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# Briefing Note 1: Key findings from updates to the National Employment Vulnerability Assessment (NEVA)

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As proposed in the White Paper on Climate Change, the NEVAs for individual value chains identify how climate change and regulations to reduce emissions will affect workers and communities that depend on a value chain. TIPS has undertaken an update of the vulnerability assessment for five value chains that are particularly exposed to the climate crisis. The findings will inform updated Sector Jobs Resilience Plans that aim to improve resilience to the impacts of the climate crisis. The full NEVAs will be published on the TIPS website early in 2026.

## Petroleum-based transport

The petroleum-based transport value chain accounts for around 11% of South Africa's total greenhouse gas emissions, compared to the international average of 16%. Efforts to reduce the value chain's emissions centre on transitioning to electric vehicles. The impact of the transition on South Africa will largely be influenced by decisions in its main export destination, the European Union (EU). Currently, the EU plans to ban imports of petrol-based vehicles by 2035. Its Carbon Border Adjustment Mechanism (CBAM) will take effect in 2026, which will effectively increase tariffs on cars produced in South Africa.

In 2024, the value chain contributed R546 billion in gross value added and R262 billion in export revenue. It employed almost 1.4 million people in production, sales, fuel retail, vehicle service, and land transport. More than two thirds of the workers were in maintenance and repairs plus land transport, including taxis. Their jobs are predominantly informal, with low wages and limited formal qualifications even for relatively skilled and experienced workers. They provide less protection through union membership, employment contracts and contribution to pension funds and unemployment insurance than other segments of the value chain and other industries.

The low level of protection makes transport and maintenance workers in the value chain more vulnerable to the impacts of a shift to electric vehicles. These kinds of cars have fewer moving parts, which reduces the need for regular services and repairs. By extension, workers in this field may find it harder to get work. For taxi operators and their workers, the implications are less clear. The technology for electric minibus taxis is still in its infancy. Experience with taxi recapitalisation in the past, however, suggests that most taxi owners cannot afford new vehicles without substantial assistance.

## Coal

The coal NEVA covers mining, logistics, and Eskom and Sasol as the main refineries. These activities are geographically concentrated in Mpumalanga and Metsimaholo in the Free State, which incorporates Sasolburg. In the small number of municipalities included in the NEVA, coal accounts for between 37% and 51% of local value added.

The coal-dependent municipalities have relatively high incomes per person and above-average employment. But they also suffer from poverty, deep inequality, and often severe pollution. Coal production volumes have been broadly stable, but they are affected by falling demand from Eskom as its electricity sales decline; disruption on Transnet bulk coal export lines; and volatility in global coal prices. Still, employment in the value chain remains substantial, with roughly 98 000 coal miners plus 26 000 workers at Eskom and Sasol whose work is directly linked to coal.

The report identifies two main risk windows. The first is a period of gradual decline through 2036, when national electricity plans foresee rising emissions standards and the retirement of aging coal plants. Then, from 2037 to 2045, both domestic and global coal demand are expected to fall more steeply.

Workers in the coal value chain generally have relatively good wages, high unionisation and strong access to retirement and unemployment insurance funds, but limited formal qualifications. The communities that depend on coal include some secondary municipalities. Still, most faced constrained municipal revenues, capacity and infrastructure, with limited housing wealth. These factors mean that they will likely need significant support to diversify away from dependence on coal as it phases out over the coming 30 to 50 years.

## Metals

The metals value chain has long been important to South Africa's economy, dominating its exports and heavy manufacturing. In 2024, its value added equalled approximately 7% of the national total, while overseas sales amounted to US$47 billion, or 42% of total goods exports. It employed approximately 570 000 people, with around two thirds in mining and the remainder in manufacturing.

The metals value chain will be affected by a range of policy measures that target emissions, including sectoral targets and company carbon budgets, the carbon tax, the EU's CBAM, and the global transition to electric vehicles. Because metals refining is typically electricity-intensive, especially for ferrochrome and aluminium, escalating Eskom tariffs also pose a threat.

Smelting operations face the greatest transition risks because of their energy intensity. By commodity, steel, ferroalloys, and aluminium are particularly exposed. The workers in smelting operations generally have lower financial, human, and social capital than mineworkers. Still, on average they are better off than employees in the rest of the economy. Moreover, most live and work in metros or secondary cities, which should make it easier to find new economic opportunities in the case of an industry downturn.

Mining is less vulnerable than smelting to downsizing. The most obvious risk for the mines is on the demand side. Platinum metals risk demand losses with the shift to electric cars, as they do not require catalytic converters, a major source of demand for the industry.

Miners today earn substantially more than most other employees. Still, many mines are in relatively small mining towns, with limited alternative opportunities. In these areas, a mine closure can depress the entire local economy. While the miners themselves usually have significant protection thanks to unemployment insurance and retrenchment payouts, other local business owners and their workers could face difficult times.

## Agriculture

Climate change threatens agricultural employees and smallholders through droughts and rising temperatures, which can lead to farm closures, consolidation, and layoffs. Seasonal workers risk cuts to their hours and incomes. Technological fixes like irrigation or shade netting may help, but shifting to the associated precision agriculture often requires higher skills. Moreover, these kinds of investment often prove too expensive for small farmers.

Commercial farmworkers face significant risks if the climate crisis leads to downsizing in agricultural employment. In 2024, farming employed 840 000 workers, with nearly 300 000 in the Western Cape. The sector is dominated by low-skilled elementary jobs, which account for 75% of farming positions, compared to 18% in other formal employment. Some 62% of farm workers have not completed matric. Median monthly earnings in 2023 came to R3400 for men and R2600 for women. Fewer than 10% of farm workers have formal savings.  In terms of social capital, only 6% belong to a union, compared to 37% in the rest of the economy. Because full-time farmworkers typically live in tied housing, job loss often leads to homelessness.

In former labour-sending regions, climate change will directly affect household food security through water scarcity and extreme weather, leading to crop failure in family gardens. The principal risk here is reduced food access rather than the loss of livelihoods, as only a tiny fraction of households depend primarily on farming for incomes or food. Participation in gardening is particularly high in Limpopo (36%), Eastern Cape (32%) and Mpumalanga (32%). Over 90% of this production is in backyards and not on farmland, and only 3% of farming households see agriculture as their primary source of income. Still, about 23% of agriculturally dependent households in so-called "traditional" areas experienced food insufficiency in 2023, around twice as high as in the rest of the country.

Households that get part of their food from gardening are typically deeply vulnerable. Some 53% rely on social grants. The median monthly income in "traditional" areas is under R4000, compared to R7000 for households in urban areas. Women-headed families make up half of all households that depend on agriculture for food or income, and they tend to be worse off. Adaptive capacity is further constrained by poor infrastructure in "traditional" regions as well as limited disaster response strategies.

## Tourism

In 2022, tourism accounted for more than 722 000 jobs across several industries and many municipalities. The more vulnerable of these jobs are in the accommodation and catering industries, which together supported about 250 000 jobs in 2022. A quarter of employees in these two industries were in the informal sector. These jobs provide particularly limited job and social protection, as reflected by low levels of unionisation, unemployment insurance and paid leave. In both accommodation and food service, women employees outnumber men. Still, most employees have at least matric.

Climate events already affect tourism and have caused job losses. Cape Town and eThekwini have both experienced severe impacts from, respectively, droughts and floods. Smaller municipalities with significant natural attractions (for instance, national parks, coastlines, or mountain ranges) are often unusually reliant on tourism jobs. That makes them particularly vulnerable to degradation due to climate change. The most vulnerable are employees in informal accommodation and food and beverage services firms.