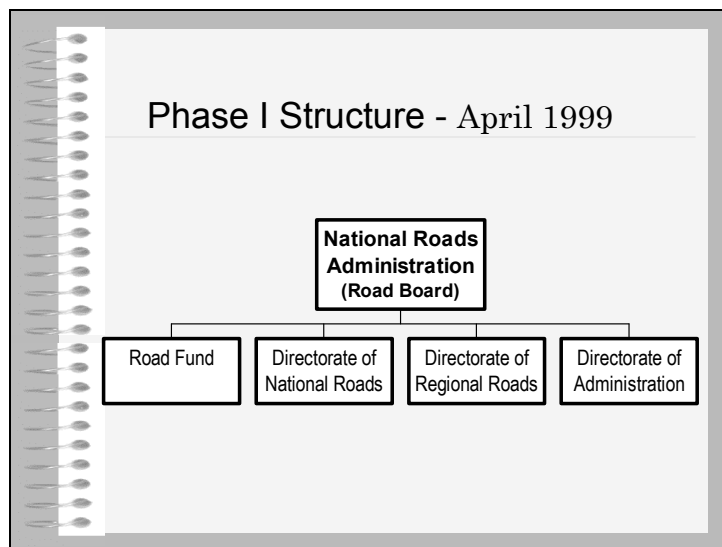
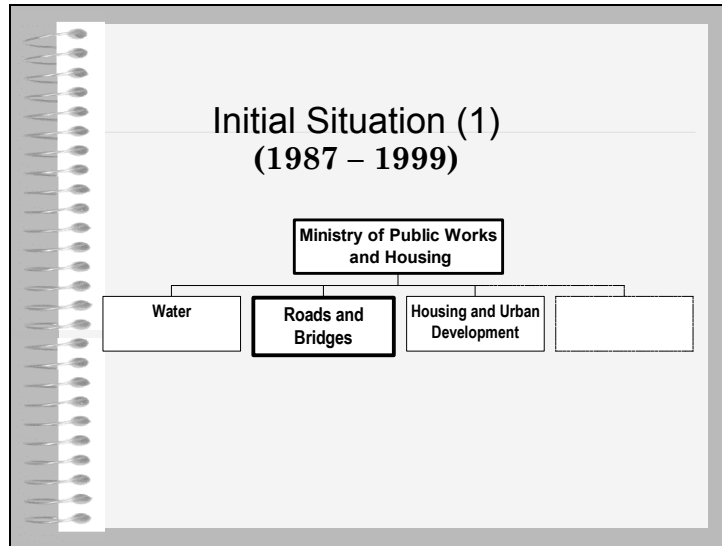


Update of Performance Indicators in Mozambique, by Atanásio Mugunhe



Road Board composition



- Chairman of the Board
 - Vice Chairman - Director of Road Fund
 - Representatives of:-

<p><u>Ministries</u></p> <ul style="list-style-type: none"> - Public Works - Finance - Interior - Transport 	<p><u>Private Sector</u></p> <ul style="list-style-type: none"> - Road transport industry - Agricultural producers - Industry association - Employers' organizations
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- University**

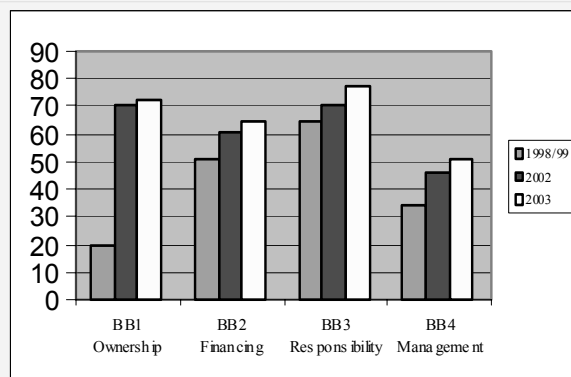
Phase II Structure FROM 2002/3



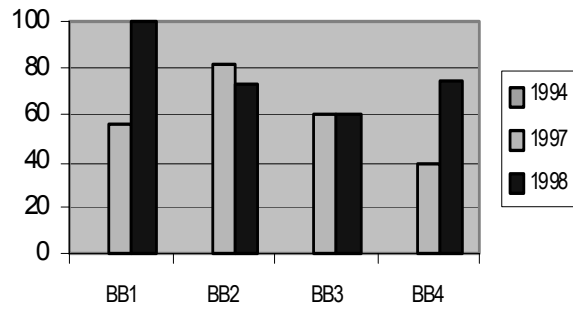
The Survey seeks to Assess

- **Implementation of Road Sector Reforms**
 - RMI Principles - 4BB
 - BB1 Ownership
 - BB2 Financing
 - BB3 Responsibility
 - BB4 Management
 - Basis of Questionnaire

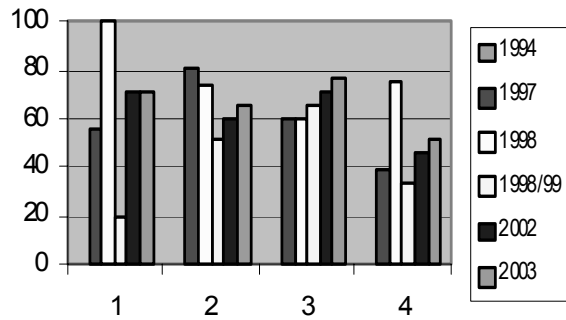
Implementation of Road Sector Reforms, April 2002



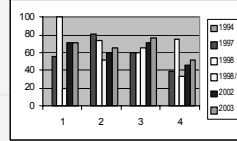
1997 Assessment



1997 and 2002 Assessment



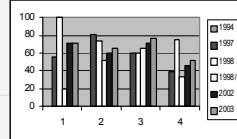
Implementation of RS Reforms



- **Ownership**

- Significant Progress from 20 to 71.
- The Progress of 1997 will not be achieved;

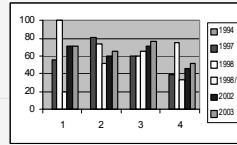
Implementation of RS Reforms



- **Financing**

- Increase from 51 to 61 and 65 expected next year.
- 1997 Survey; Scores were higher
- No adjustment of fuel levy and devaluation of Metical by more than 60%

Implementation of RS Reforms



- **Responsibility**

- Progress has continued from 60% level in 1997 report to 65% 3y ago to a present of 71%. 77% expected next year

- **Management**

- Progress has stagnated 39 % since 1997
- Expected to be 50% next year

The Survey seeks to Assess

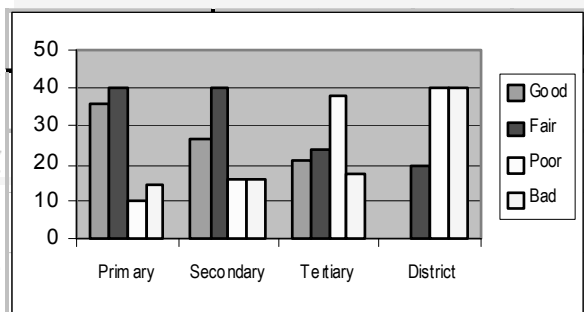
Impact of Road Sector Reforms

- Roads Economic Decision Model
- Analyses of the Sustainability of the the existing road network and the Development Scenario

Road Classification

	Paved	Gravel	Earth	Total
Primary	3.066,0	604,0	533,0	4.203,0
Secondary	1.968,0	2.775,0	3.074,0	7.817,0
Tertiary	639,0	3.711,0	8.730,0	13.080,0
District			26.000,0	26.000,0
Total	5.673,0	7.090,0	38.337,0	51.100,0

Road Condition



Expected Lifetime

Surface Type	Lifetime (years)
Paved	15
Gravel	7
Earth	4

Linear Deterioration: Surface spends 1/3 of its lifetime in each condition

Steps in the Analysis

Define Sustainable Network

↳ Routine Maintenance Costs

↳ Periodic Maintenance Costs

↳ Minimum Overall Cost

Network Size

	Total Present Network (km)	Development Scenario (km)
Primary	4,203.0	4,203.0
Secondary	7,817.0	7,738.9
Tertiary	13,080.0	13,080.0
District	26,000.0	26,000.0
Total	51,100.0	51,021.9

Maintenance Costs

- Present network - 1000 USD

	Routine	Periodic
District	4.680,0	20.290,4
Tertiary	4.091,4	25.778,1
Secondary	3.983,7	39.684,9
Primary	4.575,9	44.724,2
Total	17.331,0	130.477,6

Maintenance Costs

- **Development network - 1000 USD**

	Routine	Periodic
District	7,800.0	25,350.0
Tertiary	4,929.5	31,578.6
Secondary	4,751.6	50,033.6
Primary	5,320.8	57,685.0
Total	22,801.9	164,647.2

Conclusions (1)

- **Sustaining condition of present network in 2002**
 - Routine maintenance: 30 mUSD
 - Reinvestment: 130 mUSD
 - Increase fuel levy to 0.20 USD per litre

Optimal Solutions (1)

- **Earth Roads**
 - <5 vpd, leave in bad condition
 - <15 vpd, 50% poor, 50% fair
 - >30 vpd, maintain in 100% good
- **Gravel Roads**
 - <15 vpd, leave in bad condition
 - >25 vpd, maintain in good condition

Optimal Solutions (2)

- **Paved Roads**
 - <100 vpd, maintain in good condition
 - Periodic maintenance when they fall to fair condition

Conclusions (2)

- 'Development Scenario' Network
 - Roads kept in Good and Fair conditions when traffic levels allow
 - Funding level: 190 mUSD per year
 - Increase of 0.08 USD per litre in fuel levy

Effect of Deficit Level

