



DIAGNOSTIC STUDY

Policies for Sustainable Accessibility and Mobility in the Cities of Benin

October 2019

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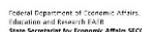
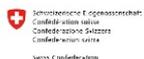
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Policies for sustainable mobility and accessibility in cities of Benin



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* * * * *

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Glossary

AFD	French Development Agency (<i>Agence Française de Développement</i>)
AfVD	African Development Bank
ANaTT	National Agency for Land Transports (<i>Agence Nationale des Transports Terrestres</i>)
BAI	Analysis and Investigation Office (<i>Bureau d'Analyse et d'Investigation</i>)
CNSR	National Center for Road Safety (<i>Centre National de Sécurité Routière</i>)
CONAFIL	Local Finances National Commission (<i>Commission Nationale des Finances Locales</i>)
DCVDD	Directorate of Life and Sustainable Development Framework (<i>Direction du Cadre de Vie et du Développement Durable</i>)
DFTL	Directorate of Fluvio-LagunarTransport (<i>Direction des Transports Fluvio-Lagunaires</i>)
DGDU	General Directorate for Urban Development (<i>Direction Générale du Développement Urbain</i>)
DGI	General Directorate for Infrastructures (<i>Direction Générale des Infrastructures</i>)
DTT	Directorate of Land Transports (<i>Direction des Transports Terrestres</i>)
DUE	European union Delegation (<i>Délégation de l'Union Européenne</i>)
EASI	Enable, Avoid, Shift, Improve
EU	European Union
FADEC	Municipalities Development Support Funds (<i>Fonds d'Appui au Développement des Communes</i>)
FCFA	African Financial Community Franc (<i>Franc de la Communauté Financière Africaine</i>)
FR	Road Funds (<i>Fonds Routier</i>)
GDP	Gross Domestic Product (<i>Produit Intérieur Brut</i>)
INSAE	National Institute of Economic Statistics and Analysis (<i>Institut National de la Statistique et de l'Analyse Economique</i>)
Km	Kilometer
MCVDD	Ministry of Life and Sustainable Development Framework (<i>Ministère du Cadre de Vie et du Développement Durable</i>)
MEUR	Millions of euros

MIT	Ministry of Infrastructures and Transports (<i>Ministère des Infrastructures et des Transports</i>)
MPD	Ministry of Plan and Development (<i>Ministère du Plan et du Développement</i>)
MUSD	Millions of dollars
NGO	Non-Governmental Organisation
PAG	Government Action Plan (<i>Programme d'Action Gouvernementale</i>)
PAURAD	Urban Development and Decentralisation Back-Up Project (<i>Projet d'Aménagement Urbain et d'Appui à la Décentralisation</i>)
PAVICC	Cities Adaptation Program to Climate Change (<i>Programme d'Adaptation des Villes aux Changements Climatiques</i>)
PMU	Urban Mobility Plan (<i>Plan de Mobilité Urbaine</i>)
PONADEC	National Decentralisation Policy (<i>Politique Nationale de Décentralisation</i>)
RNIE	Interstate National Road (<i>Route Nationale Inter Etat</i>)
SBEE	Benin Electric Power Company (<i>Société Béninoise d'Energie Electrique</i>)
SDAU	Urban Planning Scheme (<i>Schéma d'Aménagement Urbain</i>)
SImAU	Urban Planning and Real Estate Company (<i>Société Immobilière et d'Aménagement Urbain</i>)
SIRB	Benin Road infrastructures Company (<i>Société des Infrastructures Routières du Bénin</i>)
SONEB	Benin National Water Company (<i>Société Nationale des Eaux du Bénin</i>)
SSATP	Sub-Saharan Africa Transport Program
SWOT	Strengths, Weaknesses, Opportunities, Threats
WAEMU	West African Economic and Monetary Union
WB	World Bank

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Introduction

Urban transport and mobility form one of the pillars of the African Transport Policy Program (SSATP), the objective of which is to provide African decision-makers with tools to develop affordable, safe and sustainable urban transport in Africa for primary and secondary cities. This fits into Sustainable Development Goal no. 11: “Make cities and human settlements inclusive, safe, resilient and sustainable.” The expected outcome of this pillar is to provide a secured universal access to sustainable transport for urban populations.

To achieve this, the SSATP has launched a program to craft a set of policies designed to improve accessibility and mobility in urban areas of Africa, based on an empirical study in a representative sample of cities in the region.

That study led to the publication of Working Document no. 106 entitled “Policies for sustainable mobility and accessibility in urban areas of Africa”¹. This paper describes an approach called the “EASI conceptual framework” which comprises a set of specific policy actions grouped into four categories: Enable, Avoid, Shift, Improve. The paper proposes specific measures that could be adopted by African cities in each of these categories.

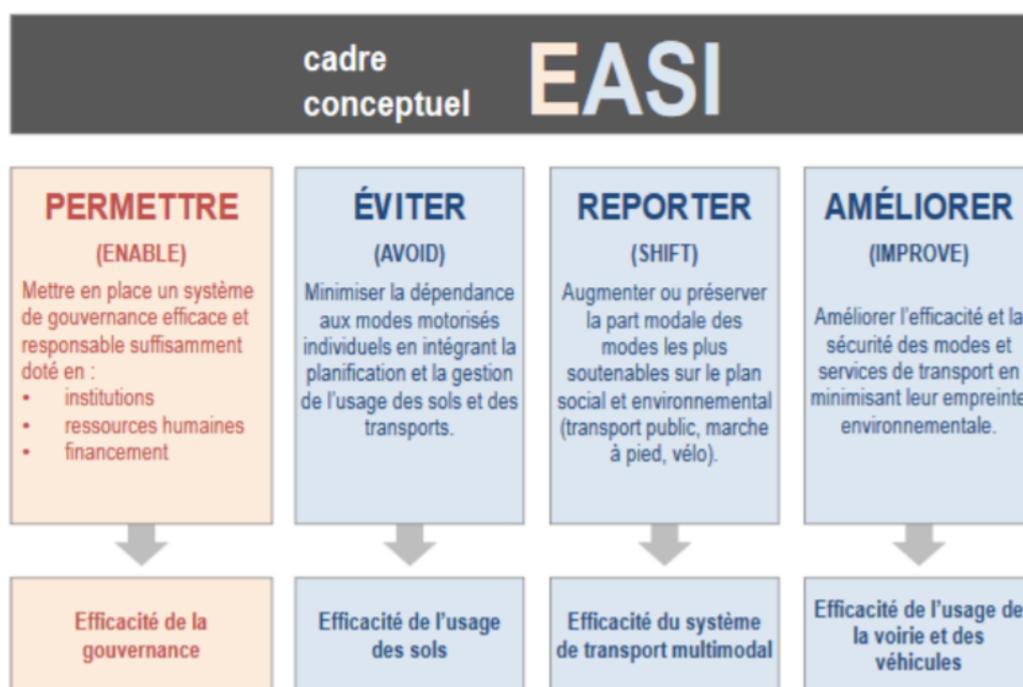


Figure 1: EASI conceptual framework

As a follow-up to this publication, an additional work program has been established to implement these guidelines in twelve program-member countries – first, Ethiopia, Guinea, Senegal, Rwanda, Ivory Coast, Kenya, Ghana and Nigeria, and now Mali, Togo, Burkina Faso and Benin, the goal being to foster the emergence of a political vision for urban mobility and transport.

The present study aims to prompt a change in thinking about accessibility and mobility, and to raise awareness among decision-makers so that they will implement strong policies, strategies and operational practices that make an effective contribution to improving transport and mobility in urban areas of Africa.

¹ Stucki M. (2015), *Politiques de mobilité et d'accessibilité durables dans les villes africaines [Sustainable accessibility and mobility policies in African urban areas]*, SSATP Working Document no. 106, available online: https://www.ssatp.org/sites/ssatp/files/publications/SSATPWP106-Urban%20Mobility_FR.pdf

This report aims to identify the main mobility and accessibility issues in Benin's cities by analyzing five priority themes:

- Strengthening the institutional framework for urban transport management;
- Bolstering funding sources devoted to urban transport management;
- Improving the performance and use of public transport;
- Fostering meaningful participation of the private sector and civil society in urban transport management;
- Improving multi-modal planning and the functioning of city centers.

It was drafted after a first mission to Cotonou and Parakou in order to gather data and talk with local and national players. It draws a distinction between what is at stake for the largest urban area (greater Cotonou) and what needs to be anticipated for secondary cities. It contains an assessment of urban mobility in Benin based on the existing literature and an analysis of the data obtained and interviews conducted in the light of the EASI conceptual framework.

This diagnostic report precedes a recommendations report which will be drawn up for debate, and finalized as part of an urban mobility forum which will be held in Cotonou on 7 and 8 November 2019.

1. Problems of urban mobility in Benin

1.1 Urban development dynamic

1.1.1 National trends and future prospects

Based in the West African Economic and Monetary Union (WAEMU), Benin shares borders with Togo, Nigeria, Burkina Faso and Niger, and has 121 km of coastline along the Gulf of Guinea. The country's economy relies heavily on informal transit trade and re-export trade with Nigeria (around 20% of the GDP), and on agriculture (mainly cotton). The poverty rate² remains high, at around 46.4% in 2018, despite a recent downward trend.

In 2018, economic activity accelerated with a growth of 6.7%, compared to 5.8% in 2017, with a growth rate of 3.8% GDP per capita. The strong performance of the Benin economy is due to the vitality of its port activity (+8.5% for 2018) and the agriculture sector, which witnessed record cotton production levels (+17% for 2018), and also to the diversification of its exports which are still relatively small (cashew nuts, pineapples). Growth has also been driven by the delayed effect of various public investments (mainly in infrastructure) and the vitality of the services sector.³

Like most West African countries, Benin, which recorded a population of around 11.5 million people in 2018, is experiencing strong demographic growth (around 2.7% per year) and a rapid pace of urbanization.

The table below introduces some comparison indicators with the 3 other countries that are taking part in this study:

² Threshold value of 1.9 dollars a day in terms of purchasing power parity

³ <https://www.banquemonddiale.org/fr/country/benin/overview>

Table 1 : Statistical data from the four countries of the study

	TOGO	BURKINA FASO	MALI	BENIN	SOURCES
DEMOGRAPHY					
National population (million, 2018)	7,9	19,8	19,1	11,5	World bank
Population projection (million, 2030)	10,9	26,5	23,3	16,1	UN-Habitat
Population density (pop. / km ² , 2018)	145	72	16	102	World bank
URBANIZATION					
Rate of urbanization (% , 2018)	42%	29%	42%	47%	World bank
Urban growthy rate (% , 2018)	3,7%	5,0%	4,9%	3,9%	World bank
Urban areas of more than 300'000 inhabitants (2018)	1	2	2	4	World bank
ECONOMY					
PIB per inhabitant (\$PPA, 2018)	1 761	1 975	2 314	2 421	World bank
Economic growthy rate (% / year, 2013-2018)	5,3%	5,5%	5,2%	5,4%	World bank
Proportion of the population living below the international poverty line (PPA, % de la pop.)	49,2% (2015)	43,7% (2014)	49,7% (2009)	49,5% (2015)	World bank
Human development index (0-1 scale, 2018) 0 - low, 1 - strong human developpement	0,503	0,423	0,427	0,515	UNDP
PUBLIC FINANCE					
State budget (in billions FCFA / US\$, 2015)	806 1,34	1 516 2,52	1 785 2,97	1 507 2,50	Financy law 2015
Proportion Budget / Population (in FCFA, 2015)	117 922	82 168	100 174	139 666	Financy law 2015 Africapolis
GOVERNANCE AND BUSINESS					
Doing Business (Distance from the border, 2019) 0 - Lowest performance, 100 - Highest performance or "border"	55,2	51,6	53,5	51,4	Doing Business World Bank
Corruption perception index (1-100, 2016) 1 - Low transparency or High corruption, 100 - High transparency or Low corruption	32	42	32	36	Transparency International
MOTORIZATION					
Petrol / Diesel Prices (US\$ / L, 2016)	0,71/0,71	0,98/0,86	1,12/0,98	0,72/0,72	World bank
Private vehicules in use (2015)	140 000	200 000	170 000	210 000	OICA
Motorization rate (private vehicules / 1 000 inhabitants, 2015)	19	11	10	20	OICA - World Bank
Road accident mortality (mortality / 100 000 inhabitants, 2016)	29	31	23	28	World bank
Rate of households owning a motorcycle and/or scooter (%)	36,8%	35,8%	55,0%	56,1%	EDSB-V Bénin 2017-2018

Following an acceleration during the post-colonial period, the growth of the urban population began to stabilize at the beginning of the 2000s but remained around 3.8% per year in 2018. The urban population represented 47% of the country's population in 2018 and is expected to reach 57% by 2025, spread over a hundred urban centers.⁴

In Benin, urbanization is concentrated around the coastal area (around 80% of the urban population is located in the south of the country where 52% of the overall population lives on 10% of the land). Furthermore, the urban environment is unbalanced with a concentration in four main urban areas: Cotonou, Abomey-Calavi, Porto Novo and Parakou which face increasing pressure in terms of their social services, basic infrastructures, land prices and demand for urban employment, as well as deterioration of the environment and sanitary conditions, poverty and a rising shortage of decent housing.

⁴ 2018-2025 National development plan

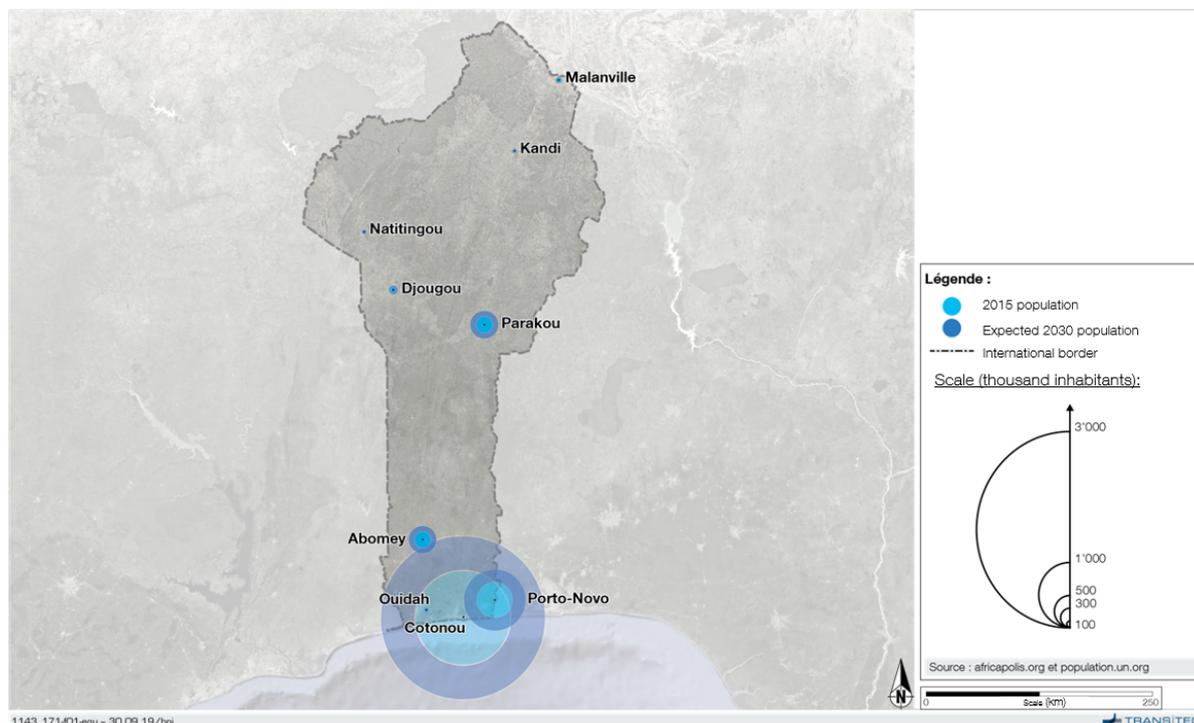


Figure 2: Population and location of Benin’s principal cities

In December 2016, the Benin government launched its action plan (PAG) for the 2016-2021 period which focuses on three main pillars: (i) consolidate democracy, rule of law and good governance, (ii) embark on the structural transformation of the economy, and (iii) improve the living conditions for its people. The implementation of the PAG is organized around 9 sectors, including the infrastructures and living environment sectors which are intended to respond to the problems of urbanization. The objective of the infrastructure sector is to “reinforce transport, logistics and trade infrastructures” while the aim of the living environment sector is to achieve “inclusive and sustainable development, revolving around resilient and safe urban areas”.

1.1.2 Main cities

Cotonou

The city of Cotonou is Benin’s largest city and economic capital with 680,000 people across 79 sq. kilometers. Since the 1950s, Cotonou has experienced strong economic and demographic growth, reflected by the spreading of its urban area into neighboring communities. As a lagoon city located between the Atlantic Ocean in the south and Lake Nokoué in the north, Cotonou stretches eastwards towards Sèmè-Podji in a somewhat dispersed manner and, above all, westwards towards Abomey-Calavi.

The city is Benin’s largest urban area with 1.8 million people in 2018 across 350 sq. kilometers. It has a density of 4,766 people per sq. kilometer (2015), which is lower than that of other major sub-regional cities (for example, in the same year, a density of 15,052 people per sq. kilometer was recorded in the urban area of Dakar and in Abidjan, 12,054 people per sq. kilometer).

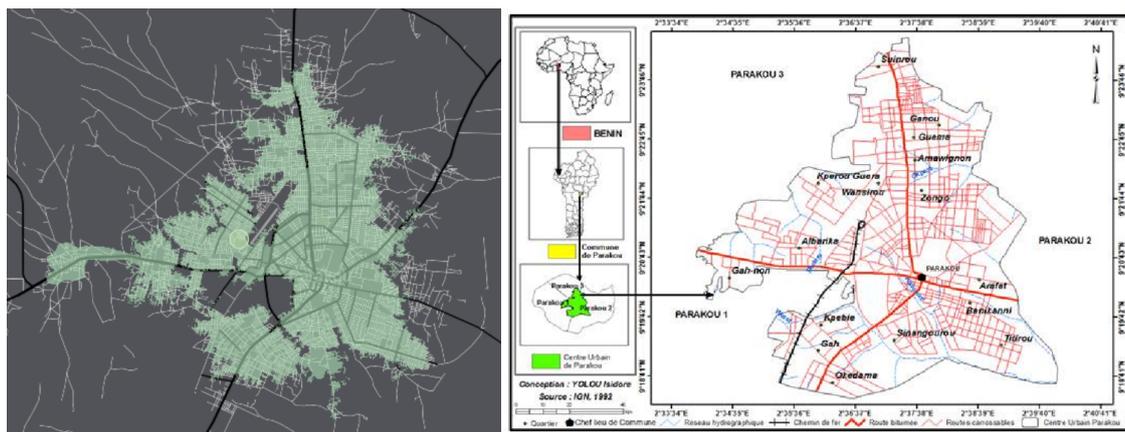


Figure 4: Parakou urban area: on the same scale, extension of the built-up area (first map, in gray-green), administrative extension (second map, in bright green) and road system (second map, in red)

1.1.3 Motorization dominated by two-wheelers

The motor vehicles in operation in Benin mainly consist of (i) motorized two-wheelers (private motorcycles and motorbike taxis) with engine cubic capacities of between 100 and 125 cc and (ii) private cars. To a lesser extent, there are (iii) tricycles which are used in particular by women working at the markets to get around with their goods, (iv) minibuses mainly running services between towns, with Dantokpa market as a concentration point, (v) taxis, however their use is low due to their high fares (i.e. BéninTaxi), and (vi) buses for long distances.

Vehicle ownership (four-wheelers and more) remains low – 23 vehicles per 1,000 people in 2015.⁹ Information on vehicle ownership rates for the country per area and type is not available apart from that found in ad hoc surveys. The vehicle registration database includes new registrations and resales. However, vehicle retirement rarely leads to vehicles being struck off the register, and the permeability of the borders makes the situation even more complicated where two-wheelers are concerned. All this means that it is not possible to constitute reliable data about the country's motorized vehicle fleet. Lastly, the stock of two-wheelers prior to 2014 – the first year in which vehicles were systematically registered – is unknown.

Nevertheless, even considering the higher resale rates for two-wheelers, when accumulatively assessed, the vehicle registration figures from the last five years (Figure 5) point to a proliferation of motorcycles observed in the field: the number of vehicle registrations has increased annually by + 46% on average for private cars and by + 65% for motorcycles and tricycles.

Despite the lack of reliable national statistics on average ages, a visual observation shows that although the vehicles in operation are mainly second-hand, a large proportion of motorcycles on the road are recent vehicles. The ban on two-stroke engines since 2007 undoubtedly contributed to the renewal of the country's fleet of motorcycles. The motorcycle market appears to be particularly dynamic, considering the extremely high number of people reselling new motorcycles in the urban area of Cotonou.

Fuel comes mainly from the black market supplied by Nigerian fuel traffickers. Although Nigerian fuel used to be cheaper than pump prices (around 350 FCFA per liter versus 535 FCFA), it has recently seen a sharp rise in prices in the territory of Benin due to the closing of the border between the two countries. Today, the price of Nigerian fuel is similar to that of pump prices – between 450 and 500 FCFA per liter. Due to fierce competition, it would appear that the increase in the price of poor quality fuel has only been reflected very marginally in commercial transport prices, but it has reduced operators' profit margins. In the mid-term, an increase in prices cannot be ruled out.

⁸ First map: www.africapolis.com. Second map: P. Tovihoudji (2015), *Market gardening in the urban area of the municipality of Parakou (north Benin) and its profitability*, International Journal of Innovation and Scientific Research, 19, 290-302

⁹ OICA 2015 statistics

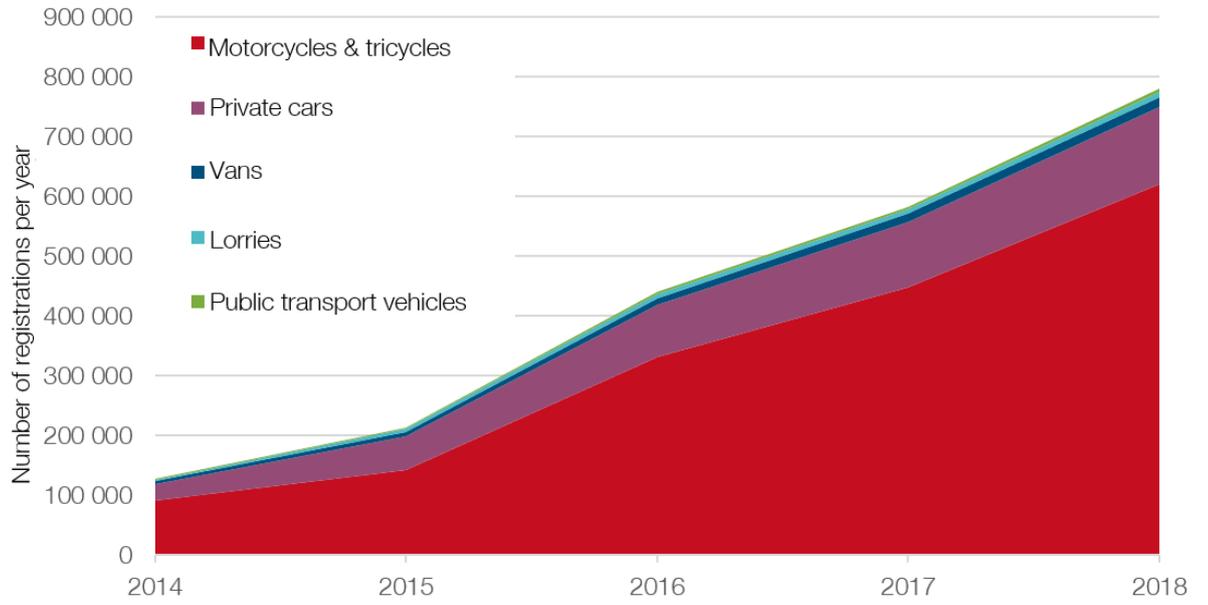


Figure 5: Motor vehicle registrations assessed cumulatively between 2014 and 2018¹⁰

¹⁰ ANaTT 2018 statistics. Note: this data relates to vehicles registered between 2014 and 2018 and not to the total stock of vehicles in Benin as this information is not available.

1.2 Urban mobility assessment

1.2.1 Assessment of Cotonou

Existing data

The following tables show the existing national and local data on urban mobility :

Table 2 : Existing national or local data

Data	Scope/area	Mode and year of acquisition	Owner/custodian of data	Availability and format of data	Regular updates	Comment
Land use						
Spatial distribution of population and jobs	Ouagadougou	Land Use Plan, 2012	Municipality of Ouagadougou	Report		
Travel demand						
Modal split	Ouagadougou Bobo-Dioulasso	2011 (PAMO), 2014 et 2016 : Road counts 2010 : Road counts : "The urban passager transport in Bobo-Dioulasso"	Municipality of Ouagadougou K.Aminata	Report	Yes No	
Origin-Destination data	Ouagadougou	Origin destination survey in Ouagadougou	Municipality of Ouagadougou	Report	Yes	
Traffic						
Traffic counts	Ouagadougou Bobo-Dioulasso	2011 (PAMO), 2014 et 2016 : Road counts 2010 : Road counts : "The urban passager transport in Bobo-Dioulasso"	Municipality of Ouagadougou K.Aminata	Report	Yes No	
Parking						
Occupation and rotation data						
Public transport						

Route itineraries and stops	Ouagadougou	2011, PAMO	SOTRACO	SIG and Report	No	
Level of service	National	Annuels operations reports	SOTRACO	Reports	Yes	
Users satisfaction data						
NMTs						
Pedestrian/bicycle counts	Ouagadougou	Household travel survey, 1992		Quotes et extracts	No	
Users satisfaction data						
Models						
Traffic model						
Transport model						
Externalities						
Road Safety	Ouagadougou Bobo-Dioulasso	Traffic accident analysis bulletins, 2015 Traffic accident in Ouagadougou, an indicator of management urban Traumatic investigations, Ouagadougou, 2015	Nikiema, A., Bonnet, E., Sidbega, S. & Ridde, V. - 2017 ONASER, 2018 National Police IRD	Traffic accident analysis bulletins ONASER	Yes	Not complete collection of traffic accident data
Air Quality	Ouagadougou	Urban Air Quality Studies : the case of Dakar and Ouagadougou	World Bank SSATP	Report Available online	No	
Gender issues						

Table 3 : Frequency of data collection

	Mobility needs	Public transport	Traffic	Parking	NMT	Model	Externalities		
	<i>Modal split, origin-destination, trip purpose, etc.</i>	<i>Operational data (route itineraries and stops, level of service, etc.)</i>	<i>Traffic counts and surveys</i>	<i>Rotation and occupation data</i>	<i>Pedestrian / bicycle counts and user satisfaction survey</i>	<i>Multimodal model (traffic and public transport)</i>	<i>Road Safety</i>	<i>Air quality</i>	<i>Gender issues</i>
Lomé, Togo		● Annual	●				● Annual		
Bamako, Mali	● 1993	● 2010 et 2019	● 2015 et 2016				● 2019	● 2004, 2008 et 2019	
Ouagadougou, Burkina Faso	● 2011, 2014 et 2016	● 2011	● 1992, 2011, 2014, 2016 et 2018		● 1992		● 2017	● 1998	
Cotonou, Bénin			● 2016			● 2016	● Annual		

Legend

- No data available
- One-time data collection
- Regular updates
- Regular updates and public availability

Like most African towns, the city of Cotonou operated a formal collective urban transport service until the end of the 1980s. With the financial crisis and the significant drop in public subsidies, operators have almost entirely disappeared from Benin. In response to this absence of public services, the paratransit private sector has developed widely, without any form of planning, to meet the mobility needs of the economic capital. Today, urban mobility mainly takes the form of private or commercial modes of transport, mostly by two-wheeled vehicles.

Poorly surfaced and organized road systems

The low number of surfaced roads greatly contributes to the success of two-wheelers which are more convenient and efficient on roads with degraded surfaces. The road system in Cotonou represents a total of 1,200 km of roads, 170 km of which are surfaced (i.e. 14% of the total number of roads).¹¹ This total includes several major routes which are managed by the central government, as well as “vons”¹² which are managed by the municipality, and range from byroads to earth tracks. The 1,030 kilometers of unsurfaced earth tracks represent 86% of all the roads. In Abomey-Calavi and Sèmè-Podji, the proportion of surfaced roads is even lower, in the order of 1 or 2%. This data does not take into account the asphaltting work that is currently in progress in the urban area.

There are no or very few designated parking areas. The situation is particularly critical around Dantokpa market on the banks of the lagoon, which combines wholesale, semi-wholesale and retail activities.

Pedestrian mobility is extremely difficult: apart from the low proportion of surfaced roads, any sidewalks that may exist are obstructed by chaotic parking and all kinds of businesses and trades. Other non-motorized modes of transport (bicycles) would appear to be virtually non-existent despite the lack of steep slopes.

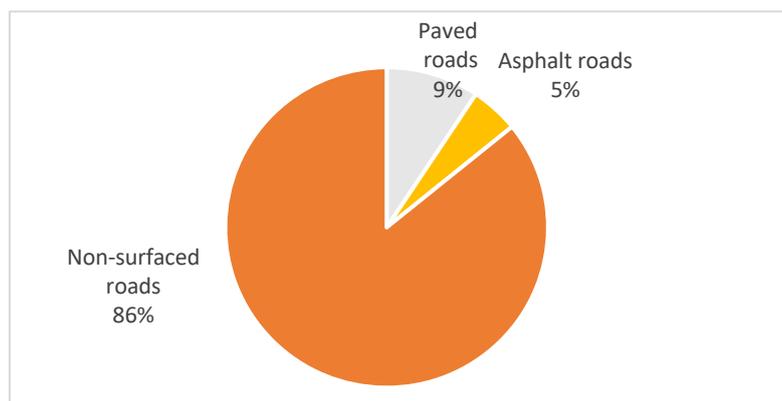


Figure 6: Distribution of roads per type in Cotonou¹³

Commuting, mostly by motorcycle

The very high level of commuter traffic, the lack of collective modes of transport, and the low proportion of surfaced roads means that traffic is concentrated on a very small number of main roads, which naturally causes high levels of congestion, particularly on the road connecting Abomey-Calavi to Cotonou center, and on the main access to the city center. The recent worsening of this congestion is a major concern both for the authorities and for the citizens of Benin. The problem is further exacerbated by the strong presence of motorized two-wheelers which, despite moving freely, are becoming ever more numerous. They represented 83% of the traffic between Calavi and Cotonou in 2013.¹⁴

Apart from the access to the city approaching from Calavi, certain major infrastructures create “black spots,” particularly the port and Dantokpa market. A high flow of heavy goods vehicles on the Abidjan-

¹¹ Two thirds (112 km) are paved and one third (58 km) has an asphalt surface

¹² “Vons” are any secondary unsurfaced roads running north-south.

¹³ 2019 data from Cotonou city hall

¹⁴ *Rapport définitif de l'étude de trafic pour un transport fluvio-lagunaire [Final report of the traffic study for a river-lagoon transport system]*, National Office of Technical Studies Development (BNEDT), July 2013

Lagos international highway and around Cotonou port aggravate congestion throughout the day on the majority of the city's roads. However, heavy goods vehicles are not allowed to circulate during peak times in the morning on certain critical traffic routes, and are forced to park while waiting.

A traffic plan was drawn up in the 1990s but was never actually implemented. It is now obsolete.

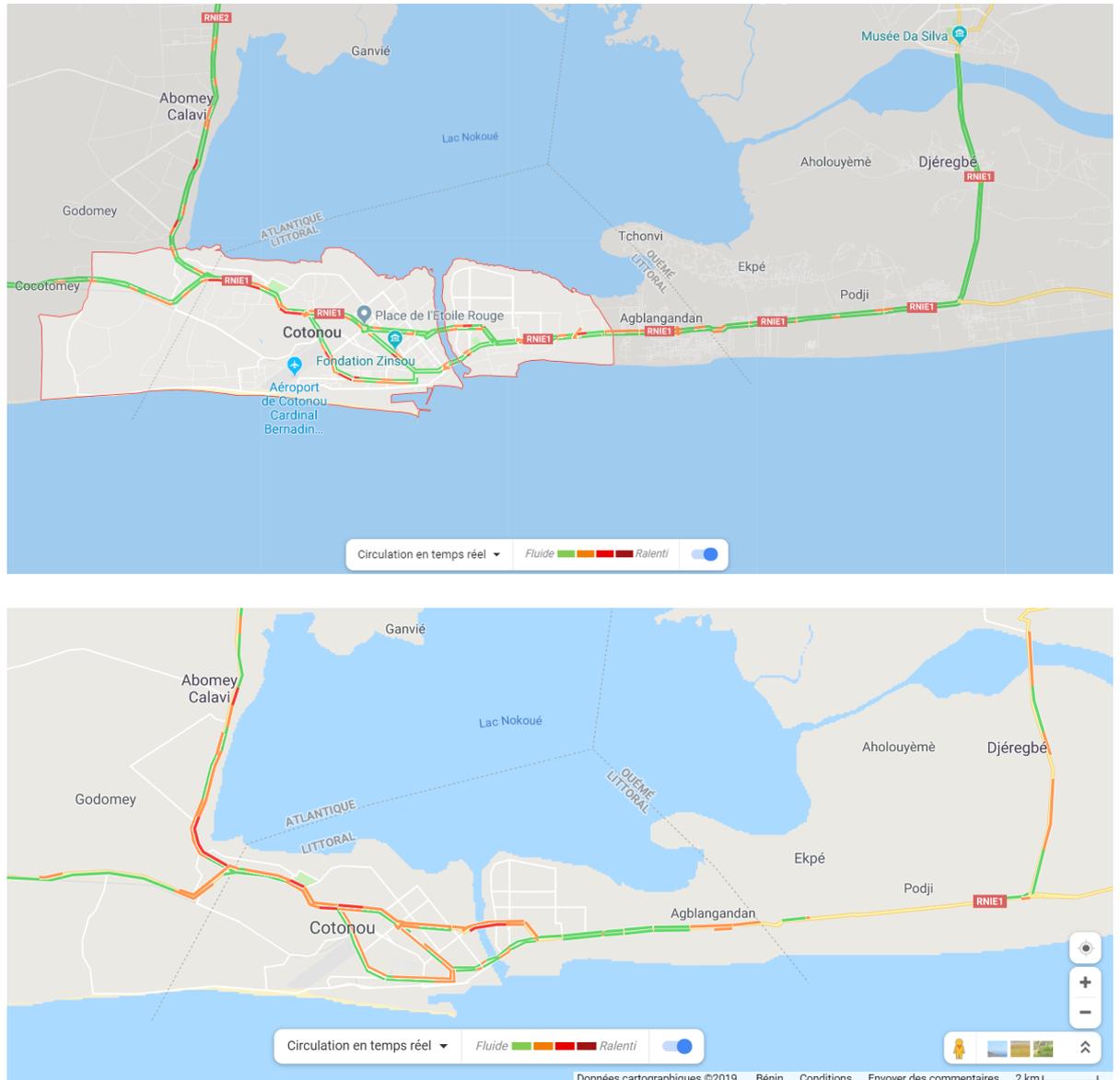


Figure 7: Traffic at peak times in the morning (top) and the evening (bottom) in Cotonou¹⁵

An informal public transport service dominated by motorbike taxis

Today, Benin does not have any form of organized public urban transport apart from individual commercial transport provided by motorbike taxis (zemidjans), taxis or tricycles. Minibuses do circulate, however they only provide intercity services. There is no available reliable data on collective transport supply, whether in terms of fleet, offered seat-kms, or any other indicator.

- **Zemidjans are by far the main transport service** in Benin's urban areas. They offer a very practical point-to-point service because they are so abundant (and therefore immediately available), and are able to travel to any area of the city despite the unsurfaced and sometimes extremely degraded roads. Due to the highly informal nature of the activity, no reliable census of the number of zemidjans exists in the country even though they represent a large portion of urban employment.

¹⁵ Source: Google Maps, 09/10/2019 at 8.18 a.m. and 8.30 p.m.

- **The taxi service is subdivided into two categories**, with urban taxis or “Bénin Taxi”, on the one hand, and intercity taxis, on the other.
 - Bénin Taxis are a recent development and have benefited from government investments with the aim of creating a more secure and better quality transport service. As these taxis operate on a price-per-zone basis and can be hired in the city of Cotonou, they are considered to be expensive and less flexible as it is difficult for them to access the same areas as the zemidjans. Despite being a recent mode of transport, it would appear that they are currently used mainly for certain types of journey by wealthier customers (i.e. journeys to the airport). The government-regulated prices are competitive, in theory, if the taxi is used by four passengers but they don’t appear to be applied at present.
 - Urban taxi services are well-developed but mainly concern intercity journeys with a capacity not exceeding four passengers.
- **The minibuses largely provide intercity transport** with a greater capacity than the urban taxis. Although these minibuses operate in an unregulated context, they do not offer service in the urban area. Undoubtedly, they would not be attractive enough compared to the zemidjans.
- **The tricycles** which are currently developing their transport service in major cities such as Cotonou. Regarded as providing greater safety for passengers, they have a higher transport capacity than zemidjans (two to three passengers or passengers with packages) despite undoubtedly similar operating costs, and therefore offer more attractive prices than zemidjans. They would appear to be used in particular by women working at the markets.
- **Standard buses have disappeared** with the end of the BenAfrique service.

The tricycles – a new entrant on the market – are still seldom used because of low availability despite competitive prices. The poor appeal of taxis stems from their limited flexibility and relatively high prices (i.e. Bénin Taxis).

Future prospects

To address the various issues facing the city of Cotonou, the central government, within the framework of its 2016 to 2021 action plan, has embarked upon the implementation of projects which will have a powerful impact on urban mobility, namely five “infrastructure” and three “living environment” structural projects.

- Construction of a highway bypassing the north of Cotonou to ease congestion mainly by reducing heavy goods traffic in the city, and to create a direct transport corridor from Calavi to Sèmè-Podji via Cotonou;
- Construction of a highway between Sèmè-Podji and Porto Novo;
- Extension of a road system covering 1,362 km, including 344.5 km for the Cotonou urban area;
- Development of an agrifood platform in the “Grand Nokoué” urban area, thus moving part of Dantokpa market (mainly the wholesale and semi-wholesale market) to reduce (i) the mass of people going to the market and (ii) congestion related to traffic supplying the stalls with goods;
- Development of the Abomey-Calavi administrative center and 12 local administrative centers, thereby grouping public services and reducing the commutes of civil servants residing mainly in the suburbs of Calavi;
- Development of low-cost social housing programs;
- Construction of the new Glo-Djigbé international airport (beyond Abomey-Calavi);
- Port development projects including the creation of car parks in the immediate vicinity, and of an international logistics area.

These projects, considered together, form an approach to urban mobility management that contrasts markedly with the three other countries in the study group (Mali, Togo and Burkina Faso). Specifically, faced with rapidly worsening urban sprawl and the spiralling of motorized two-wheeler traffic (issues that are not unique to Benin), and seeking to avoid reaching complete road saturation, the Government of Benin is answering by seeking:

- By seeking to reduce the demand for home-work trips, through projects that relocate or restructure major traffic generators,

- By seeking to reduce the disruptions caused by freight transit through the city center, through better management of freight flows and specific road infrastructure investments, taking into account the heightened importance of the issue that results from Cotonou’s geographical situation as an avoidable crossing point between Abidjan and Lagos, and between the Cotonou harbor and Niger,
- But not or barely, for the time being, by seeking to develop alternative, collective transport services despite the fact that Benin, among the four countries, is the one with the lowest modal share of such services (in practice, the share is almost zero, the only existing services being the recently implemented, but very small, fleet of shared 5-seater taxis.

Key observations and challenges in Cotonou

- High population growth, mainly in the municipality of Abomey-Calavi, and the unmanaged urban sprawl are increasing the pressure exerted on urban services
- Absence of a public urban transport system, replaced by an individualized private and public transport service (zemidjans)
- Lack of space (sidewalks, cycling paths) enabling/designed for active mobility (walking, bikes)
- Location of Cotonou port in the city center and dense flow of heavy goods vehicles on the city’s main roads, which is one aspect of a more general port-city integration conundrum

Areas to monitor

- Considerable commutes between Cotonou, the economic and administrative center, and Abomey-Calavi, the commuter suburb, producing ever-increasing congestion on the main asphalt roads.
- Extremely rapid increase in the number of motorcycles creating major nuisance (accidents, pollution, noise)

1.2.2 Assessment of secondary cities: the case of Parakou

The city of Parakou has a fairly low population which rarely causes congestion on the city’s roads, and relatively smooth circulation throughout the day. The asphalt road system is limited: 58 km, including 44 km of roads of national interest (known as “inter-état” roads) and 31 km surfaced roads. The total number of unsurfaced tracks, which constitute the wide majority, is not known.

More so than in Cotonou, motorized two-wheelers represent the main form of motorized traffic. However, the city does not suffer from congestion problems. Motorbike taxis provide the majority of “public transport”. Car taxi services are operated to a small extent by Bénin Taxi. Tricycles provide transport services for luggage, and bush taxis transport passengers from Parakou to the neighboring towns and villages.

As part of the PAG, two projects under consideration will particularly benefit the city of Parakou, namely:

- Extension of a road system covering 1,362 km, including 68 km for the Parakou urban area;
- Development of the Djogou-Pehunco-Kérou road.

In addition to these two projects currently being implemented, a bypass and city boulevard project in Parakou will benefit from the financial support of the African Development Bank.

The municipality partially regulates moto0taxi services, but it does not have the capacity to manage other aspects of mobility that fall, however, within its mandate, such as managing the small number of traffic lights.

As far as planning is concerned, urban development regulations do not appear to be enforced, and there is neither a mobility plan nor a traffic management plan.



Figure 8: Traffic at peak times in Parakou (Picture N. Djossou the 09/30/2019)

Key observations and challenges in Parakou

- Lack of urban mobility planning
- Lack of any projects or policies aiming to create a collective urban transport service, the projects currently under consideration are mainly to improve and extend the city's road systems.
- No promotion of active mobility despite the fact that the city's geography would lend itself well to this.

Areas to monitor in the secondary cities

- Lack of resources allocated to urban mobility, apart from the city hall department which manages the maintenance of traffic lights. The roads and sidewalks in Parakou are managed directly by the Ministry of Infrastructure and Transport (MIT).

1.3 National context

1.3.1 Strategic framework

Strategic documents

- **Transport sector strategy for the period 2007-2011** to (i) ensure the conservation and maintenance of the road infrastructure, (ii) ensure the development of the road system through the modernization and renovation of priority roads.
- **National policy of decentralization and devolution** of January 2016;
- **Government Action Plan (PAG)** for the period 2016-2021 which considers transport infrastructures as a powerful lever for the country's economic development.

1.3.2 Legal and regulatory framework

Legal framework

The relevant laws governing urban mobility concern (i) the organization of the government, and the roles of ministries, directorates and agencies (ii) the sectoral aspects pertaining to transport, urbanism and the environment; and (iii) the role of municipalities. Although the laws related to decentralization are relatively recent, the sectoral laws tend to be much older and have not been updated, or do not exist at all (no urban planning code, in particular). Therefore, among the main laws, we can list:

- **Orders and decrees on the organization of the government and roles of the ministries, directorates and agencies**
 - Order no. 309/MTPT/DC/SG/DGTT of 11 May 2004 on the responsibilities, organization and functioning of the Directorate General of Land Transport;
 - Order no. 2016-205 of 4 April 2016 on the creation, responsibilities and organization of the functioning of the National Agency of Land Transport (ANaTT), and Decree no. 2017-300 of 21 June 2017 on the updating of the ANaTT statutes;
 - Decree no. 366 of 16 June 2016 on the creation, responsibilities, organization and functioning of the Office of Analysis and Investigation of the President of the Republic;
 - Decree no. 418 of 20 July 2016 on the responsibilities, organization and functioning of the Ministry of Infrastructures and Transport;
 - Decree no. 2016-501 of 11 August 2016 on the responsibilities, organization and functioning of the Ministry of Living Environment and Sustainable Development;
 - Decree no. 2016-502 of 11 August 2016 on the responsibilities, organization and functioning of the Ministry of Planning and Development
- **Laws, orders and sectoral decrees**
 - General order of 24 July 1956 on the regulation of the use of highways open to public traffic;
 - Decree no. 79-109 regulating road transport in the People's Republic of Benin;
 - Law no. 98-030 of 12 February 1999 constituting the framework law on the environment
 - Decree no.°2000-671 of 29 December 2000 on the regulation of importation, marketing and distribution of second-hand equipment and goods;
 - Order no.°2016/MTPT/MISD/DC/SG/CTTT/DGTT/SPC/SER of 7 March 2016 on the regulation of motorcycles used for the public transport of passengers (motorbike taxis)
- **Law on municipalities**
 - Law no.°97-028 of 15 January 1999 on the organization of territorial administration in the Republic of Benin;
 - Law no°97-029 of 15 January 1999 on the organization of municipalities in the Republic of Benin;
 - Law no°98-005 of 15 January 1999 on the organization of municipalities with special status;

- Law no°98-007 of 15 January 1999 on the financial system of municipalities in the Republic of Benin;
- Law no.°2009-17b on intercommunal cooperation in Benin

A critical review of these texts is provided in section 2.1.

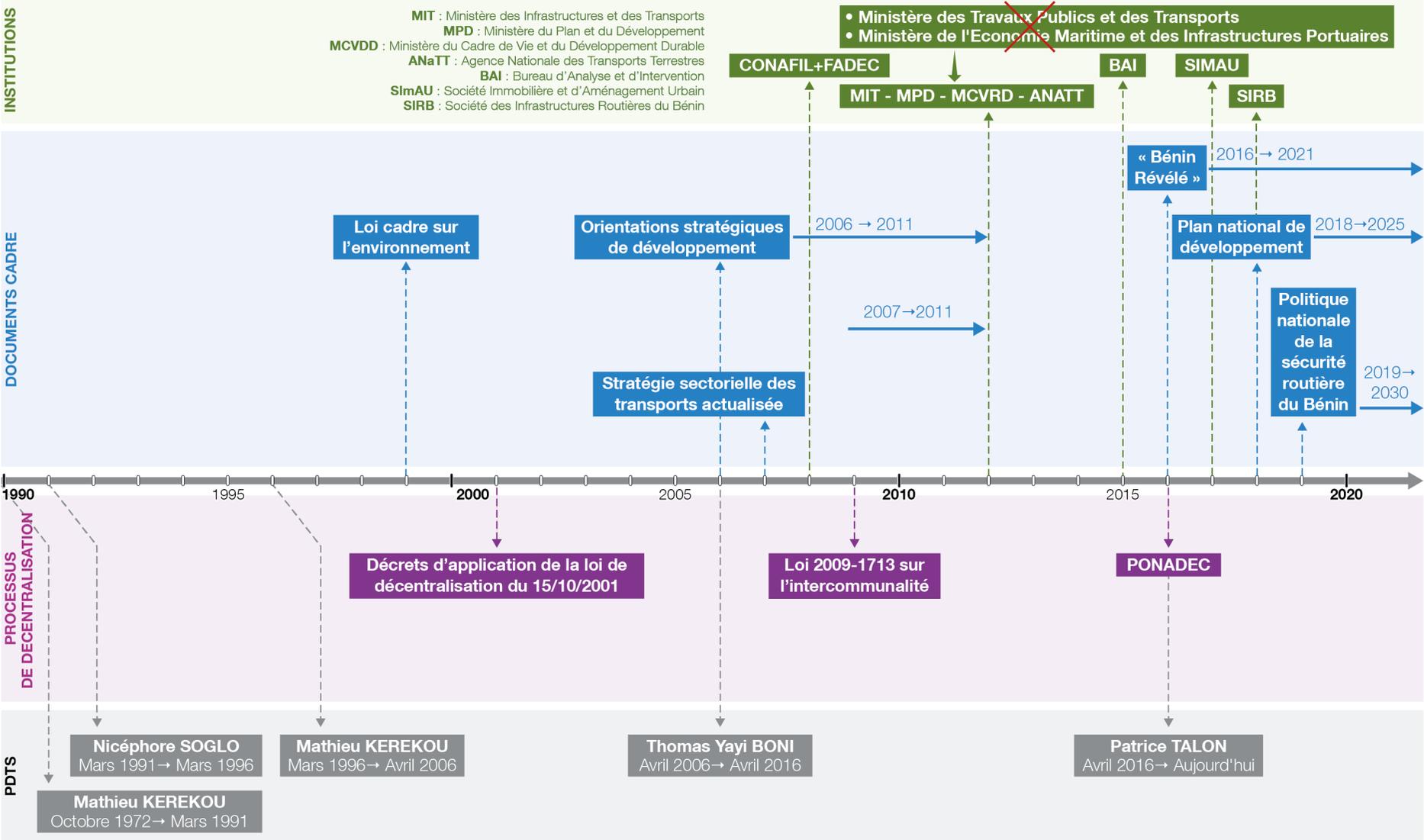


Figure 9: Historical timeline of institutions in Benin

1.3.3 Main urban mobility actors

Presidency

The **Office of Analysis and Investigation (BAI)** within the Presidency is a center of expertise responsible for guaranteeing the quality of programs and the main reforms initiated by the government, and in particular takes part in the strategic analysis, the conception and monitoring of their implementation. The BAI is also responsible for coordinating targeted investigative missions designed to inform decision-making and guide corrective and/or repressive measures required by the need for sound management. The BAI, which is the architect of the Government Action Plan (PAG), runs several projects that directly affect urban mobility, and has a strategic and political role in the sector.

Ministries, agencies and public or mixed organizations

Three main areas of government action are directly linked to urban mobility;

- Infrastructures and transport: in Benin, these competencies fall within the scope of the same ministry to simplify coordination;
- Living environment and sustainable development, which include, in particular, urbanism and the environment;
- Planning and development.

Government action is exercised through the Ministries (and their directorates), Agencies which levy designated incidental tax revenues, and more recently, public or mixed organizations which collect commercial revenues (road tolls, for example) and make investments.

- The overall objective of the **Ministry of Infrastructure and Transport (MIT)** is to manage and develop transport services and infrastructures in order to support economic growth and social welfare.

The Ministry itself consists of various directorates, the following of which are involved in urban mobility:

- The Directorate of Land Transport (DTT) is responsible for:
 - Developing, steering and supervising the proper implementation and follow-up of land transport policies;
 - Developing a strategy for road transport operator traffic which is organized, secure and operated in peri-urban areas;
 - Monitor, regulate and organize road and rail transport operators with regard in particular to the safety of people and goods, noise and environmental pollution;
 - Developing a strategy to improve mobility conditions and modes of transport for goods and people in urban, peri-urban and rural areas;
 - Defining and regulating optimal pricing for private and public land transport in collaboration with the various structures involved;
 - Designing, steering and giving impetus to a framework for public-private dialog, contributing to the implementation of the national urban mobility policy by initiating planning contracts;
 - Designing an integrated information system to collect and process data on rail and road freight;
 - Ensuring that Benin is represented at international forums dealing with questions concerning road and rail transport.
- The Directorate of River and Lagoon Transport (DFTL) is responsible for:
 - Developing, steering and supervising the application, implementation and follow-up of the national policy in the various river-lagoon transport areas;
 - Carrying out studies into currents and navigability;

- Promoting the operation and installation of river-lagoon transport infrastructures and facilities;
- Developing actions for combating the obstruction and backfill of navigable continental waters;
- Issuing administrative authorization certificates to the various river-lagoon transport service providers;
- Representing Benin in regional or international institutions in this sector.
- The General Directorate of Infrastructures (DGI) is responsible for:
 - Steering all strands of the installation, development and maintenance of public works under the Ministry’s responsibility;
 - Elaborating and implementing long-term road system development and maintenance strategies in keeping with the government’s macroeconomic and political measures, in collaboration with the various structures involved;
 - Assuming a project management role for all construction works on roads, drainage systems, dams, water retention structures, bridges and tunnels, and all civil engineering works that are not assigned to other specific structures;
 - Supporting the implementation of public works infrastructures borne by the government, and monitoring the work carried out in the public interest;
 - Taking part in the development, application and adaptation of standards and regulations concerning road traffic and public works;
 - Ensuring the technical control of various road tolls and/or weighing fees;
 - Helping to preserve various public work service areas and the rights of way for which the Ministry is responsible.

The Ministry supervises:

- The Road Fund (FR) which is responsible for:
 - Funding the maintenance of road systems under the responsibility of the Ministry of Infrastructure and Transport. The network responsible for the Road Fund consists of a classified network, including classified roads that cross through cities and, up to now, earth tracks, but their maintenance is soon to be shifted to the responsibility of a new support network. The current missions of the Road Fund are in the process of evolving due to the creation of the Benin Society of Road Infrastructures or the “SIRB”.
- The National Agency of Land Transport (ANaTT), responsible for:
 - Participating in the development of regulations and the monitoring of road and rail transport;
 - Implementing the national mobility policy in collaboration with the municipalities;
 - Helping the local authorities develop, organize and manage urban, inter-urban and rural transport;
 - Establishing road transport prices in collaboration with the competent national bodies;
 - Issuing and monitoring transport permits and authorizations;
 - Implementing national and international agreements on land transport;
 - Issuing accreditation to driving schools and monitoring their activities;
 - Initiating and conducting thinking and studies to encourage the improvement of conditions for transporting goods and people in peri-urban and urban areas;
 - Collecting and processing data on rail and road freight;
 - Centralizing, monitoring and coordinating the various activities involved in transit traffic on inter-state roads and facilitating transport;
 - Ensuring respect for rail and road freight regulations in Benin;

- Developing and promoting research into land transport.
 - The National Center for Road Safety (CNSR), which is responsible for:
 - Studying, researching and implementing all measures intended to increase the safety of road users, particularly through measures to prevent and combat traffic accidents.
 - The Benin Society of Road Infrastructures (SIRB), which, as a private company with capital funding, is responsible for:
 - Managing, developing and maintaining highway and road infrastructures and for improving their quality;
 - Ensuring the growth and security of resources received from the road system via road tolls and other related services.
 - The principal tasks of the **Ministry of Living Environment and Sustainable Development (MCVDD)** are the development and guarantee of the implementation and monitoring/evaluation of the government's policy and strategies including management of land use, land registry, property and land management, construction, housing, sewage systems, protection of shorelines and coasts, preservation of urban planning ecosystems, and climate change. It includes, in particular, the following directorates that interface with urban mobility:
 - The General Directorate for Urban Development (DGDU) is the ministry's operational structure and is responsible for developing and implementing government projects, programs, strategies and policies in the areas of urban planning, urban roads, sewage systems, cartography and geomatics;
 - The Directorate of Living Environment and Sustainable Development (DCVDD);
 - The Departmental Directorate of Living Environment and Sustainable Development;
 - The General Directorate for Environment and Climate;
 - The General Directorate for Housing and Construction
- Three other entities play a key role in these areas:
- The Agency for Living Environment and Sustainable Development (ACV-DT) is responsible for launching and managing major development projects related to the population's living environment, regional planning, building growth hubs and driving sustainable development.
 - The National Agency for land use planning;
 - The mandate of the Society of Real Estate and Land Use Planning (SI MAU), which was created in 2017 as a partnership between the government, financial establishments and banks, insurance companies and a property developer, is to oversee all activities that may relate to land use planning, construction and real estate development.
- The **Ministry of Planning and Development (MPD)** is responsible for stimulating social and economic development and monitoring the implementation of the government's decisions, projects, programs and policies on local, regional and national development. Its role is also to elaborate long-term development strategies to enable Benin to tap into its national potential and anticipate issues related to its development.

Local authorities

The 2008 policy of decentralization and devolution considers a single level of decentralization, i.e. that of the municipality (of which the country has 77), and a single level of devolution, i.e. the county (of which there are 12). The municipalities have a municipal council and a mayor with deputies who head up an administration committee and various local advisory councils.

Three types of competencies are devolved to the municipalities:

- The municipality’s own competencies whereby it exercises the powers assigned exclusively to it (for example, the environment, decentralized and inter-municipal cooperation);
- Shared responsibilities involving the joint intervention of the municipality and the government (for example, education, health);
- Competencies delegated by the central government to the municipalities (administrative and judicial police, the dissemination and enforcement of laws and regulations).

Infrastructures, facilities and transport services come under the municipality’s own remit. Therefore, municipalities are responsible for funding and maintaining roads (apart from cross-city roads which are covered by the Road Fund) and for traffic equipment and facilities (traffic lights, road signs, etc.), taxi licenses, and the management of public transport (de facto power which is not exercised).¹⁶

Despite municipalities being given important responsibilities in terms of urban mobility, it would seem that they lack an overall urban mobility strategy or policy, on the one hand, and financial resources, on the other. This is due, in particular, to a decentralization of powers which is not necessarily accompanied by a transfer of funds. Although the municipalities’ tax revenues represent between 40 and 50% of their total income, their spending only represents 3.7% of total public expenditure.¹⁷ Figure 10 shows that expenditure by local authorities in a country such as Mali reaches a level that is more than double that of Benin.

	Pop. / Pop. urbaine 2018	% Dépenses des collectivités locales du total des dépenses publiques*	Recettes fiscales en % du total des revenus des collectivités locales*															
Maroc	36,0 M / 62%	11,8%	30% - 35%	■	■	■												
Mali	19,0 M / 42%	8%	20% - 30%	■	■	■												
Sénégal	15,8 M / 47%	4%	60% - 70%	■	■	■	■	■	■									
Burkina Faso	19,7 M / 29%	4%	30% - 40%	■	■	■												
Côte d’Ivoire	25,0 M / 51%	4%	40% - 50%	■	■	■	■											
Bénin	11,5 M / 47%	3,7%	40% - 50%	■	■	■	■	■										
Togo	7,8 M / 42%	2,3%	60% - 70%	■	■	■	■	■	■	■								
Niger	22,4 M / 16%	2,3%	70% - 80%	■	■	■	■	■	■	■	■							

Figure 10: Comparison of public authority spending and resources in the WAEMU region¹⁸

The **National Commission for Local Finance (CONAFIL)**, which was created by decree no.2008-274 of 19 May 2008, is responsible for defining, guiding and implementing the government’s local finance strategy and policy. It is also tasked with managing and steering the Communal Development Support Fund (FADEC). This is directly in line with a clear government strategy and policy concerning the funding of municipalities (i.e. transferring resources, taxation, funding investment projects, etc.). It is used as a tool to redistribute national wealth and as a lever for developing local resources. In practice, it provides support for local project management, among other things.

Public and private operators

Urban mobility in Benin is characterized by an almost complete absence of organization of both public and private companies. With the disappearance in the 1980s of public transport companies and a failed

¹⁶ Article 88, law no. 97-029 of 15 January 1999 on the organization of municipalities in the Republic of Benin. For roads which do not expressly fall within the responsibility of other institutions and bodies, the municipality is responsible for:

- implementing and maintaining roads, tracks, bridges and tunnels in its territory;
- implementing and maintaining urban roads and their sewage systems in urban areas;
- road signs;
- implementing and maintaining streetlight systems.

¹⁷ Average between 2008 and 2010, Peter Hochet et al. *Livre blanc de la décentralisation financière dans l’espace UEMOA [White paper on financial decentralization in the WAEMU region]*, 2014

¹⁸ 2013, source: *Subnational Governments around the world: structure and finance*, OECD/UCLG, 2016

attempt with BenAfrique in the 2010s, the transport sector today is largely dominated by the private sector composed of many players. In fact, the structure of Benin’s passenger transport, which mainly consists of motorbike taxis, tricycles and private minibuses, has led to drivers organizing themselves around unions. The zemidjans unions represent a major political strength in Benin due to the influence of the drivers within the labor force (see section 2.4 Private sector participation).

International partners

Financing of urban mobility operations by international donors is very limited in Benin. Apart from the African Development Bank (AfDB), other donors involved in the country have so far concentrated their actions on other sectors, particularly agriculture and health. However, some of these donors’ programs contribute indirectly to urban mobility, in particular via the asphaltting of roads as part of wider urban programs (i.e. the French Development Agency (AFD), the World Bank) or through the reinforcement of capacity-building of institutions as part of the decentralization framework (i.e. the EU).

Talks with a number of these partners indicate that the formalization of a national urban mobility strategy or policy could facilitate increased support in the area in terms of feasibility studies and investments.

Locality	Donor	Details	Start	End	Amount
■ Parakou urban transport project					
Parakou	AfDB	Conversion into 4-lane highways of 17.55 kilometers of the town’s arterial roads	June 2015	December 2020	23.8 MUSD
■ Adapting Cities to Climate Change Program (PAVICC)					
Cotonou, Sèmè-Podji, Comè, Bohicon	AFD	6.18 linear kilometers of paving 9.95 kilometers of surfaced roads 3.20 kilometers of surfaced roads	October 2018	March 2023	58 MEUR
■ Porto-Novo, Green City					
Porto-Novo	AFD	Elaboration of a sustainable urban development plan, including the development of roads	December 2015	End 2021	9.2 MEUR
■ PAURAD					
Benin’s cities	World Bank	Improvement of services through the renovation, maintenance and expansion of infrastructures, 27% of which include urban transport (road systems)	June 2013	June 2020	60 MUSD

Table 4 : List of donor projects with a component directly or indirectly related to transport

Sector		Urban Planning	Public Transport					Espace public				
			Institutional Public Transport	Urban bus terminals	Paratransit			Road infrastructure and network	Traffic management	Parking	Active modes	
			Bus (Standard lines)		Urban minibus	Shared taxis	Mototaxis				three-wheelers	Walking
Strategical level <i>What are the goals and the resources available?</i>	Planing and design	Ministry of Life and Sustainable Development Framework	Ministry of Life and Sustainable Development Framework									
	Financing	State and municipalities	Municipalities			Inexistent		Ministry of Infrastructures and Transports	Municipalities	Municipalities	Ministry of Infrastructures and Transports and Municipalities	
Tactical level <i>Which services need to be developed in order to reach the objectives?</i>	Regulation	Inexistent	Municipalities			Ministry of Infrastructures and Transports		Ministry of Infrastructures and Transports	Ministry of Infrastructures and Transports			
	Licensing, permits and contracting	Municipalities				Municipalities				Municipalities		
	Fare system					Inexistent		SIRB (Benin Road infrastructures Company)		Inexistent		
	Infrastructure, Equipment	SBEE (Benin Electric Power Company), SONEB (Benin National Water Company) and municipalities						Municipalities		Ministry of Infrastructures and Transports or municipalities		
Operational level <i>How do you efficiently deliver these services?</i>	Operations / Maintenance											

Issue
Unsatisfactory
Satisfactory
Irrelevant

Figure 11: Governance structure in Cotonou

2. Overview of the challenges by priority theme

2.1 Legal, reglementary and institutional framework of urban transport

A clarified breakdown of the functions and mandates of the different national institutions

All of Benin’s public institutions are strongly committed to implementing the Government Action Plan (PAG) for the period 2016-2021. As described in section 1.3 “Urban mobility assessment” above, the PAG contains several complementary and ambitious elements which are designed to have a considerable impact on the improvement of urban mobility conditions.

The implementation of the PAG has been accompanied by a vertical clarification of the roles between the central governmental institutions concerned (Presidency, Ministries, Agencies and public or mixed organizations, see section 1.4.3 “Main urban mobility actors”). This clarification also benefits the area of urban mobility. Horizontally, the responsibilities between the different institutions have also been broken down in a clear manner:

- The **Ministry of Planning and Development** is responsible for coordinating the various institutions involved in the sector and for including the PAG in its planning effort;
- The **Ministry of Infrastructure and Transport** and the associated agencies and companies coordinate the transport and mobility policy at national level;
- The **Ministry of Living Environment and Sustainable Development** is responsible for planning and coordinating urban and regional development and the preservation of the environment.

Well-trained and staff aware of issues...

It was noted when talking to staff from the government agencies concerned that they had received appropriate initial training and specific training in urban mobility, including within the context of training cycles organized and financed by the SSATP.¹⁹ The managerial staff generally has a good understanding of the issues related to their area of focus, and can clearly identify a large part of the improvements to be made. It would be useful to raise this point during the National Forum by means of a questionnaire to be filled in by the delegates.

... but sector legislation with obsolete contents

The sector laws covering transport mainly regulate the management of infrastructures (development and maintenance of road systems) and shape the public-private transport service (for example, the regulation of *zemidjans*). They date from the decolonization era, and from the late 1990s and early 2000s and are generally divorced from the reality of the current situation. Specifically, they make no distinction between urban and inter-urban transport, do not provide for the possibility to regulate parking, and envisage roadway usage regulations that are not adapted to the development of “active” modes or intermodality.

There is no urban planning code; it is currently being drawn up.

The transport strategy does not deal with urban mobility but mainly with transport on a national scale. The PAG reflects an implicit strategy for curbing traffic flow by relocating traffic-generating centers and developing infrastructures, but there is no mention in this strategy of the key strands of a sustainable urban mobility policy (modes of transport, for example, and the type of energy that these modes are fueled by; or the funding of these services).

Highly decentralized public action in legislation...

More clearly than in many sub-regional countries, the law unambiguously assigns to the municipalities the role of improving and managing urban mobility through their exclusive powers in the development and maintenance of the urban road system and its associated facilities (apart from a few inter-state roads of national interest, known as RNIEs), in the organization and management of urban transport, and in urban planning. In this latter area, the laws specify that the municipality should (i) draw up and adopt its development plan and the planning documents required for its local development, land use and urban planning, (ii) launch actions related to development, infrastructure and engineering works

¹⁹ In particular, the program “Leaders in Urban Transport Planning” and the road safety programs

which form part of its assets, as well as different activities relating to their management and maintenance.²⁰

... but which is seldom exercised in practice by impoverished municipalities

However, the municipalities can only exercise these powers to a very limited extent:

- They make virtually no investments in road systems and struggle to maintain them (sometimes having to call upon the central government, like in Parakou, for example);
- Although they have established rules imposing the keeping of records, the wearing of high visibility jackets and the payment of charges for taxis (primarily the zemidjans), information collected from these taxi drivers indicates that the rules are only sporadically respected;
- They manage and maintain the few traffic lights that exist;
- Street lighting is often out of order unless it is solar-powered;
- There appears to be no organization of parking;
- Public spaces, particularly pedestrian areas, are illegally cluttered up with businesses despite the efforts (fines) made to curtail this.
- In terms of urban planning, the majority of construction work appears to take place outside of any regulatory framework.

The municipalities are greatly lacking in the human and financial means to assume their broad responsibilities. The decentralization of responsibilities to the municipalities has not been backed with the financial, human and technical resources required to effectively implement them. What's more, as regards urban mobility, no explicit national policy exists which would help them to organize their activities.

In addition to the problem of insufficient sums available to exercise the urban mobility powers described in the section 2.2 below, the transfer of financial resources to the municipalities, as provided for by the National Policy of Decentralization and Devolution (PONADEC) is not in effect. The national budget should enable municipalities to carry out their duties, particularly in terms of investments, but the funds are basically raised by the sectoral ministries for their local actions. Furthermore, the lack of the municipalities' own resources puts certain investments, such as the asphaltting program, at risk – without resources devoted to maintenance, the service life of these investments will certainly be shortened.

Legal tools for inter-municipal cooperation are not implemented

The decentralization framework provides for clear and well-defined inter-municipality cooperation tools: inter-municipal management and inter-municipal projects.

- **Inter-municipal management** enables joint management of a range of public services and activities to make it possible for a service to function or an infrastructure to be implemented which, due to its cost or scale, exceeds the resources available to each of the participating municipalities (i.e. collection of household waste, maintenance of tracks, provision of electricity, etc.), or by an activity which, by nature, exceeds the territorial limits of the municipalities (i.e. transport, sewage, urban planning).
- As for **inter-municipal projects**, the aim is to implement collective development projects defined jointly by the municipalities. In a second phase, these projects are broken down into achievements and actions outlined in an investment program.

²⁰ Article 84 and 87 of law no. 97-029 of 15 January 1999 on the organization of municipalities in the Republic of Benin

Article 84. The municipality shall draw up and adopt its development plan. It shall ensure its implementation in line with national approaches with a view to ensuring the best living conditions for the population as a whole.

Within this context, it shall draw up the necessary planning documents: the master plan for land use in the municipality; the economic and social development plan; land use plans in urban areas; land use regulations, and detailed urban planning and housing development plans.

Article 87. The municipality shall launch actions related to development, infrastructure and engineering works which form part of its heritage, and different activities relating to their management and maintenance. The municipality shall be responsible for urban planning in its territory.

In practice, these tools are not implemented, particularly for the Cotonou urban area, despite the existence of a political vision and will for inter-municipal management which is reflected in the strategic document for “Grand Nokoué”. Possible explanations for this include the lack of any laws and practical tools for applying legislative provisions.

<p>Strengths</p> <ul style="list-style-type: none"> ■ Clear allocation of responsibilities among the different institutions ■ Responsibilities for urban transport at local level with the municipalities (strong decentralization in the laws) ■ Strong and committed institutions for the design and implementation of an ambitious Government Action Plan (PAG). ■ Well-defined framework for interacting with, and sharing responsibilities among, the inter-municipal bodies ■ Well-trained agents and public service executives, conscious of the country’s problems in urban mobility 	<p>Weaknesses</p> <ul style="list-style-type: none"> ■ Archaic sectoral laws on transport and urban planning, poorly adapted to the reality of the current situation, or in some cases, no laws at all ■ Municipalities with insufficient financial resources ■ Absence of sectoral guidelines and tools to map out the actions of local authorities ■ Failure to implement inter-municipal cooperation
<p>Opportunities</p> <ul style="list-style-type: none"> ■ Ongoing support for updating key sectoral laws (urban planning code) 	<p>Threats</p> <ul style="list-style-type: none"> ■ The long-term sustainability of investments made by the PAG is put at risk by the lack of resources and tools at municipal level

Figure 12: SWOT matrix highlighting the issues related to the institutional framework and urban transport management

2.2 Funding sources devoted to urban transport management

The current government has a **clear policy for allocating resources to land transport collected from motorized travel**, through public companies and agencies to which these resources are assigned.

As illustrated in Figure 13, the **main public resources used to fund urban mobility** (apart from borrowing arrangements) are therefore currently:

- General resources:
 - Government funding with respect to road systems of national interest and part of the investment in PAG projects;
 - Municipal funds;
- Assigned resources:
 - ANaTT and CNSR funds supplied by self-generated resources (vehicle registration fees, roadworthiness test fees, etc.);
 - The tax resources assigned to the Road Fund, for a total of 18 to 19 million FCFA per year which include a share of 49.625% of the road tax levied by customs on imported goods, 100% of the proceeds from carbon tax, (10% of the value of fuel sold for consumption, which only forms a small part of the total volume of fuel consumed in the country due to fuel smuggled in from Nigeria), and 100% of tax imposed on heavy goods vehicles at borders (5,000 FCFA per vehicle).
 - The revenues from SIRB, including proceeds from two road tolls set up along the east-west highway, one to the west between Ouidah and Cotonou, and the other in Ekpe before the Cotonou eastern exit, along with weighing fees.

The recent creation of the SIRB is intended, in particular, **to facilitate borrowing, the repayment of which would be based on future revenue from road tolls and weighing fees** to accelerate investments in infrastructures.

The resources listed above are currently used to fund the operation of sector agencies (ANaTT, Road Fund, CNSR) and to fund road maintenance and investments. **However, these resources are insufficient for meeting these needs in full.** In particular, the municipal funds are no match for the expenses that would be required to maintain the roads in good condition (see section **Error! Reference source not found.1.3.3**).

Two-wheelers, which are the main mode of motorized transport, contribute proportionately far less to the sector's resources than other modes of transport. They are only subject to very low taxes on import, only use smuggled fuel, and do not have to pay road tolls which only concern light motor vehicles and heavy-duty vehicles. (To impose this on two-wheelers would undoubtedly be difficult as they would simply come off the asphalt roads and go round the toll booths.)

The **sustainable funding of a future collective transport service** would not, at this stage, pose as much of a problem in terms of allocation as a problem in terms of collection and the amount of tax or incidental tax revenues. However, as a first step, such a service could undoubtedly benefit from the support of multilateral and bilateral donors whose financing of urban mobility in Benin (see section 1.3.3) is currently quite limited, and is only or almost only focused on urban networks – unlike other

sub-regional countries (Nigeria, Côte d'Ivoire, Senegal) where major operations have been financed by these donors to encourage collective transport.

Urban mobility funding plan in Benin

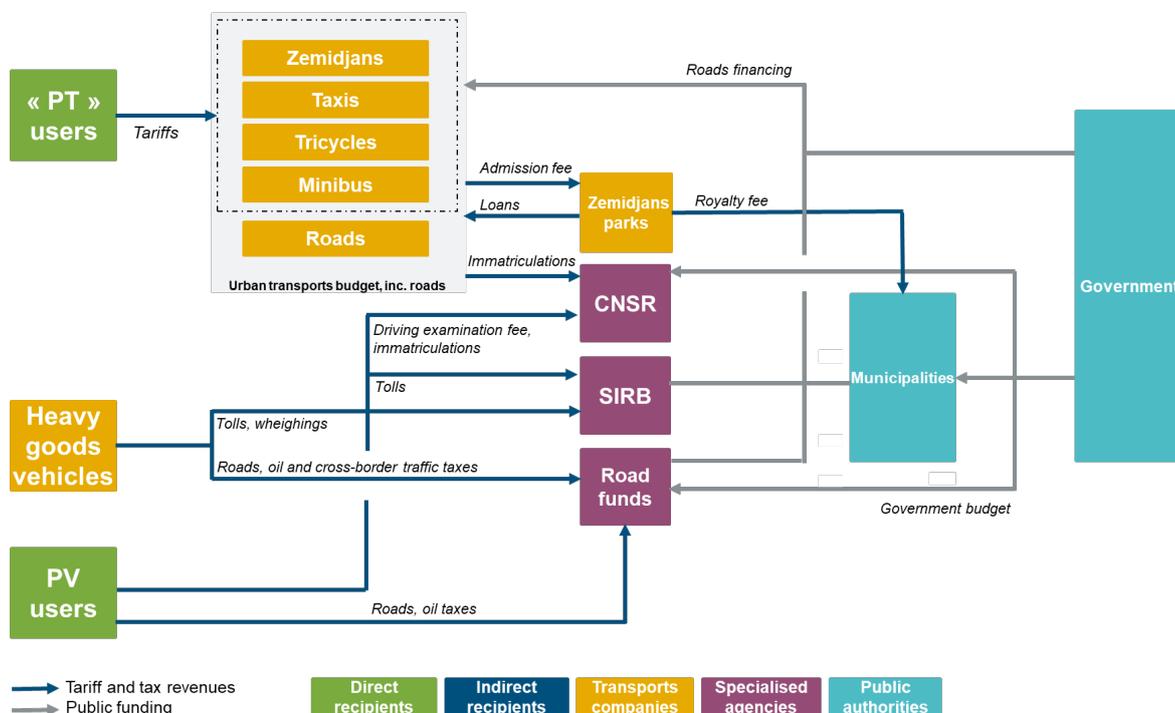


Figure 13: Urban mobility funding plan in Benin

Strengths	Weaknesses
<ul style="list-style-type: none"> Assignment of incidental tax revenues and part of tax revenues to agencies and companies in the sector 	<ul style="list-style-type: none"> Low involvement of international donors in the sector apart from asphaltting/paving Very low local tax resources compared to the responsibilities Low taxation of motorized vehicles (imports, use, etc.) Road tolls do not apply to two-wheelers
Opportunities	Threats
<ul style="list-style-type: none"> Apply leverage to designated resources to build borrowing based on future revenue, and therefore accelerate investments 	<ul style="list-style-type: none"> Fuel smuggling deprives institutions in the sector from significant resources Investments in asphaltting are currently deteriorating due to insufficient municipal resources to maintain road surfaces

Figure 14: SWOT matrix highlighting the issues related to sources of funding dedicated to urban transport management

2.3 Performance and use of public transport

Motorbike taxis are practical but place a heavy burden on household budgets

The motorbike taxi transport service is abundant and widespread in all urban areas. The flexibility of two-wheelers enables them to move about easily on roads whether surfaced or not, regardless of their

practicability. Over short distances, they avoid people having to make long trips on foot in urban areas where pedestrian space is often cluttered, impassable, in poor condition, or non-existent.

The convenience of zemidjans is counterbalanced by the prices charged for longer distances which are high in proportion to low household incomes. For example, the cost of traveling a short distance within Cotonou (between 0 and 3 km) varies between 100 and 250 FCFA, but for longer distances (between 15 and 20 km) such as the commuter journeys undertaken twice a day by many people in the Calavi – Cotonou urban area, the price is between 500 and 1,000 FCFA.

To compare, the consumption expenditure of Benin households is estimated at 1,040 FCFA per person, per day for the entire country (World Bank 2018 data), with obviously higher geographical differences, but a maximum of 1,576 FCFA per day (INSAE 2015 data) in Littoral County which more or less corresponds to the municipality of Cotonou. The average income of an employee is approximately 3,900 FCFA in Benin.

In Parakou, short-distance journeys (between 1 and 5 km) cost between 100 and 200 FCFA, whereas longer trips cost from 200 FCFA to 400 FCFA.

Therefore, the current cost of long journeys represents a significant part of the expenses of the poorest households. The development of public transport for the longest journeys between home and the workplace could enable (i) the poorest households to save money, and (ii) greater efficiency of this transport over time.

A major source of well-paid jobs for poorly qualified people

With one driver for one customer, the zemidjans are a highly labor-intensive mode of transport and represent a major source of employment. Despite the safety risks and the demanding nature of the work, the main appeal of this profession is the income that it generates. It is thought to be around 5,000 FCFA per day, compared to a national average of 3,900 FCFA. Therefore this is an attractive option for those who have difficulties finding employment.

Drivers can gradually pay off a new vehicle (costing between 430,000 and 500,000 FCFA) by means of weekly installments through contracts of about 8 to 10 months. New vehicles are used for an average duration of two to three years, depending on maintenance, and for an average distance of 250 km per day.

In addition to covering the usual costs related to operating motorcycles (fuel, repairs, etc.), the zemidjans also have to pay a monthly municipal fee of 400 FCFA per person, and this is generally paid on an annual basis.

Increasing nuisance

The uncontrolled increase of the number of motorcycles used – either owned by individuals or zemidjans – in urban areas is unsustainable in view of the problems that they cause, namely:

- **Congestion** in urban areas due to the massive use of individual two- and four-wheel vehicles for commercial or non-commercial purposes. Despite sections of major routes being dedicated to two-wheelers to improve and secure the flow of traffic, driving in urban areas nevertheless remains difficult at peak hours. Urban congestion could worsen if the current mobility trend continues.
- On account of the **safety risks** for users of two-wheel vehicles, decision-makers and citizens are seeking a more secure alternative for public transport. In fact, with motorized two-wheelers being involved in 77% of accidents resulting in personal injury on a national level, and in 82.13% of accidents in urban areas in 2015, they appear to be responsible for a large number of accidents with injuries in Benin.
- **Air pollution.** Although several policies have been implemented to reduce pollution from private vehicles, including a ban on imports of used vehicles older than 10 years to ensure a relatively recent fleet, and a ban two-stroke engines, pollution levels remain high and have a considerable impact on public health. Mainly because of the massive use of private vehicles and poor quality fuel obtained from an informal market, the severity of air pollution, which is not fully grasped, is likely to be on the increase again.

The need to move beyond the past failures of collective transport

With ever increasing exchanges between the cities of Cotonou and Abomey-Calavi, urban congestion will be a growing concern for the authorities and other players involved in urban mobility. Although various projects aiming to decongest these commuter flows are being considered (i.e. Cotonou

northern bypass, administrative center in Calavi), the lack of an underlying urban mobility policy targeting key issues such as the development of public transport, could limit their impact over time.

Nevertheless, if public transport is to develop, the past failures need to be understood so that a viable service can be created. In August 2012, a private company, in partnership with the city of Cotonou, attempted to create a public transport service. “BenAfrique”, as it was called, rolled out 52 buses in the city with the aim of transporting 15,000 passengers a day. Despite the initial appeal of an attractive price, i.e. 200 FCFA per journey, the white, blue and green buses did not succeed in establishing themselves. The failure appears to stem from (i) the prices being increased from 200 FCFA to 300 FCFA, soon exceeding the price of zemidjans for the same distance, (ii) unreliable service, and (iii) the lack of any public subsidies for a service which was operating at a loss. The BenAfrique buses disappeared after a year.²¹ It would also appear that the system suffered from irregular stops and times, excessive and highly variable travel times, and a lack of well-organized stops to promote intermodal travel (access on foot, connections with the “zems” to continue the journey into local neighborhoods not served by the buses, etc.).

Lagoon transport could offer a good alternative for certain journeys. With a travel time from shoreline to shoreline not exceeding 20 minutes, this mode of transport could interest users near the boarding areas (i.e. traders at Dantokpa market, the main landing wharf). A traffic study carried out by BNEDT in July 2013 which focused on a development project for river-lagoon transport in Cotonou, Porto Novo and their surroundings, calls for an attractive rate and advantageous travel time compared to the existing road transport service.

<p>Strengths</p> <ul style="list-style-type: none"> ■ Very flexible point-to-point service for the user ■ Relatively recent fleet, generally in good condition, motorized two-wheelers almost completely eliminated ■ Adaptation of services to the specific needs of women (transport of goods, etc.) <p>Opportunities</p> <ul style="list-style-type: none"> ■ High prices and low profitability of other modes for long distances could make room for a collective mode of transport at attractive prices for the same distances ■ The population’s acute perception of road safety problems – the government’s capacity to implement improvement measures, i.e. wearing of crash helmets ■ Increase in mobility demand providing the opportunity to focus part of this demand on other modes 	<p>Weaknesses</p> <ul style="list-style-type: none"> ■ Non-existent mass public transport by bus apart from inter-urban services ■ Significant safety impact (accidents, etc.) ■ Price remains high for the user given the level of incomes in Benin <p>Threats</p> <ul style="list-style-type: none"> ■ Risk of congestion and pollution ■ Lack of awareness of non-visible pollution
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Figure 15: SWOT matrix highlighting the issues related to the performance and ridership of public transport

2.4 Participation of the private sector and civil society

Following spontaneous and massive development in the 1980s, the motorbike taxis or “zemidjans” today represent not only virtually all of the urban transport services available, but also a considerable source of direct employment (i.e. drivers) and indirect employment (i.e. motorcycle owners and sellers, repair services, etc.). Some estimations put the number of drivers at around 12,000 for Cotonou alone

²¹ H. Kingbêwé, *Bénin: BenAfrique, fin précoce pour une entreprise qui a fait rêver* [Benin: BenAfrique, an early end for a company that got us dreaming], La Nouvelle Tribune, September 2013

(1/10th of the country's population) and at 250,000 in the entire country.²² Therefore, this mobility service can be considered highly labor-intensive.

A certain degree of success in regulating motorbike taxis

The organization of zemidjans started in 1989 with the acknowledgment of the “motorbike taxi” service as a profession. Between 1992 and 1993, the local authorities of Cotonou then tried to regulate the market by establishing a “taxi law” and a monthly fee similar to a road tax disk for the zemidjan drivers.

To keep on top of the activity, the authorities also imposed the wearing of crash helmets and high visibility jackets, possessing a driving license and registering the motorcycle. Although helmets and jackets are now used by everyone, it would appear that the other regulations or restrictions are far from being fully respected, and this remains difficult to control. The profession is difficult to assess as the authorities are unable to regularly collect fees.

In 2017, a reform aiming to register the motorbike taxis and organize the sector was launched in Parakou, resulting in the motorbike taxi drivers taking out insurance and making helmets mandatory. This reform saw around 3,500 motorbike taxi drivers register with the local authorities.

A reform of the annual fee paid by the drivers to the local authorities was also initiated. Increasing from 6,000 FCFA to 20,000 FCFA, the fee was intended to give the drivers the right to insurance cover and to uniforms. The implementation of this reform is somewhat vague and it creates a source of resentment on the part of zemidjan drivers.

Zemidjans represented by a range of unions

In parallel to the authorities' desire to regulate the sector, the zemidjans organized themselves around various trade unions, the first one being the Cotonou union of motorbike taxis (UCOTAC), created in 1993. After an initial success at organizing the profession, and becoming a major political force in the country, the unions multiplied and became fragmented with the rise in the number of motorbike taxis between the 1990s and 2000s.

Today, the highly informal nature of the sector makes representation and dialog difficult, despite the political leverage of the major trade unions and their power to mobilize. The larger ones have grouped together into the “Benin consolidated group of trade unions of motorbike taxi drivers” and represent the main intermediaries between the zemidjans and the government. The unionized zemidjans can benefit from access to government and local authority projects. They are also directly informed of these projects during political meetings as they are called upon to provide their support to representatives, and they also benefit from financial support.

Organization of zemidjan “meeting and resting places”

In response to the lack of safety and insurance, zemidjan “meeting and resting places” have been developed, bringing together 80% of zemidjans in the Cotonou urban area. These are mostly private and informal micro-institutions which emerge spontaneously in all the regions where the zemidjan operate. They are organized around small roadside stop-off points where drivers can park and rest in complete safety.

These resting places, which may only be accessed by members, are veritable communities and have paying entrance fees that vary depending on the size of the resting place. They also provide a source of income of a more or less formal nature, for the authorities.

Varying in size, they are organized in a cooperative way, with the head of the resting place or general secretary elected for a mandate ranging from six months to one year, heading up a “resting place committee” made up of half a dozen members. During elections in the large resting areas, lists of all the main unions battle it out alongside lists of independent or “apolitical” candidates. The zemidjan unions are strongly represented in the resting areas, and their influence and political leverage can generally be measured by the size of the resting places that they govern. The trade unions can also intervene as an external adjudicator to regulate disputes with the authorities or between the different resting places. Some “official” resting places are also directly affiliated with the trade unions that created them.

They also enable the members of their communities to have access to “tontines” (traditional lending systems) and other forms of informal finance. This source of financing enables members of the

²² G. Marchais (2009), *Règles publiques, règles privées : les taxis motos au Bénin* [Public rules, private rules: motorbike taxis in Benin], *L'Economie politique*, 41 (1), 59-68. doi :10.3917/leco.041.0059

community to take out loans with an interest rate varying between 10 and 15% which is mainly used to purchase motorbikes.

First lessons

The profession appears to be particularly difficult to reform as it constitutes a significant portion of Benin’s employment opportunities, particularly for young, unqualified people or for those whose qualifications are in low demand on the labor market. Many zemidjan drivers, mainly in Cotonou (no doubt due to the higher number of accidents) claim to be interested in transitioning to other jobs. Therefore, any transformation of the urban transport service which does not address the precariousness of the profession, or aim to improve the drivers’ conditions of employment, would probably be doomed to failure.

On the other hand, the resting place system could serve as a basis for introducing more uniform social protection for these extremely precarious workers in return for improvements in transport organization and regulation.

A civil society taking action on road safety issues

Road safety is a major area of concern for NGOs, faced with the country’s worrying performance, due to multiple factors including the condition of roads, the number of heavy goods vehicles and motorcycles, and the lack of respect for traffic regulations. A new highway code has been developed within the context of a partnership between the CNSR and Handicap International. Several national NGOs also exist such as Alignagnon, created in 2009, which focuses its activities on social entrepreneurship and road safety, both in the Benin territory and in the West African sub-region. These activities include raising awareness, promoting the prevention of traffic accidents and road maintenance, carrying out studies related to traffic and the reduction of deaths on the road, and training.

Strengths	Weaknesses
<ul style="list-style-type: none"> Transport service representing a major provider of direct and indirect employment, highly labor-intensive mobility Zemidjan profession relatively well organized in terms of its representation (trade unions) and operation (resting places) NGOs active in the area of road safety 	<ul style="list-style-type: none"> Very fragmented union representation, making collaboration and organization difficult in the sector The high level of informal activity and fragmentation makes it difficult to fund the sector (low rate of fee collection) Profession difficult to enumerate
Threats	Opportunities
<ul style="list-style-type: none"> Due to the impact on employment, it would be extremely difficult to evolve towards collective modes of transport requiring a lot less labor Difficult to involve new private players given the political leverage of the current operators Difficult to reform the sector due to the impact this would have on employment 	<ul style="list-style-type: none"> Awareness of zemidjan drivers, at least in Cotonou, of the precarious nature and risks of their profession, and interest in transitioning to other jobs

Figure 16: SWOT matrix highlighting the issues related to the participation of the private sector and civil society in urban transport management

2.5 Multi-modal planning and the functioning of city centers

Mobility and urban planning lacking integration

As is often the case in the West African sub-region, Benin’s urban areas developed at first in an informal and spontaneous way. Then, the authorities deal with connecting these scattered districts to the different urban systems that exist, in particular the sewage system and the road system. This

uncontrolled model of urban development does not allow for any mobility planning, but government action can influence it ex post.

Although the authorities are giving greater priority to the creation of urban master plans and urban mobility plans, these two planning exercises, where they have been initiated, appear to be disconnected. The projects under consideration currently focus on the development of housing, roads or even the problem of mobility related to private commercial transport, but not on the development of public transport.

However, the Benin authorities (particularly the Presidency and the Ministry of Living Environment) are fully aware of the need to focus on the development of urban areas with an eye to reducing travel requirements. The PAG contains an explicit effort to curb commuter traffic by relocating certain major traffic-generating centers: it plans to move administrative jobs to the Calavi area, to move the airport and the wholesale market out of the city center, and to create a car park and a logistics area in the immediate vicinity of the port. The creation of 11,800 housing units, another project of the PAG, could also offer the opportunity to plan the urban space and services to better meet the travel requirements that this housing development will create.

Public spaces are not designed to be used by very different modes

The different modes of transport (two-wheelers, private cars, heavy goods vehicles) exist side by side in the urban areas and their centers in a disorganized manner, creating traffic flow problems and safety issues. The authorities have transformed several local access roads along the four-lane highways (for example along the Calavi-Cotonou road), previously designed to facilitate access to local businesses, into special lanes for motorized two-wheelers. The results seem positive in terms of safety, but the elimination of the local access roads and the inadequate organization of intersections are causing problems.

As regards active mobility, it appears to be nonexistent as a mode of transport, despite the fact that the geography of the area would lend itself well to this. This is no doubt due to (i) the lack of specially assigned spaces, (ii) the risks related to traffic, particularly motorized two-wheelers, and (iii) an unfavorable climate for this kind of mobility (intense heat, lack of shaded areas).

Parking areas mostly develop spontaneously and often take up space that could be allocated to active mobility. The lack of designated parking spaces causes congestion in public areas.



Figure 17: Separation of modes of transport on the Cotonou-Abomey road in rush hour (Picture Y. Hopkins)

Public spaces are not geared towards intermodal travel

The massive use of an individualized point-to-point transport service (private and commercial two- and four-wheeled vehicles) does not encourage the spontaneous development of modal transfer areas such as those seen in other cities of the sub-region where minibus services are more widely available. Uncontrolled construction and the informal sector, in Benin, have often occupied the land which could be used to develop this type of space.

<p>Strengths</p> <ul style="list-style-type: none"> ■ Use of specially assigned lanes on major routes. 	<p>Weaknesses</p> <ul style="list-style-type: none"> ■ Lack of planning, urban development and urban transport apart from major projects; ■ Lack of dedicated areas for connecting between different modes of transport, even informal ones; ■ Low proportion of surfaced roads in peripheral areas;
<p>Threats</p> <ul style="list-style-type: none"> ■ The number of motorized two-wheelers continues to increase, bringing problems of safety, pollution and congestion; ■ Difficulty to move beyond the use of motorized two-wheelers in urban planning; ■ Risk of creating an urban master plan and an urban mobility plan that are disconnected from each other; ■ Gradual encroachment on public areas; ■ Road asphaltting program insufficiently connected to public transport needs. 	<p>Opportunities</p> <ul style="list-style-type: none"> ■ Certain urban master plans and urban mobility plans are in progress or about to start; ■ Major projects could be used to build a multi-modal urban transport service; ■ Definition of land use rights to be clarified through major projects; ■ Road asphaltting projects in peripheral areas; ■ Development of lagoon transport.

Figure 18: SWOT matrix highlighting the issues related to multi-modal planning and the functioning of city centers

2.6 Transversal themes

Environment and quality of life

Several measures in favor of the environment and the quality of life have been implemented by the government up to now, namely:

- Limitation of the age of vehicles to under 10 years in the territory of Benin, thus reducing the number of aging and highly polluting vehicles;
- A shift, now completed, from motorcycles with two-stroke engines to motorcycles with four-stroke engines, visibly reducing air pollution.

However, these two major improvements have partly concealed the still problematic issue of air pollution. While some pilot measurement stations had been set up in the 2000's, no kind of quantitative monitoring is available anymore today. The resumption of regular air quality measuring campaigns and the communication of results would make it possible to argue in favor of implementing tougher controls on the number of motorized two-wheelers (taxation, for instance).

Road safety

Data collected by the CNSR clearly highlights the problem of road safety stemming mainly from the high number of motorized two-wheelers used for daily journeys.

Although Benin's results are not as bad as those of neighboring countries (Niger, Burkina Faso or Togo), people traveling by motorized two-wheelers are highly vulnerable and represent the main victims of traffic accidents. In addition, statistics at the county ("département") level show that most of these two-wheeler accidents happen in an urban setting (especially in the Greater Cotonou). To reduce these risks, certain measures have already been implemented, such as the mandatory wearing of helmets and the creation of reserved lanes on major routes.

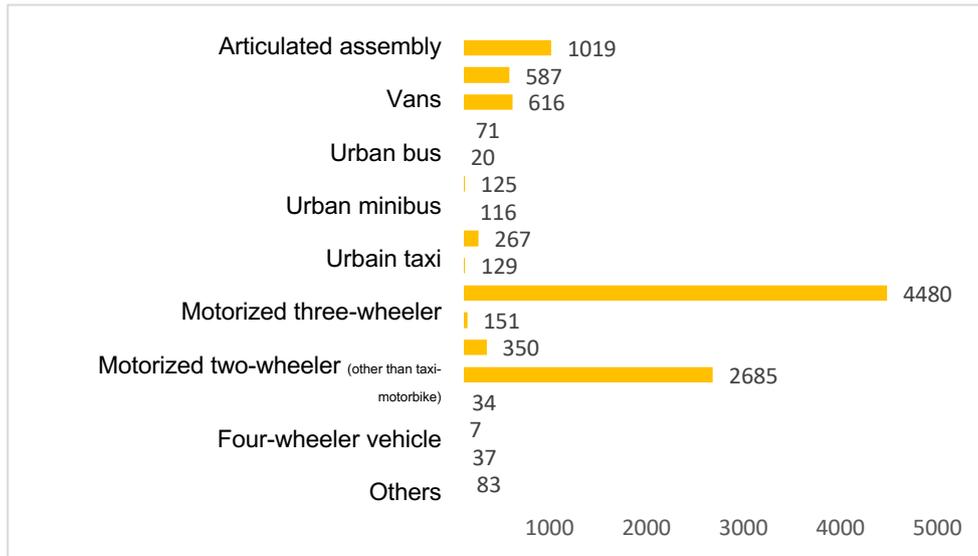


Figure 19: Types of vehicle involved in traffic accidents in 2017 in Benin

Social equity

Today, motorbike taxis in Benin constitute a practical transport service which is relatively inexpensive for short distances (but expensive for longer distances) and, above all, a massive source of employment for drivers. But the virtual monopoly of the mode also represents an obstacle to the mobility of the poorest households who need access to economic opportunities and public services. This obstacle must be balanced/considered against the sector’s weight in terms of employment.

An alternative collective transport service targeting these poor households cannot be conceived without some kind of complementarity between these two modes of transport, or finding new employment for some of those directly or even indirectly involved in the industry.

Discussions with zimidjan drivers in Cotonou show their general willingness to switch to different jobs because they work in this trade more out of necessity than by choice. However, drivers in smaller urban areas such as Parakou seem less motivated to change jobs.

New information and communication technologies (NTIC) and transport

The use of new technologies in the urban mobility sector remains relatively low both at road infrastructure level and in the services. A new private transport service called “uber taxis,” which makes use of NTIC, has appeared on the scene, most likely inspired by the franchise of the same name. A company based in Togo is trying to set up a similar motorbike taxi service, with a focus on safety (passengers must wear helmets and drivers are trained) and security (registered driver) to justify a higher price; however, the low number of these motorcycles is likely to hinder the success of this concept. Both services represent only a negligible portion of the market today.

Summary

Like most Sub-Saharan African countries, Benin is undergoing a process of rapid urbanization while the tools necessary for planning, managing and guiding this growth have not been created or updated for at least two decades. The Cotonou urban area has spread quickly, now absorbing Abomey-Calavi in the north and Sèmè-Podji in the east. This creates huge volumes of commuter traffic, made worse by the overlap with the Abidjan-Lago corridor for international freight transport which crosses the city center. At present, the situation of secondary cities is far less critical but, without any strong impetus, it could soon follow the same trend.

The lack of public funding for collective transport to meet growing needs for mobility has resulted in the rapid development of individual motorized transport. Benin, in particular, has witnessed an explosion in the number of motorized two-wheelers owned by individuals or operated by informal, poorly regulated taxi services. The heavy financial burden that these individual modes of transport and motorbike taxis impose on household budgets contributes to a reduction in mobility.

The proliferation of motorized two-wheelers is the source of a high number of accidents, perceived by the population as a serious problem and, combined with the poor quality of fuel smuggled into the country from Nigeria, it is also the source of a high level of air pollution. This pollution remains unmeasured and the public is less aware of it as a problem since the elimination of two-stroke motorcycle engines, however, it is creating a very real health risk in the medium to long term. Though there is no real data on the number of vehicles in operation, the statistics on annual registrations of motorized two-wheelers (around 170,000 registrations per year) point to a growing problem.

The 2016-2021 Government Action Plan (PAG) adopted in 2015 aims to “boost Benin’s economic and social development in a sustainable way.”²³ Among other objectives, it intends to meet the challenges of urban mobility and mitigate the associated problems through governance reforms and major projects, aiming, in particular, to:

- *Enable* greater effectiveness of public action through the creation or reinforcement of companies and agencies (to be listed) charged with implementing these actions, equipped with resources of their own and/or with a legal fund-raising capacity, and the clarification of their roles, particularly with regard to existing ministries;
- *Avoid* commuter traffic by relocating major traffic-generating centers (move administrative jobs to the Calavi area, move the airport and the wholesale market out of the city center, and create a car park and a logistics area at or in the immediate vicinity of the port);
- *Shift from* certain types of transport to new modes (river-lagoon transport, for example);
- *Improve* traffic conditions through a major asphaltting program for urban roads and through the construction of a rapid Cotonou bypass in the north-east.

In addition to certain findings that gave rise to these PAG measures and projects, the assessment of the situation highlights the following elements:

- *Legal, regulatory and institutional framework.* Sectoral legislation on transport and urban mobility needs to be updated, identified or even created, but this has yet to be done. However, apart from major routes of national interest, urban mobility (road systems, transport services) is essentially organized by the municipalities within an extremely decentralized legal framework. These municipalities are sorely lacking in terms of policy frameworks (national policy, tools for inter-municipal cooperation) and financial resources.
- *Sources of funding.* The limited revenues from the road sector are generally allocated to improving mobility, which is a positive factor. However, while two-wheelers have become the main mode of motorized mobility in urban areas, they do not, or barely, contribute to funding this mobility, which will have to be increased if the public authorities are to develop collective transport in a sustainable way. Finally, unlike in other sub-regional countries, multilateral and bilateral donors have little involvement in mobility projects, except for limited contributions to the road system or a few planning studies.

²³ 2016-2021 Government Action Plan

- *Performance and ridership of public transport.* The omnipresent motorbike taxis, virtually the only means of “public” urban transport, provide a practical point-to-point service which is readily available but expensive in proportion to average household incomes. They represent thousands of direct and indirect jobs for relatively deprived categories of the urban population and the sector has adapted itself to the specific requirements of women. Finally, despite improvements (wearing of helmets, elimination of two-stroke engines, use of reserved lanes on major routes), the motorized two-wheelers continue to generate considerable pollution and nuisance.
- *Private sector and civil society.* The political leverage of the motorbike taxis sector is high, but their representation through trade unions remains fragmented. However, organization of the sector out in the field (resting places) could provide a cornerstone for reforms. The involvement of NGOs in road safety demonstrates the severity and the level of awareness of the problem.
- *Multi-modal planning and the functioning of city centers.* Apart from major projects in the PAG, urban planning remains non-existent. The urban master plans and urban mobility plans currently being developed or launched appear to be disconnected. This connection is essential for collective and/or active modes of transport to become capable of meeting the demand for mobility in the long term. What’s more, unsuccessful attempts in the past to create urban bus services in Cotonou show that, above the lack of funding, the real obstacle to alternative modes is the lack of developments facilitating point-to-point journeys (pedestrian pathways, intermodal areas, prioritized routes for collective modes of transport, etc.).

In this context, the public infrastructures and major facilities called for in the PAG provide the opportunity to link an ambitious sustainable urban mobility policy with concrete, funded actions. This policy could concentrate on promoting sustainable mobility services (collective transport and intermodal travel) beyond the few road infrastructures envisaged by current projects. The next national forum on urban mobility will be the opportunity to define the content of such a policy based on recommendations which will be proposed in the next stage of this study.

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Decree no. 366 of 16 June 2016 on the creation, responsibilities, organization and functioning of the Office of Analysis and Investigation of the President of the Republic;

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Decree no.°2000-671 of 29 December 2000 on the regulation of importation, marketing and distribution of second-hand equipment and goods;

Order no.°2016/MTPT/MISD/DC/SG/CTTT/DGTT/SPC/SER of 7 March 2016 on the regulation of motorcycles used for the public transport of passengers (motorbike taxis);

Law no.°97-028 of 15 January 1999 on the organization of territorial administration in the Republic of Benin;

Law no°97-029 of 15 January 1999 on the organization of municipalities in the Republic of Benin;

Law no°98-005 of 15 January 1999 on the organization of municipalities with special status;

Law no°98-007 of 15 January 1999 on the financial system of municipalities in the Republic of Benin;

Law no.°2009-17b on intercommunal cooperation in Benin

List of persons met during assessment missions in Cotonou and Parakou in September 2019

Organisme		Nom	Prénom	Rôle
Présidence de la République	BAI	Akoute	Eric	Directeur des études et appui aux projets d'investissements
Ministère du plan et du développement	Cabinet	d'Almeida	Rufino	Directeur de cabinet
	Direction des Politiques de Développement	Agbessi	Magloire	Directeur
Ministère des infrastructures et des transports	Cabinet	Ahissou	Joseph	Directeur de cabinet
		Houndje	Roch	Secrétaire général
		Idohou	Marius	Secrétaire général adjoint
		Yayi	Didier	Directeur
	Direction nationale des transports terrestres (DGTT)	Zinsou	Bienvenu	
		Aboudou	Younous	Directeur des transports fluvio lagunaire
	Direction de la gestion et du suivi des infrastructures (DGSi)	Avotrican	Sylvain	Directeur de la gestion et du suivi des infrastructures
		Adomou	Habib	Direction de la gestion et du suivi des infrastructures
		Gbadamassi	Ahmed	Direction de la gestion et du suivi des infrastructures
		Adda	Célestine Cira	Direction de la gestion et du suivi des infrastructures / DGI
	Centre National de Sécurité Routière (CNSR)	Yete	Koovy	Chef service prévention routière
		Anagonou	Georges	C/SCC
	Fonds routier	Kouton	Emmanuel	Directeur
		Akoha	Alain	Chef comptable pi
		Fassinou	Lucius	Responsable du budget et de l'administration
	Agence nationale des transports terrestres	Anago Adjovi	Auguste José-Marie	Chef service des études, de la réglementation et du contrôle
		Lisboa	Appolinaire	C/DF
Société des infrastructures routières du Bénin (SIRB)	Rage	Antoine	Directeur général	
	Adammado	Jock	Contrôleur des gestion	
	Kpenou	Sarah	DAF	
Ministère du cadre de vie et du développement durable	Cabinet	Pinto	Adam	Directeur Adjoint de Cabinet
	Direction de l'Urbanisme	Avakoudjo	Abraham	Directeur
	Direction Départementale Atlantique-Littoral	Attolou	Rosaire	Directeur départemental du cadre de vie et du développement durable /Atlantique-Littoral
Mairie de Cotonou		Cakpo Chichi		Secrétaire Générale
		Legbanon	Célestin	C/DE
Mairie de Sèmè-Podji		Kinsikounon	Sébastien	Secrétaire Général
		Gbedan	Ambroise	
Mairie d'Abomey Calavi				Secrétaire Général
		Megninou	Dieu Donné	DST
Mairie de Parakou		Djossou	Ghislaine	
		N'Pocha	Félix	Secrétaire Général
Port autonome de Cotonou		KariM Issaou	Osseni	Chef Service Eclairage public et de la circulation urbaine
		Thys	Joris	Directeur général
Banque Africaine de Développement		Andrianarisata	John	Country Manager
		Dicko	Hamaciré	Senior country economist
Taxi-Moto Cotonou		Sossoukpe	Cyrille	
			Basile	
Taxi-Moto Parakou		Chabi	Blaise	
		Sossa	Paul	
		Koto	Karim	

List of documents collected during the assessment mission and still to be collected

Donnée transmise	Convention et son cahier des charges de la concession pour la gestion et l'exploitation d'un service public de transport fluvio-lagunaire collectif de personnes et marchandises en
Donnée transmise	Arrêté général 1956 portant réglementation de l'usage des voies routières ouvertes à la
Donnée transmise	Décret 1979 n°79-109 réglementant les transports routiers en République Populaire du Bénin ;
Donnée transmise	Bénin 2025 – scénario ALAFIA ;
Donnée transmise	Guide méthodologique pour l'élaboration de documents de stratégie sectorielle ou thématique ;
Donnée transmise	Plan national de développement 2018-2025 ;
Donnée transmise	Politique nationale de sécurité routière du Bénin 2019-2030 ;
Donnée transmise	Age des véhicules recensés entre 2007 et 2018 ;
Donnée transmise	Véhicules immatriculés entre 1981 et 2017 ;
Donnée transmise	Evolution des ressources et des emplois du Fonds Routiers de 2012 au 31 août 2019 ;
Donnée transmise	Base de donnée des véhicules immatriculés pour les années 2016, 2017, 2018 ;
Donnée transmise	Données sur la ville de Cotonou : budget municipal alloué à la mobilité urbaine en 2018, redevances municipales, linéaire du réseau routier.
Donnée transmise	Rapport définitif de l'étude de trafic et annexes – projet de développement du transport fluvio-lagunaire à Cotonou, Porto Novo et leurs environs ;
Donnée transmise	Etude relative à la mise en place du cadre juridique et institutionnel du projet – projet de développement du transport fluvio-lagunaire à Cotonou, Porto Novo et leurs environs ;
Donnée transmise	Etude de faisabilité technico-économique du projet de développement du transport fluvio-lagunaire et du tourisme au Bénin (cas du trajet Cotonou-Porto Novo) ;
Donnée transmise	Audit de la gestion des ressources du fonds d'appui au développement des communes (FADeC) au titre de l'exercice 2016, Commune de Porto Novo ;
Donnée transmise	Fiche du projet « Programme d'Adaptation des Villes aux Changements Climatiques » (PAVICC) –
Donnée transmise	Porto Novo, ville verte : aménager et protéger les berges lagunaires – AFD.
Donnée non transmise	Etudes EGIS contournement nord-est (y compris annexes) ;
Donnée non transmise	Etude de navigabilité de 2013 sur le Grand Cotonou (si lien existe une différente de l'étude de
Donnée non transmise	Dossier UE Grand Nokoué ;
Donnée non transmise	Rapport sur la sécurité routière au Bénin ;
Donnée non transmise	Cartographie des routes asphaltées ;
Donnée non transmise	Données Cotonou, Abomey-Calavi et Sèmè-Podji : projets des mairies, budget total 2018, plan
Donnée non transmise	Données Abomey-Calavi et Sèmè-Podji : budget 2018 prévu et réalisé avec montant pour la voirie et nombre de personnel affecté pour ces services, nombre personnel affecté pour services transports/total, montant redevances payées par les différents transports, linéaire de