

## CHAPTER 6.4: TRANSPORT

### ABSTRACT

South Africa's Covid-19 lockdown has had a massive effect on the transport sector. Restrictions on the movement of people and goods under the Disaster Management Act were supplemented by sector-specific regulations that included cross-border road transport, air services, seaports, public transport services, railway operations, and the provision of transport services in general. The financial impact on public transport services has been substantial. Rail services initially came to a standstill, and following vandalism during the lockdown, have difficulty resuming services at previous levels. Bus operators reported significant disruption and sizeable operating losses. Likewise, minibus taxi operators were severely affected by capacity restrictions and (ongoing) lower demand. The ban on travel also translated into lower revenue for airlines (which had already been in a financial predicament), cross-border transport services, and sea cruise operations.

Transport is essential to the functioning of the economy and society. Covid-19 has changed the face of transport and underscored disparities in its provision. The pandemic offers the chance to address systemic issues in the sector through, for example, a more equitable public transport subsidy policy, travel demand management initiatives, and better integration between modes of transport to enhance sustainability. Note that any conclusions on the strengths and limitations of the Covid-19 response in this chapter are still preliminary and will be refined based on stakeholder consultations and feedback from readers.

### DISCLAIMER

This Country Report on the measures implemented by the South African government to combat the impact of the Covid-19 pandemic in South Africa (including individual research reports that may be enclosed as annexures) were prepared by various professional experts in their personal capacity. The opinions expressed in these reports are those of the respective authors and do not necessarily reflect the view of their affiliated institutions or the official policy or position of the South African government.

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## **ABBREVIATIONS AND ACRONYMS**

ADT	average daily traffic
ADTT	average daily truck traffic
CoGTA	Department of Cooperative Governance and Traditional Affairs
PPE	personal protective equipment
PRASA	Passenger Rail Agency of South Africa
SANRAL	South African National Road Agency Ltd
WHO	World Health Organization

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## INTRODUCTION

The Covid-19 pandemic has significantly changed how people work and, hence, how they use transport. It has also underscored disparities in the provision of transport in South Africa. This chapter reviews government measures to limit the transmission of the virus through transport, along with the impact of various Covid-19-related restrictions on the transport sector. It is based on a synthesis of published information, empirical observations, interviews with selected stakeholders, and the interrogation of various datasets.

## MEASURES AND REGULATIONS IN THE TRANSPORT SECTOR

Restrictions on the movement of people and goods are ordinarily provided for in section 27 of the 2002 Disaster Management Act (RSA, 2003) when a state of national disaster is declared under the auspices of the Department of Cooperative Governance and Traditional Affairs (CoGTA). Various ministries must thereafter publish sector-specific regulations in support of the CoGTA regulations.

Following several Covid-19-related alerts by the World Health Organization (WHO) from early January 2020 (WHO, 2020a), the first reported case in South Africa (from Italy) on 5 March 2020 (NICD, 2020), and the classification of Covid-19 as a pandemic on 11 March 2020 (WHO, 2020b), the South African president imposed a ban on travel to and from specific ‘high-risk’ countries as from 18 March 2020. These included China, Germany, Italy, Iran, South Korea, Spain, the United Kingdom, the United States, and France (The Presidency, 2020a).

On 15 March 2020, the minister of transport (DoT, 2020a) announced additional measures, including the following:

- Public transport operators should develop risk management plans.
- Operators should carry out a health and awareness campaign on Covid-19.
- Operators should provide adequate sanitisation equipment.
- Personnel in the transport industry should have sufficient personal protective equipment (PPE).
- Operators providing food on board should take special precautions.
- Train operators should provide marshals or security personnel on board to manage crowds and avoid overloading.

With rapidly rising Covid-19 cases, on 23 March 2020, the president announced a 21-day nationwide lockdown, effective from midnight on 26 March 2020 (SAnews, 2020a). The minister of CoGTA published nationwide lockdown regulations that included the following provisions (CoGTA, 2020a):

All commuter transport services including passenger rail services, bus services, taxi services, e-hailing services, maritime and air passenger transport are prohibited, except bus services, taxi services, e-hailing services and private motor vehicles for purposes of rendering essential services, obtaining essential goods, seeking medical attention, funeral services and to receive payment of grants: Provided that: (a) bus services, taxi services and e-hailing services shall not carry more than 50% of the licensed capacity; and (b) private vehicles shall not carry more than 60% of the licensed

capacity, and that all directions in respect of hygienic conditions and the limitation of exposure of persons to Covid-19, are adhered to.

Following the president's announcement on 23 April 2020 of the risk-adjusted strategy for managing Covid-19 – the five alert levels – transport regulations were adjusted for each level (The Presidency, 2020b). These regulations, summarised here, are discussed in more detail in the next sections:

- *Level 4:* Interprovincial travel was still not allowed. However, special provision was made between 1 and 7 May 2020 to allow persons who had not been at their place of residence or work before the lockdown to travel to these places. Intra-provincial services for non-essential travel could operate only between 05:00 and 20:00, similar to private car travel. The Gautrain could operate.
- *Level 3:* Interprovincial and long-distance (>200 km) buses and minibus taxis could operate at 70% of capacity. Interprovincial travel was allowed. The Passenger Rail Agency of South Africa (PRASA) was requested to carry out infrastructure maintenance and testing of its fleet before opening lines, given that most of its network had been vandalised (discussed below). PRASA opened a few lines on 1 July (Pienaarspoort–Pretoria Central; Cape Town–Retreat; Port Elizabeth–Uitenhage; and East London–Berlin), limited to peak periods and at a capacity that ensured physical distancing of 1,5 m, which effectively meant 15–20% of train capacity. Domestic passenger flights were allowed at specific airports, but international flights were still prohibited.
- *Level 2:* All non-long distance (<200 km) road-based public transport services were allowed to load to 100% of their capacity. Passenger rail services were limited to 70% of capacity.
- *Level 1:* International flights were allowed under specific conditions. Road-based cross-border services were also permitted. Long-distance buses and minibus taxis were still only allowed to load up to 70% of capacity. The wearing of masks on public transport remained mandatory.

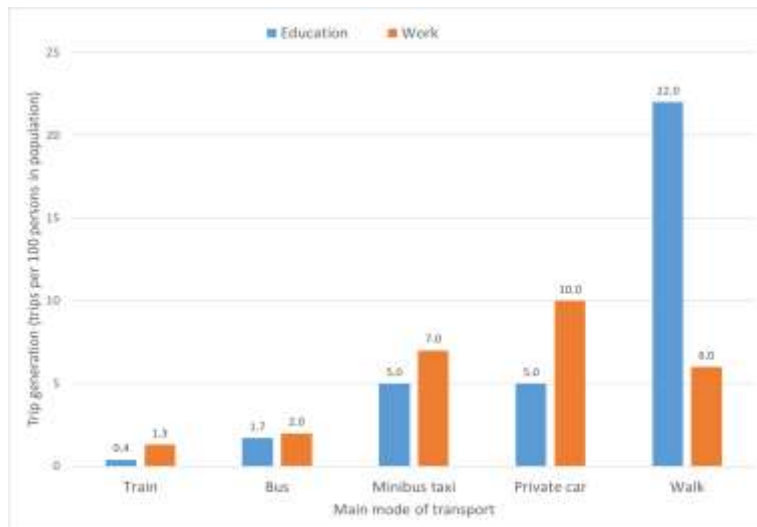
To help reduce the financial impact of the restrictions on subsidised bus services, the June 2020 Division of Revenue Amendment Act (RSA, 2020) made the following special provision:

to respond to the Covid-19 pandemic, provinces may use grant funds for the sanitation of public transport vehicles and other public transport facilities, including the provision of personal protective equipment for public transport workers, and hand-washing facilities and provisions for physical distancing. Provinces must report separately on Covid-19 expenditure, in their reports submitted in terms of section 12 of the Division of Revenue Act.

## IMPACT OF THE REGULATIONS

The travel restrictions discussed above significantly affected trip generation rates. Figure 6.4.1 shows ordinary trip generation rates for education and work, in terms of trips per 100 people. During the lockdown, the closure of schools and businesses and the banning of all travel other than for essential services substantially reduced road traffic. This obviously had a negative financial impact on minibus taxi, bus and train services. The ban on international travel likewise translated into lower revenue for airlines, cross-border road transport services, and sea cruise operations.

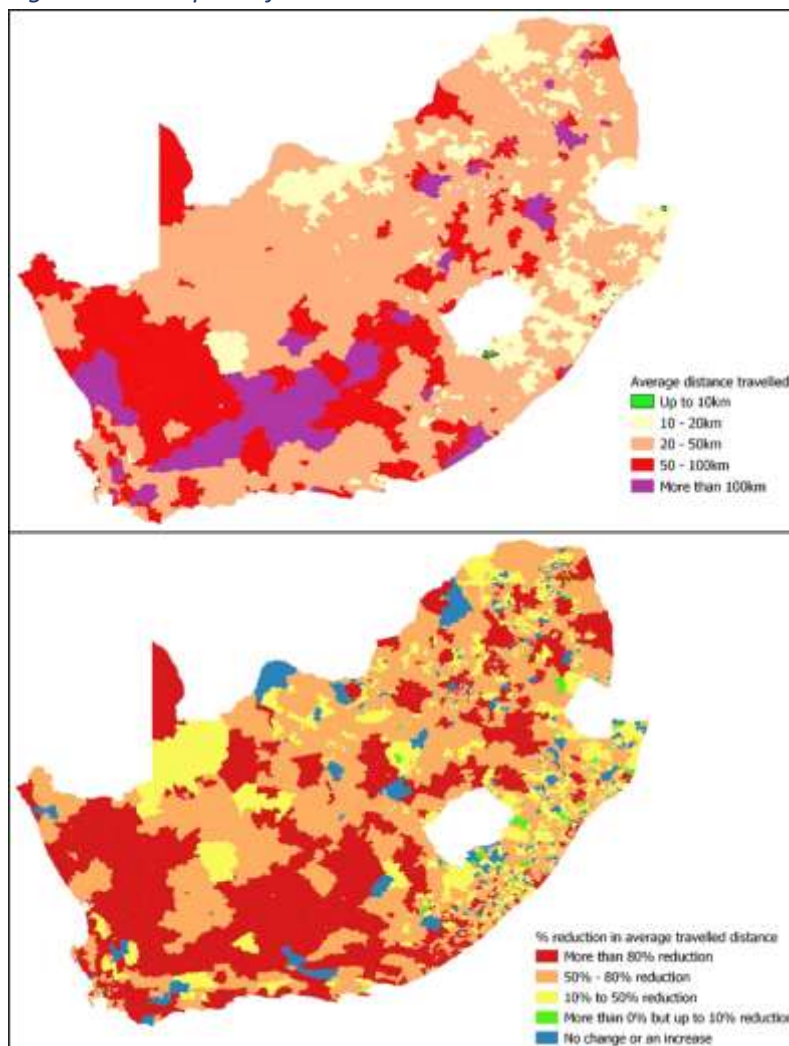
Figure 6.4.1: National baseline: One-way trip generation for education and work on weekdays



Note: Figures calibrated from the 2013 national household travel survey data.

Source: Stats SA, 2014

Figure 6.4.2: Impact of level 5 lockdown on distances travelled



Source: Generated by the CSIR using data provided by Vodacom

(i.e. limited to Vodacom mobile phone subscribers)

To demonstrate the impact of the restrictions, Figure 6.4.2 above presents two extremes: the upper map shows the average distance travelled per person, per municipal ward, on Wednesday, 4 March 2020. This represents a normal baseline weekday and includes travel for a variety of purposes. The lower map in the figure depicts the average distance travelled on Wednesday, 1 April 2020, soon after the start of the hard lockdown (alert level 5). Apart from a few isolated areas, mainly in rural parts of the country, the overall average distance travelled was lower during the lockdown. The consequences of such shorter travel distances include lower revenue generated by public transport services, lower fuel consumption, reduced expenditure on vehicle maintenance, and a reduction in emissions.

The next sections discuss the impact of changes in trip generation and other travel characteristics on road-based travel and public transport, drawing on data and information from the various alert levels. This is followed by an overview of freight transport and a discussion of the effect of the reduction in trips on road safety. The chapter concludes with some lessons learnt and recommendations. Note that any conclusions on the strengths and limitations of the Covid-19 response are still preliminary and will be refined based on stakeholder consultations and feedback from readers. Also, this chapter focuses on the first and second waves of the pandemic. Transport during the further progression of the pandemic will be discussed in the second edition of the Country Report.

## **ROAD-BASED TRAVEL**

Data on road-based traffic volumes is aggregated for all modes of road-based transport to give a general indication of the demand for travel during the different alert levels. The data, provided by the South African National Road Agency Ltd (SANRAL), relates to daily traffic volumes, known as average daily traffic (ADT). It was collected by roadside traffic sensors mainly along national routes, in both urban and rural areas.

### **LOCAL TRAVEL**

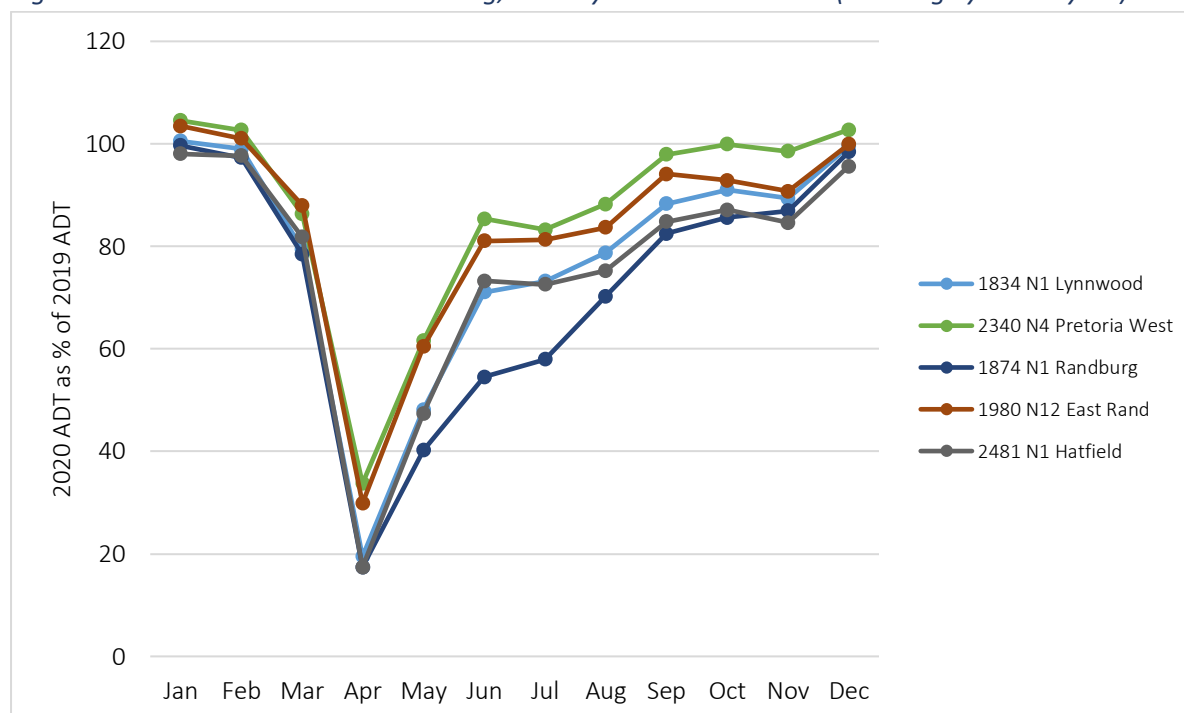
During alert levels 5 and 4, only limited local travel was allowed within cities (Table 6.4.1). Figure 6.4.3 shows daily travel for various locations in Gauteng, demonstrating that daily trips fell dramatically at the start of the lockdown on 27 March. In April, traffic was at 20–30% of normal levels, and it increased to 40–60% of normal levels during alert level 4. Traffic increased again at the start of alert level 3 and then stabilised. In general, traffic in lower-income areas recovered faster than in affluent areas, reflecting different patterns of employment. For example, traffic on the N4 west of Pretoria and the N12 on the East Rand had recovered to 80% of 2019 ADT by alert level 3 and approached normal levels by September 2020. In contrast, traffic on the N1 through Randburg, Lynnwood and Hatfield remained subdued throughout level 3 and was still below 90% of 2019 levels by September. Traffic levels in Gauteng appear to have reached 85–100% of normal levels by alert level 1, suggesting a recovery in economic activity. In December 2020 traffic throughout the region approached 100% of normal levels; however, it should be noted that traffic is usually lower in December than in the rest of the year because of the festive season.

Table 6.4.1: Restrictions on local, intracity travel

Level	Restrictions
5	Local travel permitted only for essential workers to reach their place of work and for members of the public for grocery shopping and medical purposes
4	Local travel to available services allowed, and travel to places of work allowed with permits
3, 2 & 1	All local travel permitted for allowed activities

Source: DPME, 2021

Figure 6.4.3: Variation in ADT in Gauteng, January to December 2020 (% change year-on-year)



Source: Based on data from SANRAL

## LONG-DISTANCE TRAVEL

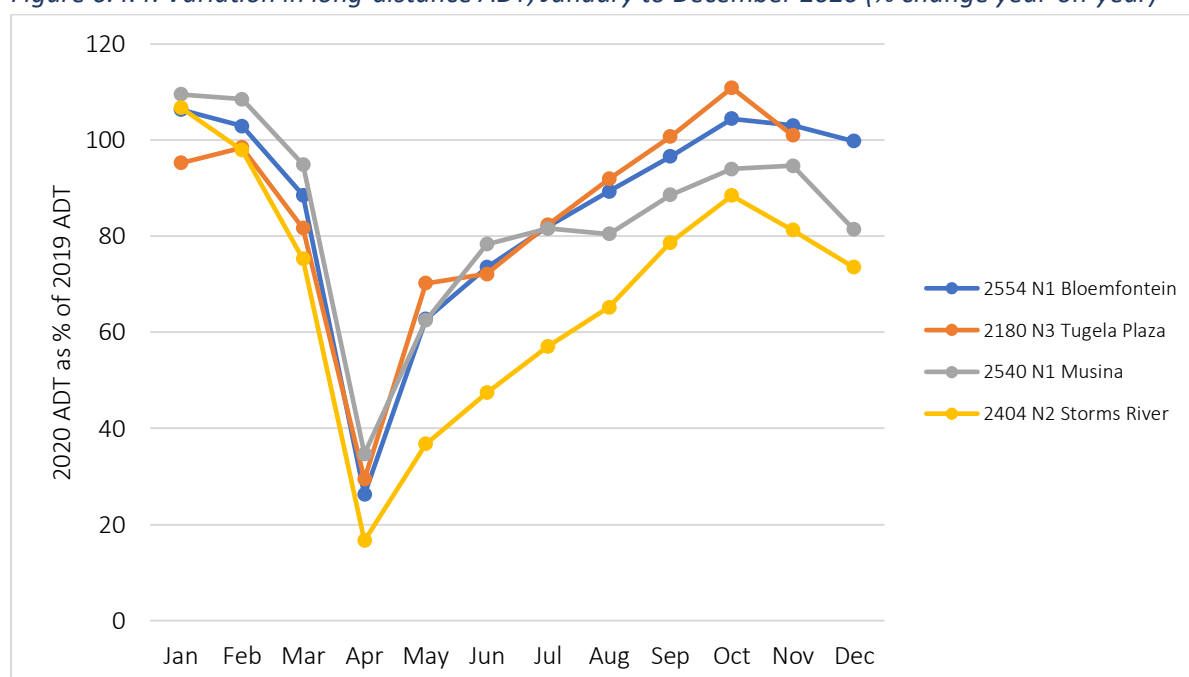
Private, long-distance travel was strictly regulated during alert levels 5 and 4 (Table 6.4.2). Under alert level 3, travel was only allowed for particular purposes. Figure 6.4.4 shows long-distance travel along four major routes – the N1 north of Bloemfontein and near the border with Zimbabwe at Musina, the N2 at Storms River, and the N3 at the Tugela Toll Plaza. Similar to the urban pattern, traffic dipped in March 2020 and then dropped to 20–40% of normal levels in April. Traffic on three routes (the N1 in both locations and the N3) recovered to over 60% of normal levels by May. Traffic on the N2 remained below 40% of normal levels, probably because it is partly a tourist route. Long-distance traffic volumes recovered steadily from May to October 2020. Interestingly, in December 2020 all traffic was relatively lower than in the corresponding period in 2019. Closer inspection showed that this was not due to an actual decline in traffic in the holiday period. Rather, traffic levels were fairly constant but simply much lower than in previous holiday seasons. This suggests that relatively less long-distance travel was undertaken over the festive season.

Table 6.4.2: Restrictions on long-distance, intercity travel

Level	Restrictions
5	No travel permitted between provinces, metropolitan areas and districts
4	No travel permitted between provinces, metropolitan areas and districts
3	Once-off special dispensation for long-distance travel between 1 and 7 May 2020 for people who were not at their place of residence when alert level 5 commenced to return home.
2	Long-distance transport between provinces, metropolitan areas and districts allowed for permitted persons, according to a limited list of allowable trip purposes
1	Interprovincial travel permitted for all purposes

Source: [DPME, 2021](#)

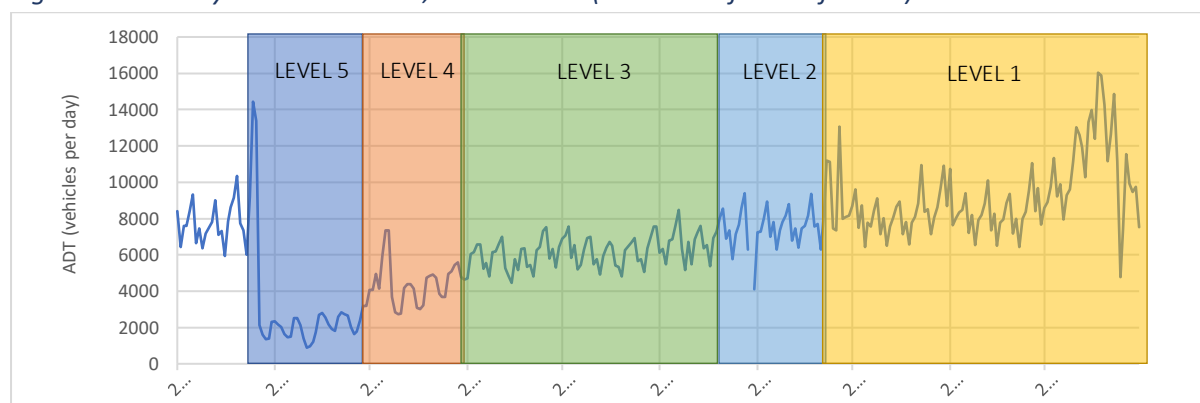
Figure 6.4.4: Variation in long-distance ADT, January to December 2020 (% change year-on-year)



Source: Based on data from SANRAL

Figure 6.4.5 shows the daily variation in ADT along the N1 north of Bloemfontein from 1 March to 31 December 2020. Before the lockdown, very typical long-distance traffic patterns were evident, with traffic increasing during the week, reaching a maximum on Fridays, and falling to a minimum on Mondays. Two lockdown peaks can be observed: the two days before the start of the lockdown, when traffic nearly doubled, and the first week of May, when people could return home under a special dispensation. Throughout the rest of the lockdown, daily traffic has increased gradually. Since alert level 3, traffic has reverted to the typical long-distance pattern, albeit at a lower level than before. By November 2020, traffic patterns were fairly similar to those in March 2020, before the lockdown. Traffic increased notably in the December festive season, as well as around the long weekend associated with Heritage Day in September.

Figure 6.4.5: Daily variation in ADT, station 2554 (N1 north of Bloemfontein)



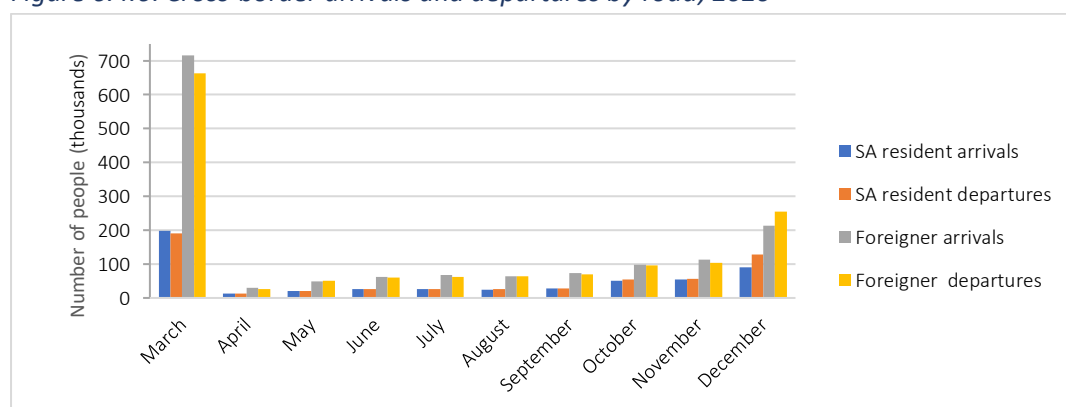
Source: Based on data from SANRAL

### ROAD-BASED, CROSS-BORDER TRAVEL VIA LAND PORTS

No travel across land borders was permitted during alert levels 5 to 2, other than for repatriation. Borders were opened to international travellers only from alert level 1. Even before the official lockdown, the pandemic had already affected cross-border migration. Total arrivals of South African citizens in March 2020 were down 35,6% year-on-year (33,7% for foreigners), while departures dropped by 45,0% for citizens and 25,2% for foreign travellers (Stats SA, 2020b). April 2020 saw a dramatic change, as migration figures dropped by 97% for citizens (both arrivals and departures), and arrivals of foreign travellers fell by 98% (Stats SA, 2020c).

Figure 6.4.6 summarises the impact of alert levels 5 to 1 on road-based travel across borders. Initially, as noted, the main reason for cross-border travel was repatriation; travel increased slightly as restrictions were eased. From the start of alert level 1 on 21 September 2020, cross-border travel was allowed without special dispensation. Soon, the cross-border movement of both South African and foreign nationals doubled; however, it remained dramatically lower than before. In December 2020, the increase in cross-border movement was even more significant, presumably because both migrant workers and holidaymakers travelled for the festive season. Box 6.4.1 discusses the resulting pressures on one border post, Beitbridge.

Figure 6.4.6: Cross-border arrivals and departures by road, 2020



Source: Based on Statistics South Africa's monthly Tourism and Migration Statistical Releases

#### *Box 6.4.1: Congestion at Beitbridge border post*

The Beitbridge border post between South Africa and Zimbabwe was heavily congested in December 2020, and the resulting delays were severely criticised in the media. At the peak of the congestion, vehicle queues exceeded 15 km on both sides of the border. The line on the South African side stretched all the way into the town of Musina. It was reported in the media that four travellers, including two truck drivers, died waiting to cross the border during December 2020, reportedly from thirst, hunger, and exhaustion – some had waited to cross the border for about 5 days.

The congestion was caused by a combination of factors, linked with regulations imposed by the Department of Home Affairs and customs operations. Thirty-three land ports had been closed, leaving the remaining 20 to deal with significantly more traffic. In December 2020, for example, about 2000 more trucks used the Beitbridge border post than in December 2019. When holding areas overflowed, trucks were forced to park on the side of the road and eventually in traffic lanes, completely blocking traffic. Also, many people did not have the requisite Covid-19 test results before reaching the border post. Many opted to be tested at the border instead, possibly because the tests were significantly cheaper in South Africa than in Zimbabwe. The high number of people who needed to be tested at the border post created serious backlogs. A final factor was the curfew imposed in South Africa, which required the post to be closed between 22:00 and 04:00, further disrupting traffic flows.

In December 2020 the South African cabinet approved the draft One-Stop Border Post Policy, which aims to harmonise the movement of people and goods between the country and its neighbours. A project to upgrade the Beitbridge border post is underway, which will increase the capacity of the bridge and will separate freight from passenger traffic. However, the project has reportedly been hampered by the lack of counter-funds from the Government of Zimbabwe. The Department of Transport earlier requested the transfer of road ownership in the vicinity of border posts from the Department of Public Works and Infrastructure to SANRAL. However, the roads will be transferred to the Border Management Authority; the aim is to improve efficiency by providing a single authority to oversee all aspects of the border environment.

*Source: SABC News, 2020*

## **PUBLIC TRANSPORT**

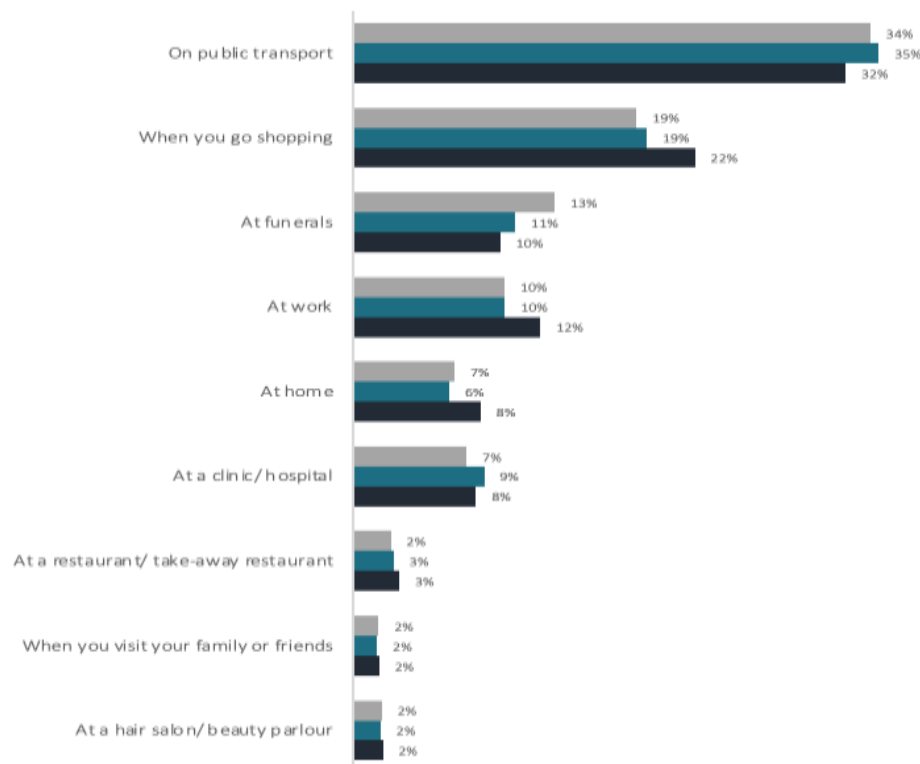
Public transport can be a rapid transmission medium for Covid-19 (Zhen, et al., 2020), because the virus is transmitted through air-suspended respiratory droplets lasting up to three hours or through objects contaminated with such droplets (known as fomites), on which it lasts from a few hours to a few days (UITP, 2020a). The risk of transmission increases in crowded, indoor spaces, especially where air is recirculated. The efficacy of physical distancing is limited indoors, particularly for longer exposures. Based on a survey of another influenza virus, H1N1, infected persons were six times as likely as uninfected ones to have recently used public transport (Zhen, et al., 2020). Precautionary measures to minimise transmission in public transport elsewhere in the world include encouraging people to reduce their use of public transport, making PPE compulsory, and rotating staff periodically.

The pandemic saw a reduction in the use of public transport by as much as 80% in some parts of the world (UITP, 2020a). Still, analyses of reported cases suggest that public transport has been responsible for a relatively small proportion of community transmissions, for example as little as 0,2% in Germany and 1,2% in France (UITP, 2020b). That said, South Africa's characteristically long commutes and highly peaked travel demand create particularly favourable conditions for infection.

South African commuters were clearly aware of these risks, as demonstrated in research conducted by Ask Afrika's (2020) market research (up to alert level 3). They found that:

- Many users of public transport did not feel safe from the virus in buses or taxis (only 40% felt safe on buses and 31% on taxis). Commuters saw public transport as the highest risk factor for contracting Covid-19 (Figure 6.4.7).
- Most people welcomed the requirement to wear masks on public transport.
- Over half of people travelled by minibus taxi during the lockdown; the highest usage figure was in the townships (74%). Only 14% of township residents used buses to commute.
- Most taxi commuters wore masks (96%) or sanitised their hands before (75%) and after (70%) leaving the taxi. They found social distancing difficult.

*Figure 6.4.7: Public perceptions of high-risk areas for contracting Covid-19*



Source: Ask Afrika, 2020

The minister of transport published regulations on 1 May 2020 (DoT, 2020b) to mitigate the spread of the virus among people using public transport. These included the following:

- All long-distance and interprovincial services would be prohibited throughout the lockdown.
- Public transport would only be permitted to ferry essential service workers and could only operate from 05:00 to 09:00 and from 16:00 to 20:00.
- No person would be allowed to travel while standing in a public transport vehicle.
- All operators had to sanitise vehicles before picking up and after dropping off passengers.
- All public transport operators had to provide disinfection information, materials and procedures.
- All drivers had to wear a mask.
- Marshals interacting with members of the public were required to wear a mask.

Commuters who rely on public transport were severely affected by these regulations. Waiting times were excessive during peak periods, and train users had to switch to more expensive modes (typically paying two to three times more) because passenger rail services were halted. The impact on each mode of public transport is addressed in the sections below.

## RAIL SERVICES

### PRASA

PRASA passenger rail services had been decreasing steadily even before the pandemic, because of reduced operational capacity and poor service quality. In 2019 the number of rail passenger journeys fell by about 31% year-on-year (Stats SA, 2020a). January and February 2020 also saw significant decreases in passenger numbers – over 40% year-on-year. By April, lockdown restrictions meant that no rail trips were made (Table 6.4.3). Passenger numbers recovered only marginally once the various services came back online. In July and August 2020, when some PRASA services resumed, passenger rail trips were still between 98% and 97% lower, respectively, than during the same months in 2019. By November 2020 (alert level 1), PRASA operated about 250 weekday train trips, significantly fewer than the about 1750 trips under its full timetable.

*Table 6.4.3: Restrictions on passenger rail services*

Level	Restrictions
5	All public and private long-distance and commuter rail services are suspended.
4	PRASA and Metrorail long-distance and commuter rail services remain suspended.
	Gautrain operations resume (except the airport service) at 50% coach capacity and during limited hours of operation (05:00–12:00 and 15:00–20:00).
3	PRASA and Metrorail commuter rail services remain suspended at the start of alert level 3. From 1 July, some PRASA commuter routes are reinstated.
	Long-distance rail passenger transport remains suspended.
	Gautrain operations continue at 50% coach capacity, with the airport service reinstated.
2 & 1	The majority of commuter passenger rail services resume at 70% coach capacity.
	All long-distance passenger rail services are permitted at 70% coach capacity.

Source: [DPME, 2021](#)

When commuter rail services in urban areas were stopped early in the lockdown, train stations were severely vandalised, in part because of protracted legal battles between PRASA and security service providers. A site visit to Soweto during alert level 3 found the Kliptown, Nancefield, Mlamlankunzi, Mzimhlope, Dube and Ikwezi stations in poor condition. Entrance kiosks, toilets, offices, windows and doors had been vandalised, and overhead high-voltage electricity cables had been cut (Nkosi, 2020). In its 2019/20 annual report, PRASA (2021) confirmed that overhead traction equipment cables were being stolen on daily basis, particularly in Gauteng, and some ticket offices had been badly vandalised. This undermines its longer-term capacity to generate revenue. PRASA reported a loss of about R100 million per month in April and May 2020, including the loss of tenant rental income. However, it continued to receive an operational subsidy, which in 2019/20 covered all employee-related costs,

along with repairs and maintenance (PRASA, 2021). Limiting the service capacity and associated loading from 1 July 2020 worsened PRASA's losses. Because electrical infrastructure on some lines had been vandalised, it deployed leased diesel locomotives for these lines, which further increased its operating costs. Some of these losses were offset by savings on energy and overtime payments.

PRASA (2020) blamed delays in the roll-out of its capital programme on the pandemic, for reasons such as the Treasury prohibition on advertising bids during lockdown; the non-evaluation of closed bids; the prohibition on construction work; and a shortage of supplies. These claims are refuted by the Department of Transport, which attributes the delays to the general lack of project management capacity within PRASA. It notes that under the same circumstances, SANRAL was able to mobilise resources for construction work when permitted by the regulations ([Moemi, 2021](#)).

In October 2020, the National Treasury approved R900 million for PRASA, mainly to fund a responsive security solution to the rampant vandalism. PRASA suggested it needed to increase its personnel from 3 113 to 10 693; the funds from the Treasury would not be sufficient to support such an increase. However, PRASA also benefitted from R1,2 billion converted from its capital expenditure budget to the operational budget to help fund the management of Covid-19-related risks (PRASA, 2021).

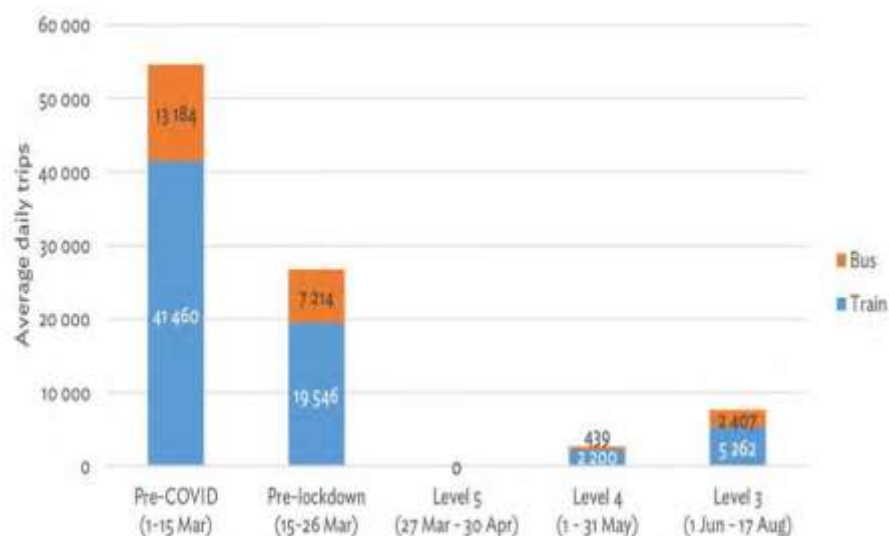
### **Gautrain**

The Gautrain was permitted to resume operations at the start of alert level 4. Management focused on instilling confidence and ensuring passenger safety, and quickly put social distancing measures in place. In fact, Gautrain's response in this regard set good practice standards. Specific interventions included running the maximum number of eight-car (rather than four-car) trainsets to facilitate social distancing, introducing midi-bus taxi services, reviewing Gautrain bus routes to augment the number of feeder and distribution routes around stations, and adding stops and changing routes to serve health workers in the catchment areas.

Gautrain ridership was seriously affected by the pandemic; a decline was already evident in the week before the lockdown (Figure 6.4.8). As travel restrictions eased, patronage increased slowly, but by alert level 3, it was still only about 10% of normal levels. Parking bays at Gautrain stations remain grossly underutilised even at alert level 1. For example, the Hatfield Station's 2300 parking bays used to be near full capacity, but fewer than 10% of bays were used on a weekday during alert level 1. By November 2020 passenger demand on the Gautrain stood at 30% of pre-Covid-19 levels; it was expected to remain low in the short run (National Treasury, 2021).

The revenue risk to the Gautrain operator, Bombela Concession Company, is relatively limited, as it has a patronage guarantee arrangement with the Gauteng Provincial Government. For 2020/21, Gauteng estimated that the patronage guarantee fee would come in at R400 million more than its original budget (National Treasury, 2021).

Figure 6.4.8: Average daily Gautrain trips



Source: Based on data from the Gautrain Management Agency

## BUS SERVICES

The restrictions on bus services (Table 6.4.4) led to a drop in passenger numbers of about 80% year-on-year during alert level 5 (Figure 6.4.9). Bus passenger numbers increased somewhat in alert level 4, and by level 3, numbers stabilised at just below 60% of normal passenger volumes. The Southern African Bus Operators Association, which represents about 70% of bus and coach public transport operators, reported significant disruption to the sector. During alert level 5, only 10% of its national bus fleet was in use; this rose to 33% during level 4. Many operators were not permitted to operate at all during alert levels 4 and 5, when long-distance travel was prohibited. Contracted commuter services experienced a decline in passenger numbers of 92% in April 2020.

Table 6.4.4: Restrictions on bus services

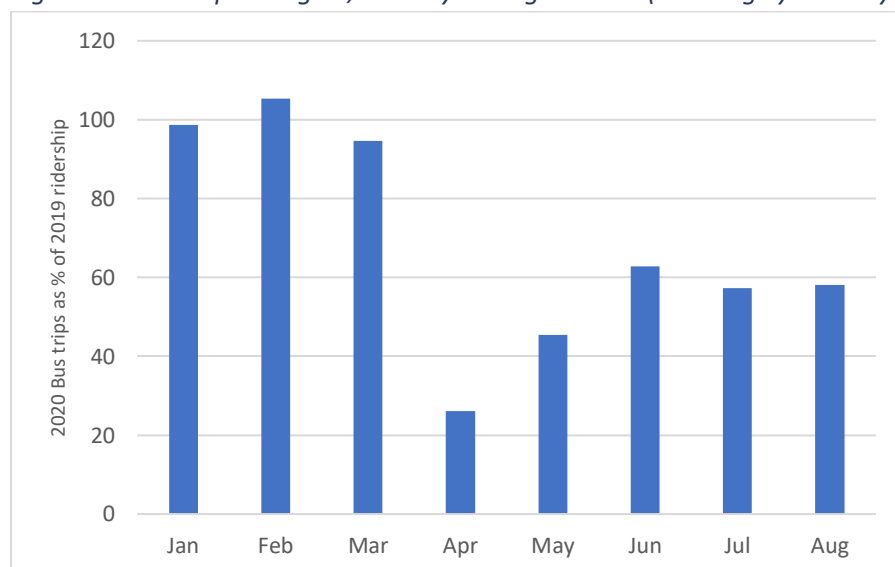
Level	Commuter services	Long-distance services
5	Limited local operations for essential workers and permitted movements of other people	Not permitted
4	Limited local bus operations between 05:00 and 20:00 at 50% of passenger capacity	Permitted during 1–7 May 2020 to help people move to their homes in other areas
3	Permitted at 50% of passenger capacity with no restrictions on operating times	Allowed for permitted persons, and a limited list of purposes, at 50% of capacity
	From 16 July 2020: 100% capacity	From 16 July 2020: 70% of capacity
2 & 1	Permitted at 100% of passenger capacity	Interprovincial travel permitted at 70% of capacity

Source: [DPME, 2021](#)

The state contracts with subsidised commuter buses based on the number of kilometres operated or number of passengers carried. The lockdown meant that these subsidy payments decreased by 51% in April 2020 (29% in May and 16% in June). Passenger fare income decreased more significantly, by 82% in April, 66% in May, and 46% in June. When commuter bus services cannot operate for reasons

beyond the control of the operators, they continue to receive a portion of the contract fee as ‘standing’ kilometres. In Gauteng, operators can claim about 60% of the agreed fee. However, for many operators, overhead costs exceed 60% of the contract fee. They would normally offset these by operating supplementary services for funerals, tours, church services, and other excursions. However, such excursions had also been suspended under the lockdown. This implies that most bus operators would have experienced operating losses. In addition, Covid-19 safety and hygiene protocol requirements are estimated to cost about R180 per bus per day, or R100 million per month for the sector as a whole (Govender, 2020).

*Figure 6.4.9: Bus passengers, January to August 2020 (% change year-on-year)*



Source: Stats SA, 2020a

Based on an industry survey, the Gauteng Department of Roads and Transport estimated that operators would need to be supported to the tune of R6 576 per bus for PPE and cleaning and sanitising of facilities (GDRT, 2020). It further estimated that a once-off relief package of over R110 million would be needed to compensate bus operators for losses stemming from pandemic-related regulations (about R60 000 per bus). The Department of Transport planned to source relief funding for subsidised commuter bus services from savings made in the public transport operations grant. However, spending in this regard appears to have slowed down over time, owing to forensic investigations into the procurement of PPE ([Moemi, 2021](#)).

Long-distance buses typically carry labour costs of about R100 000 to R150 000 per month per bus (Mokonyama, own calculations). Other standing costs, such as security, property-related costs and insurance, add a further 30–50% of labour costs. This implies standing costs of about R130 000 to R225 000 per month per bus. Long-distance bus operators would have incurred these costs without generating any fare revenue, which is normally about R15 per kilometre. Given capacity restrictions (i.e. a maximum 70% of capacity under alert level 1), long-distance bus operators would be losing a minimum of about R4,50 per kilometre, even before taking additional spending on Covid-19 risk mitigation measures into account.

## MINIBUS TAXI SERVICES

Of all the public transport modes, minibus taxis had the most to lose in the pandemic. This industry comprises about 200 000–300 000 vehicles and creates about 350 000 jobs (Mbalula, 2020). During alert level 5, vehicles were permitted to load only to 70% of licensed capacity (Table 6.4.5), and it is estimated that less than 60% of the minibus taxi fleet was in use. About 20% of the taxi industry faced a total loss of income, particularly long-distance and cross-border operators (Mbalula, 2020).

The minibus taxi industry responded negatively to the restrictions on public transport operations, particularly the reduction in the allowable vehicle capacity. After reported threats of a strike by the industry, the minister of transport announced on 1 April 2020 that minibus taxis would be allowed to load to full capacity, provided passengers wore face masks (SAnews, 2020b). The minister further announced a government commitment to assist minibus taxi operators with supplies of surgical masks and sanitisers. However, taxis would not be allowed to load to full capacity if passengers were not wearing masks. Following another public outcry, this time about the full-capacity loading of minibus taxis, on 2 April 2020 the minister of CoGTA amended the lockdown regulations, limiting taxi services to no more than 70% of their licensed capacity (CoGTA, 2020b).

*Table 6.4.5: Restrictions on minibus taxi services*

Level	Short-distance services (<200 km)	Long-distance services
5	Limited local operations for essential workers and permitted movements of other people, in 05:00–09:00 and 16:00–20:00 windows	Not permitted
4	Limited local operations from 05:00 to 19:00 at 70% of passenger capacity	Permitted during 1–7 May 2020 to help people move to their homes in other areas
3	Permitted at 70% of passenger capacity without restrictions on operating times From 16 July 2020: 100% capacity	Permitted at 70% of passenger capacity without restrictions on operating times
2 & 1	Permitted at 100% of passenger capacity	Interprovincial travel permitted at 70% of capacity

Source: [DPME, 2021](#)

The capacity restrictions and falling demand had a significant financial impact on the taxis that were allowed to operate (Box 6.4.2). A minibus taxi operator in an urban area would typically need to generate revenue of about R7/km in order to be viable. However, given the directional peak of travel demand and low off-peak demand, a minibus taxi typically generates about R5/km per day (Mokonyama, own calculations). This structural loss implies that operators may defer vehicle maintenance and pay drivers less than the minimum wage. The lockdown, therefore, severely affected minibus taxi operators. The industry reported finding it hard to cover running costs and being at risk of having vehicles repossessed. This helps explain why operators wanted to defy the regulations and load vehicles to full capacity. To make up the shortfall, some taxi operators have increased fares by 10–25% (Penny, 2020).

#### Box 6.4.2: Cape Town minibus taxi industry

Independent interviews were conducted with four taxi associations in the Cape Town area, which together operate about 240 minibus taxis. Services included local distribution routes in Khayelitsha and Mitchells Plain, as well as line haul operators providing services to Cape Town and Bellville central business districts.

Taxi operators reported a 60–70% drop in demand for taxi services in alert levels 5, 4 and 3. Demand for services recovered somewhat in alert level 2, with passenger levels increasing to 50–80% of 2019 levels, depending on service types. Line haul movements were the most affected and remained subdued.

To compensate for the reduction in passenger demand and to ensure that all operators would carry some passengers, the associations implemented a rotating operating schedule, with taxis operating on a one-day-on, one-day-off system. Vehicle owners reported that while no drivers were laid off, earnings decreased. Many owners were forced to default on vehicle financing repayments.

Source: McLachlan, 2020

On 19 June 2020, the minister of transport announced a once-off relief package for the minibus taxi industry to the tune of R1,135 billion (Mbalula, 2020). This would translate to about R5 676 per vehicle for the estimated 200 000 minibus taxis on the road. These funds would be paid out in once-off amounts to legal taxi operators with valid operating permits (i.e. just over than half of operators or about 137 000 taxis) and would apply to various roles in the industry, including taxi owners, drivers, rank managers and marshals. It would also provide relief to other taxi services, including metered taxi operators (about 25 000 registered taxis) and e-hailing services (about 63 000 registered drivers). The taxi industry rejected the proposed fund as too small; they cited the critical importance of the industry and the massive size of the overall relief package announced by the president (R500 billion). Operators requested relief of R20 000 per vehicle, to be paid directly to them and not to the associations.

The Department of Transport ([Moemi, 2021](#)) indicates that, ultimately, the taxi industry agreed with the R1,135 billion relief package; however, they required this to be paid without any conditions, which the department refused. The conditions (reportedly rejected by the industry) were:

- Registration for income tax
- Registration of formal businesses
- Transferral of valid operating licences from individual operators to the registered businesses
- Registration of industry employees with the Unemployment Insurance Fund
- Compliance with sectoral determinations by the minister of employment and labour, including the payment of minimum wages.

In order to reduce the risk of losing the relief fund to the revenue fund by end-March 2021 (due to non-expenditure), the Department of Transport plans to publish the relief conditions in a Government Gazette. The aim is to allow individual operators who wish to comply with the conditions to apply for the relief fund ([Moemi, 2021](#)).

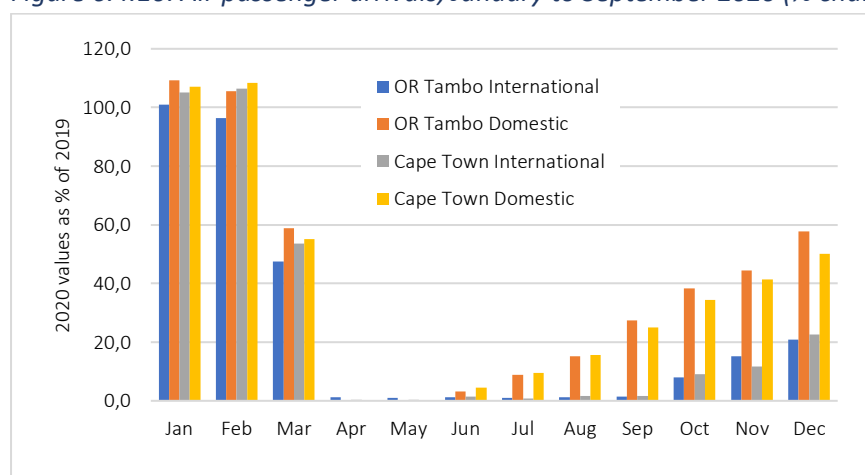
### PASSENGER AIR TRANSPORT

The airline industry had been in financial difficulty even before the pandemic. South African Airways and SA Express were placed in business rescue in December 2019 and February 2020 respectively. Comair voluntarily entered business rescue in April 2020 (Zweigenthal, 2020). The pandemic greatly

exacerbated these problems. The Airlines Association of Southern Africa estimates that 40 000 jobs are at risk in the directly related aviation sector, as are 270 000 jobs in related sectors. Many employees had their salaries reduced, were forced to take paid or unpaid leave, or were retrenched.

Figure 6.4.10 shows international and domestic arrivals at OR Tambo and Cape Town International Airport as a percentage of 2019 trips. In January 2020, all airports had seen growth in domestic and international travel. International arrivals at OR Tambo International Airport dropped slightly in February 2020 and all air travel dropped sharply in March 2020, suggesting that passengers had already been wary of travelling before the lockdown. Passenger air travel was all but prohibited during the lockdown, being limited to repatriation flights in alert levels 5 and 4 (Table 6.4.6). Unsurprisingly, from April to June 2020, international arrivals fell by over 99% year-on-year (DT, 2020).

*Figure 6.4.10: Air passenger arrivals, January to September 2020 (% change year-on-year)*



Source: ACSA, 2020

*Table 6.4.6: Restrictions on passenger air transport*

Level	Restrictions
5 & 4	All domestic and international passenger flights suspended
	Repatriation flights can bring citizens home and return foreign nationals to their home countries
3	Domestic air travel allowed for business purposes, with authorisation based on the reason for travel
	Flights operated from a few airports allowed to start operations in a phased approach
	International passenger flights prohibited unless authorised by the minister of transport
2	Domestic air travel allowed for all purposes
	International passenger flights prohibited unless authorised by the minister of transport
1	Domestic air travel allowed for all purposes
	International passenger flights allowed, except where travel to and from South Africa had been restricted by the destination country

Source: [DPME, 2021](#)

Under alert level 3, domestic travel was allowed from various airports (Table 6.4.7). This contributed to a gradual increase in domestic passenger numbers from June 2020. Alert levels 2 and 1 saw an increase in local air travel, recovering to 50% and 58% of 2019 levels in December at Cape Town and

OR Tambo International Airports respectively. With international travel again allowed from alert level 1, international movements increased suddenly from October 2020. However, it remained subdued until the end of 2020, at about 20% of the normal passenger numbers.

*Table 6.4.7: Resumption of passenger flights at local airports*

Airports opened	01 June	29 June	21 July	25 August
	OR Tambo INT	Bram Fischer	East London	Mthatha
	Cape Town INT	Kruger-Mpumalanga	George	Hoedspruit
	King Shaka INT	Pietermaritzburg	Kimberley	Phalaborwa
	Lanseria INT	Port Elizabeth		Margate
		Richards Bay		
		Skukuza		
		Upington		

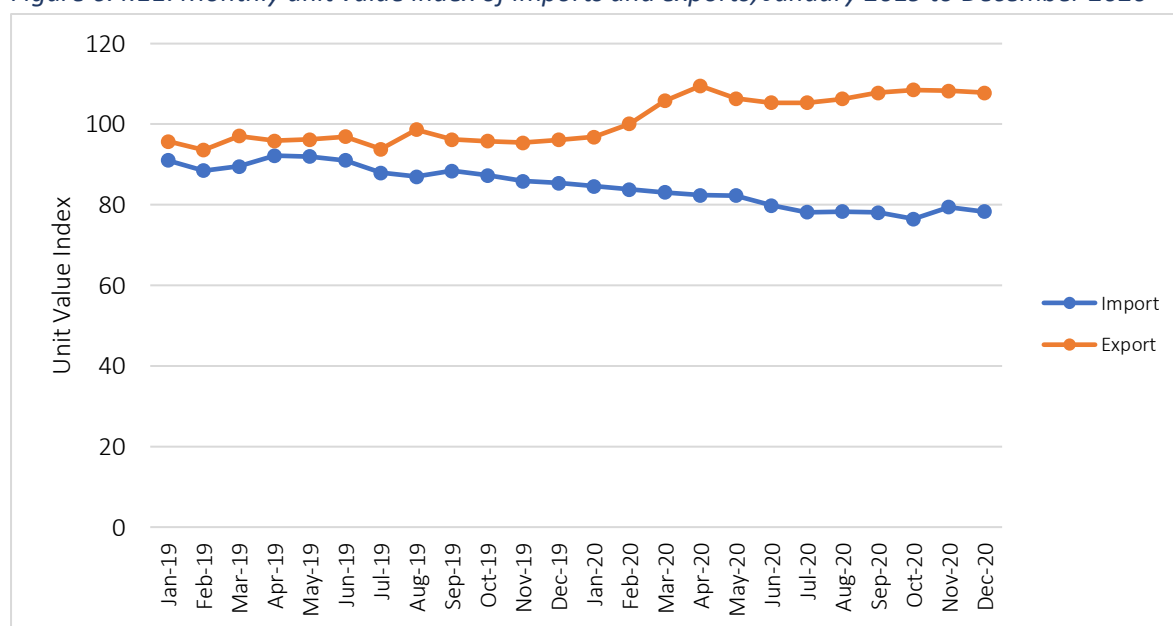
Source: [DPME, 2021](#)

## FREIGHT MOVEMENT

### INTERNATIONAL FREIGHT

Land, sea and airports were closed to passenger movement during the strictest part of the lockdown, but freight movements through ports were allowed to continue, as shown in Table 6.4.8 ([DPME, 2021](#)). Trends in the export prices of local produce and the prices of imported commodities (Figure 6.4.11) suggest the pandemic has had little influence on the import and export market. The unit value index of imports decreased steadily throughout 2019; this trend continued to June 2020, after which imports stabilised. The unit value index of exports increased until April 2020 and then remained relatively constant for the remainder of 2020.

*Figure 6.4.11: Monthly unit value index of imports and exports, January 2019 to December 2020*



Source: Stats SA, 2020a

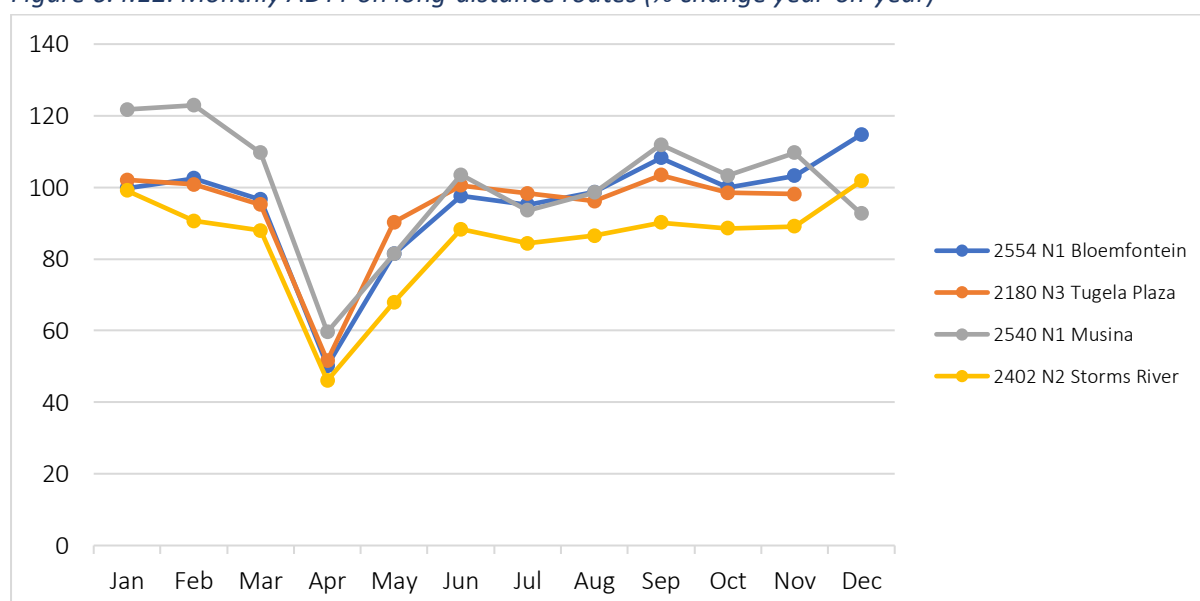
Table 6.4.8: Restrictions on international freight

Levels	Restrictions
5 & 4	Only essential cargo (defined by government notices in terms of the Disaster Management Act) allowed to enter and exit at land, sea- and airports. No crew changes allowed
3, 2 & 1	Cargo allowed to enter and exit at land, sea- and airports; South African crew permitted to embark and disembark from cargo ships.

## LOCAL FREIGHT

The average daily truck traffic (ADTT) – the number of heavy vehicles (trucks) counted on the main national distribution routes – gives a good indication of local freight movements. Figure 6.4.12 shows monthly ADTT on four national routes (the N1 north of Bloemfontein and close to the border with Zimbabwe at Musina, the N2 at Storms River, and the N3 at the Tugela Toll Plaza). Truck traffic at these locations decreased slightly in March 2020 and then fell to 40–60% of normal levels in April. While not insignificant, this is not as severe as the decrease in private vehicle traffic at the same locations. Truck traffic returned to normal levels by June, except along the N2, which carries proportionally less freight. Although traffic along the N1 close to Musina returned to levels similar to those of 2019, these still fell short of the traffic levels observed in January and February 2020.

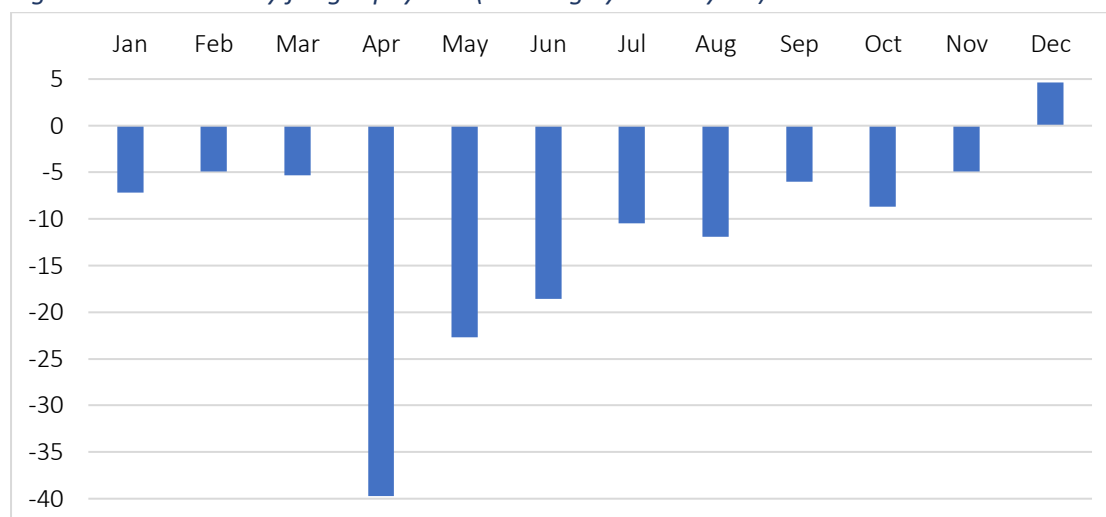
Figure 6.4.12: Monthly ADTT on long-distance routes (% change year-on-year)



Source: Based on data from SANRAL

Payload data highlights the subdued movement of local freight in the pandemic (Figure 6.4.13). While payloads were below normal throughout 2020, April saw the largest fall (-39,7%). These reductions relate to reduced movements of manufactured food, beverages and tobacco products, as well as containers, basic metals and fabricated metal products (Stats SA, 2020a). September and November 2020 saw freight payloads approaching pre-pandemic levels (January to March 2020), while in December 2020 freight payloads exceeded 2019 levels for the first time in the year.

Figure 6.4.13: Monthly freight payload (% change year-on-year)

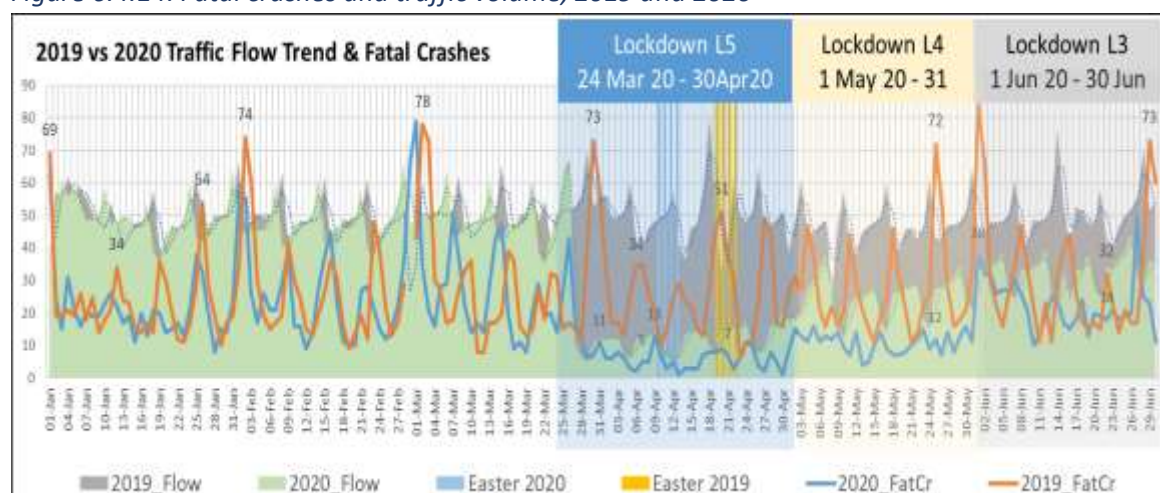


Note: Base=December 2016; Source: Stats SA, 2020a

## ROAD SAFETY

Traffic accident numbers are directly influenced by the number of vehicle kilometres travelled and alcohol intake, both of which were significantly lower during the lockdown. When vehicle volumes on major roads fell dramatically after lockdown, relative to the same period in the previous year, so did fatal accidents (Figure 6.4.14). Particularly striking was the massive reduction in fatal crashes during the Easter period (Table 6.4.9). As restrictions were slowly eased, accident numbers started to rise again. Figures from the eThekweni Transport Authority for April (2018: 5597; 2019: 6115; 2020: 997) show an 85% decrease in the number of crashes. Under alert level 2, the number of crashes increased but remained much lower than in the previous year (2148, against 6289 in May 2019). Worth noting is that crash numbers in eThekweni fell further than did traffic flow levels. This disproportionate decrease in crashes probably reflects the banning of alcohol sales.

Figure 6.4.14: Fatal crashes and traffic volume, 2019 and 2020



Note: Traffic volumes obtained mainly from toll plazas on national roads; most plazas are in rural areas.  
Source: Based on data from the Road Traffic Management Corporation

Table 6.4.9: Easter Holiday road fatalities, per province, 2019 and 2020

Year	Gauteng	KwaZulu- Natal	Western Cape	Eastern Cape	Free State	Mpuma- langa	North West	Limpopo	Northern Cape	National
2019	16	37	18	22	4	17	13	32	3	162
2020	3	6	3	5	0	7	3	1	0	28
% change	-81	-84	-83	-77	-100	-59	-77	-97	-100	-83

Source: RTMC, 2020

Most of the 2020/21 festive season took place under alert level 3, when alcohol was still banned. The Department of Transport reported a 10,3% year-on-year reduction in fatal crashes nationally, along with a 7% reduction in fatalities in this period (Zwane, 2021). Based on the lessons learnt from the banning of alcohol and its impact on road crashes, the department plans to amend the National Road Traffic Act to reduce the blood alcohol level limit for drivers to zero and also to introduce severe penalties for drunk driving ([Moemi, 2021](#)). It further wishes to extend penalties to every form of intoxicated driving, including from the use of drugs.

## THE CHANGING FACE OF TRANSPORT

As noted, the pandemic has significantly changed how people work and, hence, how they use transport. Businesses are likely to allow greater flexibility and more working from home, which would affect transport across modes and patterns in peak periods. However, the pandemic also underscored disparities in the provision of transport. Most people do not have the option of working from home. More emphasis is being placed on walking and cycling as modes of travel, recognising that social distancing is a new argument in support of these options. However, where distances are too far for walking and cycling, minibus taxis continue to fill the gap, and given the relative weakness of bus and rail services, are likely to play an increasingly important role. In a pandemic, people who own cars prefer the safety of their own vehicles. Thus, Covid-19 probably reversed any nascent shifts from private to public transport.

## LESSONS LEARNT

The following key lessons are worth noting:

- Travel demand is elastic to enforced regulations. South Africa can benefit from travel demand management, where regulations are used to influence travel in order to manage peak volumes.
- Pandemics can have a severe impact on transport infrastructure, systems and operations. Therefore, the transport sector needs robust business continuity plans.
- The resources required to implement lockdown regulations were not properly estimated. It was assumed, for example, that operators would finance the implementation of the regulations; however, the operators had structural cash flow constraints. The financial impact of the lockdown has been especially severe on the minibus taxi industry, which carries the majority of travellers.

- Conflicting medical advice on the risk posed by public transport creates uncertainties about the use of public transport services. Unambiguous and scientifically supported messaging is vital. Such uncertainties could have severely affected services such as the Gautrain, which is used mainly by people who have access to private vehicles.
- While walking remains a predominant mode of travel, with a lower risk of Covid-19 transmission, there were few, if any, initiatives to improve conditions and infrastructure for walking and cycling.

## RECOMMENDATIONS

- The various regulations published by CoGTA and the national Department of Transport assumed the availability of technical capacity and financial resources to implement them. In reality, the relevant entities and departments were ill resourced. The development of a *business continuity plan* for the transport sector is therefore recommended. The Department of Transport should set out broad guidelines in this regard and not leave it to individual operators. The plan must include the financing of public transport for resilience and incorporate spatially represented social vulnerability. This would, for example, inform the targeted provision of relief to essential workers. A periodically updated register of essential workers is key, especially in vulnerable communities.
- A more equitable public transport subsidy policy should be adopted to also cater for *minibus taxi* operations.
- Some employers had apparently been willing to *contract dedicated public transport service providers* for the exclusive use of their employees in order to minimise transmission risks. Such an arrangement should be proactively facilitated and supported in the regulations. Elsewhere in the world, for example Hong Kong, underutilised taxi services were used to deliver goods.
- The National Treasury and the Department of Trade, Industry and Competition must work together to formulate a responsive *disaster management policy* for supply chains that include the automotive and construction sectors.
- More in-depth *research* on the risks of disease transmission on public transport is required. Practices adopted by various stakeholders to minimise the transmission and impact of Covid-19 in the transport sector must also be documented. Such lessons may help improve the transport sector adapt faster to other disease outbreaks and disasters, including from climate change, for example.

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