Low Carbon Frameworks: Transport

OVERVIEW OF LEGAL AND POLICY INSTRUMENTS AND INSTITUTIONAL ARRANGEMENTS
Relating to Transport, Land Use and Spatial Planning in South Africa

1. INTRODUCTION

This briefing paper presents a summary of the legal and policy instruments related to transport and land use planning in South Africa, with a specific focus on how they work towards or against provision of transport services in a low carbon economy. It also provides some insights on implementation challenges from a small number of stakeholders in the sector.

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LIST OF ACRONYMS

BRT  Bus Rapid Transit
CBD  Central Business District
COSATU  Congress of South African Trade Unions
DEA  Department of Environmental Affairs
DEAT  Department of Environmental Affairs and Tourism
DFA  Development Facilitation Act
EIA  Environmental Impact Assessment
UNDP - GEF  United Nations Development Programme Global Environmental Facility
GHGs  Greenhouse Gas Emissions
IDZ  Industrial Development Zone
IRPTN  Integrated Rapid Public Transport Network
MEC  Member of Executive Committee
NATMAP  National Transport Master Plan
NDOT  National Department of Transport
NEMA  National Environmental Management Act
NGP  New Growth Path
NLTA  National Land Transport Act
NLTTA  National Land Transport Transition Act
NMT  Non-motorised Transport
NSDP  National Spatial Development Perspective
SATAWU  South African Transport Workers' Union
SDF  Spatial Development Frameworks
SEZ  Special Economic Zone
2. TRANSPORT LEGAL AND POLICY INSTRUMENTS

National Government has developed a number of legal and policy instruments which outline its obligations and policy direction with respect to the transport sector in South Africa. This policy process began soon after the advent of democracy and continues to be built upon.

These instruments, largely developed by the National Department of Transport (NDoT), refer to development of both the passenger and freight transport system and including rail, road, sea and air transport modes.

Whereas the large majority of these instruments refer to the need to consider environmental protection in the development of the transport system, only two recent instruments, the Public Transport Strategy and Action Plan and the National Transport Master Plan, specifically articulate the need to consider “carbon emissions”.

A list of the instruments is presented in the sections below. In each section, the purpose of the instrument is outlined and aspects relevant for transition to low carbon transport identified. A summary of the roles and responsibilities in land-based transport in South Africa is also presented in the final section.

The instruments reviewed are summarised in the table below:

<table>
<thead>
<tr>
<th>Section</th>
<th>Policy Instrument</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>White Paper on National Transport Policy</td>
<td>Outlines a vision for the South African transport system to provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure</td>
</tr>
<tr>
<td>2.2</td>
<td>Moving South Africa – A Transport Strategy for 2020</td>
<td>Addresses urban, rural, freight and special transport needs, analyzes the sustainability of the present transport system and presents possible solutions to the problems facing the industry</td>
</tr>
<tr>
<td>2.3</td>
<td>National Land Transport Transition Act (NLTTA)</td>
<td>Addresses transformation and restructurering of the national land transport system and defining land transport policy</td>
</tr>
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<td>2.4</td>
<td>Interim National Passenger Rail Plan</td>
<td>Provides a business plan for commuter and long distance rail services</td>
</tr>
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<td>2.5</td>
<td>National Freight Logistics Strategy</td>
<td>Promotes safe, reliable, effective, efficient and fully integrated transport systems and operations</td>
</tr>
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<td>2.6</td>
<td>Public Transport Strategy and Action Plan</td>
<td>Defines strategic objectives for public transport and specific actions to achieve these objectives</td>
</tr>
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<td>2.7</td>
<td>Rural Transport Strategy for South Africa</td>
<td>Promotes coordinated rural nodal and linkage development and develop demand-responsive, balanced and sustainable rural transport systems</td>
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<td>2.8</td>
<td>Draft National Non-motorised Transport (NMT) Policy</td>
<td>Promotes the role of NMT as a key transport mode</td>
</tr>
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<td>2.9</td>
<td>Draft National Maritime Transport Policy</td>
<td>Facilitates the growth and development of South Africa’s maritime transport sector</td>
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<td>2.10</td>
<td>National Land Transport Act (NTLA)</td>
<td>Addresses continued transformation and restructuring of the national land transport system</td>
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<td>2.11</td>
<td>National Climate Change Response White Paper</td>
<td>Although not directed at transport, the White Paper has some provisions which will impact the transport sector</td>
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<tr>
<td>2.12</td>
<td>National Transport Master Plan (NATMAP)</td>
<td>Develops a long term and sustainable land use/multimodal transport systems framework</td>
</tr>
</tbody>
</table>
The following people were interviewed regarding the implementation of some of these policies and plans:

**Jane Barrett**: Affiliate Support Coordinator at COSATU, previously Policy Research Officer at SATAWU.

**David Ingham**: Project Coordinator NDOT/UNDP-GEF Sustainable Transport Project

According to David Ingham, although government policies often refer to environmental protection in the development of transport systems, action explicitly identified to reduce Greenhouse Gas Emissions (GHGs) is rare. The priority of the Department of Transport is to provide a transport system that is accessible and efficient. However, government strategies being implemented such as building public transport networks and reducing travel times will have the unintended consequences of minimizing GHG emissions.

### 2.1 White Paper on National Transport Policy (1996)

The White Paper on National Transport Policy outlines a vision for the South African transport system to provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will:

- Meet the needs of freight and passenger customers at improved levels of service and cost
- Support government strategies for economic and social development
- Be environmentally and economically sustainable

Two key thrusts of the White Paper are *intermodalism* and *integration*. **Intermodalism** refers to promotion of intermodal co-ordination, co-operation and sharing of information, which will be encouraged in both infrastructure provision and operations.

According to the White Paper, a key driver of reducing costs of transport will be capacity utilisation. As such, a goal of infrastructure and modal planning is to optimise capacity utilisation and to increase integration between modes. The policy does not state, however, that Government will force the use of particular modes simply to utilise existing spare capacity. Rather, customer service criteria (cost, timeliness, reliability, security etc.) will be the determining factor in mode choice. In principle, intermodalism will be fostered by incentives, and not regulation.

This implies that there is no clear policy directive to support a lower carbon mode, such as a rail, over a higher carbon mode such as road.

**Integration** refers to modal, spatial, institutional and planning integration of transport policy. It also refers to a decision-making process that involves the appropriate government, private sector and consumer input.

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LOW-CARBON FRAMEWORKS BRIEFING
In terms of understanding how this White Paper may relate to low carbon planning, it is identified that one of the stated goals is:

“To achieve the above objectives in a manner which is economically and environmentally sustainable, and minimise negative side effects.”

As such, it prescribes that the provision of infrastructure should take place within an integrated environmental management approach, and should include the performance of environmental impact assessments (EIAs). Among the issues to be considered are environmental impacts, energy conservation, the transport of hazardous materials and the conservation of scarce infrastructure construction materials. Of these, the two that relate to low carbon planning are those of energy conservation and conservation of infrastructure materials which carry with them a carbon burden.

In terms of Land Passenger Transport, the White Paper goes on to suggest that the use of more energy efficient and less pollutant modes of transport will be promoted, and a greater energy awareness will be fostered amongst planners and users. The mission for Land Freight Transport refers briefly to the need to provide a service which is environmentally sustainable, with specific reference to all aspects of transporting hazardous substances and goods. The civil aviation component also refers to the need to minimise any detrimental impact on the environment.


Moving South Africa outlines the strategic framework for the South African transport sector through 2020. It addresses urban, rural, freight and special transport needs, analyzes the sustainability of the present transport system and presents possible solutions to the problems facing the industry.

According to Jane Barrett, this document identified issues around the cost of transport. It laid the foundations for a market economy transport approach, including a strategy to introduce competitive tendering to the bus industry which has had an impact of increasing transport fares, thereby lowering accessibility of the public transport system to the poor.

2.3 National Land Transport Transition Act (2000)

The National Land Transport Transition Act gives effect to the White Paper on National Transport Policy with the aim of restructuring South Africa’s land transport system.

- Principles of the Act relevant to low carbon planning are:
- Priority placed on the development of public transport services, with a focus on integration of modes in a manner that is least harmful to the environment
- Integration of land transport functions with related functions such as land use and economic planning
- Development through corridors, densification and infilling.

The Act requires the Minister of Transport to publish annually the National Land Transport Strategic Framework for the country for a five year period.
The Framework must serve to guide land transport planning countrywide. The Act also requires MECs to annually prepare Provincial Strategic Transport Frameworks which must have due regard for integrated development plans and include a public transport strategy for the province.

A key feature of the Act is that it legislated for Local Transport Authorities to become key transport planning and coordination entities.

2.3.1 Implementation

According to the deputy transport minister, Jeremy Cronin, the power vested in Transport Authorities never took effect, with only one Transport Authority ever being established. This was partly due to local government dispensation that came into effect in 2000 which established single-tier metropolitan authorities encompassing entire metropolitan areas. Thus much of the rationale for Transport Authorities was removed.

2.4 Interim National Passenger Rail Plan (2005)

The Interim National Rail Passenger plan contains a Priority Rail Corridor Strategy which seeks to identify routes to which rail has a comparative advantage, thereby optimizing on business and operational efficiency. Routes identified are those where high volume coincides with corridors of preferred future development in line with long term Spatial Development Frameworks, and where there are no serious engineering obstacles.

The plan includes a passenger rail business plan for both commuter and long distance rail and a stabilization plan (actions to secure feasible short term goals by region and corridor).

2.5 National Freight Logistics Strategy (2005)

The National Freight Logistics Strategy identifies that South Africa’s freight system is currently riddled with inefficiencies and unable to fulfil the demand for cargo movement at prices, levels of service, quality of service and at accepted levels of reliability in a manner that supports the national development strategies.

The strategy mainly refers to:

- Proposed changes to the freight industry’s governance and management;
- Regulatory and institutional reform;
- Integration with Transnet policy; and
- Integrated planning, information collection and forecasting.

While noting that there has been a growth in road freight and a decline in rail freight in recent years, there is an acknowledgement that moving goods via road is problematic because of exhaust emissions, congestion and other environmentally detrimental effects.


In proposing solutions to the challenges of moving freight in South Africa, the strategy notes that there is a need to consider environmental sustainability.

Environmental objectives encompass reduction of congestion, reduction of infrastructure damage, reduction of exhaust emissions and reduction of external items such as accident costs. As such, the policy speaks about overhauling the entire freight system but without specifically mentioning a mode preference relating to lowering carbon emissions. However, clearly a shift from road to rail is consistent with a low carbon transport system.


The Public Transport Strategy lays out strategic objectives for South Africa’s public transport system. The Strategy has two key thrusts:

- **Accelerated Modal Upgrading**: This includes consolidating the passenger rail sector, rolling out the National Passenger Rail Plan, implementing Taxi Recapitalisation; and transforming and optimising current subsidised bus services

- **Integrated Rapid Public Transport Networks**: This is a focus on implementing high quality Phase 1 networks of Rail Priority Corridors and Bus Rapid Transit Corridors in the six metro cities. There will also be integration with the pedestrian precinct environment, bicycle feeder networks, metered taxis, motorised two and three wheelers and park and ride facilities.

The aim until 2020 is to develop a system that places over 85 percent of a metropolitan city’s population within one kilometre of an Integrated Rapid Public Transport Network trunk (road and rail) or feeder (road) corridor and to achieve a mode shift of 20 percent of car work trips to public transport networks. Furthermore, the aim will be to actively integrate the networks into urban CBD renewal efforts that are underway.

The Strategy also provides for non-motorised transport networks, metered taxis, long distance public transport services and car use and parking demand management such as incentives and penalties to get car users to switch.

The strategy makes reference to the promotion of low-emission vehicle technologies. However, it does not specify if these emissions relate to local pollutants, greenhouse gases or both.

The Public Transport Strategy is clearly facilitative of the transition to a lower carbon transport sector.

Following approval of the Public Transport Strategy by Cabinet in January 2007, a Public Transport Action Plan was developed to translate the Strategy into action. It maps out a Phase 1 (2007-2010) fast track implementation programme that targets the initial development of high quality, integrated rapid public transport networks (IRPTNs) in 12 cities: City of Johannesburg; Tshwane; Cape Town; Nelson Mandela Bay Metro; Ethekweni; Ekurhuleni; Buffalo City, Mbombela; Mangaung; Polokwane; Rustenberg; and Msunduzi.

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The Action Plan contains “catalytic projects” for Phase 1. The goal of the “Catalytic Projects” is to initiate implementation of Integrated Rapid Public Transport Networks in targeted municipalities, simultaneously with the current nationwide rollout of “Accelerated Modal Recovery” interventions. This network will prioritise public transport, walking and cycling over private car travel and will dedicate road space to these priority modes. The latter involves the 3-7 year modal transformation plans such as the Taxi Recapitalisation Plan, Passenger Rail Plan and the Commuter Bus Transformation Plan.

The Action Plan proposes the phased establishment of transport authorities that are able to plan, manage and regulate a Network in which the transport authority is responsible for the fare revenue and operators are contracted to provide particular services in terms of the Network Plan. The Provinces will play a coordinating role with regard to planning and to ensure core capacity is available for transport authorities. The Action Plan also proposes a public transport network. The IRPTN Rollout is being implemented by the DoT for six rural districts:

- Sekhukhune, in Limpopo
- OR Tambo, in Eastern Cape
- Umkhanyakude, in KwaZulu-Natal
- Ehlanzeni, in Mpumalanga
- Thabo Mofutsanyane, in Free State
- Kgalagadi, in the Northern Cape

These districts have been selected because they are high on the social need index and simultaneously have development potential with close proximity to economic opportunities.

2.6.1 Implementation

According to David Ingham, the publication of this document and its progress in implementation has indicated a major shift in Government focus towards the rollout of IRPTNs in cities. There are currently functional systems in Cape Town and Johannesburg. Ten other cities are in various stages of planning. These public transport systems not only have the potential to direct private transport user to public transport. They also have the potential slow down the shift from public transport to public transport in the emerging middle class.

There are, however, a number of challenges associated with public transport implementation. Firstly, the negotiations with existing operators regarding compensation for loss of business have slowed down implementation. Secondly, the IRPTNs are labour and capital intensive and may be directing focus away from possible improvements to existing infrastructure which could take place at a lower cost.

Further, there is a question of financial viability of many public transport routes. Due to the layout of South African cities, many people live far from their place of work. This has created “dormitory suburbs” and there are a large number of people using public transport at peak hours. However, services are generally underutilized at other times of the day. This has contributed towards expensive fares. Lack of affordability of fares negatively affects accessibility of public transport services.

According to Jane Barrett, the affordability of the public transport system has been negatively affected by Government’s pursuit of market-orientated competitive tendering established on the assumption that it would drive prices downwards. This has resulted in a number of small operators entering the system.
in line with Government’s Black Economic Empowerment goals. However, the system of small operators does not allow for economies of scale which would allow the public transport system to be cheaper for users. At present the cost of transport for the public is significantly above Government’s goal of 10% of monthly earnings stated in the White Paper.

Barrett identifies further that transport subsidies remain very small. There has been no progress in creating new routes where new settlements are established. The consequence is that these settlements quickly become serviced by the taxi industry which has relatively high GHG emissions compared to public transport alternatives. In terms of city rail transport (Metrorail), all funding is being used to refurbish existing infrastructure. There are few new routes and additional coaches.

Barrett and Ingham are both of the view that one of the challenges in implementing policy is the devolution of policy from the National to the Provincial and Local level. There is a lack of capacity at local government level to create Integrated Transport Plans and the requisite technical knowledge is wanting. From a GHG emission perspective there is a view that departments are working in ‘silos’ without sufficient integration in strategy or budget allocation. Jane Barrett believes that one of the problems in changing government implementation is that there are no strong commuter organizations besides those in the Western Cape.

Some commentators have reviewed the social impact of the current public transport services, particularly on accessibility to opportunities. Chakwizira et al. (2011), commenting on the implementation of the Rea Vaya and Gautrain in Gauteng, note that the public transport system reinforces inherited urban spatial accessibility challenges. They note that terminals are located far away from marginal communities’ locations. Therefore, commuters from marginal communities need to make various changes in order to access these services. In addition, BRT routes in Johannesburg and Pretoria are operating on traditional taxi routes, rather than providing access to outlying and underserviced marginal transport communities.

Using a small sample household survey, Venter and Vaz (2012) consider the poverty impacts of the Rea Vaya in Johannesburg. Key findings indicate that the Rea Vaya has improved accessibility to a number of activities including work. However, these benefits accrue mainly to medium income households rather than the poorest commuters in the area because Rea Vaya is priced higher than the cheapest available transport alternative. Therefore, it is not conducive to creating social equity.


LOW-CARBON FRAMEWORKS BRIEFING
2.7 Rural Transport Strategy for South Africa (2007)

The Rural Transport Strategy for South Africa\(^8\) views the delivery of a rural transport infrastructure as a significant catalyst for sustainable economic development, improved social access and poverty alleviation in South Africa's rural areas.

The strategy has two strategic thrusts:

- Promote coordinated rural nodal and linkage development.
- Develop demand-responsive, balanced and sustainable rural transport systems.

Sustainability is one of the guiding principles of the strategy i.e. consideration of the transport system's impacts on the wider social, economic and biophysical environment. No explicit reference is made to greenhouse gas emissions.

Amongst other programmatic foci, the strategy outlines the development of the non-motorised transport system and specifies alignment with existing non-motorised transport initiatives such as DoT's *Shova Kalula* National Bicycle Partnership Programme\(^9\). The focus on non-motorised transport is encouraging in terms of low carbon planning.

2.8 Draft National Non-Motorised
Transport Policy (2008)

The primary objectives of the Non-Motorised Transport (NMT) policy\(^10\) are to increase the role of NMT as a key transport mode, integrate NMT as an essential element of public transport, provide a safe NMT infrastructure and allocate adequate and sustainable funding for the development and promotion of NMT.

Guiding principles of the policy are:

- the integration of NMT into the transport system
- the need to improve quality of life for marginalised people and adherence to the principle of environmental protection and energy conservation.

Once again there is no specific reference to greenhouse gas emissions, although as identified above, NMT has a strong role to play in reducing emissions from the sector.

There is emphasis on the need to improve safety and ease of use for non-motorised transport users, in particular pedestrians to improve the perception of walking as a transport mode. Measures suggested are improvements in infrastructure such as cycling paths and pedestrian walkways and measures to increase social safety such as lighting and police surveillance.

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2.8.1 Implementation

According to David Ingham, implementation of non-motorised transport has started in Cape Town, Polokwane, Manguang and Rustenburg. Challenges to the rollout of NMT are the safety of users from other vehicles and crime. In the case of bicycle programmes in low income communities, the challenge is the affordability of maintaining the bicycles. In these communities, bicycles are also viewed as a mode of transport for poor people and therefore not valued as much as cars. These challenges impact on the ability of the programme to improve accessibility to opportunities such as work.


The intent of the Maritime Transport Policy is to create a policy environment that facilitates the growth and development of South Africa’s maritime transport sector to its full potential in support of economic growth and sustainable social development of South Africa.

The policy suggests that the NDoT and the maritime industry should keep abreast with international environmental compliance issues. The policy also states that all entities reporting to the NDoT in the maritime industry should embark on Environmental Implementation Plans (EIPs), and that these shall form the submission of the NDoT to the Department of Environmental Affairs and Tourism (DEAT – now the Department of Environmental Affairs, DEA) in compliance with the stipulations of the National Environmental Management Act (NEMA).

2.10 National Land Transport Act (2009)

The purpose of the National Land Transport Act (NLTA) is to:

- Further the process of transformation and restructuring of the national land transport system initiated by the National Land Transport Transition Act (referring to institutional arrangements, planning, funding, regulation and law enforcement)
- Prescribe national principles, requirements, guidelines, frameworks and national norms and standards that must be applied uniformly in the provinces and other matters contemplated in section 146 (2) of the Constitution
- Consolidate land transport functions and locate them in the appropriate sphere of government

Among other functions, the Act mandates the Minister of Transport to promote the efficient use of energy resources, and limit adverse environmental impacts in relation to land transport. No further detail is provided as to what this entails or the implications thereof for low carbon planning in the sector.

The Act also mandates the Minister to facilitate the increased use of public transport that:

- Is effective in satisfying user needs
- Operates efficiently as regards the use of resources
- Is of an acceptable standard and readily accessible and is operated in conjunction with effective infrastructure provided at reasonable cost
- Is safe
- Ensures the integration of public transport modes, giving due consideration to the needs of users
- Promotes effective integrated transport planning

This mandate is encouraging as increased public transport is central to low carbon planning, in that it represents a far more energy efficient way of providing transport services than those offered by private vehicles. Public transport has further benefits of reducing congestion and lowering air pollutants, as well as potentially improving road safety. Having said this, approaches to spending of public funds on public transport should include considerations of equity and accessibility – many interventions are focussed on income groups who already have access to transport, and who can afford transport services. This is discussed in detail in Section 2.6.

2.11 National Climate Change Response White Paper (2011)

Although not directly focused on transport, the National Climate Change Response White Paper does make some provisions which have implications for the sector. The first of these a commitment to “ensure access to affordable lower-carbon public transport systems” (p. 21). The second is that key sectors, of which transport is one, are required to draw up carbon budgets within two years of publication of the White Paper.

The third is the commitment to the Transport Flagship Programme. Under this Flagship Programme, the White Paper suggests that the Department of Transport will “…facilitate the development of an enhanced public transport programme to promote lower-carbon mobility in five metros and in ten smaller cities and create an Efficient Vehicles Programme with interventions that result in measurable improvements in the average efficiency of the South African vehicle fleet by 2020.” (p. 31) It is identified that the planned rail re-capitalisation programme forms a component of this Flagship Programme.

2.12 National Transport Master Plan (NATMAP) (2012)

The overarching goal of NATMAP is to develop a dynamic, long term and sustainable land use/multimodal transport systems framework. As of June 2012, NATMAP is in the final stage of stakeholder consultation.

NATMAP identifies a need to continuously upgrade passenger and freight infrastructure in an innovative, flexible and economically and environmentally sustainable manner in order to achieve the above goal. One of its objectives is to provide energy efficient transport and to reduce the carbon footprint of transport. Another is to provide an integrated and multimodal passenger transport system.

Selected road programmes identified under NATMAP include:

- Road maintenance – elimination of backlog and periodic and routine maintenance
- Promotion of public transport investment
- Capacity upgrades, (lane additions) to roads when they reach Level of Service E
- New construction and major upgrades of roads

Selected rail programmes include:

- Introduction of a standard gauge rail system
- Implementation of passenger rail initiatives including feasibility studies for high speed rail programmes including linking Johannesburg to Durban and Polokwane via rapid train networks
- Provision of access to private operators.

The plan states that new airports will be planned for Gauteng (2050), Cape Town (2040) and Durban (2050) and the ports of Saldanha Bay and Cape Town will be expanded.

The goals and programmes of NATMAP could serve to either facilitate or work against low carbon planning in the transport sector. As congestion is a large source of GHGs, upgrade of road infrastructure could have a short term positive impact. However, in the long term upgrading of road infrastructure potentially works against planning for a low carbon economy, which can be enhanced through a reduction in road based transport volumes through increase public transport and a shift to rail. Air travel is currently a high emissions intensity activity, and suggestions of increased air traffic are once again counter to low carbon planning. Increased rail initiatives for passenger transit are, however, supportive of the low carbon transition.
# 2.13 Roles and responsibilities in land transport

The table overleaf provides a summary of the roles and responsibilities in land transport in South Africa.

<table>
<thead>
<tr>
<th>TRANSPORT FUNCTIONS ACCORDING TO THE NATIONAL LAND TRANSPORT ACT (2009)</th>
<th>NATIONAL</th>
<th>PROVINCIAL</th>
<th>LOCAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MINISTER OF TRANSPORT</strong></td>
<td>Publish national policy</td>
<td>Member of Executive Committee for Transport</td>
<td>No political role defined by the Act</td>
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<tr>
<td></td>
<td>Monitor provincial land transport policies and frameworks</td>
<td>Report to the Minister on utilization of funds</td>
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<tr>
<td></td>
<td>Take responsibility for land transport arrangements with other countries, with Department of Foreign Affairs</td>
<td>Promote provincial land transport policy</td>
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<tr>
<td></td>
<td>Coordinate between 3 spheres of government</td>
<td>Monitor provincial land transport policy</td>
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<td></td>
<td>Promote effective integrated transport planning</td>
<td>Promote provincial legislation</td>
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<td></td>
<td>Maintain national information system with respect to land transport</td>
<td>Monitor the implementation of provincial land transport policy</td>
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<td></td>
<td>Establish the National Public Transport Regulator within the Dept of Transport</td>
<td>Assist municipalities with resources if necessary</td>
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<tr>
<td></td>
<td>May provide funds for land transport</td>
<td>Establish a Provincial Regulatory Entity</td>
<td></td>
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<tr>
<td></td>
<td>Responsible for producing the National Land Transport Strategic Framework</td>
<td>May provide funds for land transport</td>
<td></td>
</tr>
<tr>
<td><strong>MEMBER OF THE MAYORAL COMMITTEE FOR TRANSPORT</strong></td>
<td>Provide minister with information for national information system</td>
<td>Responsible for producing the Provincial Land Transport Strategic Framework (MEC) which must include planning of both intraprovincial and interprovincial long-distance services, which must be linked where applicable with other public transport services</td>
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<td></td>
<td>Report to the Minister on utilization of funds</td>
<td>Promulgate municipal bylaws</td>
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</tr>
<tr>
<td></td>
<td>Monitor the implementation of provincial land transport policy</td>
<td>Coordinate between departments and agencies within the municipal sphere</td>
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<td></td>
<td>Promote provincial legislation</td>
<td>Plan and implement and manage modally integrated public transport networks and travel corridors for transport within the municipal area and liaising in that regard with neighbouring municipalities</td>
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<tr>
<td></td>
<td>Monitor disbursement of funds</td>
<td>Prepare integrated transport plans</td>
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<tr>
<td></td>
<td>Assist municipalities with resources if necessary</td>
<td>Establish an intermodal planning committee to ensure coordination between public transport modes</td>
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<tr>
<td></td>
<td>Establish a Provincial Regulatory Entity</td>
<td>Establish transport plans</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No political role defined by the Act</td>
<td>Plan and implement and manage modally integrated public transport networks and travel corridors for transport within the municipal area and liaising in that regard with neighbouring municipalities</td>
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</tr>
<tr>
<td></td>
<td>Provide Minister with information for the national information system</td>
<td>Prepare integrated transport plans</td>
<td></td>
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<tr>
<td></td>
<td>Report to the Minister on utilization of funds</td>
<td>Establish integrated transport plans</td>
<td></td>
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<tr>
<td></td>
<td>Formulate national transport policy and strategy, within the framework of national policy and strategy</td>
<td>Establish an intermodal planning committee to ensure coordination between public transport modes</td>
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<tr>
<td></td>
<td>Formulate national transport policy and strategy</td>
<td>Promulgate municipal bylaws</td>
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<tr>
<td></td>
<td>Plan and coordinate national strategic transport</td>
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</table>
INTERGOVERNMENTAL RELATIONS

A province may enter into an agreement with one or more municipalities in the province to provide for the joint exercise or performance of their respective powers and functions.

One or more adjacent municipalities may agree on the joint exercise or performance of their respective powers and functions.

REGULATING ENTITIES

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<thead>
<tr>
<th>NATIONAL PUBLIC TRANSPORT REGULATOR</th>
<th>PROVINCIAL REGULATORY ENTITIES</th>
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<tbody>
<tr>
<td>Monitor and oversee public transport in the country</td>
<td>Monitor and oversee public transport in the province</td>
</tr>
<tr>
<td>Receive and decide on applications relating to operating licenses for intra-provincial transport where no municipality exists to which the operating license function has been assigned</td>
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</table>
South Africa has a number of legal and policy instruments referring to land use and spatial development that have been developed since the inception of democracy. These instruments largely address the need to redesign the apartheid spatial landscape which left South Africa segregated along racial lines, with a large majority of previously disadvantaged people without access to services and employment opportunities. As such, the policies speak directly to the need to improve the socio-economic circumstances of this group. However they also address the spatial development needs for South Africa’s growing economy, charting a direction for the development of rural and urban landscapes towards being more integrated. Given that transport represents a derived demand from movement of people and goods, which will be affected by land use and spatial planning, the provisions of these instruments have a substantial bearing on the evolution of the sector and its carbon profile.

This section provides an overview of these legal and policy instruments. It concludes with a summary of the implication of these instruments for the potential for low carbon evolution of the transport sector. The instruments reviewed are summarised in the table below:

<table>
<thead>
<tr>
<th>Policy Instrument</th>
<th>Purpose</th>
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<tr>
<td>Development Facilitation Act</td>
<td>To speed up implementation of reconstruction and development projects and projects related to land</td>
</tr>
<tr>
<td>White Paper on Local Government</td>
<td>Provides a framework for the creation of liveable integrated cities, towns and rural areas</td>
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<tr>
<td>White Paper on Spatial Planning and Land Use Management</td>
<td>Provides a set of principles and norms for land development in the country</td>
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<tr>
<td>Guidelines for the Formulation of Spatial Development Frameworks</td>
<td>Assists municipalities in the development of Spatial Development Frameworks</td>
</tr>
<tr>
<td>National Spatial Development Perspective</td>
<td>Reconfigure Apartheid spatial relations based on imperative of providing basic services, alleviating poverty and inequality</td>
</tr>
<tr>
<td>Spatial Planning and Land Use Management Bill</td>
<td>Provides a framework for spatial and land use planning in South Africa</td>
</tr>
<tr>
<td>Special Economic Zones Policy and Bill</td>
<td>Provides for the creation of Special Economic Zones (SEZ) which are geographically designated areas of the country set aside for specifically targeted economic activities</td>
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</tbody>
</table>
3.1 Development Facilitation Act (1995)

The purpose of the Development Facilitation Act (DFA), promulgated in 1995, is to introduce extraordinary measures to facilitate and speed up the implementation of reconstruction and development programmes and projects in relation to land, and thereby lay down general principles governing land development throughout South Africa. The general principles for land development in the DFA are:

1. Promotion of efficient and integrated land development:
   a. Integration of the social, economic, institutional and physical aspects of land development
   b. Integrated land development in rural and urban areas in support of each other
   c. Availability of residential and employment opportunities in close proximity to or integrated with each other
2. Promotion of a diverse combination of land uses, discouraging the phenomenon of “urban sprawl” in urban areas and contributing to the development of more compact towns and cities
3. Environmentally sustainable land development practices and processes


The purpose of the White Paper on local government15 is to provide a framework for the creation of liveable integrated cities, towns and rural areas.

With respect to spatial planning, an emphasis of the White Paper is spatial integration and socially inclusive development of South Africa’s settlements to ensure affordable mobility between work, home and recreation; combat crime, pollution and congestion. As such, the White Paper recommends that urban municipalities should promote mixed use and mixed-income development.

Land use planning should be synergised with transport planning and bulk-infrastructure planning to achieve this. The paper also refers to the Local Agenda 21 which requires municipalities to develop long-term strategic action plans that address priority sustainable development concerns.

3.3 White Paper on Spatial Planning and Land Use Management (2001)

This White Paper16 provides a set of principles and norms for land development in the country. Its objective is to facilitate allocation of land to the uses that provide the greatest sustainable benefits and to promote the transition to a sustainable and integrated management of land resources.

According to the White Paper, National Government has the overall responsibility for spatial planning, land use management and land development. It proposes National Spatial Planning Frameworks to facilitate the achievement of more integrated and coordinated spending of public funds. The White Paper also states that local government is the most important sphere of decision making in the spatial planning, land use management and land development system and refers to appropriately designed Spatial Development Frameworks (SDFs).

The following principles outlined in the White Paper are relevant to environmental sustainability:

- **Principle of Sustainability**: sustainable management and use of the resources comprising the natural and built environment. The Paper states that the life cycle costs of land development and its likely side effects on the environment, community, and the economy need to be understood and taken into account to sustain its benefits, while minimizing or mitigating any likely negative impacts.

- **Principle of Efficiency**: implies that land use planning and development should promote the development of compact human settlements, combating low intensity urban sprawl. The areas in which people live and work should be close to each other and plans of contiguous municipalities and regions should relate positively to each other.

- **Principle of Integration**: implies that land use and development should promote efficient, functional and integrated settlement. The paper states that land use and development should be determined by the availability of appropriate services and infrastructure, including transportation infrastructure and that land use and development should promote mixed-use development.

### 3.4 Guidelines for the Formulation of Spatial Development Frameworks, (2005)

The purpose of the guideline\(^\text{17}\) is to assist municipalities to prepare Spatial Development Frameworks (SDFs). The guidelines state that municipalities should design SDFs that make provision for:

1. Accessibility to a variety of social and economic opportunities, walking distance being the guiding measure.
2. Socio-economic integration, facilitated by the use of a socio-economic gradient with relatively small differences in income and property between adjacent communities. In particular, efforts should be made to locate low income neighbourhoods nearer to the core or nodes of settlements and away from the periphery.
3. Provision for mixed use development along development corridors.
4. Optimisation of use of existing resources.
5. Densification of development.
6. Delineation of an urban edge to prevent lateral growth of settlements.
7. Strategies that will protect and/or minimize the impact of development and human activities on this resource base.
8. A nodal hierarchy whereby in large urban areas decentralized nodes are connected by high speed arterials or railway lines.

3.5 National Spatial Development Perspective (2006)

The primary purpose of the National Spatial Development Perspective (NSDP)\(^8\) is to provide a framework to reconfigure apartheid spatial relations and implement spatial priorities that meet the constitutional imperative of providing basic services to all and alleviating poverty and inequality.

A key principle of the policy is that future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link to the main growth centres. Further, the policy promotes densification of development and improvement of public transport networks. Higher settlement densities should be located specifically along transport corridors and more dispersed settlements could be discouraged.

The policy states that spatial plans at all levels will need to factor in sustainable resource use as well as energy and water resource management, so as to circumvent the potential negative social, economic and ecological consequences of inefficient and unsustainable resource use in the medium-to-long term. It mentions opportunities to leverage alternative energy forms such as gas and biofuels. At a household level, it mentions the need for exploring renewable energy alternatives, reducing and re-using waste and efficient public transport use.

Referring to core areas of high economic potential and value, the policy states that they will need to be supported through appropriate investment in key infrastructure such as roads, railways, telecommunications and ports.

3.6 Spatial Planning and Land Use Management Bill (2011)

The primary purpose of the Bill\(^9\) is to provide a framework for spatial planning and land use management in South Africa.

Relevant development principles outlined in the Bill include:

- **Spatial sustainability**, whereby spatial planning and land use management systems must ensure protection of the prime and unique agricultural land, the environment and other protected lands; promote land development in locations that are sustainable and limit urban sprawl

- **Efficiency**, whereby land development optimises the use of existing resources and infrastructure and decision making procedures are designed to minimize negative environmental impacts

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The Bill states that National and provincial spheres of government may and local governments must prepare spatial development frameworks that:

- Comply with applicable environmental legislation or a specific environmental management Act (as defined in Section 1 of the National Environmental Management Act No. 107 of 1998).
- Give effect to national legislation and policies on sustainable utilisation and protection of agricultural resources.

### 3.7 Special Economic Zones Policy and Bill (2012)

The Special Economic Zones (SEZ) Bill and Policy was issued for public comment in January 2012. The purpose of the SEZ Policy is to provide for the creation of SEZ which are “geographically designated areas of the country set aside for specifically targeted economic activities, which are then supported through special arrangements (which may include laws) and support systems to promote industrial development” (p. 9).

The general objective of SEZs is to support and accelerate industrial development attract targeted foreign and domestic direct investment. The SEZ programme will replace the Industrial Development Zone (IDZ) Programme.

The purpose of the SEZ programme is to:

1. Expand the strategic focus to cover diverse regional development needs and contexts, and improve the design deficiencies of the IDZ Programme
2. Provide planning frameworks for the development of a wider array of SEZs to support industrial policy objectives and the New Growth Path (NGP)
3. Clarify and strengthen governance arrangements; expand the range and quality of support measures beyond provision of infrastructure; provide for a predictable financing framework to enable long-term planning; and provide for predictable financing arrangements that enable long-term planning.

The policy states that measures will be put in place to ensure environmental protection.

Categories of SEZ include: ports, free trade zones, industrial parks, science and technology parks, sector development zones (e.g. agriculture), spatial development corridors connecting two developing zones, and industrial development zones.

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3.8 Implications of spatial development and urban planning policy and legislation for low carbon transport

From the review above, it seems that the various pieces of spatial development and urban planning policy and legislation are not only well aligned in terms of their desired outcomes particularly as they relate to the transport sector, but should also facilitate the transition to low carbon transport and mobility. In particular the following common themes are noted:

- Mixed-use spatial development, which can facilitate lower requirements for transport to places of employment, supermarkets, services etc
- Increased densification, resulting in reduced urban sprawl and hence reduced commuting distances and transport requirements for provision of services.

There are also some suggestions of improving rail infrastructure. The broad references to environmental sustainability and efficient use of resources in various documents could also have a positive benefit on the carbon impacts of the transport sector, depending on how such suggested intentions are realised in practice.

In addition to the direct implications for low carbon transport, the policy and legislation frameworks have implications for equitable access to transport services, through their stated intentions of redressing inequitable access to transport and other services, and poor urban planning which has disadvantaged certain sectors of the population.
This is one in a series of briefings produced by WWF South Africa's Low-Carbon Frameworks programme, which explores the shift to a low-carbon economy. We seek solutions for emitting fewer greenhouse gas emissions and enabling a flourishing South Africa, which delivers developmental outcomes and social equity.

The programme includes a focus on transport. WWF’s transport project aims to provide a platform, expertise and interactive modelling to support labour, business and government in engaging with the challenges implicit in the low-carbon transition. Choices about trade-offs, sequencing of initiatives, and investment will need to be made in setting emission targets for and within the sector, and in determining how to achieve them, while yielding a flourishing economy with equity and developmental benefits. Interventions will need to REDUCE movement of goods and people; SHIFT to low-carbon modes of transport, from private to public, from road to rail; or IMPROVE energy and fuel efficiency. The project builds on previous work on a carbon budget approach to a low-carbon action plan for South Africa, and is grounded in existing initiatives in the transport sector.

The Green House is a niche technical sustainability consulting firm based in Cape Town, with experience working on a wide range of energy, carbon and sustainability-related projects including strategic energy planning, carbon footprinting, and life cycle assessment. The Green House has significant experience in energy, transport, urban systems, bioenergy, biofuels, industry, commerce, agriculture, municipal waste management, mining and minerals.

WWF is active in more than 100 countries, with almost 5 million supporters worldwide. Our mission is to build a future in which we all live in harmony with nature, by conserving the world’s biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful production and consumption. In South Africa, we focus on an ecosystems-based approach to development, including work in the areas of marine, freshwater, agriculture, food, energy, transport and protected areas.

WWF South Africa’s transport low-carbon frameworks project aims to provide a platform, expertise and interactive modelling to support labour, business and government in engaging with challenges of a transition towards a lower carbon transport sector. Choices about trade-offs, sequencing of initiatives, and investment will need to be made in setting emission targets for and within the sector, and in determining how to achieve them, while yielding a flourishing economy with equity and developmental benefits. Interventions will need to REDUCE movement of goods and people; SHIFT to low-carbon modes of transport, from private to public, from road to rail; or IMPROVE energy and fuel efficiency. The project builds on previous work on a carbon budget approach to a low-carbon action plan for South Africa, and is grounded in existing initiatives in the transport sector, including government plans.