Republic of Mali
Transport Support to Sustainable Economic Growth

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Africa
Transport Sector (AFTTR)
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ACRONYMS AND ABBREVIATIONS

ADM  Mall Airports/Aéroports du Mali
AGEROUTE  Contracting Agency for Road Maintenance
AGETIER  Contracting Agency for Rural Infrastructure Works and Equipment
AGETIPE  Contracting Agency for Public Works
AR  Roads Authority/Autorité Routière
ASECNA  Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar
BOT  Build-Operate-Transfer
CAS  Country Assistance Strategy
CET  Common External Tariff
CMC  Conseil Malien des Chargés
CMTR  Conseil Malien des Transporteurs Routiers
COMANAV  Compagnie Malienne de Navigation
COSCAP  Cooperative Development of Operational Safety and Continuing Airworthiness Project
DNAC  Direction Nationale de l’Aviation Civile
DNR  Direction Nationale des Routes
DNT  Direction Nationale des Transports
EC  European Commission
ECOWAS  Economic Community of West Africa States
EM  Mali Warehouses/Entrepéts du Mali
ESW  Economic Sector Work
FAA  Federal Aviation Agency
ICAO  International Civil Aviation Organization
IF  Integrated Framework for Trade
ISRT  Inter-State Road Transport
MDG  Millennium Development Goals
NEPAD  New Partnership for Africa’s Development
PER  Public Expenditure Review
PRSP  Poverty Reduction Strategy Paper
RCFM  Régie des Chemins de Fer du Mali
SSATP  Sub-Saharan Africa Transport Program
TCP  Transport Corridor Improvement Project
TOR  Terms of Reference
TSP  Transport Sector Project
TSP2  Second Transport Sector Project
WAEMU  West Africa Economic and Monetary Union

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EXECUTIVE SUMMARY

1. The World Bank’s FY04-06 Country Assistance Strategy (CAS) is designed to support the Poverty Reduction Strategy Paper (PRSP) and, together with the PRSP, to provide a solid framework for moving towards achieving the Millennium Development Goals (MDGs). The World Bank’s assistance strategy to the transport sector relies on two upcoming projects, namely the Transport Corridors Improvement Project (TCIP) covering the 2004/2006 period and the second Transport Sector Project (TSP2) from 2006 onwards. While the TCIP is underway, the TSP2 will be prepared in close cooperation with the European Commission (EC) and other donors. Its intended scope will be broad (i.e. sector wide program policy framework) and will include all relevant transport sub-sectors warranting a substantial investment program which will be supported by the donors community.

2. This Economic and Sector Work (ESW) is consistent with the objectives laid out for the transport sector in the PRSP and the CAS. It also incorporates the work to be undertaken under the TCIP and provides the knowledge base necessary to plan for the TSP2. The two primary objectives of this ESW are: 1) to help strengthen existing reforms; and 2) to help define next steps of a reform program. In meeting these objectives, this ESW will contribute to the Government’s efforts to develop a medium and long term vision of its transport sector.

3. The ESW main findings are:

- Mali’s road infrastructure is in poor condition, especially Mali’s dirt and rural primary and secondary roads which play a key role in economic integration and poverty alleviation.
- Mali’s spending on roads maintenance and construction has been flat in real terms since 1996 and has declined by almost a quarter as a share of GDP since 1999. In order to increase future level of spending in road maintenance, Mali has agreed with the EC to raise to FCFA 9 billion (or USD 18 million) by 2008 the level of users fees it collects from road users annually.
- Mali’s road sector reform is still underway with the planned creation of the contracting agency for road maintenance (i.e. AGEROUTE) in 2004.
- The disruption of Mali’s international traffic resulting from the Côte d’Ivoire crisis has been severe. Consequently, Mali is spending a significant amount of money to upgrade several international road corridors to accommodate its displaced international trade.
- Mali’s trucking industry is suffering from inefficiencies relating to the small size of its operators, the age of its fleet, chronic over supply, its cartel pricing mentality and its lack of reliability. Yet, informal operators play a crucial role in the distribution of goods and, in the case of urban transport, of people.
- Mali’s others transport sectors are entering a transitional phase. In the rail sector, the recent concessioning of rail operations between Bamako and Dakar should be followed by a rapid strengthening of international cargo activities. Likewise, in the
aviation sector, the ongoing attempt at privatizing the country’s airports may, if well managed, have positive results on the overall sector. Finally, river borne traffic continues to play an important role in Mali’s economy, especially when it comes to serving remote populated areas.

- Mali’s transport sector regulatory oversight is weak in the current context of privatization of some its operators (i.e. rail and airport operators) as well as the decision to free as quickly as possible international goods transport, which would require stronger regulatory oversight capacity.
- Cross cutting issues in Mali’s transport sector relate primarily to: 1) trade and transport, 2) regional integration, transport facilitation and governance, 3) institutional capacity, 4) transport and poverty, 5) transport and HIV/AIDS, 6) transport and safety, and 7) public private partnership. Trade and transport, regional integration, transport facilitation, governance and institutional capacity issues have obvious linkages. The current efforts of the Government to promote Malian exports rely in part on its ability to liberalize its economy, remove hidden barriers to trade (e.g., road blocks), harmonize trade procedures with its neighbors and monitor effectively that fair market access is provided to all traders (e.g., dismantle transport cartels). The Government’s ability to attract private investment in the sector will depend, in part, on the successful implementation of these initiatives as well as on the development of adequate regulations and laws such as arbitration laws or Build Operate Transfer (BOT) laws.

4. Based on these findings, Mali’s proposed transport strategy should rely on the following three pillars:

- **Pillar 1:** Promote sustainable development of transport infrastructure by ensuring adequate allocation of financial and human resources to infrastructure maintenance.
- **Pillar 2:** Increase transport sector efficiency by implementing sound market and fiscal policies to support the rapid modernization of Mali’s transport companies.
- **Pillar 3:** Support cross sectoral initiatives primarily in the areas of economic competitiveness, road safety, rural poverty alleviation, HIV/AIDS prevention and health services accessibility.

5. For each of these three pillars, a series of principles and objectives have been defined. These are:

- **For Pillar 1:**
  - While on-going or already planned new road construction, or paving of existing dirt roads, is justified in order to secure alternative international road corridors to/from Mali (i.e. corridor to Senegal, Guinea, Mauritania and Ghana), no further road construction or paving of existing dirt roads should be planned once these corridors have been completed. Instead, the Government focus should shift to routine and to periodic maintenance of the road network so as to dramatically improve current road conditions and to maintenance, improvement and construction of the rural road network.
The total budget allocated to road routine and periodic maintenance should increase from FCFA 16 billion in 2002 to FCFA 20 billion in 2005 and FCFA 25 billion by 2008.

The portion of road routine and periodic maintenance expenditures financed from local resources should increase from 50% in 2002 to 80% in 2008.

By 2008, total investment in real terms in the road sector should increase to FCFA 50 billion versus FCFA 32 billion in 2002 with: 1) FCFA 25 billion for urban and inter urban road routine and periodic maintenance, 2) FCFA 15 billion for primary network road construction and upgrading, and 3) FCFA 10 billion for maintaining, improving or building rural access roads.

The expected impact of the proposed increase in the road maintenance budget should be measured in terms of percentage of road network classified as in good or somewhat good condition.

By 2006, the amount of money earmarked to multi-year road maintenance contracts should raise to at least 50% of yearly road maintenance disbursements in order to ensure continued maintenance of the priority roadways.

By 2008, 75% of all multi-year road maintenance contracts (by value) should be performance based contracts.

For Pillar 2:
- In terms of institutional reforms necessary to support the proposed change in road expenditures focus, the primary goals of the Government should be to continue current reforms, including the rapid creation of the AGEROUTE.
- All restrictions on international truck services to/from Mali should be lifted in 2005.
- Import tariff rates on new truck equipment should be lowered to 10% or less by the end of 2004.
- The tax burden on leasing instruments used for financing equipment acquisition should be lowered.
- Technical inspection requirements (currently standing at 61.4% for trucks) should be better enforced in order to remove unsafe trucks from roadways with an associated goal of at least 90% of all trucks registered in Mali inspected by the end of 2005.
- The axle weight regulations should be better enforced through the installation of axle weight measuring equipment at each border crossing by the end of 2005.

For Pillar 3:
- The proposed strategy takes into consideration cross sectoral impact of proposed measures in pillars 1 and 2 in order to be fully effective. Consequently, it encompasses as detailed in the main report: 1) Economic competitiveness, 2) Road safety, 3) Rural poverty alleviation, 4) HIV/AIDS prevention and, 5) Health services accessibility.
I. BACKGROUND

1. The reforms implemented in the transport sector in the 1990s with support from the Transport Sector Project (TSP) have only been partially successful at: (i) enhancing the sector’s operation efficiency, (ii) maintaining and improving infrastructure, especially roads, and (iii) building new infrastructure to reach inaccessible areas. Accordingly, Mali’s Poverty Reduction Strategy Paper (PRSP) adopted by the Government on May 29, 2002 seeks to address these issues through: (a) the development of competition between transport modes and enterprises on a sound basis; (b) the improvement of infrastructure condition, especially those of the road and rail networks, by applying a suitable maintenance policy; and (c) the continued process of opening up areas that lack easy access. Specific transport objectives of the PRSP during the 2002-2004 horizon are:

- Routine maintenance of up to 14,100 km of roads (paved and unpaved);
- Periodic maintenance of up to 1,055 km of roads (paved and unpaved);
- Rehabilitation and new construction of up to 4,975 km of roads (paved and unpaved);
- Construction of 8,272 km of rural trails;
- Construction of two new bridges over the Niger river (3rd bridge in Bamako and bridge of Gao);
- Rehabilitation of 583 km of railway tracks;
- Repair and maintain boat quays along the Niger river;
- Install navigation buoys along the Niger river;
- Acquire two boats with limited draft;
- Acquire a dredging boat; and
- Build additional port warehouses in Conakry, Nouakchott and Cotonou.

2. The World Bank’s FY04-06 Country Assistance Strategy (CAS) is designed to support the PRSP and, together with the PRSP, to provide a solid framework for moving towards achieving the Millennium Development Goals (MDGs). While the European Commission (EC) is the lead donor in financial terms for road investments (about EUR 140 million through 2007), the World Bank continues to play a dominant role in strengthening the policy framework and helping ensuring a coherent sector-wide approach. In this respect, the World Bank’s assistance strategy to the sector will rely on two upcoming projects, namely the Transport Corridors Improvement Project (TCIP) covering the 2004/2006 period and the second Transport Sector Project (TSP2) from 2006 onwards.

3. The TCIP has two primary objectives: (a) improve alternative corridors to the ports of Dakar and Abidjan by rail and road respectively, and (b) sustain accessibility to the northern region of Mali, one of the poorest region in the country. The TCIP is divided into the following project components: 1) a rail component covering social and compensation plan for redundancies of the Régie des Chemins de Fer du Mali (public railway company - RCFM) staff within the context of its concessioning in September 2003, 2) a rail component addressing the need for infrastructure rehabilitation and modernization of the rail line and the railway rolling stock, 3) a road component targeting the periodic maintenance works for two critical roads which are part of the North-South corridor; and 4) a road component encompassing technical advisory services in support of road works supervision, planning and assessment.
4. While the TCIP is underway, the TSP2 will be prepared in close cooperation with the EC and other donors. Its intended scope will be broad (i.e. sector wide program policy framework) and will include all relevant transport sub-sectors (i.e. roads, rail, aviation, maritime and river) warranting a substantial investment program which will be supported by the donors community based on a coherent transport sector strategy.

II. OBJECTIVES AND SCOPE

5. This Economic and Sector Work (ESW) is consistent with the objectives laid out for the transport sector in the PRSP and the CAS and incorporates the work to be undertaken under the TCIP. It has two primary objectives: (i) to help strengthen reforms that are being implemented, and (ii) to help define the next steps of a reform program in the transport sector. The first objective should be achieved in 2004 as part of the implementation of the TCIP and through continuous dialogue with the Government to whom the ESW was presented. Likewise, the second objective should be attained in 2005 as the proposed transport policy’s objectives and recommendations presented in the ESW, and agreed with the Government, will be incorporated within the preparation framework of the TSP2. In turn, the TSP2 will help achieve one of the goals of the New Partnership for Africa’s Development (NEPAD) consisting in closing Africa’s gap in transport infrastructure and services by: a) reducing the costs and improving the quality of transport services; b) increasing both public and private financial investments in transport infrastructure; c) improving the maintenance of transport infrastructure assets; d) removing formal and informal barriers to movements of goods and people; and e) supporting regional cooperation and the integration of markets for transport services.

6. The ESW’s primary focus was limited by design and by budget\(^1\) to road maintenance needs as well as to strategic and cross-cutting issues. Operations aspects of the domestic and rural road networks were also only partially addressed, thus preventing the ESW from providing a complete diagnostic of the transport sector. As it stands, this ESW should, therefore, be considered as a work in progress that will be complemented over time as results of the preparatory work necessary for the TCIP and the TSP2 become available. Among key documents which will be become soon available are:

- A Transport Master Plan financed by the EC which will evaluate the feasibility and determine the priorities of transport investments;
- A Public Expenditure Review (PER) of the transport sector to review the sector financing and budgeting processes, the planned works financing and expenditures and the consistency between these expenditures and the PRSP;
- A Medium Term Expenditure Framework for the transport sector which will estimate the resources necessary for recurrent and investment costs based on objectives and performance indicators defined by the Government;
- A PST2 preparation study focusing primarily on the strategic aspects of the envisioned project; and

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\(^1\) The budget allocated for this effort was USD 90,000 which is slightly more than what is considered necessary (i.e. USD 40,000 + dissemination costs) under the Recent Economic Development in Infrastructure (REDI) guidelines published when carrying out a sector snapshot review. On the other hand, this budget was considerably less than what is considered necessary to conduct an in-depth sector diagnostic (i.e. up to USD 500,000).
A review of the regulatory framework within the context of the participation of the private sector in the financing and management of transport infrastructure and services.

Accordingly, the findings and recommendations presented in this ESW will need to be updated bi-annually in order to reflect the changing operational environment of the transport sector.

III. TRANSPORT SECTOR CHALLENGES

7. Mali is a vast landlocked country (i.e. 1.24 million km$^2$) with a relatively small population (i.e. about 10.5 million in 2002) thinly spread along the Senegal and Niger river valleys. This combination of factors, to which must be added the low level of urban population (i.e. less than 31% of total population in 2002)$^2$, results in the need for a large infrastructure transport network that a country as poor as Mali cannot currently afford on its own resources. Without such network, however, Mali’s ability to reduce poverty, and especially rural poverty, would be seriously undermined.

8. This review of the current state of Mali’s transport sector is designed to identify those issues that are critical to developing a transport strategy that will contribute to the effective alleviation of poverty. As such, as part of this ESW, the following four fundamental questions need to be answered: (1) What additional institutional reforms are required in support of a successful transport strategy? (2) What must be the focus of Mali’s investment in transport infrastructure, and particularly in the road sector? (3) How must this investment be tied to other investment activities in related sectors in order to maximize its impact? and (4) How must this investment be financed? By answering these questions, the two primary objectives assigned to this ESW will be achieved (i.e. help strengthen existing reforms and help define next steps of a reform program). Furthermore, the outcome of the ESW will contribute to the Government own efforts to develop a medium and long term vision of its transport sector. Ideally, this vision will be supported by a series of specific objectives with among them those which will address how the Government intend to deal with the distinct transport needs of its rural and urban populations.

IV. TRANSPORT SECTOR REVIEW

IV. 1 INFRASTRUCTURE NETWORKS CHARACTERISTICS AND UTILIZATION

Roads

9. With 1.04 km of road per 100 km$^2$, or about 13,000 km of primary roads, Mali’s road network density is one of the lowest in the world. For comparison, that same figure is 3.10 for the Economic Community of West Africa States (ECOWAS) and 4.70 for the whole of Sub-Saharan Africa. This road density index can be misleading, however, since it ignores the fact that large portions of Mali are inhabited. Using a density index which relates population number to roadway length (i.e. number of km of road per 1,000 people), Mali roadway density appears to...

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$^2$ For comparison, urban population represents the following percentages of total population: 17% in Burkina Faso, 21% in Niger, 43% in Benin and 47% in Senegal.
be in par with that of its neighbors with a density of 1.23 km of roadway per 1,000 people in Mali versus a similar index of 1.11 for all of Sub Saharan Africa.

10. Of the 13,000 km of primary roads, about 3,000 km are paved urban and inter-urban roads while the rest, or about 10,000 km, are dirt roads. Of these, about 8,300 km are rural roads and 1,700 km are urban and inter-urban roads. The overall quality of these roads varies considerably from one type of road to another. As shown in Figure 1, in 2002, 43.5% of paved roads condition was rated as good to somewhat good, versus 28.3% and 4.0% for urban/inter-urban and rural roads, respectively.

11. As part of a recently completed study on Mali’s road classification\(^4\), a proposal was made to increase the length of the classified road network in Mali from the current 13,000 km of primary roads to 80,300 km of primary and secondary roads (see Figure 2). While this proposed increase in the length of the classified road network does provide an interesting insight about the true size of the country’s road network, it would have little relevance unless it were accompanied by a reform of the current road network maintenance spending and financing levels as well as management (i.e. implementation of decentralized management practices). The importance of communal and local roads in Mali’s road stock is worth noticing, however, since: 1) these roads represent about 75% of total road length, and 2) they play an important role in the Government’s poverty alleviation efforts by linking remote population centers to the country’s economy. For this latter reason, it seems important that Mali’s future road sector investment and maintenance

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strategy incorporate a social evaluation criteria in order to capture the social impact of these roads. For now, nevertheless, it is unclear whether any of the ongoing studies about the sector will tackle this issue or, at the very least, propose a methodology to add a social criteria in the evaluation process of road maintenance and construction.

![Figure 2: Impact on the Length of Mali's Classified Road Network of Proposed Road Classification Changes](image)

12. In 2001, ninety percent (90%) of all cargoes were transported by roads with about 95% of all domestic cargoes and 84% of all international cargoes carried by roads. Domestic road cargo traffic grew between 1995 and 2001 at about 2%/year to an estimated total of 3.8 million tons while international road cargo traffic increased by 12%/year to an estimated total of 1.5 million tons (see Figure 3). The rapid growth of international road cargo traffic reflects both the expansion of Mali’s international trade (i.e. from 1.2 to 1.8 million tons or 7%/year) as well as a significant increase in road transport modal share of international cargo traffic (i.e. from 63% in 1995 to 84% in 2001 – see Figure 3). This latter trend is a consequence, for the most part, of the loss of competitiveness endured by the state-owned rail operator during the same period.

13. It must be noted, however, that current transport traffic information should be interpreted carefully as it shows inconsistencies when compared to economic growth. Indeed, while average economic growth in Mali reached 5.3%/year between 1995 and 2001, overall cargo traffic growth (i.e. domestic and international) stood at only 2.9%/year during this same period or an elasticity factor of 0.54 (i.e. 2.9%/5.3%). Usually, such factor hovers around 2.0. In the absence of additional and more refined traffic data, it is impossible to explain such inconsistency.

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although the important contribution of gold production to the country's economic growth might provide a partial explanation to this phenomenon since gold exports have virtually no direct impact on traffic volumes. This finding is worrisome, nevertheless, as the availability of accurate traffic data is a key element in the development of a sound transport strategy.

Figure 3: Historical International Cargo Volumes by Transport Mode In Mali

Looking into the future, a continued economic growth in excess of 5%/year should support continued international trade volumes growth of 7%/year as it is the case now. Such annual increase in trade would translate by 2011 into a doubling of international cargo volumes (i.e. from 1.8 million tons in 2001 to 3.6 million ton in 2011). Likewise, a similar trend in domestic road traffic (i.e. continued 2%/year growth) would result in an increase in national cargo volumes transported by roads of 22% by 2011 or 4.6 million tons. The biggest uncertainty regarding future traffic flows lies, therefore, not in their growth but rather in: a) their geographical distribution and, b) their modal distribution:

- **Geographical distribution:** The ongoing crisis in Côte d'Ivoire has resulted in a massive shift of international traffic from the Bamako/Abidjan corridor to other regional corridors. As shown in Figure 4, back in 2000, about 76% of Mali's total international traffic (railway traffic included) was transiting through the port of Abidjan in Côte d'Ivoire. By 2003, this figure had dropped to less than 18% with Lomé, Dakar and Tema\(^8\) representing each about a quarter of that same total. These changes, if they were to become permanent, would create challenges as the strategic advantage for Mali of a lesser dependence on a single trade corridor would be offset by the increases in various costs associated with the operation of multiple

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\(^7\) Source: Railway concessionaire's (CANAC) Business Plan.

\(^8\) Tema's figures are included under "Others" in Figure 3. They represent more than 90% of the "Others" category.
international corridors (e.g., additional border crossings costs, additional road construction/maintenance costs, increased freight charges).

- **Modal distribution**: While intermodal competition is projected to stay low for domestic traffic over the foreseeable future, international road traffic will be subjected over the coming years to increased competition as the private railway operator starts improving international rail services to Dakar. Assuming this operator achieves its projected market share gains by 2011 (i.e. from 15% in 2001 to 25% by 2011) of all international cargo traffic), the sheer increase in actual tons transported internationally (i.e. +1.8 million tons over 10 years) should still ensure, however, a substantial growth in international road cargo transport over the foreseen horizon (i.e. to 2.7 million tons in 2011 versus 1.8 million tons in 2001).

15. In spite of the projected robust growth of road cargo traffic, Mali’s road network is unlikely to experience in the distant future any type of road capacity related congestion with the notable exception, however, of its main urban areas. This observation stands even if one considers the fact that a large share of the country traffic is concentrated on few road axes (i.e. 1.6 million tons on the Bamako/Abidjan corridor in 2000) and that the paved sections of its primary road network handle most of the traffic (i.e. about 70% of total traffic). Indeed, in 2000, average traffic on the country’s road network was estimated at only 86 vehicles per day. Even on the most frequented inter-urban roads, such as the road between Bamako and Ségou, total

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9 World Bank’s estimates indicate that the lengthening of trade routes due to the Côte d’Ivoire crisis is representing an additional USD 12 million/year in transport costs.

10 Source: The railway concessionaire is projecting upward to 884,000 tons of international cargoes transported by rail by 2011 in his business plan.

11 Source: *Étude de la Classification Routière au Mali*. April 2003 and data from the Observatoires Routiers.
average traffic was less than 1,000 vehicles/day (i.e. 854 in the case of Bamako/Ségou). This under utilization of the current network may actually worsen in the near future as Mali is pursuing the paving of new international road corridors as alternatives to the Bamako/Abidjan corridor (e.g., Bamako/Kayes/Dakar – to be completed by 2006 – Bamako/Kourémalé/Conakry – to be completed by early 2005). The addition of these corridors, while it is justified on purely strategic ground, will be costly. The Government should, therefore, seek to recoup some of the investment made on these new corridors by ensuring that appropriate policies (e.g., deregulation of international trucking services, elimination of road blocks, reduction of border crossing times, road maintenance practices) are implemented to make them the catalyst of greater truck services competition so as to benefit the whole economy.

16. Along similar lines, the Government should look into the adequacy between supply and demand for the 105,000 square meters of warehouses space\(^{12}\) which is leased and operated by the parastatal Entrepôts du Mali (EM) at the main West Africa ports where Malian trade takes place. As Figure 5 shows, prior to the beginning of the crisis in Côte d'Ivoire (i.e. 2000), 32.4% of EM warehouse storage capacity (i.e. 34,000 m\(^2\)) was located in Abidjan while 76.7% of Mali’s trade transited there. Consequently, while Malian’s warehouses in Abidjan processed 46.9 tons of international cargoes per square meter of warehouse space in 2000, those in Nouakchott and Conakry managed only to treat 2.7 tons of cargoes. Such stark difference in warehouse space utilization ratio (i.e. 18 times less than in Abidjan) suggests that, even if the current policy for securing supply routes at the lowest possible cost is justified, the acquisition of warehousing space should be reviewed carefully in order to identify ways to make it more efficient as well as responsive to actual market demands.

**Railway**

17. Railway activities play an important role in Mali’s transport infrastructure despite the limited density of the rail network which is made of a single rail line of 643 km from Bamako to the Senegalese border via of Kayes. Fourteen (14) rail stations are located along the 643 km of the Malian section of the rail line which continues beyond Kayes to Dakar. This connection provides an important transport linkage to a major port from which Malian imports and exports can transit.

18. As of 2000, the rail line was in poor condition with 84% of the rails being more than 40 year old and only 33% of the total rail line made of welded rails. Additionally, 46% of all rail ballast condition was then rated as poor\(^{13}\). This situation should improve dramatically once the new rail operator (i.e. Transrail) starts implementing its planned 5-year investment rehabilitation plan starting in 2004.

\(^{12}\) The acquisition and management of these warehouses which are meant to serve exclusively imports and exports from/to Mali started in the 1970’s with the Abidjan warehouses. Since then, the Malian Government via the Entrepôts du Mali has spent more than FCFA 2 billion (or about USD 4 million) to acquire these facilities.

\(^{13}\) Source: *Etude de la Compétitivité de la Voie Sénégalaise de Dévouement du Mali*, July 2002.
19. Historically, the rail line has provided an economically sound alternative to truck international traffic along the Bamako/Abidjan corridor. As shown in Figure 3, back in 1995, the rail line's market share of Mali's international cargo traffic stood at 36.8% or 442,000 tons. Since then, the rail’s share of international traffic has fallen dramatically to 15.1% in 2001, or 273,500 tons, under the combined impact of ageing infrastructure and rolling stock as well as increased multi-modal competition from the Bamako/Abidjan corridor\(^\text{15}\). This downward trend is expected to reverse itself over the coming years as the existing rail line is due to undergo significant rehabilitation work.

20. Under the 25 year concession agreement signed in September 2003 between a private operator, Transrail, and the Malian and Senegalese governments, the operator plans to invest through 2008 Franc CFA (FCFA) 9.5 billion (i.e. about USD 19 million) in the track and FCFA 10.5 billion (i.e. about USD 21 million) in the rolling stock. This investment plan should strengthen significantly rail operations’ competitiveness, thus enabling the rail operator to reach its goal of transporting 711,000 tons of international cargoes by 2008\(^\text{16}\) in spite of the expected completion in 2006 of the paved road between Dakar and Bamako. Early traffic figures from the

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\(^{14}\) Source: *Etude Pour un Service de Camionnage Plus Efficace au Mali*. May 2003. Assumes that 100% of Mali's exports passing through these ports of entry are warehoused there for some time.

\(^{15}\) The privatisation in 1995 of the rail line operations between Abidjan and Ouagadougou has resulted in significantly higher productivity of the rail operator. Combined with the higher productivity of Abidjan port versus Dakar port, as well as the better road connection between Côte d'Ivoire and Mali, this increased productivity of the transport linkage between Abidjan and Bamako translated into significant market share gains for this corridor between 1996 and 2001 (i.e. from 61.3% to 79.3%, or from 938,000 tons to 1,598,000 tons).

\(^{16}\) Sitaraail, the private operator of the Abidjan/Ouagadougou rail line, experienced a similar growth of freight traffic after it took over the operations of the rail line in 1995. Its freight traffic rose between 1995 and 2002 from less than 500,000 tons/year to more than a million tons/year.
concessionaire confirm the market potential of the privatized railway with an international traffic during the first full month (i.e. October 2003) of operations doubled that of the previous year (i.e. 38,000 tons in October 2003 versus 19,000 tons in October 2002).

21. The long term future of both domestic and international rail passenger traffic is uncertain, however, since the opening of the paved road connection between Bamako and Kayes and Bamako and Dakar in 2006 should have a significant impact on overall passenger demand. As shown in Figure 6, current passenger traffic stood at 550,830 in 2002, with 89.8% of this total, or 494,810, representing domestic passengers. This total is 29.2% lower than in 1999, with all of the decline in passenger number reflecting the contraction in domestic passenger demand (i.e. from 720,190 passengers in 1999 to 494,810 passengers in 2002). Since, over short to medium distances, small buses are usually able to provide similar yet faster and more frequent services than the train for only slightly more expensive fare, one would expect that the current downward trend of domestic rail passenger traffic will accelerate upon completion of the paved road between Kayes and Bamako, thus raising the question of the long term sustainability of this service. The same question should also be asked of the future of international services as similar experiences (e.g., international passenger service from Côte d'Ivoire to Burkina Faso) show that even over distance of several hundred kilometers, buses can successfully compete with the train.

![Figure 6: Passenger Activities along the Bamako/Kayes Rail Line](image)

**Airports**

22. Mali airport network comprises ten (10) airports of which six (6) are designated as international airports (i.e. Bamako, Tombouctou, Kayes, Sikasso, Mopti and Gao). Recently completed and ongoing major investment programs on the airport network include the expansion

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of Tombouctou airport at a cost of FCFA 8.0 billion (i.e. or about USD 16 million), the
construction of a new airport terminal in Bamako for FCFA 952 million (i.e. or about USD 1.9
million) as well as the ongoing rehabilitation of Nioro and Mopti airports at a total cost of FCFA
5.6 billion (or about USD 11.2 million) and the improvements of Kayes and Sikasso airports for
a total cost of FCFA 15 billion as part of the organization of the 2002 African Nations Cup
(ANC) tournament. In spite of this significant investment program, the overall airport
infrastructure in Mali, including air navigation systems, is suffering from obsolescence. The
Government has long acknowledged that problem and is seeking to involve the private sector in
the financing of its airport infrastructure (see Section IV.2). This approach is rendered difficult,
however, by the lack of traffic volumes except for Bamako airport. In 2002, overall traffic
amounted to only 351,433 passengers with 93.1% of this total, or 327,106 passengers, at Bamako
airport (see Figure 7). In light of these traffic statistics it is apparent that, with the notable
exception of Bamako airport, the investments made and planned for Mali’s airport system cannot
be justified on financial grounds alone. The question of their economic and social usefulness
should, therefore, be raised and investigated.

23. Likewise, the question of the low elasticity factor between economic growth and traffic
growth in Mali needs to be addressed. Despite strong economic growth between 1995 and 2002
(i.e. about 5.3%/year), airport system wide traffic increased only by 1.1%/year or, respectively,
from 321,676 to 351,433 passengers. This anemic growth which translates into a demand
elasticity factor of only 0.2018 is rather surprising as this figure is usually above one (i.e. 1.74 for
international traffic in Senegal between 1995 and 2002). This low number merits further research
as it suggests a problem of affordability and availability of air services to/from and within Mali
as well as wealth concentration.

Figure 7: Passenger Traffic at Mali’s Main Airports

18 Ratio computed as follows: passenger traffic growth/economic growth.
Rivers

24. Mali’s river network is made of two major river systems (i.e. Senegal and Niger rivers) totaling 2,334 km of navigable waterways. Operations along these waterways which are primarily concentrated along the Niger river basin (about 90% of total waterways length) is limited year round by lack of water depth and/or marked navigable canals. The recent completion of the Manantali dam on the Senegal river, however, should alleviate this problem for at least this waterway. It remains, nevertheless, that in the absence of unloading and loading quays along the main rivers’ effluents, permanent problems exist for cargo and passenger traffic. Financing sources for these necessary improvements to Mali’s waterways have yet to be identified.

25. In 2001, it was estimated that about 98,000 tons of cargo and 102,000 passengers were carried on these waterways\(^{20}\). While these traffic numbers seem low in comparison to those of the road and railway systems, they conceal the fact that waterways are often the only mean of transportation available to reach isolated rural areas. Most of Mali’s river borne traffic takes place between Koulikoro and Mopti. As such, waterways play an important role of economic integration and exchange. Unfortunately, detailed traffic statistics in terms of primary traffic routes, type of goods transported, tariff levels, operators size and safety are in short supply. This absence of information presents a problem as it limits any sound analysis of the contribution of river transport activities to rural poverty alleviation. Likewise, it makes it difficult to evaluate the rationale of any proposed investment in the river systems infrastructure in Mali.

IV. 2 INFRASTRUCTURE NETWORKS MANAGEMENT, FINANCING AND REGULATION

Roads

26. Over the last couple of years, Mali’s road sector management has undergone significant reforms. The creation of dedicated road policy, management and financing government organizations and agencies has been at the heart of these reforms. Since December 2002, the task of defining the country’s road development policy and elaborating the country’s road routine and periodic maintenance program is under the responsibility of the National Department of Highway (i.e. Direction Nationale des Routes - DNR). As the oversight agency for road maintenance work, the DNR works closely with the “Service des Données Routières” (i.e. Road Statistics Service) in order to assess road maintenance priorities throughout the country. Its annual maintenance program is submitted for approval to the Board of Directors of the Road Authority (i.e. Autorité Routière – AR) which manages the financing of the road maintenance (both routine and periodic) program. This independent agency whose Board of Directors is comprised equally of representatives of the State and civil society, including road users, was created in August 2000 following the dismantlement of the then existing road fund.

27. Its financing of road maintenance activities is derived from the following sources:

- An axle load charge paid by trucks using Mali’s road network based on standard axle weight;

- A fuel levy on all types of transport fuels sold within Mali;
- Toll road fees charged on selected road segments; and
- Government budget’s special investment funds.

Of these four sources of financing, only the Government budget’s special investment funds and the axle load charge were in place in 2003. Starting in 2004 with the fuel levy and in 2005 with the toll road fees, all four sources of funding will be then generating revenues. This should allow for a progressive reduction in the amount of special investment funds provided from the Government’s budget.

28. As shown in Figure 8, total budget for the AR is projected to increase from FCFA 5.9 billion (i.e. or about USD 11.8 million) in 2003 to FCFA 12.4 billion (i.e. or about USD 24.8 million) in 2008. This sizeable increase in AR’s road maintenance budget (i.e. +108% between 2003 and 2008) will be made possible primarily by the planned increase in fuel levy taxes from FCFA 3/liter in 2004 to FCFA 14/liter in 2008 as agreed between the Government and the EU. By that date, fuel levy alone will generate FCFA 6.5 billion (i.e. or about USD 13 million), or 53% of the agency’s projected budget while the Government budget special investment funds’ share of that same total will shrink to less than 25%.

29. While this projected increase in AR maintenance budget is welcome, it still falls short, however, of the estimated FCFA 25 billion (i.e. or about USD 50 million which is equivalent to a FCFA 53/liter fuel levy tax) needed for yearly periodic and routine road maintenance in Mali21. Additionally, one must remember that road maintenance represents only a portion of total road expenditures for a given year. Accordingly, the Government’s financial efforts in this sector must be judged in their entirety. As shown in Figure 9, overall road expenditures (including new construction) have stagnated in real terms since 1996 at around FCFA 32 billion/year (i.e. or USD 64 million) with about half of that total, or about FCFA 16 billion/year (i.e. or USD 32 million), spent on road routine and periodic maintenance. The primary impact of AR rising budget will be, therefore, to increase significantly the percentage of total routine and periodic maintenance expenditures self-financed from less than 52% in 2002 to about 89% by 2008 (assuming 2002 spending levels are maintained). This lower reliance on external donors and Government’s budget should ensure greater stability of road expenditures.

30. The projected improvement in road maintenance funding while it deserves praises should not hide the fact that overall road expenditures in Mali continues to be insufficient to improve significantly the quality of the existing road network (see Figure 1). While no precise estimates exists on how much would be required to resolve Mali’s road network quality issue, figures provided by the Malian Government show that routine maintenance of the primary road network would alone require FCFA 9.9 billion (i.e. or about USD 19.8 million) in 2004 versus the FCFA 7.5 billion allocated (i.e. or about USD 15 million – See Figure 8). Indeed, one can only assumes that significant additional budgetary efforts will have to be made in the future to make up for the past insufficiencies in road routine and periodic maintenance.

Figure 8: Road Authority Actual and Projected Maintenance Budget by Funding Sources

Figure 9: Road Sector Expenditures by Activity Categories in Constant 2002 FCFA

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31. At a minimum, the Malian Government should clearly commit itself to increase the share of its Gross National Product (GNP) it spends on roads back to its 1999 level of 1.8% versus 1.4% in 2002 (see Figure 10) or the equivalent of an extra FCFA 7 billion/year (i.e. about USD 14 million). Such increase should be linked to clearly spelled out improvements in road quality measurements presented in Figure 1. Likewise, it should be accompanied by changes to the tendering processes used for road maintenance and construction. In this regards, two key upcoming reforms should ensure that future road monies are disbursed quickly and efficiently. There are: (i) the planned creation in 2004 of the Contracting Agency for Road Maintenance (AGEROUTE) which should complete the intended reform of the road sector management by centralizing into one single entity the role of implementing routine and periodic urban road maintenance and (ii) the introduction of multi-year maintenance and performance maintenance contracts instruments that should facilitate road funding disbursements as well as increase the efficiency of Malian private public works companies as stable and long-term financing would now be made available to them.

Figure 10: Road Sector Financing as a Percentage of GNP and Central Budget

32. Figure 11 shows how road sector financing will work once the AGEROUTE whose creation has been endorsed by the Government becomes operational in 2005. Since the AGEROUTE will require time to be fully effective, supervision of road periodic and routine maintenance will continue to be handled in part by two other road work supervision agencies; namely the Contracting Agency for Public Works – or AGETIPE – and the Contracting Agency for Rural Infrastructure Works and Equipment – or AGETIER. For now, it is unclear whether

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these two road contracting agencies will be kept "as is" once the AGEROUTE is fully operational. It is likely that part of the answer to this question will come from the level of efficiency that the AGEROUTE will achieve once it is operational.

![Diagram](image)

Figure 11: Road Sector Organization Following the Creation of the AGEROUTE

33. **Rural Roads Financing & Management**: Insufficient rural accessibility remains an issue in Mali that the Government seeks to address through continued rehabilitation and maintenance of the tertiary road and feeder road networks and improvement of the institutional framework. The Government recently launched the preparation of a rural transport strategy to address these issues. They were identified with the support of the Rural Travel and Transport Program which is part of the Sub-Saharan Africa Transport Program (SSATP) supported by several donors including the World Bank. More specifically the envisioned strategy will seek to mitigate the problems linked to: (i) the lack of clear ownership and identified responsibilities in the maintenance rural roads, (ii) the lack of participation of local populations in the management
and planning of the rural road network and (iii) the lack of financial resources to pay for the necessary maintenance improvements and expansion of the rural road network. Support to formulate this strategy is provided under the National Rural Infrastructure Program (Credit 3393-MLI approved on June 27, 2000) through two studies designed to: (a) propose a reclassification of the rural road network (already completed); and, (b) revise the institutional framework and responsibilities for the management of rural roads (ongoing). Once the results of both studies are available, it will become clearer what strategy should be implemented to ensure sustainable development and management of the country’s rural road network.

34. **Rural and Urban Roads Transport Regulation**: For now regulations of the road sector in Mali is limited to the technical aspects of its construction and maintenance. It does not yet involve any type of economic regulation since toll roads have yet to be created and does not cover the difficult subject of conservation and protection of the existing road assets.

**Railway**

35. As previously indicated, the major event in the railway sector was the transfer in September 2003 of the operations of the rail line and the railway freight and passenger activities to a private operator: Transrail. Under the signed 25 year concession contract, Transrail is responsible for maintaining and upgrading as necessary the rail line from Bamako to Dakar as well as operate the freight and passenger trains on this line. While Transrail is to take full financial risks associated with the maintenance and upgrading of the rail line as well as the freight operations, it only acts as a hired operator for the passenger activities under a separate agreement with the RCFM. For now, passenger services will be subsidized by the respective governments under a full cost plus benefit recovery scheme whereby the operator will collect the passenger fees and charge the states, if necessary, for the difference between the fees collected and the cost and profit of providing these services.

36. Preliminary operations results show an increase in passenger revenues due to better passenger access control as well as revenue collection. This increase, albeit it has been achieved in a reduced service environment, has proven thus far sufficient to cover Transrail’s variable costs. The concessionaire, however, is still planning in its current business that over the long run operating passenger services will require subsidies. (i.e. projected to be FCFA 700 million - or about USD 1.4 million by 2004 between Mali and Senegal).

37. The activities of the concessionaire will be monitored by an Oversight Committee composed of the following five permanent members:

- A president selected from the civil society and designated conjointly by the Malian and Senegalese ministers of transport;
- One representative of the Senegalese Government and one representative from the Malian Government based on names proposed by the respective ministry of transport;
- Two representatives of the concessionaire;

This Oversight Committee will not have, however, any legal or financial power over the concessionaire. It will only play a consultative role and will provide advices to the respective
concessioning authorities. Finally, it will be responsible for selecting every couple of years an independent auditor whose task will be to verify that the parties involved in the concession have carried out their respective obligations. Additionally, a Follow Up committee composed of Senegalese director and his Malian assistant director will be in charge of monitoring the private operator work on a daily basis.

Aviation

38. The aviation sector in Mali is organized around three entities:

- **The Civil Aviation Directorate** (i.e. Direction Nationale de l’Aviation Civile - DNAC). The DNAC whose mission is to oversee the aviation sector, is in charge of certifying and delivering operational licenses to airline operators and pilots. It also must ensure that existing aviation rules, regulations as well as airport operations are in compliance with the International Civil Aviation Organization (ICAO) guidelines on safety and security. Such compliance has become critical in a post 9/11 environment as countries who are unable to meet these guidelines run the risk of seeing their international air connections to the outside world curtailed as well as enduring the financial consequences of their inability to provide adequate security and safety (i.e. sky high insurance premium for the airlines based in these countries). Within this context, and with the awareness of the fact that it does not have the necessary resources and skills to meet these requirements on its own, the DNAC has joined forces with the civil aviation authorities of the West Africa Economic and Monetary Union (WAEMU) to create a regional agency (i.e. also known as COSCAP) in charge of aviation safety. This agency is to be set up with the help of ICAO under an initial 3-year USD 3.3 million contract signed in March of 2003. Lastly, Mali has signed an Open Skies agreement with the United States that is managed by the DNAC as well as joined the US Safe Skies initiative for Africa in an effort to improve the safety and security procedures at Bamako airport. Finally, Mali is considering transforming the DNAC in an administratively and financially autonomous entity in compliance with WAEMU and IACO’s directives so as to strengthen its capacity.

- **The Airport Authority** of Mali (i.e. Aéroports du Mali – ADM): ADM currently manages all of Mali airports. It is a state-owned company with 250 employees and a turnover in 2002 of FCFA 1.8 billion (i.e. or about USD 3.6 million). The process for selecting a private concessionaire to manage the Bamako airport that was launched in 2002 failed. A second attempt at identifying a private concessionaire is underway. The Government announced at the end of November 2003 its intention to initiate negotiations with one of the bidding consortia composed of a bank, an airport operator and a construction firm. Available information indicate that this consortium is offering to operate under a concession contract the airports of Bamako, Tombouctou and Gao and manage, using a management contract, the remaining airports. In addition, this consortium is proposing to invest FCFA 56 billion (i.e. or about USD 112 million) between 2004 and 2006 to, among other things, build a new passenger terminal as well as rebuild the existing apron, taxiways and main runway at Bamako airport. While this offer looks enticing on paper, one must question: 1) its
financial soundness since the proposed investment is equivalent to 33 times ADM’s 2002 turnover, and 2) the budgetary risk it involves for the Government as only State subsidies can make this investment plan feasible.

- The ASECNA (Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar) provides meteorological services for Mali airports, overflight air traffic control, ground and approach control at the airports of Bamako and Gao, as well as fire fighting services at both of these airports. The ASECNA is an international organization which provides similar services in 15 other French speaking African countries.

Rivers

39. The “taxable base” of waterways traffic is very limited since 90% of actual river borne traffic in Mali is handled by informal service providers (i.e. owners of small pirogues) who escape mostly from any type of taxation and oversight of their operations. Although it does not appear to be for now a pressing issue, the enforcement of safety and service quality regulations under the jurisdiction of the Direction Nationale des Transports (DNT) is currently made difficult by the importance of informal operators in this sector.

IV. 3 TRANSPORT SERVICE PROVIDERS

Trucking Industry

40. The primary characteristics of the trucking industry in Mali are as follows:

- It is mostly composed of old trucks which is both comprehensible and economically advisable since Mali is a poor nation. The problem in Mali, however, is that the existing truck fleet is simply too old (i.e. in 2000, 94.6% of all heavy trucks registered in Mali were more than 10 year old\(^{25}\)) to ensure reliable operations. As shown in Figure 12, in 2000, only 62% of the existing truck bulk tonnage capacity (i.e. 10.3 out of 16.6 million tons) was offered on the market while that same figure stood at 50% for truck liquid bulk capacity (i.e. 0.7 out 1.5 million of M\(^3\)).

- It is suffering from chronic overcapacity. Statistics provided in Figure 12 for bulk cargo capacity show that in 2000 only 35% of the truck fleet bulk cargo capacity offered to the market was utilized (i.e. 3.6 out 10.3 million of tons). Even if we were to assume that overall international and domestic transport demand increases at today’s rate through 2011, and that all incremental demand generated were served exclusively by Malian trucks, Mali existing fleet bulk capacity usage rate would still stand at only 51% by 2011 (i.e. 5.3 million tons demand for 10.3 million tons capacity). In spite of this overcapacity problem, however, truck fleet capacity in Mali continues to grow. According to statistics provided by the DNT, the number of trucks of all sorts registered in Mali grew from 13,396 in 1996 to 23,496 in 2000 (see Figure 13), or an average yearly growth of 12%. While caution must be exercised when considering these figures as they may include the trucks which have been retired from

service, they clearly outline that the market mechanism of gradual adjustment of supply to meet demand does not work properly in Mali.

- It is not capable to meet Mali's international trade needs. Following the closing of the Bamako/Abidjan corridor, Mali had to lift the market share limitations imposed on foreign trucks as the Malian truck fleet proved incapable to provide sufficient long haul capacity to transport Malian goods to/from Lomé, Accra or Cotonou.

- It practices overloading with all the consequences that such practice entails on road maintenance costs in order to compensate for the limited business opportunities offered by a market suffering from overcapacity.

- It is dominated by informal single truck companies. In 2000, the average number of trucks available per trucking company stood at 2.926 with less than 5% of all truck companies generating an annual turnover of more than FCFA 100 million (about USD 200,000). A significant reason behind these low numbers seems to be the difference in fiscal treatment that currently exists between trucking companies of less or more than 3 trucks. In the first case, a standard flat tax is applied while in the second case a turnover based tax is utilized. Accordingly, companies with more than 3 trucks tend to break themselves into smaller individual companies operated by relatives of their primary owners in order to take advantage of this simplified and less intrusive taxation scheme.

![Figure 12: Truck Fleet Utilization Statistics for 2000](image)

26 Source: Ibid. This average was calculated based on 3,075 truck companies exploiting 23,496 vehicles with an average availability rate of 37.8%.

27 Source: Ibid.
The current state of this industry can be partially explained by the cartel based management principles applied to truck transport by both the Government and the Malian professional trucking associations as well as the lack of competitiveness of rail operations until now in spite of lower rail tariffs internationally (i.e. about FCFA 28/tons versus FCFA 44/tons for trucks). Until now, Mali had negotiated with neighboring countries transport agreements that guaranteed a substantial share of international cargo (i.e. 100% of international petroleum cargoes and 50% of bulk cargoes) for Malian trucks engaged in cargo transport to/from Mali. Additionally, the Government had ensured that only Malian trucks could import petroleum product into Mali. Consequently, almost all international truck traffic to/from Mali was regulated with guaranteed market share for the Malian truck companies which often translated into fixed transport tariffs, thus leaving very little room for competitive behavior to flourish. This policy has carried, however, a significant cost to the Malian economy and its consumers. In 2001 alone, the country balance of services recorded a FCFA 158 billion (i.e. or about USD 316 million) deficit for freight services, or the equivalent of 7.1% of GNP. While it is not possible to say that truck transport was solely responsible for this entire figure, the fact that it accounts for 90% of all international exchange to/from Mali must suggests a strong correlation between this figure and truck activities.

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28 Source: Ibid.
29 Source: Ibid.
30 Based on an average truck freight rate of FCFA 44/ton, an average international one way trip length of 1,000 km, total truck service cost for 2001 should have been at a minimum FCFA 67 billion (i.e. or about USD 134 million). Adding to this cost the cost of freight forwarders and others transport professional, and the important contribution of truck traffic to this figure of FCAF 158 billion appears realistic.
42. The hands-on approach to truck transport supply and demand management adopted by the Malian Government has led to the current situation of oversupply, low productivity and lack of preparedness for international competition. While the consequences of the Côte d'Ivoire crisis on the Malian trucking industry have yet to be fully evaluated, World Bank's estimates indicate that the lengthening of trade routes alone translated in 2003 in an additional USD 12 million in transport costs. Likewise, anecdotic evidences of the incapacity of Malian truck companies to compete along more intensely used international transport corridors such as Bamako/Tema and Bamako/Lomé are starting to emerge. These evidences take the form of complaints from Malian truckers of the presence of larger (up to 60 tons) and more modern Nigerian and Ghanaian trucks on Mali's roads. The same complaints about Malian trucks, however, are arising from Ghana and Burkina. Accordingly, one would recommend that the Administration carefully reviews facts before taking any important decisions in support of its trucking industry. Among the proposed measures that seemingly would require such review are: a) a one year moratorium on value added tax, b) a reduction and/or elimination of import duties on trucking related equipment, and 3) a loan guarantee scheme under which the Government would provide State guarantees to loan taken by trucking companies to acquire new trucks. While this latter measure is well intentioned, it carries significant financial risks to the Malian taxpayers (i.e. Malian truck companies have very low credit worthiness) unless it is based on very sound credit analysis and eligibility criteria. Furthermore, it fails to address the structural issues that plagues the trucking industry (e.g., over supply, fixed tariffs) and, therefore, does not provide a long term solution to current problems. At a minimum, one would expect that any help to the trucking sector would be accompanied by a sound reform of the sector that would seek to encourage small operators to merge in order to eliminate progressively the over supply of trucking capacity as well as create larger firms with sufficient financial capacity to acquire on their own new trucks.

43. Finally, the Government has promoted the creation of a public organization called the Conseil Malien des Transporteurs Routiers (CMTR) which, like for the freight forwarders, will regroup all truck operators under the umbrella of a single professional organization whose stated goals will be to defend the interest of its members. Since the legislative texts underpinning the creation of the CMTR have yet to be adopted by the Malian parliament, it is too early yet to tell practically what the role and impact of this new body will be on the truck industry.

Urban Transport Companies

44. One of the most notable features of the public transport sector in Mali in recent years has been the explosive growth of para-transit services of low quality and standards, defined as publicly available passenger transport services outside the formal public transport system. In Bamako, for instance, the number of minibuses and buses registered has grown from 730 in 1995 to 4,454 in 2001 (see Figure 14) primarily because of the increase in para-transit services using 14-25 passengers minibuses. Lately, however, larger buses (i.e. 50 seat buses) have started to be operated by these private operators. This type of operations is market responsive, provides access to poor areas, and allows for direct routing, speed and flexibility of service. As such, it plays a vital role in urban mobility and ensures in Bamako alone the transport of an estimated 400,000 people daily along 234 designated routes. Unfortunately, at the same time, it is associated with three characteristics that give it poor image and reputation:
Dangerous behavior on the road. Accident statistics for Bamako in 2001 shows that minibuses accounted for 36.7% of all deadly accidents recorded for four wheels vehicles while they represented only 18.0% of these registered vehicles31.

Urban congestion; and,

Rife pollution caused by old and poorly maintained vehicles.

![Figure 14: Number of Urban Transit Registered Vehicles in Bamako](image)

A regional study conducted in 1999 as part of the Urban mobility component of the Sub-Saharan Africa Transport Program (SSATP), reviewed the organization, the financing and the profitability of private transit services in Abidjan, Bamako, Nairobi and Harare, and showed that, in those four cities, para-transit operators had the following points in common:

- A highly fragmented sector comprising a large number of small enterprises;
- The predominance of low capacity minibuses (14 to 25 seats);
- An aging fleet: with the opening up of the market for used vehicles in the 1990s, more than half of the fleet is more than 10 years old;
- Absence of traffic regulation; and
- Unsafe transport because drivers are pressured to push themselves to the limit to earn the daily amounts that vehicle owners require.

In Mali, since the completion of the SSATP study, the sector has evolved for the better in terms of minibuses operational safety due to the stricter implementation of technical visit rules. Indeed, in 2001, according to the data provided by Mali Technic System (the concessionaire in

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charge of conducting technical visit throughout Mali), minibuses in Bamako had the highest inspection rate of all vehicles registered with a total of 86.2% of registered minibuses inspected versus 48.1% for all other vehicles.

**Freight Forwarders**

47. As part of a Government sponsored initiative, freight operators in Mali are represented by a professional organization called the Conseil Malien des Chargeurs (CMC) which was created in September 1999 as a public organization. About 1,200 freight forwarders are registered with the CMC with 1,065 classified as importers and 135 classified as exporters. As it is the case in the trucking industry, most of these forwarders are one-person companies (i.e. 65% of all operators) and very few have significant revenues (i.e. only 6% of all forwarders have a turnover greater than FCFA 1 billion/year – or about USD 2 million)\(^3^3\).

48. The role of freight forwarders in the international transport chain is essential as they order transport services to/from Mali. In this regard, the current proposal from the Government to deploy CMC representatives at the Malian warehouses located at the various international West African ports in order to ensure “proper supply and demand” of international cargoes at these warehouses requires further clarification.

**Airlines**

49. Since the demise of Air Mali in 2003, no Malian scheduled passenger airline is operational. Domestic air services are ensured by air taxi while regional and international air services are provided by the like of Air France, Air Sénégal, Air Burkina and STA Mali. In an attempt to remedy this situation, the Government has launched in November of 2003 a call for bid for a strategic investor to take 51% of the shares of a new national company with an initial capital of FCFA 3 billion (i.e. or about USD 6 million)\(^3^4\). While this new airline would inherit the international air traffic rights (i.e., outside of Africa) of the defunct Air Mali, it may also have to take over its domestic services obligations which are financially unattractive considering the very limited size of the national traffic demand (i.e. 24,000 passengers in 2002). Within the context of a difficult economic context and considering the fully liberalized status of air traffic services within Africa, the Government’s initiative appears to go against prevailing market and economic conditions.

**River Transport Companies**

50. As indicated before, in Mali, 90% of existing river traffic is handled by informal transport companies. The rest, or 10%, is handled by the state owned company, the COMANAV. At the end of 2002, the company employed 116 employees, operated 5 obsolete boats which were between 20 and 46 year old, had an annual turnover of FCFA 976 million\(^3^5\) (i.e. or about USD 24

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\(^3^4\) For reference the capital of two West African private airlines, namely Air Sénégal and Air Ivoire are, respectively, USD 11 and USD 7 million. Under the proposed scheme, the Malian Government would take 49% of the new company’s capital.

\(^3^5\) 2001 turnover figures.
1.9 million) and a net loss of FCFA 14 million (i.e., or about USD 28,000). As part of three-year plan covering the 2003-2005 period, the Government has agreed to provide to the COMANAV a FCFA 250 million (i.e., or USD 0.5 million) in equipment subsidies to cover the cost of carrying out emergency repairs on its existing fleet. Additionally, it has approved in March 2004 an increase in its capital structure from the current FCFA 50 millions (i.e., USD 0.1 million) to FCFA 1.5 billion (i.e., or USD 3 million) and is seeking financial help from regional banks (e.g., Banque Ouest Africaine de Développement) in order to finance the acquisition of a new fleet of boats more capable to operate on the shallow water of the Niger and Sénégal rivers (i.e., at an estimated cost of FCFA 2 billion - USD 4 million).

V. CROSS CUTTING ISSUES

V. 1 TRADE AND TRANSPORT

51. The government of Mali has recently undertaken an encouraging initiative in commencing informal consultations on trade with key stakeholders, including an informal Integrated Framework for Trade (IF) discussion group and the creation of the embryonic National Committee on Competitiveness (Conseil National de la Concurrence). Additionally, Mali has taken major steps to liberalize its economy by reducing its import tariffs when it adopted the Common External Tariff (CET) of the WAEMU in 2000. This decision has since brought average external tariffs from 22 to 12% but has not resulted, however, in a sharp decrease in the overall tax burden placed on trade since, in the meantime, new taxes and duties have been introduced (e.g., Community Wide Solidarity Tax of 1.5% add-valorem or statistical tax of 1% add-valorem). The Malian Government has long acknowledged, however, the importance of lower trade barriers in order to foster economic growth. Within this mindset, it seeks to foster greater competitiveness among Malian industries so as to lower the country over reliance on three main exports products (i.e. Cotton, Livestock and Gold accounted for 78% of Mali’s total exports in 2000). Accordingly, the Government is fully aware of the fact that an expanding export base cannot be obtained without the importation of intermediary goods (machinery, equipment and petroleum products) whose cost is directly impacted by transporting costs. Unfortunately, current government policies adversely impact these costs and should, therefore be changed. These policies are:

- The continued heavy imposition placed on new truck import (i.e. 30 to 40% add-valorem versus and average of 12% add-valorem for all goods) although current figures are much lower than what they were before the adoption of the CET (i.e. >100% add-valorem). Without new trucks, Mali’s trucking industry cannot modernize itself, thus lower its operating costs.
- The continued enforcement of tight market access regulations through administrative limitations of foreign trucks market share on international trade routes to/from Mali.

V. 2 REGIONAL INTEGRATION, TRANSPORT FACILITATION AND GOVERNANCE

52. As a landlocked county, Mali can only trade efficiently if it has a well-developed network of transportation routes. Mali’s capacity to trade, therefore, depends not only on its own internal transportation network but also on that of its neighbors. The recent crisis in Côte d’Ivoire has highlighted just how dependent Mali is on its neighbors and has forced the authorities to identify
alternative transportation arrangements. Although Mali is well integrated in the region as a member of both ECOWAS and WAEMU, of WAEMU Customs Union and ECOWAS Free Trade Agreement, its economy in general and its transport sector in particular, continue to suffer from administrative hindrances. A recent study on various road corridors throughout West-Africa shows that the average cost of police, gendarmerie and customs harassment ranges from FCFA 100,000 to FCFA 300,000 (about USD 2,000 to 6,000) for a 20 foot container or, in the case of Mali, anywhere between 8 and 25% of the transport cost of a 20 foot container between Abidjan and Bamako. This important fact is corroborated by the results of interviews conducted with private operators which show that they rank administrative harassment as the largest constraint affecting their operations (see Figure 15). Within this context, trade facilitation initiatives are, therefore, key to easing transport conditions to/from Mali as well as lowering transport costs. In order to be effective, however, they need to acknowledge administrative hindrances as, first and foremost, a governance issue rather than continuing to see them as purely transport issues.

Figure 15: Major Constraints Cited by Private Operators When Operating a Truck in Mali

53. For these reasons, the World Bank is pursuing with other international donors (e.g., United States Agency for International Development, Agence Francaise de Developpement, African Development Bank), WAEMU and ECOWAS the implementation of a Regional Transport and Transit Facilitation program. This project aims at tackling the issue of trade facilitation within West-Africa, including Mali, by:

Setting up regional and national facilitation committees which will oversee international trade flows along these corridors (including the corridors between Mali and Senegal and Mali and Côte d’Ivoire);
- Defining and implementing a regional road improvement program;
- Fostering acceptance by local customs services of the Inter-State Road Transport agreement (ISRT) and computerization of the ISRT documentation;
- Fostering acceptance of national guarantee programs at the regional level through an harmonization of national guarantee programs associated with the ISRT38;
- Building joint customs border post (including between Mali and Senegal and Mali and Côte d’Ivoire);
- Harmonizing road codes among West-Africa states ahead of the introduction of a common driver license;
- Harmonizing vehicles technical control standards and processes;
- Harmonizing and interfacing West-African customs services electronic declaration processing systems and increasing the use of customs electronic declarations among traders;
- Making available at all port of entry and border crossing axle weight measuring equipments;
- Creating regional and national observatories for abnormal practices in order to report such practices to the relevant states;
- Developing road activities and road accidents databases;
- Liberalizing the regional transport market; and
- Developing a regional transport policy.

V. 3 INSTITUTIONAL CAPACITY

54. With regard to institutional capacity, the transport sector faces the following challenges:

- An institutional capacity that needs strengthening in the areas of: (a) management and regulation of transport operations; (b) management and supervision of road maintenance works; and (c) planning of infrastructure investments;
- A civil servant population that suffers from years of hiring freeze which have precluded the transfer of know how from the more experienced generations to the younger generations;
- The impact of the HIV/AIDS pandemic that is striking young people in their adulthood and aggravates the two problems above. HIV/AIDS limits the pool of potential recruits and stops short the returns on investment in skilled labor to answer the transport Sector needs.

V. 4 TRANSPORT AND POVERTY

55. No data linking transport and poverty in Mali are available. The 1988-1989 survey on household expenditures (Enquête Budget de Consommmation) showed that the share of the

38 Regionally, guarantee programs are administered by national Chambers of Commerce. They are designed to provide insurance related to the import tax value of the good transiting in a country in the event that this good is not ultimately cleared for consumption by customs but rather re-enters a country as contraband.
transport and communication expenses in a household varies between 2.1 and 5.2% and is correlated to the level of poverty. Since these figures do not take into account walking trips which do not have monetary values, and which are used by the very poor, an analysis of the following key factors affecting the poor in their daily mobility would be required to better understand the link between transport and poverty:

- Proportion of household expenditures spent on transport (inclusive of the cost of foot travel);
- Travel time, highly correlated with geographic location;
- Vulnerability to transport externalities such as road accidents;
- Accessibility; and
- Reliability of services.

56. The potential impact of transport on poor people’s lives cannot be underestimated, however. For instance, it is estimated that because of current inefficiencies, transport costs represent 30% of the cost of imported goods in Mali, versus an average of 18.5% for WAEMU and 4% for developed countries (see Figure 16). Any improvements in transport efficiency, therefore, would make goods, especially basic ones such as food stuff, more affordable to consumers. This in turn would benefit primarily the poorest of consumers since they tend to spend a disproportionate share of their income to buy food and basic goods.

![Figure 56: Transportation Costs as a Percentage of Goods Imported Values](image)

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V. 5 TRANSPORT AND HIV/AIDS

57. Confronting AIDS is a transport sector priority for two main reasons:

➢ Findings of international studies of HIV/AIDS suggest that the road sector is a breeding ground and a vehicle for the HIV/AIDS epidemic. Migration, short term or long term, increase opportunities to have sexual relationship with multiple partners, thus becoming a critical factor in the propagation of HIV/AIDS.
➢ AIDS is impeding the transport sector from achieving its goals. Illness and early deaths are depleting workforce capacity and increasing costs for benefits, recruitment and training. Personal loss and uncertainty lower morale and quality of life.

58. Accordingly, throughout Africa, as well as in Mali, specific strategies have been or are being developed to combat the impact of AIDS on the transport industry. In Mali, the Government published in January 2001 a national strategic HIV/AIDS control program. This program which is to be implemented from 2001 to 2005 has a transport component designed to address the high prevalence of HIV/AIDS in the industry, transport and trade sectors (i.e. in the transport sector the infection rate is estimated to be anywhere from 6 and 12% compared with a national average of 3%) by slowing the spread of the disease as well as combat its impact. These objectives are to be achieved within 3 years through:

➢ Deeper involvement of civil leaders (public and private firms, union organizations of Transport, Industry and Trade sectors) and NGOs in the fight against HIV/AIDS,
➢ Adoption of safer sexual behaviors by heavy-transport drivers, street vendors, and
➢ Creation of a fund to support infected population and improve its quality of life.

59. Within this context, the World Bank’s Board of Directors approved in November 2003 a regional project to combat the spreading of HIV/AIDS along the Abidjan/Lagos transport corridor. Since this corridor is a truck corridor, early findings derived from this project will be useful to develop an effective strategy on how to combat the spreading of HIV/AIDS within the transport sector in Mali. Additionally, as part of its Multi-Sectors HIV/AIDS Program (MAP) under preparation for Mali, the World Bank will now be able to provide specific help to the transport sector through an existing national HIV/AIDS programs.

V. 6 TRANSPORT AND SAFETY

60. Road safety is fast becoming a significant issue in Mali. Although it is not sure how bad things really are since only the District of Bamako maintains any type of road accident data, the overall picture regarding road safety in Mali is a gloomy one. From 1992 to 2001, in the District of Bamako alone, road accidents increased from 250/year to 1,150/year or a +16%/year versus an increase in traffic of +12%/year\textsuperscript{40}. Since the Bamako District was housing 78.4% of all registered vehicles in Mali by the end of 2002, the trend in road accidents in Bamako is a good proxy of the general deterioration of road safety in Mali over the last ten years. Available estimates put the costs of road accidents in 2001 at FCF 18 billion\textsuperscript{41} which is FCFA 2 billion

\textsuperscript{40} Source: Etude de Restructuration des Activités Routières de la DNT, September 2003.
\textsuperscript{41} Source: Ibid.
more than what the Government of Mali spent that year on routine and periodic road maintenance.

61. Road safety issues in Mali can be summarized as follows:

- Private and commercial vehicle fleets are old and unsafe to operate: 90.1%\(^{42}\) of all private automobiles and 94.6% of heavy trucks on the road were more than ten years old in 2000.
- Technical inspection rates remained low (i.e. 54.6% in 2002) due to lax enforcement by the police and gendarmerie of existing inspection rules. The situation has, however, dramatically improved over the last couple of years due in part to the recent construction, upgrading and equipment at a cost of FCFA 500 million (about USD 1 million) of 13 inspections stations nationwide by the private concessionaire in charge of technical inspections. Total inspections performed have increased from 22,959 in 1998 to 59,850 in 2003\(^{43}\).
- Road traffic management and signaling equipments are deficient and too few. In Bamako, in 2002, a survey showed that 16 of the 36 installed traffic lights were not operational\(^{44}\). 
- Less than 40% of all private drivers have car insurance\(^{45}\). This current situation translates into permanent economic losses for the country as few accident victims benefit from insurance money.
- 50.7% of all road victims are pedestrians and 90% of all accidents are happening at road crossings\(^{46}\).
- Most accidents occur repeatedly at the same location and should, thus, be preventable. A map of accident locations produced in 1995 for the District of Bamako shows how 10% of all accidents happen along the same Avenue in Bamako (i.e. Avenue de l’OUA)\(^{47}\). That total was, however, half of that from the previous year thanks to the installation of traffic lights.
- The National Committee for Road Safety which is responsible for advising the Government on road safety issues has limited means of actions since its operations are funded by a meager government annual budget of FCFA 15 million (about USD 30,000). Necessary media campaigns regarding road safety issues cannot be financed nor can detailed analysis of road accident information be carried out.
- Accidents data, when reported by enforcement officials, are usually incomplete and sketchy which renders any detailed analysis of accident conditions unfeasible. Without these data, it is nearly impossible for the Government to develop a coherent road safety strategy.
- Drivers’ knowledge of the new road code (updated in 2000) is minimal.


\(^{44}\) Source: Ibid.

\(^{45}\) Source: Ibid.

\(^{46}\) Source: Ibid.

\(^{47}\) Source: *Etude sur l’Amélioration des Conditions de Circulation à Bamako*. October 2002
Student drivers are often formed through informal channels which result in uneven driving skills and poor road code knowledge among drivers.

The government is aware of the gravity of the situation. It is currently planning to adopt a series of drastic measures designed to quell the rise in road related accidents. Among them are: a) the creation of a road security committee, b) the adoption of a zero tolerance policy when it comes to the use of seatbelts in cars, c) the requirements for users of motorcycle to wear a helmet and, d) a better analysis of road accidents through accurate compilation of accidents data. The effective implementation of these measures, however, will require strong support from all enforcement agencies.

V. 7 PUBLIC PRIVATE PARTNERSHIP

Mali is still at an early stage of experimenting with the Public/Private partnership model for the purpose of financing, operating and maintaining transport infrastructure (e.g.; recent concessioning of the railway and current attempt to concession the airport system). Accordingly, it has yet to set up a regulatory framework that would be conducive to private investors in the form of appropriate laws to protect private investment (e.g., arbitration law) or the setting up of an independent regulatory agency (single or multi sectors) to oversee the activities of private operators in the transport sector. Since it is an established fact that only the rail sector and maybe the airport sector can generate sufficient activities to warrant private investment in their respective infrastructure, the Malian Government ought to look for alternate ways to secure private sector participation in the country’s road sector. Within this context, the development and adoption of a Build Operate Transfer (BOT) law could prove very helpful.

VI. RECOMMENDATIONS

VI. 1 PROPOSED TRANSPORT STRATEGY

In order to be successful in fighting poverty, Mali’s transport strategy must recognize the limitation imposed by the country’s limited financial and skilled human resources. Such realistic approach is key to ensuring its long term sustainability and effectiveness. The proposed strategy, consequently, is based on the following three pillars:

- **Pillar 1**: Promote sustainable development of transport infrastructure by ensuring adequate allocation of financial and human resources to infrastructure maintenance.
- **Pillar 2**: Increase transport sector efficiency by implementing sound market and fiscal policies to support the rapid modernization of Mali’s transport companies.
- **Pillar 3**: Support cross sectoral initiatives primarily in the areas of economic competitiveness, road safety, rural poverty alleviation, HIV/AIDS prevention and health services accessibility.
VI. 2 PILAR I

Promote sustainable development of transport infrastructure by ensuring adequate allocation of financial and human resources to infrastructure maintenance

Pilar I Implementation and Goals

65. Since the road network in Mali handles 90% of all goods transported, the focus of the proposed first Pillar of the strategy is on road. Indeed, no further Government actions is required in the railway sector since the concession agreement signed between the Government and Transrail covers both track maintenance and operations. In the airport sector, even considering a successful concessioning of some of the country’s airports, Government support will still be needed as the current traffic volumes are insufficient to finance all necessary rehabilitation of the airport network. Since the Government financial resources are limited, a minimalist approach to airport infrastructure investment should be adopted with the goals of: 1) improving safety and security at Bamako airport so as to obtain US FAA category I certification for the airport, and 2) limiting investment in runways and passenger terminals to what is strictly necessary (i.e. only justifiable at Bamako airport for now). Lastly, in the waterways sector, low cost infrastructure investment in the form of river quays for small barges and pirogues should take priority over any heavy investment (e.g., river dredging) in recognition of the fact that small informal carrier’s needs are paramount to the future of this activity (i.e. they handle 90% of all traffic) and that, therefore, the Government should consider either selling or liquidating COMANAV if it fails to secure the necessary investment to renew its fleet.

66. In the road sector, the primary focus of Government investment has been historically on road construction with 52% of all road expenditures allocated to new road construction between 1995 and 2002. This policy has resulted in an increase in the length of the network (paved and unpaved) but also in a parallel decline in road operating conditions due to stagnating road maintenance budgets. While new road construction, or paving of existing dirt roads, is still justified in order to secure alternative international road corridors to/from Mali (i.e. corridor to Senegal, Guinea and Ghana), no further road construction or paving of existing dirt roads should be planned once these corridors have been completed. Instead, the Government focus should shift to routine and to periodic maintenance of the road network so as to dramatically improve current road conditions and to maintenance, improvement and construction of the rural road network. Based on the information provided by a recently completed study\(^48\), road maintenance needs (routine and periodic) in Mali have been evaluated to stand at about FCFA 25 billion/year. This figure is much higher than the combined expenditures made in routine and periodic road maintenance by the Government in 2002, or FCFA 16 billion. Therefore, it is proposed that the Government agree to the following road expenditures objectives:

- Increase total budget allocated to road routine and periodic maintenance from FCFA 16 billion in 2002 to FCFA 20 billion in 2005 and FCFA 25 billion by 2008. This figure far exceeds the FCFA 12 billion that the Government has agreed with the EU

to self-finance by 2008 (see Figure 8) but is consistent with the estimated FCFA 25 billion needs for road maintenance in Mali. Consequently, it underscores the necessity for the Government to continue to identify additional sources of financing for the road sector, outside of international donors financing, as well as consider increasing the share of its budget dedicated to road maintenance.

- Increase the portion of road routine and periodic maintenance expenditures financed from local resources from 50% in 2002 to 80% in 2008, or FCFA 20 billion, with about 2/3 of this amount, or FCFA 12 billion, funded by the Road Authority using fuel levies, special investment fund, axle charges and toll levies. Under the current agreement with the EU, this FCFA 12 billion would be reached by 2008. Therefore, the challenge for the Government would reside in finding the remaining FCFA 8 billion (i.e. FCFA 20 billion minus FCFA 12 billion) necessary to meet this objective. Under the proposed increase in local contribution, these resources could be provided either by: a) diverting only 12% of the FCFA 69 billion of the existing fuel tax collected by the Malian treasury in 2003 (i.e. equivalent to 2.0% of the central budget for that year), b) ensuring that the FCFA 6.5 billion in various cars/trucks registration and insurance fees that were not collected as planned by the Government in 2003 are collected49, or c) a combination of both.

- By 2008, increase total investment in real terms in the road sector to FCFA 50 billion versus FCFA 32 billion in 2002 with: 1) FCFA 25 billion for urban and inter urban road routine and periodic maintenance, 2) FCFA 15 billion for primary network road construction and upgrading, and 3) FCFA 10 billion for maintaining, improving and building rural access roads. The portion of the budget dedicated to rural roads should by then be allocated based on requests made by Mali’s regions and managed by them50.

- By 2006, raise to at least 50% of yearly road maintenance disbursements the amount of money earmarked to multi-year road maintenance contracts in order to ensure continued maintenance of the priority roadways.

- By 2008, ensure that 75% of all multi-year road maintenance contracts (by value) are performance based contracts.

- By 2008, ensure that at least 75% of all road maintenance carried out is subjected to a technical audit so as to better monitor its effectiveness.

67. The expected impact of the proposed increase in the road maintenance budget would be measured in terms of the percentage of road network classified as in good or somewhat good condition. Using available road network 2002 condition data (see Figure 1), it is expected that the following improvements could be made by 2008 for 8,876 km of primary roads network:

- Percentage of paved roads in good or somewhat good condition would increase from 43.5% to at least 60%;

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49 For 2003, the Government had projected to raise FCFA 12 Billion in various registration and insurance fees. Instead, it achieved only FCFA 5.5 Billion, or a FCFA 6.5 Billion shortfall.

50 This proposed increase in road expenditures in 2002 terms would mean an increase of 5 points of road expenditures in the national 2002 budget (i.e. from 9.1% to 14.1%) and of 0.7% of 2002 GNP (i.e. from 1.4% to 2.1%).
The goals should be considered only as a first step towards the ultimate goal of achieving in excess of 75% of all roads (i.e. paved, dirt and rural) in good to somewhat good conditions.

68. In terms of institutional reforms necessary to support the proposed change in road expenditures focus, the primary goals of the Government should be to continue current reforms, including the rapid creation of the AGEROUTE in order to increase sharply the Government’s capacity to quickly disbursed road maintenance funds. Since the main thrust behind the creation of the AGEROUTE is to streamline, simplify and increase the reliability of public bidding and payment procedures in the road sector, maintaining a competitive environment between the AGEROUTE, the AGETIPE and the AGETIER would contribute to achieving the objectives given to AGEROUTE under the conditions that the work done by both agencies (i.e., AGETIPE and AGETIER) during the period 2002-2004 has been satisfactory.

VI. 2 PILLAR 2

*Increase transport sector efficiency by implementing sound market and fiscal policies to support the rapid modernization of Mali's transport companies*

**Pillar 2 Implementation and Goals**

69. The efficiency problem that currently affects the Malian transport sector is primarily a consequence of: 1) the low economic development of the country, 2) the low quality and density of the existing transport network, 3) the strong presence of informal operators throughout the sector, 4) Government regulation of transport services supply through dictated market share, and 5) excessive taxation of new transport equipment. While Pillar 1 of the proposed strategy addresses the transport network aspect of this problem, Government actions are required in order to deal with the current oversupply of informal, poorly productive, service providers, especially in the trucking industry.

70. As stated previously, the trucking industry in Mali is handicapped by low productivity due to excessive capacity and poor reliability. This situation is mostly to blame on the following Government policies:

- Existing bilateral agreements designed to secure a significant share (anywhere between half to 100%) of all goods transported by roads to/from Mali for Malian truckers; and
- Application of high import tariffs on new truck equipment (ranging from 30 to 50% ad-valorem) which precludes most operators from acquiring new trucks.
In order to alleviate the impact of these two policies, the following measures are proposed:

- Lifting, starting in 2005, of all restrictions on international truck services to/from Mali. This proposed liberalization of the international truck market which is de-facto already underway since the Côte d’Ivoire transport corridor has been closed, should help eliminate excessive capacity and allow the most efficient trucking companies to achieve higher fleet utilization ratios and productivity. This action cannot be taken, however, without the agreement of other countries. Therefore, it might require a regional approach spearheaded by either ECOWAS and/or WAEMU in order to be fully effective.

- Lowering of import tariff rates on new truck equipment to 10% or less by the end of 2004. This action which is similar to that taken recently in Madagascar and Burkina Faso should provide the necessary incentive for financially sound trucking companies to acquire new equipment. With that newer equipment, these companies should be better prepared to face competition from foreign trucks on international corridors linking Mali to West-Africa ports. This measure should result in a minimum loss of import taxes since: 1) the number of new trucks currently imported into Mali is minimal, and 2) imported used trucks generate limited customs duties due to their low commercial value.

- Lowering of the tax burden on leasing instruments in order to lower the cost of acquisition of new transport equipment.

- Better enforcement of technical inspection requirements (currently standing at 61.4% for trucks) in order to remove unsafe trucks from roadways. The goal in this case would be to get at least 90% of all trucks registered in Mali inspected by the end of 2005.

- Better enforcement of the axle weight regulations through the installation at each border crossing by the end of 2005 of axle weight measuring equipment so as to ensure fair competition among trucking companies and a 100% inspection rate of international trucks.

Additionally, if the Government wishes to continue to explore the possibility to enhance trucking companies access to credit financing in order to boost new transport equipment acquisition, one would hope that any solution devised would limit to a minimum the budgetary cost associated with it. Indeed, such solution should be considered as a last resort solution and have a limited life span of at most three years (through 2007)\(^{51}\).

\(^{51}\) A possible truck equipment acquisition program could have the following characteristics: 1) The Government would pay the difference between commercial rates and concessionary rates offered to the buyer of a new truck through a tax credit scheme; 2) In order to avoid any abuses and limit the costs of the program, a buyer of a new truck would first have to be judged credit worthy by a commercial bank before being required to present a proof of registration to the Government so as to become able to participate in the program; 3) Likewise, he would have to operate his new equipment for at least five years. More specifically, this program would work as follows: 1) The truck company would have to qualify for a commercial loan based on its own credit worthiness, 2) The lender, always a commercial bank capable of carrying out such credit worthiness analysis, would lend money to the truck company, 3) This truck company would then deduct from its tax bill the cost of the interest incurred on its loan during the applicable year. This approach would ensure that no Government intervention would be required during
72. To ensure a successful implementation of these measures, a dedicated information/consultation campaign would have to be organized with the various unions and professional associations representing the truckers. In parallel, the Ministry of Finance would have to create a dedicated coordination structure so as to provide a one stop shop to answer truckers questions and help them apply to the Government backed loan program. Additionally, this coordination structure would have to coordinate the implementation of this program with other government ministries and agencies.

73. The impact of the proposed measures would be evaluated based on the following indicators:

- Number of new truck and truck equipment imported each year;
- Average truck fleet age at the end of each year;
- Truck fleet availability ratio;
- Average yearly turnover of trucking companies;
- Technical inspection rates of trucks;
- Percentage of international trucks subjected to an axle weight inspection; and
- Market share of Malian trucks on international road corridors.

VI.3 PILLAR 3

Support cross sectoral initiatives primarily in the areas of economic competitiveness, road safety, rural poverty alleviation, HIV/AIDS prevention and health services accessibility

Implementation and Goals

74. The proposed strategy must take into consideration cross sectoral issues in order to be fully effective. Consequently, it must encompass some key cross sectoral aspects among which are: 1) Economic competitiveness, 2) Road safety, 3) Rural poverty alleviation, 4) HIV/AIDS prevention and 5) Health services accessibility

Economic Competitiveness

75. Since transport costs represent a significant share of the imported costs of intermediary goods used to build up Mali export capacity, their reduction should have a positive impact on Mali’s economic competitiveness. Accordingly, the already completed privatization of the railway, the current attempt at privatizing the airport system as well as the proposed measures to increase the productivity of Mali’s truck transport should all support this goal. The Government will have, however, to ensure that adequate regulatory oversight is in place to ensure that these productivity gains are passed on to transport customers.

the borrower eligibility review since it is obvious that commercial banks are far better suited than any government agencies to carry out such review solely on financial ground.
Road Safety

76. Road safety in Mali has not only a financial dimension but also a health dimension since it tends to challenge an already stretched health service. Improving road safety must, therefore, be a Government priority. The first important measure that would have to be taken would entail training law enforcement agents on how to properly file accident reports in order to be able to create a nationwide road accident database. This database would be managed by an expanded multisectoral Road Safety Agency whose activities would be partially financed through a tax on insurance policy. Complementary measures would involve:

- Improvements in the enforcement of technical inspection requirements with the goal to achieve a 90% inspection rate for all vehicles by the end of 2005.
- Increase the number of drivers carrying proper insurance from 40% today to 80% by the end of 2008.
- Installation or upgrading in the seven cities with the highest number of registered vehicles (Bamako, Ségué, Sikasso, Kayes, Koulikouro, Mopti, Gao) of traffic light systems by the end of 2008. Since maintenance of the existing traffic light system in Bamako failed, the Government and the local municipalities should consider the option to outsource to the private sector the maintenance of these systems as well as identify proper source of financing for this investment (e.g., car insurance tax).
- Re-design of village and market crossings in order to lower the number of road fatalities that occur at these intersections.
- Development of a national road safety program by the end of 2005 that would delineate road accidents reduction goals as well as road driving and education standards.
- Increase training opportunities and accessibility for drivers.
- Better enforcement of the road driving rules through increased training of traffic enforcement officials. This effort would be accompanied by a public media campaign as well as the introduction of a dedicated school program to alert and educate drivers, pedestrians and school children about the dangers associated with road use.

77. The success of these measures would be measured using the indicators that follow:

- Percentage of all registered vehicles inspected at the end of each year;
- Number of operational traffic lights installed nationwide at the end of each year;
- Prevailing usage rate of safety belts;
- Accident rate and total number of accidents;
- Percentage of all drivers with proper insurance;
- Number of school children exposed to road safety programs; and
- Amount of money spent in public media campaign regarding road safety.

Rural Poverty Alleviation

78. The alleviation of rural poverty is one the primary goal of Mali’s PRSP. Consequently, the proposed increase to FCFA 10 billion by 2008 of rural road construction and maintenance funding as well as the proposed building of river quays (see strategy Pillar 1) would go a long
way towards helping alleviate rural poverty by fostering increase integration of rural areas with the rest of the economy. To be effective, this effort would require initially the development of rural road maintenance and construction strategy by no later than the end of 2004. As part of this strategy, investment priorities would have to be defined based on poverty reduction criteria such as increase accessibility to health care, linkage to local markets, etc.

**HIV/AIDS Prevention**

79. It is now an established fact that transport activities are an important vector to HIV/AIDS dissemination. Any activities within the transport sector designed to educate transport operators about the disease and its mode of transmission would, therefore, contribute to the overall fight against the spread of the virus. Likewise, any such activities which would protect skilled transport workers from catching the disease could have a significant impact on the sector’s long term growth and productivity. Accordingly, the Government ought to ensure that its current national HIV/AIDS program includes transport sector activities.

**Health Services Accessibility**

80. The biggest expected gains from improved health for the Malian population will come from the rural areas where 70% of the country’s population still lives. As such, the proposed scaling up of the Government’s activities in terms of rural roads maintenance and construction should have a disproportionate impact on the ability of Mali to meet its MDG goals. In order to maximize the potential impact of these efforts, close coordination will have to take place between health and transport officials so as to ensure that new health facilities built are properly connected to potential rural users since 60% of the maternity related deaths occur on the way to the hospital. Any plans put forward by the Government in terms of new medical facilities or new or improved rural road networks will have, therefore, to take into account this important dimension of development.