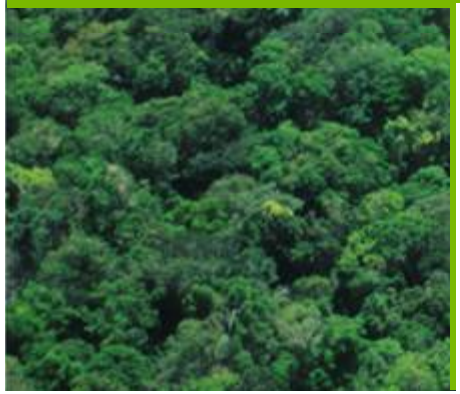
The Forestry Transport Infrastructure Plan



Focus on Forest Engineering 2012
7 November 2012

agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

aurecon

Table of Contents


Introduction

Objectives of the study

Specific objectives and **scope** of the study:

1. Determine the status of transport infrastructure (MP, KZN, EC, WC, LP)
2. Assess the transport requirements for forestry sector as a whole
3. Identify bottlenecks:
    a. Profile transport infrastructure challenges and recommendations
    b. Investigate barriers to the development of forestry transport infrastructure
4. Investigate impact of current planning:
    a. Review national, provincial and district road and rail transport plans
    b. Investigate whether afforestation plans are depicted in transport plans
    c. Investigate whether infrastructure programmes from government (EPWP etc.) address issues of forestry transport adequately
5. Ensure opportunities as identified in forestry Transformation Charter are aligned to transport infrastructure requirements


Key Findings

Overview of the Forestry Industry

The following observations were made:

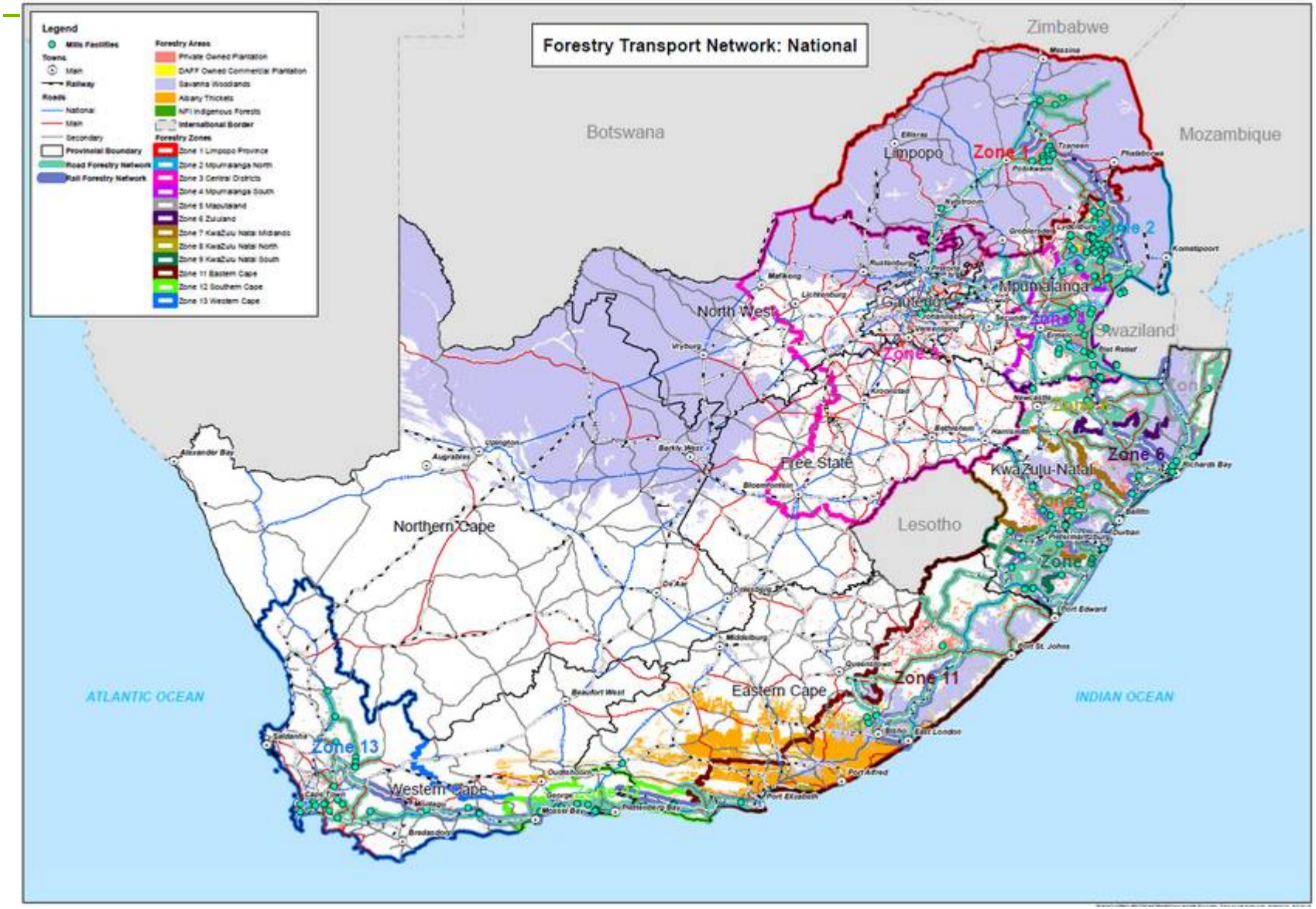
- KwaZulu-Natal Midlands produced the highest number of roundwood for sales during 2008/9, namely 3, 22 million tonnes, followed by Mpumalanga South and North, with 2, 95 million tonnes and 2, 86 million tonnes respectively.
- Trip generation rates varied between 4, 6 tonne/ha in Maputaland and 22, 4 tonne/ha in Zululand. The average trip generation rate for the country during 2008/9 was 13 tonne/ha.

Roundwood Production (and therefore trip generation rate) by Zone (2008/9)

Forestry Economic Zone		Roundwood Production (tonne)	Trip Generation (tonne/ha)
Zone 1	Limpopo Province	579,832	11.7
Zone 2	Mpumalanga North	2,861,425	12.7
Zone 3	Central Districts	270,167	10.8
Zone 4	Mpumalanga South	2,945,344	10.9
Zone 5	Maputaland	78,012	4.6
Zone 6	Zululand	1,723,111	22.4
Zone 7	KwaZulu-Natal Midlands	3,221,111	16.5
Zone 8	KwaZulu-Natal North	738,749	8.1
Zone 9	KwaZulu-Natal South	1,883,747	15.3
Zone 11	Eastern Cape	1,473,857	12.0
Zone 12	Southern Cape	578,640	9.4
Zone 13	Western Cape	127,929	7.6
Total		**16,481,924**	**12.9**

Source: Department of Agriculture, Forestry and Fisheries, 2010

Overview of the Forestry Industry



Extent of Forestry Industry Transport Infrastructure

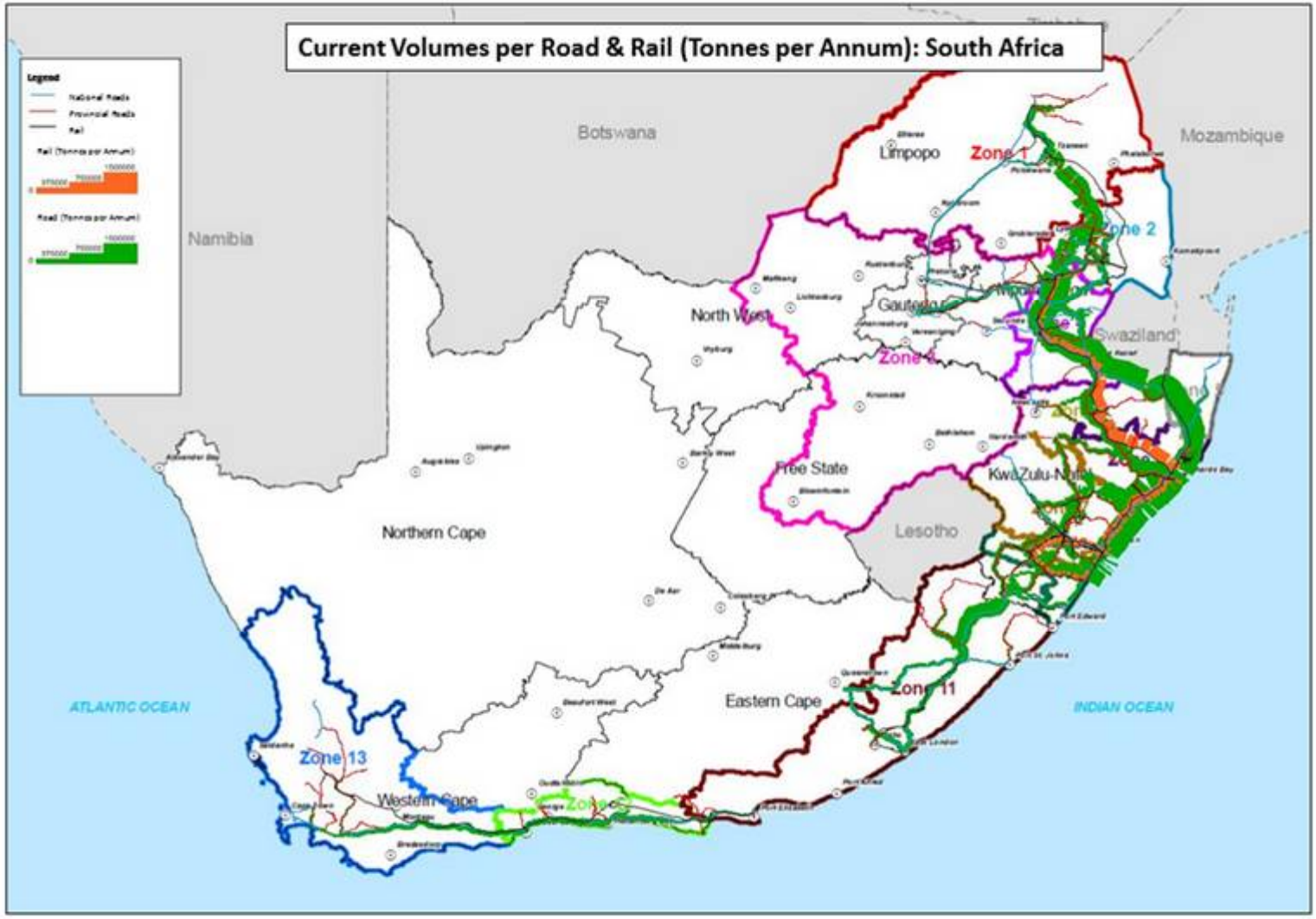
Extent of Forestry Road Network

Province	Total Forestry Road Network km
Eastern Cape	1 864
KwaZulu-Natal	4 261
Limpopo	1 158
Mpumalanga	3 122
Western Cape	1 770
Total Forestry Road Network	12 175
Extent in RSA	440, 176
% Used by Forestry Sector	Approx. 3%

Extent of Forestry Rail Network

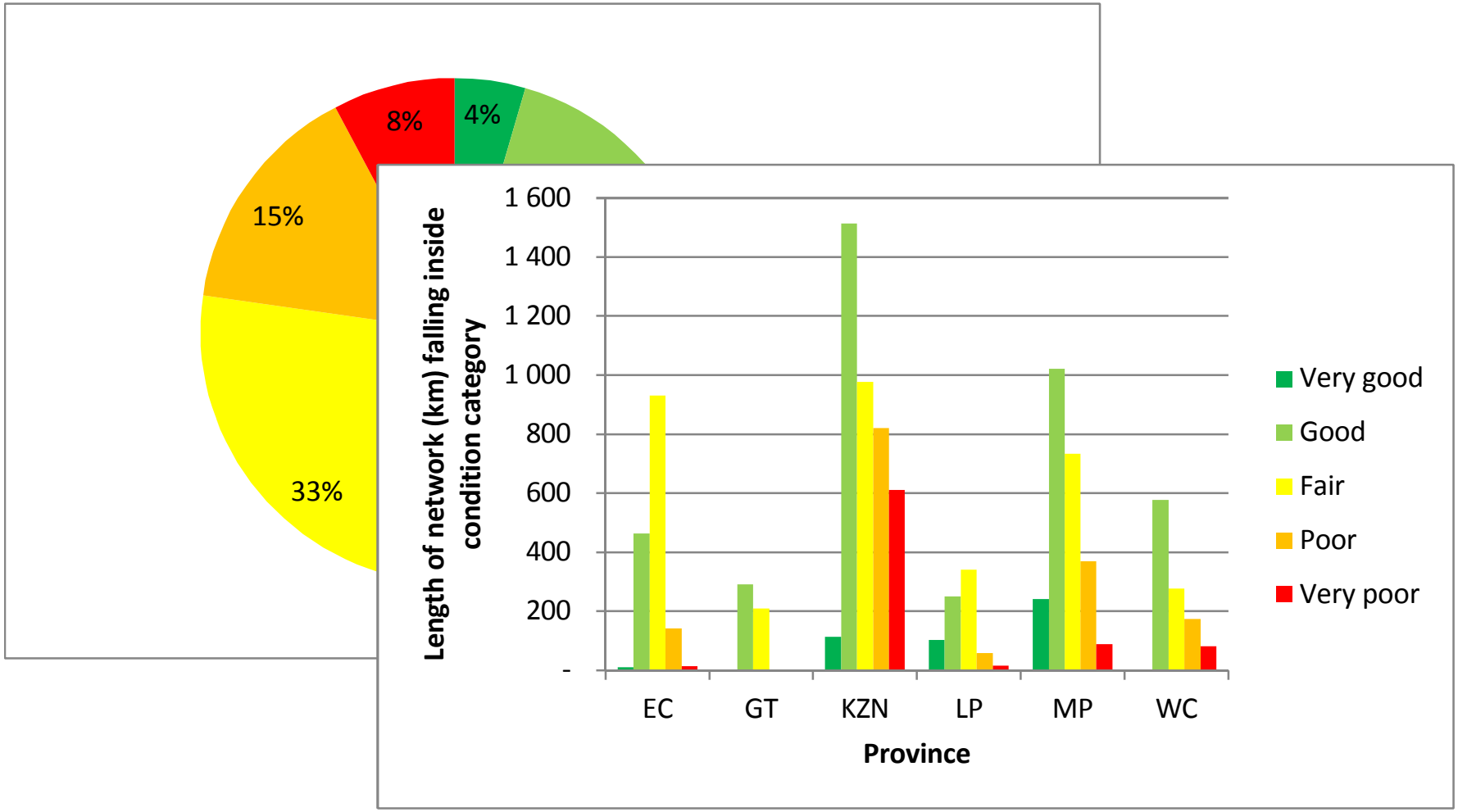
Province	Total Forestry Rail Network km
Eastern Cape	714
KwaZulu-Natal	2 994
Limpopo	399
Mpumalanga	1 322
Western Cape	654
Gauteng	213
Swaziland	63
Total of Forestry Rail Network	6 359
RSA	20 953
% Used by Forestry Sector	Approx. 30%

Current Volumes per Road and Rail

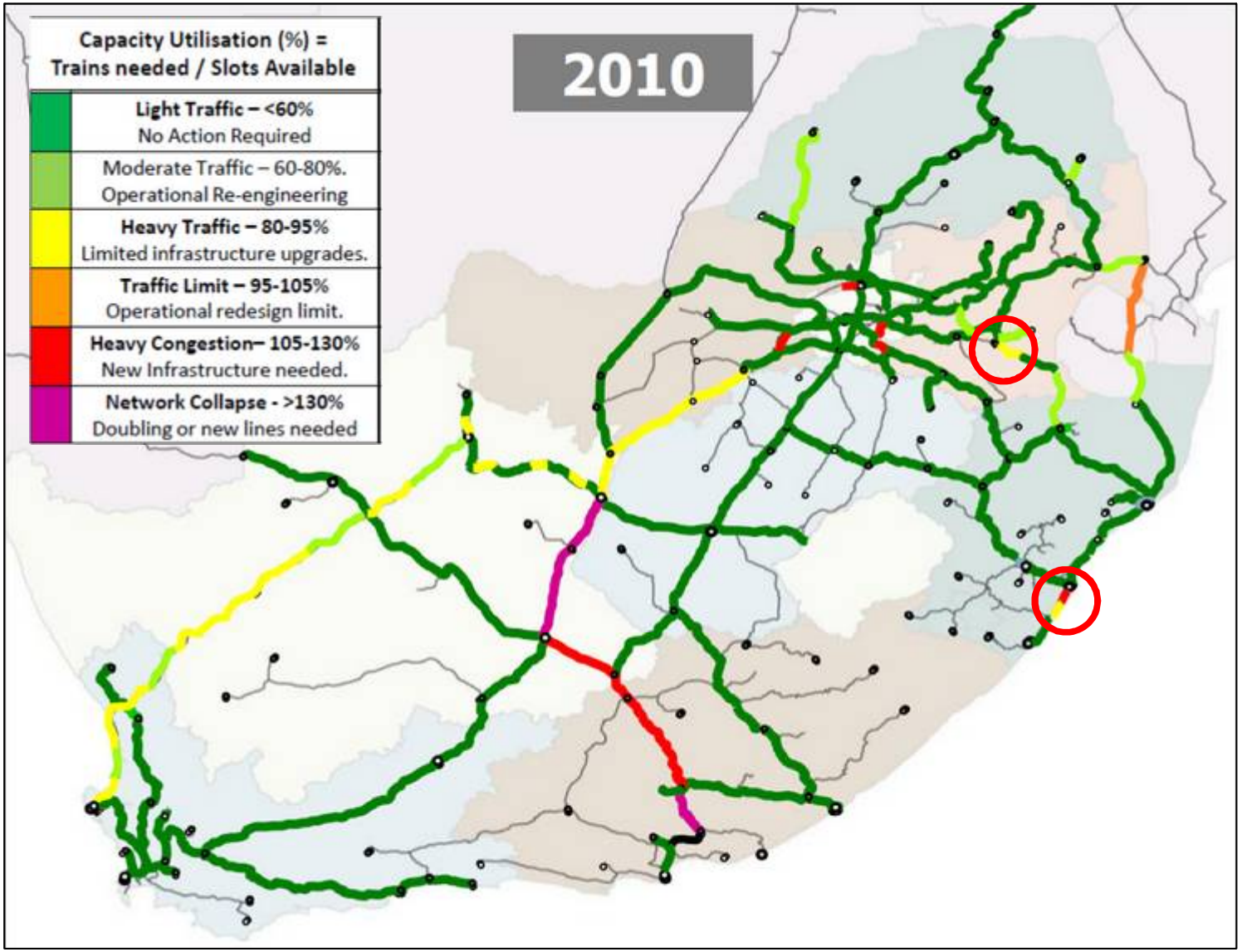


Current Condition of Forestry Industry Transport Infrastructure

Overall Condition of Forestry Road Network



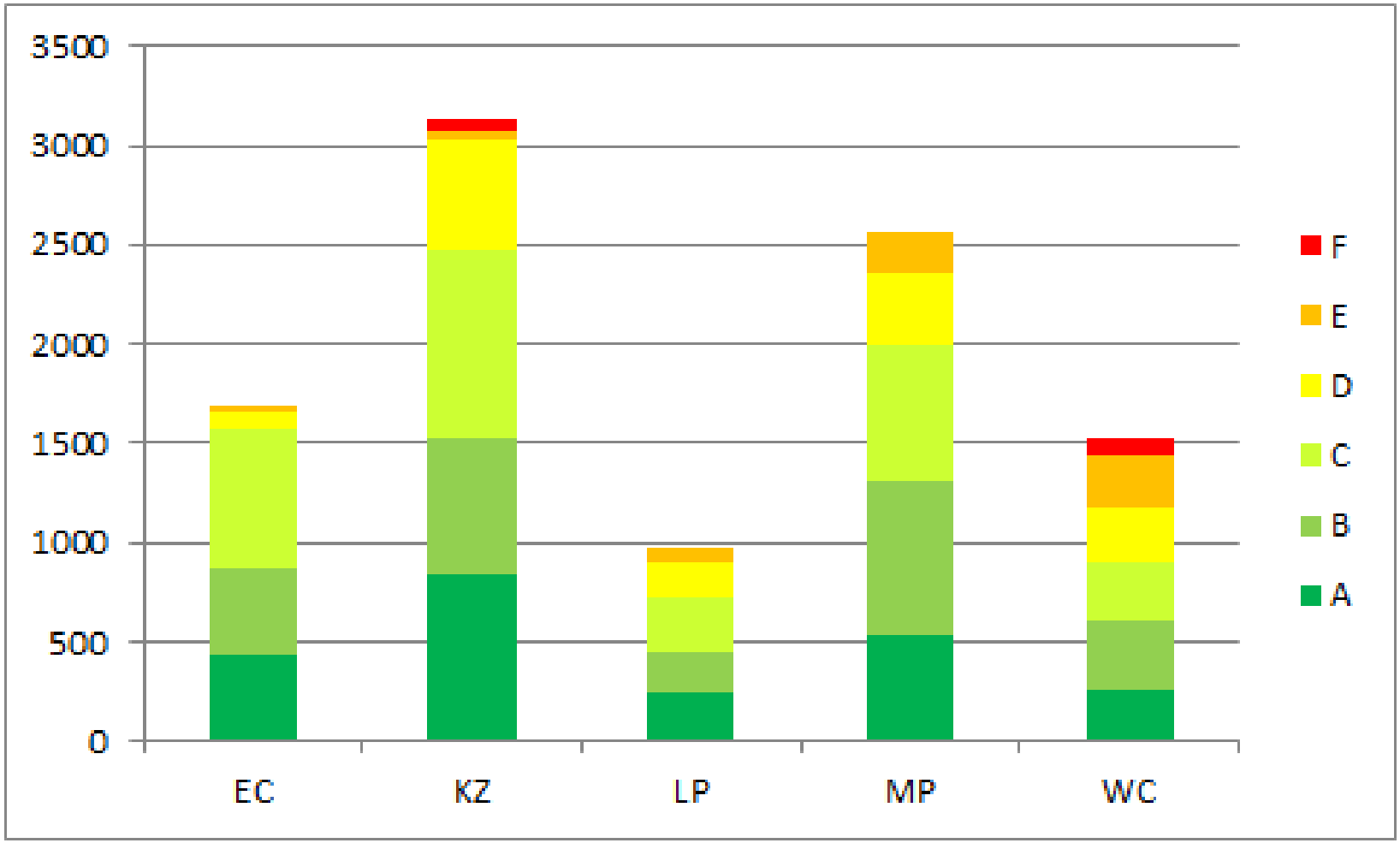
Current Capacity Constraints of Rail Network serving the Forestry Sector



Source: Transnet, 2011

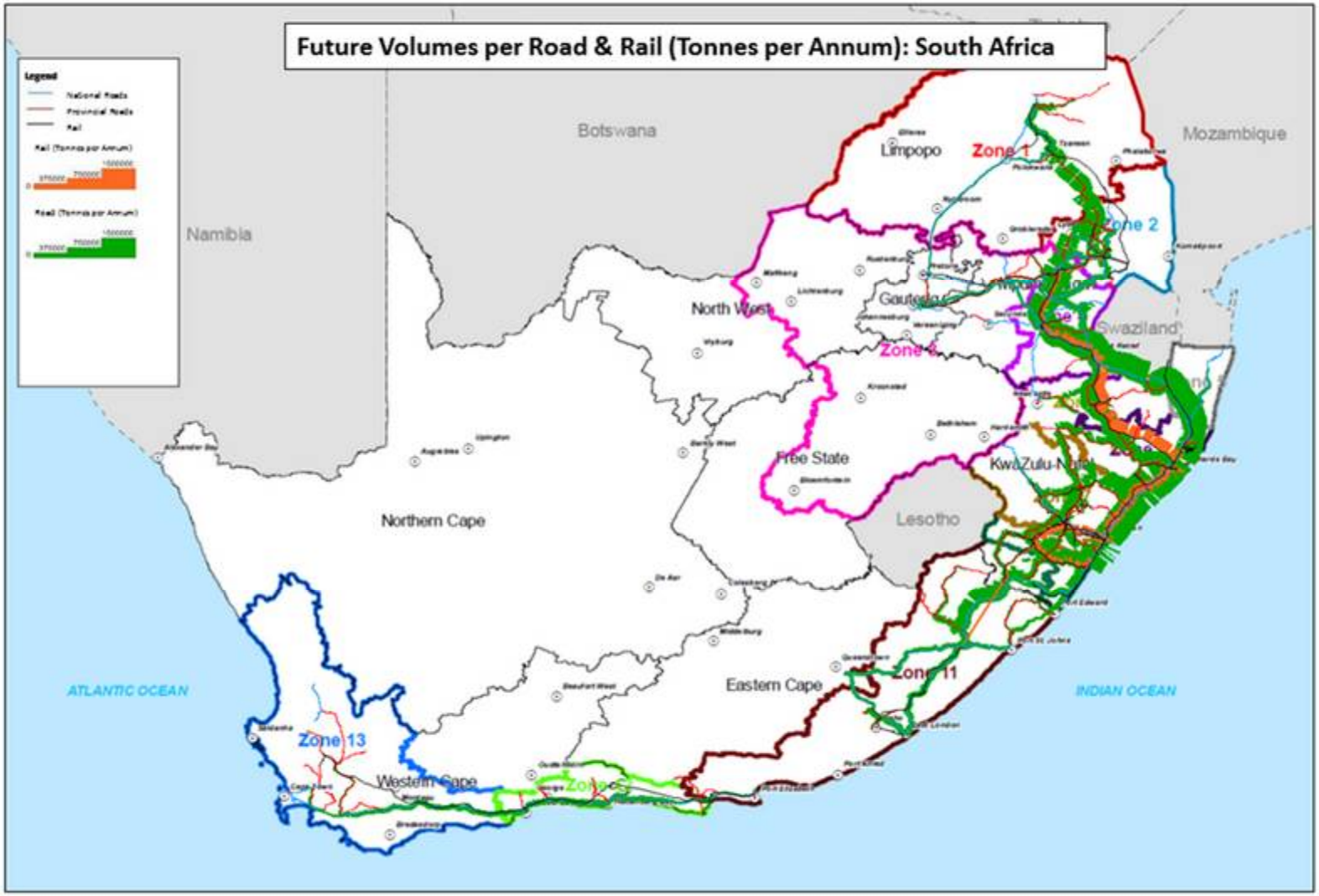
Current Road Capacity Assessment

Length of Forestry Road Network Operating at LOS per Province for Base Year



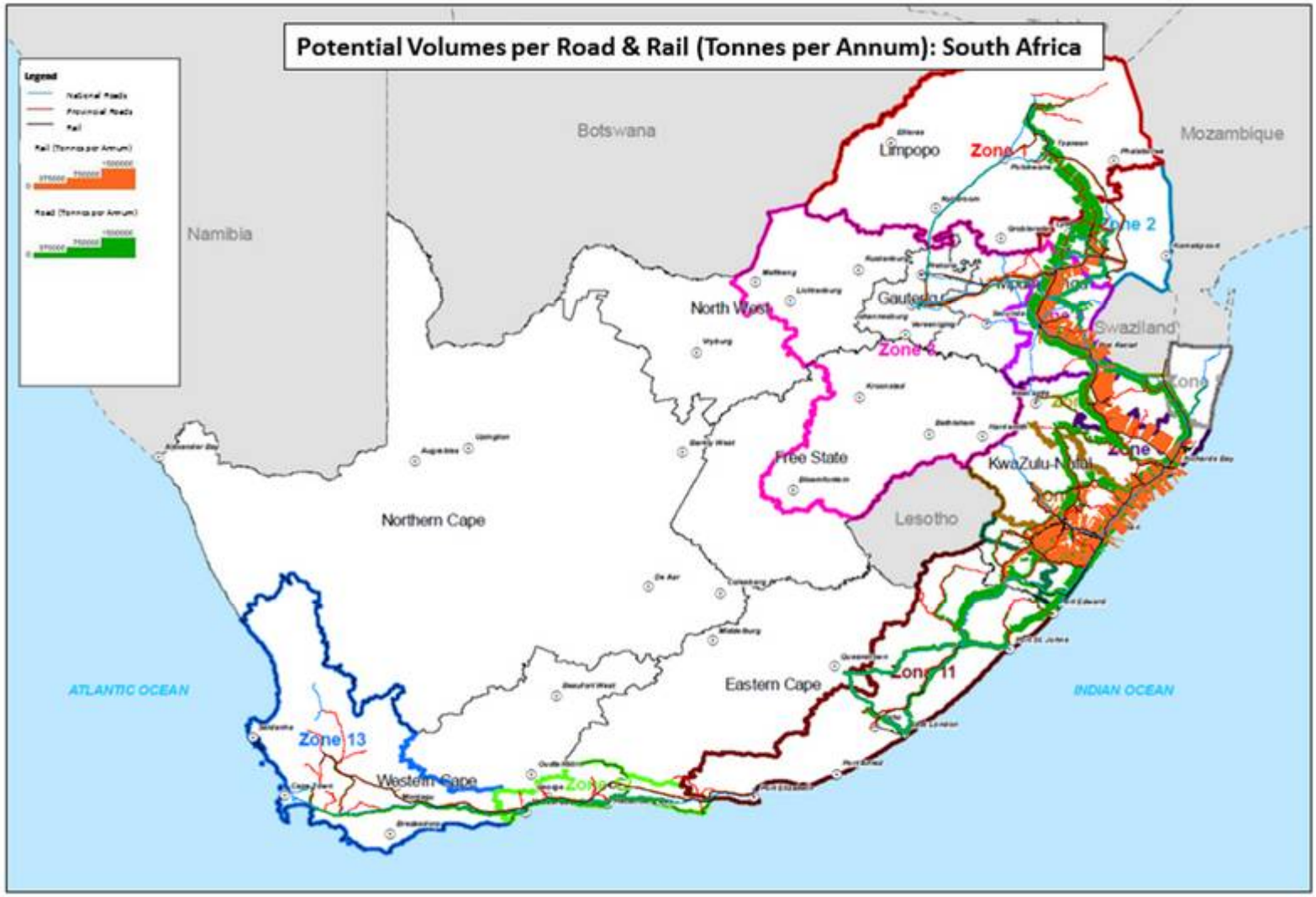
Future Transport Requirements for the Forestry Sector

Future Forestry Volumes per Road and Rail (Trend Scenario): South Africa



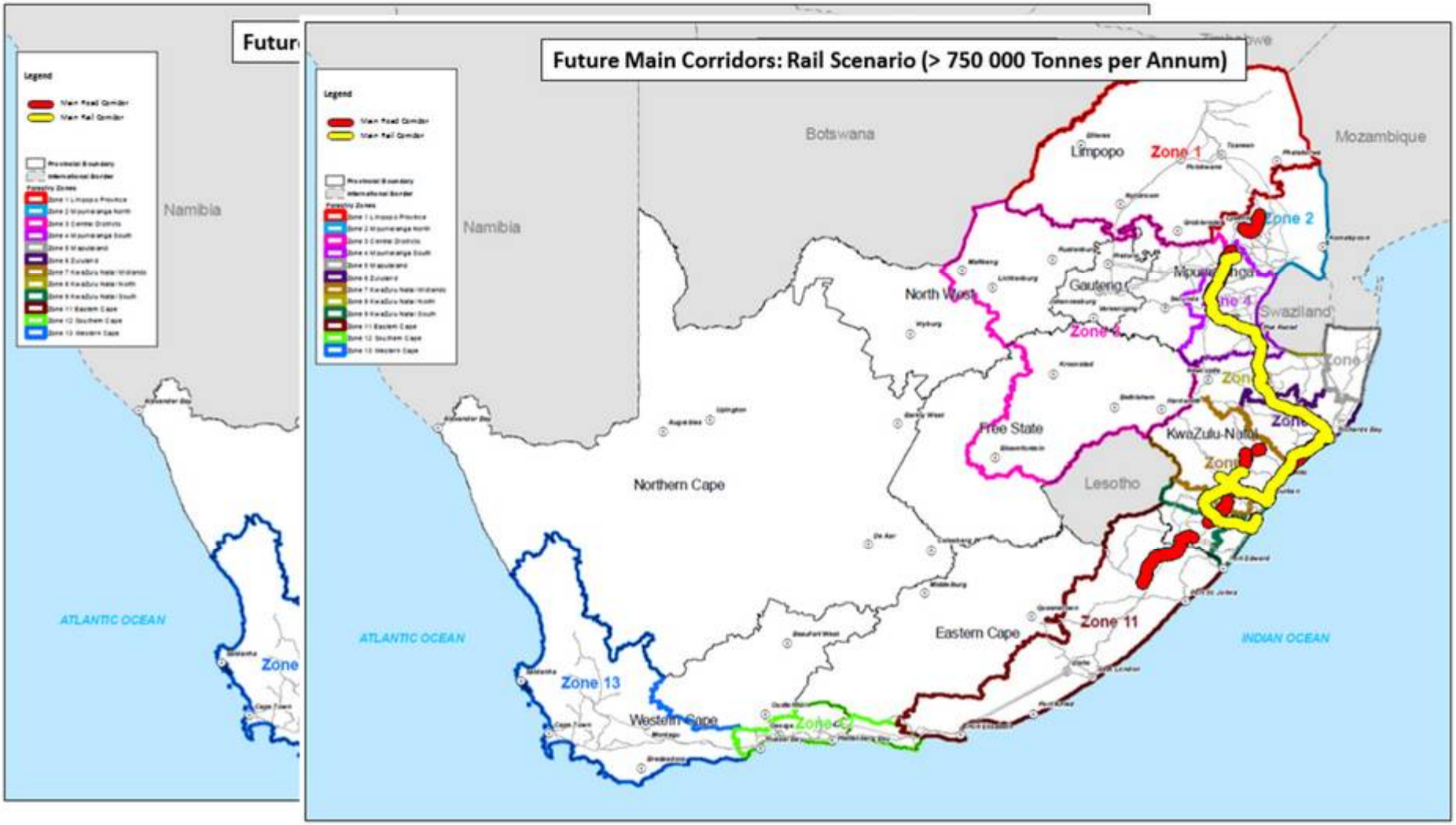
Future Transport Requirements for the Forestry Sector

Future Forestry Volumes per Road and Rail (Rail Scenario): South Africa



Future Transport Requirements for the Forestry Sector

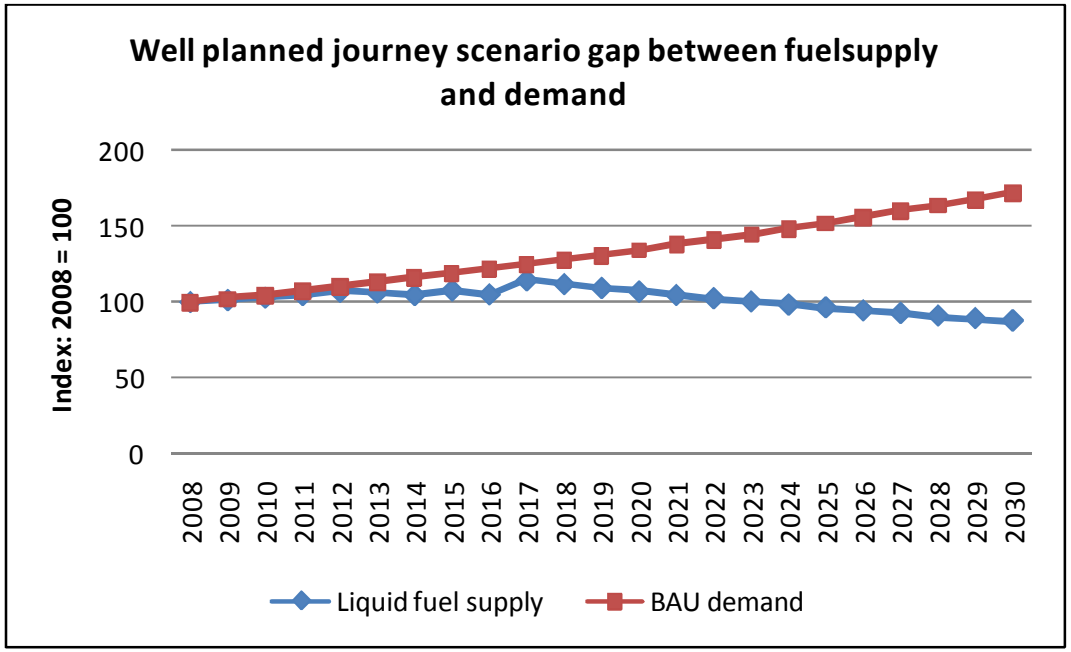
Future Forestry Corridors (Trend and Rail Scenario): South Africa




Key Challenges

Policy, Environment and Technology Issues

1. Policy on shift of freight from road to rail
2. Climate change impact on industry
3. Changes in energy source for transport
4. Technology changes in harvesting and processing of timber
5. Progress with RTMS
6. Progress with PBS



Stakeholder Opinion

Stakeholder Feedback on Transnet Current Services

Stakeholders were consulted during the course of the study (issuing of questionnaires). Most stakeholders indicated their dissatisfaction with current service levels on rail. The following specific concerns were raised:

- **High tariffs for rail services (compared to road transport);**
- **Delay in the concession of the branch lines;**
- **No competition to Transnet as an operator;**
- **Lack of services on the less trafficked rail lines;**
- **Some proposed that, in order for branch line concessioning to be an attractive option to the private sector, Transnet should be able to guarantee the availability of rolling stock and should be responsible for the maintenance of the rail infrastructure.**

Transnet, in their feedback, acknowledged problems such as old resources (wagons and locomotives), the availability of slots on certain main lines and the conditions of certain rail networks (especially the branch lines, which are currently poorly maintained). Transnet further indicated the following:

- Transnet have embarked on a project to replenish old resources;
- Provision has been made to improve on infrastructure, specifically on the branch line network around Pietermaritzburg. However, Transnet noted that the low traffic lines are normally costly to repair and therefore not a high priority;
- Rail transport by itself is not expensive. However, all the "other cost" that customers incur (harvesting, extracting from difficult terrains, stacking at roadside depots, shorthaul, off-loading, loading and mostly double handling) add up to make it expensive;


Recommendations

List of Recommendations to Key Departments

DAFF, as the custodian of the forestry sector in South Africa, should take ownership of the findings of the study, and should liaise with Transnet, provincial transport authorities and other relevant organisations to ensure implementation of the findings of the study.

The needs of the forestry sector, as reported in this study and in the feedback received from questionnaires, should be communicated to these agencies, and **DAFF** should monitor progress on projects on a frequent basis.

The **DOT Integrated Planning Directorate** should take account of the infrastructure projects required to address constraints in the transport of forestry products, as summarised in Table 8.1 in Chapter 8.

DOT Roads Branch should ensure that these projects are implemented at the relevant government level. It is noted that budget constraints at provincial and district level may delay implementation of certain of the projects. DOT is requested to consider, from a strategic importance point of view, providing financial assistance to provincial and district road authorities to ensure timely implementation of road improvement projects related to the forestry sector.

Transnet should take account of the following:

- The extent of the forestry transport rail network, and the specific importance of the corridor from Ermelo to Richards Bay and Durban, and the "half circle" from Durban to Pietermaritzburg to Ixopo and Pennington;
- The high potential for the transport of forestry products in the Pietermaritzburg link cluster. This should be treated as a priority branch line concessioning project. Transnet should consider assistance to the concessionaire to ensure that branch lines are in a fair condition before takeover by the concessionaire;
- Ensure implementation of projects affecting the forestry transport rail network.

Provincial road authorities should take note of the extent of the forestry transport road network, and the areas of poor condition on this network, and address these as a matter of priority.

Infrastructure and Operational Requirements for the Forestry Sector

The following types of infrastructure requirements have been identified:

Rehabilitation of roads in poor condition;

Intermodal facilities.

Continued road maintenance of forestry road network;

Addressing capacity constraints on the rail network;

Rehabilitation of rail in poor condition;

Addressing capacity constraints on the road network;

The following types of operational requirements have been identified:

- The need for branch line concessioning;
- A need for a modal shift from road to rail;
- Increased participation of the sector in self-regulation programmes (RTMS, and the related PBS).
- The need for the forestry sector to align itself to conditions of climate change and fuel shortage;

A summary of all identified infrastructure projects, to cater for current and future needs in the forestry sector, is provided.

A summary of all identified operational projects, to cater for current and future needs in the forestry sector, is provided

Infrastructure Projects

Program list.pdf


END...
THANK YOU.
aurecon