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# Republic of Benin Transport Assessment Note for Roads, Airports and Port Sectors

June 28, 2007

Africa  
Transport Sector (AFTTR)



Document of the World Bank

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**CURRENCY EQUIVALENTS**  
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Currency Unit = CFA Franc  
US\$1 = 486 CFA Franc

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**ACRONYMS AND ABBREVIATIONS**

|            |                                                                                                                                                      |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANAC       | National Civil Aviation Agency<br>( <i>Agence Nationale de l'Aviation Civile</i> )                                                                   |
| AOC        | Airworthiness Operational Certificate                                                                                                                |
| ASECNA     | Safety Aerial Navigation Agency for Africa and Madagascar<br>( <i>Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar</i> ) |
| CTNPR      | National Technical Council for Rural Roads<br>( <i>Comité Technique National des Pistes Rurales</i> )                                                |
| CNSR       | National Centre of Road Safety<br>( <i>Centre National de Sécurité Routière</i> )                                                                    |
| CNTR       | National Committee for Rural Roads<br>( <i>Comité National Transport Rural</i> )                                                                     |
| COSCAP     | Cooperative Development of Operational Safety and Continuing Airworthiness Project                                                                   |
| COSYTRAMAB | Benin's Confederation of Unions for Road Merchandise<br>( <i>Confédération des Syndicats des Transports Routiers de Marchandises du Bénin</i> )      |
| DGTP       | General Public Works Directorate<br>( <i>Direction Générale des Travaux Publics</i> )                                                                |
| DGTT       | Road Transport General Directorate<br>( <i>Direction Générale des Transport Terrestres</i> )                                                         |
| DROA       | Roads Directorate<br>( <i>Direction des Routes et d'Ouvrages d'Arts</i> )                                                                            |
| EC         | European Community                                                                                                                                   |
| ESW        | Economic and Sector Work                                                                                                                             |
| GDP        | Gross Domestic Product                                                                                                                               |
| GNI        | Gross National Investment                                                                                                                            |
| GoB        | Government of Benin                                                                                                                                  |
| ICA        | Investment Climate Assessment                                                                                                                        |
| ICAO       | International Civil Aviation Organization                                                                                                            |
| LPI        | Logistics Perception Index                                                                                                                           |
| LSCI       | Liner Shipping Connectivity Index                                                                                                                    |
| IMF        | International Monetary Fund                                                                                                                          |
| IMF        | International Monetary Fund                                                                                                                          |

|          |                                                                                         |
|----------|-----------------------------------------------------------------------------------------|
| MCC      | Millennium Challenge Corporation                                                        |
| MDG      | Millennium Development Goals                                                            |
| PAC      | Benin Port Authority<br><i>(Port Autonome de Cotonou)</i>                               |
| PRSC     | Poverty Reduction Strategy Credit                                                       |
| PRSP     | Poverty Reduction Strategy Paper                                                        |
| RAI      | Rural Access Index                                                                      |
| RF       | Road Fund                                                                               |
| SODEMAP  | Benin Cargo Handling Company<br><i>(Société Béninoise des Manutentions Portuaires)</i>  |
| SNTR     | National Rural Road Strategy<br><i>(Stratégie Nationale de Transport Rural)</i>         |
| SSA      | Sub Saharan Africa                                                                      |
| TEU      | Twenty Foot Equivalent Units                                                            |
| UNACOB   | National Union of Drivers in Benin<br><i>(Union Nationale des Conducteurs du Bénin)</i> |
| WAEMU    | West African Economic and Monetary Union                                                |
| WCAATSSP | West and Central Africa Air Transport Security and Safety Program                       |

|                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
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## CONTENTS

|                                                                                  |     |
|----------------------------------------------------------------------------------|-----|
| Executive Summary .....                                                          | vii |
| Section 1. Country background and Perception of Infrastructure Performance ..... | 1   |
| Section 2. Objectives of the ESW and transport sector role in Benin .....        | 7   |
| A. Objective and Scope of the ESW .....                                          | 7   |
| B. The Transport Sector in Benin .....                                           | 7   |
| Section 3. Roads .....                                                           | 11  |
| A. Overview .....                                                                | 11  |
| B. Investments in the Road Sector .....                                          | 12  |
| C. Financing Road Maintenance – The Road Fund (RF) .....                         | 17  |
| D. Road Subsector Management .....                                               | 24  |
| E. Rural Roads .....                                                             | 26  |
| F. Road Safety .....                                                             | 29  |
| G. Road Transport Services .....                                                 | 34  |
| Section 4. Airports .....                                                        | 37  |
| A. Overview .....                                                                | 37  |
| B. Key Sectoral Challenges .....                                                 | 41  |
| C. Strategic Priorities for the Sector .....                                     | 44  |
| Section 5. Ports .....                                                           | 46  |
| A. Regional Environment .....                                                    | 46  |
| B. Institutional Set-Up .....                                                    | 51  |
| C. Port Infrastructure and Operations .....                                      | 51  |
| D. Action Plan for improving the port performance .....                          | 58  |
| E. Opportunities for further engagement of the Private Sector .....              | 63  |
| F. Adjustment of the Institutional Framework .....                               | 64  |

## TABLES

- Table 1.1:** Economic Trends, 1990-2006
- Table 1.2:** Regional Comparison – Selected Indicators (2005)
- Table 1.3:** Comparison of Transport Infrastructure – Selected African Countries
- Table 1.4:** Logistics Performance Index – Cross Country Comparison
- Table 3.1:** Main Road Network following the 2001 Road Classification
- Table 3.2:** Condition of the Classified Road Network
- Table 3.3:** Expenditures by Function
- Table 3.4:** Distribution of Public Investment by Sector
- Table 3.5:** Investments on the Paved Network – Period 2002-2006
- Table 3.6:** Investments on the Gravel Network – Period 2002-2006
- Table 3.7:** Planned and Actual Receipts of the RF (percent share)
- Table 3.8:** Rural Access to Transportation Networks – Rural Access Index
- Table 3.9:** Number of accidents, injuries and fatalities -1994-2005
- Table 3.10:** Road Freight Annual Growth (in thousand of metric tons)
- Table 3.11:** National Freight and Transport Growth (in thousand of metric tons)
- Table 4.1:** Revenues ANAC- 2005-2007 (Million FCFA)
- Table 4.2:** Expenses ANAC- 2005-2007 (Million FCFA)
- Table 5.1:** Merchandise Trade of Africa
- Table 5.2:** Composition of African Trade by Blocs
- Table 5.3:** Container Traffic between the West Coast of Africa and Europe
- Table 5.4:** Liner Shipping Connectivity Index, 2004-2005
- Table 5.5:** Transit Traffic going through West African Ports (2003)
- Table 5.6:** Total Container Traffic in West Africa (Selected Countries)
- Table 5.7:** Goods Imported 1996-2005
- Table 5.8:** Goods Exported 1996-2005
- Table 5.9:** Transit Cargo through Benin 1996-2005
- Table 5.10:** Evolution of the workforce and average salaries for selected staff
- Table 5.11:** Studies related to the Port Sector undertaken in the last 5 years – Selected Examples
- Table 5.12:** Millennium Challenge Compact – Budget Allocation
- Table 5.13:** Access to Markets Component Targets

## GRAPHS

- Graph 1.1:** PRSP Conceptual Framework
- Graph 1.2:** The Most Problematic Factors for Doing Business (percentage)
- Graph 1.3:** Business Environment Constraints
- Graph 1.4:** Transportation as a Business Environment Constraint (selected countries)
- Graph 1.5:** Transportation as a Business Environment Constraint (by firm characteristics)
- Graph 1.6:** Infrastructure Services Constraints
- Graph 2.1:** Institutional Framework Transport Sector – The Ministry, Directorates and Dependent Agencies (2007)
- Graph 3.1:** Main Road Network 1997, 2001 and 2006
- Graph 3.2:** Investments in Road Transport as Percentage of GDP in Selected Countries
- Graph 3.3:** Share of Project Aid in total Transport Expenditures (percentage)
- Graph 3.4:** Investments in Roads 2001-2005
- Graph 3.5:** Investment program period 2002-2006 – Targets and actual results for the paved road network (million FCFA)
- Graph 3.6:** Investment program period 2002-2006 – Targets and actual results for the paved road network (Km)
- Graph 3.7:** Investment Program Period 2002-2006 – Targets and actual results for the gravel road network (million FCFA)
- Graph 3.8:** Investment Program Period 2002-2006 – Targets and actual results for the gravel road network (km)
- Graph 3.9:** Road Fund Budget Allocation 1997-2006
- Graph 3.10:** Actual Budget Execution
- Graph 3.11:** Road Fund Disbursements
- Graph 3.12:** Funding of the Road Fund 1997-2006
- Graph 3.13:** Road User charges (percentage)
- Graph 3.14:** Levels of Road User Charges and Direct Channeling to RF (percentage)
- Graph 3.15:** Force Account vs. Local Contractors (Routine Maintenance Activities)
- Graph 3.16:** Amount of Maintenance Work Contracted out (percentage)
- Graph 3.17:** Road Accidents, Injuries and Fatalities – Period 1990 to 2005
- Graph 3.18:** Fatality Rates Evolution in Sub-Saharan Africa
- Graph 3.19:** Accidents in the Commune of Cotonou - 2003-2005
- Graph 3.20:** Accidents, Fatalities and Injuries in the Commune of Cotonou (2005)
- Graph 4.1:** Passengers Evolution 2001-2006
- Graph 4.2:** Cargo Evolution 2001-2006
- Graph 4.3:** Income statements 2003-2004
- Graph 4.4:** Cash in Hand and Operating Debt 2003-2005
- Graph 5.1:** Port Administration Models
- Graph 5.2:** Evolution of Total Cargo 1996-2006 (Tons)
- Graph 5.3:** Evolution of Container Traffic in the Port of Cotonou (1996-2006)
- Graph 5.4:** Local vs. Transit Traffic (Metric tons)
- Graph 5.5:** Evolution Transit Traffic (Ton)
- Graph 5.6:** Financial Results of the Port of Cotonou 2001-2006
- Graph 5.7:** Linkage between the Port's Traffic and Operating Revenue
- Graph 5.8:** Evolution of Permanent Workforce and its cost

## EXECUTIVE SUMMARY

i. The Poverty Reduction Strategy Paper (PRSP) for Benin was adopted by the government on April 2007. This PRSP emphasizes the acceleration of economic growth as a major plank of its approach to reducing poverty. Five pillars were identified by the government; improving the quality of the transport infrastructure was explicitly enounced in the strategy.

ii. The last World Bank funded transport project in Benin was completed in December 2001. Since then, support to the transport sector has been provided through the PRSC. Specifically, because of its strategic importance to the country, the rural roads sector was included into the scope of PRSC2 (currently the Bank completed the preparation of PRSC4).

iii. The Purpose of this Economic Sector Work (ESW) is to: (i) provide a framework to help the government analyze transport sector issues and finalize the update of the transport sector strategy; and (ii) identify issues and challenges that can be addressed through donor funded operations. This ESW focuses on roads, air, and port transport.

iv. Transport infrastructure and services have a vital role to play in the economic and social development of the country. They were designed to facilitate the distribution and sale of income-generating products, mainly cotton; to promote goods transit towards neighboring countries; and to facilitate trade between towns and rural areas, and ensuring access to social infrastructure and services in the rural area. The formal transport sector contributes approximately seven percent of the gross domestic product (GDP), but its indirect contribution to the creation of added value is much greater.

v. **Roads.** Within the road sector four main aspects were evaluated:

1. Level of Investments in the Road Sector: Actual expenditures in Benin attained up to 2.6 percent of GDP in 2001, and began to decrease since then. The figure for 2006 was 0.8 percent. For Benin to improve and maintain its road network, more resources need to be allocated. Regarding the quality of the investment, it is recommended that more attention be given to periodic maintenance activities, both on the paved and gravel road networks.
2. The Road Fund (RF): A detailed analysis of the RF performance is presented, as well as a comparison with other RF within the region. The main challenge for the RF is how to create a strategy aimed at diversifying its revenues, in order to create a scheme based mostly on user's charges.
3. Rural Roads: The document presents the recently approved National Rural Transport Strategy. Even though the strategy capitalized on the experience of the country in this area, some gaps have been identified.
4. Road Safety: Overall, the road safety in the country deteriorated over the last 15 years, and has noticeably improved since 2005 due to government's efforts. The specific situation of Cotonou requires a coordination system that reinforces the



conclusions and recommendations of all available studies and ensures concerted implementation of ensuing action.

vi. **Aiports.** As most countries in Sub Saharan Africa with medium air traffic volumes (i.e., around 300,000 passengers/year), Benin's air transport industry and infrastructure suffer from financing and human capacity constraints. This situation has so far prevented Cotonou from fully playing its potential role of transfer point between West African and Central African markets, although the government is currently in discussions with a potential large private airlines operator who would like to take advantage of Cotonou geographical position to tap into this lucrative market. Three strategic priorities for the sector have been identified: (i) support to government of Benin in its effort to reinforce ANAC's autonomy, (ii) establish an enabling institutional framework to improve safety and the quality of service delivery at Cotonou airport under economically sustainable conditions, and (iii) make the necessary investments to improve the operational capacity of Cotonou Airport.

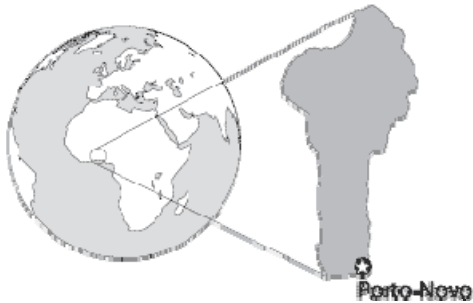
vii. **Ports.** With an installed capacity of 3 million tons of cargo<sup>1</sup>, the Port of Cotonou now handles more than 5 million tons; as a result it is operating under a very congested environment. Even though it is envisaged in the medium term to have new facilities and equipment to alleviate the current situation, it is fundamental to ameliorate operational practices and maximize land use in order to improve the overall performance of the port. In addition, the report identifies several opportunities for further involvement of the private sector: (i) stevedoring activities for conventional cargo; (ii) construction of a new terminal for dry bulk cargo; (iii) towage, inshore pilotage and piloting, and (iv) equipment and management of dry ports.

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<sup>1</sup> SOURCE: Comité de coordination des activités portuaires (CCAP), *Réflexions sur la compétitivité du Port de Cotonou* (Reflections on the competitiveness of the Port of Cotonou)

## SECTION 1. COUNTRY BACKGROUND AND PERCEPTION OF INFRASTRUCTURE PERFORMANCE

1.1. Located in the Gulf of Guinea, between Togo on the west and Nigeria in the east, Benin is a small country with a population of 8.4 million and a gross national investment (GNI) per capita of US\$510<sup>2</sup> in 2005 (compared to US\$745<sup>1</sup> for Sub-Saharan Africa, and



US\$580<sup>1</sup> for low-income countries). The country successfully achieved in 1990 a transition from a Marxist-Leninist state towards a pluralist democracy and a market economy. Following 1990, fundamental political change, the country has been enjoying a relative political stability, and democracy has been greatly strengthened with presidential elections taking place regularly and with a peaceful transfer of power. Important

structural reforms have also been undertaken and growth rates averaged around 5 percent annually until 2002, resulting in modest increases in per capita incomes as well as improvements in human development. Nonetheless, poverty remains widespread and per capita income is below the Sub-Saharan average.

1.2. **An economy heavily based on the agricultural sector and transit trade.** The economy remains heavily dependent on the agricultural sector, in particular cotton, and transit trade with its giant neighbor Nigeria. The informal sector accounts for more than 90 percent of non-agricultural employment, and close to 70 percent of non-agricultural GDP. The agricultural sector represents about 35 percent of GDP and employs nearly 70 percent of the country's workforce; cotton is the major primary export commodity with about 65 percent of total exports over 2003-05. Transit trade with Nigeria is estimated to represent around 7 percent of GDP and explains the vulnerability of the economy to trade policy changes in its neighboring and main trade partner.

1.3. **Recent Economic Developments.** Benin's macroeconomic performance has been broadly on track over the past years but economic activity has been adversely affected by major external shocks since 2004. Poor performance of the cotton sector under volatile and declining international prices and more vigorous efforts by Nigeria to reduce unofficial imports from Benin led to a slowdown of economic activity, a decline in exports, and a loss of government revenues. Real GDP growth rate averaged 5 percent over 2000-03 (compared to 4 percent for Sub-Saharan Africa) but slowed to 3 percent in 2004 and 2005. In 2006 economic growth recovered to 4.5 percent, reflecting a rebound in cotton and services sectors. Despite the increases in the international prices of oil and in the regional food prices caused by draught in neighboring Niger, inflation was broadly contained, averaging 2.7 percent over the 2003-2006 period. Although inflation remains low, Benin's competitiveness on global markets weakened due to the appreciation of the

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<sup>2</sup> SOURCE: The World Bank, "Benin at a glance". GNI per capita was calculated following the Atlas method.

real effective exchange rate and delays in the implementation of key structural reforms. During 2001-2004, the real effective exchange rate appreciated by 4.9 percent, mainly due to the appreciation of the Euro against the dollar.

**Table 1.1: Economic Trends, 1990-2006**

|                                                  | 1990-95 | 1996-99 | 2000-02 | 2003-05 | 2006  |
|--------------------------------------------------|---------|---------|---------|---------|-------|
| Population (million)                             | 5.1     | 5.9     | 6.5     | 7.2     | 8.4   |
| Population growth (%)                            | 3.1     | 2.7     | 3.2     | 3.0     | 3.2   |
| GDP (US\$, billion)                              | 1.9     | 2.3     | 2.6     | 4.0     | 4.5   |
| GNP per capita (Atlas method, US\$)              | 363     | 375     | 385     | 443     | 590   |
| Real GDP growth (%)                              | 4.1     | 5.2     | 5.2     | 3.3     | 4.5   |
| Real GNP per capita growth (%)                   | 1.1     | 2.4     | 1.9     | 0.3     | 1.3   |
| Inflation (CPI, average, %)                      | 11.5    | 3.3     | 3.5     | 2.6     | 3.0   |
| Gross investment (% of GDP)                      | 15.5    | 17.5    | 19.0    | 19.4    | 21.0  |
| Gross private investment (% of GDP)              | 9.9     | 11.2    | 12.1    | 13.0    | 13.6  |
| Gross domestic savings (% of GDP)                | 3.0     | 5.1     | 6.4     | 7.7     | 10.2  |
| Fiscal balance (primary balance, % of GDP)       | -1.3    | -1.7    | -1.7    | -0.4    | -0.9  |
| Overall balance of payments (% of GDP)           | 0.7     | 2.1     | 1.5     | -4.0    | -5.0  |
| Gross international reserves (months of imports) | 5.2     | 5.8     | 9.4     | 10.4    | 11.4  |
| Export growth (volume, %)                        | -1.1    | 2.4     | -1.2    | 7.5     | -11.1 |
| Share of cotton exports (% of exports)           | 75.1    | 82.9    | 74.6    | 62.3    | 46.7  |
| Debt service to GDP ratio (%)                    | 5.0     | 2.9     | 1.0     | 0.6     | 0.2   |
| Debt service to export ratio (%)                 | 32.4    | 17.2    | 12.8    | 6.6     | 2.9   |

SOURCE: Beninese authorities and IMF staff estimates and projections

**Table 1.2: Regional Comparison – Selected Indicators (2005)**

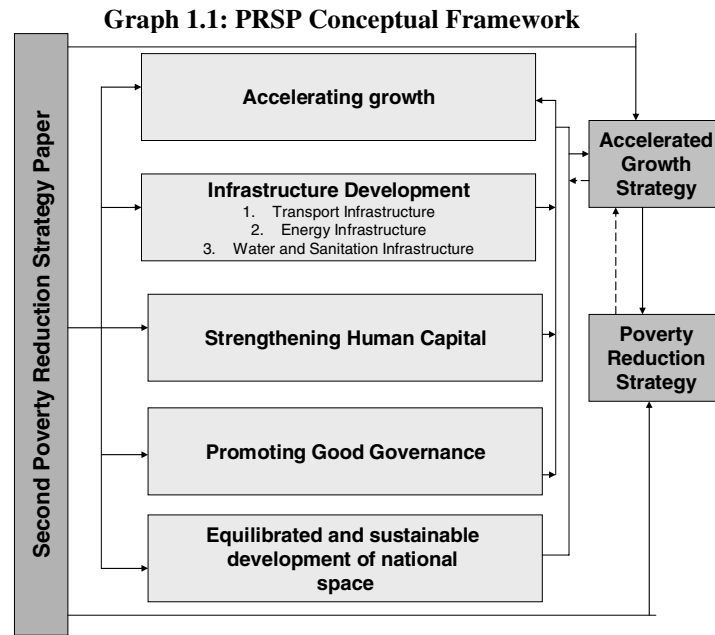
|                                                                    | Benin       | Togo | Mali | Niger | Nigeria | Burkina Faso | Ivory Coast |
|--------------------------------------------------------------------|-------------|------|------|-------|---------|--------------|-------------|
| Population (million)                                               | <b>8.4</b>  | 6.1  | 13.5 | 14    | 131.5   | 13.2         | 18.2        |
| Population growth (%)                                              | <b>3.1</b>  | 2.6  | n.a. | 3.3   | 2.2     | 3.1          | 1.6         |
| GDP (US\$ billion)                                                 | <b>4.3</b>  | 2.2  | 5.3  | 3.4   | 99      | 5.2          | 16.3        |
| GDP growth (%)                                                     | <b>3.9</b>  | 2.8  | 6.1  | 4.5   | 6.9     | 4.8          | 1.8         |
| GNI per capita (US\$)<br>Atlas method                              | <b>510</b>  | 350  | 380  | 240   | 560     | 400          | 870         |
| Inflation, GDP deflator (annual %)                                 | <b>1.8</b>  | 3.8  | 2.4  | 6.6   | 26.9    | 2.1          | 3.5         |
| Foreign direct investment, net inflows (BoP, current US\$ million) | <b>21</b>   | 2.7  | 159  | 11.9  | 2,000   | 19.5         | 65.7        |
| Present value of debt (% of GNI)                                   | <b>22.7</b> | 74.1 | 29.8 | 25.1  | 33.5    | 22.5         | 69.4        |
| Exports of goods and services (% of GDP)                           | <b>13.5</b> | 33.7 | 25.9 | 15.0  | 53.1    | 8.7          | 49.7        |
| Imports of goods and services (% of GDP)                           | <b>26.1</b> | 46.6 | 37.2 | 24.2  | 35.2    | 21.9         | 42.4        |

n.a: Not available

SOURCE: World Development Indicators database, April 2007

1.4. **The recently approved Poverty Reduction Strategy Paper – PRSP** (*Stratégie de Croissance pour la Réduction de la Pauvreté*) renewed the importance of the transport sector. On April 2007, the government of Benin officially adopted the second PRSP. The strategy is based on five pillars: (i) governance in the service of development,

including administrative, judicial, transparency and decentralization reforms; (ii) macroeconomic stability and promotion of a business climate favorable to economic growth; (iii) development of economic and social infrastructure, including better performance of the agriculture, transport, energy, telecom, and housing sectors along with disengagement of the state from public enterprises in these sectors; (iv) building human capital; and (v) assuring equitable development. The way those five pillars interact with each other, and contribute to both diminishing poverty and accelerating growth, is laid out in the following conceptual graph:



SOURCE: PRSP2

1.5. According to the analysis carried out by the government, the country lacks an adequate transportation network to respond to the needs of the population. Both the quality and quantity of the transportation infrastructure need to be improved if the country is going to reach its goals regarding the PRSP. The Strategy is accompanied by a detailed program of priority actions, which specifies a large number of measures, investments, and projects, as well as targets and monitoring indicators.

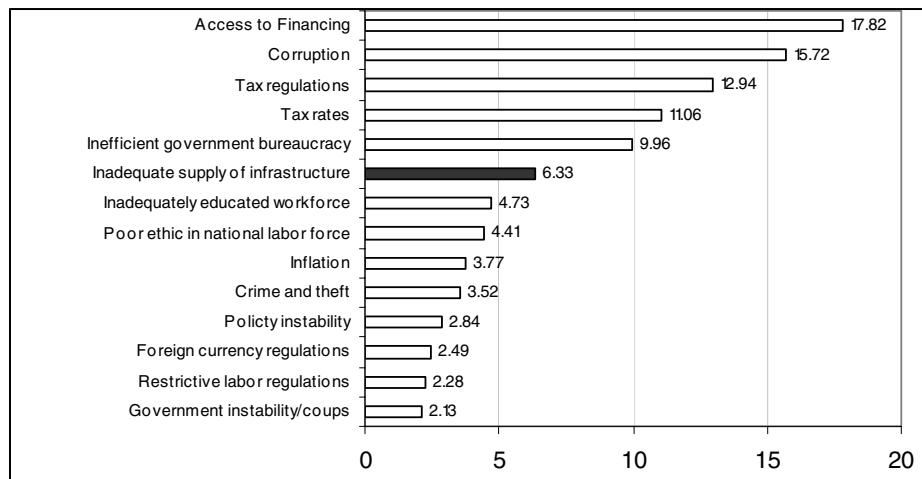
**Table 1.3: Comparison of Transport Infrastructure – Selected African Countries**

|                                         | Benin | Togo  | Nigeria | Burkina Faso | Ivory Coast |
|-----------------------------------------|-------|-------|---------|--------------|-------------|
| <b>Railway (km)</b>                     | 578   | 525   | 3,557   | 622          | 660         |
| <b>Road Network (km)</b>                | 6,076 | 7,520 | 194,394 | 12,506       | 50,400      |
| <b>Road Density (km/km<sup>2</sup>)</b> | 0.05  | 0.13  | 0.21    | 0.05         | 0.16        |
| <b>Paved Roads (asphalt)</b>            | 30%   | 32%   | 31%     | 16%          | 10%         |
| <b>Airport (paved runway)</b>           | 1     | 2     | 36      | 2            | 7           |

SOURCE: PRSP2

1.6. **Users’ perceptions – Overall, infrastructure in Benin is ranked 108 out of 125 countries reviewed (World Economic Forum, Global Competitiveness Report 2006-2007).** When asked about the most problematic factors for doing business, users identified infrastructure as the sixth bottleneck for the country after: (i) access to finance, (ii) corruption, (iii) tax regulations, (iv) tax rates, and (v) inefficient government bureaucracy (see Graph below). The survey also revealed that out of 125 countries reviewed, the quality of the air transport infrastructure was ranked 116; railroad infrastructure development 112; and quality of electricity 105.

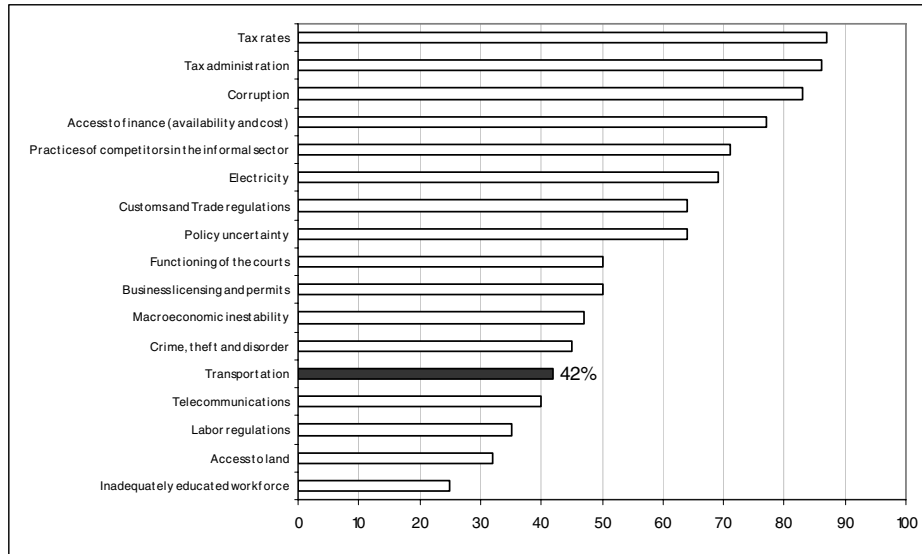
**Graph 1.2: The Most Problematic Factors for Doing Business (%)**



SOURCE: World Economic Forum, Global Competitiveness Report 2006-2007

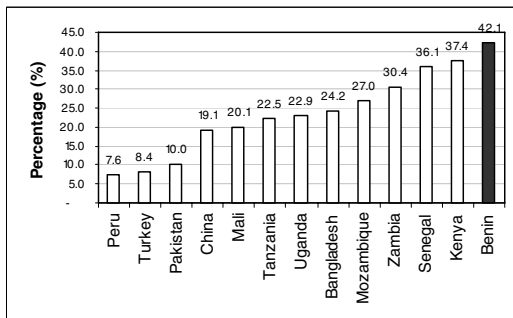
1.7. **Users’ perceptions – transport perceived as a “major/severe” problem by about 42% of the firms surveyed.** The 2005 Investment Climate Assessment (ICA), which is based on a survey of 320 formal private enterprises across manufacturing, tourism, and trade industries, identified the seventeen main business environment constraints; transportation is perceived as a constraint by around 42% of the firms surveyed. Even though it could be argued that transportation is not among the most critical bottlenecks for business, its importance is higher in Benin when compared to other countries both within the region and outside. The most affected firms appear to be the big, high capacity, export and domestics (see Graphs 1.3, 1.4, and 1.5 below).

**Graph 1.3: Business Environment Constraints**  
 (% of firms identifying constraints as “major” or “severe”)

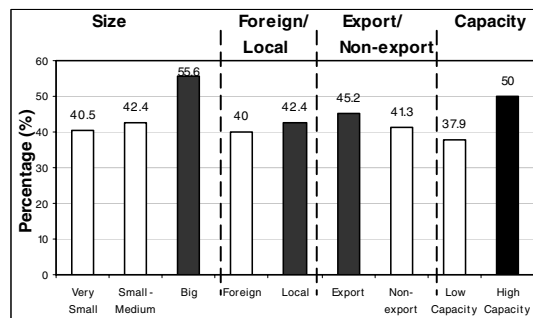


SOURCE: ICA, 2005

**Graph 1.4: Transportation as a Business Environment Constraint (selected countries)**  
**Graph 1.5: Transportation as a Business Environment Constraint (by firm characteristics)**  
 (% of firms identifying transport services as a “major” or “severe” constraint)



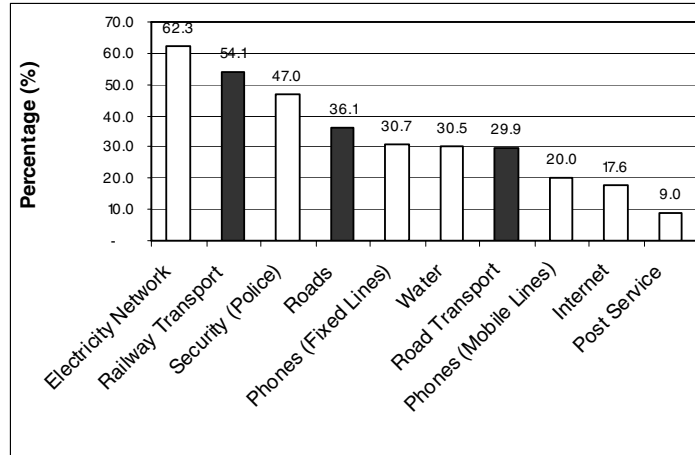
SOURCE: ICA, 2005



SOURCE: ICA, 2005

1.8. A more detailed analysis indicates user’s perceptions for different infrastructure sub-sectors. The main constraint acknowledged is the quality of the electricity supply. However some transport sub-sectors have also been identified: (i) railway services, (ii) roads condition, (iii) road transport, and (iv) air transport.

**Graph 1.6: Infrastructure Services Constraints**  
 (% of firms identifying quality of the service “poor/very poor” or “non-existent”)



SOURCE: ICA, 2005

1.9. From the logistics point of view, Benin is ranked 89 out of 150 countries surveyed (Logistics Performance Index 2006). Results from the World Bank’s Logistics Perception Index<sup>3</sup> (LPI) 2006 are also indicating where improvements are needed to better the business trading environment. Benin ranked 89 out of a total of 150 with areas such as Infrastructure (341 out of 150), Customs (142 out of 150) and Timeliness (107 out of 150) ranking in the lower 30 percentile (see table below):

<sup>3</sup> The Logistics Performance Index is based on a survey of operators on the ground worldwide (global freight forwarders and express carriers), providing feedback on the logistics “friendliness” of the countries in which they operate and those with which they trade. They combine in-depth knowledge of the countries in which they operate with informed perceptions of other countries with which they trade, and experience of global logistics environment. Feedback from operators is supplemented with objective data on the performance of key components of the logistics chain in the home country. The LPI consists therefore of both perception and objective measures and helps build profiles of logistics friendliness for these countries. It measures performance along the logistics supply chain within a country and has three parts: (i) perceptions of the logistics environment of trading partner countries, (ii) information of the logistics environment in the home country of operation, and (iii) real time-cost performance data for country of operation.

**Table 1.4: Logistics Performance Index – Cross Country Comparison**

| LPI Rank  | Country /Region     | Overall LPI | Customs     | Infrastructure | International Shipments | Logistics Competence | Tracking & Packing | Domestic Logistics Costs | Timeliness  |
|-----------|---------------------|-------------|-------------|----------------|-------------------------|----------------------|--------------------|--------------------------|-------------|
| 84        | Cameroon            | 2.49        | 2.57        | 2.00           | 2.33                    | 2.25                 | 2.50               | 3.00                     | 3.29        |
| <b>89</b> | <b>Benin</b>        | <b>2.45</b> | <b>1.80</b> | <b>1.89</b>    | <b>2.78</b>             | <b>2.56</b>          | <b>2.89</b>        | <b>3.22</b>              | <b>2.78</b> |
| 93        | Nigeria             | 2.40        | 2.23        | 2.23           | 2.49                    | 2.38                 | 2.36               | 2.90                     | 2.69        |
| 101       | Senegal             | 2.37        | 2.38        | 2.09           | 2.09                    | 2.73                 | 2.30               | 3.09                     | 2.63        |
| 102       | Ivory Coast         | 2.36        | 2.22        | 2.22           | 2.13                    | 2.38                 | 2.00               | 3.00                     | 3.25        |
| 109       | Mali                | 2.29        | 2.17        | 1.90           | 2.23                    | 2.21                 | 2.38               | 3.05                     | 2.88        |
| 119       | Togo                | 2.25        | 2.10        | 2.25           | 2.40                    | 2.40                 | 2.20               | 3.33                     | 2.11        |
| 121       | Burkina Faso        | 2.24        | 2.13        | 1.89           | 2.67                    | 2.33                 | 2.13               | 2.67                     | 2.25        |
| 143       | Niger               | 1.97        | 1.67        | 1.40           | 1.80                    | 2.00                 | 2.00               | 1.67                     | 3.00        |
|           | Sub Saharan Africa  | 2.35        | 2.21        | 2.11           | 2.36                    | 2.33                 | 2.31               | 2.98                     | 2.77        |
|           | Lower middle income | 2.47        | 2.31        | 2.27           | 2.48                    | 2.40                 | 2.45               | 3.01                     | 2.93        |
|           | Upper middle income | 2.85        | 2.64        | 2.70           | 2.84                    | 2.80                 | 2.83               | 2.94                     | 3.31        |

SOURCE: 2006 LPI – The World Bank

## **SECTION 2. OBJECTIVES OF THE ESW AND TRANSPORT SECTOR ROLE IN BENIN**

### **A. Objective and Scope of the ESW**

2.1. **Objective.** The main objective of this ESW is to provide the government of Benin a general overview of its transport sector, highlighting issues and challenges that should be addressed in the short-medium term. As stated in the introductory chapter, infrastructure as a whole is a main bottleneck for the country, and transport accounts for an important part of it. Improving the quality of transportation infrastructure and its associated services would not only contribute to increasing the competitiveness of the country; it would also contribute to increasing trade, speeding up economic growth, and hastening poverty reduction.

2.2. **Scope.** It is important to note that for this ESW, it was deliberately decided to focus on three sub-sectors: roads, ports and airports.<sup>4</sup> The following chapters discuss the current situation in each sector reviewed, and provide recommendations for improvement.

### **B. The Transport Sector in Benin**

2.3. Transport infrastructure has a vital role to play in the economic and social development of the country. In Benin, it was designed to facilitate the distribution and

<sup>4</sup> Any sensible recommendation of the railway sector would have requested data collection and market analysis out of the mandate of this ESW.



sale of income-generating products, mainly cotton; to promote goods transit towards neighboring countries; and to facilitate trade between towns and rural areas, and ensuring access to social infrastructure and services in the rural area. The formal transport sector contributes approximately 7 percent of the GDP,<sup>5</sup> but its indirect contribution to the creation of value added is much greater.

**2.4. The transport sector strategy needs to be updated.** The transport sector in Benin comprises roads, railway, airports and ports. The way these different sub-sectors interact and complement each other is usually laid out in a transport strategy. Such strategy, to be implementable and operational, must be accompanied by an investment plan covering several years. The last comprehensive Transport Strategy (*Stratégie des Transports*) in Benin was completed in 1996.<sup>6</sup> Even though an attempt was made in 2001 to update it, the output was incomplete; it did not consider the Millennium Development Goals (MDG), or the decentralization process that began in 1999. In addition, it was not accompanied by a multi-annual investment program. Updating the Transport Strategy is a priority for the sector. This ongoing activity would provide the country with a fundamental instrument to plan actions and investments in the medium-term, and give a sense of direction to the development of the sector. It would also allow maximizing the benefits from an improved transport sector for the country as a whole.

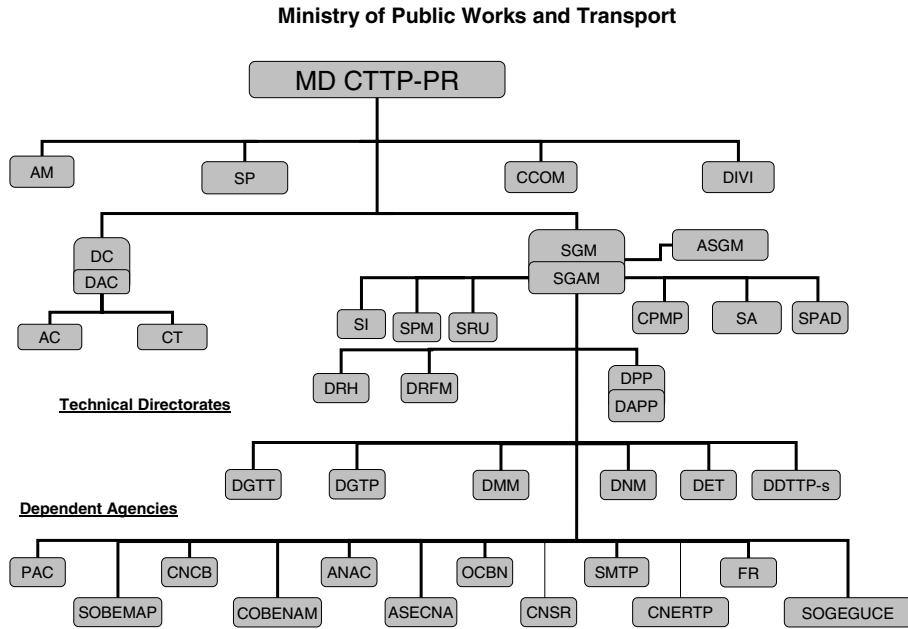
**2.5. Institutional Framework** At the heart of the institutional framework for the transport sector, there is the Ministry of Public Works and Transport. The Ministry is responsible mainly for: (i) overall management of transport and public works sectors, including sector and subsector strategy and subsector coordination; and (ii) road investment programming and implementation and maintenance of the national and rural road networks. It is composed by several directorates, as indicated on the graph below (which also indicates the agencies under the jurisdiction of the Ministry).

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<sup>5</sup> Definitive National Accounts 2006

<sup>6</sup> Actually, the Strategy was formulated in 1993, but due to FCFA devaluation, it was only finalized in 1996.

**Graph 2.1: Institutional Framework Transport Sector – The Ministry, Directorates and Dependent Agencies (May 2007)**



## The Ministry

|             |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| <b>AM</b>   | : Assistant du Ministre/ Assistant of the Minister                                             |
| <b>SP</b>   | : Secrétaire Particulier/ Private Assistant                                                    |
| <b>CCOM</b> | : Cellule de la Communication du Ministère/ Communication Group                                |
| <b>DIVI</b> | : Direction de l' Inspection et de la Vérification Interne/ Inspection and Auditing Department |
| <b>DC</b>   | : Directeur de Cabinet/ Cabinet Director                                                       |
| <b>DAC</b>  | : Directeur Adjoint de Cabinet/ Cabinet Director                                               |
| <b>AC</b>   | : Attaché de Cabinet/ Cabinet Representative                                                   |
| <b>CT</b>   | : Conseillers Techniques/ Technical Advisers                                                   |
| <b>SGM</b>  | : Secrétaire General du Ministère/ Ministry Executive Secretary                                |
| <b>ASGM</b> | : Assistant SGM/ Assistant SGM                                                                 |
| <b>SGAM</b> | : Secrétaire General Adjoint du Ministère/ Assistant Ministry Executive Secretary              |
| <b>ASGM</b> | : Assistant SGM/ Assistant SGM                                                                 |
| <b>SGAM</b> | : Secrétaire General du Ministère/ Deputy Minister                                             |
| <b>SI</b>   | : Service Informatique/ Information Technology Department                                      |
| <b>SPM</b>  | : Service du Protocole du Ministère/ Protocol Service for the Ministry                         |
| <b>SA</b>   | : Secrétariat Administratif/ Administrative Secretariat                                        |
| <b>SPAD</b> | : Service de Pré Archivage et de la Documentation/ Pre filing and documentation Office         |
| <b>SRU</b>  | : Service des Relations avec les Usagers/ Customer Service Department                          |

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## Technical Directorates

|                |                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>DRH</b>     | : Direction des Ressources Humaines/ Department of Human Resources                                                       |
| <b>DRFM</b>    | : Direction des Ressources Financières et du Matériel/ Financial Ressources and Supplies Directorate                     |
| <b>DPP</b>     | : Direction de la Programmation et de la Prospective/ Programming Directorate                                            |
| <b>DGTT</b>    | : Direction Générale des Transport Terrestres/ Road Transport General Directorate                                        |
| <b>DGTP</b>    | : Direction Générale des Travaux Publics/ Public Works General Directorate                                               |
| <b>DMM</b>     | : Direction de la Marine Marchande/ Merchant Marine Directorate                                                          |
| <b>DNM</b>     | : Direction Nationale de la Météorologie/ National Meteorology Directorate                                               |
| <b>DET</b>     | : Direction des Etudes Techniques/ Technical Studies Directorate                                                         |
| <b>DDTTP-s</b> | : Directions Départementales des Transports et des Travaux Publics/ Transport and Public Works Departmental Directorates |

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## Dependent Agencies

|                |                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PAC</b>     | : Port Autonome de Cotonou/ Benin Port Authority                                                                                                             |
| <b>SOBEMAP</b> | : Société Béninoise des Manutentions Portuaires/ Benin Cargo Handling Company                                                                                |
| <b>CNCB</b>    | : Conseil National des Chargeurs du Benin/ National Shippers Council                                                                                         |
| <b>COBENAM</b> | : Compagnie Béninoise de Navigation Maritime/ Benin Maritime Navigation Company                                                                              |
| <b>ANAC</b>    | : Agence Nationale de l' Aviation Civile/ National Civil Aviation Agency                                                                                     |
| <b>ASECNA</b>  | : Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar/ Safety Aerial Navigation Agency for Africa and Madagascar                    |
| <b>OCBN</b>    | : Organisation Commune Benin-Niger des Chemins de fer et des Transports/ Benin-Niger Railway                                                                 |
| <b>CNSR</b>    | : Centre National de Sécurité Routière/ National Road Safety Center                                                                                          |
| <b>CNERTP</b>  | : Centre National d'Essais et de Recherche des Travaux Publics                                                                                               |
| <b>SMTF</b>    | : Société du Matériel des Travaux Publics                                                                                                                    |
| <b>FR</b>      | : Fonds Routier/ Road Fund                                                                                                                                   |
| <b>SOGEUCE</b> | : Société de Gestion du Guichet Unique pour le Commerce Extérieur/ Company of Management of the One-Stop and of the External Commerce of the Port of Cotonou |

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## SECTION 3. ROADS

### A. Overview

3.1. **Road network infrastructure.** The total length of the road network in Benin is around 15,700 km. It consists of about 6,076 km of main roads (inter-state roads and national roads), 7,800 km of rural roads,<sup>7</sup> and 1,800 km of urban roads (secondary and tertiary roads in urban areas). The country's shape takes the form of an elongated corridor 800 km long and 300 km wide. There are two north-south main corridors (paved) between Cotonou and Niger, and Cotonou and Burkina Faso and Mali. Those axes are complemented with 5 east-west corridors, integrating Togo, Benin and Nigeria (2 axes are already paved and 2 are envisaged to be partially paved under the current transport strategy - *Stratégie Sectorielle de Transport*).

3.2. This infrastructure is aimed at meeting three principal aspects of demand: (i) transit traffic and trade with neighboring countries, (ii) domestic cotton exports, and (iii) internal trade and mobilization between towns and rural areas.

3.3. **The main road network (“classified road network”) amounts about 6,100 km.** Out of a total of 15,700 km, the new road classification carried out in 2001 defined 2,178 km as inter-state roads (*Routes Nationales Inter-Etat – RNIE*), and 3,898 km as national roads (*Routes Nationales – RN*); 30 percent of the classified road network is currently paved. This new classification increased the main road network by 2,650 km (see table and graph below).

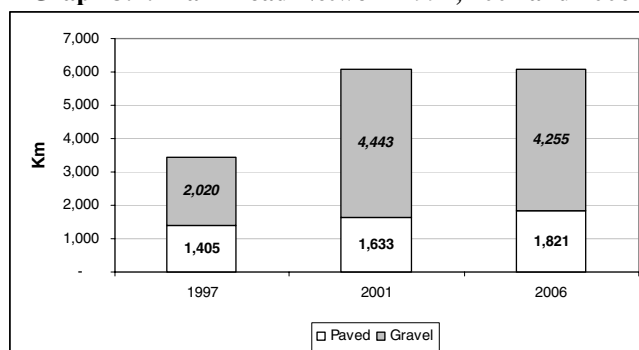
**Table 3.1: Main Road Network following the 2001 Road Classification**

|       | PAVED<br>(Km) | GRAVEL<br>(Km) | Total<br>(Km) |
|-------|---------------|----------------|---------------|
| RNIE  | 1,660         | 518            | <b>2,178</b>  |
| RN    | 161           | 3,737          | <b>3,898</b>  |
| Total | <b>1,821</b>  | <b>4,255</b>   | <b>6,076</b>  |

SOURCE: Decree 2001-092

<sup>7</sup> Actually, there is no official figure regarding the length of rural roads. It is estimated that there are around 25,000 km of which 7,827 km have been rehabilitated at some point, and only 1,075 km really maintained (SOURCE: *Stratégie de Croissance pour la Réduction de la Pauvreté*).

**Graph 3.1: Main Road Network 1997, 2001 and 2006**



SOURCE: Ministry of Public Works and Transport- DPSE

3.4. **Overall, the paved road network is in good/fair condition, but the gravel road network still needs to be improved.** Currently, about 92 percent of paved roads are considered to be in fair/good condition, reflecting a sound transport strategy for the paved network (since 1997 the network has been benefiting from adequate rehabilitation/maintenance activities, increasing the percentage in fair/good condition from 61 percent to 92 percent in 2006). The situation is more complex for the gravel road network. Before the new road classification (2001), the percentage of gravel road network in good/fair condition was about 85 percent. But following the incorporation of almost 2,400 km (all of them in poor condition), the percentage of gravel roads in fair/good condition dropped to 40 percent (2002). Since then, the Ministry of Public Works and Transport has been improving the gravel road network (see table 3.2).

**Table 3.2: Condition of the Classified Road Network**

|      | Classified Road Network (km) | Poor (km) |     | Fair (km) |     | Good (km) |     |
|------|------------------------------|-----------|-----|-----------|-----|-----------|-----|
| 1997 | 3,425                        | 1,134     | 33% | 972       | 28% | 1,319     | 39% |
| 2001 | 6,076                        | 3,763     | 62% | 1,055     | 17% | 1,258     | 21% |
| 2006 | 6,076                        | 1,039     | 17% | 3,871     | 64% | 1,166     | 19% |

SOURCE: Ministry of Public Works and Transport- DGTP

## B. Investments in the Road Sector<sup>8</sup>

3.5. **The share of expenditures on transport increased up to 2001 but have seen substantial decline thereafter, mainly on account of declining external financing.**<sup>9</sup> The expenditures of the Ministry of Public Works and Transport which accounted for 1.7 percent of GDP and 10 percent of total expenditures in 1997, increased to 2.4 percent of GDP and 15 percent of actual budget expenditures in 2001; but by 2003, it had decreased

<sup>8</sup> Maintenance in general will be addressed in the Road Fund section.

<sup>9</sup> Figures presented correspond to aggregate data on the transport sector. However, roads account at least for 90 percent of total investments in the sector.

to 1.5 percent of GDP and 9 percent of actual expenditures. Furthermore, the budget of this Ministry is highly dependent on external financing: in 2005, 90 percent of the budget consisted on investment expenditure,<sup>10</sup> with 85 percent of the investment financed by external sources (see table below).

3.6. Even though budget allocations to the sector show the commitment of the government towards improving its transport infrastructure, actual figures are still behind advisable ones.

**Table 3.3 Expenditures by Function**  
(Consolidated government sector)  
Percent of GDP

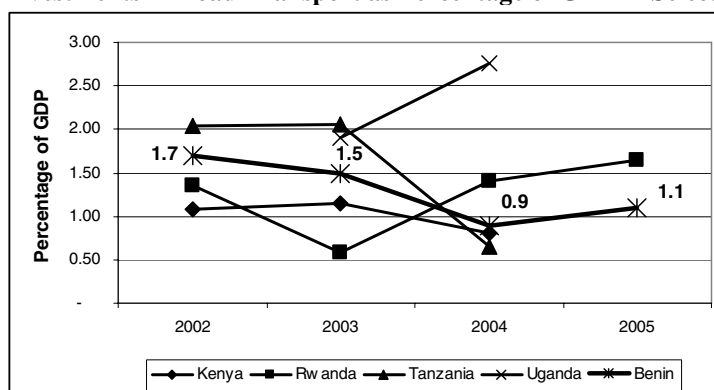
| Percent of GDP                | 1997        | 1998        | 1999        | 2000        | 2001        | 2002        | 2003        |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| General Administration        | 1.8         | 1.8         | 1.8         | 2.1         | 2.3         | 2.1         | 2.3         |
| Defense                       | 0.8         | 0.9         | 0.8         | 0.7         | 1.0         | 1.0         | 1.0         |
| Interior Affairs              | 0.3         | 0.3         | 0.3         | 0.3         | 0.6         | 0.7         | 0.8         |
| Justice                       | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         |
| Agriculture                   | 1.4         | 1.5         | 1.2         | 1.2         | 0.9         | 1.2         | 1.4         |
| Water and mining              | 0.7         | 0.8         | 0.4         | 0.5         | 0.2         | 0.4         | 0.4         |
| Other economic                | 0.1         | 0.2         | 0.2         | 0.3         | 0.7         | 0.4         | 0.5         |
| <b>Transport (*)</b>          | <b>1.7</b>  | <b>1.6</b>  | <b>1.7</b>  | <b>2.4</b>  | <b>2.6</b>  | <b>1.7</b>  | <b>1.5</b>  |
| Environment                   | 0.9         | 0.5         | 0.6         | 0.6         | 1.7         | 1.1         | 1.5         |
| Health                        | 1.2         | 1.4         | 1.7         | 1.8         | 2.0         | 1.6         | 1.2         |
| Education                     | 3.1         | 2.9         | 3.1         | 3.1         | 3.8         | 3.7         | 3.7         |
| Other socio-cultural          | 0.1         | 0.1         | 0.2         | 0.1         | 0.3         | 0.3         | 0.4         |
| Pensions                      | 1.1         | 1.1         | 1.0         | 1.0         | 1.0         | 0.9         | 0.9         |
| Interest                      | 1.7         | 1.1         | 0.9         | 0.9         | 0.9         | 0.8         | 0.8         |
| Non allocated and discrepancy | 3.8         | 2.4         | 3.4         | 4.9         | 2.3         | 4.3         | 4.5         |
| <b>Total</b>                  | <b>18.8</b> | <b>16.7</b> | <b>17.4</b> | <b>20.0</b> | <b>20.4</b> | <b>20.3</b> | <b>21.0</b> |

SOURCE: World Bank, "Benin – Enhancing the effectiveness of public expenditures – a review of three sectors", December 2004.

(\*) For 2004 the planned investment in the road sector was 2.0%, and the actual figure was 0.9%; for 2005 the planned investment was 2.0%, and the actual one was 1.1%; and for 2006 planned investment was 2.1% and the actual figure was 0.8%.

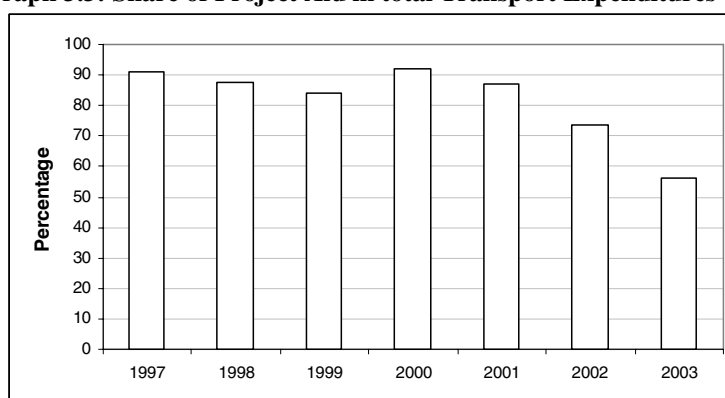
<sup>10</sup> Investments represent a high percentage of the total budget allocation for the Ministry of Public Works and Transport. Figures since 2003 are the following (investments as percentage of total planned budget): 94.4 percent (2003); 89.0 percent (2004), 90.3 percent (2005) and 76.4 percent (2006).

**Graph 3.2: Investments in Road Transport as Percentage of GDP in Selected Countries**



SOURCE: The World Bank

**Graph 3.3: Share of Project Aid in total Transport Expenditures (%)**



SOURCE: World Bank, "Benin – Enhancing the effectiveness of public expenditures – a review of three sectors", December 2004.

3.7. **Transport absorbed the largest share of total capital expenditure, around one-quarter between 1997 and 2003.** When analyzed in terms of investments, the transport sector remains by far the sector that receives the largest amount of resources. The allocation to the transport sector varied between a minimum of 22.3 percent in 2003, and a maximum of 32.9 percent in 2000.

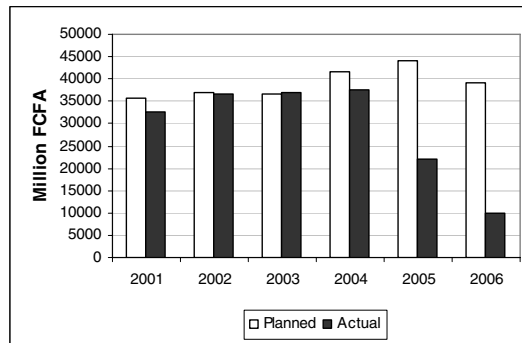
**Table 3.4: Distribution of Public Investment by Sector**  
(percent of total government capital expenditures)

| Percent of total  | 1997        | 1998        | 1999        | 2000        | 2001        | 2002        | 2003        |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Education         | 7.4         | 5.6         | 6.7         | 9           | 11.5        | 9.3         | 11.5        |
| <b>Transport</b>  | <b>24.5</b> | <b>23.5</b> | <b>23.4</b> | <b>32.9</b> | <b>29.5</b> | <b>25.4</b> | <b>22.3</b> |
| Health            | 6.5         | 8.1         | 12.5        | 13.1        | 11.2        | 9.9         | 7.1         |
| Agriculture       | 16          | 18.1        | 13.4        | 12.3        | 6.3         | 11.9        | 16          |
| Environment       | 14          | 7.6         | 8.4         | 5.5         | 17.6        | 16.3        | 22.8        |
| Mine-Energy-Water | 10.4        | 11.8        | 6           | 6.8         | 2.1         | 5.5         | 4.9         |
| Other Economic    | 1           | 2.6         | 1.9         | 3.2         | 6.2         | 3.9         | 5.4         |
| Other             | 20.1        | 22.7        | 27.7        | 17.2        | 15.6        | 17.8        | 9.9         |

SOURCE: World Bank, "Benin – Enhancing the effectiveness of public expenditures – a review of three sectors", December 2004.

3.8. **Recent budget performance negatively affected road investments in 2005 and 2006, budget execution dropped from 86 percent in 2004 to 47 percent in 2005, and 35 percent in 2006.** Even though budget allocations for the road sub-sector have been stable since 2001, actual investments decreased substantially in 2005 and 2006 (see graph below). Nevertheless, this situation needs to be understood within a national context of deteriorating budget performance. Overall, budget performance deteriorated in Benin, reflecting difficult budgetary circumstances characterized by declining revenue collection due to economic slowdown and significant budgetary pressures. Indeed, budget appropriations have been reduced by 1.0 percent of GDP in average over 2004-2005 to respond to lower than expected revenues and keep the overall budget deficit within IMF-supported program targets. The fiscal situation weakened further in 2006 with the accumulation of domestic arrears and the increase in exceptional spending procedures. However, when the new government<sup>11</sup> took office, it introduced measures to improve fiscal management. As a result, budget execution (which was at a level of 86 percent in 2004), fell down up to 47 percent in 2005 and 35 percent in 2006. Figures for the road sector follow the same trend: 90 percent for 2004, 50 percent for 2005 and 25 percent for 2006.

**Graph 3.4: Investments in Roads 2001-2005**



SOURCE: DGTP

3.9. **77 percent of financial targets and 56 percent of physical targets were achieved in the paved road network between 2002 and 2006.** For the period 2002-2006 the government of Benin envisaged, for the paved road network, the rehabilitation of 599 km, periodic maintenance on 390 km, and construction of 848 km of new roads, at a total cost of 206,123 million FCFA. Actual outputs for the period were: 441 km rehabilitated (74 percent of the initial target), 82 km with periodic maintenance (21 percent), and 450 kilometers constructed (53 percent); total investments amounted to 158,127 million FCFA (77 percent). Overall, and taking into account the difficult budget environment for 2005 and 2006, results showed that a high priority was given to the sector, for it to partially achieve its goals.

<sup>11</sup> Benin held presidential elections in March 2006, and a new government was installed in April.



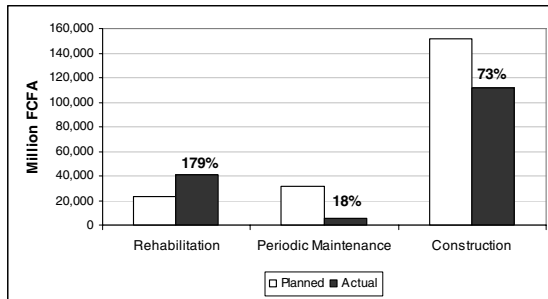
**Table 3.5: Investments on the Paved Network – Period 2002-2006**

|                |         | Rehabilitation | Periodic Maintenance | New Construction | Total   |
|----------------|---------|----------------|----------------------|------------------|---------|
| Km             | Planned | 599            | 390                  | 848              | 1837    |
|                | Actual  | 441            | 82                   | 450              | 973     |
| FCFA (Million) | Planned | 23,031         | 31,440               | 151,652          | 206,123 |
|                | Actual  | 41,123         | 5,764                | 111,240          | 158,127 |

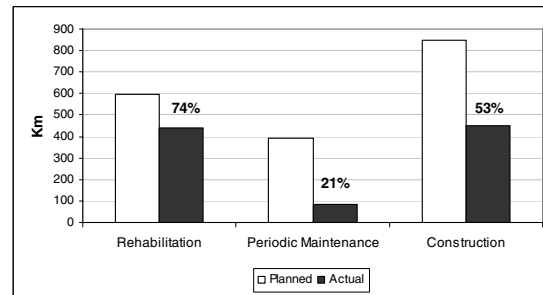
SOURCE: Ministry of Public Works and Transport - DGTP

**Graph 3.5: Investment program period 2002-2006 – Targets and actual results for the paved road network (million FCFA)**

**Graph 3.6: Investment program period 2002-2006 – Targets and actual results for the paved road network (Km)**



SOURCE: Ministry of Public Works and Transport – DGTP



SOURCE: Ministry of Public Works and Transport - DGTP

3.10. **The Ministry of Public Works and Transport should have paid more attention at prioritizing periodic maintenance between 2002 and 2006.** When analyzing the outputs for the period 2002-2006, it is clear that the priority of the Ministry for the paved road network was the rehabilitation program (the budget was substantially increased, in order to accomplish 74 percent of the physical target). This priority is consistent with good practice. Recovering and maintaining the road network in good condition is essential not only for the sector, but for the country as a whole. The paved network is basically formed by the main export-import corridors; its performance thus directly affects the competitiveness of the country. A construction program aimed at paving some key corridors (like the Togo-Benin-Nigeria corridor) is also consistent.

3.11. When analyzing the outputs for the periodic maintenance program, its execution was far below target: only 21 percent of the physical target was achieved (82 km, representing 4.5 percent of the paved network). In the future, more attention must be given to financing these activities not only to recover the backlog created during this period, but also to avoid subsequent expensive rehabilitation. This will also reinforce the commitment of the government towards recovering and maintaining the road network (as opposed to new construction).

3.12. **52 percent of financial targets and 19 percent of physical targets were achieved on the gravel road network.** For the period 2002-2006 it was envisaged, for the gravel road network, the rehabilitation of 1,238 km, and periodic maintenance of 1,790 km, at a total cost of 27,100 million FCFA. Actual outputs for the period were 385 km rehabilitated (31 percent of the initial target), and 192 km with periodic maintenance (11 percent); total investments for the period amounted to 14,056 million FCFA (52

percent). As stated for the paved network, it is important that the Ministry allocate enough financial resources in the near future in order to recover the backlog in both rehabilitation and periodic maintenance works. Even though it is comprehensible that the paved road network was considered a priority, the national gravel road network is the link between main and rural roads. Because of its strategic location, more attention must be paid to the gravel road network, in order to ensure that the overall condition of this network improves. This will contribute to a consistent development of the road network as a whole.

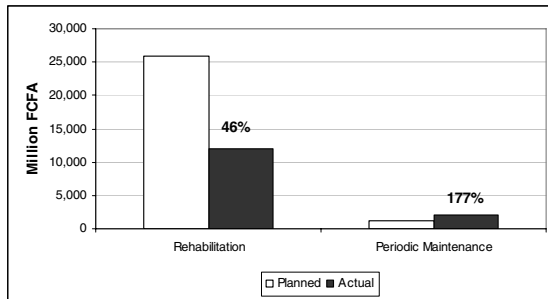
**Table 3.6: Investments on the Gravel Network – Period 2002-2006**

|                |         | Rehabilitation | Periodic Maintenance | Total  |
|----------------|---------|----------------|----------------------|--------|
| Km             | Planned | 1,238          | 1,790                | 3,028  |
|                | Actual  | 385            | 192                  | 577    |
| FCFA (million) | Planned | 25,900         | 1,200                | 27,100 |
|                | Actual  | 11,938         | 2,118                | 14,056 |

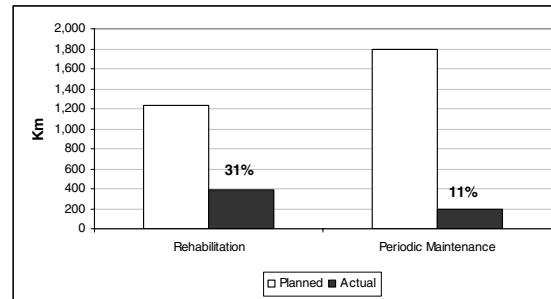
SOURCE: Ministry of Public Works and Transport - DGTP

**Graph 3.7: Investment Program Period 2002-2006 – Targets and actual results for the gravel road network (million FCFA)**

**Graph 3.8: Investment Program Period 2002-2006 – Targets and actual results for the gravel road network (km)**



SOURCE: Ministry of Public Works and Transport – DGTP



SOURCE: Ministry of Public Works and Transport - DGTP

## Recommendations

3.13. Based on the situation above, the main recommendations in this area are: (i) to pursue with the investment program aimed at improving the general conditions of the road network as a whole, seeking to satisfy the traffic demand in the country. Particular attention must be drawn on periodic maintenance, both for paved and gravel roads; and (ii) to finalize the transport sector strategy and put in place a legal and consistent framework for a multi year investment program. That would also help mobilize and coordinate donors.

### C. Financing Road Maintenance – The Road Fund (RF)

3.14. **Benin carried out an institutional reform of the RF aimed at transforming it into a second generation RF.** A first generation RF was established in Benin in the 70s as a budget line with a credit delegation system. The institutional framework was updated in 1984: a Directorate was created, and an accounting system distinct from the one of the

Treasury was put in place. In addition, a Board was also designated. Later on, in 1996, the RF experienced a major reorganization, aimed at transforming it into a second generation road fund (see Box 3.1). The RF is legally and financially autonomous and has a separate account. Direct transfers towards the RF account have been effective since April 2006. The RF Board is accountable to the Supreme Management Administration (Review Council, *Conseil de Revue*) consisting of representatives from the government and the donor community. The RF Board (Management Committee) is composed of eleven members, six of whom are representatives from central ministries, three from user groups, and two from transport operators.

#### **BOX 3.1 – Second Generation Road Funds**

Roads have to compete for their preservation for funds against other more visible sectors like health, education and this usually places them at considerably disadvantage in the annual debate. Many countries responded to the growing shortage of finance by attempting to earmark selected related taxes and charges and depositing them into a special off-budget account, or RF, to support spending on roads.

Emerging from this process is the so called “second generation” RF. A critical dimension of this form of RF was the creation of a specific legal and institutional framework which would assure proper management of the funds and accountability to users and government. “Second generation” RF are thus governed by specific legislation which sets out the roles and responsibilities of a representative management board to oversee operations and a secretariat to manage the business of the RF on a day-to-day basis. Key characteristics of “second generation” RF could be summarized as follows:

- Sound legal basis – separate RF administration, clear rules and regulations.
- Agency which is a purchaser not a provider of road maintenance services.
- Strong oversight – broad based private/public board.
- Revenues incremental to the budget, coming from charges related to road use and channeled directly to the RF bank account.
- Sound financial management systems, lean efficient administrative structure.
- Regular technical and financial audits.

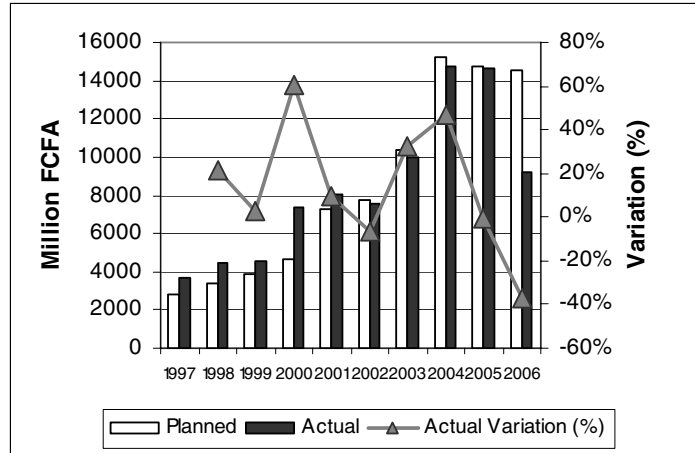
SOURCE: “Financing of Road Maintenance in Sub-Saharan Africa – Reforms and progress towards second generation road funds”, M. Benmaamar, September 2006.

#### **3.15. Budget allocation increased at an average of 13 percent per year since 1997.**

Total actual RF revenues dramatically increased from 2,860 million FCFA in 1997 up to 14,470 million FCFA in 2005. Since 2004, the European Community (EC) has been co-financing the investment in periodic maintenance. It is expected that this support will continue until 2008-2009. As seen in the graph below, the situation deteriorated in 2006, when the actual allocation fell down to 9,177 million FCFA. This is mainly explained because the support from the EC did not materialize that year.<sup>12</sup>

<sup>12</sup> According to the agreement reached with the EC, the government committed to transfer to the RF the arrears corresponding to allocated taxes. Since the transfer did not materialize in 2006, the RF did not receive the subsidy from the EC that year. The situation was finally solved in 2007, and the RF will receive the subsidy of last year.

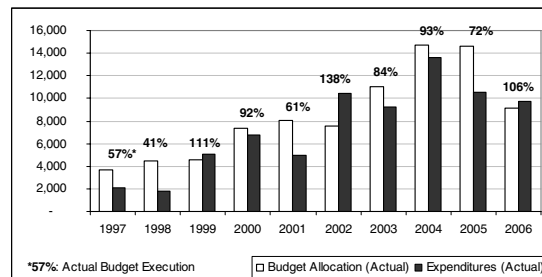
**Graph 3.9: Road Fund Budget Allocation 1997-2006**



SOURCE: Road Fund

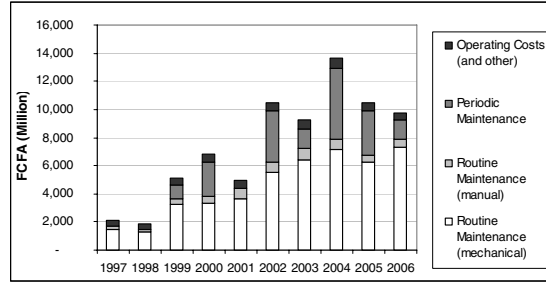
3.16. **The RF improved its budgetary execution from 70 percent at the end of the 90s to 98 percent for the period 2002-2006.** Actual budgetary execution, measured as actual disbursements over actual budget allocation, increased from around 70 percent for the period 1997-2001 to 98 percent for the period 2002-2006 (see Graph 3.10). In the past, the inability to disburse the available RF budget resulted in surplus, a dangerous situation when other government departments are short of fiscal revenues. Fortunately, the efficiency improved, and the RF is not facing this situation any longer. In terms of activities, routine maintenance remains the most important activity undertaken by the RF, followed by periodic maintenance (see Graph 3.11).

**Graph 3.10: Actual Budget Execution  
(actual budget allocation vs. actual disbursements)**



SOURCE: Road Fund

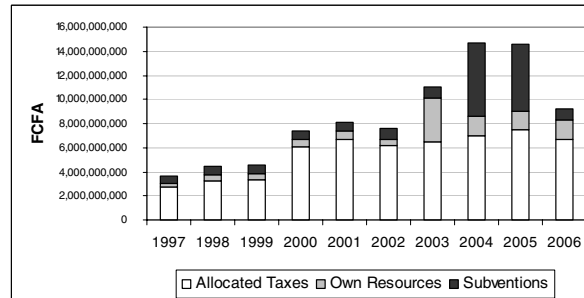
**Graph 3.11: Road Fund Disbursements**



SOURCE: Road Fund

3.17. **The Financial autonomy of the RF is threatened by its relatively high dependency on general taxation.** Revenues from the RF come from three sources: (i) allocated taxes, (ii) own resources (tolls), and (ii) subventions (both from the government and donors). Among allocated taxes, there are three main categories: (i) gasoline taxes, (ii) general taxation, and (iii) vehicle operation taxes. In the case of Benin, revenues highly depend on allocated taxes, of which general taxation is its main source of funding. Preliminary data for 2006 indicate that allocated taxes represented 73.2 percent of the revenues (general taxation alone amounting to 39.3 percent), own resources 17 percent and subventions 9.8 percent. Graph 3.12 and Table 3.7 show the funding of the RF over the last years.

**Graph 3.12: Funding of the Road Fund 1997-2006**



SOURCE: Road Fund

**Table 3.7: Planned and Actual Receipts of the RF (percent share)**

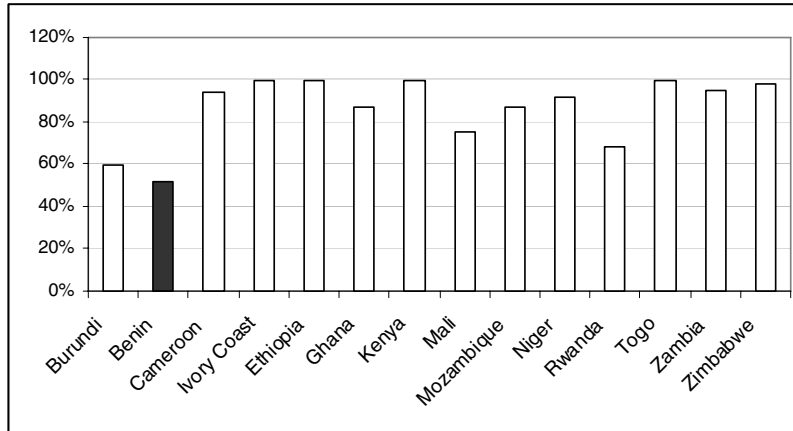
|                             | 2001         |              | 2002         |              | 2003          |               | 2004          |               | 2005          |               | 2006 (*)      |              |
|-----------------------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
|                             | Planned      | Actual       | Planned      | Actual       | Planned       | Actual        | Planned       | Actual        | Planned       | Actual        | Planned       | Actual       |
| <b>Allocated Taxes</b>      | <b>78.3%</b> | <b>83.2%</b> | <b>76.1%</b> | <b>81.7%</b> | <b>58.3%</b>  | <b>59.0%</b>  | <b>38.4%</b>  | <b>47.3%</b>  | <b>39.8%</b>  | <b>51.1%</b>  | <b>36.3%</b>  | <b>73.2%</b> |
| Gasoline Tax                | 31.4%        | 29.7%        | 29.7%        | 23.9%        | 22.7%         | 20.2%         | 11.8%         | 17.6%         | 12.5%         | 19.3%         | 14.4%         | 31.5%        |
| General Taxes               | 45.3%        | 51.9%        | 44.9%        | 56.1%        | 34.3%         | 37.2%         | 25.7%         | 28.4%         | 26.1%         | 30.5%         | 20.6%         | 39.3%        |
| Vehicle Operation Taxes     | 1.6%         | 1.6%         | 1.6%         | 1.8%         | 1.2%          | 1.6%          | 0.9%          | 1.3%          | 1.2%          | 1.4%          | 1.3%          | 2.4%         |
| <b>Own Resources</b>        | <b>11.5%</b> | <b>7.6%</b>  | <b>12.9%</b> | <b>7.0%</b>  | <b>33.5%</b>  | <b>33.1%</b>  | <b>21.1%</b>  | <b>10.9%</b>  | <b>17.4%</b>  | <b>10.2%</b>  | <b>20.0%</b>  | <b>17.0%</b> |
| <b>Subventions</b>          | <b>10.2%</b> | <b>9.2%</b>  | <b>11.0%</b> | <b>11.2%</b> | <b>8.2%</b>   | <b>7.9%</b>   | <b>40.5%</b>  | <b>41.7%</b>  | <b>42.8%</b>  | <b>38.6%</b>  | <b>43.7%</b>  | <b>9.8%</b>  |
| <b>TOTAL (Million FCFA)</b> | <b>7,321</b> | <b>8,091</b> | <b>7,756</b> | <b>7,558</b> | <b>10,421</b> | <b>11,010</b> | <b>15,195</b> | <b>14,732</b> | <b>14,373</b> | <b>14,626</b> | <b>14,570</b> | <b>9,177</b> |

(\*) Estimated data – not final – EC subsidy not included

SOURCE: Road Fund

3.18. Second generation RF philosophy is to have RF that are financially autonomous. This can only be achieved when funds depend on road user charges rather than direct treasury transfers (general taxation being the most common). Benin, as well as Burundi and Chad in Africa, are the only countries where road user charges amount less to than 60 percent of total revenues.<sup>13</sup> The following graphs illustrate this situation, comparing Benin with other countries within the region.

**Graph 3.13: Road User Charges (%)**

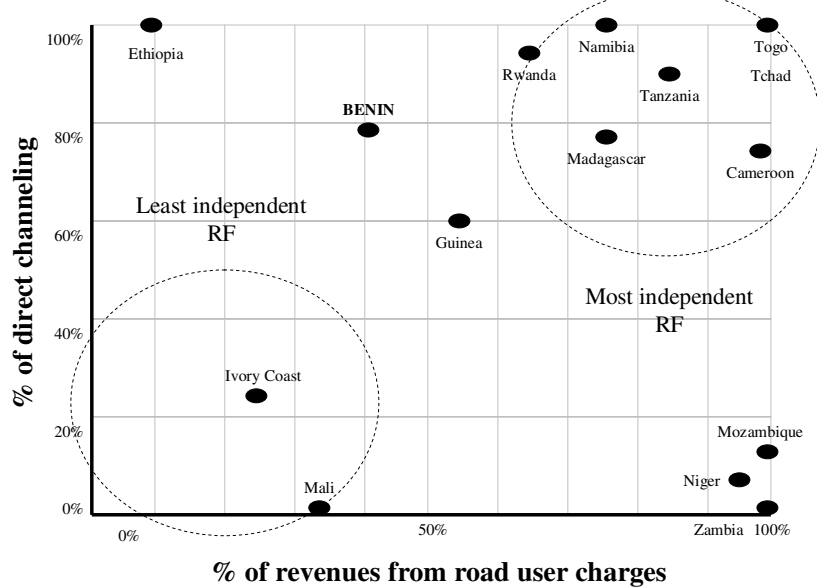


SOURCE: RMF-Matrix, 2006<sup>14</sup>

<sup>13</sup> Based on the 2006 data (RMI-Matrix), Benin has the lowest percentage on user charges.

<sup>14</sup> To measure RF performance in SSA, the SSATP has developed RMF-Matrix, a tracking system. Updated on an annual basis, the RMF-Matrix summarizes the state of advancement of reform implementation in 30 countries.

**Graph 3.14: Levels of Road User Charges and Direct Channeling to RF (%)<sup>15</sup>**

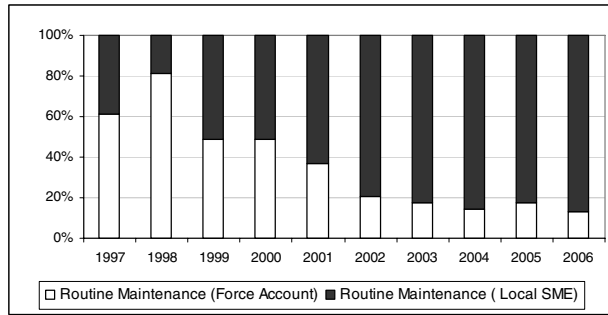


SOURCE: The World Bank. "Financing of Road Maintenance in Sub-Saharan Africa – Reforms and progress towards second generation road funds", M. Benmaamar, September 2006.

3.19. **Maintenance works are undertaken mainly by local contractors (force account represents less than 20 percent since 2002).** Efforts to manage work execution effectively are being achieved, and a program to strengthen local capacity was launched in 1998. As a result, the share of routine maintenance works carried out using force account has declined from 61 percent in 1997 (and almost 80 percent on 1998) to 13 percent in 2006, with a substantial increase in works carried out by local contractors. Benin is among the countries with highest amount of maintenance works contracted out (see Graph 3.16 below), even though in the West African sub-region it has fallen behind compared to Senegal, Burkina Faso, Cote d'Ivoire, etc. where contracting out has already reached 100%. Lately, the country has been analyzing the convenience to completely eliminate force account. This would represent a positive step towards the consolidation of Benin's RF as a second generation one. Besides, such policy, well managed, could be accompanied with all the benefits associated with the strengthening of local contractors.

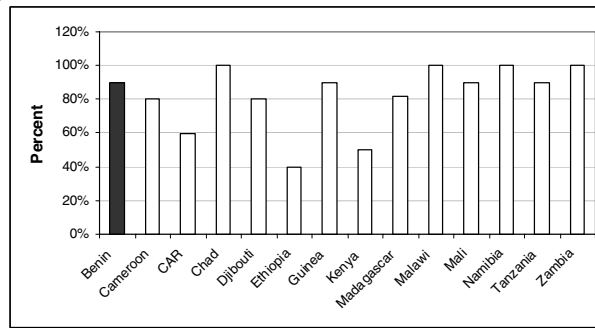
<sup>15</sup> This Graph was elaborated with the information provided by countries in 2006. Taking into account that Benin approved the direct transfer to the RF, the position of Benin in the chart improved. Nevertheless, until 2006, Benin was indeed among the least independent RF.

**Graph 3.15: Force Account vs. Local Contractors (Routine Maintenance Activities)**



SOURCE: Road Fund

**Graph 3.16: Amount of Maintenance Work Contracted out (%)**



SOURCE: RMI-Matrix, 2006

**Recommendations aimed at completing the transition towards a second generation RF**

3.20. **The RF should have a strong oversight board.** As stated before, current arrangements for the RF board do not meet the criteria of a second generation RF, particularly the fact that the majority of the board is composed of ministerial representatives.

3.21. **Financial and technical audits should be carried out on regular basis.** In order to enforce transparency and accountability, it is recommended that, in addition to financial audits, the RF undertakes, on regular basis, annual technical audits. The RF should allocate resources each year to carry out these technical audits, as it is done for the financial audits. Results from both studies should be presented and discussed among stakeholders.

3.22. **The structure of revenues should be revised, seeking a transition towards a scheme based on user's charges rather than general taxation.** As stated before, within the region, Benin's RF is the most dependent on general taxation. This situation negatively affects the autonomy of the RF, representing its main weakness. The traditional approach of relying on gasoline taxes (fuel levy) followed successfully by many countries does not seem appropriate for Benin, under the current circumstances. In



the country, around 70 percent of fuel is sold through the informal sector market. For this reason, the RF has developed a good experience in outsourcing the management of toll roads. As a short term measures, the RF should explore ways of expanding tolling to a larger portion of the road network. But there is a limit to what could be raised from this extension. The long term measure is the development of a policy to formalize the informal fuel market, which was one of the priorities set by the new government. For example, Nigeria has just increased the pump price of petrol by 15 percent and this may contribute to making fuel smuggling through borders a less attractive business for the informal sector.

**BOX 3.2 – Some Indicators of Performance of Second Generation RF in SSA**

- 27 active RF are in place, of which 9 established since 2000 and 7 in Francophone Africa.
- 18 out of 27 are established by law.
- 12 with a board with private sector majority.
- 14 RF rely 80 percent or more on user charges as revenues.
- In nearly all cases, fuel levy is the principal means of raising road user charges.
- Average fuel levy in US cents/liter is 8 and 7 for petrol and diesel respectively.
- 11 RF have their revenues channeled directly to their bank account.
- Only about one third of RF may now be meeting routine maintenance expenditure needs on a regular basis.

SOURCE: RMI-Matrix, 2006

## D. Road Subsector Management

**3.23. A major restructuring process took place in 1997 within the transport sector; it was then when the principles for the sector management were established.** In 1997 the transport sector underwent the most important reform of recent years. As a result, the RF was reorganized as a second generation RF; and the Roads Directorate's role and responsibilities were redefined (*Direction des Routes et Ouvrages d'Art - DROA*), so the DROA could act as the road network manager. The DROA was entitled with the permanent technical secretariat for the National Technical Committee for Rural Roads (*Comité Technique National des Pistes Rurales – CTNPR*). At the same time, it was decided to cap the Force Account maintenance works at FCFA 1 billion while allocating the remainder of the resources to outsourcing to local contractors. This was the institutional set-up prevailing during the implementation of the last transport IDA project in Benin, which implementation was considered as a "good practice". It was also the set-up under which the road network condition was improved.

**3.24. The General Public Works Directorate (DGTP) was created in 2004, in response to a bad experience from separating the former DROA.** In 2001 the DROA was separated into two new directorates: one in charge of new works (*Direction des Grands Projets Routiers*), and the other in charge of road maintenance and rural roads (*Direction Nationale de l'Entretien Routier et des Pistes Rurales*). As a result, the sector lost its unity, and none of the recently created directorates assumed a mandate of road

sector manager (one of the key outputs of the 1997 reform). Realizing that, the GoB decided in 2004 to merge both directorates, creating the Public Works Directorate (*Direction Générale des Travaux Publiques - DGTP*). Its main responsibilities remain basically the same as for the former DROA.

3.25. In July 2006 the GoB created, within the Presidency, an agency for large works (*Agence de Grands Travaux*). This agency, not yet operational, will be in charge of the coordination and supervision of large works that the government decides to undertake, regardless of the sector. Its creation coincides in time with the willingness of the government to undertake important road works with the participation of the private sector.

**3.26. Based on the above, some recommendations can be outlined for the institutional framework of the road sector:**

- Regarding the initiative of creating an agency for large works, and based on similar experiences from Senegal, Cameroon, and Ivory Coast where such scheme did not perform as expected, it is important to clarify the role of the agency. Regardless of this clarification, it is advisable that the agency does not get involved with project execution. Project execution should remain under the jurisdiction of sectoral ministries.
- Regarding public private partnership (PPP) initiatives for the road sector, it is advisable to set up a general framework, exploring the different alternatives that PPPs offer.
- Several activities can be envisaged in order to strengthen the technical and institutional capabilities of the DGTP. A first step would be the formulation, in coordination with the RF, of a technical strategy for road maintenance works, and the assessment of the resources required over the next 10 years. This activity should also consider reviewing technical specifications in the bidding documents, and exploring new options such as multi-year contracts and output based contracts: *Gestion par Niveau de Service* (GENis). Finally, the proposed technical strategy should tackle the allocation of financial resources among the different road networks (urban, rural, classified road network). All these elements will contribute to ensure the soundness of the overall maintenance policy.
- Because of the limited capacity of the DGTP in road investment and maintenance planning and its deficiency in collecting road data, it is necessary to improve its technical capacity. Conversely, it is equally important to develop a strategy to strengthen the local construction industry.
- In addition to strengthening the DGTP, the GoB should consider the convenience of creating a Road Authority, as a way to reinforce the sector's intervention capacity. Such road authority should remain under the umbrella of the Ministry of Public Works and Transport, in order to keep rationality in the transport sector's objectives and the implementation of its management plans. Likewise, the GoB should work on the required synergy between the interventions and responsibilities of the Authority and those of the *Agence des Grands Travaux* created by Presidential decree in June 2006.

## E. Rural Roads

3.27. **Isolation of rural communities remains a major challenge for Benin.** The nearly 7,800 km of rural roads are aimed at serving 55 percent of the population living in rural areas. When analyzing the accessibility to the transport system (measured by the Rural Access Index-RAI<sup>16</sup>), it results that with a RAI of 32 percent, more than 3.1 million people are currently isolated, without reliable access to social and economic services; ensuring improved rural access remains a high priority for the country.

**Table 3.8: Rural Access to Transportation Networks**  
**RAI – Rural Access Index**

| Country          | RAI (%)   |
|------------------|-----------|
| Chad             | 5         |
| Ethiopia         | 17        |
| Cameroon         | 20        |
| Burkina Faso     | 25        |
| Congo, Dem. Rep. | 26        |
| <b>Benin</b>     | <b>32</b> |
| Niger            | 37        |
| Tanzania         | 38        |
| Nigeria          | 47        |

SOURCE: Africa Development Indicators 2006, The World Bank

3.28. **Lack of a rural road management strategy resulted in a deteriorated rural road network, despite a significant effort in rehabilitation during the 70s and 90s.** Between the 70s and the 90s, more than 7,000 km of rural roads were rehabilitated. Nevertheless, the country lacked a rural road management strategy. As a result, maintenance was not undertaken on regular basis, and the rural network condition deteriorated over the years. A detailed survey was carried out at the beginning of the 90s, showing that its overall condition was “poor”.

3.29. In 1997 a participative approach for rural road management and maintenance was adopted: Rural Roads Strategy (*Stratégie de Pistes Rurales*). It was then envisaged that beneficiaries would be actively involved, not only contributing with 10 percent of the rehabilitation costs, but also taking responsibility for the maintenance (manual), once the rehabilitation works were completed. At the central level, the institutional set-up included the creation of a National Technical Council for Rural Roads (*Comité Technique National des Pistes Rurales – CTNPR*), in charge of coordinating all interventions within the sector. Pilots undertaken under this approach did not produce the expected results: (i) beneficiaries irregularly contributed with their 10 percent counterpart, and rarely maintained the roads rehabilitated; (ii) the CTNPR was not perceived neither recognized as the general coordinator, with several Ministries acting on their own; and (iii) the

<sup>16</sup> The RAI measures the number of rural people who live within two kilometers (typically equivalent to a walk of 20-25 minutes) of and all-season road as a proportion of the total population. An “all season road” is a road that is motorable all year round by the prevailing means of rural transport (typically a pick-up or a truck which does not have four-wheel-drive).

general structure of the 1997 Strategy did not take into account local governments - *Communes*<sup>17</sup> and was not updated after the 1999 decentralization process.

**3.30. The experience gained over a decade in the rural roads sector was capitalized with the formulation and adoption of a National Rural Transport Strategy in March 2006.** Capitalizing on the experience derived from the implementation of the Rural Roads Strategy (*Stratégie des Pistes Rurales*) updated in 1997, lessons learned from the decentralization process, and the Millennium Goal Objectives, the government formulated a broader approach, resulting in the recently approved National Rural Transport Strategy (*Stratégie Nationale de Transport Rural – SNTR*). The main objectives of the strategy are to: (i) support accessibility and mobility in rural areas; (ii) improve living conditions and contribute towards poverty alleviation; (iii) ensure the sustainability of rural transport infrastructures; and (iv) build capacity within the communes. The four cornerstones of the strategy are to: (i) improve rural roads that provide access to social services and economic opportunities; (ii) promote intermediate means of transport (IMT) and rural transport services (RTS); (iii) maintain the rural road network; and (iv) strengthen the capabilities of the different institutions dealing with rural road infrastructures.

3.31. The Strategy was formally approved by the government (*Conseil de Ministres*) in March 2006. The main challenge remains to make this strategy operational, successfully implement it, and show results. In March 2007, under the umbrella of PRSC4, the government adopted the new institutional set-up deemed necessary to implement the strategy. However, for the Strategy to actually achieve its purposes, several actions should be undertaken in the short/medium term. (See recommendations below).

**3.32. The lack of an overall responsible for rural road management might be at the core of the current situation of the sub-sector.** Traditionally, the management of the rural road network has been shared mainly between the Ministry of Public Works and Transport and the Ministry of Agriculture (even though other actors may participate, such as NGOs and other Ministries). The lack of a unique leadership negatively affected maintenance activities; besides some isolated initiatives, there has been no champion pushing for a maintenance strategy for the rural road network.

3.33. In response to the situation described above, in 1997 a participative approach was established for the management of the rural road network. A coordination group was created, the CTNPR, under the lead of the Ministry of Agriculture. The Ministry of Public Works and Transport was the permanent secretariat of the Council. Under this arrangement, communities committed not only to provide 10 percent of the rehabilitation costs, but to undertake routine maintenance. For periodic maintenance, it was envisaged to have support from the government.

3.34. The program did not produce the expected results, and the situation of the rural road network did not improve with the implementation of this participative approach (mainly because of the lack of maintenance). As a result, the government adopted the

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<sup>17</sup> The country is composed by 77 *Communes*.

SNTR, with its institutional framework, the CNTR (*Comité National Transport Rural*). The main difference between the CNTR and the CTNPR is that the former includes the *communes*, a key player since they are responsible for the transferred rural road network under the new decentralization framework. Having the new institutional set-up operational is the main challenge in the short term for the sector.

## **Recommendations**

**3.35. The rural road network transferred to the Communes should be explicitly defined through an inventory.** The decentralization Law (1999) and the 2001 road classification<sup>18</sup> defined a new framework for the sector, assigning an important role to the Communes: they will be responsible for the rural road network that was not assigned to other agencies. Unfortunately, the 2001 road classification was not explicit in that regard. As a result, up to now, the extent of the network under the Communes' jurisdiction is not clear. Moreover, this information is not available at the central level, making it more difficult for the Ministry of Public Works and Transport to act as a coordinator. Since the Strategy relies on the Communes, it is indispensable to carry out an inventory of the transferred network. This activity should be undertaken as soon as possible, to make the Strategy operational.

**3.36. Institutional and technical capabilities, both at the central and local levels, should be strengthened.** Local governments lack the institutional/technical capabilities to adequately assume the management of the transferred rural network. For the system and thus the sector to be sustainable, the central government should envisage undertaking a training program for local governments. Doing so would imply creating a task force of qualified people within the central government. As a result, a technical assistance program should be developed aimed at (i) creating the technical capacity at the central level, and (ii) training and strengthening local governments in rural roads management. This program should be linked to the physical investment program, with a particular emphasis on the mechanism to put in place to guarantee road maintenance will be undertaken systematically once rehabilitation works are completed. For that purpose, current efforts to create a Technical Service Unit in certain communes as part of selected projects will be encouraged.

**3.37. A multi-annual investment program for rural road rehabilitation and maintenance should be defined in the short-term.** As stated before, the sector requires updating its future investment plan, to make it consistent with the recently adopted Rural Roads Strategy. Until then, the government decided to continue with the guidelines derived from the Rural Transport Strategy Note ("*Note de Stratégie de Transport Rural*"). Unfortunately, the fiscal situation the country faced during 2005 and 2006 negatively affected the performance of the sector, creating an investment backlog that needs to be recovered in the next couple of years. Ensuring that investment levels respond to the needs requires a political commitment from the government.

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<sup>18</sup> Decree No 2001-92, February 20, 2001 and Law 97-029, January 15, 1999.

3.38. **A sound monitoring system should be put in place to supervise the progress of implementing the Strategy.** In order to follow up the implementation of the Strategy, it is compulsory to put in place a sound monitoring system. Results should be made public, to ensure the transparency and accountability of the program.

#### **F. Road Safety**

3.39. **The core of the institutional set-up for Road Safety in Benin is the National Center for Road Safety – CNSR (*Centre National de Sécurité Routière*); the CNRS works in coordination with several Ministries and institutions.** The CNSR was created in 1987, and was conceived as an autonomous agency under the jurisdiction of the Ministry of Public Works and Transport. Its mandate is to design and implement measures to improve road safety. Financial resources come from both the central government (Ministry of Finance funds the 27 government permanent employees working in the Centre) and revenues from the vehicle technical inspection. Among the tasks undertaken by the CNSR, the most relevant are the following: statistics, road safety education programs, controls on the road and vehicle technical inspection. As part of the Transport Sector Program, the CNSR received crucial assistance that helped it strengthen its role including in accident data collection, management and exploitation. , The identification of black spots carried out in 2004 is one of the major actions undertaken in this regard. More than 30 black spots were identified, and measures were proposed to eliminate them.

3.40. The Ministry of Public Works is responsible for infrastructure improvements aimed at ameliorating the road safety situation. For doing so, the government decided to include a “road safety audit” in all rehabilitation and construction works. This initiative must be highlighted, because of its expected results (identification of black spots and formulation of specific recommendations). For this initiative to be successful, it is fundamental to have the adequate coordination and collaboration between the Ministry of Public Works and Transport (DGTP) and the CNSR.

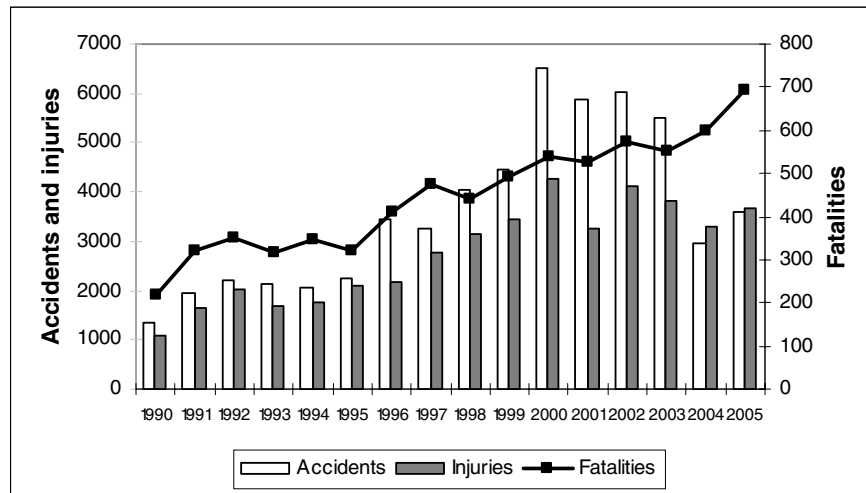
3.41. **Overall, road safety deteriorated over the last 15 years, but however significantly improved between 2000 and 2005. In 2005, 3,612 accidents were registered, with 3,659 injuries and 691 fatalities.** Between 1994 and 2000 the number of road accidents per year has more than tripled and the number of injuries per year has more than doubled reaching 6,528 accidents and 4,260 injuries in 2000. Since then, the figures significantly declined and between 2000 and 2005 the overall number of accidents was reduced by 47 percent, as shown in Table 3.9 and Graph 3.17 below. This unique reduction is the result of government’s commitment to road safety issues. Unfortunately, over the same period the intensifying severity of accidents led fatalities to increase regularly, attaining 691 in 2006.

**Table 3.9: Number of Accidents, Injuries and Fatalities, 1994-2005**

|                             | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Number of Injuries</b>   | 1,763 | 2,085 | 2,170 | 2,766 | 3,152 | 3,447 | 4,260 | 3,271 | 4,113 | 3,802 | 3,312 | 3,659 |
| <b>Number of Fatalities</b> | 348   | 321   | 412   | 475   | 440   | 492   | 538   | 525   | 574   | 550   | 597   | 691   |
| <b>Number of Accidents</b>  | 2,064 | 2,242 | 3,436 | 3,272 | 4,037 | 4,457 | 6,528 | 5,866 | 6,022 | 5,500 | 2,964 | 3,612 |

SOURCE: CNSR

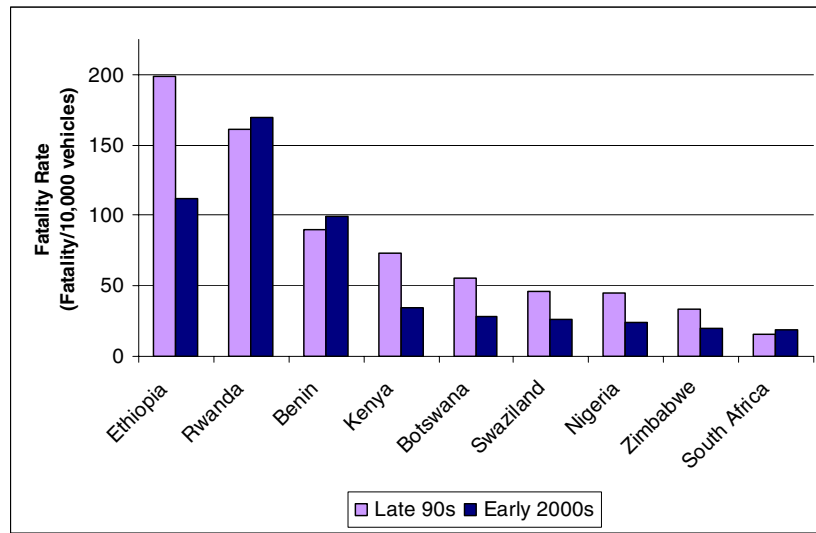
**Graph 3.17: Road Accidents, Injuries and Fatalities – Period 1990 to 2005**



SOURCE: CNSR

3.42. Due to lack of data in the sub-region, Benin’s performance was compared to many countries on the continent. The available data provided the opportunity to compare the recent trends of fatality rates in selected Sub-Saharan African countries; a ratio measuring the number of persons killed divided by the number of motor vehicles in use in the country was assessed. Graph 3.18 shows that Benin carries high fatality rates (as regards the number of fatalities per 10,000 vehicles). Likewise, while most countries fatalities have decreased relatively to their motor vehicle pool, Benin’s rate has remained unchanged during the last decade. Those in charge of the sector should give further thought to the causes of such situation. In addition to an increase in the number of fatalities (see Graph 3.17) the evaluation method for the car fleet in Benin may also help explain the situation. As a matter of fact, the evaluation method does not necessarily take into account all second hand cars in transit and motorcycles, among others, that are high on the list of vehicles mostly involved in road accidents in Benin.

**Graph 3.18: Fatality Rates Evolution in Sub-Saharan Africa<sup>19</sup>**



SOURCE: IRF World Road Statistics

3.43. The number of motor vehicles has increased by 140 percent from 1985-86 to 1995-96,<sup>20</sup> and regularly increases (around 3.5 percent per year) since 1996.<sup>21</sup> One specificity of Benin (and particularly Cotonou) is the high level of motorcycle taxis (zemidjan), which have the same passenger transport function as the minibuses in the other countries.

3.44. Personal injury accidents occur both in cities (40 percent) and rural areas (60 percent); urban accidents are almost totally concentrated in Cotonou. Based on the information available for 2005, 60 percent of accidents occurred in rural areas. Main concerns are speed, and the lack of signalization. In general, accidents in rural areas tend to be more serious than in urban areas, with respective severity rates of 80 percent and 60 percent. Almost all accidents taking place in urban areas are concentrated in Cotonou. In urban areas, motorcycles drivers and passengers are the two most frequent victim groups. Accidents are usually the result of inappropriate driver's behavior.

3.45. The situation in Cotonou where 38 percent of the accidents in Benin occur, improved between 2003 and 2005 and calls for the continuation of the efforts already undertaken. In 2005, 1,375 accidents were registered in Cotonou, with 58 fatalities and 840 injuries (of which 418 severe injuries). This represents about 38 percent of the number of accidents in the country but only 23 percent of injuries and 8.4 percent of the number of fatalities. The high accident rates are to be compared to the number of vehicles-km traveled in Cotonou in comparison to overall transportation demand. It is worth noting that more than half of the accidents in Cotonou are damage-only accidents

<sup>19</sup> Given the scarce data available, the "late 90's" figure is included in the 1994-1998 period while the "early 2000's" figure is in the 2001-2004 period. For a given country, the minimal spread between values is four years.

<sup>20</sup> Source: Africa Road Safety Review – US Department of Transportation

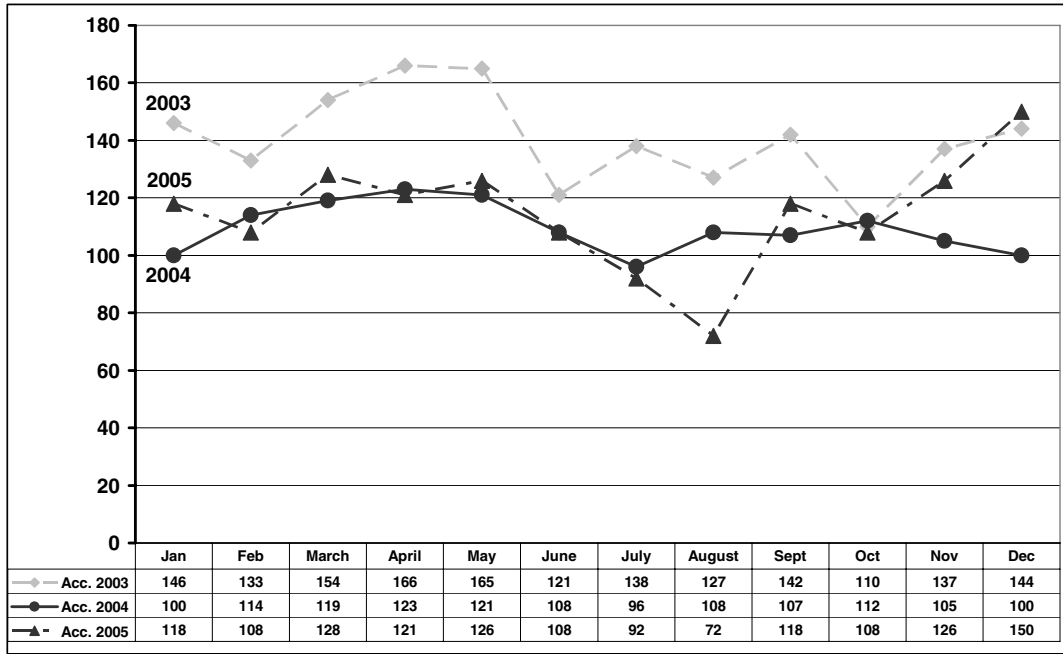
<sup>21</sup> Interview CNSR

Source: Etude sur la mise en place d'un systeme de gestion du fret routier au Benin, January 2006



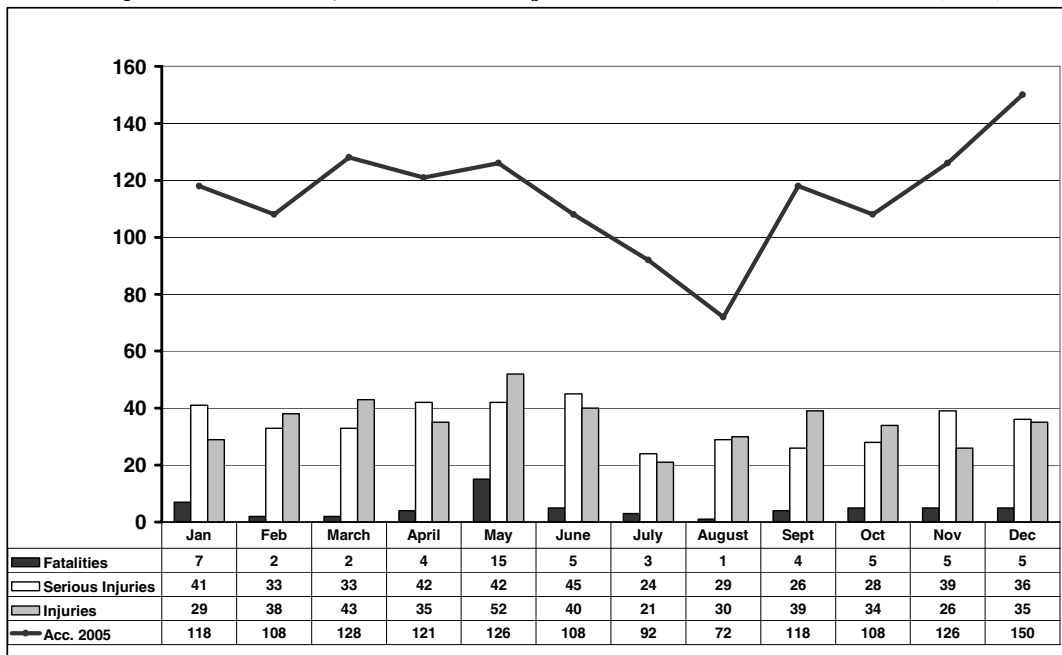
(material damage only) and motorcycles are involved in 80 percent of the personal injury accidents. The monthly evolution of accidents since 2003 as well as the situation for 2005 are presented in the two graphs below that show a noticeable decrease by 18 percent in the number of accidents between 2003 and 2005. Sustaining focus on the specific situation of the city should help further improve its performance.

**Graph 3.19: Accidents in the Commune of Cotonou - 2003-2005**



SOURCE: CNSR

**Graph 3.20: Accidents, Fatalities and Injuries in the Commune of Cotonou (2005)**



SOURCE: CNSR

3.46. Even though the current situation for Road Safety in Cotonou calls for a more profound analysis, several factors can already be identified. Among the most relevant are:

- Transit traffic adds a burden to the Commune in terms of Road Safety (currently all transit traffic must cross the city);
- The high number of motorcycles, *zemidjans* in permanent conflict with other vehicle categories;
- Inexperienced drivers: even though almost 60 percent of the trips are carried out by *zemidjans* with 80 percent of them involved in all recorded personal injury accidents, only 23 percent of the drivers have a driving license;
- The weakness of the institution specifically in charge of road safety in the Commune
- Insufficient road signalization (for example, minibuses do not have signalized bus stops) and non observance of the existing one and traffic rules;
- Age and condition of the vehicle fleet (the average age of the minibus fleet is 19 years);
- Lack of an updated mobility plan (last plan was developed in 1996, and no update has been carried out since then).

### Recommendations

3.47. **The institutional framework needs to be strengthened.** In order to move forward with Road Safety initiatives, it is fundamental to fine tune the institutional framework for Road Safety, giving clear mandates to the several agencies involved. Of

particular interest is the separation between “soft” and “production” responsibilities, and the clarification of the funding mechanism to finance them.

**3.48. The share of road investment devoted to road security should be increased.** In addition to the road safety audits mentioned in paragraph 3.40, the government may increase the share of road projects financing allocated to road safety and aim at 10 percent, an objective recommended by the world report “Making Roads Safer” in 2004.

**3.49. The situation in the Commune of Cotonou calls for the development of a road safety strategy within the city.** As stated above, the situation in the Commune of Cotonou is more complex, and involves more actors than the national level (like the port, the commune, urban Ministry among others). The coordination among them currently is almost non-existent, and the information is not shared. That is why it seems necessary to create a coordination system that strengthens the conclusions and recommendations of all available studies and ensure concerted implementation of ensuing actions. Particular attention should be given at initiatives carried out in the past (or ongoing), like the one for the zems (experience de circulation en site proper), and the impact of the bypass of the City of Cotonou.

## **G. Road Transport Services**

**3.50. Road transport is the main mode of transport of goods and people (93 percent).** In Benin, road transport accounts for about 93 percent of local demand for transport of goods and people. Traffic annual growth during the last decade averaged 9 percent on paved roads, and between 5 and 6 percent on gravel roads<sup>22</sup>.

**3.51. Cargo Transport Supply.** Based on recent analysis<sup>1</sup>, transport supply in Benin is characterized by:

- a) The vehicle fleet for road transport of goods is composed mainly by trucks, tractors, trailers, semi-trailers. Trucks represented about 42 percent of cargo vehicle registrations during the 2001-2006 period; trailer and semi-trailers 29 percent and tractors 28 percent over the same period. Based on data from DGTT (cross-checked with information obtained during technical inspection at CNSR control stations), cargo vehicles in operational condition amounted to 8,871 in 2004.
- b) On average, the vehicle fleet is 17 years old<sup>23</sup>;
- c) Total transport capacity has been estimated at about 705,782 metric tons, over the 2001-2006 period mainly with 35-55 ton trucks<sup>24</sup>.

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<sup>22</sup> Source: Study “Implementing a Road Freight Management System in Benin” (*Etude sur la mise en place d’un system du fret routier au Benin*), January 2006.

<sup>23</sup> Source DGTT

<sup>24</sup> Source DGTT

3.52. Access to the profession is governed by decree No.79-109 of May 15, 1979 and its regulations. Accordingly, the potential carrier must obtain a license issued by the Minister of Transport and a transport authorization. This authorization recognizes the right for the applicant to carry out transport activities without these activities being considered as a profession. A professional transport card is required to perform transport activities as a profession.

3.53. **Transport demand.** It increased by 13 percent on average between 2001 and 2003, before falling by 13 percent in 2004 and doubling in 2005. As shown in the tables<sup>25</sup> below, exports to all destinations represent 90 percent of this demand while the national share increased from 53 percent to 57 percent between 2001 and 2004 with a 51 percent decrease in 2003 before reaching 66 percent in 2005.

**Table 3.10: Road Freight Annual Growth (in thousand of metric tons)**

| YEARS | Import  |    | Export  |    | Total   |          |
|-------|---------|----|---------|----|---------|----------|
|       | Freight | %  | Freight | %  | Freight | % growth |
| 2001  | 1,019   | 89 | 126     | 11 | 1,145   |          |
| 2002  | 1,077   | 87 | 161     | 13 | 1,238   | 8%       |
| 2003  | 1,324   | 90 | 147     | 10 | 1,471   | 19%      |
| 2004  | 1,133   | 89 | 146     | 11 | 1,279   | -13%     |
| 2005  | 2,508   | 91 | 262     | 9  | 2,770   | 117%     |

SOURCE: Statistic Directory, Land transports in Benin

**Table 3.11: National Freight and Transport Growth (in thousand of metric tons)**

| Year | National |    | Transit |    | Total   |  |
|------|----------|----|---------|----|---------|--|
|      | Freight  | %  | Freight | %  | Freight |  |
| 2001 | 601      | 53 | 543     | 47 | 1,144   |  |
| 2002 | 662      | 53 | 576     | 47 | 1,238   |  |
| 2003 | 745      | 51 | 727     | 49 | 1,472   |  |
| 2004 | 735      | 57 | 545     | 43 | 1,280   |  |
| 2005 | 1,828    | 66 | 942     | 34 | 2,770   |  |

SOURCE: Statistic Directory, Land transports in Benin

3.54. Truck transport is carried out by individual carriers and independent or unionized companies and by carriers not affiliated with trade unions. Four main labor confederations control the freight transportation industry: FESTRB, SNB-UTRAO, COSYTRAMAB and FESTRIS. In addition to these organizations, the *Bureau de Coordination des Transports Bénin-Niger* (Benin-Niger Transport Coordination Bureau) coordinates freight transport to and from Niger. Rates vary due to the lack of an adequately structured body for freight management despite the existence of an official rate evaluated per ton-km.

3.55. **Road freight management.** Road freight management had its ups and down. The dissolution of the Freight Bureau National Center (*Centre National de Bureau de Fret*) following deregulation of maritime transport in the second half of the 1990's, gave an opportunity to directly entrust labor confederations with the management of road freight. However, this experience led to competition among confederations for the distribution of

<sup>25</sup> Data on these tables only include road freight for which a consignment note was issued by DGTT.

the freight and to higher transport costs with a direct impact on the competitiveness of the Beninese corridor. This situation prompted the Minister of Transport to suspend this mode of freight management in 2005, conduct a study to implement a road freight management system, and at the same time set up a Transition Committee composed of labor confederations, representatives of the Administration, and various professional organizations (from Benin, Niger and Burkina Faso) involved in the sector. A report of the study is available and the ministry must choose a management structure and allow the consultant to elaborate related texts. It would be advisable that this process be rapidly completed to end the current slippages in the existing mode of operation of the Transition Committee. Efforts will therefore be made to ensure compliance with the December 2007 date envisaged for the implementation of the new Fret Management Framework in Benin.

**3.56. Passengers' Transportation.** Transport of people is also governed by the 1979 decree with specific regulations. This sub-sector is dominated by five labor confederations: UNACOB, UTIB, UTCGB, UNACODEB and OCTAVIC. Travel rates are set by the government through DGTT by mutual agreement with the drivers unions. However, the updating process is not automatic and adjustments are made only on the basis of consensual negotiations between the government and the carriers. A study is planned by DGTT to update the 1994 baseline rates that were adjusted in 2001 and 2005 but only in an informal manner. This study will be part of the overall study to update the regulatory framework that dates back to 1979 and is now obsolete.

**3.57. Transport facilitations.** With increased incidental expenses and their impact on transport costs for most itineraries and corridors throughout the country, interstate road transport and transit facilitation have become a major concern for the GoB over the past years. Many workshops have been organized and related regulations have been adopted. All this resulted in the establishment of an Interstate Road Transport and Transit National Committee (*Comité National de Facilitation des Transports et Transit Routier*) on June 8, 2006 and a workshop on September 19-21, 2006 in Lokossa. This workshop, which was attended by all public and private stakeholders led to the adoption of recommendations and an action plan containing both physical measures and those aimed at streamlining customs procedures and other measures<sup>26</sup>. They complement regulatory provisions already adopted by the GoB on road controls, the number and operation of these control posts and establishing responsibilities in case of illicit traffic at the posts. It would be appropriate to periodically make a progress report on all these measures to assess their real impacts on the Beninese corridor, which remains one of the most expensive in the sub-region.

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<sup>26</sup> See the conclusions of the workshop on « la Facilitation du Transport Routier : un enjeu pour le développement économique national et régional » (Facilitation of Road Transport : A challenge for national and regional economic development).

## Recommendations

3.58. Given the situation, the following recommendations can be made to improve competitiveness in the sub-sector:

- i. *Developing a new policy on road transport of people and goods* to ensure harmonious and complementary development of individual and collective transportation services taking into account related real costs. This policy must focus on taxation in the sub-sector and on recovering investment costs ;
- ii. *Updating current regulations* to better specify the roles of the stakeholders and update the conditions to access the carrier profession ;
- iii. *Identifying and implementing an adequate stakeholders' professionalization system* coupled with assistance/training and reskilling programs;
- iv. *Identifying and implementing a realistic and adequate system to finance the renewal and extension of the operational vehicle fleet* in order to improve competition and quality of service delivery ;
- v. *Accelerating the completion of the study to effectively establish a road freight management system* to benefit from an adequate freight management system, restore transparency at this level and reduce cost increases due to slippages in the current transitional system.

## SECTION 4. AIRPORTS

### A. Overview

4.1. Institutional Framework. The Ministry of Public Works and Transport is responsible for air transport activities in the Benin. Regulatory functions are executed by a Civil Aviation Authority –ANAC (*Agence Nationale de l'Aviation Civile*). ANAC has an independent status, as defined in Decree no. 2004-598 of October 24, 2004.

4.2. **ANAC's revenues varied between 1,473 million FCFA and 1,972 million FCA between 2005 and 2007, while expenditures varied between 1,474 million FCFA and 2,047 million FCFA.** The following tables summarize the composition of ANAC's revenues and expenditures for the period 2005-2007. According to the planned budget for 2007, revenues are composed by fees and charges (63 percent), investments grants (32 percent) and operating grants from both ASECNA and the government (5 percent). Expenditures are divided in two main groups: investments (representing 41 percent of the total expenditures), and operating costs (59 percent).

**Table 4.1: Revenues ANAC- 2005-2007 (Million FCFA)**

|                                                           | 2005         |              | 2006         |              | 2007         |
|-----------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
|                                                           | Planned      | Actual       | Planned      | Actual       | Planned      |
| <b>Revenues</b>                                           | <b>1,882</b> | <b>1,524</b> | <b>1,972</b> | <b>1,659</b> | <b>1,473</b> |
| <b>Fees and Charges</b>                                   | <b>877</b>   | <b>906</b>   | <b>955</b>   | <b>1,052</b> | <b>1,086</b> |
| Security fees                                             | 375          | 385          | 388          | 414          | 404          |
| ground handling charges                                   | 80           | 36           | 80           | 62           | 130          |
| Services delivery                                         | 9            | 18           | 14           | 10           | 60           |
| Inspection/Certification fees                             | 20           | 21           | 20           | 30           | 20           |
| Aeronautical development charges                          | 393          | 446          | 453          | 536          | 472          |
| <b>Operating grants</b>                                   | <b>87</b>    | <b>35</b>    | <b>85</b>    | <b>75</b>    | <b>50</b>    |
| ASECNA                                                    | 35           | 35           | 35           | 37           | 0            |
| Government                                                | 52           | 0            | 50           | 38           | 50           |
| <b>Other products and balance of previous fiscal year</b> | <b>68</b>    | <b>0</b>     | <b>2</b>     | <b>0</b>     | <b>2</b>     |
| <b>Investment grants</b>                                  | <b>796</b>   | <b>583</b>   | <b>930</b>   | <b>532</b>   | <b>335</b>   |
| <b>Balancing grants</b>                                   | <b>54</b>    | <b>0</b>     | <b>0</b>     | <b>0</b>     | <b>0</b>     |

SOURCE: ANAC

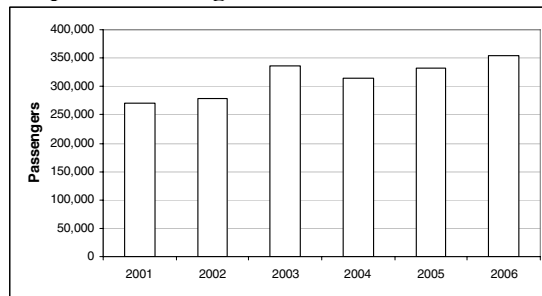
**Table 4.2: Expenses ANAC- 2005-2007 (Million FCFA)**

|                                          | 2005         |              | 2006         |              | 2007         |
|------------------------------------------|--------------|--------------|--------------|--------------|--------------|
|                                          | Planned      | Actual       | Planned      | Actual       | Planned      |
| <b>Expenses</b>                          | <b>1,883</b> | <b>1,085</b> | <b>2,047</b> | <b>1,330</b> | <b>1,474</b> |
| <b>Investment</b>                        | <b>1,092</b> | <b>635</b>   | <b>1,268</b> | <b>742</b>   | <b>610</b>   |
| Acquisition of tangible capital assets   | 74           | 9            | 505          | 380          | 4            |
| acquisition of intangible capital assets | 784          | 606          | 590          | 257          | 425          |
| Office supplies and furniture            | 234          | 20           | 173          | 105          | 181          |
| <b>Operating Costs</b>                   | <b>791</b>   | <b>450</b>   | <b>779</b>   | <b>588</b>   | <b>864</b>   |
| Purchases                                | 64           | 28           | 115          | 105          | 64           |
| Transportation expenses                  | 74           | 0            | 1            | 0            | 1            |
| External services                        | 342          | 211          | 399          | 263          | 456          |
| Taxes                                    | 4            | 7            | 10           | 0            | 10           |
| Miscellaneous                            | 11           | 12           | 10           | 6            | 15           |
| Personnel expenses                       | 296          | 192          | 244          | 214          | 318          |
| Depreciation allowance                   | 0            | 0            | 0            | 0            | 0            |

SOURCE: ANAC

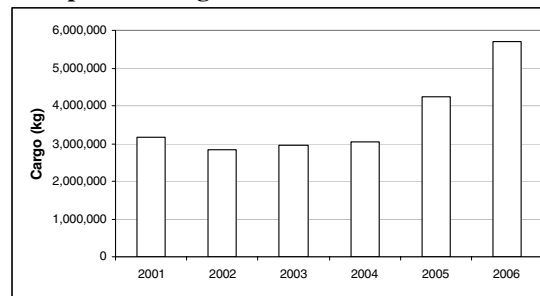
4.3. **Air Transport Market.** Aviation traffic in Benin is mostly concentrated on Cotonou's international airport although the country is also served by three other secondary airports. As most countries in Sub Saharan Africa with medium air traffic volumes (i.e., around 300,000 passengers/year), Benin's air transport industry and infrastructure suffer from financing and human capacity constraints. This situation has so far prevented Cotonou from fully playing its potential role of transfer point between West African and Central African markets, although the government is currently in discussions with a private operator who would like to take advantage of Cotonou geographical position to tap into this lucrative, yet modest, market. Regardless of the results of these discussions, however, Cotonou's position between Africa's South West Coast historic aviation hubs of Abidjan and Lagos should be a constant reminder that Cotonou's ability to grow into a connecting "airport" will face many hurdles.

**Graph 4.1: Passenger evolution 2001-2006**



SOURCE: ANAC

**Graph 4.2: Cargo evolution 2001-2006**



SOURCE: ANAC

4.4. Six private airlines are registered in Benin and all have an Airworthiness Operational Certificate (AOC): Benin Golf Air, Transair Benin, Aero Benin, Benin Littoral Airways, Alafia Jet, and West African Airlines. Except for West African Airlines, the other five companies are all operational. Each of them services a small number of air routes, using wet-leased aircraft (i.e., aircraft and aircrew are not registered in Benin but in a foreign country). This means, in essence, that ANAC exercises only a limited safety oversight role on these operators, a testimony of its limited capacity in this role.

4.5. The main foreign companies operating in Benin are: Air France (Cotonou-Paris route, 4 flights a week with an A330 aircraft), Air Sénégal International (Dakar-Abidjan-Cotonou route, 3 flights a week), Air Ivoire (Abidjan-Cotonou), Air Mauritanie (Nouakchott-Dakar- Abidjan-Cotonou), and Kenya Airways (Abidjan-Cotonou-Nairobi).

4.6. **Air Navigation Infrastructures and Services.** The Airport of Cotonou is managed by ASECNA, in pursuance of a contract signed with the government of Benin under Article 10 of the Dakar Convention. This contract stipulates that the government provides the infrastructure (and is therefore responsible for its upkeep) in exchange for ASECNA remitting part of the aeronautic development fees (about 400 millions FCFA in 2005). Under this agreement, ASECNA is responsible for the airport infrastructure maintenance activities.

4.7. Benin is one of many ASECNA's countries to have requested that ASECNA manage its main airport as it does not feel that it has the necessary home grown human capacity to do so. However, ASECNA's officials will be the first to admit that the agency core business is air traffic control, suggesting that they would be more than willing to relinquish their airport operator role to someone else. In the case of Cotonou, and especially within a context of the medium term development of a new airport for the capital city, the government would be well advised to look into the possibility of substituting to ASECNA a qualified foreign airport operator.

4.8. Despite the limited level of traffic in Cotonou airport, its financial results seems actually promising in terms of private sector attractiveness, although the Team was unable to verify their accuracy and reliability and had to rely on relatively old figures (i.e., 2003 and 2004). The airport's profit margin grew from 24% of revenues in 2003 to a 32% of revenues in 2004 (see Table 4.3). Meanwhile its cash in hand steadily increased



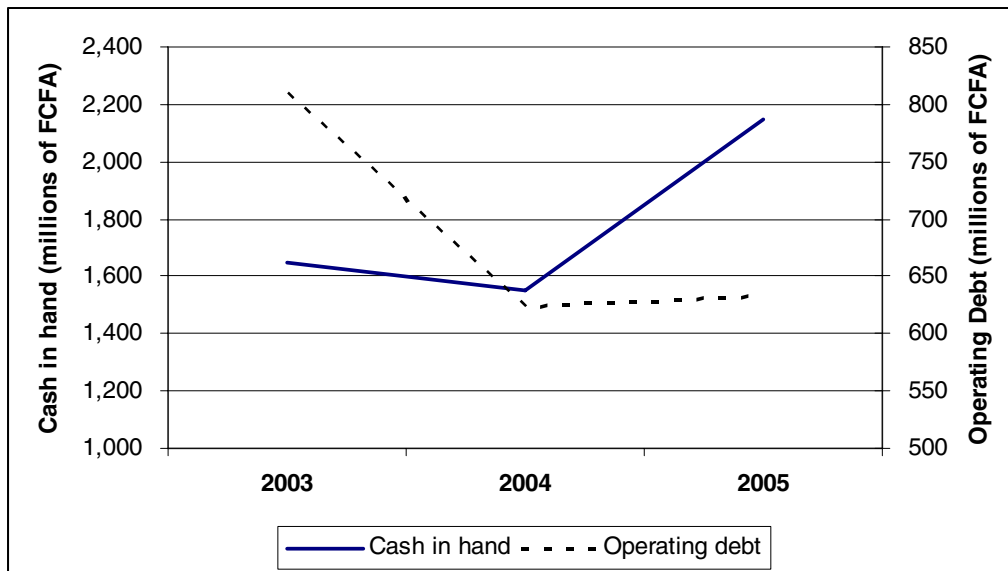
over that period to reach more than US\$4 million in 2005 at the same time as its debt was reduced (see Figure 4.3). The comparison with an equivalent international airport in Ouagadougou also reveals a significant potential for greater aeronautical revenues. Both airports collected about 2.5 billion FCFA in 2003, yet Burkina Faso’s airport bore 30% less traffic. Furthermore, the cost of personnel in both airports is quite similar in spite of the different passenger traffic; therefore demonstrating relatively efficient operations.

**Graph 4.3: Income statements 2003-2004**

| (in million FCFA)        | 2003  | 2004  |
|--------------------------|-------|-------|
| <b>Revenues</b>          | 2,713 | 3,240 |
| <b>Expenses</b>          | 2,061 | 2,197 |
| <b>Net profit</b>        | 652   | 1,043 |
| <b>Net profit margin</b> | 24%   | 32%   |

SOURCE: ANAC

**Graph 4.4: Cash in hand and operating debt 2003-2005**



SOURCE: ANAC

4.9. Rehabilitating its infrastructure has been a priority for the Cotonou airport. It has recently remodeled its departure terminal at a cost of approximately 2 billion FCFA. The ongoing project comprises the construction of a second taxiway as well as an aircraft apron extension for which preliminary studies are underway. The work that is scheduled to start in November 2007 should help increase the number of parking spaces from 9 to 20. Even though there remain some key shortcomings in the airport’s infrastructure, current upgrades should provide for much needed relief and strengthen the airport’s attractiveness to potential private operators.

4.10. At this stage of this study, however, and without detailed financial information pertaining to Cotonou airport’s fee structure, revenues and costs, it is not possible to confirm whether such public/private option would make financial sense both for the

government and a private operator. It should, nevertheless, be investigated as one possible option to improving Benin's airport infrastructure performance, regional competitiveness and passenger service quality.

4.11. Benin's "upper airspace"<sup>27</sup> is under the jurisdiction of the Flight Information Region (FIR) of Accra; while the government of Benin controls the "low altitude airspace" and has delegated air traffic control functions in/out of its airports to ASECNA. This division of responsibilities means practically that FIR Accra collects fees for Benin's upper airspace without contributing to the financing of Cotonou's airport navigational aids (i.e., VOR-DME) which are used both for overflights and airport operations.

4.12. Airport ground services. Until its demise, Air Afrique was in charge of providing ground handling services at Cotonou's airport. Following the carrier's collapse, the government decided to concession the airport ground handling services to AHS, a private company and a subsidiary of the Menzies group.

4.13. Airport security is under the jurisdiction of ANAC (in collaboration with law enforcement authorities: the police and Gendarmerie). For baggage screening, ANAC has hired a private security company to carry out this work.

## **B. Key Sectoral Challenges**

4.14. **Articulation between Political and Regulatory functions.** ANAC is responsible for the follow up of issues relating to the Beninese government's civil aviation policy. This provision seems to breach the principle of separation between political and regulatory functions. In practice, however, there is relative compliance of the separation principle since ANAC's role is limited to reviewing files and making recommendations, while decisions pertaining to aeronautic policies are made by the Ministry of Public Works and Transport. An advisor within the Ministry serves as interface.

4.15. **ANAC's Autonomy.** Even though ANAC was conceived as an autonomous agency, some provisions within its founding documents as well as some practices seriously limit its administrative and financial autonomy. These are:

- ANAC's Board of Directors is composed of seven members, with five of them representing several Ministers;
- Its Managing Director is directly appointed by the government, without input from the Board of Directors;
- It is in charge of accident investigations and, thus, may find itself in a situation of conflict of interest if an accident investigation calls on ANAC's responsibility in a particular case; and
- Capital grants are not directly allocated to ANAC. Instead, funds are managed through the Ministry of Public Works and Transport and ANAC has just some

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<sup>27</sup> It is the airspace above Flight level 250; that is, 25000 feet standard pressure of 1013.25 mbar.

« drawing rights » to finance a given investment but has little control over their implementation. This might explain why both in 2005 and 2006, ANAC's budgetary category with the lowest level of execution (i.e., less than 65%) has been its investment one (see Table 4.2).

4.16. It seems, therefore, important that the government consider the possibility of revising ANAC's statutes in order to ensure its full administrative and financial autonomy as demanded by the WAEMU's directive tackling this issue and as reflected in the 2007 International Civil Aviation Organization (ICAO) safety audit.

4.17. **Air Safety Challenges.** ANAC's human and financial resources are limited with an operating budget hovering at around 1 US\$ million per year. Accordingly, it is ill suited to train and retain qualified air safety inspectors and regulate commercial and charter airlines operating from/to Benin, including issuing AOC, pilot and commercial crew licenses, etc. One solution to ANAC current air safety regulatory capacity problems would be to rely more heavily on the capacity provided for free by the WAEMU's Cooperative Development of Operational Safety and Continued Airworthiness COSCAP experts based in Ouagadougou. While this would represent a rapid and helpful short term solution for ANAC it would not address, however, the long term issue of the sustainability of its autonomy and of its ability to meet ICAO safety and security standards. Accordingly, a more serious set of solutions needs to be envisaged, including Benin's support to the creation of a regional Aviation Safety Agency and/or its joining of the World Bank's financed West and Central Africa Air Transport Security and Safety Program (WCAATSSP).

4.18. **Competition Challenges.** Practically, there does not seem to be any restrictions to airline's competition in the Beninese market. Indeed, the presence of three local airlines companies and several large regional operators in this medium size market (though they share routes rather than compete with each other) seems sufficient to ensure a certain level of competition for regional services. This finding is corroborated by the fact that regional air fares from/to Benin are in par with those of neighboring countries and suggests that airlines operating interstate routes are taking advantage of the opportunities offered by the implementation of the Yamoussoukro Decision that liberalized Sub Saharan Africa internal air market back in 1999. When it comes to International fares (i.e., mostly to Paris), travelers to/from Benin are handicapped by the fact that they cannot easily take advantage of: 1) the far more competitive international travel market out of Lagos<sup>28</sup> where all major Western European airlines compete with Virgin Nigeria in the absence of connecting flights from/to Cotonou/Lagos, 2) the opportunity offered by regional airlines such as Air Senegal International or Royal Air Maroc that offer competitive prices to Paris. In the latter case, this means that the sole large international carrier that operates out of Cotonou, Air France, is able to charge a premium for its services to/from Cotonou in the absence of any competition. The same holds true, however, on many other routes where Air France's quasi monopoly is shared with a national carrier such as in Burkina, Côte d'Ivoire, Cameroun or Madagascar. There

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<sup>28</sup> Lagos handles more than 2.8 million international passengers a year and more than 5.1 million passengers if one adds its domestic traffic.

is not, therefore, a simple solution to international air travel affordability in Benin as the market is simply, for now, too small to warrant a level of competition that would bring down substantially these air fares.

4.19. From a theoretical viewpoint, the lack of competition in ground handling services is a problem; however, given the low volume of activity, it is hard to imagine how the market could handle many service providers without affecting the already-fragile economic equilibrium of this activity. Some companies have mentioned operational problems relating to passenger bus transfer service from the hardstand to the terminal. Since passenger buses are operated by ASECNA and not the company providing ground handling services there may be a dilution of responsibilities, which affects the coordination of movements on the platform.

4.20. **Infrastructures Challenges.** Users surveyed as part of the field work carried out for this Note mentioned three main infrastructure problems affecting Cotonou airport:

- Insufficient length of the runway. Operators consider that the runway length should be increased by at least 200 meters in order to improve their operational flexibility as well as safety margins on take offs and landings. Studies for such extension are underway;
- Insufficient apron space: operators believe that there is a need to build at least one new wide-body and two new narrow-body aircraft parking spaces in front of the main terminal in order to ease aircraft movements during peak hours. Likewise, they believe that the addition of high speed exit taxiways would markedly improve the airport peak hour traffic capacity. Forecasts in paragraph 4.9 above should help meet this concern;
- The passenger terminal lacks capacity at peak hours which translates into low standards of services for passengers. Implementation of extension works, for which detailed design studies are ongoing, should help face this situation.

4.21. In addition, two other infrastructure related problems were identified at Cotonou's airport: (i) the deterioration of the runway surface, and its need to be reinforced; and (ii) the improvement/completion of the fence around the airport to comply with ICAO's security standards. Concerning the latter point, the rehabilitation of the fence using funds from the Public Investment Program, in annual installments, does not seem to help accelerate the installation of the fence due to the low amounts taken into account for that purpose.

4.22. In the past, the extension of the airport runway has been considered not feasible mainly because of land issues as the airport is surrounded on three sides by human dwellings and on its fourth side by the sea. Accordingly, the government has decided to build a new airport 40 km outside of Cotonou so as to lift the physical constraints that today preclude physical expansion of the existing airport. Some economic actors involved in the sector, however, fear that this decision will negatively either delay, or worst, cancel

any new investment in the existing airport although these are needed urgently, especially when considering the fact that the new airport will not be completed in the foreseeable future. It would, therefore, behoove the government to carefully review the economic, safety and security merits of additional investments in the current airport (i.e., extension of the existing runway) as this airport needs to be able to accommodate current and projected traffic in Cotonou for at least the next ten years, while complying with basic ICAO standards in terms of safety and security of operations. Such improvements would also support current attempt to attract well funded airline operator and strengthen the case for a transfer of the airport operations management to a private airport operator.

## **C. Strategic Priorities for the Sector**

### **C.1 Supporting the government of Benin's efforts to reinforce ANAC's autonomy.**

4.23. This recommendation is based on three kinds of actions and supported by the need to rapidly improve ANAC's ability to enforce ICAO security and safety standards:

- Improve ANAC's statutes to ensure compliance with the recommendations made by the ICAO and with the provisions of the WAEMU's directive on Civil Aviation Autonomy; specifically:
  - a) Increase the private sector representation within the Board of Directors ;
  - b) Entrust the Board with the responsibility of appointing the Managing Director and a financial controller accountable to the Board;
  - c) Clearly specify responsibilities concerning air transport policies (ANAC reviews and prepares them, the Minister makes decisions) ;
  - d) Entrust the Ministry or an independent organization with the responsibility of investigating air accidents to avoid potential conflicts of interests.
- Clarify the financial framework for ANAC's autonomy, especially regarding its investment budget; using the following and mutually exclusive possible solutions:
  - a) Plan the effective payment of investment grants in installments, following an approved calendar. These funds would be committed and disbursed under ANAC Board's authority according to guidelines set by the contract and in compliance with clear outcome indicators;
  - b) Keep these grants within the Ministry's budget and with the Ministry as the main contractor for the corresponding works while ANAC's role is solely that of a service provider as part of a delegated contract mission.
- Improve the regulatory and operational framework to ensure that ANAC meet its safety and security oversight obligations:
  - a) Enforce technical regulations for operating and supervision permits; in particular, ensure that the criteria for the issuance and renewal of AOC complies with the provisions of the regulations;
  - b) Improve ANAC's own resources (including in human resources) by seeking assistance from the WAEMU's COSCAP to avoid duplication of efforts whenever possible;
  - c) Review the benefits of joining the Bank-financed WCAATSSP; and

- d) Support the creation of a regional air safety agency for West Africa.

**C.2 Establishment of an enabling institutional framework to improve safety, security and the quality of service delivery at Cotonou airport under economically sustainable conditions.**

4.24. Improvements should focus on: (i) complying with security and safety standards, (ii) increasing capacity, mainly apron space, and (iii) improving operational performance (including the extension of the runway). To deliver these improvements, the government should consider the possibility of:

- Concessioneering the airport to a qualified operator which would contribute in full or partially to the financing of landside infrastructure improvements (i.e., passenger and/or freight terminals, car parking, etc.) in lieu of the current ASECNA's management contract.
- Implementing a rigorous investment policy to guarantee that airport generated revenues are not diverted away from airport's airside investment financing (i.e., apron, runway and fencing);
- Reviewing the adequacy of the airport's current fee structure to balance the needs for regional competitiveness with sustainable revenue earnings.

4.25. Regardless of the solution to be adopted, some key issues must be solved in the short term. These include:

- Defining ANAC's arbitration role in solving possible disputes that might arise between the different airport operators;
- Looking for less costly schemes. For example, authorizing the same service provider to manage the air terminal and ground handling services may generate substantial economies of scale in a low traffic airport, provided the project specifications for both activities are clearly defined;
- Determining the rules for sub-contracting (for possible extension of the freight facilities that can be contracted to specialized companies such as forwarders) so that the contractor really controls the award of subcontracts according to project specification;
- Confirming and improving ANAC's role as "leader," especially in the field of space management (who has the right to build what and where). This role would be most important as part of an airport concession contract; and
- Reinforcing ANAC's role vis-à-vis other administrations, notably in terms of *city and space management*, to enforce technical requirements for obstacle clearing and airport zoning to guarantee the safety of airport operations, and ensure that civil aviation development needs and technical requirements are taken into account, in particular by empowering ANAC to prevent that work construction conflict with these needs and requirements.

### C.3 Making the necessary investments to improve the operational characteristics of Cotonou Airport.

4.26. The most urgent investments are:

- The rehabilitation of airport facilities to ensure their compliance with ICAO security and safety standards including, but not limited to, the airport perimeter protection, its navigational aids (NAVAIDs), etc.; and
- Repairing the runway surface and, where appropriate, the runway beacons and lighting;

## SECTION 5. PORTS

### A. Regional Environment<sup>29</sup>

5.1. **Africa accounts for nearly 2.3 percent of imports and 2.6 percent of exports in 2004.** Overall, the share of Africa in world trade is modest and seems to be stable. In 1994 it stood at 2.3 percent of the value of exports and 2.4 percent for imports. Figures ten years later indicate that the trend has been maintained (See Table 5.1). For 2004 the value of exports for the continent amounted US\$231.7 billions, while imports amounted US\$204.8 billion. Out of this total, Sub-Saharan Africa represents 45.5 percent of the exports and 41.4 percent of the imports.

**Table 5.1: Merchandise Trade of Africa**

| Year | Billion of US\$ |         | World share in %<br>for |         |
|------|-----------------|---------|-------------------------|---------|
|      | Exports         | Imports | Exports                 | Imports |
| 1990 | 105.5           | 99.2    | 3.1                     | 2.8     |
| 1991 | 99.8            | 94.7    | 2.9                     | 2.7     |
| 1992 | 96.9            | 100.6   | 2.6                     | 2.7     |
| 1993 | 93.0            | 98.4    | 2.5                     | 2.6     |
| 1994 | 96.8            | 106.1   | 2.3                     | 2.5     |
| 1995 | 111.5           | 126.5   | 2.2                     | 2.5     |
| 1996 | 125.0           | 125.1   | 2.4                     | 2.3     |
| 1997 | 127.3           | 132.3   | 2.4                     | 2.4     |
| 1998 | 105.4           | 132.5   | 2.0                     | 2.4     |
| 1999 | 116.6           | 128.1   | 2.1                     | 2.2     |
| 2000 | 148.5           | 129.1   | 2.4                     | 2.0     |
| 2001 | 137.9           | 134.0   | 2.4                     | 2.2     |
| 2002 | 140.1           | 136.6   | 2.2                     | 2.2     |
| 2003 | 175.1           | 162.8   | 2.4                     | 2.3     |
| 2004 | 231.7           | 204.8   | 2.6                     | 2.3     |

SOURCE: UNCTAD, Review of Maritime Transport, 2006

<sup>29</sup> Sub-Saharan African countries are a diverse group with widely differing needs on account of their geographical situation. There are 2 coastal countries, 16 landlocked countries and 7 insular countries located in the Atlantic and Indian Oceans. In West Africa, there are 3 landlocked countries: Burkina Faso, Mali and Niger. As it will be developed later, this aspect is especially relevant, since part of the cargo going through Benin is transit cargo for those countries.

**TABLE 5.2: Composition of African Trade by Blocs**

| Year |         | Billions of Dollars |                    |                 |                 | Percentage         |                 |                 |
|------|---------|---------------------|--------------------|-----------------|-----------------|--------------------|-----------------|-----------------|
|      |         | All Africa          | Sub-Saharan Africa | Northern Africa | Southern Africa | Sub-Saharan Africa | Northern Africa | Southern Africa |
| 2002 | Exports | 140.1               | 62.3               | 48.1            | 29.7            | 44.4               | 34.3            | 21.2            |
|      | Imports | 135.8               | 56.8               | 50.7            | 29.3            | 41.5               | 37.1            | 21.4            |
| 2003 | Exports | 175.2               | 76.5               | 62.2            | 36.5            | 43.7               | 35.5            | 20.8            |
|      | Imports | 162.8               | 70.0               | 52.7            | 40.1            | 43.0               | 32.4            | 24.7            |
| 2004 | Exports | 231.7               | 105.4              | 80.2            | 46.0            | 45.5               | 34.6            | 19.9            |
|      | Imports | 204.8               | 84.8               | 64.8            | 55.2            | 41.4               | 31.7            | 27.0            |

SOURCE: UNCTAD, Review of Maritime Transport, 2006

5.2. The most recent estimates for the total of goods loaded and unloaded in African ports fluctuates around 860 million tons per year, with the share of sub-Saharan countries being above a third (300 million tons of which 230 million tons are loaded goods and 70 million tons unloaded ones).<sup>30</sup> The bulk of loaded cargo estimated at almost 200 million tons is crude oil from oil-exporting countries of West and Central Africa, notably Nigeria, Gabon, Angola and Equatorial Guinea. Most of the balance is dry bulk bauxite from Guinea and iron from Mauritania, which fluctuates at around 15 million tons per year. The remaining tonnage of loaded cargo and about 90 percent of total unloaded cargo are general cargo, which is increasingly carried in containers. About one tenth of unloaded cargo is refined petroleum products such as gasoline.

5.3. Container traffic flow between Africa and Europe is the largest for the continent, and in 2004 reached 3.3 million TEUs; the corresponding flow between Africa and North America is evaluated one tenth of that figure. Moreover, the largest traffic flow is heavily imbalanced, with the northbound container flow being only one third of the total.

**Table 5.3: Container Traffic between the West Coast of Africa and Europe**

| Year | Southbound flow | Northbound flow |
|------|-----------------|-----------------|
| 2003 | 534             | 278             |
| 2004 | 532             | 281             |
| 2005 | 556             | 286             |

SOURCE: Containerization International, September 2005.

5.4. **Ports in the region are aiming at improving their efficiency; even though different models are in place, in West Africa the most efficient are the Tool Port and the Landlord Port models (see Box 5.1 and Graph 5.1).** The largest share of Africa's container throughput is handled by the private sector in terminals under the control of the public sector: 83.9 percent in 2004, compared with a 20.9 percent rate globally<sup>31</sup>. Nevertheless, further improved operational efficiency and investments continued to be sought by governments through the landlord port model.

<sup>30</sup> Data available for 2006

<sup>31</sup> SOURCE: Sub-Saharan Africa Transport Policy Program, SSATP Working Paper No. 84 *Port and Maritime Transport Challenges in West and Central Africa, May 2007.*



5.5. An alternative approach was followed by South Africa during 2005. Ports in that country were adversely affected by lack of investment and militant labor opposition to changing the current institutional set-up. Transnet<sup>32</sup>, the public holding encompassing transport business at the national level, including ports, was authorized to invest up to US\$8.8 billion to rehabilitate railways and ports over the next five years using reserves and loans from the capital markets.

#### **BOX 5.1 – Port Administration Models**

Four main categories of ports have emerged over time. This classification is based on the following characteristics: (i) public, private or mixed provision of services; (ii) local, regional or global orientation; (iii) ownership of infrastructure; (iv) ownership of superstructure and equipment; and (v) status of dock labor management.

**Service Port:** These ports have a predominantly public character. The Port Authority offers the complete range of services required for the functioning of the sea-port system. The port owns, maintains and operated every available asset and cargo-handling activities are executed by labor employed directly by the Port Authority. Services Ports are usually controlled by (or even part of) the Ministry of Transport and the Chairman (or Director General) is a civil servant appointed by/or directly to, the Minister concerned.

**Tool Port:** The Port Authority owns, develops and maintains the port infrastructure as well as the superstructure, including cargo-handling equipment such as quay cranes, forklift trucks, etc. Other cargo handling on board vessels as well as on the apron and on the quay is usually carried out by private cargo-handling firms contracted by the shipping agents or other principals licensed by the Port Authority. This division of tasks is also associated to the essential problem with this type of model: split operational responsibilities. The tool port has a number of similarities to the service port, both in terms of its public orientation and the way the port is financed.

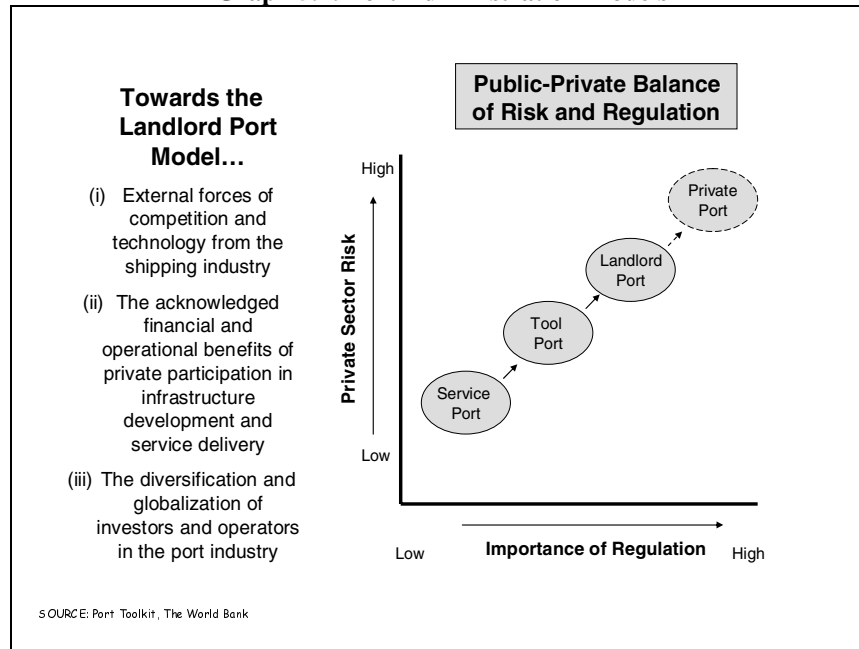
**Landlord Port:** These ports are characterized by their mixed public-public-private orientation. Infrastructure is leased to private operating companies and /or to industries. The lease to be paid to the Port Authority is usually a fixed sum per square per year, typically indexed to some measure of inflation. The level of the lease amount is related to the initial preparation and construction costs. The private port operators provide and maintain their own superstructure. They also purchase and install their own equipment on the terminal grounds. Dock labor is employed by private terminal operators, although in some ports part of the labor may be provided through a port-wide labor pool system.

**Private Port:** There are few examples, and can be found mainly in the United Kingdom and New Zealand. In fully privatized ports, port land is privately owned, contrary to the situation in other port management models. This requires the transfer of ownership of such land from the public to the private sector. The main risk in this type of arrangement is that port land can be sold or re-sold for non-port activities, thereby making it impossible to reclaim for its original maritime use.

SOURCE: World Bank, "Port Reform Toolkit"

<sup>32</sup> Transnet is the South African rail, port and pipeline company. It was formed as a limited company on April 1, 1990. A majority of the company's stock is owned by the Department of Public Enterprises, or DPE, of the South African government. The company was formed by restructuring into business units the operations of South African Railways and Harbors and other existing operations and products. Its subsidiaries include South African Airways.

**Graph 5.1: Port Administration Models**



SOURCE: World Bank, "Port Reform Toolkit"

**5.6. A region with a low liner shipping connectivity Index (LSCI).** The LSCI indicator was recently developed, as a way to quantify the maritime containerized liner trade, a key factor for a country's competitiveness. The LSCI is built up by taking 9 elements into consideration<sup>33</sup>, and ranges from 0 to 100. Countries with a high index benefit from regular and frequent shipping services that place them at the centre of international trading activity, while those with a lower index are on the periphery of such activity. For 2004, the countries with the highest LSCI were Egypt (47) and South Africa (29); while the lowest LSCI were found in Somalia (3), Eritrea (3) and Democratic Republic of the Congo (5).

<sup>33</sup> Factors considered as the follows: (i) the number of containerships deployed on the liner services from/to a country's ports; (ii) the container carrying capacity deployed, measured in TEUs; (iii) the per capita number of ships deployed; (iv) the per capita container carrying capacity deployed; (v) the number of liner shipping companies servicing a country's ports; (vi) the number of liner services provided by shipping lines; (vii) the maximum size of vessels deployed; (viii) the average size of vessels deployed; and (ix) the average number of vessels operated per liner shipping company.

**Table 5.4: Liner Shipping Connectivity Index, 2004-2005**  
West Africa

|                           | Index<br>2005 | Index<br>2004 |
|---------------------------|---------------|---------------|
| Ivory Coast <sup>34</sup> | 20            | 25            |
| Ghana                     | 19            | 18            |
| Nigeria                   | 18            | 18            |
| Togo                      | 18            | 19            |
| Senegal                   | 18            | 19            |
| <b>Benin</b>              | <b>17</b>     | <b>17</b>     |
| Mauritania                | 15            | 10            |
| Gambia                    | 14            | 11            |
| Guinea                    | 12            | 10            |
| Liberia                   | 11            | 11            |
| Sierra Leone              | 11            | 11            |
| Guinea-Bissau             | 9             | 4             |

SOURCE: UNCTAD

5.7. **Since 3 of West Africa countries are landlocked, transit traffic has important effects in some neighboring countries, especially on its port flows.** Imports and exports going to/from Burkina Faso, Niger and Mali must go through the ports of its neighboring countries. In an analysis done in 2003, the almost 3.0 million tons of international trade of these countries, were mobilized through Dakar (17 percent), Abidjan (6 percent), Tema (22 percent), Takoradi (4 percent), Lome (29 percent) and Cotonou (22 percent). Because of the nature of this cargo, its distribution is extremely sensible to several factors such as the general quality of infrastructure and its associated services; political situation, administrative practices.

**Table 5.5: Transit Traffic going through West African Ports (2003)**  
(in thousands of metric tons)

| Landlocked country               | International trade | International trade going through different ports |            |            |            |             |            |
|----------------------------------|---------------------|---------------------------------------------------|------------|------------|------------|-------------|------------|
|                                  |                     | Dakar                                             | Abidjan    | Tema       | Takoradi   | Lome        | Cotonou    |
| <b>Burkina Faso</b>              | 1,126               |                                                   | 28         | 330        | 29         | 703         | 37         |
| <b>Niger</b>                     | 1,083               |                                                   |            | 78         | 30         | 175         | 800        |
| <b>Mali</b>                      | 1,584               | 653                                               | 177        | 423        | 97         | 221         | 14         |
| <b>Total</b>                     | <b>3,793</b>        | <b>653</b>                                        | <b>204</b> | <b>831</b> | <b>156</b> | <b>1099</b> | <b>851</b> |
| <b>Percentage taken per port</b> |                     | <b>17</b>                                         | <b>6</b>   | <b>22</b>  | <b>4</b>   | <b>29</b>   | <b>22</b>  |

SOURCE: UNCTAD, "A comparative study of import transit corridors of landlocked countries in West Africa", 2004

<sup>34</sup> Ivory Coast's LSCI dropped from 25 to 20 as a result of business lost to ports of neighboring countries. Nevertheless, this country continued to rank high thanks to resilient local traffic and trans-shipment activity.

## B. Institutional Set-Up

5.8. The port of Cotonou is a Tool Port, with a government owned port authority: *Port Autonome de Cotonou – PAC*. The PAC is under the jurisdiction of the Ministry of Public Works and Transport (see organization chart of the Ministry, Section II).

5.9. Following the restructuring process carried out in 1997, container handling activities are carried out by three operators: (i) the Benin Cargo Handling Company - SOBEMAP (“*Société Béninoise des Manutentions Portuaires*”, a public own company<sup>35</sup>); (ii) COMAN S.A. (“*Conotou Manutention*”, a company owned by the Maersk group), and (iii) SMTC (“*Société de Manutention du Terminal á Conteneurs de Cotonou*”, owned by the Bollore group). Both, COMAN and SMTC, were awarded in 2004 a 25 year concession for handling containers, while SOBEMAP has the command for all kind of conventional cargo handling activities. The reforms undertaken in 1996 led to the creation of the Port Authority (*L’Autorité Portuaire*) and the Port Activities Coordination Committee (*Comité de Coordination des Activités du Port de Cotonou*).

### Box 5.2 - Main Actors within the Port Sector in Benin

Main actors within the port sector are the follow:

- Port Authority – PAC
- National Shippers Council (« *Conseil National des Chargeurs de Benin – CNCB* »)
- Customs Directorate (« *Direction Générale des Douanes et Droits Indirects* »)
- Stevedoring companies (SOBEMAP, COMAN and SMTC)
- Merchant Marine Directorate (« *Direction de la Marine Marchande* »)
- The consignees
- The carriers

## C. Port Infrastructure and Operations

5.10. With an installed capacity of 3 million tons of cargo<sup>36</sup>, the Port of Cotonou now handles more than 5 million tons. In 2005 total cargo handled through the port reached 5.1 million tons. As a result, there is tremendous pressure on the infrastructure, equipment and port spaces, and the port is operating under a very congested environment. Even though it is envisaged in the medium term to have new facilities and equipment to alleviate the current situation, it is fundamental to ameliorate operational practices and maximize land use in order to improve the overall performance of the port. The following paragraphs give more information regarding the port infrastructure and operations.

<sup>35</sup> Until 1997, SOBEMAP had the monopoly for stevedoring and shorehandling activities within the port.

<sup>36</sup> SOURCE: Comité de coordination des activités portuaires (CCAP), *Réflexions sur la compétitivité du Port de Cotonou*

5.11. **Port Infrastructure Description.** The Port of Cotonou is a deep water port. It is composed by:

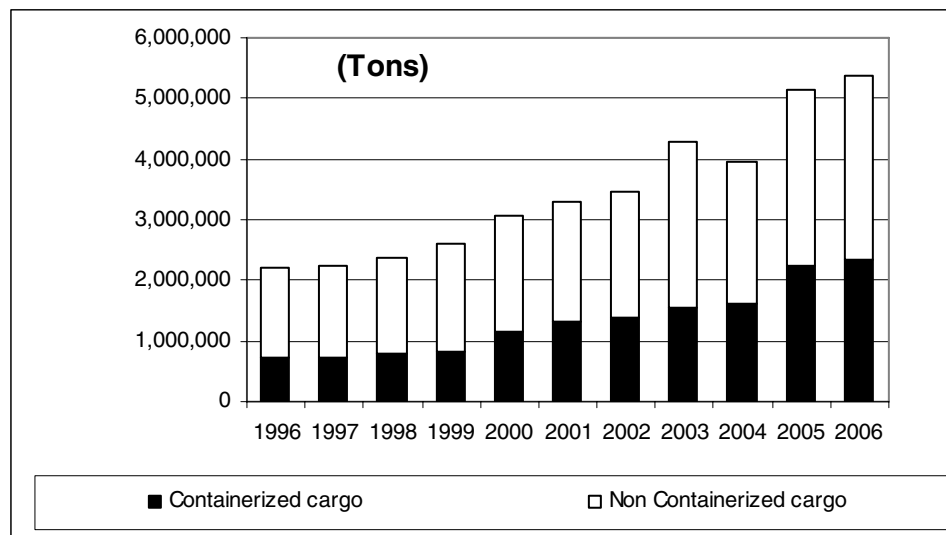
- 6 conventional berth stations: 4 berths of 155 (Q1-Q4) and 2 berths of 180 m (Q5-Q6)
- 1 berth of 220 m for container vessels (Q7)
- 1 berth at Roro fitted at the extreme west of the containers location to receive on the roll-off vessels with a ramp at the back(Q8)
- 1 berth station for clinker and gypsum of 200 m
- 1 berth for oil handling of 160 m, connected by pipes to the storage in the city
- 1 berth station of 100 m for fishing ships
- 1 oil berth of 250 m built in the southern part of the port by a private company (ORYX)
- Draft oscillates between 9 and 11 m

5.12. Regarding storage space and customs facilities, the situation is as follows:

- Storage and cargo space for transit cargo: 57,000 m<sup>2</sup>
- Paved area: 60,000 m<sup>2</sup>
- Container handling space: 91,000 m<sup>2</sup>
- “*Zone Franche*” reserved for Niger (28,000 m<sup>2</sup>), Mali (12,151 m<sup>2</sup>) and Burkina Faso (15,000 m<sup>2</sup>)

5.13. **The port has more than doubled its total cargo in 7 years, from 2.6 million tons in 1999 to more than 5.3 million tons in 2006.** In the mid 90s the port of Cotonou was handling around two million tons. A decade later, the port is handling more than double this cargo. In 2006, the official figure was 5.3 million tons (see Graph below).

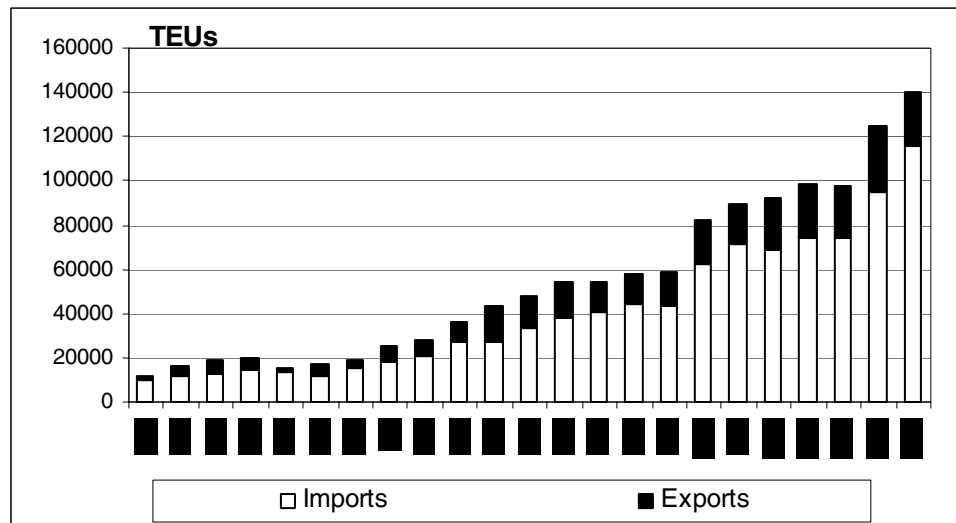
**Graph 5.2: Evolution of Total Cargo 1996-2006 (Tons)**



SOURCE: PAC Webpage

5.14. **The share of containerized cargo was around 40 percent in 2006<sup>37</sup>; in 2006 the Port of Cotonou handled about 140,000 TEUs, mostly for importation purposes.** The container traffic through the Port of Cotonou has grown remarkably over the last 10 years. Between 1995 and 2006, TEU has practically tripled from 48,000 up to 140,500. The positioning of the Port of Conotou vis-à-vis other ports within the region can be visualized in table 5.6.

**Graph 5.3: Evolution of Container Traffic in the Port of Cotonou (1996-2006)**



SOURCE: PAC Webpage

**Table 5.6: Total Container Traffic in West Africa (Selected Countries)**

| Port           | Country      | TEU             | TEU             | Percentage Change |
|----------------|--------------|-----------------|-----------------|-------------------|
|                |              | (thousand) 2005 | (thousand) 2004 |                   |
| Abidjan        | Ivory Coast  | 719 (*)         | 670             | 6%                |
| Lagos          | Nigeria      | 580(**)         | 444             | Na                |
| Tema           | Ghana        | 393             | 340             | 16%               |
| Dakar          | Senegal      | 309             | 331             | -7%               |
| Lome           | Togo         | 205             | 185             | 11%               |
| <b>Conotou</b> | <b>Benin</b> | <b>158</b>      | <b>97</b>       | <b>63%</b>        |

SOURCE: UNCTAD, Review of Maritime Transport, 2006, Port Authorities websites.

(\*)estimated figure

(\*\*) the figure is for all Nigerian Ports

5.15. **Imports represent on average 80 percent of the containerized cargo.** The ratio imports/exports has been stable since the mid 90s. Export goods mostly included: cotton, cashew nuts, and wood; and import goods: petroleum and petroleum derivatives, food products, clinker and gypsum, and used vehicles. The following tables indicate the composition for both imports and exports for the period 1996-2006.

<sup>37</sup> Percentage of containerized cargo compared to total cargo traffic

**Table 5.7: Goods Imported 1996-2006**

|                                     | 1996         | 1997         | 1998         | 1999         | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006         |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Petroleum and petroleum derivatives | 17%          | 18%          | 22%          | 23%          | 16%          | 11%          | 17%          | 22%          | 24%          | 18%          | 18%          |
| Clinker, Gypsum                     | 23%          | 25%          | 21%          | 21%          | 28%          | 31%          | 21%          | 19%          | 17%          | 16%          | 13%          |
| Construction Material               | 3%           | 3%           | 4%           | 7%           | 3%           | 3%           | 4%           | 3%           | 4%           | 3%           | 4%           |
| Cereals                             | 14%          | 9%           | 6%           | 5%           | 4%           | 6%           | 8%           | 14%          | 12%          | 18%          | 17%          |
| Food products                       | 12%          | 12%          | 15%          | 12%          | 14%          | 14%          | 14%          | 14%          | 11%          | 12%          | 14%          |
| Lubricants and asphalt              | 0%           | 0%           | 0%           | 0%           | 0%           | 0%           | 1%           | 0%           | 1%           | 0%           | 0%           |
| Insecticides                        | 4%           | 5%           | 5%           | 7%           | 3%           | 2%           | 5%           | 2%           | 3%           | 1%           | 1%           |
| Materiel                            | 2%           | 2%           | 3%           | 2%           | 5%           | 4%           | 4%           | 3%           | 4%           | 6%           | 7%           |
| Vehicles and vehicle parts          | 6%           | 8%           | 8%           | 8%           | 11%          | 12%          | 11%          | 8%           | 6%           | 7%           | 7%           |
| Sulfur                              | 1%           | 1%           | 1%           | 1%           | 0%           | 0%           | 0%           | 1%           | 1%           | 0%           | 1%           |
| Other                               | 18%          | 17%          | 16%          | 14%          | 16%          | 17%          | 15%          | 13%          | 16%          | 16%          | 18%          |
| <b>TOTAL IMPO (000 Ton)</b>         | <b>1,796</b> | <b>1,878</b> | <b>2,005</b> | <b>2,236</b> | <b>2,675</b> | <b>2,929</b> | <b>3,008</b> | <b>3,809</b> | <b>3,521</b> | <b>4,557</b> | <b>4,854</b> |
| <b>IMPO as % of TOTAL</b>           | <b>81%</b>   | <b>84%</b>   | <b>84%</b>   | <b>86%</b>   | <b>87%</b>   | <b>89%</b>   | <b>87%</b>   | <b>89%</b>   | <b>89%</b>   | <b>88%</b>   | <b>90%</b>   |

SOURCE: PAC Webpage

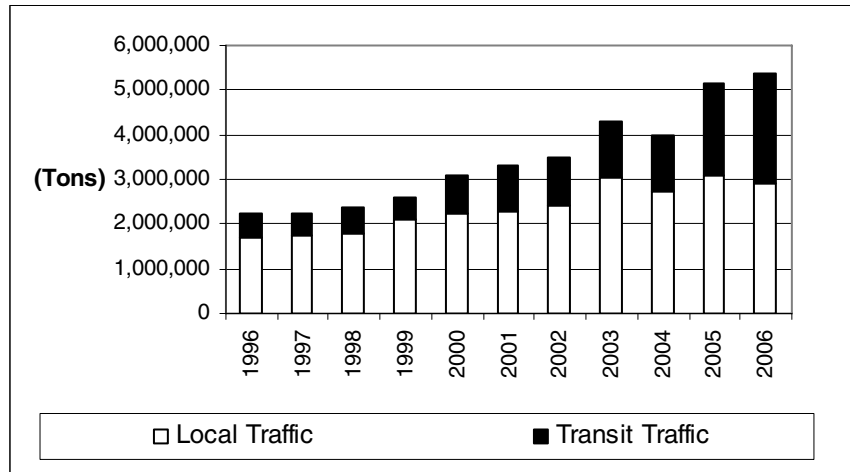
**Table 5.8: Goods Exported 1996-2006**

|                                     | 1996       | 1997       | 1998       | 1999       | 2000       | 2001       | 2002       | 2003       | 2004       | 2005       | 2006       |
|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Vegetable oils                      | 0%         | 1%         | 2%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         |
| Cotton (grains)                     | 37%        | 42%        | 41%        | 21%        | 22%        | 22%        | 10%        | 9%         | 6%         | 8%         | 3%         |
| Cattle Cake                         | 0%         | 0%         | 1%         | 0%         | 6%         | 6%         | 6%         | 8%         | 8%         | 6%         | 11%        |
| Wood                                | 0%         | 0%         | 0%         | 0%         | 5%         | 5%         | 12%        | 7%         | 10%        | 7%         | 13%        |
| Cashew Nuts                         | 0%         | 0%         | 0%         | 0%         | 10%        | 10%        | 10%        | 10%        | 15%        | 11%        | 22%        |
| Karite Nuts                         | 0%         | 0%         | 0%         | 0%         | 3%         | 3%         | 1%         | 5%         | 3%         | 1%         | 0%         |
| Other nuts                          | 7%         | 10%        | 10%        | 13%        | 9%         | 9%         | 11%        | 13%        | 12%        | 11%        | 6%         |
| Cotton                              | 34%        | 34%        | 36%        | 52%        | 30%        | 30%        | 29%        | 34%        | 27%        | 31%        | 20%        |
| Petroleum and Petroleum derivatives | 0%         | 0%         | 0%         | 0%         | 4%         | 4%         | 13%        | 5%         | 2%         | 5%         | 2%         |
| Materiel                            | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 1%         | 1%         | 1%         | 0%         |
| Vehicles and vehicle parts          | 0%         | 1%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 1%         |
| Other                               | 21%        | 13%        | 11%        | 13%        | 10%        | 10%        | 7%         | 8%         | 18%        | 19%        | 22%        |
| <b>TOTAL EXPO (000 Ton)</b>         | <b>424</b> | <b>370</b> | <b>379</b> | <b>360</b> | <b>399</b> | <b>381</b> | <b>462</b> | <b>469</b> | <b>448</b> | <b>596</b> | <b>514</b> |
| <b>EXPO as % of TOTAL</b>           | <b>19%</b> | <b>16%</b> | <b>16%</b> | <b>14%</b> | <b>13%</b> | <b>11%</b> | <b>13%</b> | <b>11%</b> | <b>11%</b> | <b>12%</b> | <b>10%</b> |

SOURCE: PAC Webpage

5.16. **Transit cargo, mainly to Niger and Nigeria, has been increasing over the last decade; 23 percent in 1996, and 46 percent in 2006.** The region is very dynamic in terms of trade, and the cargo handled through the Port of Cotonou is not only for domestic use. Since 2000, around one third of the cargo arriving to the Port of Cotonou is transit cargo. Niger and Nigeria represented a minimum of 82 percent of transit traffic (2005) and a maximum of 91 percent (2001). Niger alone is the most important destination; transit volumes oscillate between 51 percent (2005) and 65 percent (2003). Nigeria is the second destination, with transit volumes fluctuating between 25 percent (2003) and 40 percent (2001). Even though growth has been constant since 2000, annual growth rates greatly vary from 1 to 70 percent, which reflects changes in economic activity in neighboring countries and competition between corridors.

**Graph 5.4: Local vs. Transit Traffic (Metric tons)**



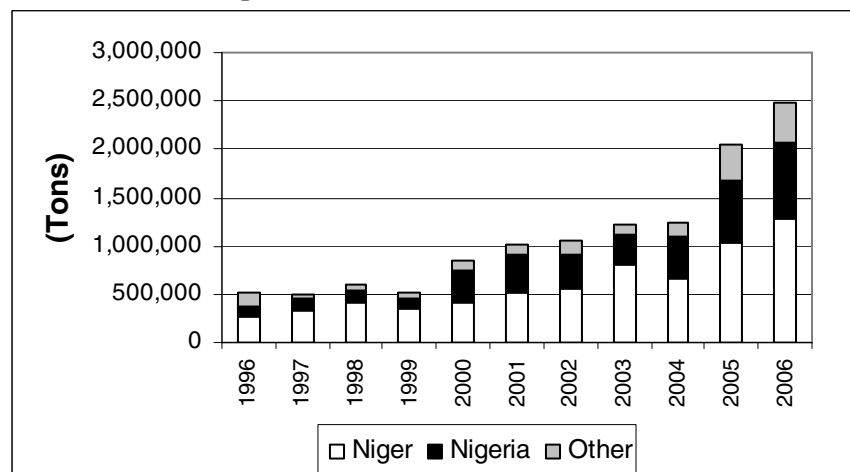
SOURCE: PAC Webpage

**Table 5.9: Transit Cargo through Benin 1996-2006**

|      | Niger     | Nigeria | Mali    | Burkina Faso | Togo   | Other   | Total Transit | Total     | Transit /total cargo (%) |
|------|-----------|---------|---------|--------------|--------|---------|---------------|-----------|--------------------------|
|      | (Ton)     | (Ton)   | (Ton)   | (Ton)        | (Ton)  | (Ton)   | (Ton)         | (Ton)     | (%)                      |
| 1996 | 270,685   | 94,933  | 3,518   | 38,578       | 25,894 | 82,025  | 515,633       | 2,219,813 | 23%                      |
| 1997 | 340,057   | 108,057 | 13,898  | 2,497        | 18,498 | 16,787  | 499,794       | 2,248,213 | 22%                      |
| 1998 | 414,817   | 115,362 | 9,848   | 22,478       | 13,911 | 18,432  | 594,848       | 2,383,609 | 25%                      |
| 1999 | 346,531   | 118,630 | 15,299  | 17,629       | 5,808  | 8,640   | 512,537       | 2,596,659 | 20%                      |
| 2000 | 419,685   | 332,207 | 15,307  | 5,170        | 2,814  | 69,331  | 844,514       | 3,073,490 | 27%                      |
| 2001 | 513,626   | 402,007 | 28,727  | 14,437       | 5,008  | 43,095  | 1,006,900     | 3,309,890 | 30%                      |
| 2002 | 549,963   | 350,560 | 46,969  | 65,044       | 6,347  | 36,935  | 1,055,818     | 3,470,182 | 30%                      |
| 2003 | 799,907   | 311,389 | 13,976  | 37,215       | 2,805  | 64,487  | 1,229,779     | 4,278,286 | 29%                      |
| 2004 | 671,446   | 416,639 | 424     | 25,265       | 2,993  | 124,926 | 1,241,693     | 3,968,830 | 31%                      |
| 2005 | 1 041 253 | 629 282 | 41 978  | 105 785      | 6 366  | 216 407 | 2 041 071     | 5 152 859 | 40%                      |
| 2006 | 1 280 237 | 798 076 | 130 062 | 224 210      | 2 393  | 39 225  | 2 474 752     | 5 369 134 | 46%                      |

SOURCE: PAC Webpage

**Graph 5.5: Evolution Transit Traffic (Ton)**



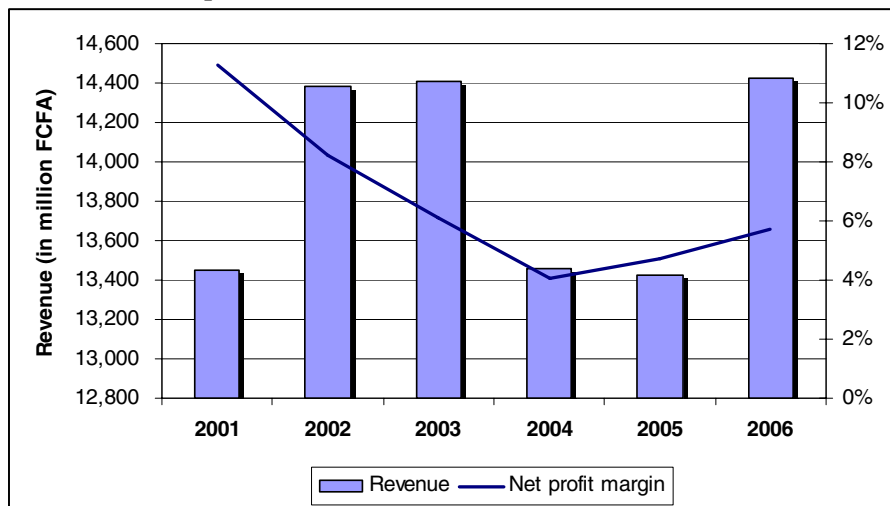
SOURCE: PAC Webpage



5.17. Average containers' dwell time at the Port of Cotonou is more than 12 days,<sup>38</sup> reducing the storage capacity.<sup>39</sup> One of the reasons is the fact that in the Port of Cotonou the import container traffic is mostly unstuffed in the port perimeter while in other ports this process usually takes place outside the port. This situation does not enable an optimal use of the port space, and results in heavy truck traffic in and around the port perimeter, which hampers traffic flow. Another reason appears to be low cargo handling productivity. However, the situation would improve soon due to the planned acquisition of two mobile cranes in July 2007 and the decision to handle container stuffing and unstuffing activities outside the port.

5.18. **On the financial side, the Port's performance has been reasonable but does not appear to portray its operational results.** Overall revenue of the Port of Cotonou (PAC) has remained relatively steady in the past six years, hovering between US\$27 million and US\$29 million (see Graph 5.6). The net profit margin, however, has significantly decreased from 11% in 2001 to 6% in 2006 despite growing traffic levels, even reaching a record low US\$1.1 million profit in 2004. Graph 5.7 displays the response of the operating revenue to the increase in port traffic. While the income in 2003 and 2004 varied with respect to the operational results, it decreased in 2002 and 2005 when the traffic grew significantly. The lack of visible correlation between total revenue and growing traffic levels calls for an analysis of the tariff structure that could not be conducted as part of this study for lack of data.

**Graph 5.6: Financial Results of the PAC - 2001-2006**

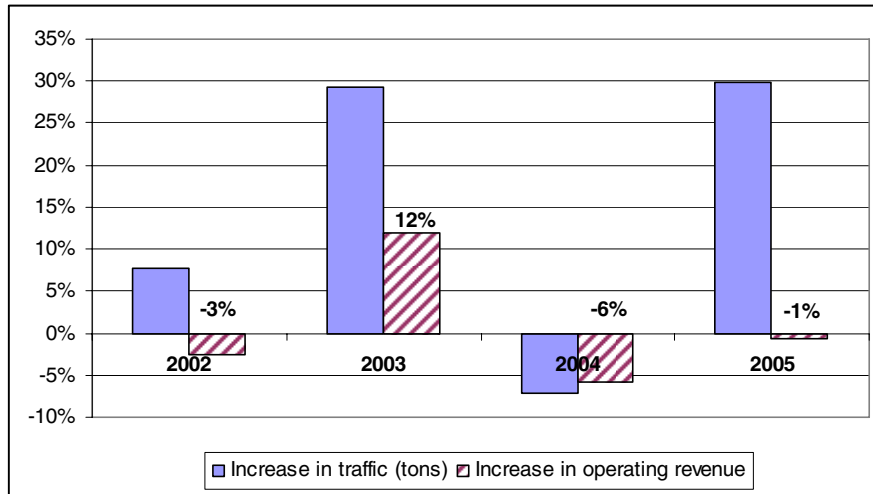


SOURCE: Inspired by the PAC financial reports 2002-2006

<sup>38</sup> SOURCE: ROYAL HASKONING, *Mission d'étude pour la mise en place d'un système d'évaluation des délais de passage des marchandises au Port de Cotonou*, September 2005.

<sup>39</sup> The dwell time corresponds to the necessary period between the time when the container is placed in a container terminal after being unloaded on the dock and the time when the container effectively leaves the terminal by whatever means of transport.

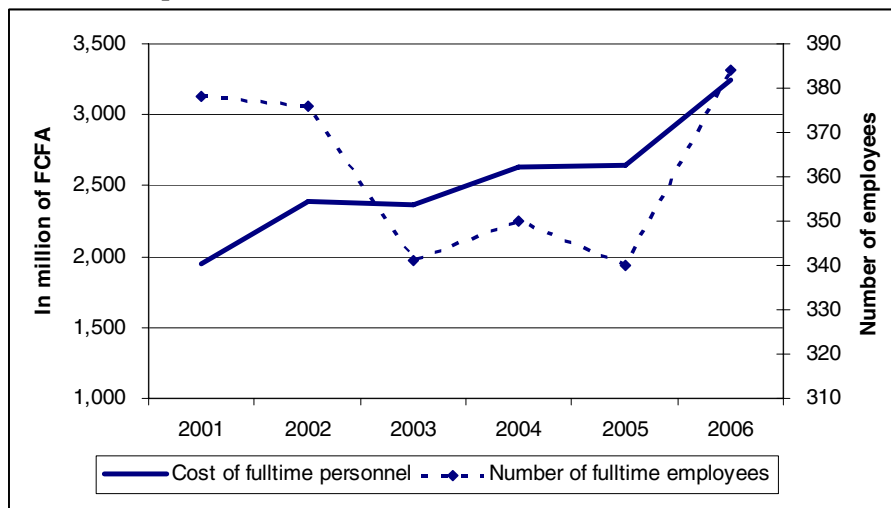
**Graph 5.7: Linkage between the PAC's traffic and Operating Revenue**



SOURCE: Inspired by the PAC financial reports 2002-2006

5.19. **A special focus on the breakdown of expenses reveals increasing personnel costs which are partially responsible for the poor financial results.** The Port of Cotonou hires around 360 employees full time and about 400 external temporary workers. In the past six years, permanent personnel costs have accounted for 16% to 23% of the total port's expenses. The workforce size has varied while the overall cost of personnel has kept increasing (see Graph 5.8). A closer look at PAC's yearly financial reports stresses inconsistencies in salaries and wages (see Table 5.10). The management has for instance risen from 52 to 74 employees, and it appears that, on average, a top manager receives comparable or lower salaries than the workers. An audit of the port personnel may help conduct a thorough analysis of this situation and provide PAC's management with the appropriate tools to review the organizational and salary structure as well as set the recruitment priorities.

**Graph 5.8: Evolution of Permanent Workforce and its Cost**



SOURCE: Inspired by the PAC financial reports 2002-2006

**Table 5.10: Evolution of the workforce and average salaries for selected staff**

|      | Top management |                               | Workers   |                               |
|------|----------------|-------------------------------|-----------|-------------------------------|
|      | Workforce      | Average salary (million FCFA) | Workforce | Average salary (million FCFA) |
| 2002 | 57             | 5.09                          | 139       | 5.10                          |
| 2003 | 52             | 9.12                          | 134       | 6.33                          |
| 2004 | 59             | 7.68                          | 124       | 7.19                          |
| 2005 | 60             | 7.87                          | 119       | 7.73                          |
| 2006 | 74             | 9.28                          | 131       | 8.12                          |

SOURCE: Inspired by the PAC financial reports 2002-2006

#### **D. Action Plan for improving the port performance**

5.20. **Recognizing the fundamental role of the port, the PRSP envisaged a series of actions to be undertaken in the short and medium term.** The port of Cotonou is the life-blood of the country's economic activity and one important source of funds for the Treasury. Recognizing this strategic importance, the recently approved PRSP contemplates key activities to be undertaken in the short and medium term:

- Ameliorate overall performance of the port, and improve the quality of the services;
- Rehabilitate port facilities where and when required;
- Reinforce port security and improve the quality of the customs related services;
- Strengthen environmental management within the sector;
- Complete the systematization of port operations with the objective of decreasing port time and associated costs;
- Strengthen the partnerships with the private sector in port and maritime activities; and
- Strengthen institutional and technical capabilities of the Merchant Marine Directorate;

5.21. **Even though an impressive amount of studies have been carried out to assess the situation of the port, recommendations were not always adopted neither implemented by the government.** The port sector has benefited throughout the last decade of a remarkable quantity of studies, covering all kind of issues (customs, management model, infrastructure requirements, among others). Table 5.11 is a summary of some of these studies. Unfortunately, their recommendations were not systematically applied by the administration. Moreover, the current situation of the port suggests that the main challenge for the sector is not to identify solutions, but to adopt and implement them. Implementing requires a strong political commitment and support that goes far beyond the jurisdiction of the Ministry of Public Works and Transport. The government is aware of this situation and plans to hold, within the next weeks, a workshop on the competitiveness of the port sector, which is an encouraging sign.

**Table 5.11 Studies related to the Port Sector undertaken in the last 5 years – selected examples**

| Study                                                                                                                                                                                                                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Study aimed at incorporating the private sector in port management (" <i>Etude relative a l'implication du secteur prive dans la gestion du PAC</i> ") - CPCS Transcom, 2001                                                              | The consultant presented several scenarios involving private sector participation in the port management. Even though a decision was officially made by the government, no further action was undertaken. Port and SOBEMAP Unions presented a strong opposition to the implementation of the model.                                                                                           |
| Study aimed at elaborating a development program and productivity increase in the Port of Cotonou (" <i>Etude pour l'élaboration d'un programme de développement et d'augmentation de la productivité du PAC</i> ") - Las Palmas, ongoing | The study is ongoing. It provides several scenarios for infrastructure development and maintenance, depending on traffic forecasts.                                                                                                                                                                                                                                                           |
| Study aimed at developing a system for evaluating delays in merchandise (" <i>Etude pour la mise en place d'un système d'évaluation des délais de passage des marchandises</i> "), Royal Haskoning.                                       | The study concluded with an Action Plan.                                                                                                                                                                                                                                                                                                                                                      |
| Studies for the Dry-Port in Parakou (" <i>Etudes pour la réalisation du port sec de Parakou</i> "), Royal Haskoning                                                                                                                       | Two sites have been identified: Parakou and Tori. Both alternatives could help to reduce port congestion, provided (i) goods transfer procedures are not dissuasive; and (ii) extra costs are less than the one associated with a longer stay in the port.<br><br>The government took the political decision to move forward with the Dry Port in Parakou (it is included in the second PRSP) |
| Initial Technical Studies for the “ Access to Market” Project of the MCA-Benin Program, Larroche, 2007                                                                                                                                    | Study completed in the first semester of 2007.                                                                                                                                                                                                                                                                                                                                                |
| (" <i>Etude technique des 2 postes a quai du nouveau TC et étude de faisabilité technique et financière de la concession d'exploitation</i> "). Seamar/Axelcium                                                                           | The new infrastructure will be financed by the MCC.                                                                                                                                                                                                                                                                                                                                           |
| Prefeasibility study for the second port (" <i>Etude de préféabilité du second port</i> "), BCEOM                                                                                                                                         | Given the dynamics of the sector, it is expected that the Port of Cotonou will attain its capacity around 2015 (including the new Container Terminal). It is important to begin analyzing several scenarios in the short term.                                                                                                                                                                |

**5.22. Some actions aimed at improving the port performance have been taken and are under implementation.** It is important to recognize that some measures have been taken in order to improve the performance of the port. Among the most relevant are the following:

- Consolidate clearance operations (“Guichet Unique”): The GoB has taken measures to improve the level of service at the Port, working on the development of a “guichet unique” to speed up the customs clearing process. Its objective is to provide a “one-stop shopping” for traders and transporters to clear their goods through the port. Even though important progress has been achieved, currently the system is not operational. The final step is expected to be taken with the support of the MCC. Because of the anticipated impact of this measure and the time devoted to its design, it is important to complete pending activities before the end of 2007.

- Customs procedures. Recognizing the importance of achieving greater efficiency for trade facilitation through the use of improved Information Technology, customs adopted the Sydonia ++ system. For the system to be integrated to the “*Guichet Unique*”, an interface must be developed. This integrated IT platform will be complemented with measures taken by the Customs Directorate with the objective of decreasing port transit time of merchandise (measures included a restructuring of procedures and a simplification of the tax structure).
- Private Inland Container Depot. COMAN/Maersk entered into an agreement to lease part of the railway land and create a private inland container depot. The depot will have a surface of 4 Ha, and is located at less than 2 km from the port (connected by train and a paved road). Works are currently ongoing, and are expected to be completed around June 2007. It is estimated that during the first semester of operations, around 40 percent of containers operated by COMAN will be transferred to the park. This will have a positive impact in the port itself, and will decrease the number of trucks going into the port. This is a good example of maximizing land use.
- Creation of the Port of Cotonou Promotion Association (*Association de Promotion du Port de Cotonou – APPC*). This association, created in 2005, has a permanent Secretary General and a non-negligible budget for 2007 (200 million FCFA). Even though it is still early to assess its achievements, it conveys the positive message of an integrated port community.
- Putting in place of a Port Counselor. As explained further, the new and key player within the port sector in Benin is the MCC/MCA. As part of project implementation, a port counselor will be recruited. His role is fundamental for coordinating the different actors and players within the port sector. The lack of a strong coordination has been identified as a major weakness in the past.

5.23. In the short term it is fundamental that the port maximizes the use of the land. Under the current situation of the port, it is fundamental to maximize the efficiency of current operations. One key factor for achieving that is to rationalize and maximize the use of the available land. Even though a land use regulation was developed in the past, it has not been effective. Implementing the land use regulation becomes a priority for the port management.

5.24. **A new key player: the Millennium Challenge Corporation.** On February 2006, the Millennium Challenge Corporation (MCC) signed a five-year approximately \$307 million Compact with the GoB. This investment positioned the United States as the largest bilateral donor to the country.<sup>40</sup> The Millennium Challenge Compact with Benin seeks to remove key constraints to economic growth and poverty reduction<sup>41</sup> by supporting improvements in physical and institutional infrastructure in four critical sectors focusing on access to land, financial services, justice, and markets. The access to

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<sup>40</sup> Other major donors to Benin are the Netherlands, Denmark, France, Belgium and Germany.

<sup>41</sup> The Beninese identified a poor investment climate and a lack of dynamic private sector activity as key impediments to sustainable economic growth and poverty reduction. Land insecurity, lack of access to capital, an inefficient judicial system, and an increasingly uncompetitive Port of Cotonou further hinder economic growth.

markets component (US\$169.45 million – see Box 1 for a component description) is expected to improve port operations and infrastructure, to reduce delays at the Port of Cotonou, and increase the volume of imports and exports through the port. More than US\$100 million will be allocated directly to the port to finance, among others, the construction of new infrastructure, and to upgrade the overall port security.

**Table 5.12: Millennium Challenge Compact – Budget Allocation**

| <b>Component</b>                                    | <b>Amount<br/>(Thousand<br/>US\$)</b> | <b>%<br/>of<br/>Total</b> |
|-----------------------------------------------------|---------------------------------------|---------------------------|
| <b>Access to Land</b>                               | <b>36,020</b>                         | <b>12%</b>                |
| <b>Access to Financial Services</b>                 | <b>19,650</b>                         | <b>6%</b>                 |
| <b>Access to Justice</b>                            | <b>34,270</b>                         | <b>11%</b>                |
| <b>Access to Markets</b>                            | <b>169,447</b>                        | <b>55%</b>                |
| Studies                                             | 8,094                                 |                           |
| Port Institutional Activity                         | 11,319                                |                           |
| Port Security and Landside<br>Improvements Activity | 73,863                                |                           |
| Waterside Improvement Activity                      | 76,171                                |                           |
| <b>Monitoring and Evaluation</b>                    | <b>8,780</b>                          | <b>3%</b>                 |
| <b>Program Administration and<br/>Control</b>       | <b>39,131</b>                         | <b>13%</b>                |
| <b>TOTAL</b>                                        | <b>307,298</b>                        |                           |

SOURCE: MCC Documents

### BOX 5.2 – Description of the Access to Markets Component

The importance of the Port of Cotonou to Benin's economy has been increasing while its competitiveness has been steadily decreasing. This component was designed to promote access to markets by improving port operations and infrastructure. Specifically, it aims to improve port performance and security, expand capacity, and reduce costs. MCC anticipates the component will reduce delays at the port and increase the volume of imports and exports. The component includes the following activities:

**Studies and Port Institutional Activity:** It includes key feasibility studies, environmental assessments and revision of master plan for the port, as well as the computerization and streamlining of customs clearance procedures for merchandises, technical assistance and training in information systems and Port management, and improvements to legal, fiscal and institutional frameworks that govern the sub-activities.

**Port Security and Landside Improvements<sup>42</sup>:** It is aimed at addressing the safety and security aspects of the Port for compliance with international safety requirements (ISPS Standards). The expansion and reconfiguration plan for the Port under this project activity includes: major improvement to the physical infrastructure including the access gate, access road, vehicle access facilities, storage areas, and the construction of a compulsory inspection facility for fish and seafood with associated training and technical assistance.

**Waterside Improvements<sup>43</sup>:** It includes the construction of a new south wharf (nearly 595 meters of berth space) to accommodate additional containerized merchant marine vessels and a dry bulk conveyor system. Environmental management improvements; and, an environmentally appropriate solution to address sedimentation of the Port's entrance.

SOURCE: MCC documents

5.25. A monitoring system was also developed as part of project design. Based on the general objective of the component, improve access to markets through improvements to the port of Cotonou, several outcomes were also identified, with associated targets, as indicated in the following table:

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<sup>42</sup> MCC disbursements in connection within the landside improvements sub-activity shall be conditioned upon, among others, the following: (i) renegotiation of existing concession and lease agreements on terms acceptable to MCC that provide for capital investment based upon the demand for port services; (ii) a contract management program of the dry bulk conveyor system acceptable to MCC; (iii) the completion of initial technical studies; (iv) a GoB commitment of funding, or commitments obtained from another funding source (satisfactory to MCC) for amounts in excess of budgeted amount, including amounts that may be necessary for environmental and mitigation; and (v) subject to results, satisfactory to MCC, of feasibility studies and ESIA that includes an environmental audit; (vii) redesign of the fish inspection facility; (vii) completion of a World bank privatization and competitiveness study; and (viii) selection of a construction management agent.

<sup>43</sup> MCC disbursement in connection with the waterside improvements sub-activity shall be conditioned upon, among others, the following: (i) satisfactory results of the Initial Technical Studies; (ii) demonstration, satisfactory to MCC, of improvements in costumes and warehouse systems operations; (iii) implementation of recommendations of the independent financial auditor; (iv) obtaining environmental permits; (v) a government commitment of funding, or commitments obtained from another funding source (satisfactory to MCC) for amounts in excess of already budgeted amounts, including amounts that may be necessary for environmental and mitigation; (vi) results, satisfactory to MCC, of feasibility studies that includes an environmental audit; and (vii) the completion of a long-term management services agreement for the operation of a port sedimentation facility (other harbor dredging program, as appropriate) on terms satisfactory to MCC.

**Table 5.13: Access to Markets Component Targets**

|                                                                     | Baseline | Year 1      | Year 2       | Year 3       | Year 4       | Year 5      |
|---------------------------------------------------------------------|----------|-------------|--------------|--------------|--------------|-------------|
| <b>Disbursement (US\$ million)</b>                                  |          | <b>9.45</b> | <b>30.13</b> | <b>66.29</b> | <b>62.36</b> | <b>1.22</b> |
| <b>Objective Level Indicators</b>                                   |          |             |              |              |              |             |
| Volume of merchandise traffic through the PAC (million metric tons) | 4.1      | 4.9         | 5.2          | 5.6          | 5.9          | 6.3         |
| Port surcharges due to delay (euros)                                | 125      |             |              |              |              |             |
| <b>Outcomes</b>                                                     |          |             |              |              |              |             |
| Bulk ship carriers waiting times at the Port (days)                 | 7        |             |              |              | 5            | 3           |
| Average customs clearance times at the port (days)                  | 5        |             |              | 3            |              | 1           |
| Port user satisfaction                                              | 50%      |             |              | 65%          | 70%          | 75%         |
| Average duration of stay of trucks at Port (hours)                  | 24       |             |              | 18           | 12           | 7           |
| Volume of seafood export processed through BOC (tons)               | 0        |             |              |              | 250          | 500         |

SOURCE: MCC documents

**5.26.** Finally, it is important to point out that the spirit of the Compact is consistent with further participation of the private sector. In order to achieve the expected benefits from MCC funding, several improvements at the port are dependent on private sector complementary investments and expanded private sector management services associated with the operations of the Port. MCA-Benin is supposed to work with PAC to coordinate with existing private sector operators at the port, and MCA-Benin and PAC will establish the appropriate private sector participation at each stage of the sub-activities including renegotiations of existing concession agreements to provide for the appropriate investment by the private operators in the port.

#### **E. Opportunities for further engagement of the Private Sector**

**5.27. The current situation leaves space for several opportunities for private sector engagement, covering a wide range of activities.** There are many opportunities for further engagement of the private sector in the Port of Cotonou. Among the most relevant (because of their potential impact), are the following:

- Stevedoring activities for conventional cargo: SOBEMAP has the monopoly for handling conventional cargo (for containers there are two stevedoring companies competing with SOBEMAP). The current legal status of SOBEMAP does not fit the dynamic nature of the business. In particular, the restriction to follow national procurement procedures for goods over 10 million FCFA has a negative impact on the performance of the company. Another factor affecting the performance of SOBEMAP is the political influence for selecting personnel. SOBEMAP has around 404 employees (237 conventional positions, and 167 as fixed term



employees). Currently there are around 6,000 dockers including 400 professional staff with priority in recruitment.

- Construction of a new terminal for dry bulk cargo (mainly clinker gypsum and sulfur): Clinker, Gypsum and sulfur represented in 2006, 16 percent of the total import cargo of the port (this figure has been oscillating between a minimum of 16 percent in 2006, and a maximum of 28 percent in 2000). These figures support the initiative of offering a BOT to the private sector for a new bulk terminal. Technical aspects of such a project should be analyzed in detail, taking into consideration the presence of the fishing industry in the area.
- Towage, inshore pilotage, and piloting: Currently, those are low quality services due to problems of lack and obsolescence of equipment resulting in frequent unavailability and to lack of punctuality of pilots. In addition to new acquisitions of equipment and training, it is advisable to envisage possibilities of a partnership between the public and private sector to better manage this equipment.
- Equipment and management of dry ports: It is advisable to involve the private sector in the financing of the equipment and the management of the dry ports.

**5.28.** Another option, which was already considered in the past by the government of Benin, is to give the management of the port to the private sector, either through a concession or management contract. Several studies (some of them financed by the World Bank) covering different scenarios have been developed, in order to present the government with a wide range of options for private participation involvement. Even though the government at some point expressed its acquiescence to go further with this initiative, no concrete actions have been undertaken, partly because of the lack of consensus among the different players. If the government is really committed to move forward in this direction, it is advisable to undertake a stakeholder analysis and formulate a strategy for building consensus on the future of the port.

## **F. Adjustment of the Institutional Framework**

**5.29. Principles of the Institutional Framework.** The legal and institutional framework of the sector must specify the different level of responsibilities and the way these are implemented. Key elements that must be considered are:

- Formulation of the port policy: usually responsibility of the government and a port council;
- Execution of the port policy: usually delegated to the Ministry with the jurisdiction over the port sector;
- Regulation authority: this aspect is even more relevant when the port manager does not belong to the public sector (see Graph 5.1 on port administration models); and
- Port management: usually responsibility of the Port Authority with the advice of a Port Commission.

**5.30.** In addition to the general scope outlined above, the legal and institutional framework needs to be clear and specific about the role of the different players, and the

conditions under which the private sector participates (depending on the model and extent of the involvement of the private sector).