Data Collection Survey on Traffic for International Port and International Corridor in Western Africa

Final Report

December 2012

Japan International Cooperation Agency (JICA)

Yachiyo Engineering Co., Ltd.
INGÉROSEC Corporation

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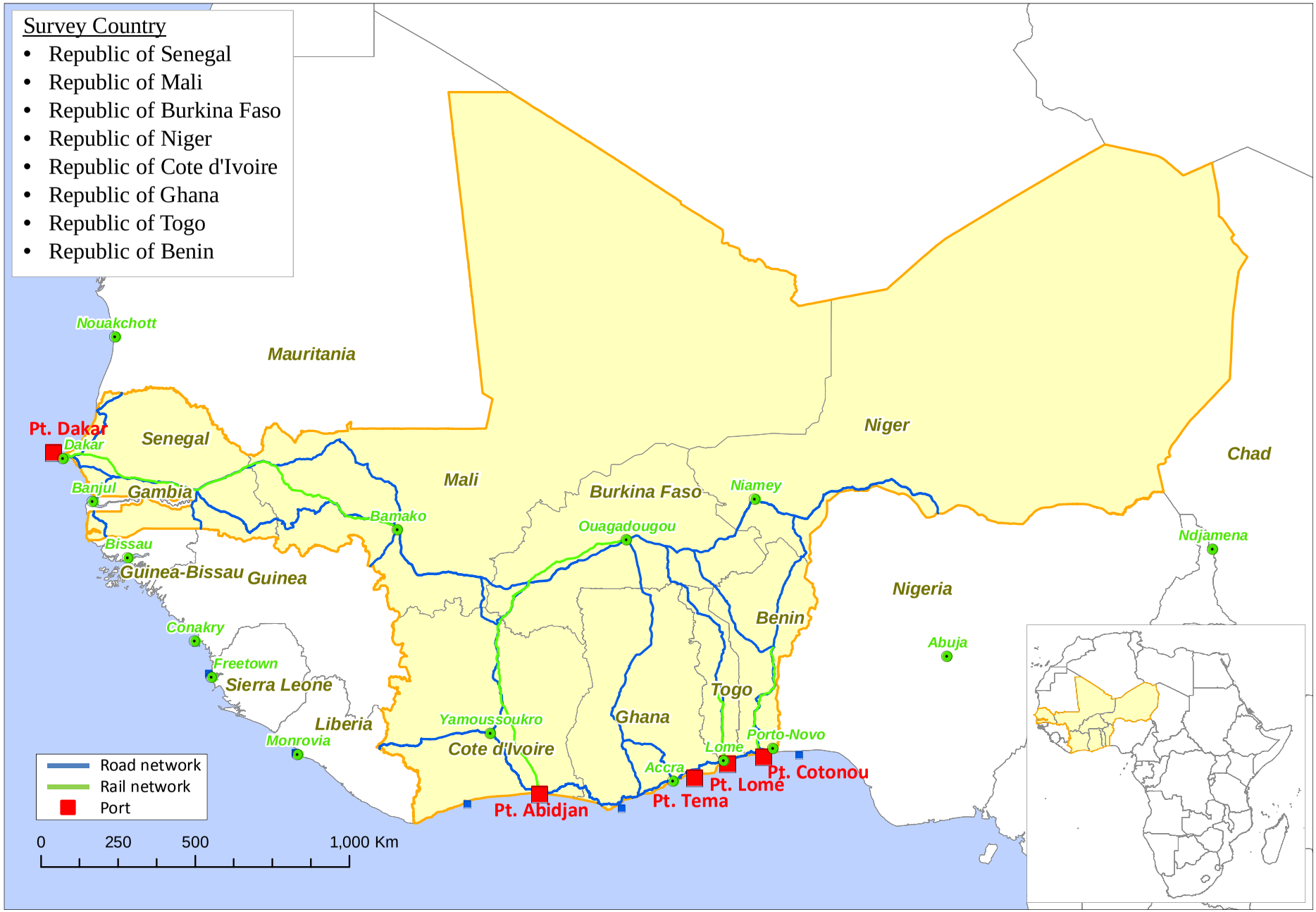
Exchange Rates : June 2012
US1.00$ =531.5 Franc CFA
US1.00$ = ¥78.7



Survey Country

Road with pothole
Bamfora-Niangoloko, Cote d'Ivoire

Road with pavement deterioration
National Route 1 near the Sahel terminal, Togo

Unpaved section
Cinkansé-Dapaong, Togo

Section under rehabilitation
Bella-Gaya, Niger

Unpaved section in Coastal Road
Near the Togo borde, Ghana

Paved section in Coastal Road
Benin

Road Situation of the Study Area

Passing of freight train
Cotonou, Benin

Road-railway combined bridge
Cotonou, Benin

Departure of customs escort
Ougarinter, Burkina Faso

Dry port
Bobo Dioulasso, Burkina Faso

Waiting trucks to pass customs
Gaya custom office, Niger

Waiting trucks to pass the checkpoint
Tambacounda, Senegal

Land Transport Situation of the Study Area

Data Collection Survey on Traffic for International Port and International Corridor in Western Africa Final Report

Survey Country/Site photos

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Abbreviation

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Abbreviation

AFD	French Development Agency
AfDB	African Development Bank
AICD	Africa Infrastructure Country Diagnostic
ASYCUDA	Automated SYstem for CUstoms DAta
ECOWAS	Economic Community of West African States
EPZ	Export processing zones
EU	European Union
F/S	Feasibility study
GDP	Gross Domestic Product
JICA	Japan International Cooperation Agency
NEPAD	New Partnership for Africa's Development
OD	Origin Destination
OSBP	One Stop Border Post
PACITR	Community Roads of UEMOA Infrastructure and Transport Action programme
PPP	Public–private partnership
RECs	Regional Economic Communities
REP	Regional Economic Programme
SEZ	Special economic zones
UEMOA	West African Economic and Monetary Union (WAEMU)
USAID	United States Agency for International Development
WADB	West African Development Bank
WB	World Bank

Chapter 1 OVERVIEW OF SURVEY

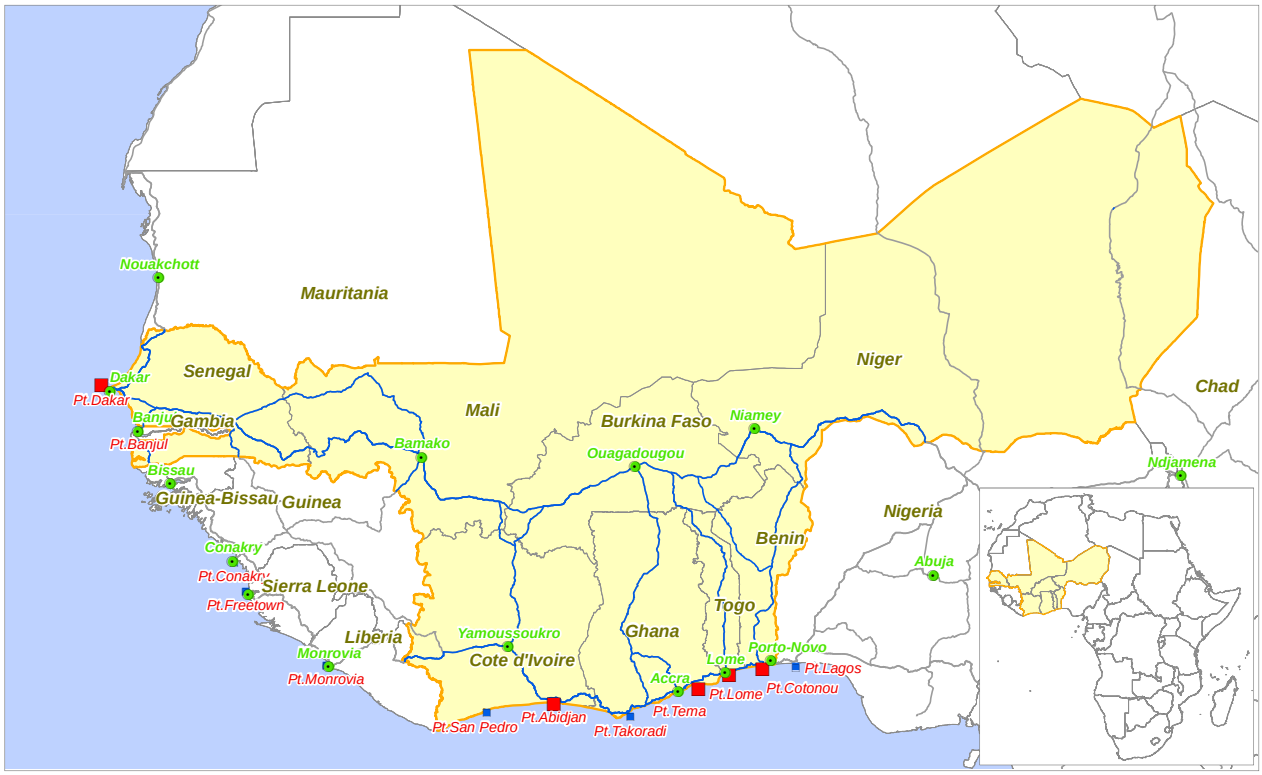
1.1 Objective of Survey

The aim of the Survey is to carry out a current traffic survey on automobile-based cross-border traffic in the West African region centred on the West African Economic and Monetary Union (WAEMU, hereinafter referred to UEMOA; *L'Union économique et monétaire ouest-africaine*) zone in combination with a interview survey involving relevant organizations, in order to identify problems in the transport infrastructure of the region.

Note that the Survey is ranked as a survey for collecting the basic data to be used in considering future policies and assistance programme to be provided by JICA in relation to the transport sector in Western Africa.

1.2 Survey Area

The Survey is conducted in a total of eight countries, i.e., the members of UEMOA (Republic of Senegal, Republic of Mali, Republic of, Burkina Faso, Republic of Niger, Republic of Cote d'Ivoire, Republic of Togo and Republic of Benin) and the Republic of Ghana.



Source: JICA Study team

Figure 1-1 Survey Area

Table 1-1 Survey Country pfofile

	Unit	Benin	Burkina Faso	Cote d'Ivoir	Ghana	Mali	Niger	Senegal	Togo
Area	km²	112,620	274,000	322,460	238,540	1,240,190	1,267,000	196,720	56,790
Population	million hab	8.8	16.5	19.7	24.4	15.4	15.5	12.4	6
Population growth	%	2.8	3	2	2.4	3.1	3.5	2.7	2.1
Population density	hab./km²	80	59	67	102	11	13	65	119
Urban population	%	42.5	26.5	51.3	52.2	36.6	17.2	42.7	44.1
Life expectancy	years	61	55.4	55.4	64.2	51.4	54.7	59.3	57.1
Literacy	%	41.7	28.7	55.3	66.6	26.2	28.7	49.7	56.9
Human Development Index	HDI	0.427	0.331	0.4	0.541	0.359	0.295	0.459	0.435
	rank	167 / 187	181 / 187	170 / 187	135 / 187	175 / 187	186 / 187	155 / 187	162 / 187
Languages		French(official), Fon, Goun, Mina, Yoruba, Dendi, Bariba…	French(official), Moore, Dioula, Fulani, Tamacheq…	French(official), Dioula, Baoule, Bete, Senoufo…	English(official), Gha, Twi, Ewe, Fante…	French(official.), Bambara, Senoufo, Fulani, Soninke, Tamasheq, Songhai, Dogon…	French(official), Haoussa, Djerma, Fulani, Tamacheq, Kanouri…	French, Wolof, Peul-toucouler, Serere, Diola…	French(official), Ewe, Kabie…
Settlement		Fons, Adjas, Peuls, Yorubas, Sombas…	Mossis, Mandes, Peuls, Bobos…	Senoufos, Dans, Agris, Betes, Baoules, Dioulas, Malinkes…	Akans, Dagombas, Gourmantches, Ashantis, Akwapims, Krobos…	Bambaras, Peuls, Dogons, Bozos, Touaregs, Songhais…	Haoussas, Djermas, Foulas, Touaregs, Kanouris…	Wolofs, Toucouleurs, Peuls, Sereres, Diolas, Mandingues…	Ewes, Kabies, Minas…
Religions		Animism, Christianity, Islam	Animism, Islam, Christianity	Christianity, Islam	Islam, Animism, Christianity	Islam	Islam, Animism	Islam, Christianity, Animism	Animism, Christianity, Islam
Currency		Franc CFA	Franc CFA	Franc CFA	Cedi	Franc CFA	Franc CFA	Franc CFA	Franc CFA
Parity in the first janv.2012	1€(F CFA)	655.96	655.96	655.96	2.10(cedi)	655.96	655.96	655.96	655.96
	1$(F CFA)	496.63	496.63	496.63	1.62(cedi)	496.63	496.63	496.63	496.63
GDP per capita	$	756	670	1049	1588	796	428	1096	496.63
Distribution of GDP (primary)	%	35.9	35.2	25	32	39	44	17	47.5
Distribution of GDP (secondary)	%	14.5	23.8	25	19	21	16.1	22	17.8
Distribution of GDP (tertiary)	%	49.6	41	50	49	40	39.9	61	34.7
GDP 2011	in billions of dollars, current prices	7.5	10.1	23.8	38.6	11	6.5	14.7	3.6
Rate of growth 2011	in %, constant prices	3.8	4.9	-5.8	13.5	5.3	5.5	4	3.8
Inflation	%	2.1	0.9	2.7	8	1.4	3.4	1.2	5.3
Foreign direct investment	million $	111	37	418	2.5(billion /$)	148	947	237	41
Exports	billion $	1.2	1.3	10.3	7.9	2.4	930(millions / $)	2.2	800(millions / $)
Imports	billion $	2.2	2	7.8	10.7	2.9	2.2	4.8	1.6
Key Resources		cotton(80% of export earnings), fish	cotton, livestock, gold, sugarcane	cacao, cotton, coffee	gold, diamond, cacao, tourism	gold, cotton	uranium, carbon, gold, livestock, agriculture(cereals)	phosphates, peanuts, cotton, cereals, tourism	phosphates, cotton, coffee, cacao

Source: JICA Study team

1.3 Survey Description

1.3.1 Survey Items

This Survey examined the items listed below.

Table 1-2 Survey items

Stage	Survey item
Stage 1: Implementation of current traffic and physical distribution survey	
[1-1]	Collection and analysis of basic data
[1-2]	Implementation of current traffic and physical distribution survey
[1-3]	Aggregation and analysis of results of current traffic and physical distribution survey
Stage 2: Analysis of traffic flow and forecast of future traffic demand	
[2-1]	Current traffic flow analysis
[2-2]	Establishment of socio-economic framework
[2-3]	Future traffic demand forecast
[2-4]	Identification of problems in transport infrastructure and proposals on approaches to solutions
Stage 3: Holding of workshop	
[3-1]	Holding of seminar
Stage 4: Reporting	
[4-1]	Final report (English and French version)

Source: JICA Study team

1.3.2 Implementation of Current Traffic and Physical Distribution Survey

(1) Collection and Analysis of Basic Data

Basic data on the socio-economic and transport sectors for each country is collected in order to obtain an understanding of the current situation in the survey area. The following information was collected:

i. Socio-economic and trading trends
ii. Trends in industry, business investment and physical distribution industry
iii. Trends in transport sector
iv. Review of traffic- and trading-related policies, laws and standards, organizational system and customs clearance system
v. Other donors' assistance programme and status regarding implementation

(2) Implementation of Current Traffic and Physical Distribution Survey

1) Survey Description

The survey consists of a total of 5 surveys of the actual status with regard to traffic and physical distribution. These surveys include the acquisition of quantitative data on cross-border traffic through spot traffic volume surveys and Origin Destination surveys as well as identification of the actual status with regard to physical distribution through interview surveys targeting the major transport operators.

2) Traffic Survey Methods

Traffic count survey method

- This survey mainly involves a counting survey at a road cross section near a border.

Roadside OD interview survey method

- The OD survey (road cross section) is conducted at the same point on the road as the spot traffic volume survey.
- The survey involves the interviewing of drivers. Specifically, the surveyor stops a vehicle, interviews to the driver, and fills out each result on the survey sheet.
- The total flow to the final destination was identified in the OD survey.

OD interview survey method (logistic facilities)

- The survey involves interviewing drivers of freight vehicles driving into and out of the major ports, inland container depots, and export processing zones (EPZs) and special economic zones (SEZs).
- The net flow to the final destination was identified in the OD survey.

Interview survey method

- The survey was conducted by the advance distribution of survey sheets to correspond to the survey location and asking those taking part in the survey to fill out a survey sheet.
- When the survey sheets are collected, interviews are conducted for confirmation.

(3) Survey Schedule

Table 1-3 Survey Schedule

No	Survey item	Duration
1	Preparation	March 2012
2	Collection and analysis of basic data	March-July 2012
3	Implementation of current traffic and logistics facility survey Aggregation and analysis of results of current traffic and physical distribution survey	
4	Current traffic flow analysis	July-September 2012
5	Establishment of socio-economic framework Future traffic demand forecast	September-October 2012
6	Holding of seminar	24 September 2012
7	Final report (English and French version)	October-November 2012

Source: JICA Study team

1.3.3 Analysis of Traffic Flow and Forecast of Future Traffic Demand

(1) Analysis of Current Traffic Flow

The traffic flow was analyzed based on quantitative data acquired from the analysis of the results of the current traffic survey as well as qualitative data acquired from the interview survey.

(2) Establishment of Socioeconomic Framework

A socio-economic framework based on the year 2022 was established with regard to the socioeconomic indicators to be used as the explanatory variables in a model to forecast traffic demand.

(3) Forecast of Future Traffic Demand

Future traffic demand is forecast in basic compliance with the flow of the Four-Step Method. When applied to automobiles, however, this is a three-step method, modal shares being excluded. In this method, demand forecast models is created that correspond to passenger and freight vehicles (physical distribution) respectively.

(4) Identification of Problems in Transport Infrastructures and Proposed Solutions

On the basis of the results of this Survey, future problems in the transport infrastructures in relation to the cross-border traffic in this region is examined.

1.3.4 Holding of Seminar

A Seminar held at 24 September 2012 in Ouagadougou, Burkina Faso to announce the results of the survey and to hear opinions from stakeholders. It is expected that one Seminar was held at the end of the Survey.

Chapter 2 OVERVIEW OF SURVEY AREA

2.1 Regional Community in West Africa

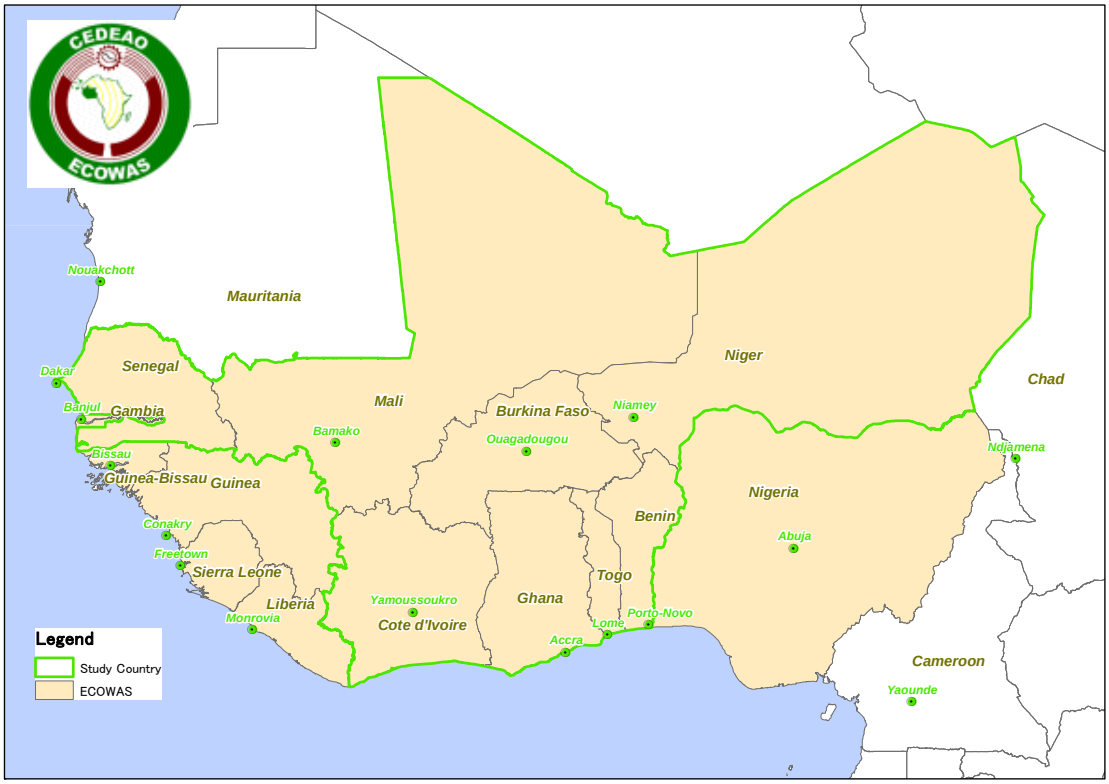
The African Continent is composed of more than 50 countries. Borders of these countries have been artificially and historically set according to the colonial policies of the European countries. These are groups of nations which have small economies, and they are actively creating regional economic communities (RECs) to unify the regional nations.

In the Western Africa, the Economic Community of West African States (ECOWAS) and UEMOA as a monetary community have been organized.

2.1.1 ECOWAS

The Economic Community of West African States (ECOWAS) is a regional group of fifteen West African countries. Founded on 28 May 1975, with the signing of the Treaty of Lagos, its mission is to promote economic integration across the region.

ECOWAS 15 member states is Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Bissau-Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.



Source: JICA Study team

Figure 2-1 ECOWAS 15 member states

Considered one of the pillars of the African Economic Community, the organization was founded in order to achieve "collective self-sufficiency" for its member states by creating a single large trading bloc through an economic and trading union. It also serves as a peacekeeping force in the region. The organization operates officially in three co-equal languages -English, French, and Portuguese.

The ECOWAS consists of two institutions to implement policies, the ECOWAS Commission and the ECOWAS Bank for Investment and Development, formerly known as the Fund for Co-operation until it was renamed in 2001.

A few members of the organization have come and gone over the years. In 1976 Cape Verde joined ECOWAS, and in December 2000 Mauritania withdrew, having announced its intention to do so in December 1999.

2.1.2 UEMOA

UEMOA is an organization of eight West African states. It was established to promote economic integration among countries that share the CFA as a common currency. UEMOA was created by a Treaty signed at Dakar, Senegal, on 10 January 1994, by the heads of state and governments of Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, and Togo. On 2 May 1997, Guinea-Bissau, a former Portuguese colony, became the organization's eighth (and only non-Francophone) member state.

This organization, which brings together eight countries of the region, sharing the use of a common currency, the CFA, has the following objectives:

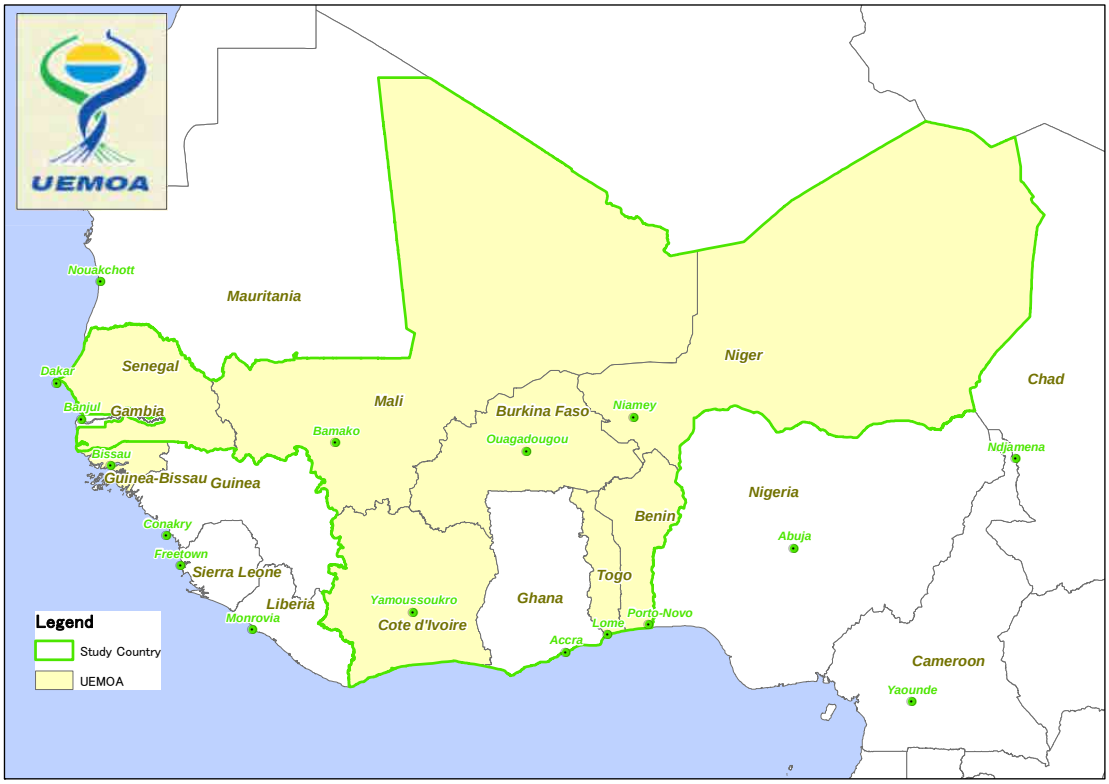
- to ensure the free circulation of individuals and products within a single zone of free exchange,
- to coordinate the policies of Member states and target convergence in their development programmes,
- to harmonize legislation and regulations within the UEMOA region,
- to ensure the coordination of sectorial policies

The treaty of UEMOA has implemented the policy of planning of regional territory, aiming to boost and encourage complementarity between the economies of the member states. The integration is manifest economically and socially and accompanied by underlying driving forces, particularly in the areas of:

- internal migratory movements in the region, which result from the demographic growth and pressure exerted on different ecosystems,
- the development of cross-border trade networks, which utilize existing infrastructure already in place for several decades.

In the area of infrastructure and transport, a minimum of twenty or so directives, regulations and decisions have been taken by UEMOA, particularly concerning the community management of the airline industry, road and rail corridors between member states, the adoption of a community strategy in road rehabilitation and maintenance, the harmonization of standards and gage control and a shared vision in the area of road safety.

The project of connecting together rail links goes beyond the scope of UEMOA and also encompasses other ECOWAS member countries. It has already seen a certain number of initiatives implemented; particularly the implementation of the master plan for interconnecting rail traffic (2008) and certain detailed studies was launched pending the provision of the required funding.



Source: JICA Study team

Figure 2-2 UEMOA 8 member states

2.2 Socioeconomic Situation

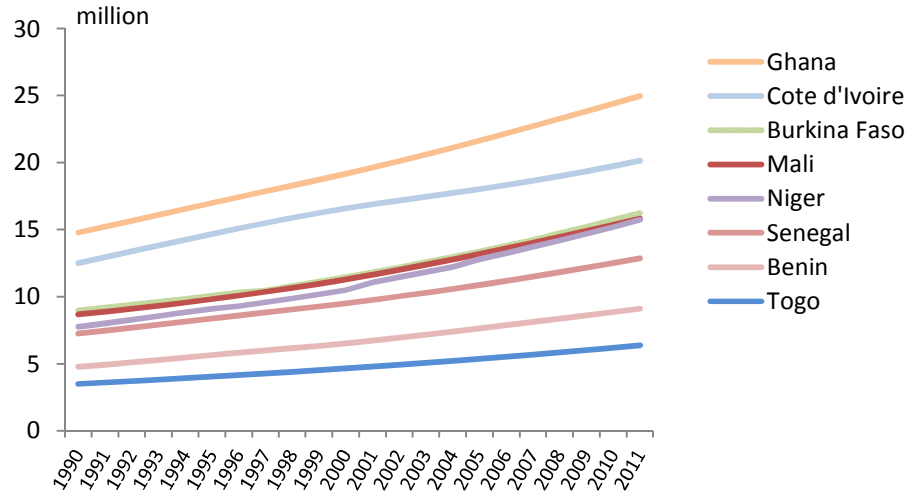
2.2.1 Population

(1) Changes in the Total Population

Figure 2-3 shows the changes in the population of each country from 1991. The total population of each country increased uniformly. It is a growth of about 80 % in 20 years. The total population of the survey countries area reached about 120 million in 2011.

The total population has increased 2.7 % on average per annum in recent 5 years. The landlocked countries of Mali, Burkina Faso and Niger recorded a growth of 3.0 % or more than that of the coastal countries. Cote d'Ivoire recorded a growth of 1.5 %.

Among the eight countries, Ghana has the greatest population, or 20.6 % of the total population of the area. Here are the shares of other countries: Cote d'Ivoire (16.6 %), Burkina Faso (13.4 %), Mali (13.1 %), Niger (13.0 %), Senegal (10.6 %), Benin (7.5 %), and Togo (5.3 %).



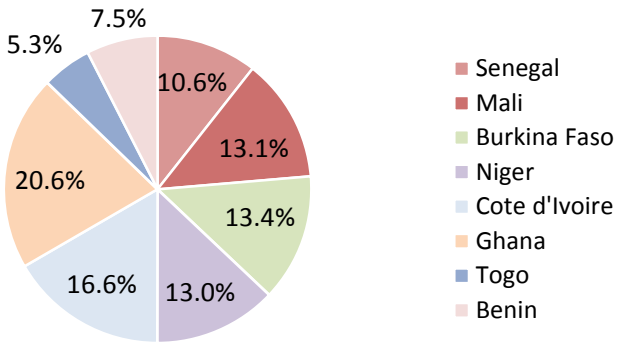
Source: Statistical data of each country

Figure 2-3 Changes in the Population of Each Country (1991-2011)

Table 2-1 Population Annual Average Growth rate (1991-2011)

	Senegal	Mali	Burkina Faso	Niger	Cote d'Ivoire	Ghana	Togo	Benin	Total
1991-1996	2.9 %	2.6 %	2.3 %	3.0 %	3.1 %	2.8 %	2.9 %	3.4 %	2.8 %
1996-2001	2.6 %	2.9 %	2.8 %	3.6 %	2.3 %	2.4 %	2.9 %	2.9 %	2.7 %
2001-2006	2.7 %	3.2 %	3.2 %	3.7 %	1.6 %	2.5 %	2.9 %	3.2 %	2.7 %
2006-2011	2.9 %	3.1 %	3.3 %	3.5 %	1.5 %	1.9 %	2.9 %	2.4 %	2.6 %
1991-2011	2.8 %	2.9 %	2.9 %	3.4 %	2.1 %	2.4 %	2.9 %	3.0 %	2.7 %

Source: Statistical data of each country



Source: Statistical data of each country

Figure 2-4 Shares of Population of Each Country (2011)

(2) Population Distribution

When we look at the population distribution, the population accumulation is high on the coast, mainly in port areas. In each country, the population accumulation is remarkable in the capital cities and port cities as centers of economy.

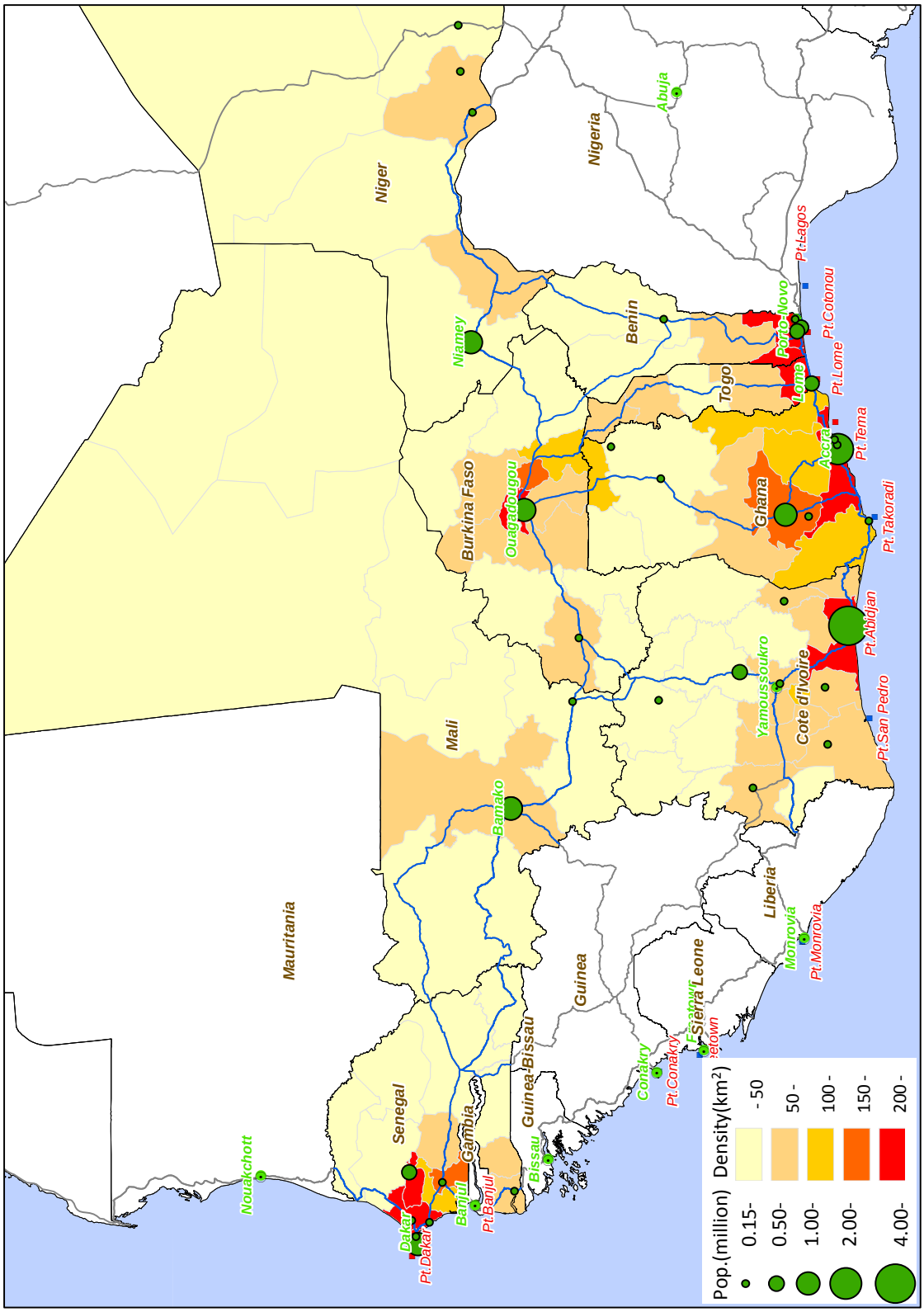
Among the major cities, Abidjan City in Cote d'Ivoire has the largest population (4,600,000), followed by Accra City (2,400,000) in Ghana, Kumashi City in Ghana (1,920,000). And Dakar metropolitan (Pikine city and Guédiawaye city) has 2,476, 000 habitants.

Table 2-2 Shares of Population of Principal City (2011)

Unit: '000

Senegal			Mali			Burkina Faso			Niger		
Dakar	1,182	*9%*	Bamako	1,600	*10%*	Ouagadougou	1,323	*8%*	Niamey	1,303	*8%*
Pikine	969	*8%*	Sikasso	178	*1%*	Bobo-Dioulasso	418	*3%*	Zinder	275	*2%*
Touba	591	*5%*	Mopti	142	*1%*	Koudougou	98	*1%*	Maradi	206	*1%*
Guédiawaye	325	*3%*	Kayes	134	*1%*	Banfora	75	*0%*	Tessaoua	167	*1%*
Thies	286	*2%*	Koutiala	128	*1%*	Ouargaye	74	*0%*	Birni Nkonni	144	*1%*
Sub total 5city	3,353	*26%*	Sub total 5city	2,182	*14%*	Sub total 5city	1,989	*12%*	Sub total 5city	2,094	*13%*
Total of state	12,855	*100%*	Total of state	15,831	*100%*	Total of state	16,249	*100%*	Total of state	15,731	*100%*
Cote d'Ivoire			**Ghana**			**Togo**			**Benin**		
Abidjan	4,639	*23%*	Accra	2,397	*10%*	Lome	861	*14%*	Cotonou	776	*9%*
Bouake	693	*3%*	Kumasi	1,921	*8%*	Sokode	149	*2%*	Abomey-Calavi	645	*7%*
San Pedro	281	*1%*	Tamale	460	*2%*	Kara	144	*2%*	Porto-Novo	265	*3%*
Daloa	267	*1%*	Sekondi-Takoradi	327	*1%*	Kpalimé	130	*2%*	Parakou	202	*2%*
Yamoussoukro	257	*1%*	Ashaiman	290	*1%*	Atakpame	109	*2%*	Bohicon	112	*1%*
Sub total 5city	6,136	*30%*	Sub total 5city	5,395	*22%*	Sub total 5city	1,393	*22%*	Sub total 5city	2,000	*22%*
Total of state	20,134	*100%*	Total of state	24,973	*100%*	Total of state	6,370	*100%*	Total of state	9,105	*100%*

Source: Statistical data of each country



Source: JICA Study team based on Statistical data of each country

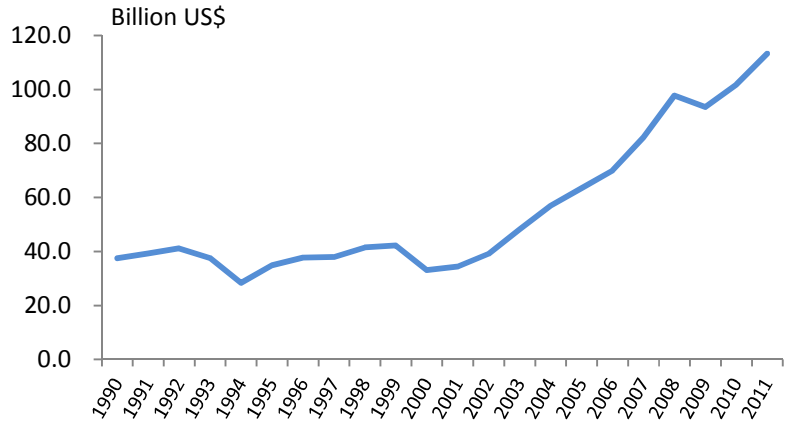
Figure 2-5 Population Density by Region and Population Distribution in Major Cities

2.2.2 Economy

(1) Changes in GDP

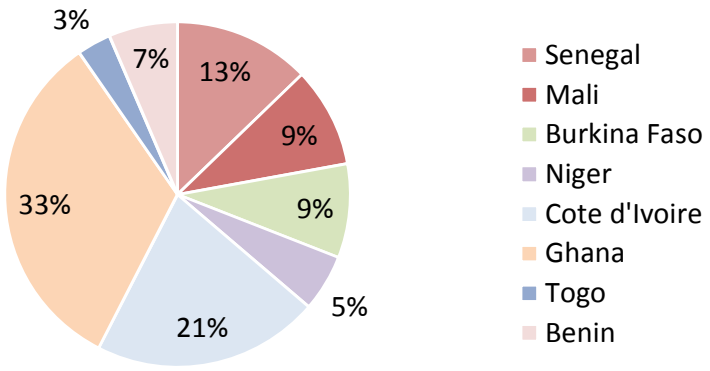
The US dollar based nominal GDP (Gross domestic product, current prices) hovered at a level of 40 billion dollars between 1990 and 2002, but it jumped to an economic scale of about 2.9 times between 2002 and 2011. By share of each country in 2011, Ghana had the greatest scale of 33 %, followed by Cote d'Ivoire (21 %) and Senegal (13 %).

The real GDP growth has been positive in each country in most of the years but it dropped in the event of political crisis (Cote d'Ivoire, 2011) and drought (Niger, 2009).



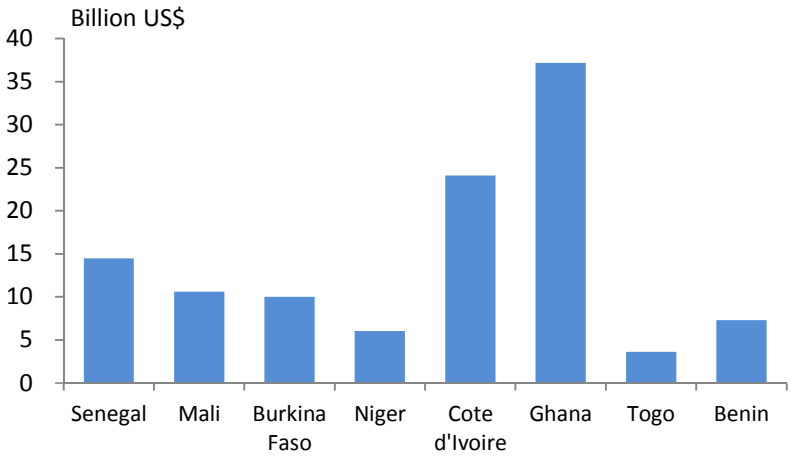
Source: Statistical data of each country

Figure 2-6 Changes in GDP of the Area (1990-2011)



Source: Statistical data of each country

Figure 2-7 National Shares of GDP (2011)

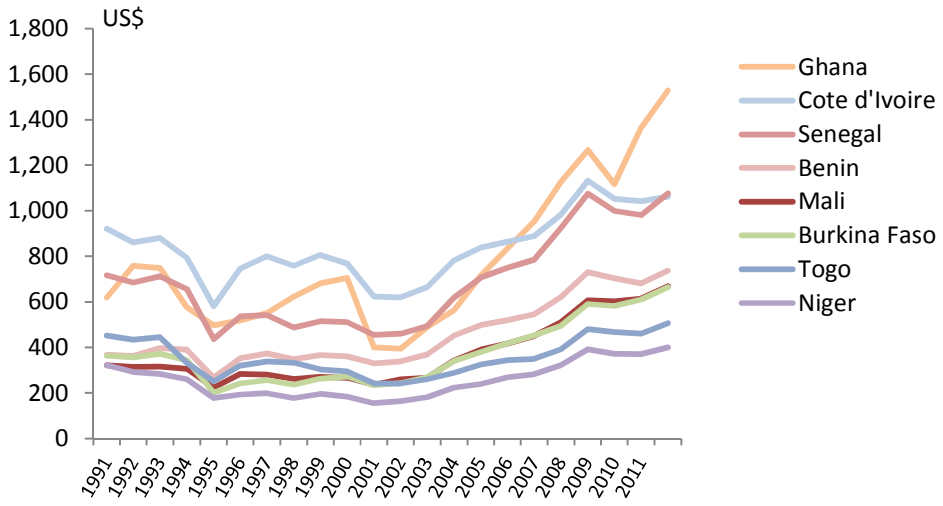


Source: Statistical data of each country

Figure 2-8 GDP by Country (2011)

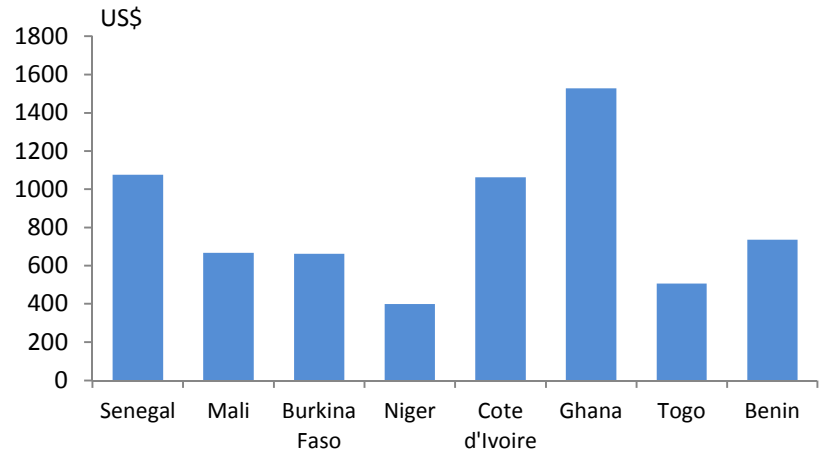
The GDP per capita continued to grow in the 21st century. Despite a temporary drop reflecting the worldwide economic deceleration in 2008, it grew more than 3 times between 2000 and 2011.

The GDP per capita in Ghana, Cote d'Ivoire and Senegal exceeded 1,000 dollars. On the other hand, the figure was low in the 3 landlocked countries, and Benin and Togo. Especially, the figure in Niger is only 400 dollars.



Source: Statistical data of each country

Figure 2-9 Real GDP Growth per Capita (1990-2011)



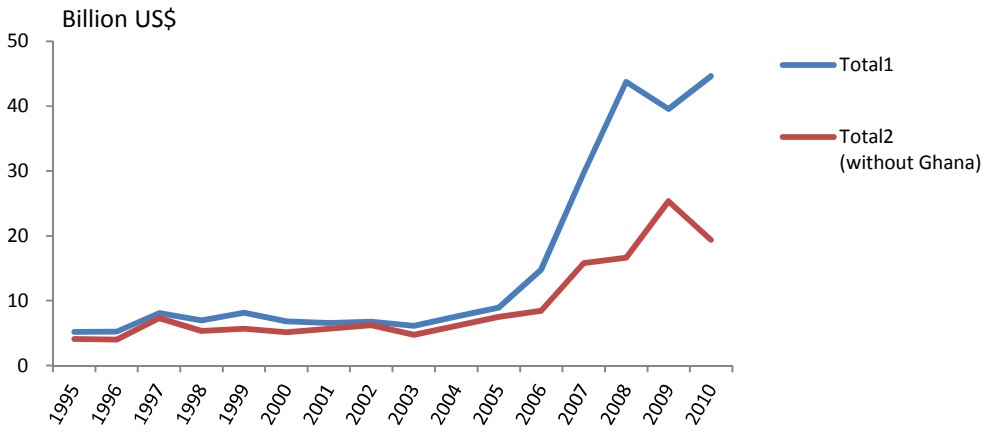
Source: Statistical data of each country

Figure 2-10 GDP per Capita by Country (2011)

(2) Inflow of Foreign Direct Investment

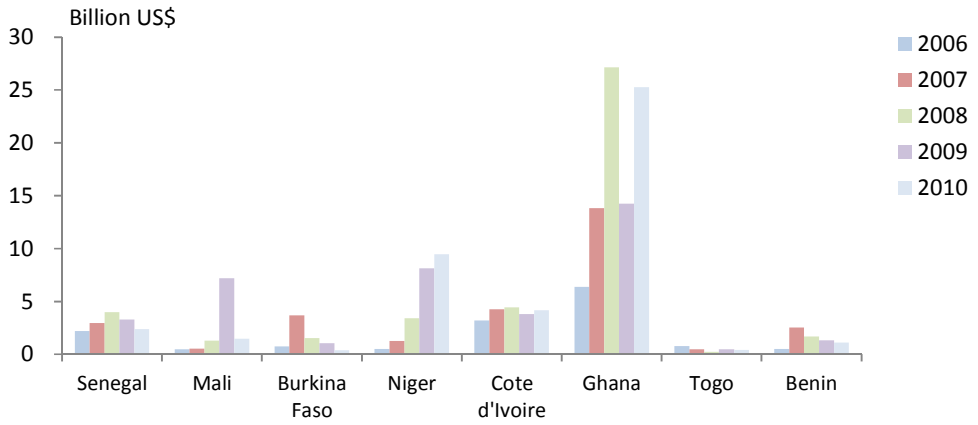
According to the net inflow of Foreign Direct Investment (FDI) by the World Bank Statistics, the FDI continued to be flat until the beginning of 2000s. Thereafter, the inflow of FDI tended to increase from the first half of 2000s.

When we look at the net inflow in the recent 5 years by country, it is the largest in Ghana in the background of the investment in the oil development. Also, the net inflow to Niger reflecting investments to extraction of uranium is remarkable. An even amount of net inflow is invested in Senegal and Cote d'Ivoire every year.



Source: World Bank statistical data of each country

Figure 2-11 Growth of FDI (1995-2010)



Source: World bank statistical data of each country

Figure 2-12 Amount of FDI by Country in the Recent 5 Years (2006-2010)

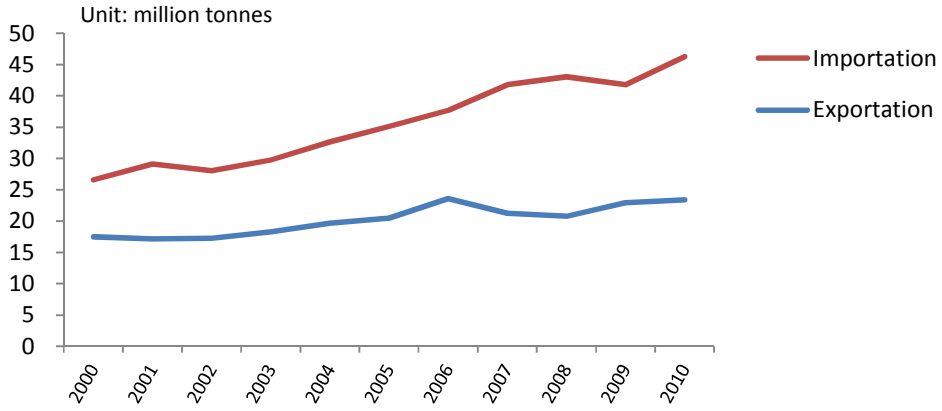
2.2.3 Situation of Exports and Imports

(1) Total amounts of Exportation and Importation

The imports and exports in the area remained sluggish temporarily due to the civil war in Cote d'Ivoire in 2002 but are increasing thereafter. Between 2000 and 2010, the export grew 1.3 times and the import grew 1.7 times.

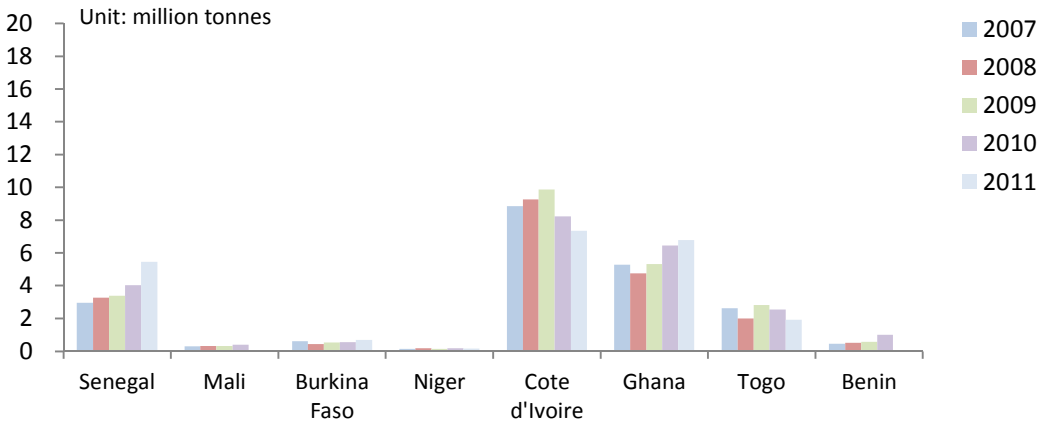
By country, Cote d'Ivoire had the largest amount of export but it is decreasing in recent years due to political instability. This is followed by Ghana and the Senegal, which had large amount of exports and experienced increase. The amounts of export from the 3 landlocked countries are relatively small but increasing. In imports, the amount is the largest in Ghana, or 39 % of the total, followed by Cote d'Ivoire (19 %) and Senegal (13 %).

When we compare the total import and export, the import stood at 66 % and the export stood at 34 %, indicating that the import is twice as much as the export. By country, the 3 landlocked countries had the remarkable trade deficit. The rate of import was 91 % in Mali, 83 % in the Burkina Faso, and 90 % in Niger.



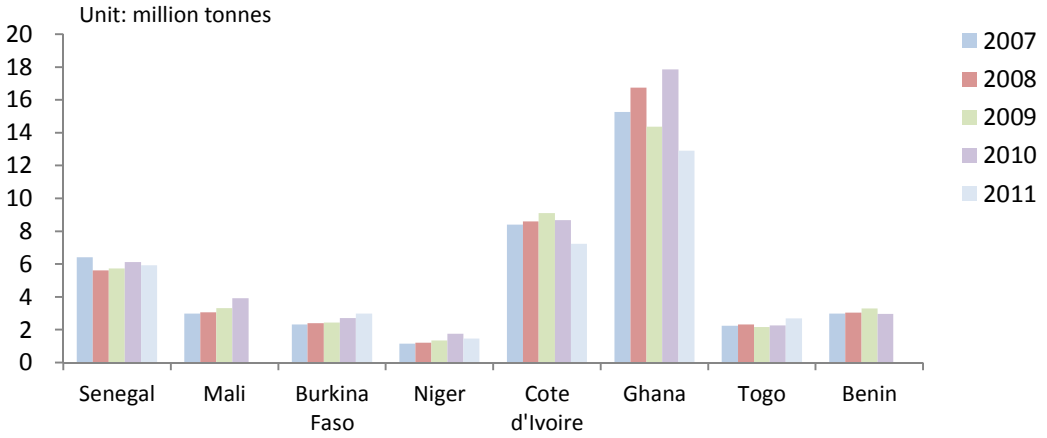
Source: Statistical data of each country

Figure 2-13 Changes in the Trade volume in the Area (2000-2010)



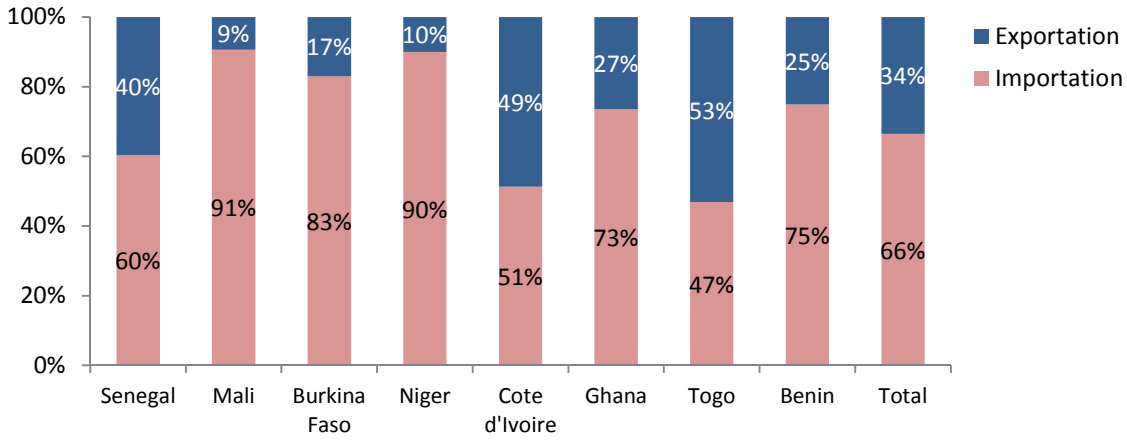
Source: Statistical data of each country

Figure 2-14 Export volume by Country (2007-2011)



Source: Statistical data of each country

Figure 2-15 Import volume by Country (2007-2011)



Source: Statistical data of each country

Figure 2-16 Import-Export Ratio by Country (2010)

2.3 Economic Development Plan

In this section, it shows an overview of an economic development plan and / or a poverty reduction plans in each country. Those plan is positioned the upper plan of transport strategy or the road developement plan.

2.3.1 Regional Economic Programme (REP II) by UEMOA

The outlook and 2012-2016 Strategy in the Second Phase of UEMOA's Regional Economic Programme (REP II) has been drafted by WADB, CBWAS and UEMOA in 2012. This introduces the strategy and directions of the Regional Economic Programme for 2012-2016 periods.

The analysis of prospects and socio-economic issues by the next five (5) years shows that there can't be a substantial increase in business competitiveness, the intra-regional trade, the terms of trade and poverty reduction if there is a persistence of barriers to growth and economic development.

The strategy of regional economic programme of the UEMOA for the period 2012-2016 is focused on common priorities to the actors of regional integration and focuses on results towards for the removal of obstacles to the smooth functioning of the common market. It also seeks to frame the role of actors in accordance with their respective areas of expertise and to integrate solutions to technical challenges raised in particular in the evaluation of the REP (2006-2010).

The main priority areas identified by the union institutions and Member States, likely be considered in developing the new REP, are as follows:

- Energy, environment, food security and infrastructure. (Areas identified by the union Council of Ministers)
- Infrastructure, agriculture and support to Small and Medium-sized Enterprise, in particular improving access to credit. (Areas identified by the Organs of the Union)
- Education and culture, technology and innovation, governance. (Defined by the High Level Panel through the 2020 vision of the Union)
- A set of 25 priority areas, including areas of competence transferred to local governments has been identified by Member States.

Projects continue to register within five (5) axes of the original strategic framework because the analysis of the priorities of the actors confirmed that they continue to remain relevant. Thus, the REP 2012-2016 will focus on projects that contribute to building a competitive regional environment to attract a strong flow of public and private investment into growth drivers and have a real impact on poverty, and which also provide a response to social the challenges the Union faces today, as defined by the following 5 axes:

Axes 1 - Governance and Economic Integration: Strengthening the efficiency and transparency in financial management and markets, reducing barriers to free movement of persons, goods, services and capital within the Union and conflict prevention.

Axes 2 - Economic Infrastructure: Continued development of basic infrastructure in transport, energy and telecommunications in order to improve access to quality infrastructure and reduce costs and delays for businesses and people in the Union.

Axes 3 - Productive integrated system: Strengthening the competitiveness of enterprises, the intra-regional trade and food security through the continued implementation of key sectorial policies such as agricultural policy of the Union and the common industrial policy, the common mining policy and projects related to water control, environmental protection and management of shared resources.

Axes 4 - Human Resources Development: The development of human resources by improving standards of health and support for higher education systems and regional centers of excellence.

Axes 5 - Resource mobilization and monitoring and evaluation: The establishment of a partnership framework for the establishment of financing, mechanisms for monitoring and evaluation and capacity building in project management necessary to achieve the REP 2012-2016.

2.3.2 Senegal

(1) Poverty Reduction Strategy Paper (PRSP)

Since 2003, the Government of Senegal has put the priority on the fight against poverty by the subscription of Senegal to the International Millennium Declaration and at national level by Establishing the Poverty Reduction Strategy Paper: I-PRSP (2003-2005).

In 2006, the the Government of Senegal Developed PRSP-II (2006-2010) in order to Reduce Poverty by Half by 2015, and Achieve the Millennium Development Goals (MDGs).

The objective of this strategy is to sustainably improve the welfare of the people in Reducing the Poverty Index among the population below 30 % by 2015.

(2) Economic and Social Policy Document (SED) 2011-2015

Following the PRSP-II, the Government of Senegal Established a new strategy document for its policy in matters of social and economic development (SED) for 2011-2015. SED data and identify policy framework for development by all stakeholders of which there is a long term vi-

sion and opposing any form of social exclusion. It calls for optimal implementation of Governance Policies initiated at Central and local levels to achieve the MDGs by the year 2015.

During the SED 2011-2015 period, the GoS intends to implement: i) increase its yearly average growth rate to 6-7 %, ii) a reduction of the public deficit below 4 % of GDP by the year 2014 - 2015, iii) a reduction of the current account deficit of around 6 % of GDP and 4) stabilization of the debt ratio below 40 % of GDP.

To this end, it is articulated around three axes linked and interdependent:

- To create wealth and economic opportunities for the promotion of productive employment and structural transformation of the economy
- To improve access to basic social services, social protection and sustainable development.
- To strengthen the basic principles of good governance and the promotion of human rights.

2.3.3 Mali

(1) The Strategic Framework for Growth and Poverty Reduction (CSCRP) 2012-2017

After assessing the implementation of the first generation PRSP (2002 -2006) and the Strategic Framework for Growth and Poverty Reduction (CSCRP) 2012-2017, the Government adopted for the period 2012 -2017, the document of the Strategic Framework for Growth and Poverty Reduction (CSCRP) which aims to achieve an annual average growth rate of 5.6 %, to reduce poverty and accelerate progress towards achieving the Millennium Development Goals (MDGs).

This goal is reiterated in the President's Economic and Social Development project (PDES), which is the expression of the will and political commitment to operationalize CSCRP. Growth targets in Mali are based on:

- Improving governance and renewal of public action,
- Development of productive sectors including agriculture,
- Continued basic infrastructures expansion programme,
- Private sector development, and
- Increasing investment in human resources.

The Government intends to guide public investment towards reducing constraints on private sector development and improve the incentive system of private investment. The President of the Republic, in its framework letter to the Prime Minister emphasized the need to better organize public action to effectively support the other components of the PDES. It is therefore to have a strong state, efficient administration, a sanitized justice and local government to serve citizens. Good governance, including the fight against corruption is the main component, is a priority for the Government. Mali has joined the African Mechanism of Peer Review Mecha-

nism (APRM) in 2003.

The areas of concentration of public investments primarily concern rural development and basic infrastructure. Vocational training, especially young job seekers, is a Government priority.

Productive sectors prioritized by Mali in its accelerated growth strategy 2008-2012 are:

- The agricultural sector, which includes production and marketing of livestock products and fish, red meat industry
- Mines
- Tourism, crafts and culture
- Infrastructure (energy, road, airport)

2.3.4 Burkina Faso

(1) The Strategy of Accelerated Growth and Sustainable Development (SCADD) 2011-2015

The overall objective of the strategy of accelerated growth and sustainable development (SCADD) 2011-2015 is to achieve strong economic growth, sustained and qualitative, generating a multiplier effect on the level of income improvement, quality life of the population and concerned about respecting the principle of sustainable development.

Specifically, the SCADD is structured in four strategic areas:

- Pillars of accelerated growth
- Human capital and social protection
- Good governance
- Transversal priorities in policies and programmes

The sectors of intervention identified are:

- Agriculture, livestock, fisheries and forestry
- Mines
- Crafts, cultural and tourism industries
- Small and Medium Business, Small and medium industries
- Support infrastructure development, namely
  - Hydro-agricultural infrastructure;
  - Transport infrastructure to open up inaccessible areas to make them accessible in all seasons
  - On ICT infrastructure to increase productivity in all sectors and promote market expansion beyond the borders
  - Energy infrastructure to reduce costs of inputs and better access to modern energy services
  - Urbanization and property development
  - Promotion of support institutions

- Marketing infrastructure and marketing

On social issues and those relating to human capital, the identified priorities are education, teaching and technical and vocational training, health and nutrition, drinking water and sanitation.

2.3.5 Niger

In terms of socio-economic issues, Niger has identified the following priorities in its Multi-annual convergence, stability, growth and solidarity programme 2011-2015.

Rural sector:

- Land reform;
- Water control and the strengthening of irrigation;
- The development of promising sectors and promotion of export-oriented agro-forestry-pastoral products

Health sector:

- Improved management of human resources in terms of recruitment and balanced distribution across regions;
- Better allocation of financial resources including 20 % of the budget to be allocated to social sectors and their sustainable management;
- Improvement of the cost recovery system so as to introduce an exemption system for vulnerable groups (including pregnant women and children under five years) through the free antenatal care, caesarean sections, the care for children under five and people with disabilities, and contraceptives;
- Strengthening health infrastructure.

Education Sector:

- Improved the framework of the medium term expenditure, the allocation of substantial financial resources and improving efficiency in public expenditure management;
- Targeting poor areas on the basis of the map of school;
- Reform of teacher training colleges;
- Accelerated schooling in rural areas and particularly for girls;
- Involvement of people in the school management and cost sharing;
- Strengthening of educational infrastructure;
- Implementing a stabilization plan and contract teachers management.

Transportation sector and infrastructure:

- Priority use of local labor and materials;

- Disengagement of the State from road maintenance by entrusting it to a private entity (Fund Autonomous Road Maintenance Financing Fund);
- Multiplication of construction of rural roads projects to open up areas of production;
- Job creation in urban areas by establishing a policy to promote urban income-generating work;
- Redesign road toll management by entrusting its collection to the private sector.

The mining, energy and competitiveness of the economy are also areas of concern for Niger. Unfortunately, the master plan of national level isn't prepared by a cause of budget shortage

2.3.6 Cote D'Ivoire

(1) Plan National development plan (2012 -2015)

The National Development Plan was launched in Cote d'Ivoire in March 2012. It aims to broadly promote private investment. With the goal of joining the ranks of emerging countries by 2020, it presents the following items as strategies to be achieved by 2015.

- People live in harmony in a secure society in which good governance is ensured;
- The creation of national wealth has increased, supported and distributed fruits in equity;
- Populations, in particular women, children and other vulnerable groups have access to quality social services in equity;
- People lives in a healthy environment and living environment and adequate;
- Repositioning of the Cote d'Ivoire on the regional and international scene is effective.

The importance of the transport infrastructure is emphasized as a growth sector in the National Development Plan. Approximately 25% of the required investment until 2015 is allocated to infrastructure and transportation services, making them top priority items. More precisely, construction of the Yamoussoukro-Bouakè expressway, the Bassam-Aboisso-Noè highway (border with Ghana) and a dry port in Ferkessédougou Department and improvement of port functions are indicated.

2.3.7 Ghana

The Ghana Shared Growth and Development Agenda (GSGDA) 2010-2013 was compiled by the NDPC (National Development Planning Commission) and launched as the medium-term development policy framework in Ghana in December 2010.

The GSGDA is organized around seven thematic areas, namely, assurance and maintenance of macroeconomic stability; enhanced competitiveness of Ghana's private sector; accelerated agricultural modernization and sustainable natural resource management; oil and gas development; infrastructure, energy and human settlements; human development, productivity and employment; and, transparent and accountable governance. Other issues of critical importance, such as gender, population, environment, vulnerability and exclusion have been mainstreamed into these thematic areas.

The Goal

The overarching goal for the medium-term economic development policy framework is to achieve and sustain macroeconomic stability while placing the economy on a path of higher growth, in order to attain middle-income status by 2020 while achieving the Millennium Development Goals (MDGs) as well. It is also aimed at reducing poverty through a pro-poor, export-led growth strategy based on modernizing agriculture and linking it to industry in an emerging oil and gas economy.

Strategic Direction

The medium-term strategy is anchored on the continued pursuit of macroeconomic stability and the sustainable exploitation of Ghana's natural resource endowments in agriculture, minerals and oil and gas supported by strategic investments in human capital, infrastructure, human settlements, science, technology and innovation to drive industrialization, in particular manufacturing, policies, programmes and projects in agriculture, infrastructure (including energy, oil and gas), water and sanitation, health, education, ICT, Science, Technology and Innovation are the priority expenditure areas for the medium term (2010-2013).

Thematic Areas of GSGDA

- Assurance and Maintenance of Macroeconomic Stability
- Enhanced Competitiveness of Ghana's Private Sector
- Accelerated Agricultural Modernization and Natural Resource Management
- Oil and Gas Development
- Infrastructure, Energy and Human Settlements Development
- Human Development, Employment and Productivity
- Transparent and Accountable Governance

2.3.8 Togo

The 2009-2011 Poverty Reduction Strategy Paper (PRSP) is the flagship policy document of Togo. The Government, through its second strategic pillar, expressed his willingness to go over the next three years, beyond the economic recovery by creating a new foundation for a gradual, strong, sustainable and sustained growth.

To achieve this, nine priority areas are identified. They are:

- Strengthening structural reforms
- Improvement of business climate
- Promote sources of growth
- Development of support growth infrastructure
- Strengthening regional integration
- Effective management of natural resources, environment and surroundings
- Redistribution of the fruits of growth
- Job Creation
- Promote research

2.3.9 Benin

The used strategies documents indicate Benin vision: "Benin is, by 2025, a flagship country, a country well governed, united and in peace with prosperous and competitive economy, having a cultural influence and a social welfare ".

This vision comes in six development strategic orientations (OSD), namely: i) Rebuild an administration for Development, ii) Sanitize and maintain the macroeconomic framework and its stability, iii) Promote economic renewal iv) Development economic and social infrastructure v) Strengthen human capital vi) Ensure balanced and sustainable development of the national space through grassroots development.

The implementation of OSD and the priority areas defined in the Growth Strategy for Poverty Reduction (CPRS) and the Priority Actions Programme (PAP). CPRS is the umbrella framework and integrator of sectorial policies for the operationalization of the OSD. The strategic axes to the CPRS 2011-2015 are the same as the CPRS from 2007 to 2009. The content and scope of the priority areas for each axis were strengthened. These axes are as follows:

Axis 1: Acceleration of sustainable growth and economic transformation

Axis 2: Infrastructure development:

Axis 3: Building human capital

Axis 4: Promotion of good governance

Axis 5: Balanced and sustainable development of the national space

2.4 Summary of Chapter

- Each country has both the population and economic scale growing. In particular, the past decade showed the upward trend for the economic growth. Population concentration to port cities is remarkable. In the inland area, overconcentration to the capital city has occurred.

- In the survey area, intra-regional exchange (academic, business, and seasonal working) and trades appear to be prosperous among UEMOA member countries (francophone and CFA currencies used) including Ghana. On the other hand, most of import-export trades are made with overseas countries (Europe and Asia).

- Policies for economic development of each country have shifted from poverty reduction to economic acceleration. The industrial development has been positioned as a top priority in each country. The governments believe that the development of infrastructure is necessary for carrying out development of the industry. In particular, the development of major roads is very important elements to advance the plan.

- Though economic disparity is observed between coastal and landlocked countries, the issue to overcome here is whether the port cities having the large economic scale can lead the regional economy and bring the propagation effects to the inland area.

- Economic development and regional integration of the region as a whole within the framework of ECOWAS and UEMOA, as well as development of the transport/traffic infrastructure is considered important.

In subsequent chapters, the present state of traffic infrastructures of each country as well as the present state of international corridors was discussed.

Chapter 3 OVERVIEW OF THE TRANSPORT SECTOR

The traffic sector mentioned in this chapter is mainly road sector for the purpose that this data collection survey is intended as observation of the traffic on the international corridor that connects to international port in Western Africa.

3.1 Senegal

3.1.1 Overview of Transport Sector

(1) Related Organizations

1) Ministry of Infrastructure and Transport (MIT)

Under the authority of the Prime Minister, the Ministry of Infrastructure and Transport (MIT) prepares and implements the policy defined by the President of the Republic in the areas of infrastructures and transports.

The MIT is responsible for:

i. Implementation of the policy for urban and interurban transport;
ii. Development of land, maritime and aerial transport;
iii. Development of rail transport nationally and internationally and supporting the policy of improving the network and rolling stock;
iv. Supervision of the Executive Council of Urban Transport of Dakar (CETUD).

2) Direction of Road Transport (DTR: Direction des Transports Routiers)

Direction of Road Transports (DTR), reconstituted from Direction of Land Transports (DTT) since the "Decree No. 2012-543 of 24 May 2012", is a direction under the MIT responsible for studying, planning, promotion, regulation, control and coordination activities that could contribute to the development of land transport.

As the mandate, DTR shall:

i. prepare, implement and monitor the implementation of the policy defined in the land transport;
ii. develop security policy for land transport and ensure coordination of its implementation;

As such, DTR has the responsibilities:

i. To explore, plan, promote, regulate, control and coordinate activities that could contribute to the development of land transport both road and rail;
ii. To develop action programme for improving the capacity and efficiency of land transport system;
iii. To coordinate studies and programme relating to improving the safety of inland;

iv. To develop policy and information on the national road network and to ensure its implementation;
v. To initiate any action to allow optimization of land transport;
vi. To study the phenomena and demand for land transport and to anticipate situations that ensue and coordinate the necessary actions;
vii. To establish an effective system for monitoring and security of road transport;
viii. To assist the Minister of Infrastructures and Transports to exercise technical supervision of national societies and public bodies involving the transport sector in Senegal.

3) Direction of Route (DR)

Direction of Route (DR) is a direction under the MIT responsible for:

i. Management of all roads in Senegal;
ii. Development of national road network, programme of road investment, execution and mobilization of funding;
iii. Technical coordination of public and private organizations working in the field of road infrastructure;
iv. Supporting to local authorities in the field of road infrastructure;
v. Implementation of the national strategy for development of rural roads;
vi. Technical assistance to bodies responsible for carrying out civil engineering works (including with respect to, utilities, water systems, the port facilities, airports, sea, river and rail).

4) AGEROUTE (Agency for Road Works and Management)

AGEROUTE is project management delegate of road works on the classified network. The administration of the road sub-sector has improved since 2000. AGEROUTE's role is to manage the classified road network of 15,000 km (including 5,000 km of paved roads) and to control road construction works.

As such, AGEROUTE has the missions:

i. To manage construction and development of new roads;
ii. To manage periodic or routine maintenance of existing roads;
iii. To manage rehabilitation of existing roads;
iv. To develop an action plan for the execution;
v. To prepare a tender document for studies or procurement of equipment;
vi. To provide project management of the extension of the network in accordance with conventions agreed with development partners.

5) FERA (Road Maintenance Fund)

Road Maintenance Fund (FERA) is responsible for:

i. Mobilization of finance for road maintenance;
ii. Finance, maintenance and operation of road network efficiently and transparently.

FERA's finance covers following activities:

i. Routine and periodic maintenance of classified and unclassified road;
ii. Preparation and implementation of road maintenance programmes;
iii. Inspection of road network, traffic studies, constitution and operation of road inventories;
iv. Control axle loads;
v. Public awareness campaign for the importance of road maintenance;
vi. Road safety.

FERA's fund covers annual road maintenance cost up to 50 billion CFA, while the needs are much more.

6) APIX (National Agency for Investment Promotion)

APIX is an autonomous body which was established in July 2000. Its main task is to implement the policy defined in the fields of investment promotion and major projects.

7) Direction of Major Project

In order to accelerate the priority projects and monitor the achievement itself, Direction of Major Project has been established inside APIX.

Direction of Major Project is responsible for coordination and technical monitoring of activities relating to infrastructure projects and those under the jurisdiction or other structures of the various departments involved.

The operation of the Major Project is based on the concession contract under the Public Private Partnership (PPP) mechanisms such as BOT, BOOT or Leasing.

8) COSEC (Conseil Sénégalais des Chargeurs)

Senegalese Shippers Council (COSEC) is a public institution created by the "Law No. 75-51 of April 3, 1975". COSEC's main tasks are to define a policy and to promote activities for exporters and importers of Senegal. COSEC also manages finance to improve the Senegalese maritime transport.

In this regard, COSEC has implemented an investment programme including finance for maritime transport sector, construction of several infrastructures (e.g. Ferry terminal in Ziguin-

chor) and establishment of a national observatory of shipping which the main objective is to monitor the tariff rates concerning the maritime transport.

(2) Transport Master plan

1) Five year Priority Programme (2010-2015)

The Five-year Priority Programme of road infrastructure 2010-2015 has been prepared by AGEROUTE in 2010 as a future development plan on road sector.

The objectives of the Five-year Priority Programme are:

i. To improve the corridor Dakar-Bamako and to develop new corridors;
   Ex: Southern corridor between Dakar and Bamako, Rosso bridge
ii. To rehabilitate and pave the entire national road network;
   Ex: Rehabilitation of the national road No.3
iii. To develop unpaved firm roads;
iv. To improve urban mobility in Dakar and in major cities;
v. To develop the highway network.
   Ex: Highways between the Blaise Diagne International Airport (AIBD) in Diamniadio and Saly, Highway to the North (St. Louis) and to Bamako

To achieve these objectives, 80 priority projects have been selected; including requirement of investment for the five years amounted to 1,538 billion CFA (2.4 billion EUR), of which over half are road projects. 80 priority projects consist of 64 % of rehabilitation projects, while 36 % are new projects, with total length 4,015 km including 1,520 km of new road construction.

According to this Five-year Priority Programme, cost for a rehabilitation project was allocated by the Government of Senegal by using the fund from FERA.

On the other hand, for new construction project, AGEROUTE have to find a donor's fund basically.

2) AU/NEPAD African Action Plan 2010-2015

The AU/NEPAD African Action Plan (AAP) was drafted in March 2008 and it has been reviewed and revised for the period 2010-2015 including seventy (70) priority programmes and projects. These emerging projects or programmes have been recognized as important for regional and continental integration over the medium and long term.

Following projects in Senegal are listed in the AAP as the priority projects on transport sector for regional development.

Table 3-1 Projects listed in the AAP

Project	Cost	Remark
Maghreb Road Project - Rosso Bridge	63 million US$	This is a section of the corridor from Cairo to Dakar (8.636 km), which involves a modernization of the entire road network in the Maghreb, including new bridge between Mauritania and Senegal across the Senegal river (Rosso: border of Senegal). The finance for construction of the Rosso bridge had been evaluated by AfDB, but the project has been suspended since long time.
Trans Sahel Corridor (Dakar-N'djamena-Djibouti)	0.6 million US$ (Study only)	This project involves preparation of a feasibility study for the missing sections on the Trans Sahel Corridor from Dakar to Djibouti.
Trans Gambia Road - Gambia Bridge	75 million US$	Construction of a new bridge over the Gambia river. The bridge is a part of the Trans Gambia Road, which will increase regional trade and economic integration. The finance for construction of the Gambia bridge has been evaluated by AfDB.

Source: Final Report "Review of the AU/NEPAD African Action Plan: Strategic Overview and Revised Plan, 2010-2015" (2010)

3) Priority Action Plan (PAP)

According to the approach of the DPES, Priority Action Plan (PAP) is set in order that all actions should align with the priorities of the DPES on the basis of diagnosis of all socio-economic sub-sectors.

To achieve the objectives of DPES, following projects are listed on the PAP in the sub-sector of transport:

1. Expansion of national and international road network such as i) highway project Dakar-Diamniadio, ii) connection of highway between the national route no.1 and highway, iii) extension of highway Blaise Diagne International Airport (AIBD)-Mbour-Thies and construction of connection route, iv) several construction and rehabilitation projects of paved roads and bridges, v) construction of shuttle train between Dakar and airport AIBD, vi) the revitalization of the railroad business in the country by construction of new railroad lines, rehabilitation of the national railroad, and construction of the railroad station Colobane-Dakar, vii) construction of the road Saraya (Mali border-Kédougou-Saraya), viii) construction of the road Gounass Medina-Guinea border and ix) modernization of railroad Dakar-Bamako;

2. Reinforcement of the port infrastructure by modernization of the Dakar port, rehabilitation of Kaolack and Ziguinchor ports, programme for modernization of ports and access in Casamance;

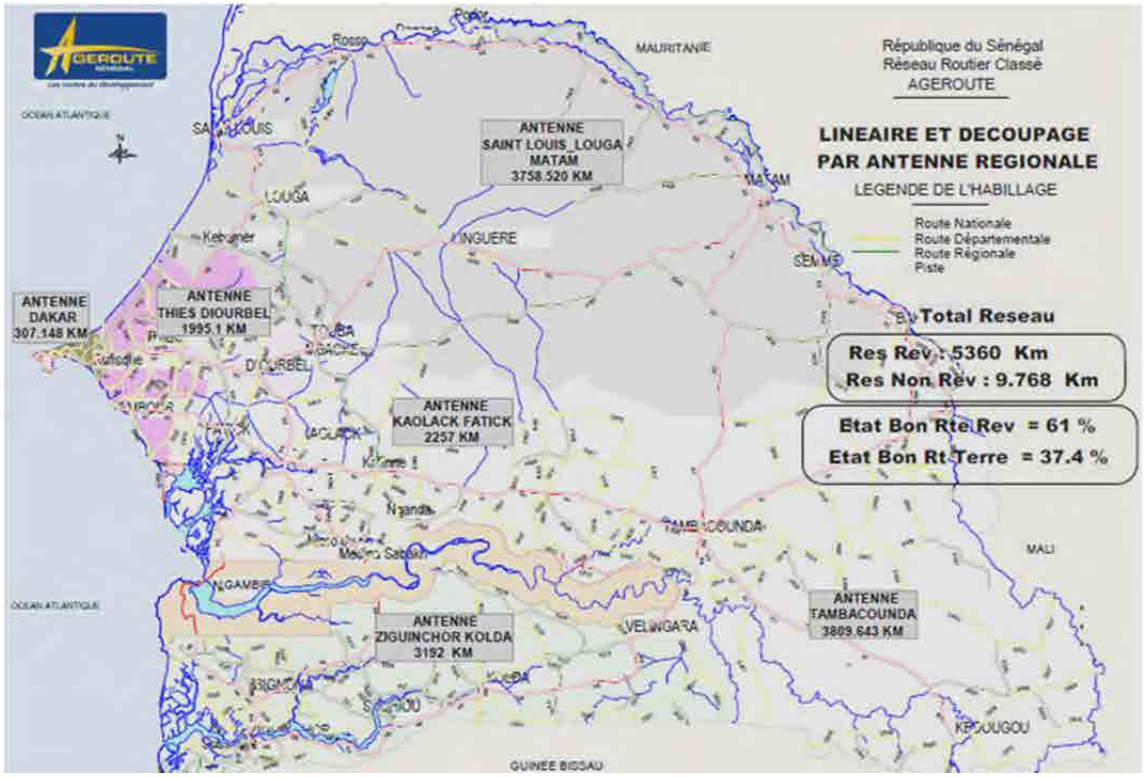
3. Development of aviation services and airport facilities by the investment programme of airport AIBD, rehabilitation and equipment programme for regional airports, the construction and equipment programme for the international airport Touba, construction and equipment programme for the airport Tobor, regional safety and security project for air transport in west and central Africa, construction of airport and modernization of regional airdrome;

4. Development of transport services by the transport and urban mobility support project (PATMUR), the Dakar-Bamako railroad corridor management project (Institutional study), renewal of bus (Phase-II), strengthening the development fund for urban transport (FDTU), modernization of bus stations and construction of rail infrastructure including the upgrading of rail infrastructure between Dakar and Thies.

3.1.2 Road Transport

(1) Road Network

According to the latest statistic data (in 2010) from AGEROUTE, Senegal's road network reached around 14,800 km long, including 5,300 km of paved roads.



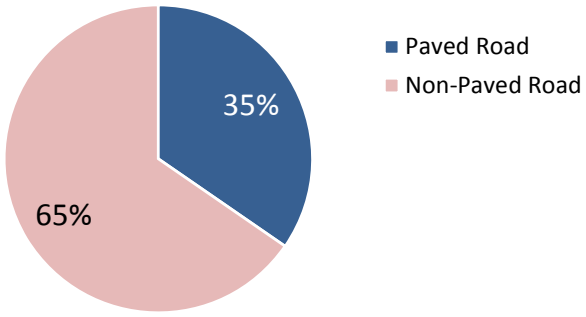
Source: AGEROUTE of Senegal

Figure 3-1 Road network in Senegal (2010)

Table 3-2 Current road network by category in Senegal

Category	Total Length	(%)	Paved Road (Km)	(%)	Non-paved Road (Km)	(%)
National Route	3,507	23.7	3,000	56.6	507	5.3
Regional Route	1,311	8.9	692	13.1	619	6.5
Departmental Route	5,782	39.1	1,001	18.9	4,781	50.4
Classed Gravel Road	4,297	29.1	191	3.6	4,106	43.3
Bypass Road	34	0.2	34	0.6	0	0
City Road	259	1.8	253	4.8	6	0.1
New Route	131	0.9	131	2.5	0	0
Total	14,785	100.0	5,305	100.0	9,479	100.0

Source: AGEROUTE of Senegal 2010

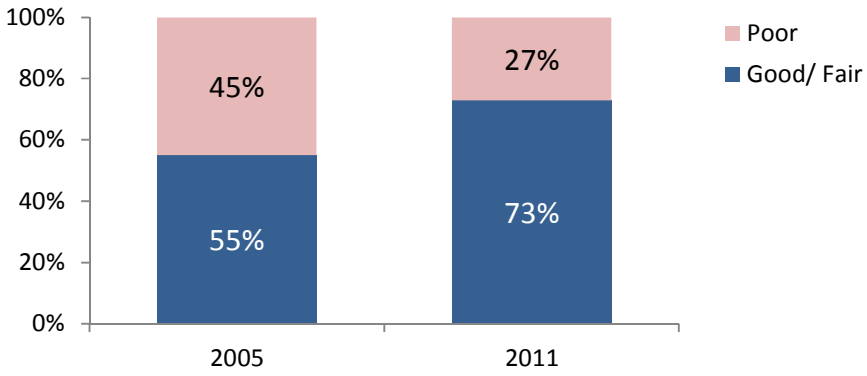


Source: AGEROUTE of Senegal 2010

Figure 3-2 Road classification share in Senegal

A target rate for improvement of road network condition planned by the end of the year 2011 is as follows:

- For the paved road network in good or fair condition targeted from 61 % (2009) to 63.4 % (2010) and 72.8 % (2011);
- For the non-paved (earth) road network in good or fair condition targeted from 37 % (2009) to 37.2 % (2010) and 38.6 % (2011).



Source: AGEROUTE of Senegal 2010

Figure 3-3 Road Conditions of paved road in Senegal

The condition of main international corridor could be observed as follows based on the comment from the DR (Direction of Route):

<Senegal-Mali>

1. Daka-Thies: good
2. Fatick-Kaolack: totaly bad
3. Kaolack-Tambacounda: 80 % bad
4. Tambacounda-Kidira: 50 % good
5. Tmbacounda-Kdougou: 50 % good
6. Kedougou-Saraya: good

<Senegal-Gambia>

7. Kaolack-Nyoro: good
8. Nyoro-Ziguinchor: totaly bad
9. Karang-Kaolack: 80 % bad

<Senegal-Mauritania>

10. Thies-Louga: 50 % good
11. Louga-Saint Louis: 60 % good
12. Saint Louis-Rosso: good (under construction)

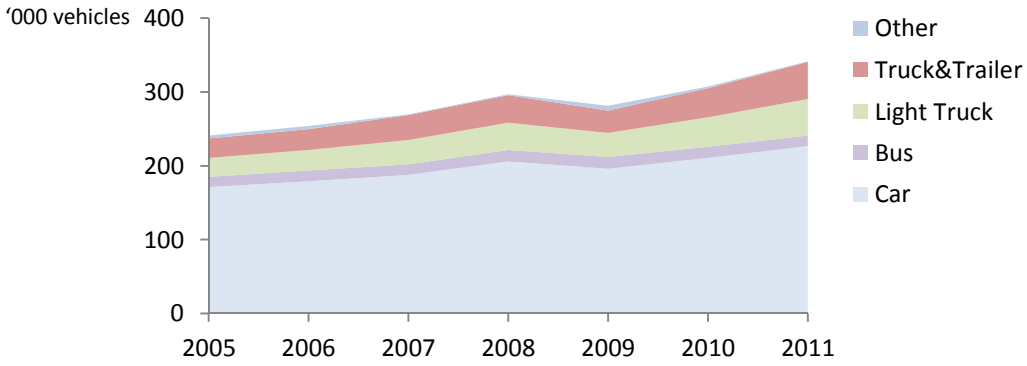
(2) Road Facilities

To avoid the degradation of the condition of road surface, an axle weight control system shall be installed through concession contract with Afrique Pesage Group (group of CAPTEL (axle weight equipment production) subsidiaries).

16 weight control stations were installed in Senegal and its operation starts from July 2012. Today, axle weight control system is operated by using mobile equipment since an axle control has started since 2011 in Dakar port.

(3) Vehicle Fleet

The number of vehicles has been increased since 2005.



Source: Direction of Road Transport (DTR) of Senegal

Figure 3-4 Evolution of vehicles fleet in Senegal (2005-2011)

3.1.3 Rail Transport

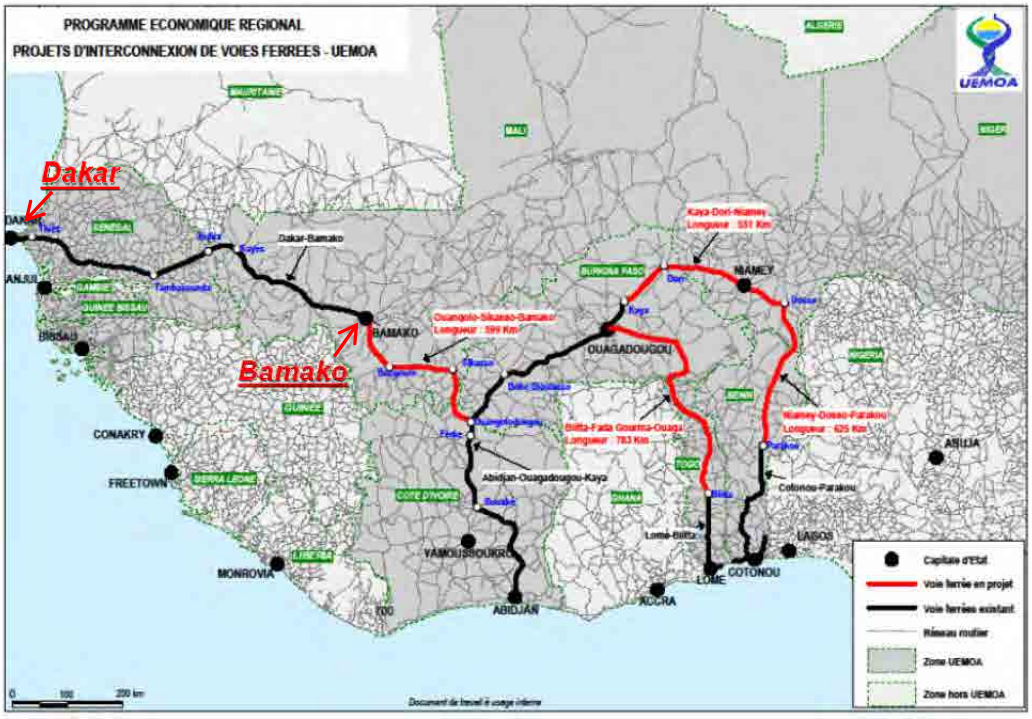
(1) Railroad Network

Since its foundation, the Senegal Railroad has been catering for domestic and international traffic between Dakar and Bamako. The capital assets of these two types of traffic are made up of 906 km of main tracks, 111 km of secondary tracks, 15 locomotives and other tractor machinery, 750 freight freight and a few passenger carriages.

Some of these carriages are used for a suburban rail transport service called “small blue train” (petit train bleu). Currently, the service is limited between Dakar and Rufisque only.

According to its financial profitability and increasing of future demand, a study is underway for its extension to other cities.

The operation of the Dakar-Bamako international line, which was previously under control by the government and now, it had been transferred to a private company, TRANSRAIL, through a concession contract and an agreement between the Senegal and Mali since 2003.



Source: UEMOA

Figure 3-5 Railroad Network (Dakar-Bamako)

(2) Current Services

Regarding freight corridor from Dakar to Bamako, 70 % of goods had been transported by rail. However, since the route between Kidira-Kayes opened, current market share is only 20 % because of the problems caused by aging infrastructure and insufficiency of its transport capacity.

Above all, the railroad transportation from Dakar to Bamako takes a week or more sometimes, and its transit rotation is rotation is very limited, only 20 wagons a month.

Freight carried amounted to 249,537 tons (Export: 43,181 tons / Import: 206,356 tons) in 2011 (EMAS: Annual Report 2011)

(3) Future Development Plans

The improvement of the railroad situation depends on political vision and will. After facing many difficulties, the two (2) national railroad companies of Mali and Senegal have been merged and entrusted to a private operator through concession since 2003 under World Bank directions. However, investment financing did not follow to improve railroad service quality after 10 years of studies.

Currently, TRANSRAIL is under “financial transfusion” and TRANSRAIL is facing bankruptcy.

3.2 Mali

3.2.1 Overview of Transport Sector

(1) Related Organizations

1) Ministry of Equipment and Transport

Ministry of Equipment and Transport (MET) plays a key role in the transport development. The National Directorate of land, sea and river transport, one of the directorate in MET, is responsible for the development of the National Transport Strategy. For the development of road, The National Directorate of Roads (DNR) has a mission to develop the elements of the national policy in the field of roads and bridges and to coordinate and control the activities of public and private services and organisms playing a role in the implementation of this policy.

2) The Road Authority (AR)

AR is responsible for administering the funds intended to the road network maintenance. As such, it provides funding for road maintenance including urban roads. It also helps to improve the management of the road network.

3) The Emergency Works Cell (CETRU)

CETRU is responsible for the execution of the drafts works necessary for the use of emergency sites, repair damages caused to roads and bridges by weather and calamities and the execution of road maintenance works in all geographic zones where road maintenance is not done by private enterprises.

4) AGEROUTE (Agency for Road Works and Management)

The AGEROUTE mission is to manage the road maintenance done by enterprises.

(2) Transport Master Plan

The national directorate for road, sea and river transportation is in the process of planning the national transport strategy under the cooperation of the EU. It will be finalized during 2012.

3.2.2 Road Transport

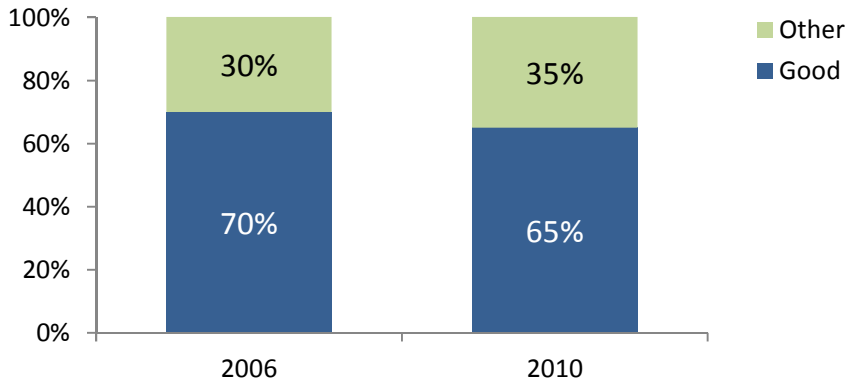
Mali only has a road network of about 4,000 km by its independence including 370 km of paved roads and 3,630 km poorly maintained rural roads unusable by all seasons. Currently, the built road network is of about 20,262 km.

With 4,457 km of paved roads, 1,888 km of ground roads and 9,890 km of improved roads and 4,027 km seasonal roads, the detailed situation of the priority road network is given in the table below.

Table 3-3 Road network by category in Mali (2010)

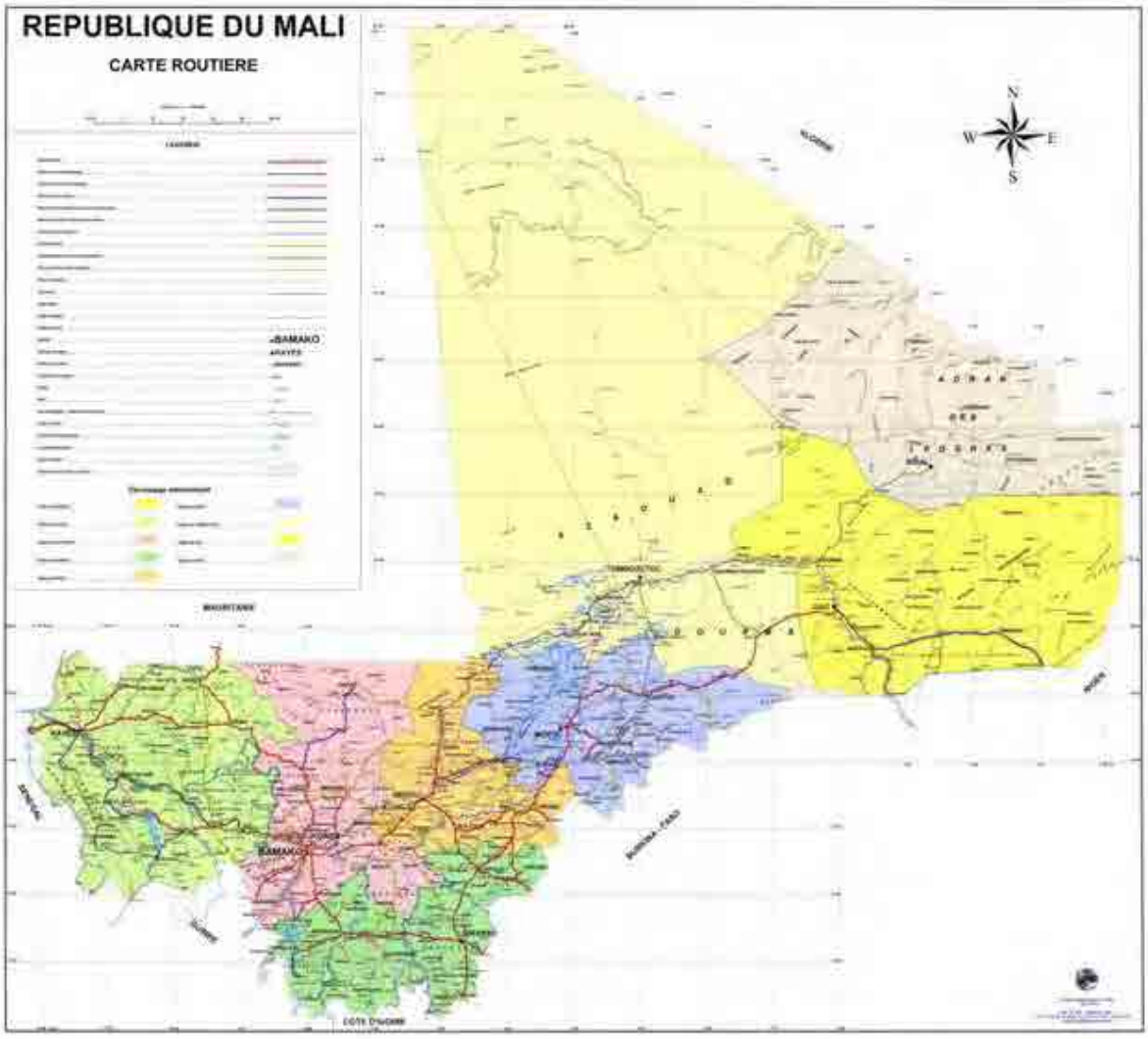
	Technical class				
	Paved road (Km)	**Ground roads (Km)**	**Improved roads (Km)**	**Natural roads (Km)**	**Total (Km)**
National roads(RN)	4,381	1,647	3,287	2,276	11,591
Regional roads(RR)	15	223	1,963	1,461	3,662
Local roads(RL)	9	18	958	200	1,185
District roads(RC)	45	0	0	0	45
Rural roads	0	0	2,993	0	2,993
Unclassified roads(RNC)	7	0	689	90	786
GENRAL TOTAL	4,457	1,888	9,890	4,027	20,262

Source: The National Directorate of Roads (DNR) of Mali



Source: The National Directorate of Roads (DNR) of Mali

Figure 3-6 Road Conditions of paved road in Mali (2010)



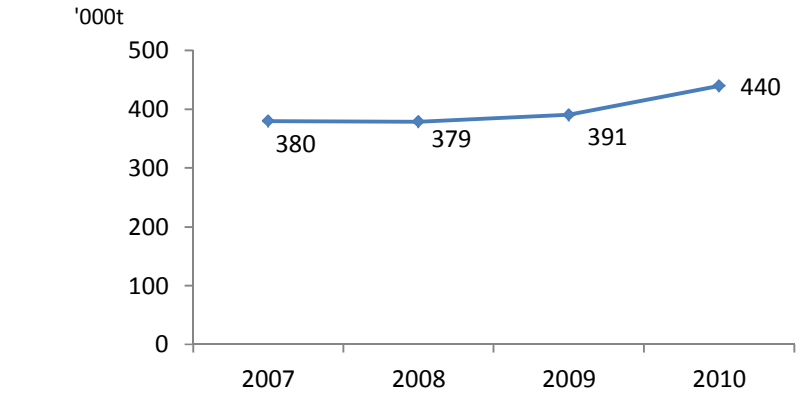
Source: The National Directorate of Roads (DNR) of Mali

Figure 3-7 Road network in Mali

3.2.3 Rail Transport

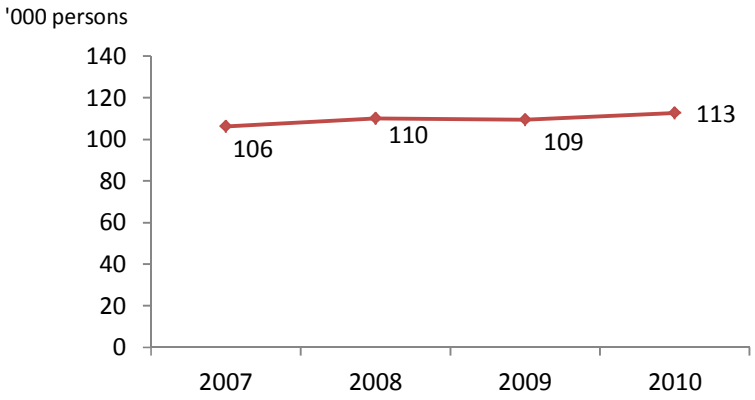
Rail transport is the second mode of transport in Mali by tonnage on its main track of 729 km. The railroad is mainly characterized by its dilapidated state. In 2010 Transrail SA operated an average of 20 locomotives with an availability rate of 80 %. 557 units of goods wagons had an availability rate of 88 %.

The monthly mileage traveled by available locomotive was 7,548 km and the average rotation was 17 days. Passenger traffic was of 113,000 passengers in 2010 against 109,000 in 2009 and 110,000 passengers in 2008.The total goods traffic was 440,000 tons in 2010 against 391,000 tons in 2009 and 379,000 tons in 2008.



Source: Ministry of Equipment and Transport of Mali

Figure 3-8 Evolution of railroad traffic of freight volumes in Mali



Source: Ministry of Equipment and Transport of Mali

Figure 3-9 Evolution of railroad traffic of passengers volumes in Mali

3.3 Burkina Faso

3.3.1 Overview of Transport Sector

(1) Related Organizations

1) Related Ministry

The Ministry of Infrastructure and Development (MID) and the Ministry of Transport (MT) respectively ensure the implementation and monitoring of government policy for the infra-structure and transport sectors. The MID is responsible for the implementation and maintenance of road infrastructures, including engineering structures. As for MT, it is responsible, on the one hand for the implementation and maintenance of other transport infrastructure (air and rail) and, on the other, for the regulation and operation of infrastructure and transport services.

To ensure their missions, the MID and MT maintain functional relationships with other transversal ministerial departments, namely the Ministry of Economy and Finances.

2) Burkina Faso Shippers' Council (CBC)

The CBC is a public establishment with a professional character, with a majority representation of the private sector in its governing bodies (Administrative Board and General Assembly). It is subject to dual supervision: technical supervision from the Minister of Transport and financial supervision by the Ministry of Economy and Finances.

The CBC manages freight bound for Burkina Faso aiming to: (i) ensure regular supplies reach Burkina Faso as economically, expediently and safely as possible, (ii) boost the competitiveness of Burkina Faso products in the international market, (iii) ensure monitoring of road traffic in real time and (iv) provide statistical information for users of the transport chain.

It thus has the following main missions: (i) providing assistance to shippers (representation, traffic and freight), (ii) training shippers, (iii) informing shippers (observing, canvassing), (iv) the implementation of studies of a strategic or sectoral nature and (v) the interface between the State and shippers.

Since 2002, the Council has no longer utilized State grants, which represents a remarkable performance. It supports itself via maritime committees, the sale of direct services to transporters, the sale of information (reports, studies, etc.), fees paid by its members, rental and sale of other products.

The CBC has certain strengths: (i) acknowledged authority over traffic management regulators (police officers, gendarmes, customs, transit port, etc.), (ii) effective knowledge of international transport (conventions, agreements, procedures, inter-state road transport, etc.), (iii) presence at the key components of the international transport chain (ports, frontiers, transit points) and (iv) handling of problems encountered by shippers.

(2) Transport Master plan

1) Transport Strategy (2011-2025)

Burkina Faso had the transport strategy for the period from 2011 to 2025. The key principles that guided the development of the strategy are the following:

- Developing a network of infrastructures in adequacy with the needs of the economy and performing sectors, especially taking into account the characteristics of the generated transport flows,
- Updating transport services in order to meet the needs of people and economy, paying special attention to rural areas by developing intermediary transport means (MIT),
- Making fluid international traffic and improving transit conditions,
- Adapting institutional and regulatory framework to the new context of development,
- Insuring environmentally friendly development,
- Supporting regional integration.

Per subsector and per cross-cutting topic (regulations, environmental and social concerns, funding), the key strategic axes retained are as follows:

Interurban and International Road Transport (5 axes)

In order to tackle the constraints and difficulties experienced by the interurban transport subsector, the major strategic policies retained are as follows:

Axes 1: Developing and strengthening the road network
Axes 2: Improving transit conditions on international corridors
Axes 3: Reinforcing the roads management
Axes 4: Reinforcing traffic services competitiveness
Axes 5: Consolidating regional integration

Rail Transport (4 axes)

In the face of the constraints experienced by the railroad subsector, the policy should include three main goals in order to bring about an effective and completive railroad system for Burkina Faso: (i) building the operational capacities of the current railroad system and (ii) extending railroad within both Burkina Faso and other countries in the sub-region, (iii) building stakeholders' capacities. The policy includes the following four axes:

Axes 1: Improving performances of the current railroad system
Axes 2: Extending railroad system within both Burkina Faso
and other countries in the sub-region
Axes 3: Building capacities
Axes 4: Strengthening training in the subsector

3.3.2 Road Transport

Burkina Faso road network has changed over the past ten years due to investments and reforms undertaken during this period. It has improved both on quantity and quality. It was originally 9,500 km long and moved to 15,300 km in the beginning of the decade, namely, in 2010 and the length of tarred roads increased by 50 % over the last ten years.

A number of reforms were also carried out giving ride especially to new classification of the road system and a sharing of competences between the central administration and regions.

This mainly concerns the rural road and classified road system within the Government jurisdiction. The transformation of the road maintenance funding into a first generation fund (FER-B) equally made possible for better resource mobilization and management.

Despite all these improvements, the road system and transportation are still facing many difficulties the most important of which are as follows:

- Low coverage by the road system compared to countries in the sub-region as well as low rate of tarred roads.
- Problems of access to sea hinder the competitiveness of the economy. Time spent each km for transit in Burkina Faso international corridors is by 25 % to 70 % higher than time spent in East Africa corridors.This leaves room for great improvements for service delivery in the corridors.
- The current FER-B reform (first generation fund) does not allow for the autonomy necessary for meeting the needs for maintenance at the right time and in effective way. The length of market procurement procedures and bureaucracy also jeopardize performance.
- An increase of the phenomenon of overload (more than 34 % of trucks searched on classified roads are overloaded) compounds the protection of roads.
- Transport services undermined by divisions (high atomicity), low professionalization and vehicle fleets both old enough and most often not operational. This accounts for a low control of costs and an inefficient use reflected in low rates of viability, low investment and in an increasingly insecure professionalization striving for survival instead of development and growth.
- Distribution quotas between Burkina Faso shippers and their counterparts from transit countries and a “queuing system” that help keep the least effective operators, put on prices and account for the degradation of the viability of the activity.

(1) Road Network

The Burkina Faso road network comprises a graded network 15,296 km in length. The graded network is managed by the Ministry of Infrastructure and Development.

The density of the graded Burkina Faso network is 5.6 km/100 km² and 105 km/100,000 inhabitants. Most of the graded roads in Burkina Faso are earth, with only one portion of 20 % asphalted.

The graded Burkina Faso network is divided into three categories: the national roads, the regional roads and the country roads.With a length of 6,728 km, the national roads connect the main towns of the regions and ensure a link with the road networks of border countries. 45 % of national roads are asphalted, the remainder being primarily composed of ordinary earth roads. The regional roads fulfill the task of serving provinces and establish links between the main provincial towns. 1 % is asphalted, with the ordinary earth roads, followed by the village tracks

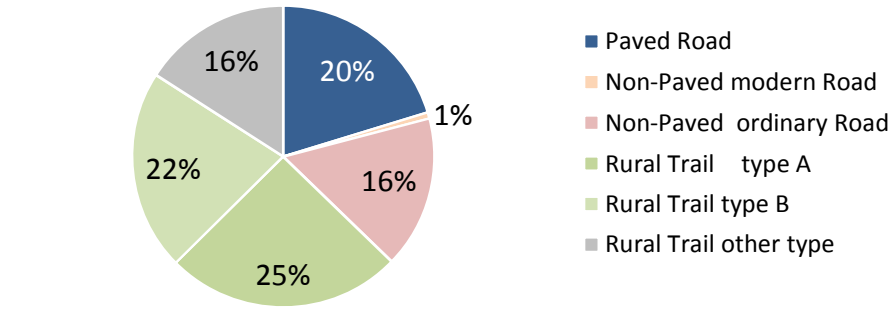
(summary maintenance) actually constituting virtually all the regional road network, which is reflected in the ceaseless traffic problems affecting the routes.

Table 3-4 Road length by classification in Burkina Faso (2011)

Unite: km

Class	Paved Road	Non-Paved modern Road	NonPaved ordinary Road	Rural Trail type A	Rural Trail type B	Rural Trail other type	Total
National	3,059	102	2,233	475	264	595	6,728
Reagional	28	0	161	1,720	490	1,145	3,544
Depart-m	13	0	103	1,677	2,537	694	5,024
Total	3,100	102	2,496	3,872	3,291	2,433	15,296

Source: Ministry of Infrastructure and Development of Burkina Faso

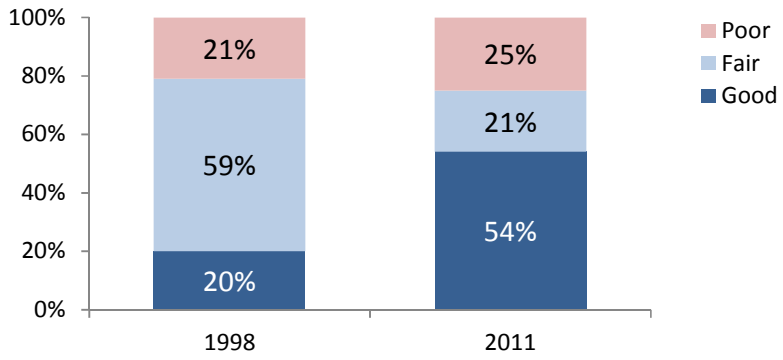


Source: Ministry of Infrastructure and Development of Burkina Faso

Figure 3-10 Road classification share in Burkina Faso

(2) Condition of the Graded Road Network

Figure 3-11 show that a significant portion of the network is in a good to average condition. 54 % of the graded Burkina Faso network is in good condition as opposed to 21 and 25 % in an average and poor condition respectively, which represents a significant improvement in terms of the road system. However, a certain number of projects involving leveling and reinforcement of arterial roads are underway, particularly in regions of Sahel, des cascades and the Sahel, which should consolidate the portion of well-maintained roads.



Source: Ministry of Infrastructure and Development of Burkina Faso

Figure 3-11 Road Conditions of paved road in Burkina Faso

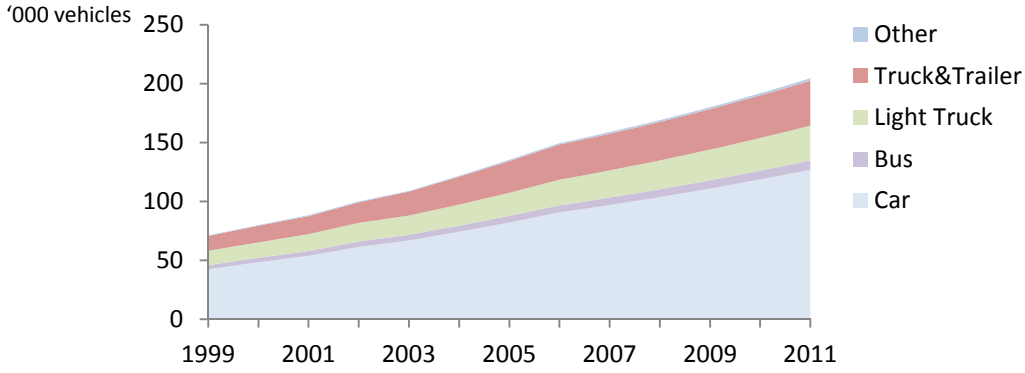
(3) Vehicles Fleet

The Burkina Faso number of vehicles increased significantly during the period 1999 – 2011, with the total number rising by 70 %. The vehicle fleet will triple around every 12 years.

The structure of number of vehicles is dominated by "passenger cars" which comprised up to 61 % of the overall total in 2011. Vans followed, making up 15 % of the total fleet. The proportion of Heavy Goods Vehicles (HGV) rose to 20 %, 4 % of which was buses, and the remainder goods vehicles: Trucks (9 %), trailers (5 %) and road tractors (5 %).

In total, the number of vehicles is characterized by a relatively high average age. Almost 55 % of the vehicles are more than 20 years old and 80 % of the vehicles are more than 16 years old. Vehicles less than 5 years represent barely 5 % of the fleet,which drops to 4% for private cars.

The slow pace of renewal and the decision to purchase used vehicles are the main causes explaining the dilapidated nature of the fleet.According to operators in the sector, the phenomenon affects all categories in the fleet, with taxis and trucks worst affected.



Source: Ministry of Transport of Burkina Faso

Figure 3-12 Evolution of Vehicle fleet in Burkina Faso

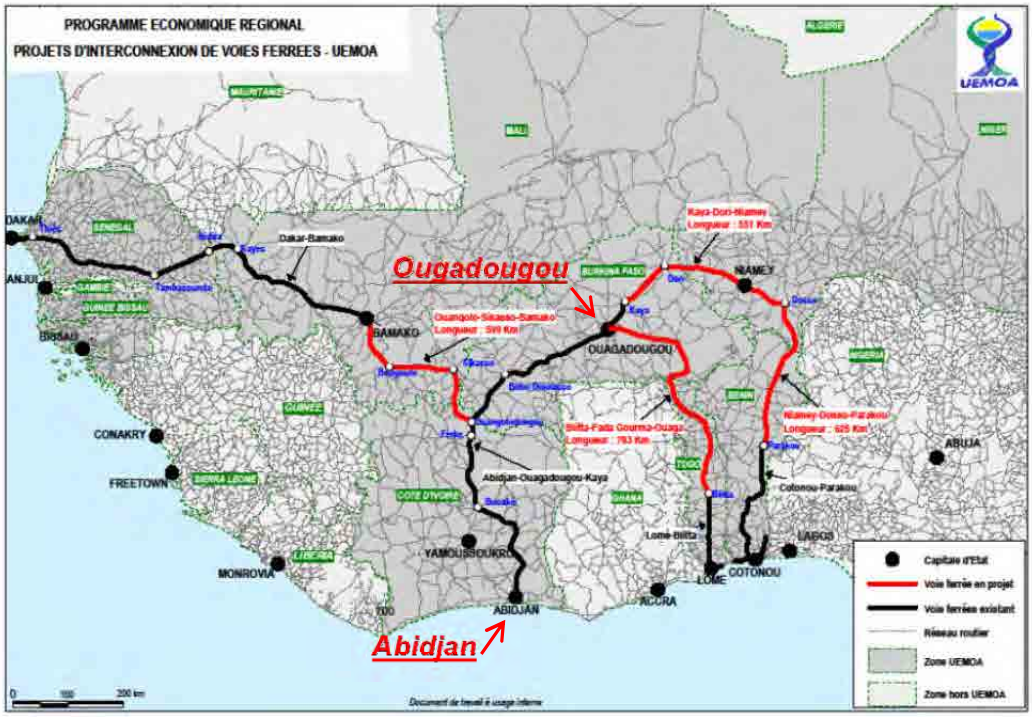
3.3.3 Rail Transport

Though freight transport increased after commissioning Ouagadougou - Abidjan line in 1995, the shortage of railroad equipment and the poor state of the line prevented actual growth of this line.

On the other hand, despite the fact that concession with SITARAIL has to with the technical and commercial operation of traveller transport service, the private operator was reluctant right from the outset to use this line, rather wishing to focus on goods transport, considered more profitable.

Thus, the reduction of the number of trains, stations and the quality of service delivery have worsened the isolation of cities and villages located within the sphere of influence of the railroad just as concession.

Regarding the servicing of the country and connection of the railroad network to the other countries in the sub-region, the limitation of the current railroad to the current unique Ouagadougou-Abidjan line accounts for loss of opportunities such as the manganese mine at Tambao, whose proven volume is estimated to 19 million tons; this mine is not yet operational because of the absence of railroads. In contrast, the reduction of the vertical orientation of railroads and the consolidation of the competitiveness of Burkina Faso economy are partly attained because of the inexistence of railroad connections with neighbouring countries.



Source: UEMOA

Figure 3-13 Railroad Network (Ouagadougou-Abidjan)

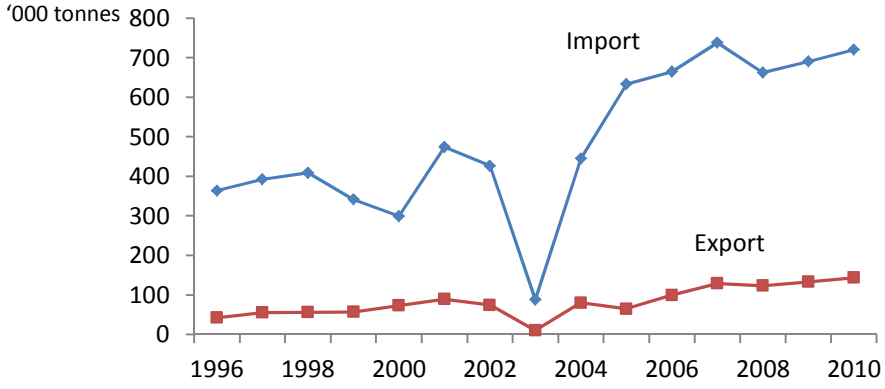
(1) Demand of Railroad Transport

1) Freight Traffic

The sector of transit transportation has always been the key component of Burkina Faso rail traffic, the proportion of national traffic not exceeding 5 % of total traffic at its peak, a figure achieved in 2001.

The progression in freight traffic from 1995 reflects the efforts made by SITARAIL in terms of railroad freight transportation by adjusting the frequency of trips and the transport cost.

This significant increase was halted by the Ivorian crisis in 2002, particularly in terms of "imports". In just one year (2003), international freight traffic plunged to 130,000 tons, namely 4 times less compared to the previous year. However, the pace of trade volume has rapidly recovered to pre-conflict levels, confirming the return to normality and progressive stabilization of the crisis in the Cote d'Ivoire.



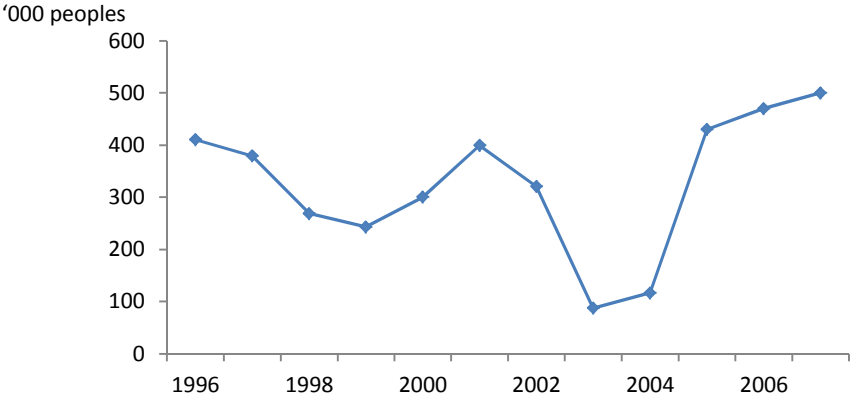
Source: Ministry of transport of Burkina Faso

Figure 3-14 Freight traffic (Ougadougou-Cote d'Ivoire)

2) Passenger Traffic

Passenger traffic showed certain irregularities, with an initial dip between 1998 and 1999, followed by a significant slump in 2003 linked to the Ivorian crisis, where the number of passengers was reduced by around 3/4 compared to 2001, to reach 100,000 in the course of this year. Other factors may also explain this drop:

- The stiff competition from road transport, which offers four round-trip buses on the Ouagadougou-Abidjan route and around forty trips per day between Ouagadougou and Bobo Dioulasso,
- The high rail fares, in a sector which SITARAIL considers lacking sufficient profitability,
- A service level characterized by (i) chronic delays and (ii) poor planning and management capacities.



Source: Ministry of transport of Burkina Faso

Figure 3-15 Passenger traffic (Ougadougou-Cote d'Ivoire)

3.4 Niger

3.4.1 Overview of Transport Sector

(1) Related Organization

1) Ministry of Transport

The department administers the area of all transport in Niger. The chart above has been simplified and only shows the departments and divisions that are the subject of this study of updating the SNT. There are no general directorates within this ministry for the transport part. The Secretariat General of the Ministry ensures the hierarchical supervision of 9 directions.

Road transport is the domain of the Directorate of land, sea and river Transport (DTT / MF). DTT / MF ensures the design and implementation of transport policy, the development and implementation of laws and regulations in its field, the programing and coordination of road safety, the coordination of transport modes, the delivery of various documents and transport titles.

2) Ministry of Equipment

The Ministry of equipment administers the roads. It has among its missions the design and implementation of the public policy on transport infrastructure.

The Ministry of equipment performs the mission of planning and definition of policies and strategies. It also entrusted with the road administration o the national level. It sets the works programing according to the policy and guidelines set by the government in matters of road infrastructure. It coordinates, plans the routine and periodic maintenance of roads works. It drafts the budget for road maintenance based on visual network degradation surveys.

3) CAFER (Autonomous Coffer for Funding Road Maintenance)

To ensure greater stability, consistency and transparency in the funding of road maintenance, an autonomous coffer for funding road maintenance (CAFER), managed by the "Roads Board" was established in November 1999. A diagnostic study of the mechanism of organization and financing of CAFER conducted in 2002 revealed a number of weaknesses that were partially resolved in July 2005 with the revision of the Road Fund statute. The incomes are based primarily on a specific tax on fuel, and on a part of tolls on paved roads.

The major objective of CAFER is to finance the maintenance of the national road network but it also helps to maintain rural roads (10 % of the annual budget) and some urban roads (also 10 % of the annual budget), and manages toll roads and weighbridges.

(2) Transport Master plan

1) The National Transport Strategy

The mining and petroleum potential of Niger make believe an important development of the transport sector. It is to anticipate the future needs for infrastructure and transport means that a National Transport Strategy document was commissioned with support from the World Bank. The New National Transport Strategy 2011-2025 which replaces the one of 2004, will diagnose all sub-sectors (road, rail, air, river and sea) and propose an action plan covering the period 2011-2025. The final document was submitted to be approved and adopted by the government which will organize a roundtable of donors to finance the action plan.

- The targeted objectives with the fundamental principles of transport regime are:
- The external and internal opening of the country;
- The improvement of the quality of services and road safety;
- The mastery of transportation costs.

3.4.2 Road Transport

Road transport is the largest in Niger: it accounts for 95 % of the transport market at least. It is divided in passenger transport and freight transport. The economic crisis facing the country has revealed several structural and organizational problems among which:

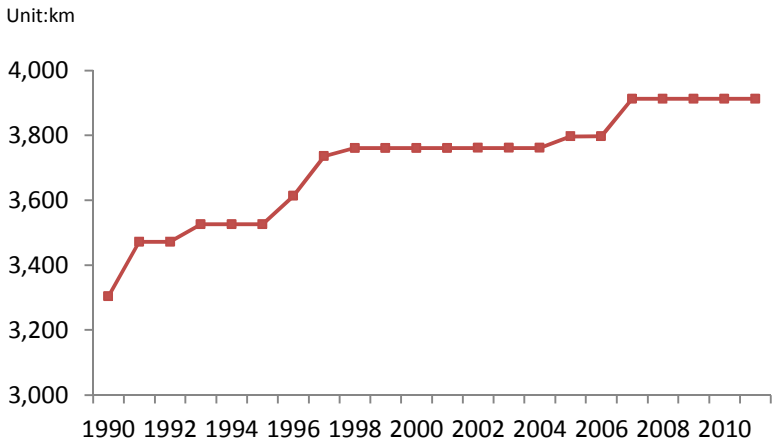
- The low profitability of transport companies
- The overcapacity in transport offer
- The obsolescence of the equipment
- The lack of supervision and training structures
- The road insecurity
- The low professional qualification of operators.

In 2007, the total length of roads is 18,949 km in all categories. The ranked linear which is 12,760 km including tracks. Only 10,430 km are likely to be maintained by the DGTP (including 3,912 km of paved roads of which 10 % are in poor condition and 6,518 km of earth roads including 31% in poor condition).

(1) Road Network

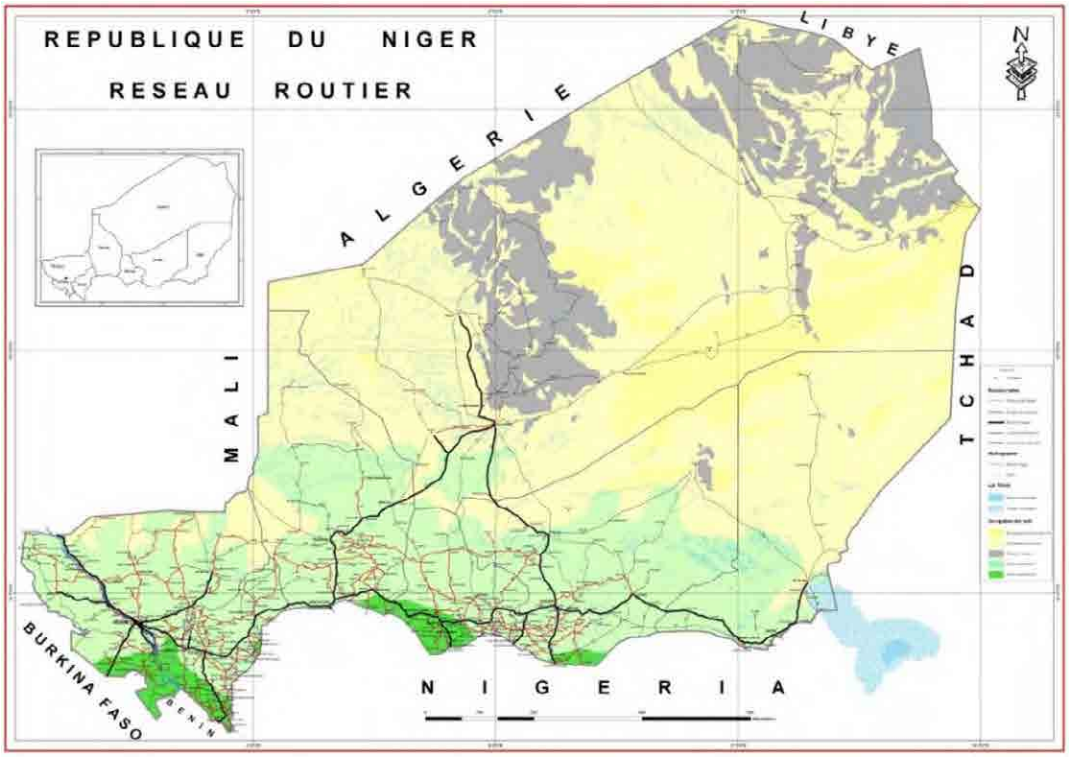
Following the data produced by the Ministry of, it was possible to reconstruct and develop the contours of the different road linear developments in Niger over the period 1990 to 2011.

The paved network in Niger follows a steady increase. This network, which condition is improving between 2001 and 2011 is a structuring important network for the national and international transport. We must not neglect the fact of the important evolution of the heavy vehicles fleet, the recurring problem of overloading, meaning important attacks on infrastructure and the reduction of the duration of life of a road of this type. These phenomena of impact on the road added to an increase of the covered linear will result in very significant financial consequences for Niger in the short run in the maintenance of its network or its rehabilitation.



Source: Ministry of Equipment of Niger

Figure 3-16 Evolution of Paved Road in Niger

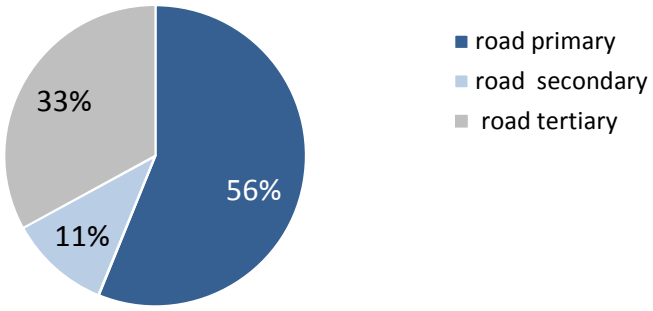


Source: Ministry of Equipment of Niger

Figure 3-17 Road Network in Niger

1) Interurban Road Network

The road data base managed by the General Directorate for Public Works (DGTP) within the Ministry of equipment provides an inventory of interurban road network on the basis of the technical classification of roads by type and depending on the traffic.

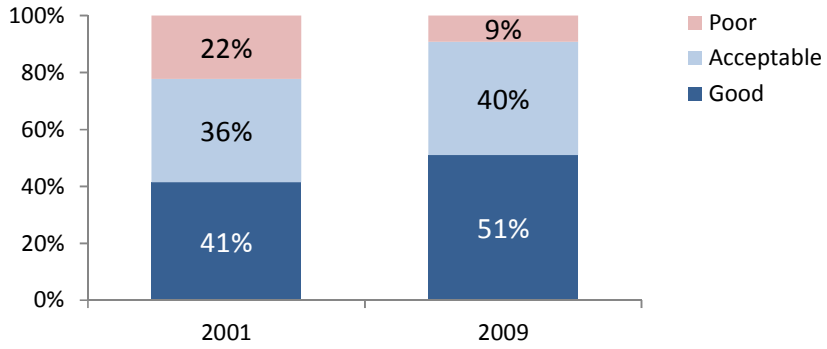


Source: Ministry of Equipment of Niger

Figure 3-18 Road classification share in Niger

2) The Status of the Paved Road Network

Figure 3-19 shows a significant improvement in the condition of the network between 2001 and 2009. The good condition increased by 10%. On the other hand, the poor condition has been reduced by 13%.



Source: Ministry of Equipment of Niger

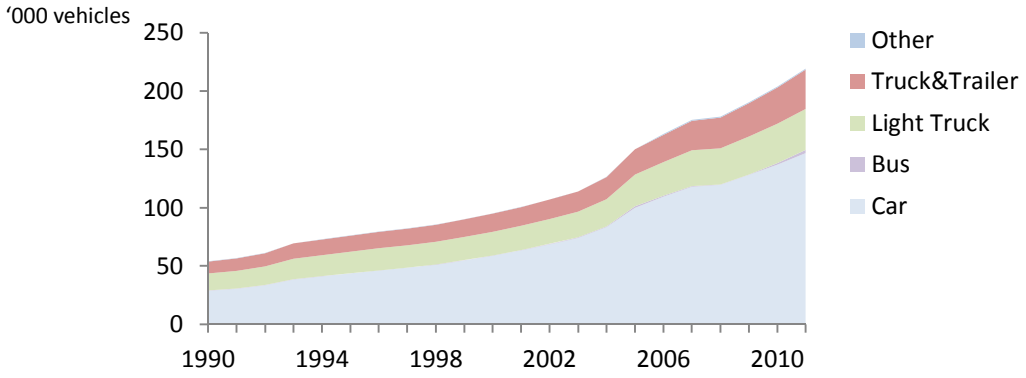
Figure 3-19 Road Conditions of paved road in Niger

3) Vehicle Fleet

Figure 3-20 shows in figures the evolution in number of cars in Niger from 1990 to 2011 and the number of vehicles by type of automobiles: These data show that the Nigerien fleet rose sharply in the category of heavy vehicles.

The increases in other categories of light vehicles rise sharply for the category of light trucks and naturally for private vehicles. These statistical data on the fleet in Niger must be correlated with the traffic figures recorded.

In any event, the huge increase of heavy vehicles has important implications on the paved network and on the ground network and on the state of network degradation.



Source: Ministry of Transport of Niger

Figure 3-20 Evolution of Vehicle fleet in Niger

3.4.3 Rail Sector

Niger does not have a railroad network in its territory but it operates as a co-owner with Benin, the rail network which is currently fully in Beninese territory. This railroad is managed by the OCBN (Organisation Commune Benin-Niger des Chemins de Fer et des Transports). This company is under concession given the difficulties it encounters. Other rail terconnections are planned within the framework of ECOWAS.

3.5 Cote d'Ivoire

3.5.1 Overview of Transport Sector

(1) Related Organizations

1) Ministry of Economic Infrastructure

The MIE defines and conducts the national policy on transport infrastructure. As such and in conjunction with the different ministries, it has the initiative and responsibility of project ownership, monitoring, design and implementation of road networks and their maintenance and the regulation of their management.

The General Directorate of Road Infrastructure (DGIR) has been created by Decree organizing the Ministry of Economic Infrastructure at the end of the road network reform.

It appears that the powers of the DGIR in terms of assets management policy can overlap with those of AGEROUTE in programing for the network management. To perform its tasks the DGIR can rely on three departments but also on the disseminated directions (regional and district) of the ministry of Economic Infrastructure.

2) AGEROUTE (Agency for Road Works and Management)

The AGEROUTE is a state owned-enterprise under the management of the Ministry of Economic Infrastructures.

Its mission is to provide state assistance for the implementation of management tasks of the road network for which it is responsible. To this end, the Agency is responsible for the execution of missions entrusted by the State, including the preparation and execution of programing tasks, procurement, works monitoring, network surveillance and the constitution and operation of road data banks.

The statutes also say that the Agency is responsible for ensuring the payment on studies services, routine maintenance and periodical maintenance. The AGEROUTE resources mainly come from the FER but are limited.

3) Road Maintenance Fund (FER)

The Road Maintenance Fund is a state-owned company under the supervision of MIE and Ministry of Finance and Economy. It is about a second generation fund created by a 2001 decree. The purpose of the FER is to ensure the financing of the services related to "project ownership, project ownership consultancy, studies ownership and the implementation of road maintenance and road periodical maintenance."

(2) Transport Master Plan

1) Presidential Programme

The presidential programme "Living Together" has been drafted in 2008 for the presidential election campaign originally scheduled this year, which first round was held in October, 2010.

Regarding roads, the programme put emphasis on the necessity to keep up the assets by scheduling rehabilitation and strengthening of the tar roads network, the filling of ground roads and the resumption of routine road network maintenance. No doubt this part of the programme is more topical than ever since during the last three years, the maintenance deficit has worsened the situation. The programme included the progressive development of the transport system, including:

- The gradual resumption of paved roads construction,
- The progressive extension of the highway north and the construction of the Abidjan-Bassam Express
- Continued expansion and modernization of the ports of Abidjan and San Pedro by improving their land links with their hinterland, especially by the construction of a railroad to export mining products North-West regions of the country through the port of San Pedro depending on the mineral resources development programme,
- Rehabilitation of the airports inside the country for a resumption of domestic regular flights,
- Encouraging the renewal of public transport of passengers and merchandises fleet.
- The development of urban transport.

2) Draft Strategic Framework

In February 2009, the Ministry of Economic Infrastructure had prepared draft maintenance and transport infrastructure development strategy offering a vision, objectives and a strategy as well as an indicative programme of action. This draft can be usefully exploited for this study.

3) Poverty Reduction Strategies Document (PRSPs)

An earlier version of this paper was drafted in 2002 and resumed in 2008 and approved by the government of the moment. Following this approval, a specific document related to infrastructures and transport services has been prepared in 2009 in order to present a draft action plan according to four programmes:

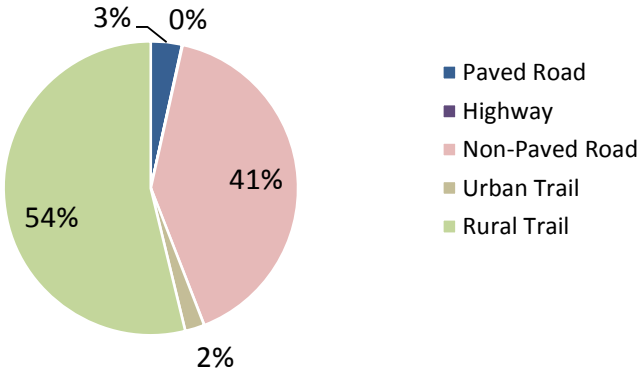
- A joint institutional support programme,
- A road infrastructure development programme,
- Other modes infrastructures development programme,
- A stimulus package for transportation services.

3.5.2 Road Transport

(1) Road Network

The road network Ivorian has strongly been developed since the independence until 1990, then the pace slowed to a complete halt between 2000 and 2010 during the years of conflict.

The road network leaped from 25,000 km of all types of road in 1960 to 80,000 km in 2000: the network of ground roads has been multiplied by three during that period and the paved network by nine. The 6,500 km of paved roads include a highway section of 140 km long from Abidjan towards the center of the country to reach Yamoussoukro.



Source: Ministry of Economic Infrastructure of Cote d'Ivoire

Figure 3-21 Road classification share in Cote d'Ivoire (2010)

Source: AGEROUTE of Cote d'Ivoire

Figure 3-22 Road Network in Cote d'Ivoire (2011)

(2) Road Conditon

The table below shows the classification by level of quality established in 2002. The general situation of the roads was then classified in three levels ranging from "very good" to "very bad."

It was observed at that time that 50 % of the covered network was in a good or very good situation despite its advanced age, which is explained by a good quality in its construction at the origin. Yet, the situation certainly progressed in the bad sense during these last years due to lack of maintenance and reinforcement works. In fact, only 100 km of road (Abidjan-Adzopé road) undergone reinforcement works.

Thus, the proportion of the network requiring urgent intervention which was one-third of the network for 1,700 km has likely increased heavily during the last years.

Table 3-5 Paved Road condition in Cote d'Ivoire (2002)

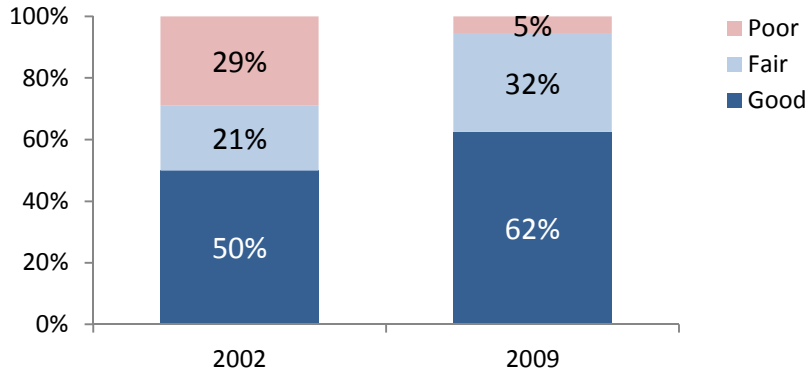
	Very good	good	average	bad	Very bad	Total
Length(km)	599	2,475	1,264	1,008	766	6,112
Percentage	10 %	40 %	21 %	16 %	13 %	100 %

Source: AGEROUTE of Cote d'Ivoire

Table 3-6 Paved Road condition in Cote d'Ivoire (2009)

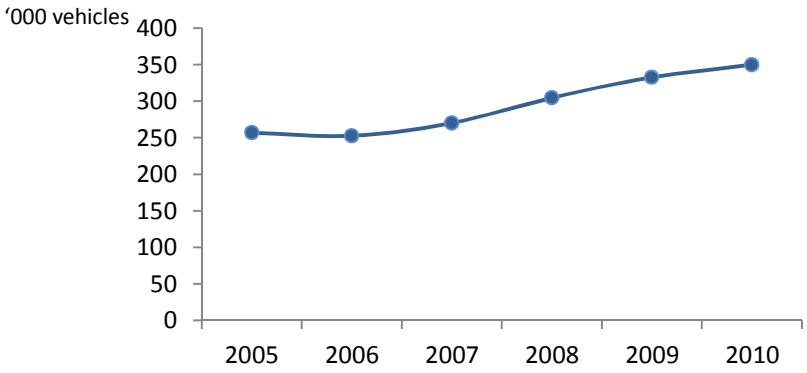
	0 à 10 % of the length is degraded	10 à 50 % of the length is degraded	More than 50 % of the length is degraded	Total
Length(km)	2,874	1,479	249	4,602
Percentage	62 %	32 %	5 %	100 %

Source: AGEROUTE of Cote d'Ivoire



Source: AGEROUTE of Cote d'Ivoire

Figure 3-23 Road Conditions of paved road in Cote d'Ivoire



Source: Ministry of Economic Infrastructure of Cote d'Ivoire

Figure 3-24 Evolution of Vehicle fleet in Cote d'Ivoire

3.5.3 Rail Sector

Cote d'Ivoire has a single railroad line with a metric line built between in 1905 and in 1954 linking Abidjan to Kaya in Burkina Faso and going through Ouagadougou.

This line is 1,260 km long (1,155 km according to SITARAIL) including 639 km are in Cote d'Ivoireand generally has a single lane except 25 km having a double track. The Ivoirian rail network comprises 35 stations and 18 halts for service in important cities of the country like Agboville Dimbokro, Bouake, Katiola and Ferkessedougou.

Because of the problem of equipment, speed of service is limited to 50 km/h for passenger and 40 km/h for freight.

3.6 Ghana

3.6.1 Overview of Transport Sector

(1) Related Organizations

The Ministry of Roads and Highways (MRH) is responsible for policy development, coordination and oversight of road infrastructure including oversight of the Department of Urban Roads (DUR), Department of Feeder Roads (DFR), The Ghana Road Fund (GRF) and Ghana Highways Authority (GHA).

The Ministry of Transport (MOT) is responsible for policy development, coordination and oversight of aviation, inland water and maritime, railroad transport sub-sectors.

In recent years both Ministries have come together to formulate the National Transport Policy, Transport Sector Development Programme and their respective Sector Medium Term Development Plans. With the implementation of the integrated transport planning process, there has been an increase in the number of formal mechanisms for collaboration and coordination between the Ministries. However, without a clear mandate for coordination and integration between the modes, as has been experienced in the formulation of Integrated Transport Plan for Ghana 2011-2015, attendance at the formal integration meetings is threatened by more 'pressing' sub-sector issues and therefore priorities tend to be determined by the formalised sub-sector mandates.

(2) Transport Master plan

Transport Sector policy in Ghana is primarily informed by Government's national development goals and objectives. In formulating the National Transport Policy, it was shown that the Sector responds to a wide range of demands as indicated by the list below:

- International Standards, Sub-regional agreements
- Government's National Development goals and objectives
- Ghana's sectoral, regional and local policies and development plans
- Institutional, regulatory and technical issues impacting on the effectiveness of the Sector
- Constraints of the existing transport network
- Future demands of users

Over the years, this has meant a more complex decision making environment as well as gradual re-orientation from a project-led approach to a strategy-led approach to planning investments in the Sector. This re-orientation was characterised by the introduction of a National Transport Policy (NTP) in 2008, setting out the priority goals and objectives for the sector, in response to Government's strategic objectives for growth and development.

The extent of change currently underway in Ghana's policy and planning framework is illustrated well by the following list of Government documents that have, or continue, to set strategic objectives for the sector:

- Road Sector Development Programme (RSDP) 2002-2008, a 1.2billion USD programme of investment in road infrastructure, regulation, institutional development and capacity building.

- Ghana Poverty Reduction Strategy II (GPRSII) 2005-2009, a strategic and coordinated national development programme

- National Transport Policy (NTP) 2008-2012, reflecting development objectives set out in GPRSII and previous Vision 2020, also reflecting international standards, sector demands and constraints in the existing transport network.

- Transport Sector Development Programme (TSDP) 2008-2012 and updated 2009-2013, an integrated programme of activities reflecting the NTP Goals with a programme of activities budgeted at 4.8 billion USD with a 2.4 billion USD funding gap.

- Sector Medium Term Development Plan (SMTDP) 2010-2013, adapted from TSDP, reviewed against NTP and new Government development objectives. (Superseding the TSDP but inheriting TSDP budget and funding forecasts)

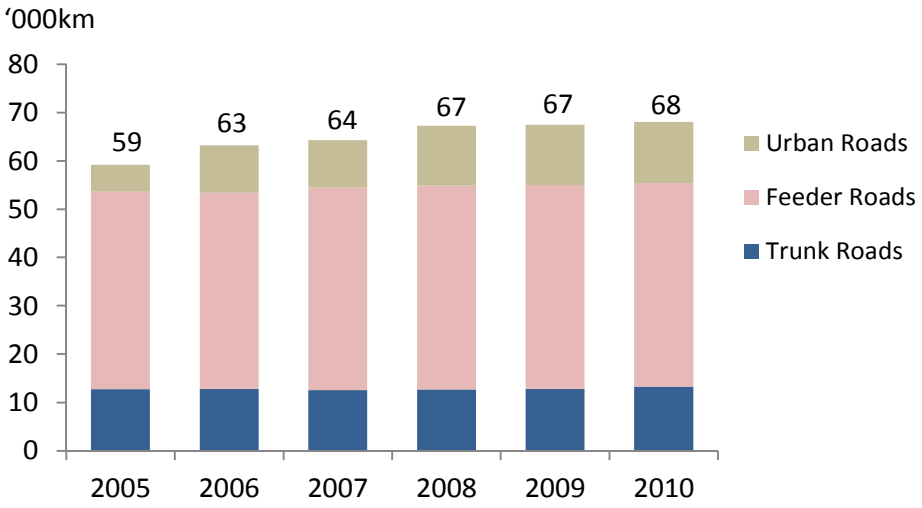
- Ghana Shared Growth and Development Agenda (GSGDA) 2010-2013, being compiled by National Development Planning Commission (NDPC) from SMTDPs provided by sector Ministries (superseding GPRSII as Government's strategic national development plan).This is National Medium Term Development Plan in Ghana.

- Integrated Transport Plan for Ghana 2011-2015, proposing a range of infrastructure developments, institutional and regulatory measures aimed at improving the effectiveness of Ghana'stransport system. Investments in infrastructure have been prioritised for the plan period and targeted at locations to overcome capacity constraints and where economic viability has been proven.

3.6.2 Road Sector

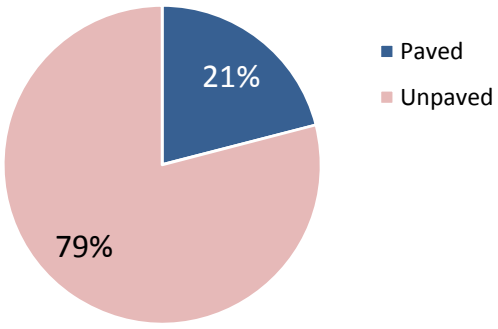
(1) Road Network

The road network in Ghana is 68,053 km as at the end of 2010. This represented an increase of 0.9 % over the 2009 inventory. The network distribution by class becomes 19 % trunk roads, 62 % feeder roads and 19 % urban roads. The increase in the network size is as a result of an increase of 424km in trunk roads and 200 km in urban roads. According to GHA, the length of trunk road will be increased to 13,344 km at the end of 2011. In the total road length, 21 % of total is paved in 2010 compared to 20 % in 2009. 79 % of the entire network unpaved as the end of 2010.



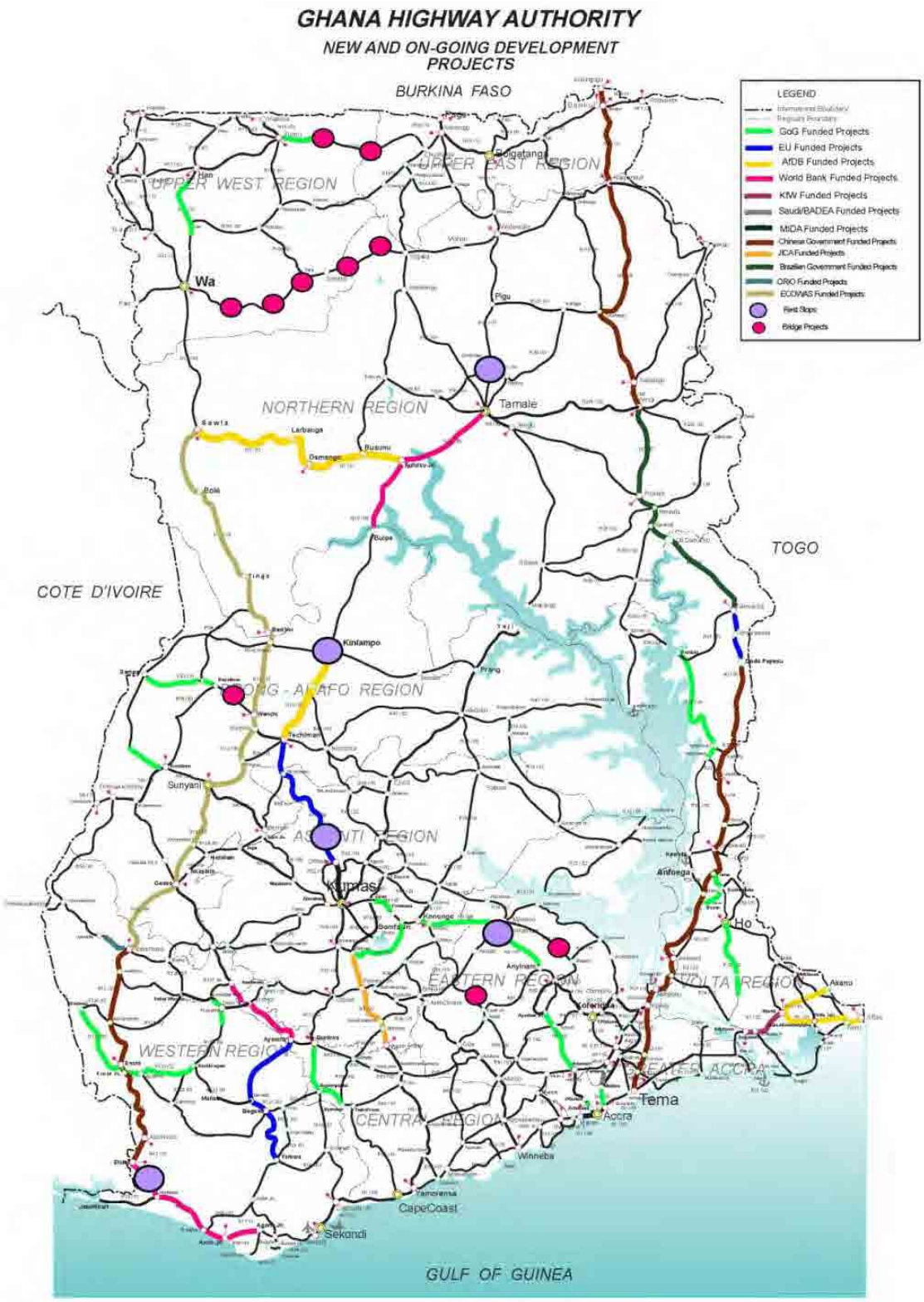
Source: Statical and analytical report (transport indicators database), Ghana, 2012

Figure 3-25 Evolution of Road Network in Ghana



Source: Statical and analytical report (transport indicators database), Ghana, 2012

Figure 3-26 Road Network by surface Type in Ghana

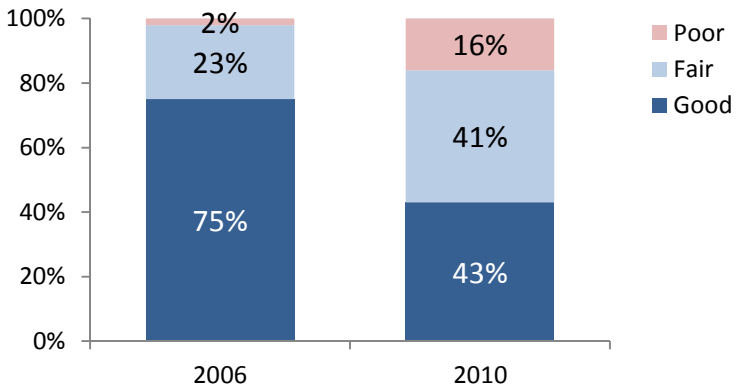


Source: The Ministry of Roads and Highways of Ghana

Figure 3-27 Trunk Road Network in Ghana

(2) Road Conditon

The paved trunk roads in good condition have been on a decline from 75 % in 2006 to 43 % in 2010. Sections in poor and fair condition also increased from 23 % to 40 % and 2 % to 17 % respectively in 2006 and 2010. The paved trunk road condition mix currently stands at 43 % good, 41 % fair and 16 % poor in 2010.



Source: Ghana highway authority

Figure 3-28 Road Conditions of paved trunk road in Ghana

3.6.3 Rail Transport

The railroad in Ghana is divided into three routes:

- Western Line: Takoradi - Kumasi and branches to Awaso and Prestea;
- Central Line: Huni Valley - Kotoku and the Kade branch;
- Eastern Line: Accra - Kumasi and the branch to Tema.

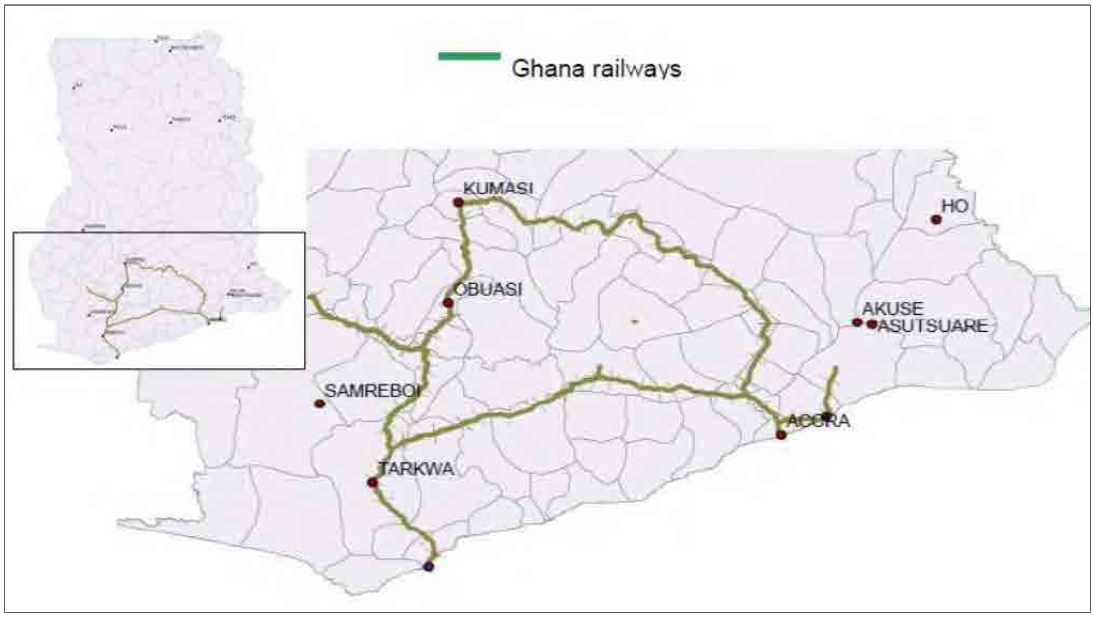
The railroad comprises 947 km of route, but 2/3rds of the system has not been operated for more than 12 years and would now require complete re-construction in order to restore services.

Only 1/3 of the system is operable and this at a time when:

- Transit traffic to hinterland has been growing
- Thr principal freight customers* offering more traffic and financial assistance

*GBC (Ghana Bauxite Company) / GMC (Ghana Manganese Company)

One third of the operable system provide services on the Western Line (dedicated to the transport of minerals) while on the Eastern Line the primary focus is on passenger traffic in and out of the capital. The Central Line is only occasionally used.



Source: Ministry of Finance and Economic Planning

Figure 3-29 Railroad Network in Ghana

3.7 Togo

3.7.1 Overview of Transport Sector

(1) Related Organizations

The Ministry of public works and the Ministry of transport is responsible for transport policy in Togo. These two ministries made jointly the declaration of road sector policy for the period 2011-2016 in December 2010.

The Ministry of Public Works has jurisdiction over all public works projects. Most public works projects are road projects and the ministry is responsible for all processes from construction to maintenance.

The Ministry of Transport has jurisdiction over matters relating to land traffic (passenger and freight transport), ports, airports, weather, etc. It also has jurisdiction over the Port Authority of Lome (PAL) and the Shippers Councils.

(2) Transport Master Plan

1) National Transportation Strategy

The Ministry of Transport is expected to develop a national transportation strategy during the year under the cooperation of AfDB.

2) New Strategic Orientations for Road Maintenance and Road Sector Development

The definition of a road transport policy falls within the objectives of the adjustment policy, economic development and poverty reduction and economic growth strategy and is supported by development partners including the European Union.

This development strategy of the sector is a voluntary act embodying the Government's priority to the transport sector.

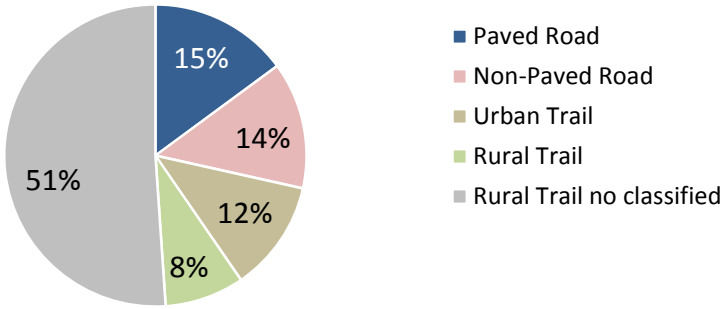
The objectives of the Government's policy for the sector are:

- Improving the mobility of goods and people and poverty reduction;
- Improving the competitiveness of Togolese products on domestic and foreign markets, through a reduction in transport costs and improved quality of service;
- Improving the effectiveness of the sector to support the economy and contribute to its growth;
- The development of agricultural potential in still isolated areas;
- Ensuring the competitiveness of the Togolese corridor starting from the Autonomous Port of Lomé to supply the hinterland countries.
- The implementation of an autonomous and sustainable development of the sector.

3.7.2 Road Transport

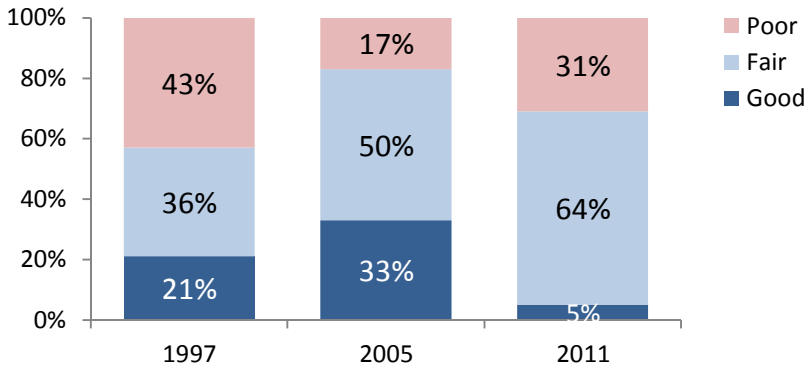
Togo has the form of a corridor with an area of 56,600 km ² with a coastline of 53 km on the Atlantic Ocean. The country has a road network with a length of around 11,750 km. This coverage gives a density of 20.75 km per km ².

The road network is composed of national paved roads (1,750 km) and unpaved roads (1,600 km), urban roads (1,400 km) and classified rural roads (1,000 km) and unclassified rural roads (6,000 km). Construction and road maintenance has suffered the consequences of the sociopolitical crisis and the suspension of foreign aid that followed this crisis. The percentage of roads in "good condition", which in 2005 was 33 % for the national paved roads, fell in 2012 respectively to 5 %.



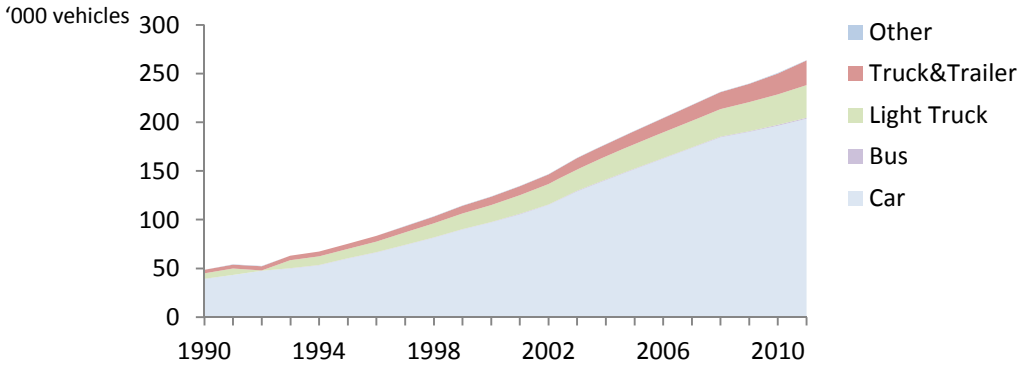
Source: Ministrye of public works of Togo

Figure 3-30 Road classification share in Togo



Source: Ministrye of public works of Togo

Figure 3-31 Road Conditions of paved road in Togo



Source: Ministry of transport of Togo

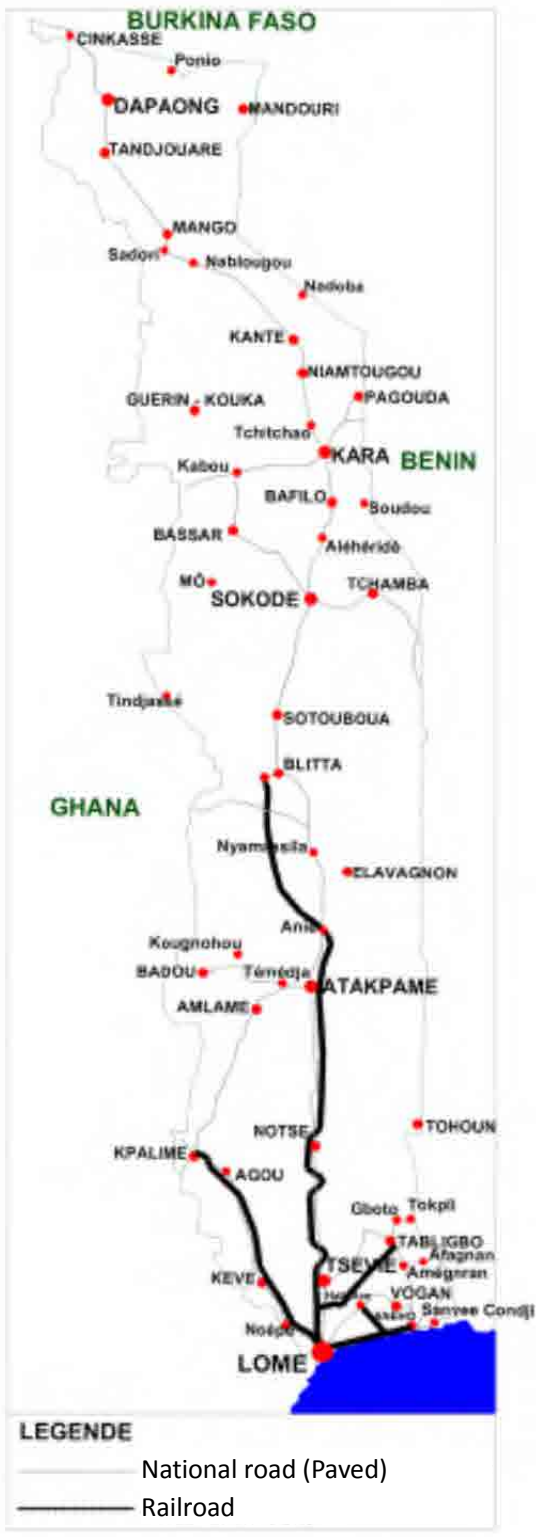
Figure 3-32 Evolution of Vehicle fleet in Togo

3.7.3 Rail Transport

Togo currently has 546 km of rail including 329 km built before 1913 during the German colonization, 113 km in 1933 during the French colonization and 104 km after the independence. The public network includes four sections that all leave Lomé towards Blitta (in the north, 276 km), Tabligbo (in the east, 58 km), Kpalimé (in the west, 119 km) and Aného (on the coast, 47 km). The first two sections are still used, the third is in a bad state and the fourth is abandoned. A private line of 46 km is used to transport phosphate ore from Hahotoè mine to the enrichment plant and export dock located at Kpémé.

The line to Blita is functioning as a dedicated freight line transportation of phosphate rock. However, it isn't on service now for maintenance of railroad.

Road Network



Railroad Network

Source: Ministrye of public works of Togo

Figure 3-33 Road and Railroad network in Togo

3.8 Benin

3.8.1 Overview of Transport Sector

(1) Related Organizations

The Ministry of Public Works and Transports (MTPT) has jurisdiction over all public works projects. The MTPT is responsible for planning, construction, maintenance and management in the transport sector.

(2) Transport Master Plan

The MTPT prepared the Stratégie sectorielle des transports actualisée (= Updated strategy in the transport sector) (2007-2011) in December 2007 as the plan for the transport sector. It is currently preparing the plan for the next period. The following items are stipulated in the 2007 annual plan.

Vision

The vision of the government is to develop Benin – a country currently in transition –towards a platform of logistic and export services, by providing others with an integrated system of efficient transport services and infrastructures.

Global objective of the sector

- The global objective of the transport sector with respect to new directions and recent developments are as follows: To develop and manage transport infrastructures and services to promote economic growth and social welfare.
- This global objective includes the following consistent objectives:
- To assure the mobility of people and goods under satisfactory reliability, safety, comfort, cost and environment preservation conditions;
- To support productive sectors and contribute to economic growth;
- To contribute to reducing poverty in urban and rural areas;
- To improve the technical, organizational and financial performance and efficiency of industries and operators of the sector;
- To increase the international competitiveness of the Beninese transport system.

3.8.2 Road Transport

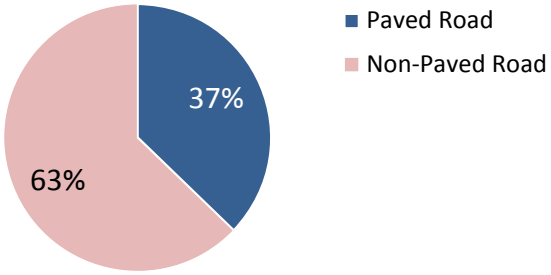
Investment in road maintenance and improvement in Benin has increased since the 1970s. In particular, a large amount of effort has been devoted to two routes that will enable regional integration with landlocked countries. Specifically, these consist of the route between Cotonou and Niamey and the route between Cotonou and Ouagadougou. In addition, work is proceeding on the paving of the East-West route connecting Togo – Benin – Nigeria with asphalt.

The total length of the national road network amounted to 5,945 km in 2011. Asphalt paved roads account for 37% (2,212 km) of the total length. A portion of the corridor connecting the landlocked countries has yet to be paved. The condition of asphalt pavement is good on 64% of the roads, and bad on 12% of the roads.

Table 3-7 Condition of Naitonal Road in Benin

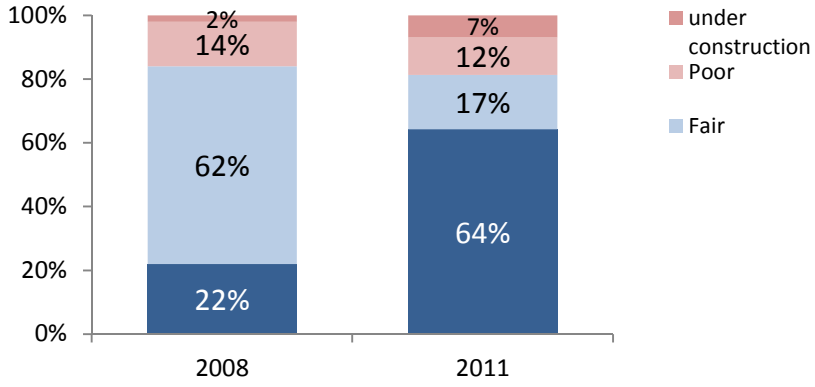
Paved Road	Non-Paved Road	Total
2,212km	3,733km	5,945km
37%	63%	100%

Source: Ministry of Public Works and Transport of Benin



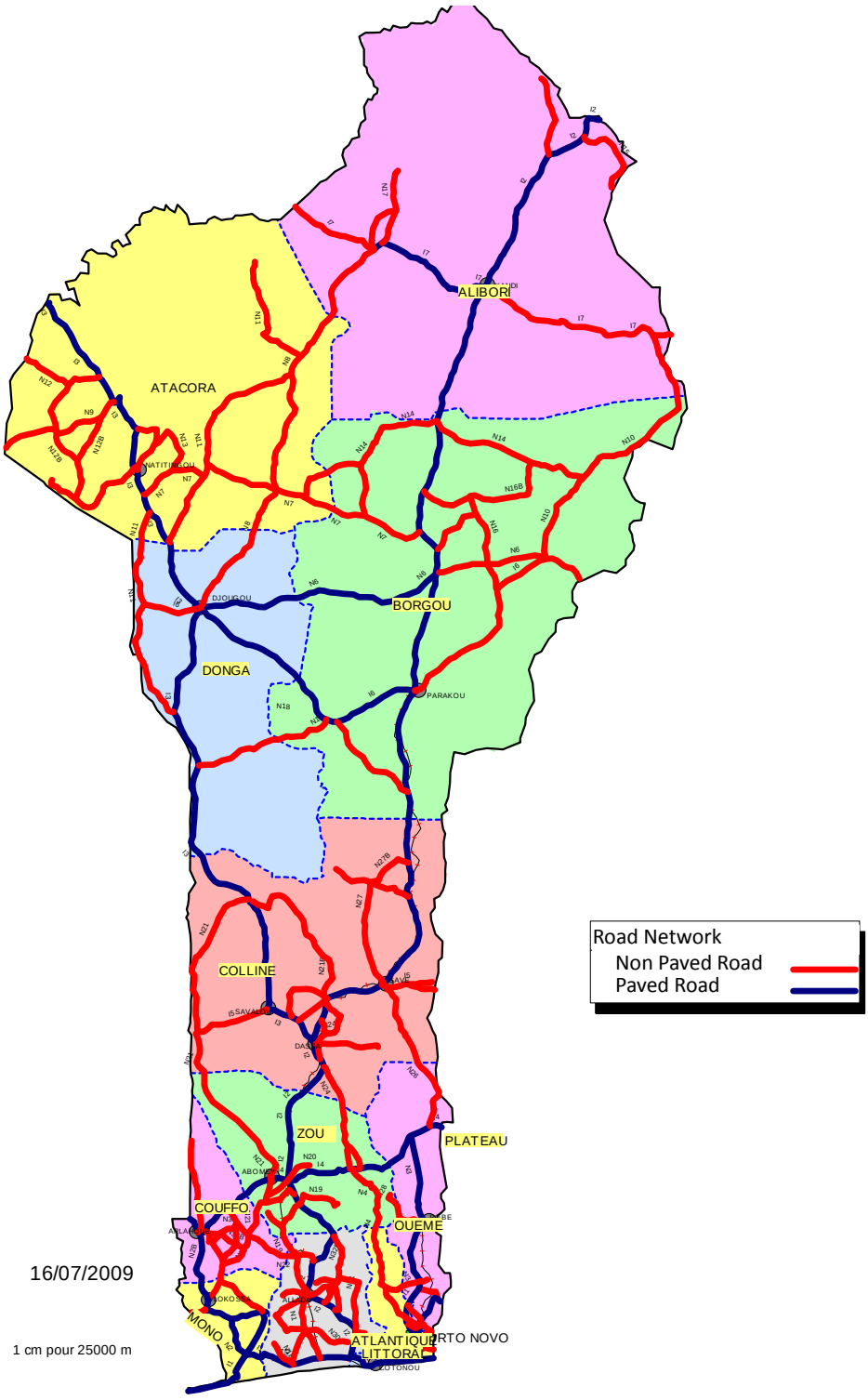
Source: Ministry of Public Works and Transport of Benin

Figure 3-34 National Road classification share in Benin



Source: Ministry of Public Works and Transport of Benin

Figure 3-35 Road Conditions of Paved Road in Benin



Source: Ministrye of public works and transport of Benin

Figure 3-36 Road Network in Benin (2007)

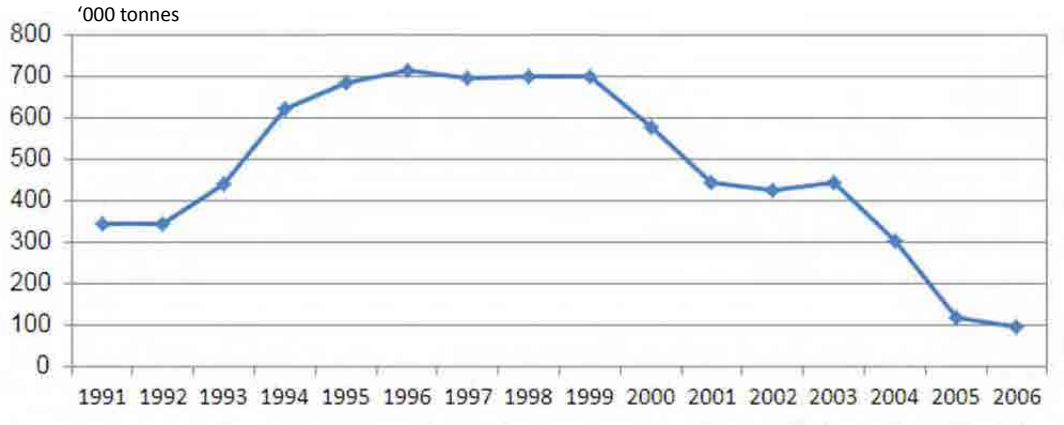
3.8.1 Railroad Transport

The railroad transport in Benin is assured by a company of two countries: OCBN (Benin-Niger Joint Organization for Railways and Transport) which is now operating a single line with a meter gauge and length of 438 km.

The Cotonou-Pobe and Cotonou-Segbohoue railway lines are currently not in operation but will be used for the inter-state connection under the ECOWAS project.

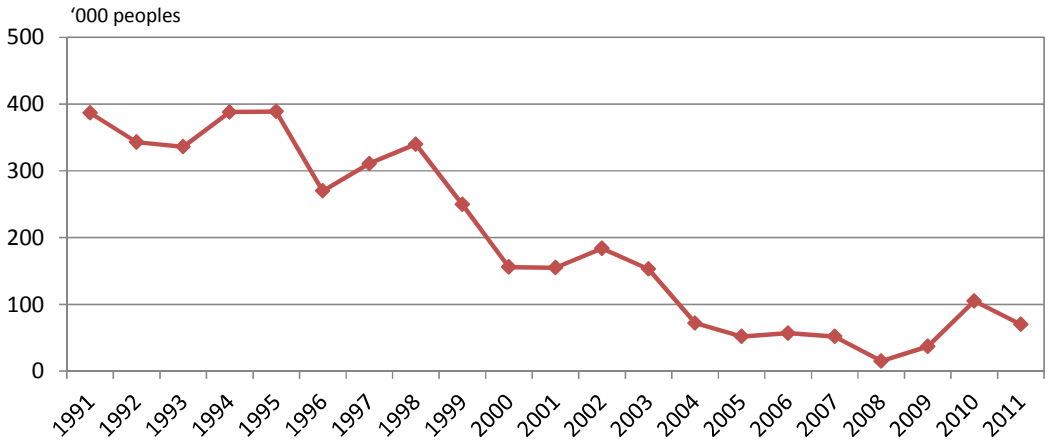
The dilapidation and insufficiency of transport equipment do not allow the company to meet the requirements, thus producing a problem between supply and demand.

Furthermore, the OCBN regulations are obsolete and no longer assure modern and efficient management.



Source: OCBN (Organisation Commune Benin-Niger Railway and Transport)

Figure 3-37 Passenger traffic of Railroad in Benin



Source: OCBN (Organisation Commune Benin-Niger Railway and Transport)

Figure 3-38 Freight traffic of Railroad in Benin

3.9 Summary of Chapter

This chapter presents an overview of the transport infrastructure, focusing on the road infrastructure in each country. As a result, the following points were noted.

- The total road length is increasing yearly. However, asphalt paving is only found in cities and on major arterial roads.
- There are not enough paved roads in the suburbs or rural areas. Even in the cities, unpaved sections of road or inadequately maintained roads are seen.
- As the population and economy grow, the number of automobiles is steadily increasing. The construction of roads, the basic infrastructure, lags behind the progress of motorization.
- From interviews with the various national governments, the following were stressed as the significance of future domestic road construction.
  - Response to motorization (expansion and regular maintenance of inner-city roads)
  - Perspective of spreading economic growth in the capital region as well as urban areas to rural areas
  - Realization of smooth transportation of farm produces from production areas to areas where there are food shortages.