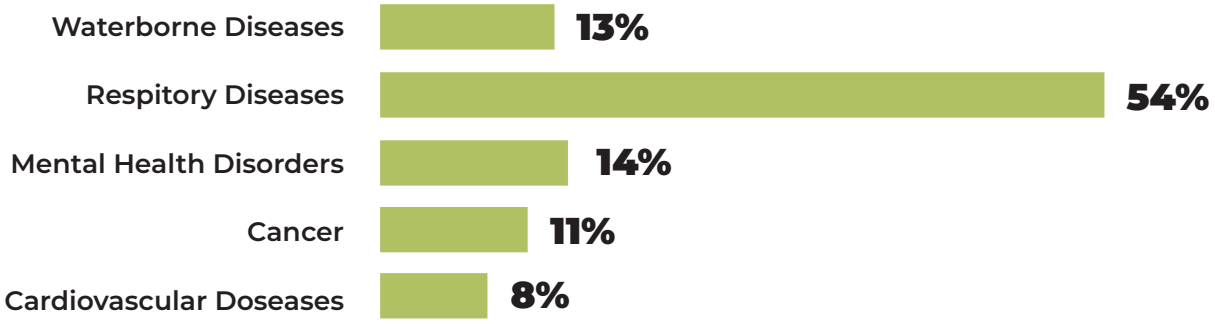
HAVE YOU OR MEMBERS OF THIS COMMUNITY EXPERIENCED ANY COAL-RELATED ILLNESS DUE TO THE MINING ACTIVITIES?



Based on the feedback received, the vital coal-related illnesses experienced by the community are as follows:

- **Waterborne Diseases:** A notable portion of the community has experienced waterborne diseases. These illnesses are likely linked to contamination of water sources due to coal mining activities, which can introduce harmful substances into local water supplies.
- **Respiratory Diseases:** Respiratory diseases are the most prevalent coal-related illnesses, affecting more than half (54%) of the community. This indicates a significant impact of coal mining on air quality, leading to conditions such as asthma, bronchitis, and chronic obstructive pulmonary disease (COPD).
- **Mental Health Disorders:** These disorders are also a considerable concern, affecting 14% of the community. The stress and anxiety associated with living near coal mining operations, job insecurity, and health worries can contribute to these disorders.
- **Cancer:** Cancer, particularly lung cancer and other types linked to environmental pollutants, is a serious concern for 11% of the community. This highlights the long-term health risks associated with exposure to carcinogenic substances from coal mining activities.
- **Cardiovascular Diseases:** Cardiovascular diseases, including heart disease and hypertension, affect 8% of the community. Air pollution and the physical stress associated with coal mining can exacerbate these conditions.

COAL-RELATED ILLNESSES EXPERIENCED



A detailed analysis per town revealed that Sasolburg, Ermelo, and Witbank recorded the highest incidences of respondents knowing someone who has experienced coal-related illness, with Sasolburg having the highest response rate at 87%.

KEY FINDINGS

- The most significant finding is the high prevalence of respiratory diseases, affecting 54% of the community. This underscores the severe impact of coal mining on air quality and respiratory health.
- Mental health disorders affect a small but substantial portion of the community (14%), highlighting the psychological toll of coal mining activities and the associated socioeconomic stresses.
- The prevalence of waterborne diseases (13%) indicates issues with water quality and the potential contamination of water sources due to coal mining.
- The presence of cancer (11%) and cardiovascular diseases (8%) points to the severe and long-term health risks posed by coal mining activities.
- To promote JET and increase acceptance of JET in communities, communication needs to emphasise how JET reduces these kinds of diseases/health impacts.

.06

RECOMMENDATIONS & NEXT STEPS

6. RECOMMENDATIONS & NEXT STEPS

RECOMMENDATIONS:

The following recommendations have been formulated based on the feedback received from the respondents of the survey, and aim to ensure a Just Energy Transition that is inclusive, equitable and responsive to the needs of the communities most affected by the shift away from coal:

1. **Increase awareness and education on JET**

   Given the significant lack of awareness about the Just Energy Transition (JET) among respondents (with only 36% being aware of JET prior to the survey), it is essential to implement targeted education and outreach campaigns. These should focus on informing communities about the goals, impacts and opportunities associated with JET, particularly in areas where awareness is lowest.

2. **Strengthen community involvement**

   Currently, a large portion of the community feels inadequately involved in decisions related to JET. Since this sentiment is inherently linked to the overall lack of awareness, JET awareness campaigns should be focussed on establishing robust and transparent mechanisms for community engagement. This can include regular town hall meetings, workshops and the involvement of local leaders to ensure that community voices are heard and considered in the decision-making processes.

3. **Develop alternative employment strategies**

   With a significant number of respondents reliant on the coal industry for their livelihoods, and being mindful of the broader influence of the mines as primary economic driver within these regions, it is imperative to create alternative employment opportunities within these communities. This could involve reskilling programmes for jobs in renewable energy, agriculture and other emerging sectors. Partnerships with local businesses and industries to create new job opportunities should be prioritised.

4. **Support vulnerable households**

   Given that 51% of respondents live in households with only one breadwinner and many have multiple dependents, there is a need for targeted support for these vulnerable households. This could include social safety nets, financial literacy programmes and targeted job creation efforts to mitigate the economic impact of the energy transition.

5. **Address health concerns linked to coal mining**

   70% of respondents reported coal-related illnesses in their communities, signifying an urgent need for health interventions. One of the main benefits of transitioning to clean energy production is that it will lead to a reduction in

environmental pollution, which may subsequently reduce the risk of health issues associated with coal mining. The health benefits associated with the JET should therefore be highlighted as part of the JET awareness campaign amongst community members.

6. Enhance communication channels

The survey findings suggest that the most effective communication channels for reaching the community are TV, radio and community meetings. These channels should be utilised as the main sources of disseminating information about JET, including upcoming changes, available resources, and opportunities for community input.

7. Foster entrepreneurship and small business development

There is a real opportunity to foster entrepreneurship as a pathway to economic resilience, as evidenced by the 39% of respondents who indicated that they have considered starting their own business. This could include providing access to microloans, business training and mentorship programmes to help aspiring entrepreneurs establish and grow their businesses.

8. Implement tailored reskilling programmes

Reskilling programmes should be tailored to the needs and aspirations of the community, focusing on sectors such as renewable energy, construction, healthcare and agriculture. The programmes should be accessible and supported by incentives such as stipends or job placement guarantees to encourage participation.

NEXT STEPS FOR UNDP:

The following section outlines specific next steps for UNDP on how the survey data and its analysis could be utilised as a way forward. These next steps leverage the data collected to drive informed decision-making, community engagement and the successful implementation of the Just Energy Transition in affected regions.

RECOMMENDATIONS	OBJECTIVES	ACTION
1. Develop targeted awareness campaigns	Use the data to identify regions with the lowest awareness of the JET and design targeted educational campaigns tailored to these areas.	▶ Collaborate with local media, community leaders and civil society organisations to disseminate information about JET, using channels

RECOMMENDATIONS	OBJECTIVES	ACTION
		identified as most effective, such as radio, community meetings and social media.
2. Strengthen community engagement	Enhance community involvement in the JET decision-making process by addressing the concerns highlighted in the survey.	▶ Organise a series of community dialogues, focus groups, and participatory workshops in areas where respondents expressed feelings of being inadequately involved. ▶ Use the data to ensure that these initiatives are accessible to all demographic groups, particularly those most affected by the transition.
3. Design and implement reskilling programmes	Address the employment concerns of those dependent on the coal industry by leveraging the data to create effective reskilling and upskilling programmes.	▶ Partner with vocational training institutions and industries to develop reskilling programmes focused on renewable energy, construction, healthcare and entrepreneurship. ▶ Prioritise communities with the highest levels of economic vulnerability, as identified in the data
4. Enhance social support systems	Use the data to identify and support the most vulnerable households, particularly those with a single breadwinner and multiple dependents.	▶ Collaborate with government agencies and NGOs to provide targeted social safety nets, such as conditional cash transfers, food assistance and healthcare services to these households.

RECOMMENDATIONS	OBJECTIVES	ACTION
5. Monitor and evaluate health impacts	Address health concerns related to coal mining as indicated by the survey data.	▶ Initiate health monitoring programmes in communities with the highest reported levels of coal-related illnesses. ▶ Establish partnerships with local health providers to offer regular health screenings and interventions aimed at mitigating these impacts.
6. Support local entrepreneurship	Foster economic resilience by encouraging entrepreneurship in communities impacted by the JET.	▶ Use the data to identify aspiring entrepreneurs and provide them with access to microloans, business training and mentorship. ▶ Focus on sectors where there is a potential for growth, as indicated by the survey responses.
7. Policy advocacy and development	Utilise the data to inform policy advocacy efforts aimed at ensuring a just transition for all communities	▶ Present the findings to local and national policymakers to advocate for the inclusion of affected communities in JET-related policies. ▶ Use the data to push for policies that address employment, health and social vulnerabilities highlighted by the survey.
8. Conduct follow-up research	Continue to monitor the impact of JET on communities and gather more nuanced data as the transition progresses.	▶ Plan follow-up surveys and focus groups to assess the effectiveness of implemented strategies, track changes in community awareness and involvement and identify emerging issues related to the transition.

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Towards a Just, Inclusive &
Participatory Energy Transition