



**VREF PROGRAMME: MOBILITY AND ACCESS IN AFRICAN CITIES
GRANTS FOR COMPARATIVE RESEARCH PROJECTS 2021**

**Negotiating the control over transportation at the urban margins: dynamics
in governance coproduction in informal mobility in Abidjan (Cote d'Ivoire)
and Douala (Cameroon)**



TECHNICAL AND SCIENTIFIC REPORT

By

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July 2024

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Acknowledgements

Our gratitude goes to the Volvo Research and Educational Foundation (VREF), which funded this study as part of the “Mobility and Accessibility in African Cities 2021” programme.

List of abbreviations and acronyms

BRT	Bus Rapid Transits
CSO	Civil Society Organisation
CSRS	Centre Suisse de Recherches Scientifiques en Côte d'Ivoire
ETM+	Enhanced Thematic Mapper Plus
GIS	Geographic information system
GPS	Global Positioning System
NGO	Non Governmental Organisation
OLI	Operational Land Imager
SOCATUR	Société Camerounaise de transports urbains
SOTRA	Société des Transports Abidjanais
TIRS	Thermal Infrared Sensor
TM	Thematic Mapper
UDs	Université de Dschang
UFHB	Univesité Félix Houphouët-Boigny
UN-Habitat	The United Nations Human Settlements Programme

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1. Introduction

African cities are growing at an extraordinary pace. Unfortunately, this remarkable growth is not accompanied by a sustained development of infrastructure and provision of basic services. Many cities are growing so fast that national, regional, and city governments cannot manage how they develop or assure the provision of the services people need (World Bank 2022). Urban mobility is one of the key challenges for African cities. Getting to places in comfort and with dignity is vital for women and men of all ages. However, in many cities, the transport system has failed to keep up with urban growth. There is inadequate provision of dependable, affordable, and safe transport services to meet the travel needs of the people. The informal sector provides much of the general transport service, using very large numbers of small vehicles. At the same time, the travel system impacts the city through congestion, increased costs, pollution, accidents, noise, intrusion, and long delays for both users and non-users. The massive expansion of many unplanned and informally developed African cities has imposed a substantial travel burden, especially on poor, peripherally located people trying to access better-paid work and services located in central or more affluent districts. The high cost of fares, long uncomfortable journeys, poor/lengthy connections between modes and key destinations, and safety and security issues, constitute major constraints to urban commuters.

State institutions and formal operators cannot resolve problems related to urban mobility alone. A more inclusive approach involving governments at national, regional and city levels, the private sector, civil society organisations and actors from other related sectors, should be promoted. Nevertheless, some actors are still regarded as “actors of the urban chaos”, and therefore, are never involved in the urban mobilities governance. Those “uninvited” actors develop, produce and reproduce urban mobility on the “margins”. Findings on governance studies show that for sustained success, processes should be participatory and inclusive. Various stakeholders should contribute in the coproduction of principles, strategies, regulations, and their implementation. This is not yet the case in most African cities where some actors are ignored or excluded in the coproduction processes.

For example, national Governments are working in guiding the development of cities, developing urban mobility policies, improving the implementation frameworks, and mobilizing finance. Local governments ensure at the city level that capabilities are built to develop and implement locally appropriate strategies. Local organisations such as informal transport workers unions (e.g. taxi drivers, minibuss operators, etc.), are also key actors in the implementation of urban transport strategies. Urban municipalities in several countries have attempted to involve various actors in urban governance strategies. Nevertheless, some actors are still regarded as “actors of the urban chaos”, and therefore, are never involved in the urban mobilities governance. Those “uninvited” actors develop, produce and reproduce urban mobility on the “margins”. This shows that all the stakeholders that should be involved in the production of urban public transport have not yet been characterised, mapped and engaged.

Findings on governance studies show that for sustained success, processes should be participatory and inclusive. Various stakeholders should contribute in the coproduction of

principles, strategies, regulations, and their implementation. This is not yet the case in most African cities where some actors are ignored or excluded in the coproduction processes.

In order to fill this knowledge gap, the project on “Negotiating the control over transportation at the urban margins: dynamics in governance coproduction in informal mobility in Abidjan (Côte d’Ivoire) and Douala (Cameroon)”, was initiated. Using an interdisciplinary approach, this project focused on dynamics from the margins to urban transport governance. The study was built on the assumption that logic and practices of actors are often strategies from below or an expression of their innovation and creativity to contribute to transport governance, to improve the mobility offer in the city. This report is structured around the conceptual framework of the study, the methodological approach, and interim results.

2. Rationale and scope of the study

2.1 State of the research

Africa is the most rapidly urbanising region of the world with an average growth rate of 3.44 percent per year (UN-Habitat, 2016). In 2040, African cities will host around a billion people, equivalent to Africa’s total population in 2009 (Rocca & Fernandez, 2020). The territorialization of African cities presents more horizontal than vertical formations. Urban sprawl shows the constitution of cities in layers, presenting a double face made up of the center and the periphery. This rapid development, with poor planning and decision-making has led to many serious urban challenges, one of which being transport. Urban mobility is increasingly becoming one of the planning and development issues for cities in the global south. Sub-Saharan cities are growing fast, outstripping the current transport infrastructure. Despite the population and spatial growth, many cities are defined by inadequate planning, rapid urbanisation and deteriorating transport infrastructure and services (Sietchiping et al 2012).

Transport-related services in urban areas include public transportation, traffic management and provisions for non-motorised transport. These services have the potential to contribute to developmental outcomes such as the reduction of congestion and travel times impacting on transaction and connectivity costs; urban mobility through affordable transportation can lead to economic mobility by enabling poorer segments of the population to access opportunities; safety can be improved through better traffic management; and both health and environmental benefits can be gained through ecologically-friendly practices (Jones et al, 2014). Transportation systems in general are of strategic importance as they are a tool of social cohesion; a powerful element in promoting economic and employment development and establishing an equilibrium between territorial areas with different levels of accessibility (Cascetta et al, 2008). There are many recent reforms to improve the level-of-service in African cities including the rapid growth of Bus Rapid Transits [BRTs] and improvement of traditional transport offer, including the displacement of informal transport operators. However, the offer is still limited to meet qualitatively and quantitatively the needs of an ever-growing urban population.

Comprehensive and integrated long-term visions for sustainable transport are rare in African cities. Transport and land use as well as many other infrastructures and services should be clearly integrated. Technological innovations in transport have encouraged both people and industry to change their location to take advantage of the improved mobility. At the same time, land use dynamics influence the demand for travel and the provision of new transport infrastructures and services (Cascetta et al, 2008). Therefore, the transport policy will be more effective if the impact of land use, urban activities, and administrative systems are taken into account, rather than a narrow focus on transport alone (Morita et al, 2004). Different governments operate on various scales of jurisdictions and their actions in a specific policy field are generally mutually dependent. However, these different levels of government do not necessarily coordinate their policies, as the scale differences drive different perspectives and objectives (Veenemann & Mulley, 2018). In many cases, although transportation planning and management may be devolved at the local level, municipalities lack the budget to fulfil their transport-related responsibilities (Pojani and Stead 2018).

The governance of urban transport that is essentially about how different actors interact to make and operationalise decisions, is critically important in African cities. A sustainable mobility paradigm should be based on an appreciation of the socio-economic embeddedness of transportation activity, implementation of innovative alternatives, and high public acceptance, if not, active public participation. This entails developing a better understanding of how various actors exercise agency to influence politics, polity, and policy in urban transport (Goyal & Howlett, 2018, Lombard & Ninot, 2010). Urban governance is experiencing significant challenges, resulting in an increased shift from public to private provision and a clear trend for devolution of responsibility to institutions at local and regional levels (Pangbourne et al, 2018). Special considerations are paid to the transport policies and local governance, since the decentralization of administration power and planning responsibility to local government has become a notable trend in African countries.

Responsibility for key urban governance issues is often fragmented amongst large numbers of government stakeholders with limited capacities and conflicting interests (Smit, 2018). Management bodies with transport tasks are often spread across a myriad of agencies. When they are granted real decision-making power, these institutions often have differing ideologies and areas of focus (Pojani and Stead 2018). Key urban governance stakeholders therefore need to be brought together in collaborative processes to jointly develop and implement new strategies that are based on a broader range of interests and meet a broader range of needs.

However, key urban transport actors have not yet been sufficiently characterised. If formal sociotechnical actors have been largely covered by literature, there is a paucity of studies regarding informal transport actors. Nevertheless, informal actors of urban transport management are increasingly receiving attention from researchers. Studies focus on challenges of operators of the informal sector using various types of transport modes such as mini-buses, communal taxis, motorcycle-taxis as well as the way various actors contribute to the reconfiguration of public space (Agbibo, 2018, Kemajou et al, 2019; Zouhoula Bi, 2018). This emerging body of knowledge contributes to advance understanding of the harsh conditions of labour and everyday challenges facing Africa's informal transport operators and, how these

operators are negotiating these challenges to make the most of their time. Importantly, it also focusses on the emergence of new actors due to insecurity and radical uncertainty caused by events such as socio-political crises or economic reform programmes (e.g. structural adjustment programme of the 1980s). These are motor-park *touts* or intermediaries called *agberos* (Lagos), *gnambro* (Abidjan), *cocseurs*, *chargeurs*, *syndicats*, etc., elsewhere across the continent, who are semi-formal transport unionists, collecting taxes in motor-parks and bus contributing to shape the informal transport sector (Agbiboa, 2018; Zouhoula Bi, 2018).

This new interest on informal actors and their role in the urban transport system, may be an accelerator for innovation and creativity in production of services and construction as well as maintenance of infrastructures (Lombard & Ninot, 2010), but also an indicator of the existence of “grey areas” of interactions around urban transport that are still unregulated or underregulated and are beyond the control of planners and policymakers. This includes the creation of unofficial motor-parks and bus stops in the city; resistance in the use of motorcycle as a urban mean of transportation despite regulations from local authorities; emergence of alternative and uncontrolled transport activities in new and / or informal settlements in the suburban areas; the urban supply sector with foodstuffs from rural areas. In spite of the existence of transport unions, those activities take place in an un-institutionalised context, giving the impression of a total anarchy in the urban transportation sector. Efforts have been constantly initiated by governments in cities to “order the chaos” (Agbiboa, 2018). However, the top-down interventionist approach of authorities met a violent resistance from those actors and the influence of informal actors in urban mobility is not likely to end anytime soon. Therefore, it urges to question the need for holistic thinking in order to better integrate actors at the margins into urban transport planning policies in major African cities.

2.2 Rethinking governance in urban transport in Africa for more functional and sustainable cities

Over the past decade, the notion of governance has attracted much attention in media, political and academic circles. Governance seems to cover a wide range of issues that include: implementing local democracy in a participatory way, improving public-private partnerships, encouraging cooperation between local authorities and promoting multi-level cooperation. Governance postulates an approach based on networks of public sector actors and cooperation integrating the diversity of public and private actors as well as civil society organisations (CSOs). However, traditional debates on governance and democratic engagement have most often focused on the binary distinction between top-down and bottom-up approaches. This dichotomy seems limited nowadays in the era of structural governance reform to explain how the different decision-making entities of a specific business area contribute to harmonious management. This implies a network of several and diversified actors and decision-making poles, governance systems, demands and social actions. This poses many challenges for policy makers.

The top-down interventionist approach of the authorities in the governance of urban transport has very often met with fierce resistance from informal sector actors and the influence of the

latter in urban mobility is not expected to stop anytime soon. Therefore, it is important to question the need for a holistic reflection in order to better integrate actors emerging and growing on the "margins" in urban transport planning policies in large African cities. New spaces of urban governance must be co-produced through a "participatory transformation" requiring innovation and creativity in the design of urban knowledge architectures. Urban governance should not always consider peripheral actors as marginal actors but as important stakeholders in the co-production of governance. This may be possible by conceptualizing governance as co-produced. Through integrated policies for sustainable urban development, it is becoming important and urgent to find an appropriate and effective form of construction of urban governance capable of dealing with the transformations underway in our different societies. This is possible by giving full expression to actors who are on the "peripheries" or "margins" and who constantly contribute to shape and reshape mobility in the city.

2.3 Conceptual framework: towards coproduction of governance of urban mobility

This holistic thinking can be conceptualised here in a form of governance coproduction. Coproduction is a form of participative transformation that implies bringing together multiple forms of expertise and knowledge, bringing new or additional perspectives to manage complex policy issues (Richardson et al, 2018). Traditional debates over governance have drawn on the binary distinction between top-down and bottom-up approaches portraying a clear separation between 'from below' governance efforts through self-organisation, and existing 'mainstream' governance institutions (Wagenaar & Wood, 2018). By focussing on the role played by critique of existing forms, disruptions to dominant discourses, and the role of dissensus, governance coproduction contributes to enable the knowledge and expertise of different participants to be recognised (Richardson et al, 2018).

Talking about governance means precisely that any government, whether centralized or local, is no longer able to govern alone (if it has ever been the case) and must now accept and co-produce with other stakeholders and participants. Governance is not something that can be decreed but rather an ongoing process through multiple processes of negotiation and cooperation. The emphasis on cooperation does not necessarily mean that the current "power relations" between social groups or competition between different actors in cities will suddenly disappear. Negotiation processes can sometimes be part of a type of "conflictual cooperation". This means that the actors or decision-making entities can enter into a process of cooperation or negotiation of their respective participation in the management of the city (e.g. urban transport), even in a context of conflict concerning mandates, statutes, strategies, etc. Focusing urban policy on the necessary co-production of services (governance) means that the individual, groups and social actors inevitably find themselves at the centre of these new urban policies since, for their implementation, the active participation of all these entities is required.

This study is interested in the way the various stakeholders and players of transport governance are at work in the city in a process of coproduction for the participative transformation of the informal mobility. Our approach in analysing Africa's informal urban transport sector stands

beyond the usual tendency to portray it as an ungoverned and chaotic system. An emphasis is put on networks and logic of practice organizing the sector and keeping the city moving. Citizens have been demonstrated to be ‘restless’ and ‘uninvited’ innovators (Hirst, 1994, cited by Richardson et al, 2018), actors of the transport system as well.

Among actors of the informal urban transport system, we will focus on dynamics at the “margins”, given that logic and practices of actors are often strategies from below, an expression of vitality and creativity of actors to contribute to transport governance, to improve the mobility offer in the city. The “margins” here are not only geographical periphery where informal activities are being developed. It is also a social and symbolic space, including territories, activities, beliefs and logic of action of informal urban actors. It can also connote those areas at the city center that do not receive full attention of authorities because they are difficult to be controlled or because they are contested public spaces. Those peripheral actors are intermediaries creating and managing improvised, urban transport operators with unauthorised cars, unregistered motorbike riders operating at the peripheries and/within the city, unorganised drivers connecting the city to its vicinity for food supply, etc.

Despite their tremendous contribution in the transport system and society in general, they are most often described as the perpetrators of urban anarchy and chaos. When they are mobilised, it is generally to serve political purposes and not as actors of urban transport governance. How could those actors at the margins contribute to the governance coproduction for urban transport in African cities? ”

2.4 Objectives of the study

In contributing to the growing body of work on everyday governance in Africa, this study aims to assess dynamics of peripheral actors of urban transport in two African cities (Abidjan and Douala) evolving at the margins of the plans, activities and logic of governments, to contribute in the coproduction of governance of urban transport in Africa.

The purpose of this project is to contribute to developing a body of knowledge on the co-production of governance based on the dynamics around urban transport in the cities of Douala and Abidjan. Drawing on the notion of everyday governance, the study aims to assess the dynamics of peripheral actors of urban transport evolving at the margins of the plans, activities and logic of governments, to contribute in the coproduction of governance of urban transport in Africa. It is therefore clear that even if this study is based on urban transport and the spatial and social dynamics underway in this environment, the main centre of interest is the production of knowledge on urban governance and more precisely on the mechanisms of co-production of governance in urban transport by considering the actors of the informal sectors evolving on the margins.

The study was based on the following research objectives:

- Mapping activities and actors of informal transport at the urban margins

- Assessing the contribution of urban transport actors at the margins in connecting people to goods and services, and also to spaces and cultures, in order to assess their contribution to the governance of urban transport
- Defining determinants for an inclusive engagement of urban transport stakeholders in transformative interactions for governance coproduction in order to qualitatively and quantitatively improve the mobility offer in African cities

To achieve these objectives, the study will mobilize expertise in human geography, geomatics and sociology in research activities aimed at building a body of multidisciplinary and interdisciplinary, even transdisciplinary knowledge, making it possible to address the central question of co-production of governance in urban transport.

3. Methodology

This study is a comparative analysis of the dynamics of peripheral actors of urban transport in two African cities (Abidjan and Douala) and their contribution to the urban governance from below. Focussing on shifting interactions among these multiple territorial and institutional scales as well as multi-level stakeholders in urban transport in Abidjan and Douala, the study aimed to contribute in formalising informal politics in African cities comparing West to Central Africa.

3.1 Selection of study sites

Situated respectively in the Coastal areas of Côte d'Ivoire in the West and Cameroon in Central Africa, Abidjan and Douala are among the most populated francophone cities in Sub-Saharan Africa.

Both Douala and Abidjan face rapid urbanization, with an expansion of the urban area and population growth, which includes both native and a large immigrant population from other African countries. Moreover, while in Douala, urban sprawl is still dominated by shantytowns, informal settlements in Abidjan have increasingly been pushed to the geographical periphery since a few years. This reality confirms the desire to explore and analyse the dynamics of transport governance in both cities, in particular how people, places and services are being connected. There is indeed a variety of transport practices that serve these cities and their peripheries.

In Douala for example, the city is largely dominated by the expansion of "benskins" or motorcycle taxis, to which are associated the "*Opeps*" or *clandos* that are or unofficial taxis, city taxis and marginally an urban mass transport company (SOCATUR). A study of the World Bank presents the Douala bus network as inefficient and representing less than 1% of urban transportation offer. Road infrastructure is lacking in many parts of the city and residents are forced to rely on shared taxis or informal modes of transport. Despite this diversified offer, transport remains a big challenge for city dwellers. In response and to correct this weakness, alternative means and types of transport are put in place. The rise and expansion of informal transport is therefore taking place. Here, the informal transport supply is largely dominant. With

the exception of a few perimeters (administrative, residential and business) excluded from the circulation of motorcycle taxis and *Opeps*, the entire city of Douala is served by unconventional means of transport. Apart from road transport, the city of Douala is also served by river transport. However, although river transport projects exist at the municipal level, the waterway has not yet been developed for use by a formal water transport system (Olvera et al, 2010). In Douala, river transport is essentially artisanal and practiced exclusively in Douala 4 municipality. Overall, it is worth saying that the formal governance of transport in the city of Douala is overwhelmed and struggling to control this sector of activity. Standards, institutions, organizations, as well as actors and practices are diverse and present fuzzy contours, interesting to assess.

In Abidjan, the means of transport are much more diversified in a context of government commitment and exponential urbanization. Public transit in Abidjan is dominated by Société des transports Abidjanais (SOTRA) that manages urban transport with an important fleet of land and water buses. However, this company is unable to meet the significant demand for mobility from Abidjan dwellers, paving the way for many actors in the informal sector. There are many other transport options constituted of informal minibuses (*gbakas*), city taxis, municipal taxis (*woro-woro*), motorboats, canoes, e-hailing vehicles, (Uber, yango, Taxijet, etc.), tricycles locally called *salonis*, and marginally motorcycle taxis. Adding to this offer, there is the development of the BRT line Yopougon-Bingerville (20 km) equipped with articulated electric buses and especially the upcoming construction of the Abidjan metro. The transport offer is very diverse depending on the context. However, this offer remains insufficient and inadequate because it is not well connected. Users generally resort to use the informal system that is either very expensive, or not safe and reliable.

The popular transport sector is continuously proposing and inventing new services, thanks to a dynamic relationship between the urban fabric, the markets for the means of transport and the social practices of the transport workers themselves (Doherty et al. 2021). With the liberalization of the water transport sub-sector in Côte d'Ivoire, two private lagoon transport companies now operate on the Ebrié lagoon in addition to SOTRA (a state-owned company). The three companies transport several thousands of Abidjan residents daily following a circuit that passes through several municipalities, with the Central Business District (Plateau Municipality) as the main hub. Despite this growing lagoon transport offer, it is still very insufficient and does not serve all the localities of the city. Although prohibited by the government, public transport with motorcycles and taxi-tricycles called 'salonis', continues booming in Abidjan, especially at the city periphery. These means of transport do not guarantee the safety of users.

Both Abidjan and Douala, economic capitals, port cities, and largest cities of Cote d'Ivoire and Cameroon respectively, are characterised by:

- Urban sprawl not always controlled by governments (administrative and municipal authorities);
- Transport offers are diversified but are not always sufficient and adequate, forcing populations to more adaptation and creativity in operational practices;

- Alternative informal transport systems exist to connect rural areas or secondary towns to supply Abidjan and Douala with food products and peripheral actors in general are not fully involved in governance structures.
- Urban transport development dynamics at the margins and bottom-up governance are currently at work in both cities to meet needs unmet by formal and approved urban transport structures

This is why it was interesting to examine the creativity of the actors of the transport system in the two cities to set up a participatory and sustainable transport system in line with urban planning and the needs of an ever-growing population. Interest in these two African economic capitals is focused on the uncertainties of urban planning and development in general and particularly in terms of urban transport. These uncertainties can be observed in transport needs in general and those of actors at the margins in particular. These peripheral categories of the urban transport system have socio-geographic, social and symbolic considerations.

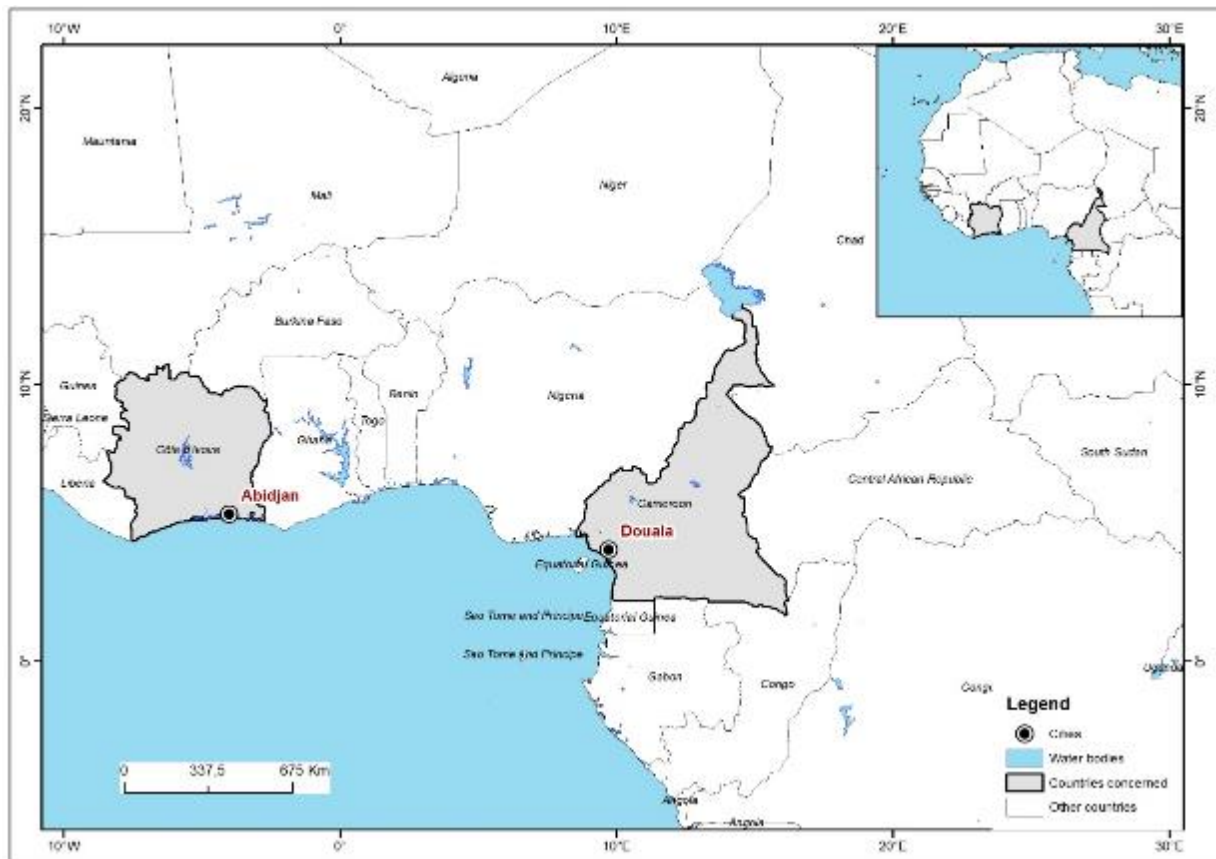


Figure 1: Position géographique des villes de Douala et Abidjan

3.2 Conceptualising the margin in the context of this study

The selection of study sites in the cities of Abidjan and Douala was based on the identification of informal urban transport actors operating on the “margins”. The margin here is not only the geographical periphery. It is related to a plurality of realities that are:

- A geographical space: island, peninsula, hill or forest, embarkation and disembarkation points, “dreaded” neighbourhood, precarious neighbourhood, abandoned or inaccessible areas, etc., in relation to the city centre;

- The situation of a practice or activity in relation to the norm: informal, illegal, unregulated
- A specific type of actors, activities and urban transport organizations: e.g. motorcycle drivers, gbakas (transport in minibuses), gnampros (illegal transport unionists), etc. By extension, this can also refer to the unemployed, homeless, residents of slums and transhumant people, people with low levels of education, precarious employment, etc.

In the general analyses the study involved all the actors of the informal transport sector as a whole to better understand the interactions with the local authorities within the framework of the co-production of governance. However, the actors on the margins within the framework of this study in the strict sense of the term excluded the following categories:

- Drivers of yellow taxis in Douala or communal taxis (woro-woro) in Abidjan
- Private metered taxis in Abidjan
- Mini-buses (gbakas) operators in Abidjan
- Moto-taxis operating in urban centers in Douala

These players are most often grouped together in well-recognized unions and very often already participate in the governance of urban transport.

We focussed mainly on marginal actors, both geographically and symbolically. They are “uninvited” and unplanned actors who carry out an unorganised activity because it is recent, unknown or misunderstood, clandestine, difficult to regulate or of little interest to the authorities. Actors operating on the margins that were targeted are:

- Motorcycle taxi operators operating in the outskirts of the cities of Douala and Abidjan, especially in sectors with anarchic housing in Douala;
- Drivers and owners of tricycles or ‘salonis’ operating in outlying neighbourhoods of Abidjan (e.g. Koweit and Kouté in the municipality of Yopougon, Akéikoi and Bocabo in the municipality of Abobo).
- Drivers or owners of artisanal pinnaces operating on the Ébrié lagoon or canoeists on and around the Wouri River;
- Drivers of unmarked or clando vehicles who provide transport between the dormitory areas and the business center but who have no approval for public transport (for example personal vehicles which provide public transport to/from Bonanjo in Douala or Plateau/Cocody in Abidjan)
- Pick-ups that operate in urban areas without approval
- Local informal transport ‘brokers’. We mean here all those intermediaries who create stations or informal stops without any authorization and who sometimes collect illegal taxes. They are gambros in Abidjan, coxeurs or “syndicates” elsewhere. Here a distinction needs to be made between formally recognized unions which collect taxes on stations and regulate transport activities and illegal parallel unions. This last category is made up of actors who sometimes operate spontaneously in specific spaces.

3.3 Research approach

For field data collection, we deployed two survey approaches: A maximalist approach and a minimalist approach

The approach labelled as “maximalist” consisted of collecting as much data as possible on the margins in both cities. Based on the preliminary maps elaborated at the beginning of the study, based on data gathered from the literature, geographical surveys have been conducted through both cities to document the margins identified: georeferencing the margins, confirming or invalidating some of them, identifying and characterising those missing.

Subsequently, the “minimalist” approach, in the form of case studies, consisted of conducting intensive investigations on selected topics in identified areas. Specifically, attention was focussed on:

1. The activities of motorcycle taxis or any form of unregulated transport on the urban outskirts of Douala, in sectors where urbanization is spontaneous and anarchic. This aimed to understand why in Abidjan the authorities manage to channel and regulate the activity of motorcycle taxis while their counterparts in Douala seem totally overwhelmed.
2. Informal water transport activities on the Ébrié lagoon in Abidjan. They show a good example of a city where large sections of urban transport still escape the control of the authorities either because the sector is little explored or because the dynamics of the populations are unknown (eg the peninsula of Adjahui which has been quickly populated by populations decamped to other places, increasing the demand for lagoon transport). Furthermore, the aim was to compare results in Abidjan with the dynamics of river transport that is still timid in Douala
3. Informal transport (use of “*véhicules banalisés*” or unregulated vehicles operating with any agreement of authorities) in administrative centres and other urban neighbourhoods (e.g. Bonanjo and Akwa in Douala; Plateau, Cocody in Abidjan). This case study aimed to analyze the resistance to the regulation of informal transport in the business centers of the two cities.

3.4 Data collection methods

The study aimed to contribute to improving the governance of urban transport in large cities in Africa. These cities are characterized by great creativity and inventiveness of actors of the urban mobility to adapt to the transport demand. As this dynamic takes place mostly in the informal sector, it is difficult to have an exact picture or a complete characterization of the actors who sometimes hide, avoid each other, oppose or overlap without collaborating or complementing each other. In order to convince these actors of the need to interact and collaborate in a process of co-production for safer and more sustainable urban mobility, it is necessary to produce scientific evidence on the importance of the contribution of these actors to the urban transport ecosystem. We planned to produce this scientific evidence through geographical and socio-anthropological studies.

As this study uses a comparative approach, the same methodology was developed in both cities. Our methodological approach includes five main research activities:

- GIS-based mapping of informal transport activities,
- Stakeholder mapping (interactions between actors of urban informal transport)
- GPS-based travel behaviour survey,

- qualitative and quantitative surveys and
- Stakeholder workshops.

Through this approach, we intended to involve a large number of stakeholders and different sources of data in order to be able to triangulate the results.

3.5 Research activities conducted

Based on the research objectives, several research activities were initiated simultaneously on the two sites, even though there are local variations in urban transport in Douala or Abidjan.

Research activity 1: GIS-based mapping of informal transport activities

Transport systems are not independent of the historical path of urban development. A GIS-based mapping of informal transport activities in cities was conducted to grasp the relationship between land-use change and transport infrastructure development since the 1980. Based on satellite images, a special focus was put on the land use change in the urban fringe areas or “urban front”, where the speed of development is very rapid, the gap between demand and supply on transport infrastructure is significant, and where proper planning is highly expected. Activities conducted here are the following:

- Historical mapping of land use changes in peri-urban areas of cities. In this context, satellite images from Landsat sensors were used. Indeed, these images offer global coverage with a long series of images, and appropriate spatial and spectral characteristics to detect environmental problems. The cities of Douala and Abidjan are fully covered by Thematic Mapper / Landsat Enhanced Thematic Mapper plus (TM/ETM+) and Landsat OLI TIRS sensors. These images were collected during the dry season (November to March) to minimize cloud cover and considering seasonality. The analysis of these images concerned the dissociation of the images, the verification of the completeness of the essential channels (infrared and near infrared) and the verification of the quality of all the images. Furthermore, in the processing of these images, they were combined with very high spatial and temporal resolution images available on the Google Earth, Bing Map and Here Maps platforms. The treatments will contribute to the documentation of the development of the urban margins in these two cities.
- A mapping of places of transport activities on the margins was made in the two cities. This preliminary work was based mainly on the data already present in the literature or direct observations and a GPS receiver was used to list the geographical position of each place of informal transport activity.
- Subsequently, based on informal surveys and information collected from certain actors, the main places (hotspots) of transport on the margins were characterized in each city. This consisted of georeferencing, describing, confirming, or infirming previously identified sites, as well as identifying new sites.
- In this process, a historical survey coupled with the dynamics of urban sprawl carried out above made it possible to grasp the evolution of transport activities on the margins, but above all to list the sites successfully dismantled by the municipal authorities, those which resist again and the new ones that have emerged. In Abidjan, for example, sites such as Grand Carrefour Koumassi, Lavage in Yopougon, etc., will be characterized and the history of their dismantling documented.

The objective was to produce a dynamic map of the evolution of urban transport on the margins in both cities.

Research activity 2: Mapping of informal transport actors on the urban margins and their logic of action

Governance means an interaction and collaboration between several actors or categories of actors, sometimes at several levels. As part of this study, an analysis and mapping of informal urban transport actors in the cities of Abidjan and Douala was conducted.

Actor or stakeholder analysis is a basic planning and management process that helps to identify actors relevant to the reform programme and to get to know their perceptions, interests and influence on policy. A stakeholder mapping provides an overview of the stakeholder landscape. It visualizes people and organisations likely to have an influence on the planned reform. It maps out the relevant stakeholders and identifies the different kinds of stakeholders as well as their interrelations. To conduct a stakeholder analysis, it is necessary to identify and list all the actors involved in the proposed program or policy reform.

For this study, we collected information on stakeholders who are likely to have an influence on the question of urban transport of the informal sector. After identifying and listing all the relevant actors, we characterized them to get a detailed overview of the different stakeholders, applying the method of the 4 A's. This method includes:

- **Actors:** What is the actor's name, what is his function? (characteristics)
- **Agenda:** What is the actor's mandate, what is his mission? (Missions, area of intervention and strategies)
- **Arena:** In what field is the actor active, where is he present? (Field of action, sites of intervention, outreach)
- **Alliances:** With which other actors is the actor allied, how is he interconnected? (Collaborations)

The listed actors were then assigned to one of three groups, namely key stakeholders, primary stakeholders, and secondary stakeholders. A focus was further put on key stakeholders to differentiate between three core attributes or features that are crucial for holding a key position regarding the issue at stake: actors with strong **legitimacy**, actors with many **resources** and actors with good **networks**.

This activity was conducted through semi-structured interviews with key actors of the transport system coupled with workshops of actors at various levels.

Research activity 3: GPS-based travel behaviour survey

City dwellers travel great distances every day for work, study, leisure and shopping. However, the journeys of commuters/users are not always documented to understand the time taken, the distances covered, the means and modes of transport used, the density/daily importance of transport needs, the interactions with transport actors, territories covered, etc. To fill this knowledge gap, a travel behaviour survey was conducted among commuters to gather information on their travel habits during one day. This technique aimed to identify impacts of the current urban structure and current transport infrastructure on daily travel behaviour. It was also an opportunity to experiment how urban users combine several means of transport.

Concretely, people using informal public transport on a daily basis, were selected at different points or neighbourhoods in the city to measure their travel habits using a mobile phone GPS. The criteria for inclusion in the selection of these people were the following:

- Participants should reside in a municipality other than their place of destination on the day of the survey (priority was given to long-distance travellers);
- partially or totally using informal transport means (motorcycle taxi, tricycle-taxi, personal transport vehicles without approval such as clando or unregistered taxis, mini-bus (e.g. gbaka), pinnace, canoe, etc.)
- agreeing to use GPS tracking of their movements for a day;
- agreeing to complete a travel monitoring questionnaire.
- For the age and sex criteria, a mix of several age groups from both sexes was considered.

Different steps of the GPS-based travel behaviour survey are as follows :

- Volunteers are identified in various communes (districts) of the city. These people have to travel long distances using informal public transport.
- A geolocation system is activated on their smartphone in the morning when they leave home and deactivated in the evening when they return.
- In addition, the persons surveyed must keep a travel tracking sheet on which they must note the purpose of their trip, the time at which they started and ended the trip, the destination and the mode of transport used, the routes, the duration, the connections during the trip, as well as their experience with informal transport actors.
- Data is then gathered by the research team in the evening when the respondent returns

This GPS-based survey will contribute to: assessing the difference in travel behaviour patterns between scattered development areas and orderly development areas; assessing interactions and experiences of commuters with peripheral actors of urban transport. Findings from this survey are useful to assess the importance of informal sector in mobility and travel choices of city-dwellers to undertake their activities (work, study, leisure, shopping, etc.) in different places.

Research activity 4: Defining the determinants of co-production of governance in urban transport.

Governance is not something that can be decreed but rather an ongoing process through multiple negotiation processes. Given that the actors or entities entering into negotiations for the co-production of the governance may have different, antagonistic or even irreconcilable strategies and modes of action, it is important to examine the preconditions for bringing these various actors to the discussion table, and for the sustainable development of the sector in question. This requires a characterization of the actors and potential collaborations (see Activity 2), but also a perception of the actors on the opportunity and the nature of the collaboration and the creation of a framework of exchange for the start of the discussions.

As part of this study, this activity consisted initially of the organization of semi-structured interviews with various public transport stakeholders including government agencies (Ministry of Transport), local government (municipalities), experts in urban planning and transport and civil society organizations in the transport sector (unions, NGOs, etc.), urban transport actors on the margins. Interviews with key informants contributed to identify indicators for the co-production of governance in urban informal transport, to be discussed during stakeholder workshops.

Secondly, this research activity consisted of the organization of stakeholder workshops. These workshops offered an opportunity to dialogue with various formal and informal actors of urban transport to discuss the modalities of implementation of a co-production of the urban governance of informal transport and strategies to qualitatively and quantitatively improve the mobility offer in African cities.

4. RESULTS

4.1 Findings on GIS-based mapping of informal transport activities

4.1.1 History and description of the location of (informal) transport at the urban margins

Both Douala and Abidjan are primarily port cities. The port function has been at the root of their development since the colonial period. This dynamic, driven by demographic growth and the rural exodus of populations in search of a better standard of living, has not been without consequences for the configuration of these two cities and the standard of living of their populations. In the space of a century, the population of these two towns has increased 100-fold. Current growth in Douala is estimated at 100,000 inhabitants per year, with a further 1 million expected by 2025, bringing the total to 4 million compared with the current figure of 3 million. This sharp increase in the urban population of Douala is fuelled by a multi-faceted migration phenomenon, and above all, by migration as an asylum from poverty, where people arriving daily from the countryside and conflict zones invent networks and illicit practices that compromise the effectiveness of any real urban policy. The economic capital of Côte d'Ivoire has a very young population. According to the RGPH 2021, over 90% of Abidjan's population is under 45. Young people make up the largest proportion of the population, with over 50% under the age of 25. The population of Abidjan has similar characteristics. It is made up of young people (pupils, students) and a large proportion of adults of working age. These two groups make up the fringe of the population whose demand for mobility remains high. They travel for reasons of education, employment or job-seeking.

In addition, these populations are characterised by poverty. As a result, the number of people able to buy their own car is negligible. According to the Enquête de Niveau de Vie (ENV, 2008) cited by Toh and Kouyaté (2009), poverty, after rising from 10% to 33.6% between 1985 and 1998 as a result of the SAPs, continued to rise, reaching 48.9% in 2008 as a result of the successive political and military crises since 1999. In 2009, one person in two is poor, compared with one person in ten in 1985, and the number of poor people has increased tenfold in the space of a generation. Furthermore, in 1998, a survey of the population showed that over 92% were unable to afford their own car for their daily commute. Public transport therefore remains the main alternative for getting around in Abidjan, as in other sub-Saharan cities.

This urban dynamic is creating ever-increasing challenges for the public authorities responsible for planning and managing these cities. In the city of Douala, for example, there is a disorganised occupation and use of land, with poorly structured urban neighbourhoods dominated by a disharmony of spaces devoted to housing, production and marketing activities, green spaces and play areas. In such an environment, housing is built in an anarchic and informal manner. The uncontrolled growth of these towns is accompanied by environmental degradation and a proliferation of substandard housing, leading to a lack of infrastructure and public services, with obvious repercussions on the type of activities that households living there

Figures 2 and 3 below show the different municipalities in the cities of Douala and Abidjan.

4.1.2 Mapping urban margins and transport at the margins in the city of Douala

From the outset, the colonisers who designed most African cities were driven by a spirit of segregation, separating the modern European districts from those reserved for the natives. This is why it can be said that the process of urbanisation during the colonial era already bore the seeds of today's urban fringes. After independence, the public authorities were unable to control the space and continue the colonial urbanisation model. Very quickly, the indigenous culture of occupying space took over from the order established by the colonisers, with the result that a number of illegal procedures for occupying urban land and spontaneous construction altered the order to create disordered urban landscapes.

The mapping of the urban margins of these two cities, carried out using very high spatial resolution images and surveys in the cities of Douala and Abidjan, highlights the urban margins where informal transport activities develop. Spatialisation of these margins shows that in both Douala and Abidjan, these margins are areas of informal practices by street and transport traders who are often mobile within the city. By extension, they are also residual spaces, fallow, undeveloped or simply abandoned by planning policies, which are today characterised by representations associated with disorder and dirtiness (Figures 4 and 5). These urban margins are also home to a proliferation of other shantytowns, working-class neighbourhoods and wealthy districts, which are the tangible sign of blatant deliberate marginalisation. In Douala, as in Abidjan, people in these areas use informal means of transport, such as two-wheeled motorbikes, to get around. Other means of transport are used, such as freighters, mini-buses and taxis, some of which are personal. Alongside these means of transport, there are also wheelbarrows, pirogues and portages. All these means of transport aim to establish the link of economic and social coherence between urban and rural areas.

Figure 4: Urban margins in the city of Douala

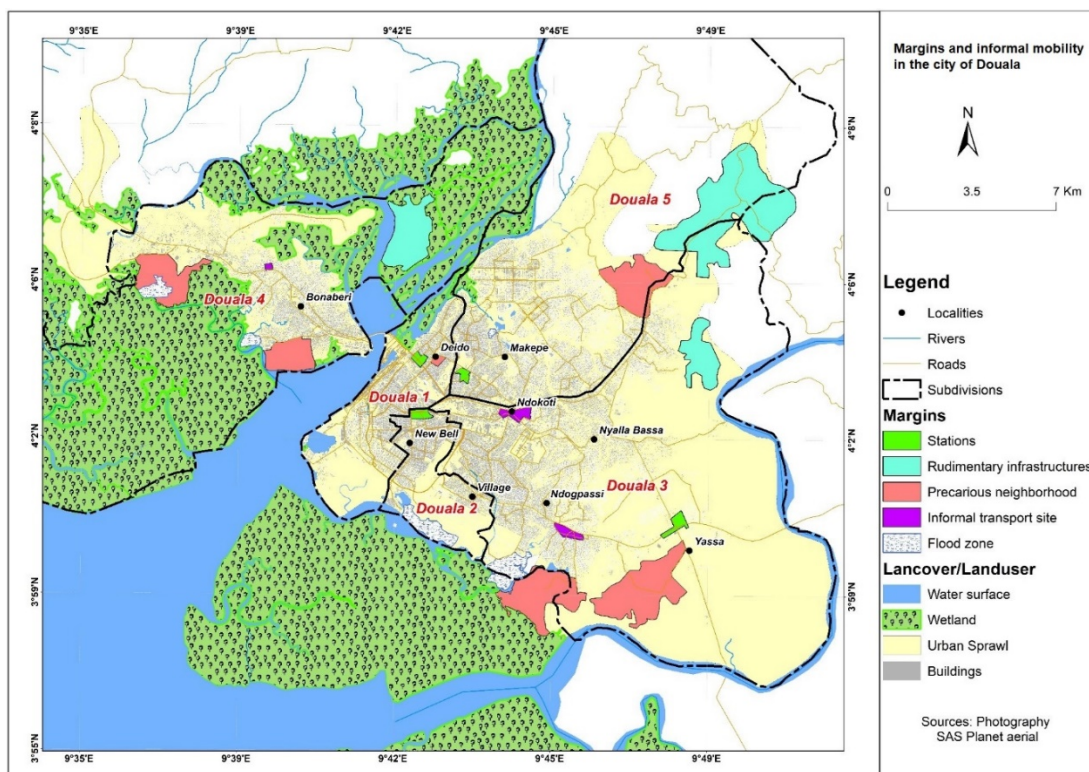
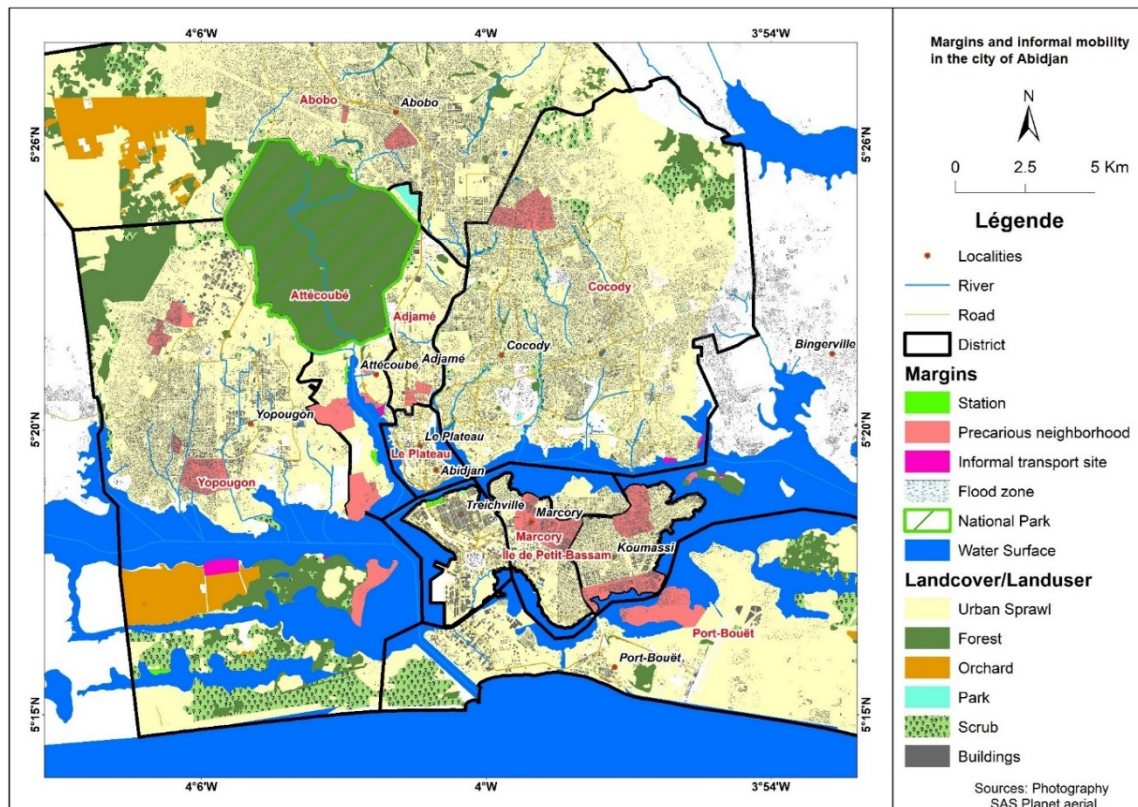


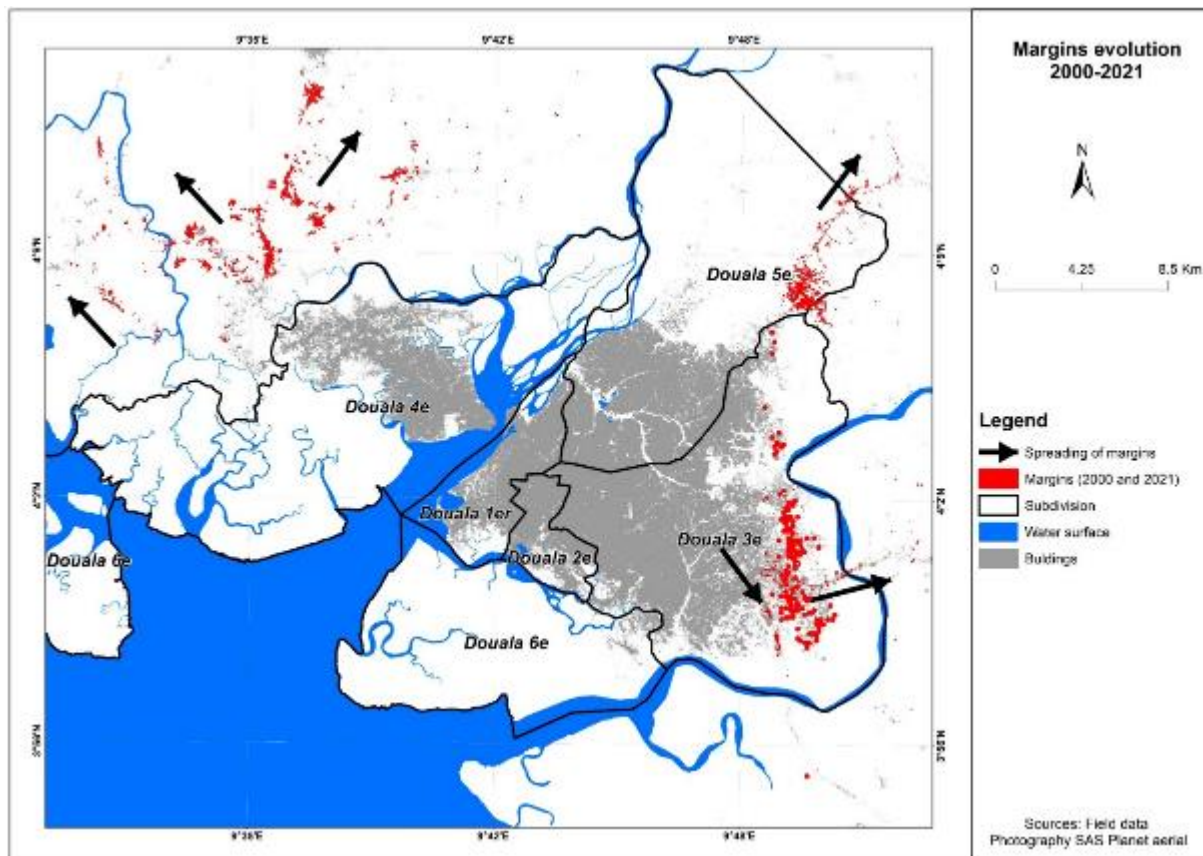
Figure 5: Urban margins in the city of Abidjan



4.1.3 Trends in urban development

Spatial analysis of Landsat satellite images shows that in 2021, most of the population of the city of Douala will be concentrated in the arrondissements of Douala III and part of Douala V. Between 2000 and 2021, urban sprawl will be most marked in the arrondissements of Douala 5^{ème} and 3^{ème}. This is justified by the fact that there are still natural areas in these communes that could be the subject of new urbanisation/development. To the south of Douala III, the presence of the N°19 Douala - Yaoundé national road encourages the expansion of the city towards the Dibamba river. However, the spatial sprawl and fragmentation of the urban fabric illustrate the authorities' difficulty in channelling the anarchic advance of the urbanisation front. The district of Douala 4 is characterised by numerous marshy areas unsuitable for urban development. This is one of the reasons for the slowdown in urban development in this district. The central arrondissements (Douala I and II) are the arrondissements that benefit most from public investment, given their economic and administrative function (Figure 6).

Figure 6: Evolution of margins between 2000 and 2021 in the city of Douala



4.1.4 Typology of neighbourhoods at the heart of urban fringes

4.1.4.1 The city of Douala

The morphology of the city of Douala reveals four types of district: districts in the historic centre; urban pockets undergoing change; districts in the first urban ring; and finally, outlying extension districts.

- City centre district

These districts are located in the heart of the historic city. They were among the first districts to be urbanised as part of the Dorian Plan of 1959, and as such have a very strong urban feel. They have undergone a number of changes in terms of population and housing, making them relatively heterogeneous but well served residential areas. The inner blocks feature a mix of housing types: blocks of flats, houses built of permanent materials and carabotte houses. There is a high level of commercial activity close to these areas. People from the rest of the town come here for entertainment. Gatherings are frequent and give rise to all kinds of illicit practices. Prostitution is widespread and there is a palpable lack of security in these areas, where the standard of living is very low.

- Changing urban pockets on the outskirts of the centre

The urban pockets undergoing change are located on the outskirts of the centre. There are few shops inside the blocks, with the exception of part of the Yabassi camp, where there are a large

number of car parts dealers. On the other hand, on the asphalt roads on the outskirts of the neighbourhoods along the main roads, there are multi-storey buildings where commercial activity is developing. These districts are characterised by the presence of poor housing (built of planks, metal sheets and other temporary materials) at the heart of the blocks. They are rather lively in the early evening, but become quiet again after dark. They can therefore be described as "dormitory districts". Most of the infrastructure is in a very poor state of repair. There are also problems with drainage and inadequate services within the blocks. Urban densification is taking place in an uncontrolled manner. With the economic development of the city, and their proximity to the centre, they will certainly have to change their appearance and accommodate other urban functions in the medium or long term. In Douala, the following neighbourhoods fall into this category: Kassalafam, Camp Yabasssi, New Bell quartier Haoussa (Kassalafam II), New Deido (lower part).

- **Neighbourhoods in the inner suburbs**

These dense neighbourhoods are located on the edge of and outside the Kilometre 5 ring road (aviation motorway). They are characterised by haphazard occupation, often without land title. Most of the land lacks adequate infrastructure, as it is awaiting land regularisation. The level of facilities in this type of neighbourhood is relatively higher than in other types of neighbourhood. This is the result of the restructuring undertaken in the past with the help of pilot projects supported by international cooperation.

- **Outlying extension districts**

The last category is made up of peripheral neighbourhoods. They reproduce the conditions under which unstructured neighbourhoods were created: uncontrolled settlements, with no land title, no overall vision and no master plan for road and infrastructure networks, or on the basis of subdivisions that are incompatible with the simplest town planning rules. These neighbourhoods are built on marshy areas, which causes many problems in terms of servicing and constructability. For the time being, no large-scale development work has been carried out in these areas (unlike in the inner suburbs), although donors are beginning to show an interest because of the particularly worrying cholera problems. There are two sub-categories within this group:

Outlying "multi-storey" extension districts: These districts are built in the second ring of the city. They are characterised by the presence of two very distinct parts: a non-floodable plateau with relatively good quality housing, well connected to the primary road network, and a marshy area below with temporary housing where flooding is frequent. Traffic in this area is very difficult due to the lack of tertiary roads and footpaths that often end in the marshes. This morphology also leads to disparities in terms of access to services (water; household waste). This lack of hygiene has serious health consequences. These areas have been among the main breeding grounds for cholera. It is therefore necessary to improve the drinking water supply, to deal with the many problems linked to sanitation in order to improve health conditions and to improve the internal access to these neighbourhoods (mainly footpaths), so as to give them back their unity (in particular by making the footbridges crossing the wetlands safe). The following

neighbourhoods fall into this category: Maképé Petit Pays, Maképé zone de recasement, Maképé Missoké³⁶, Bépanda Yoyong Bépanda Petit Wouri.

"Swampy" peripheral extension districts: These districts are mostly built in areas that are very far from the rest of the city. Most of them border a tributary of the Wouri. These neighbourhoods have been progressively developed by filling in the wetlands. Close to the river bank, there are many dwellings on stilts. These areas are regularly flooded by rain and tide. In contrast, near major roads, residents benefit from better quality land, and housing made from sustainable materials has developed. This difference can also be seen in terms of access to services and sanitation. Access to drinking water is a problem in these areas. Moreover, cholera epidemics have severely affected these neighbourhoods, which are still a long way from health facilities. The following neighbourhoods fall into this category: Grand Hangar, Bilingue, Nkomba, Mambanda and Bobongo.

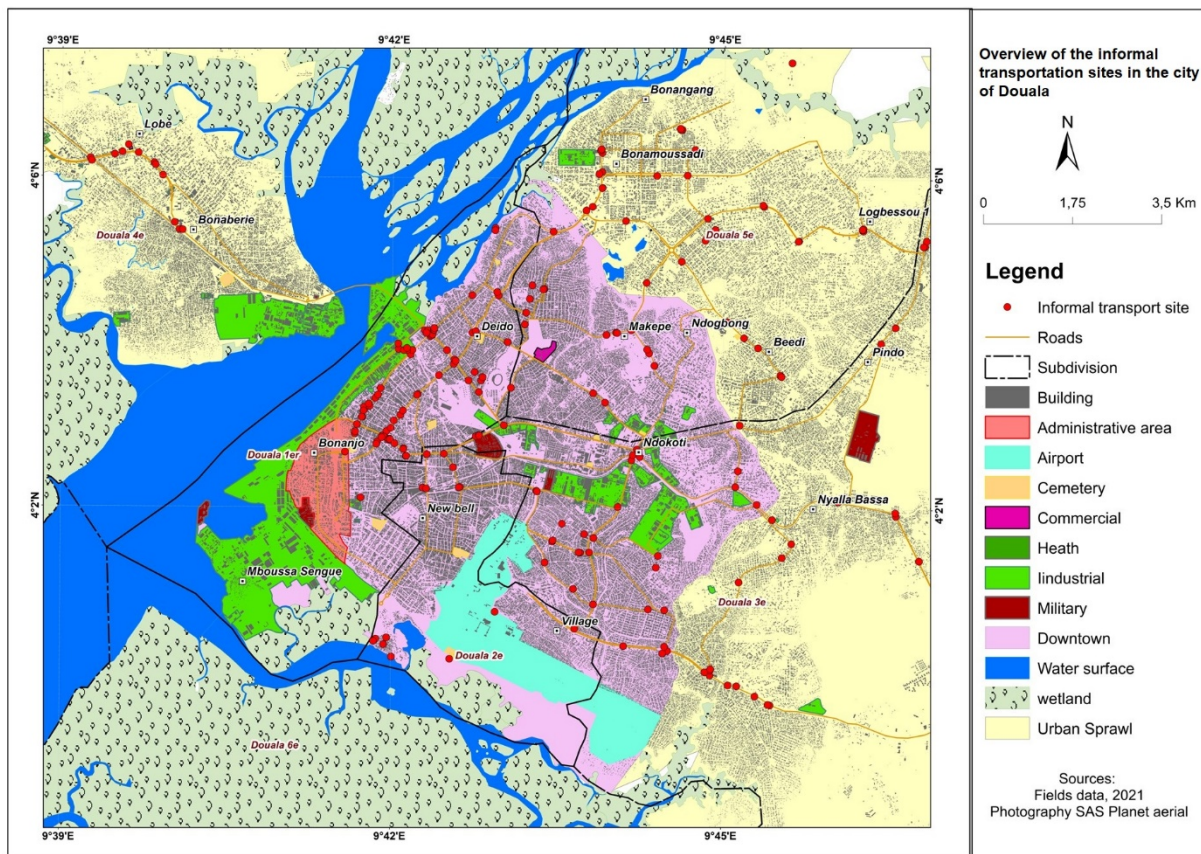
4.1.4.2 The city of Abidjan

"The size of the city, the configuration of its site, the location of residential areas and industrial, commercial or administrative zones mean that urban transport has an essential role to play" (Berron, 1980). Abidjan is a coastal city, with the Ébrié lagoon covering a large part of its surface area. Abidjan is one of the largest urban centres in sub-Saharan Africa, both economically and demographically. It comprises ten communes.

4.1.5 Informal transport on urban fringes and in urban centres

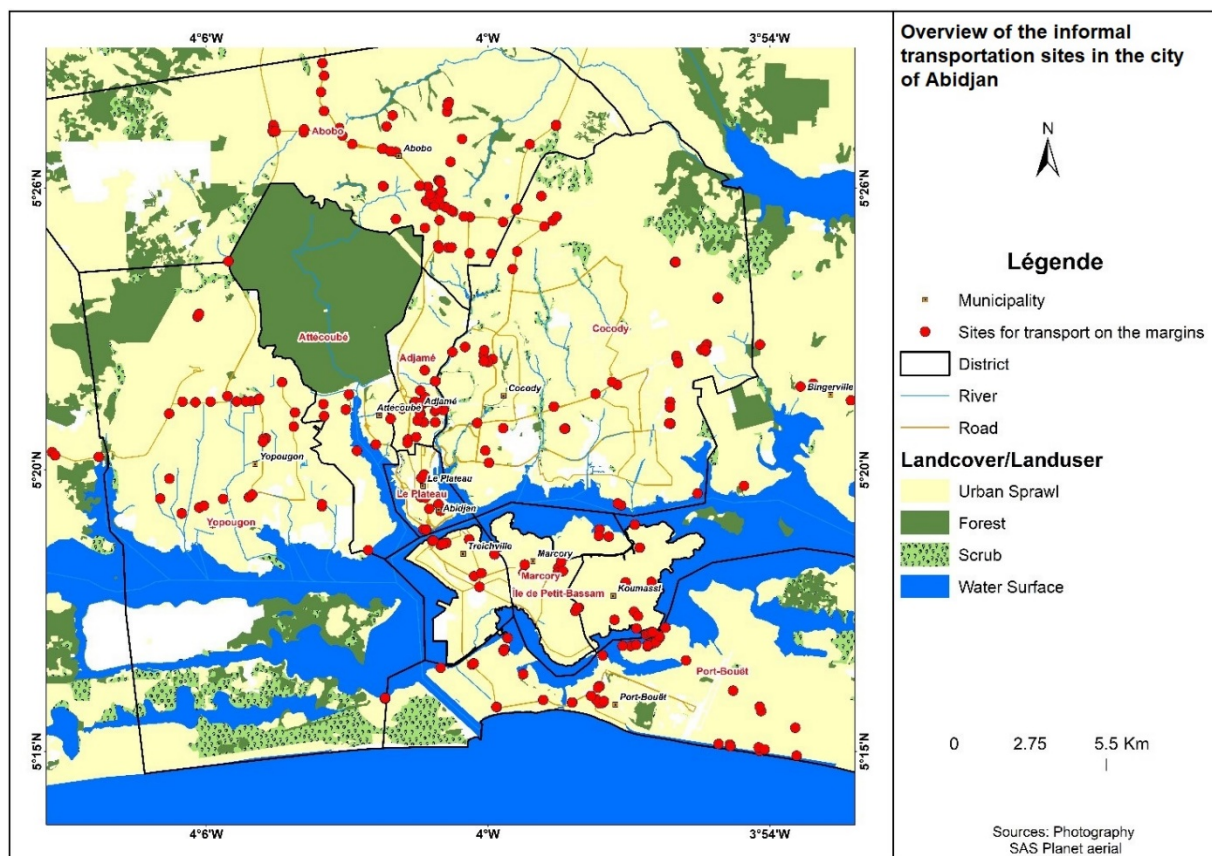
Whether in the city of Douala or Abidjan, informal transport is widespread, and is located both on the outskirts and in the city centre. In Douala, there are almost 149 informal transport sites in the city centre, compared with 103 on the outskirts. Most of these informal transport hotspots are located at crossroads and along roads. In the city centre, for example, some of these sites are located very close to the administrative area (Bonadjo). This distribution of informal transport in the city of Douala justifies mobility between the neighbourhoods where people live and the shops and workplaces (Figure 7). This is the case, for example, of the margins located in the arrondissements of Douala 4^{eme} and 1^{er} (Deido), where most of the population travels to shopping areas and workplaces by motorbike (Ben skin) in an unfavourable context: traffic jams at peak times, scarcity of vehicles, which results in a significant loss of time and accumulated fatigue. In these conditions, getting to work is often an obstacle course. Some people are forced to get out very early in the morning to go to work, exposing themselves to the aggression that is so common in these urban fringes.

Figure 7: Informal transport site in the city of Douala



In Abidjan, informal transport to the margins is provided throughout the city. Sites for this type of transport are concentrated in the communes of Yopougon, Abobo, Adjamé, Port-Bouët, Koumassi and Marcory. These sites are located along the various communication routes in these communes, depending on the means of transport used, and also along the shores of the Ebrié Lagoon and the Atlantic Ocean (Figure 8). The spatial distribution of these informal sites shows how often this type of transport contributes to the movement of people in the city of Abidjan, with the exception of the north-east of the municipality of Cocody, where it is sparsely deployed. The city of Abidjan is served by 227 informal transport stations, apart from the mini-buses.

Figure 8: Informal transport site in the city of Douala



4.1.6 Means of transport

With the exception of the city of Abidjan, most journeys in the city of Douala are made by motorbike (Bend skin), both on the outskirts and in the city centre, as the survey statistics suggest (table 1). Most of these journeys are made on foot close to homes or workplaces. Depending on the person's position or the time of day, this means of transport is motivated by the need to get to school or work, or to buy supplies. In Douala, bend-skin is the preferred means of transport, given the numerous traffic jams that clog up the city's arteries. Motorbike taxis first appeared in Douala in the early 1990s, and their numbers have been growing ever since. The business is organised around permanent drivers (those who make it their main activity), temporary drivers (those who use taxis when their main activity slows down) and occasional drivers (civil servants on low incomes who want to make ends meet). The boom in this activity is due to the fact that it allows access to places inaccessible to four-wheelers, to their low cost (a basic fare of 100 CFA francs, a third less than that of taxis) and to the development of traffic jams, which makes them faster than other modes of transport at peak times.

In Abidjan, on the other hand, tricycle taxis, used as the mode of passenger transport par excellence on the urban fringes, are a new phenomenon, and two-wheeled motorbike taxis have never been allowed to establish a presence in the city. However, these vehicles have been present in the city since 2011, providing delivery and goods transport services. The tricycle taxi, which has been emerging since January 2019, is a popular new type of transport that has

taken root on the outskirts of Abidjan in Côte d'Ivoire. These taxi-tricycles, known locally as "salonis", first entered Côte d'Ivoire following the post-election conflict in 2010. The new administration introduced them in the areas formerly occupied by the rebellion as part of projects to integrate demobilised ex-combatants from the various armed forces into the workforce and society after the crisis. These taxi-tricycles now operate on the outskirts of the communes of Yopougon and Abobo at a low cost of 100 CFA francs per journey, providing a last-mile service linking the arterial roads to working-class neighbourhoods.



Photo 1 Tricycle taxi stands in the Commune of Yopougon at a place called Koweït



Photo 2 Parking bend-skineur at Carrefour Mutzig in Douala 4th district

The minibuses and freighters present in the city of Douala are an informal mode of transport that operates from fixed loading points and line services to remote neighbourhoods (Village, Ndokoti/PK14/Nyalla, Bonabéri and Bépanda) from the centre (Bonanjo, Akwa and Marché Central). For some remote areas that are difficult to access, they are the only means of motorised transport. However, obsolete vehicles and the practice of overloading make them more vulnerable to road accidents. Controversially, however, minibuses and freighters in Abidjan are part of the formal transport system, which is not the case in Douala.



Photo 3 : People embarking at the Bonaberi entrance for the town centre

As far as taxis are concerned, in both Douala and Abidjan, one working person in three travels to the city, often over long distances, usually using a taxi. These workers, often in the informal sector or employed on low incomes, spend an average of 500 CFA francs per return journey per day, and 1,000 CFA francs in Abidjan. The low incomes of many city dwellers and traffic jams limit their access to this mode of motorised transport, both in terms of purchasing vehicles

and paying for fuel or taxis on a daily basis. A person's income has little impact on mobility across all modes of transport, but it does have an influence on the extent of the daily commute. Taxis are the oldest form of urban transport regulated in both cities: they are 5-seater vehicles painted yellow (Douala)/orange (Abidjan) and display a number on the front doors. A number of authorisations are required for both the vehicle and the driver. In general, each vehicle is operated by two drivers who divide the work between them depending on the time of day, the day of the week or simply the need for rest.



Photo 4 Parking for city taxis at Carrefour Ndokoti



Photo 5 Parking for metered taxis in Port Bouet, near the university campus

As well as city taxis, there are also other taxis known as "taxis banalisés" in the cities of Abidjan and Douala. This type of informal transport, which generally takes users from city centres to more remote areas and vice versa, is organised in the same way as the cities. In Abidjan, for example, there are almost 80 stations and drop-off points scattered throughout the city. Unmarked taxis are the most popular means of transport in Abidjan. In Douala, on the other hand, this mode of transport is underdeveloped and is generally considered to be an outlaw (drivers) who do not pay taxes or municipal levies.



Photo 6 : Location of transport sites in Abidjan



Photo 7 : Location of sites used for transport to the margins in Douala

In addition to the above-mentioned means of transport, there are also non-motorised means of transport in both cities: for example, handcarts (Abidjan), rickshaws and wheelbarrows (Douala), which are generally found near markets. In the city of Douala, rickshaw transport is organised around three main players: the owners, who hire out their rickshaws to porters; and the traders, who use the rickshaws as itinerant shops to sell hardware products (light bulbs, torches, cannons, etc.). The success of these means of transport is undoubtedly due to their affordable cost and their ability to move with their loads through the maze of Douala's markets and alleyways. The pirogue (motor or paddle) in Douala is a traditional means of transport for fishing, personal mobility and trade between the Douala 6 commune^{ème} and other communes. This mode of transport also connects certain islets on the fringes of the city of Douala. One example is the island of Djébalè, a stretch of land a few minutes from the city of Douala on one of the city's largest rivers (Wouri), where certain traders from the city centres (Bonaberie, Deido, etc.) go to buy fish in all its forms. In Abidjan, this mode of transport is known as lagoon transport, which uses boat-buses to quickly ferry passengers and goods across the Abidjan conurbation (particularly the Plateau, Treichville, Yopougon and Cocody Blockaus districts) on the Ebrié lagoon. The price is attractive to many Abidjan residents, especially professionals. It costs between 100 and 150 CFA francs per journey. In addition to the interconnectivity and trade flows using this mode of transport, it should also be noted that in certain urban margins with unfavourable conditions, this mode of transport is used to evacuate people in the event of flooding.



Photo 8 : Parking of handcarts in the commune of Marcory at a place called Marché



Photo 9 : Approximate number of sprouts parked at the central market in Douala 2^{ème}



Photo 10 : Boarding a pinasse in the commune of Koumassi at a place called Soweto



Photo 11 : Boarding by pinasse from Doula 5eme for Manoka

Table 1 and Figure 8 below present the statistics and the distribution of spontaneous stations in the cities of Douala and Abidjan based on field data. Looking at these statistics, we can see that on the urban fringes of the city of Abidjan, the motorbike/bend-skin mode of transport does not exist and that the mode of transport par excellence is the use of the tricycle taxi (almost 51 spontaneous sites), unlike in Douala where the most popular mode of transport on the fringes is the two-wheeled motorbike/bend-skin (almost 164 loading sites). Tricycle taxis are not used in Douala. Similarly, in Abidjan, cargo/ojep transport is not an informal mode of transport, unlike in Douala, where it is classified as informal. Other means of transport such as taxis, goods tricycles, pirogues/boats and non-motorised means of transport exist in both Abidjan and Douala.

Table 1 : Number of informal transport sites by means of transport in Douala and Abidjan

Means of transport	Abidjan	Douala
Tricycle taxis	51	0
Mechanical_non-motorised means	36	4
Taxis	104	89
Merchandise tricycle	25	18
Moto/Bend-skin	0	164
Pirogue/boat	45	12
Cargo/Opep	0	10
Total	261	297

The figure below shows the distribution of spontaneous informal transport sites in the cities of Douala and Abidjan.

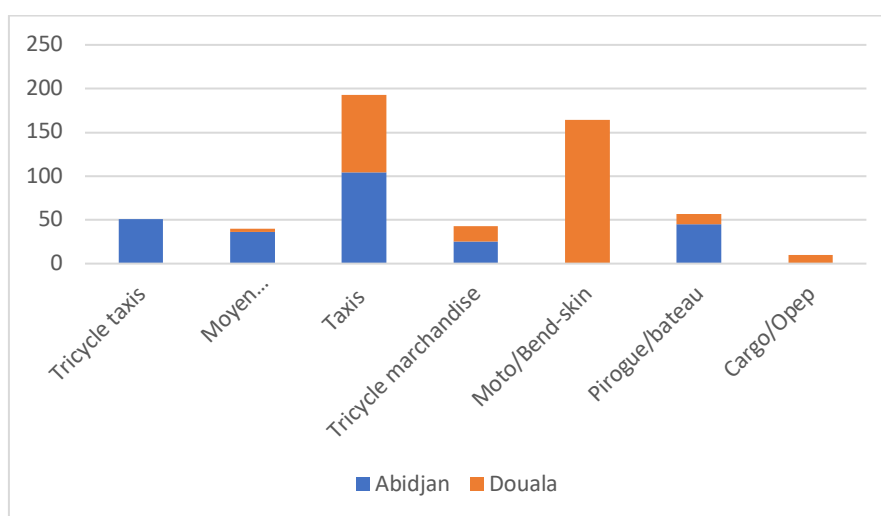


Figure 9 Distribution of informal transport sites in Douala and Abidjan

Figures 10 and 11 show the spatial distribution of spontaneous informal transport sites according to means of transport in the cities of Douala and Abidjan.

Figure 10 : Means of transport in the city of Douala

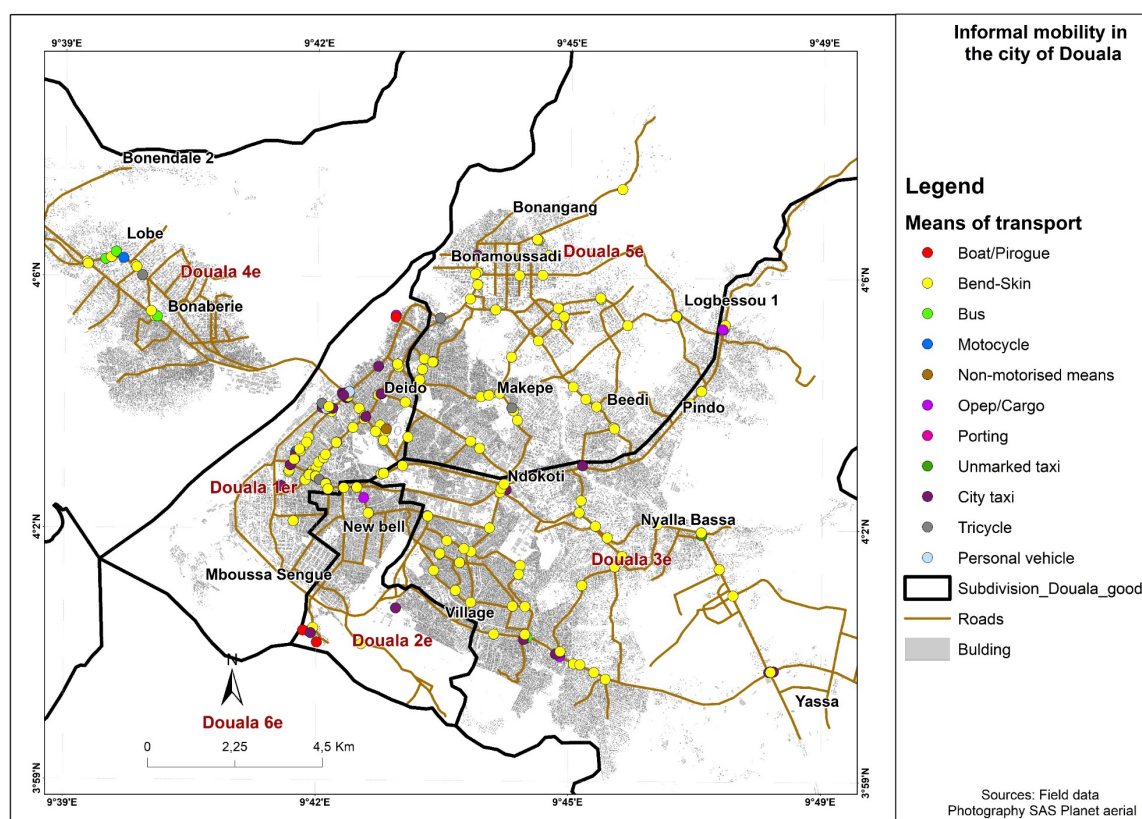
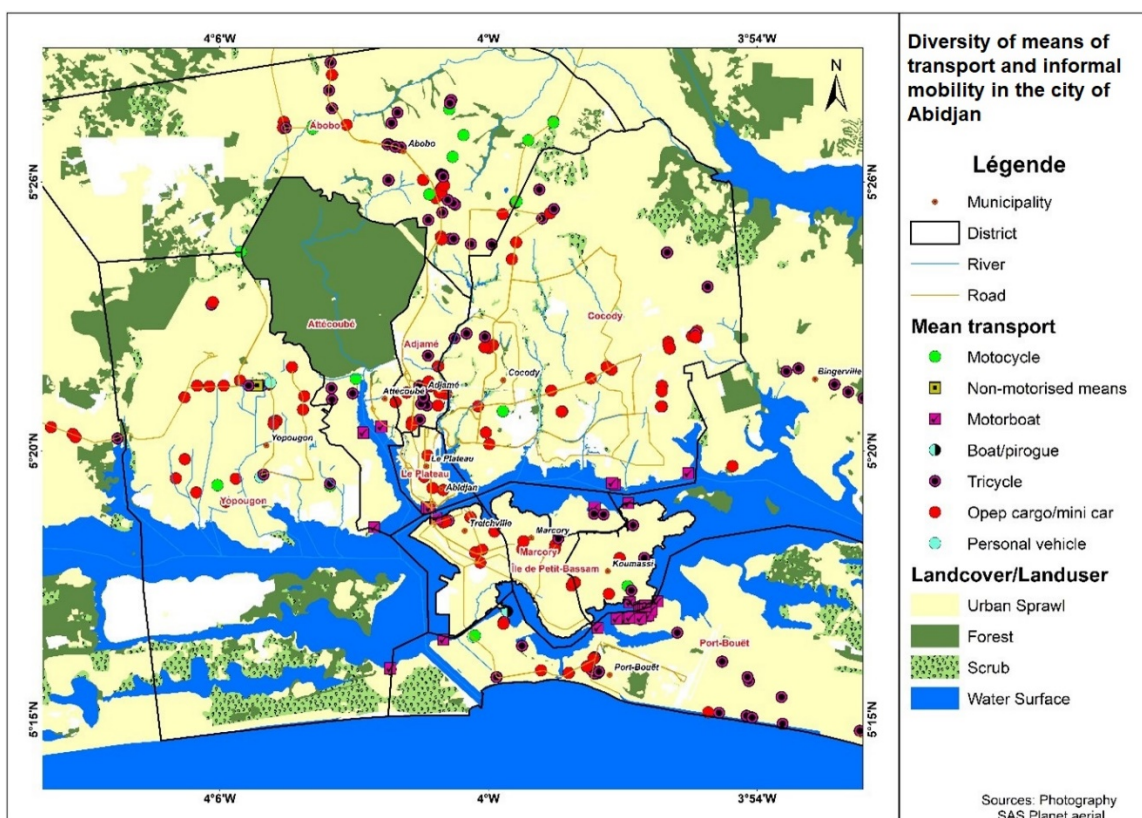


Figure 11 : Means of transport in the city of Abidjan



4.2 Findings on mapping of informal transport actors on the urban margins and their logic of action

Transport regulation refers to all the regulatory means available to the public authorities to oversee the activities of transport operators. There are many different ways of doing this, and they relate to the procedures for entering the profession, the nature of vehicle ownership, their technical characteristics, the setting of fares, etc." (Kassi, 2007). In this section, we will first attempt to map the actors involved in informal transport, and then to analyse the complex interplay of roles between these different actors, as well as the policies and reforms implemented by the state to restructure this transport sector in the cities of Douala and Abidjan.

4.2.1 Mapping informal transport operators in Douala and Abidjan

In both Abidjan and Douala, transport coordination at the margins is carried out by several players whose roles are complementary. These players are both institutional and non-institutional. Their names may differ from one city to another, but in practice their roles remain the same. For the purposes of this study, we have grouped informal transport actors into three categories: intentional actors in charge of organising and regulating transport; transport operators; and other actors such as users, associations/unions, etc.

4.2.1.1 Institutional transport players on the urban fringes

In Douala, the institutional players involved in the management of informal transport include :

- The State, through the Ministry of Transport, which is represented locally by the Regional and Departmental Transport Delegation;
- The Urban Community ;
- Town halls and ;
- Defence services (police and gendarmes).

In Abidjan, the institutional players responsible for organising, regulating and monitoring transport are :

- The Ministry of Transport through AMUGA ;
- The district of Abidjan ;
- Town halls ;
- The DGAMP and ;
- DGTTC.

4.2.1.2 Informal transport operators

Whether in Douala or Abidjan, the main informal transport operators, comprising stakeholders with a variety of concerns, are working together to maintain the informal transport sector:

- Vehicle owners,
- Drivers (car and motorbike drivers)
- Trade union or association officials and
- Other people who benefit from the sector, such as shippers.

Each group provides a distinct but simultaneous service that keeps the sector alive. In some cases, an individual player may have more than one type of role, for example "owner-drivers", who may be involved in different activities at different times. Most vehicle owners are entrepreneurs who may be active or passive participants in the sector.

4.2.1.3 Other players in the informal transport sector

In Abidjan, the other actors involved in the management of informal transport are: the HCPET-CI professional organisations (FESYNCPROCI, SNCTMV-CI, SYNCTIUR, ADTCI, SNTT, etc.); the informal urban transport institutions presented as artisans of marginal urban transport by the State; the informal owners of urban spaces converted into stations for marginal transport; and the users. In Douala, the other actors involved in the management of informal transport are the defence services, which include the national police and the gendarmerie.

4.2.2 Role and interplay of players on the urban fringes of Douala and Abidjan

4.2.2.1 The city of Douala

- Douala Urban Community

The Communauté Urbaine de Douala (CUD) is the main player in the organisation of the functioning of the urban space in general and the regulation of urban mobility, including informal transport in particular, in the city. The CUD has two departments responsible for urban mobility, the Municipal Police Department and the Transport and Mobility Department. These two departments work to reduce the urban disorder caused by transport activity in the city. The transport unit works more on planning, while the municipal police section deals with control and reprimand.

- *The CUD Transport and Urban Mobility Unit Sub-Directorate*

The CUD's transport and urban mobility unit is a think-tank, responsible for drawing up all the texts for planning transport and the mobility of goods and people in the city of Douala. The sub-directorate works to regulate and harmonise the mobility sector, and seeks to find common ground between all parties in the urban space and users of public roads. The planning in question is therefore participatory and inclusive of the various stakeholders. The motorbike and taxi unions are obviously involved, and their opinions are taken into account when decisions are made. In fact, all things considered, the discussions take into account the interest that motorbike taximen, taximen, city dwellers and urban authorities have in the transport business, urban mobility and the organisation of urban space.

- *The Municipal Police Department*

The role of the Municipal Police Department is to ensure the implementation of current legislation and action plans in the transport and urban mobility sector in the city of Douala. The officers in this CUD department work in the field to monitor compliance with the regulations in force, and to reprimand any users found to be in breach of them. Since the 2021 project to professionalise motorbike taxi transport, this monitoring work is just the beginning of the process of regulating this sector of activity, which involves all the stakeholders in the programme.

- **Douala town halls**

Also known as the decentralised local authorities responsible for a borough, town halls are responsible for :

- Recovering withholding tax.
- Ensuring that informal transport operators do not create urban disorder by parking incorrectly or outside designated parking areas, or by failing to respect traffic routes.

However, once on the ground, the municipal police check all the documents required for the use of a vehicle, as well as all other offences committed by all other road users (such as not wearing a seatbelt, etc.).

- **The Douala Transport Delegations**

As part of the road safety operation, the transport delegation is checking that motorbike owners are in possession of insurance, a vehicle registration document and a driving licence. In addition to these documents, taxis and other road users are also required to have a licence, undergo a technical inspection and wear a seatbelt.

Cross-checked information from several institutions reveals that more than 2/3 of motorbike taxis do not have all the required documents. Almost all of those working in the suburbs and on the secondary and tertiary roads are not required to have the documents checked, so they don't do so. In addition, 1/3 of those travelling on primary and secondary roads do not have them either. Some city taxis also fail to pay their taxes. This raises questions about the concept of "informal". According to the decentralised local authorities, the informal nature of motorbike transport is due to the fact that those involved do not have the necessary documents.

- **Trade unions**

In Douala, there are so-called transporters' unions (employers' unions), which refer to owners of transport vehicles who are not drivers on the one hand, and drivers (non-owner drivers) of city taxis on the other, and finally those of motorbike transporters (moto-taximen).

The purpose of the unions/trade unionists is to defend the interests and the cause of the activities of the hauliers who belong to the unions. In fact, the sector is made up of hauliers who work illegally, i.e. who do not comply with the general rules of the business by paying their taxes. However, they are making money that only those who pay the documents required for urban transport believe they have the right to enjoy. Forming a union is therefore a way of isolating illegal operators while encouraging them to comply with the requirements of the business, which is the first condition for joining a union. The union, in turn, is a body that defends the interests of hauliers, and to this end it intervenes in the event of a problem affecting a member in the course of his or her business. As a result, chairmen or certain members can easily answer for others, which limits acts of delinquency within the corporation.

Trade unionists can be identified by their chasubles, which bear a number of references that enable them to be identified, their registration numbers and their parking points.

- **Motorbike taxis and taximen**

The main providers of transport services in the city are taximen and mototaximen. While the interest of the motorbike taximen and the taximen is their survival and the improvement of the conditions of their activity, the interest of the CUD and its partners is in general the regulation of the urban transport sector through awareness-raising to make the actors more conscientious and more respectful of the regulations in force, with a view to the good organisation of the urban space. It has been noted that many motorbike taximen do not have transport documents; some are also unidentifiable because they do not have a national identity card. The role of the sub-directorate is to impose penalties and raise awareness, among other things, of the importance of having these documents, firstly for their own safety and secondly for that of other users. While the interest of the motorcycle-taximen and the taximen is their survival and the improvement of the conditions of their activity, that of the CUD and its partners is in general the regulation of the urban transport sector through awareness-raising to make the actors more conscientious and more respectful of the regulations in force, with a view to the good organisation of the urban space. It has been noted that many motorbike taximen do not have transport documents; some are also unidentifiable because they do not have a national identity card. The sub-directorate's role is to make them aware of the importance of having these documents, firstly for their own safety and secondly for that of other users.

A summary of the players in the transport sector in the city of Douala is shown in the figure below.

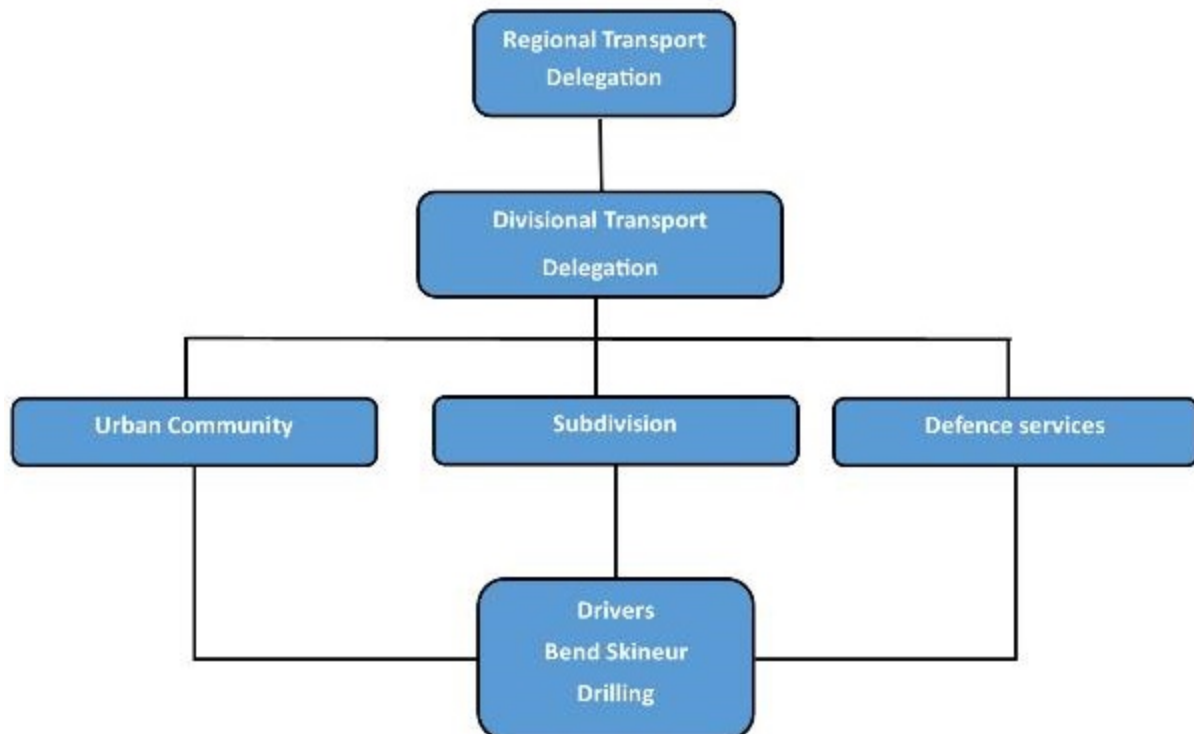


Figure 12 : Mapping of stakeholders in the co-production of urban transport on the fringes of the city of Douala

4.2.2.2 The city of Abidjan

Informal mobility in the city of Abidjan brings together both institutional and informal players. These actors include the municipality, the national police force, traders, shippers, drivers and

trade unions. This interplay of players occurs throughout Abidjan, but is most pronounced in the communes of Adjamé, Abobo and Port-Bouet, and to a lesser extent in the communes of Plateau, Cocody, Marcory, Koumassi and Yopougon. The most pronounced relationships involve not only the shippers, the municipality, the agents and the drivers, but also the unions, the drivers and the national police, and these relationships can be seen in Adjamé, Abobo and Port-Bouet. The second correlation, which is maintained in the context of informal mobility in the city of Abidjan, involves drivers, unions, the municipality and shopkeepers, most of whom are located in the communes of Abobo, Adjamé and Cocody. Relations between drivers and traders, and between shippers, drivers and the national police, are seen to a lesser extent in Port-Bouet, Adjamé and Abobo for the first set of players (drivers and traders) and in Yopougon, Abobo, Cocody and Port-Bouet for the second set of players (shippers, drivers and the national police).

- **The Ministry of Transport is the first link in the organisation and regulation of transport at the margins.**

The Ministry of Transport is the first link in the organisation of transport at the margins of the city of Abidjan. In accordance with article 1^{er} of decree no. 2011-401 of 16 November 2011 on the organisation of the Ministry of Transport, it comprises "in addition to the cabinet, directorates and attached departments, an observatory for the fluidity of transport, general directorates, directorates and external departments" (*Ministry of Transport*, 2011). As far as informal transport on the margins of Abidjan is concerned, it is the Greater Abidjan Urban Mobility Authority for land transport and the Directorate General of Maritime and Port Affairs (DGAMP) for waterways that are responsible for implementing the mobility policy. According to the Director of Planning and Studies, the Greater Abidjan Urban Mobility Authority (AMUGA) was created as a result of the government's ambition to tackle the issue of mobility from a more inclusive angle, with a mass transport system that includes small-scale means of transport such as communal taxis, minibuses known as "gbaka" and unmarked taxis. These taxis, which account for 70% of public demand for transport, will be involved in a training programme that will enable them to become more professional and better organised. AMUGA aims to overcome the problems associated with infrastructure and traffic management in a context of uncontrolled urbanisation. AMUGA's ambition is to work towards setting up a system that aims for complementarity between major projects such as the BRT and the metro, lagoon transport and small-scale transport. For transport on the margins, AMUGA plans to introduce a system for renewing the fleet of vehicles. The first actions will focus on setting up a strategic council made up of districts and municipalities to define a roadmap for implementation. Further down the line, AMUGA will apply all the organisational and coordination aspects of mobility to ensure "safer, more reliable and less expensive" travel for the population.

- **The Maries of Abidjan**

As a devolved institution, the town hall is a major player in the transport sector. In fact, Article 12 of Law No. 2003-208 of 07 July 2003 on decentralisation, which transfers and distributes powers from the State to local authorities, states that the role of the town council in organising the urban transport of people and goods is related to the law on communalisation through the

policy of decentralisation. Thus, at town hall level, the departments responsible for regulating and managing urban transport are the financial department and the technical department. In terms of the organisation of urban transport, the important mission of towns and municipalities in Côte d'Ivoire defines their roles as follows: issuing permits, approving fares, creating fees for the operation of public transport that does not exceed their territorial limits, entering into all forms of decentralised cooperation with territorial activities, public or private, foreign or international organisations within the framework defined by the State, land-use planning and the fight against insecurity.

Town councils are institutions whose aim is to develop and modernise their areas. As part of their regalian role, town councils set up departments to act as urban transport regulators. These departments include the technical department and the financial department, both of which are involved in organising urban transport in the area for which they are responsible. However, the capacity to create space dedicated to transport is very limited. In fact, in none of the communes did the housing estates provide space for the development of informal transport at the margins. The role of town councils with regard to fringe transport is limited to collecting taxes from transport operators. This service is provided by the finance department. Given its role as manager of financial resources, it is linked to all commercial activities within the municipality. This gives it an important role in the organisation of urban transport in Abidjan. In some town halls, such as Cocody, it is responsible for regulating public spaces.

The role of the technical department is to identify and define equipment requirements and the work to be carried out in response to changes in the municipality. It ensures that equipment is in good working order and that people and property are safe. In the context of urban transport, this department is responsible for ensuring the smooth running of the vehicle fleet in collaboration with the municipal police. Vehicles are checked by the municipal police to ensure that they are in order and in good roadworthy condition. If they are not, offending drivers are banned from driving and their vehicles are impounded.

The municipal police and agents from the town hall carry out checks by setting up roadblocks. When these are not up to date, the vehicles are impounded with the coins blocked by the inspectors. Taximeters have to pay 2,500 francs a day to remove coins, and impounded vehicles are charged 5,000 francs a day. When a driver is seized during the financial year or (year *n* plus 1) by the municipal police, he pays what is known as the renewal, which costs 5,000 CFA francs, and a 2,000 CFA franc badge. These taxes enable the town council to make budgetary forecasts.

- **The activity of pinasses, an activity with different players from land transport activities at the margins in the city of Abidjan**

The activity of the pinasses reveals a multitude of players with roles that differ from those of land transport activities on the urban fringes of the city of Abidjan. The players involved in the pinasse activity around the Ebrié lagoon in Abidjan are the pilots, the deckhands, the collectors and the owners of the pinasses. Pilots and deckhands remain essential players in the pinasse activity. While the pilot is responsible for driving the pinasse, he is assisted in his task by the deckhand. The deckhand assists him with a bamboo chine when the boat sets sail, but before

that, he has to make sure that the pinasse is in the best possible condition for sailing. Once the boat has been docked, he is also responsible for mooring it.

The number of loaders on a pinnace depends on its size, the employer and the line. The larger the pinnace, the greater the number of loaders. The pinnaces that operate on routes where the users are merchants carry more goods than people. There can be up to three loaders. On routes such as Santé-Boribana, the loaders are on the quayside. They work for all the pinasses and are paid by the passenger according to the quantity of goods.

- Non-institutional actors in informal transport on the margins of the city of Abidjan

The informal transport system at the margins is also made up of non-institutional players. The question of non-institutional players here refers to individuals or trade union organisations that interact in the organisation of urban transport in the city of Abidjan. These are economic operators, trade unions, drivers, customary authorities and users. These players do not initially exist in the urban transport organisational system. However, their emergence can be explained by the fact that small-scale transport has taken over the urban area in the face of SOTRA's failure in a context of uncontrolled urbanisation. Although there are similarities, there are some nuances between transport activities at the margins in the city of Abidjan.

- Transport owners at the margins in Abidjan

The informal nature of this type of transport means that anyone can invest and own a car. All you need is the means to buy a car to put it on the road. This sector of activity remains largely financed by traditional channels (family groups, people with means). For these players, a significant advantage is the ease with which owners can buy second-hand vehicles and make them available to drivers. However, the informal nature of this activity does not encourage financial organisations to invest in it. For these financing structures, being an unofficial taxi driver is not a reliable job, because drivers can stop working at any time when a more profitable job comes along.

- The players in unmarked taxis

Unmarked taxi ranks are home to a variety of players, including drivers, station managers, loaders, treasurers, line managers, financiers and negotiators. These are the key players in the operation of unmarked taxis in Abidjan. Station managers are people whose role is to supervise the running of operations. They are generally chosen by the union federations. Their role is to identify problems and pass them on to the zone managers. They receive line rights and intervene primarily in collusion with the unions in the event of a problem within the station or in relation to other actors in the station. They supervise activities remotely in most stations or appoint deputies or representatives to whom they confer discretionary powers in order to ensure their interim management.

- Those involved in taxi tricycles, goods tricycles, two-wheeled motorbike taxis and handcarts

There are few people involved in the day-to-day running of taxi ranks for salonis tricycles, goods tricycles, two-wheeled motorbike taxis and handcarts compared with those for unmarked taxis. These players are the station managers, drivers and union representatives, as in the case

of unmarked taxis. Their roles are similar to those of unmarked taxis. In small, newly-formed stations, station managers collect the taxes intended for the unions.

In the case of the handcarts generally known as poussepousses, the only people involved, apart from the owners, are the drivers known as pushers, who operate on a daily basis.

What's special about the handcart business is that the only people involved are the pushers or cart drivers. Their role is to transport customers' goods to their destination. However, the contribution of 100 CFA francs or 200 CFA francs to help the pushers in the event of a problem is collected by the oldest of the pushers at certain sites, such as Adjamé Marché Gouro.

A summary of the players in the transport sector in the city of Abidjan is shown in the figure below.

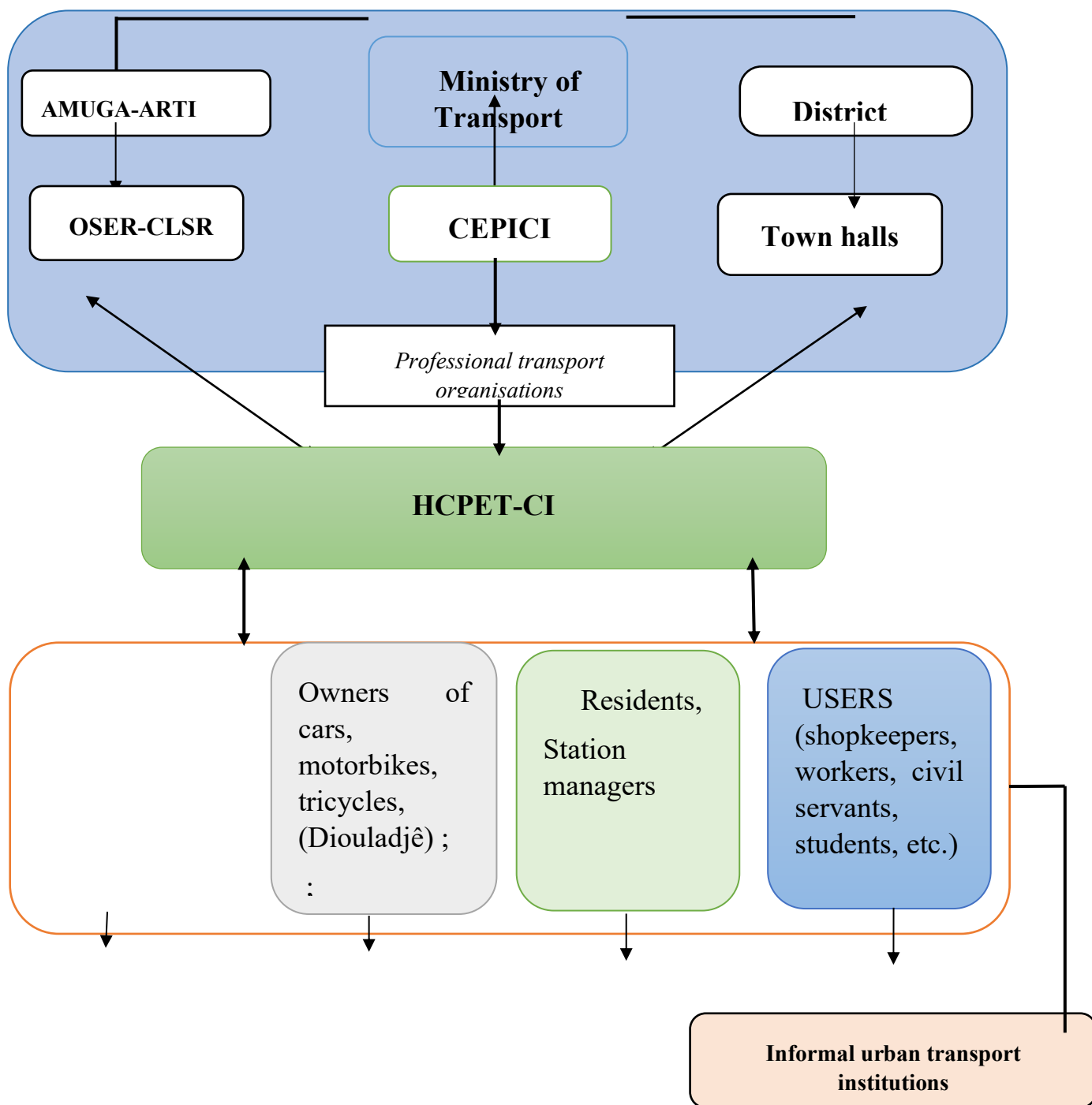


Figure 13 : Mapping of stakeholders in the co-production of urban transport on the fringes of the city of Abidjan

In Douala, as in Abidjan, informal transport is a major issue for many players, from the state to local authorities and transport operators. On the front line, the government is responsible for regulating and controlling the sector by issuing permits and operating licences and setting fares. It builds transport infrastructure. From a financial point of view, it also collects taxes on fuel and administrative formalities. Like the State, local authorities are involved at local level, through the powers assigned to them by law. Their prerogatives include building and maintaining bus stations, organising traffic and urban parking. They are much more interested in collecting revenue from parking fees for transport vehicles. The State, like local authorities,

has a mutual relationship with transport operators, which are made up of owners (transporters and owner-drivers), staff and managers of transport facilities who play a fundamental role in the transport system through the service they provide to users.

These different players in the cities of Douala and Abidjan are at the root of many of the malfunctions in the management of the transport sector. Drivers operate outside the rules laid down by the public authorities, cutting short journeys, making untimely stops, and keeping obsolete and dangerous vehicles on the roads to recoup their operating costs in a context of low fares. Parking areas are becoming increasingly dilapidated, creating pollution and traffic accidents.

4.2.3 Representations of informal transport and/or transport on the urban fringes in the cities of Douala and Abidjan

Transport modes are used to move goods and people. In big cities like Douala and Abidjan, the services provided by these modes of transport are no longer to be underestimated. To get from one end of the city to the other, you need a means of transport, whether taxis, tricycle taxis, pinasse or motorbikes, and you also need mobility routes for each means of transport. Parallel means of transport are important for these two major cities for a number of reasons:

- The economic situation of the players and the urgent need to carry out an activity in order to survive in an urban environment.
- The poor state of the roads; there are suburbs where the road layout is not always practicable, but motorbikes and taximans manage to serve these areas.
- The limits of public transport services offered by local authorities,
- The sheer size of cities in terms of space and population means that they have major needs in terms of urban mobility.

According to perceptions, informal transport is characterised by the unofficial status of the promoter or provider of the type of transport service provided. The service provider is a private player (and not a public or semi-public institution), not registered in a file of transporters, and often not identifiable because he does not possess the documents required to operate transport in the city. Informal transport operators stand out for their ability to access urban fringes by overloading. The type of vehicle/engine used for informal transport is dominated by motorbikes/tricycle taxis (2- and 3-wheelers), although there are also some 4-wheelers (city taxis, cargots). These latter vehicles are criticised for being in poor condition (colour, old, etc.) and for not complying with urban transport standards (by possessing the documents required to operate in urban areas). Lastly, this type of transport is characteristic of urban disorder and insecurity. Although some providers of this service have a level of education that favours communication, understanding of the texts and legislation/standards in force for urban transport, and finally their application for the smooth running of the urban area, the safety of their activity and the good of all; many are illiterate or illiterate, and consequently do not have the level of understanding required to understand and comply with the said standards, and then communicate with the city authorities about their activity, when necessary.

In conclusion, alternative transport on the margins is a necessary evil for those who practise the activity and for city dwellers. It responds to a need not fully met by the state institutions in

charge of urban transport, given the growing demands in terms of mobility on the one hand and survival employment on the other, in urban areas.

4.3 Identification and analysis of existing consultation frameworks with informal transport stakeholders and those on the urban fringes

Parallel transport has always posed many problems in urban areas, pitting transport operators against urban authorities. In fact, despite the existence of legislation governing this activity and regulating mobility in urban areas, deviant behaviour by users sometimes prompts the authorities to crack down. There are often demonstrations of discontent by transport operators following certain decisions by the urban authorities. These demonstrations take the form of strikes and violence in the public space. To resolve these problems, consultation meetings and awareness-raising events are held regularly to discuss transport and mobility issues in urban areas.

By way of example, it emerges from the professionalisation project described above (in the institutional framework section) that the CUD has already accepted the existence of motorbike transport, given its importance in the city. The urgent need is therefore to organise this sector of activity in such a way as to ensure that it is properly integrated into the urban space, while respecting the organisation of the said space and the safety of its users. To this end, the urban community is organising information and awareness-raising seminars on specific issues relating to this type of transport, such as occupying the public highway, the importance of having one's papers and all the official documents relating to one's activity when carrying it out, and the importance of being registered through membership of a drivers' union (which entitles drivers to the chasuble). The urban community is supported in its monitoring and control activities by the union presidents. Chasubles and helmets are sometimes distributed at these meetings.

So the idea is not to take motorbike taxis off the road, but rather to organise their sector. The sub-directorate points out that motorbike taxis make up more than 51% of the modal share of transporters in the city of Douala. It's hard to imagine the city without these motorbike taxis, which, according to some, are nonetheless an obstacle to mobility in the city.

Each Douala District Council (CAD) acts as a relay for the implementation of decisions taken by the urban community, through the offices of the municipal police and the presidents of the trade unions.

The Urban Transport and Mobility Observatory notes that "given the complexity of the problems, the proposed solutions are provisional. The final version will have to incorporate the observations and relevant proposals of all stakeholders, namely :

- The mayors of the city's boroughs ;
- The heads of the city's Forces de Maintien de l'Ordre (FMO) ;
- The heads of the central and decentralised departments of the Ministry of Housing and Urban Development (MINHDU);
- The heads of the central and decentralised departments of the Ministry of Transport ;
- Members of civil society ;

- managers of digital companies developing on-demand motorbike taxi transport applications in Douala (Bee, Yango, etc.)
- The leaders of the motorbike taximen in Douala.

The expected results of this Action Plan are (i) **modernisation**, (ii) **regulation** and **professionalisation** and (iii) **regulation** of the motorbike transport sector.

4.3.1 The synergy of players in tax collection operations and urban traffic regulation (informal transport income)

Town halls are assisted in the task of controlling the tax in discharge by police stations, sub-prefectures and the prefecture. Agreements between these three bodies mean that at least one officer from the national police or gendarmerie can obtain a mission order to accompany the municipal police in the field during the inspection. The purpose of the defence service officers is to ensure the safety of the municipal police during the collection operation. Violent altercations between road users and municipal police officers have sometimes been observed during this operation. The defence duty officer not only ensures public safety, but also that of the municipal police by dissuading road users in this case and possibly penalising them.

It should also be noted that all collection operations in the field are always carried out in the presence of at least one trade unionist. Transporters' associations are also often involved in other activities initiated by the city authorities. These include hygiene and sanitation operations and making the city safer. They are heavily involved in decision-making at all levels (district, village, arrondissement, prefecture).

4.3.2 Stakeholder synergy in the modernisation/professionalisation of motorbike taxi transport under the 2021 action plan

The urban community, town halls and the Wouri departmental transport delegation help motorcycle-taximen to obtain a driving licence and other documents required to carry out their activities. Once a user who does not have all the required documents is apprehended, his vehicle is seized and taken to the impound lot. To retrieve the vehicle, it is essential not only to pay the penalties set for this purpose, but also to pay the costs of training and establishing the missing document(s). The payment of a total of 23500 CFA francs can be made in instalments over a maximum period of 2 months for the driving licence and 2 weeks for the vehicle registration document. Receipts obtained from the start of the payment entitle them to carry out their activity while awaiting the end of the payment and then the issue of the required document(s). When the amount required to obtain a document is reached, it is issued and made available to the user. In the case of driving licences, a training course followed by an assessment to obtain the licence are organised in the centres approved for this purpose, at the end of the payments. Training courses are organised with the help of local authorities and trade unions in centres set up for this purpose, and the test is organised by the Wourri departmental transport delegation.

4.4 Opinion on the involvement of urban transport players on the margins in urban mobility management

The nature of relations is generally conflictual, between road users (informal hauliers) and the authorities responsible for regulating transport and managing urban space. The former feel oppressed and abused by the latter, whose objective is to regulate and organise traffic in urban areas. According to the decentralised local authorities, more than 1/3 of drivers do not pay their taxes and obviously do not hold all the other documents required to carry out their work. This proportion states that they *"do not make enough money to obtain them, that fuel is expensive and that, as a result, a large part of their revenue is absorbed by the purchase of this precious liquid, and, finally, that the number of documents required and the cost of obtaining them are exorbitant"*.

On the other hand, discussions with the authorities have shown that non-payment of coins is most often due to a lack of will, bad faith and a lack of civic-mindedness on the part of road users, rather than an inability to pay. By way of example, a motorbike costs between 300,000 and 400,000 francs. Transport operators buy them, but then refuse to comply with the regulations by buying the tax at source, which costs 16,000 francs payable in 4 quarters, i.e. 4,000 francs each quarter. A good number, however, managed to avoid paying the tax. So we use all kinds of strategies to get motorcyclists to pay their taxes: awareness-raising, force and penalties by seizing their motorbikes and impounding them, and then taking the penalty fees, which amount to 5,000 francs before the motorbike is impounded. Road users are not always happy about this treatment.

Some city taxis also fail to pay their taxes. "As a result, the concept of the informal nature of the transport business is open to question. According to the decentralised local authorities, the informal nature of motorbike transport is due to the fact that those involved do not have the necessary documents.

4.4.1 Findings on GPS-based travel behaviour survey

The decline in organised public transport systems has resulted in the development of largely unregulated and informally provided non-conventional public transport, the most predominant of which is the motorbike, the most common form of informal public transport system on most Douala and Abidjan secondary roads. Motorbikes, non-motorised means of transport, motorboats, pirogues, tricycles, minibuses and personal vehicles are the means used for informal mobility in Abidjan and Douala by the population.

4.4.1.1 People's mobility in Abidjan

Minicars, motorbikes and tricycles are the means of transport most used by users in all of Abidjan's communes, with tricycles predominating in the communes of Abobo, Adjamé, Koumassi and Port-Bouet. Although motorbikes are used in the communes of Koumassi, Port-Bouet, Yopougon and Adjamé by local people to get around, they are more common in Abobo. As for pirogues and motorboats, they are used by people in all the communes bordering the Ébrié lagoon. The network of small-scale lagoon transport irrigates all the compartments of the

Ébrié lagoon through fourteen lines. There is a high concentration of motor boats (Pinasse) between Port-Bouët and Koumassi. The city of Abidjan is characterised by a specialisation of zones. It is also characterised by pendular movements due to the low mix of uses, particularly residential/employment. Over time, the city has become urbanised, following a pattern based on the distribution of space around three major functions: administrative, industrial and commercial, and residential (Zoro Bi, 2005). The residential areas of Cocody, Attécoubé, Yopougon, Koumassi, Abobo, Vridi and Port-Bouët account for more than 66% of the total population, 40% of total jobs and one working area (Plateau, Treichville, Marcory and Adjamé) with 60% of total jobs in the conurbation (Zoro Bi 2005; DGAMP, 2010). This urban morphology has an impact on the main travel flows, which are directed between the outlying residential neighbourhoods and the neighbourhoods with a high concentration of economic and industrial activities.

There are several combinations, depending on the area. In general, unmarked taxis and pinasses cover long distances and travel between different communes, while tricycles, saloons and mototaxis cover short distances, usually within the commune.

The people of Abidjan get around in different ways. While some people walk, others use buses, unmarked taxis, communal taxis, salonis taxis and pinasses.

The means of transport used by each user vary from one area to another. People leave Koumassi from Soweto station by bus for the communes of Treichville and Plateau. They also use unmarked taxis from Port Bouet to Koumassi, Marcory, Cocody and Adjamé. These journeys are made respectively from stations and loading and unloading points for workplaces, from one station to another. Salonis taxis and pinasses ensure continuity of mobility for users in isolated or hard-to-reach areas on the outskirts. Finally, people walk from home to stations, loading and unloading points and vice versa.

Most of the service between Cocody and Bingerville is provided by gbakas from Gare de la Vie via Faya 2 to the mixed station at Bingerville. Unmarked taxis serve Plateau and Bingerville respectively, from Gare de la Vie to workplaces in Plateau, and from Faya 1 station to ABATTA loading and unloading points in Bingerville. The walk is a kind of relay to reach the workplaces of users who get off at the loading and unloading point located at the pharmacy of banks in Plateau, but also to reach their homes from the loading point of Abatta.

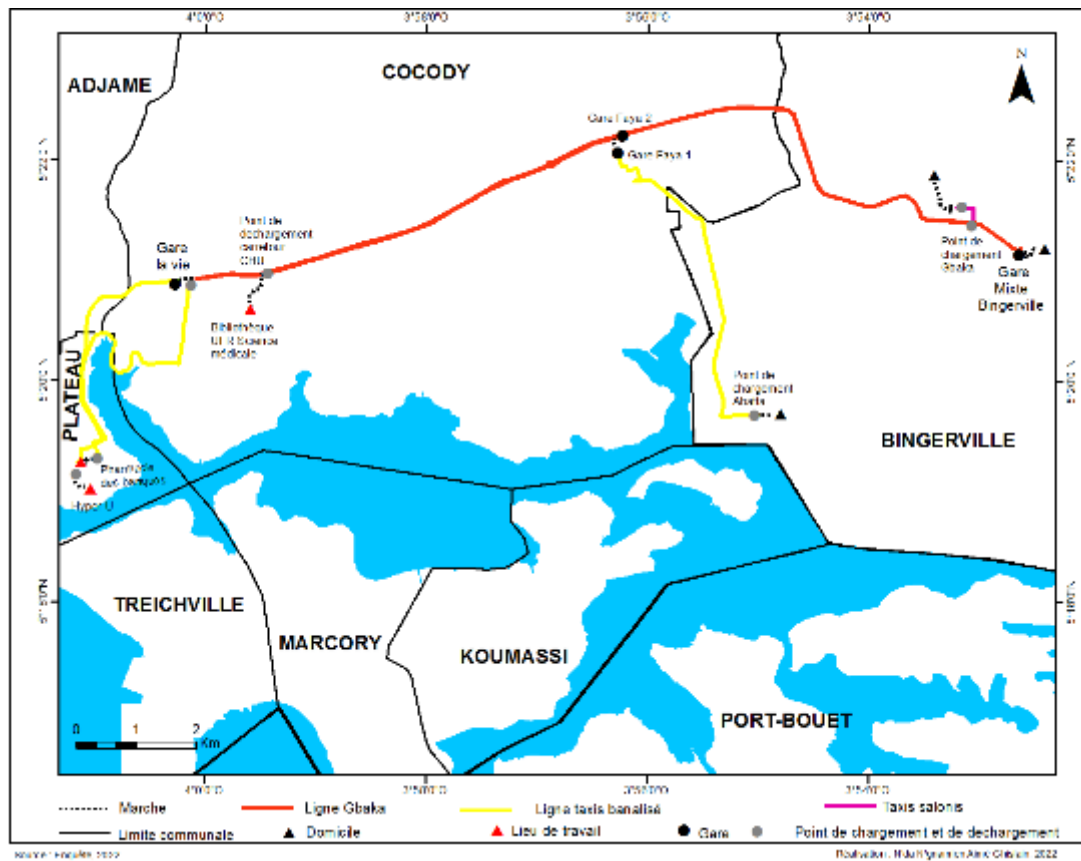


Figure 14 : Linking the Communes of Cocody and Bingerville by gbakas

The communes of Adjamé, Cocody and Treichville are served from the commune of Yopougon and even within the last-mentioned commune by gbakas, unmarked taxis and SOTRA boat buses. The gbakas are used from Saint André station to the Azito and Lubafrique stations in Yopougon and the Liberté station in Adjamé. Unmarked taxis enable people to travel from Saint André station in Yopougon to Adjamé (Gare Liberté), Cocody (the CHU de Cocody unloading point) and Attécoubé (SOTRA's lagoon station at Abobodoumé). As for the SOTRA bus boats, they take passengers from the Abobodoumé station to the Treichville lagoon station. Walking is a way for users to get to their various workplaces and homes.

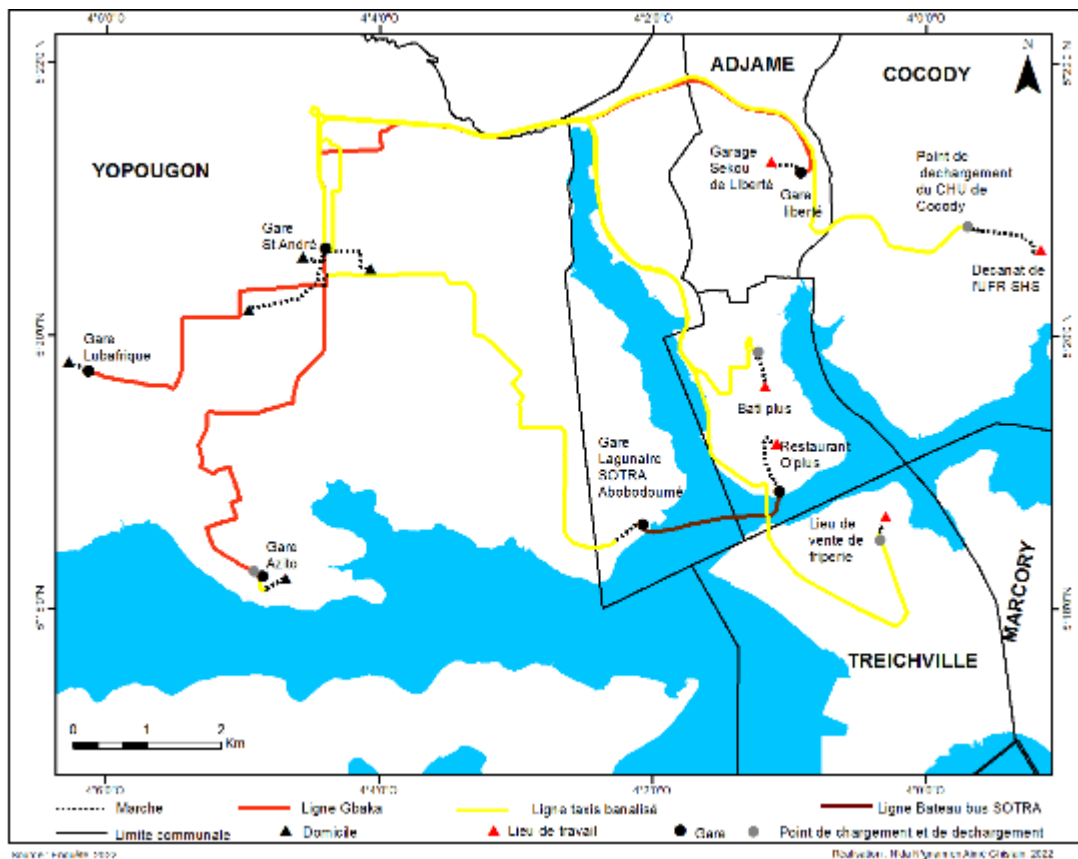


Figure 15 : Links across the Communes of Adjame, Cocody and Treichville from the Commune of Yopougon via gbakas

People in the communes of Adjame, Cocody, Plateau, Treichville, Marcory and Koumassi also travel by gbakas, unmarked taxis, pinasses, communal taxis, two-wheeled motorbikes and on foot. In these various communes, unmarked taxis are the most commonly used means of transport. From the Carrefour la Vie, Saint Jean and CHU de Cocody stations, these means of transport serve the Plateau, Treichville (Bassam station), Marcory (Saint Thérèse) and even the interior of Cocody for the M'pouto 1 and 2 stations. Communal taxis are deployed mainly in the commune of Cocody, reaching respectively carrefour 9 kilos-gare M'pouto 2, Gare saint jean-Carrefour la vie and the UFHB-Cité universitaire UFHB unloading point. From M'pouto 2 station, users take pinasses to the commune of Koumassi. Two-wheeled mototaxis provide transport for users within the same commune. These are still in the embryonic stage, and are used within the communes of Cocody, Abobo and Yopougon. Abobo and Yopougon Once at the stations or unloading points, people walk to their workplaces in the communes of Cocody, Plateau and Koumassi, while other users walk to their homes in the communes of Cocody, Adjame, Marcory and Treichville.

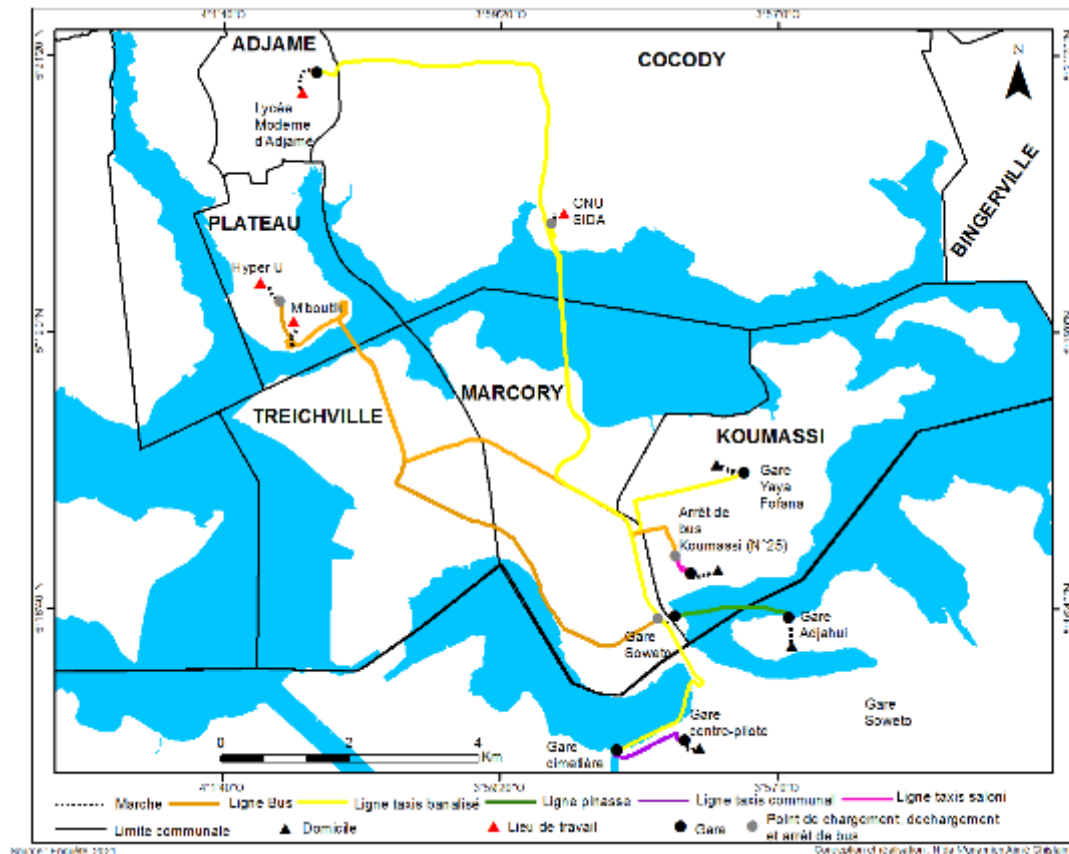


Figure 16 : Movement of people through the communes of Adjamé, Cocody, Plateau, Treichville, Marcory and Koumassi by gbakas

People travel to and from Abobo by gbakas, unmarked taxis and salonis taxis. The gbakas enable people to get to Abobo station from the village Akekoi station. Unmarked taxis provide a link between the Plateau (loading and unloading point) and Cocody (Angré Château station). Solonis taxis are used to travel between the commune of Abobo and the village of Akekoi. Once they get off at Angré château (Cocody) and Froid service (Plateau) stations, people walk to get to their places of work, while those who get off at Abobo station walk either to get to the two stations located at Abobo gare, or to get to their homes.

4.4.1.2 People's mobility in the city of Douala

Since 2012, the Douala city authorities have succeeded in bringing mototaximen to heel by forcing them to respect a traffic plan that denies them access to certain neighbourhoods (Bonapriso, Bali, Koumassi, Bonanjo and Deido). The presence of the police with a warlike presence has dissuaded a number of mototaximen/bend skineurs. Despite this decision in 2012, informal transport still exists in some of these prohibited districts (Figure 17). This is due to the fragility of the institutions, early intervention by the city authorities and the lack of infrastructure.

People move around the urban fringes of Douala using four forms of transport: taxis, bendskins, minibuses and freighters, and clandestine transporters.

- Taxis

They generally operate in collective mode ("pick-up"), with a basic fare of 100 Fcfa, or individually ("journey" and "drop-off"), in which case the price is systematically negotiated before boarding. Urban sprawl and the development of traffic jams have led taxis to divide up their routes: some taxis never cross the bridge, while others only serve the city centre. People generally use taxis to get to work and vice versa.

- Moto/Bend Skin

Bendskins in Douala owe their growth to the fact that they can access places inaccessible to four-wheelers, to their low cost (a basic fare of 100 CFA francs, a third less than that of taxis) and to the development of traffic jams, which makes them faster than other modes of transport at peak times. Loading zones are generally located at crossroads and market entrances. Once loaded, the destination is either to go to a market/supermarket, or to go to the place of residence.

- Minibuses and freighters

The minibuses and freighters operate with fixed loading points and line services to outlying districts (Village, Ndokoti/PK14/Nyalla, Bonabéri and Bépanda) from the centre (Bonanjo, Akwa and Marché Central). Once the loads have been loaded, the destinations here can connect to the towns of Buea, Kumba, Mbanga and Moutenguene from the Bonabérie and Deido loading points. This type of transport has a capacity of around thirty seats. For certain remote areas that are difficult to access, they are in fact the only motorised means of transport. But the age of the vehicles and the practice of overloading make them more vulnerable to road accidents.

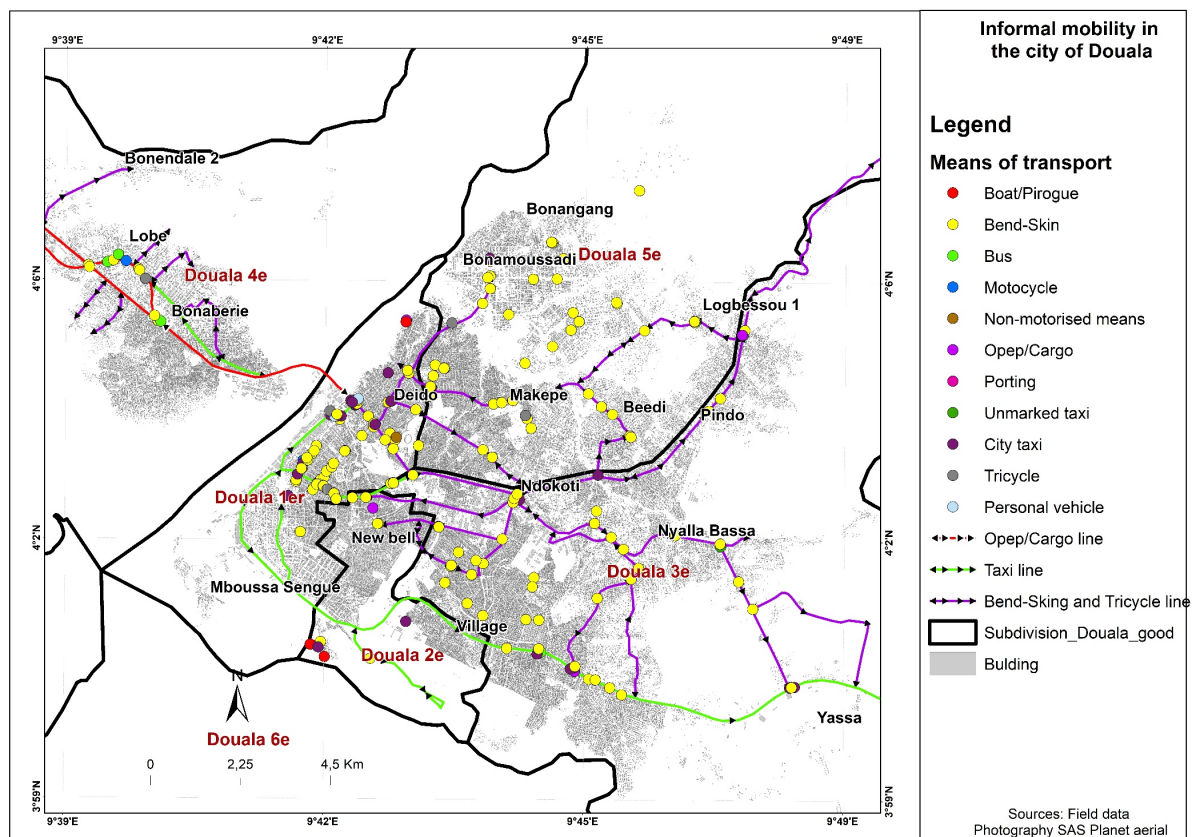


Figure 17 : Use of means of transport according to the configuration of the margins in the city of Douala

4.4.2 The mobilization game and determinants of co-production of governance in urban transport

4.4.2.1 Collective mobilisation games between transport stakeholders on the urban fringes : conflicts and concerted action

In addition to the public administration and decentralised local authorities, a number of trade unions and associations oversee transport activities on the outskirts of the city. The city has 14 unions and several associations whose primary role is to defend the interests of the corporation. However, the urban motorbike taxi transport sector is heavily infiltrated by the urban authorities and politicians through their relations with union presidents and "leaders". In fact, some union presidents and borough leaders, while acting as intermediaries between these transporters and the urban authorities, also play the role of intelligence agents for the urban authorities, and in exchange receive rewards well above what they would earn by simply supervising the transport activity. This attitude keeps them indebted to these authorities. As a result, they are very often forced to remain silent while keeping the corporation calm and serene, even in situations where they would have to make demands that would go as far as a strike if they had a free hand. These intermediaries are simply playing the game of personal interests first, and to a lesser extent the collective interest.

4.4.2.1 From trade unionists to leaders: a strategy for infiltration of the motorbike taxi transport sector by the urban administration

As the balance of power between the trade unionists and the urban authorities became increasingly unbalanced, the latter realised that the union presidents were becoming very demanding, ready to launch protests at every demand, so they worked to create posts of "ledears" of the mototaximen by district. These positions are held by the most popular and belligerent union presidents, who are capable of influencing the decisions of the mototaximen, even through intimidation. They are nicknamed "gladiators", "torchbearers", "scouts", etc. by the corporation. They claim to have been chosen jointly by the mototaximen and the city authorities, but it only takes a little analysis to understand that this is an initiative cleverly devised by the city authorities, with the aim of infiltrating the transport community in order to weaken any malicious initiative by this corporation, which constitutes a formidable mass of people because of its numbers and its demands, which can easily degenerate into urban violence. The leaders keep their positions as trade unionists while working in perfect collaboration with the urban administration.

Although the union presidents and leaders are all known to the urban administration, the particularity of the leaders, unlike the trade unionists, is that they are members of the prefecture's consultation platform, which works to combat urban disorder and maintain peace; consequently, they work with the players on this very strategic platform in the city. The leaders and to some extent the presidents of the unions play the role of "intelligence agents" for the administrative authorities. They have to report to this administration, as and when necessary, any situation likely to have an impact on peace and social stability in their territories, which may come from the urban transport sector. They infiltrate their sectors with teams of expions

who work discreetly for them. They are instantly informed of everything that happens on the ground and relay information received to the urban authorities. The leaders are therefore greatly feared by the transporters. They are the guarantors of peace on the ground in general and within the transport corporation in particular. They are direct but informal collaborators of the administration in the management of the much feared urban transport sector. In return, they clean up the sector, helping to root out delinquents who are dangerous to the city.

4.4.2.2 A defused riot among motorcycle-taxi operators linked to the rise in fuel prices in February 2022

After the press release of 1^{er} February announcing the increase in the price of petroleum products, the question of "how did motor-taxi operators receive the message announcing the increase in fuel prices, given that this is one of the sectors of activity that would be most affected by this increase?" was put to the leader of the Douala 4 transporters^e, to a union president and to some transporters.

The leader pointed out that "motorcyclists have been prepared for this increase ever since rumours spread a few months ago that the price of a litre of fuel would rise from 650 CFA francs to 1,300 CFA francs. Immediately following this rumour, the union presidents and ourselves sent a letter to the President of the Republic, under cover of the Minister of Territorial Administration, to plead for a slight increase. The President of the Republic replied to our correspondence on Monday 30 January 2023, before the press release announcing the said increase, to reassure us that it would not be substantial. Today, the increase is only 100 francs per litre, which clearly shows that the President of the Republic has listened to our grievances. We recognise this effort by the authorities to understand the grievances of motorcycle-taxi operators, so we must thank him. He went on to say that, "immediately after the press release announcing the rise in fuel prices, on 2 February 2023 to be precise, each leader, in consultation with the city prefect, called a meeting with the motorcycle-taxi operators in his area to give them the above-mentioned speech in order to "calm spirits and avoid any possible uprisings". During these meetings, the sum of 2000F cfa for the purchase of fuel was distributed to 400 transporters who took part, regardless of union affiliation. "The hauliers who took part in this meeting were instructed to pass on the same message to their other colleagues in order to maintain peace on the ground", says the leader. The action was covered by the local and national media. As a result, the possibility of a strike has been defused, even though some motorcyclists who do not share the opinion of the leaders and trade unionists continue to complain. However, these motorcyclists are being met individually or in small groups to negotiate with a view to appeasement, with the method varying from case to case. The most belligerent are met individually for negotiations accompanied by the donation of gifts (envelopes, motorbikes, fuel,) received on the one hand, against the commitment to contribute to the control of stability and maintenance of peace in the corporation on the other hand. Others are threatened and told to keep quiet.

Some trade unionists and others are opposed to the silence maintained by the majority on the subject of the increase in the price of fuel, but they cannot rise up for fear of reprisals. Marc, a

mototaxi driver and member of SYNACOMOTCAM (Syndicat National des conducteurs de Motos et Tricycles du Cameroun) who works in Bonabéri, said that :

"Our working conditions are becoming increasingly difficult, and we're being exploited at every level, because the urban authorities are demanding taxes, the cost of living and fuel are becoming more and more expensive, and we're paying union membership fees, but we're not getting any benefit from it. When we put our grievances to our president, he reassures us that he is working to improve things, but nothing changes. We are obliged to remain silent, otherwise it will be the other hauliers, whether union members or not, who will rise up against us on the pretext that strike action does not bear fruit; on the contrary, it prevents them from working to feed their families".

This lack of willingness on the part of transport operators to demonstrate their discontent is not synonymous with satisfaction but rather with discouragement, as the protests already launched have often failed to produce results in the corporation's favour. On the contrary, they have been moments of intimidation, threats and even torture of the leaders by the urban authorities, in order to further curb the corporation's intentions to rise up or make demands. Mr Marc, quoted above, emphasised the disengagement of their leaders from an uprising against the rise in fuel prices, saying: *"As the union leaders are now in collusion with the urban authorities, they cannot encourage us to strike; they tell us that the price of fuel is bearable given that we are also increasing the cost of transport".* He also pointed out that *"all the trade unionists are corrupted by the urban and political administration, hence their laxity in the event of a situation pitting the corporation against the public administration"*. In addition to Mr Marc's comments, Mr oumarou added that *"surveillance has also been carried out discreetly but permanently by the forces of law and order, who are still present at major crossroads such as the Déido roundabout, the Bonabéri rail roundabout and the Ndokoti crossroads, during this period of rising fuel prices, to ensure that the population does not rise up"*. In fact, the Forces de Maintien de l'Ordre (FMO) and some of their equipment (pick-ups and other cars) have been permanently stationed at crossroads in the city as a deterrent since the incidents linked to the crisis in the North-West and South-West regions, in order to secure the urban area. The link with the rise in fuel prices may or may not be well-founded, but all things considered, the presence of the FMOs in public spaces, not for any known purpose of control, deters any intention of disorder among urban motorbike transporters.

In the urban transport sector, there are now conflicting opinions and many dissatisfied people, but because the union leaders have been corrupted and the transport operators intimidated and threatened in various ways, there can be no uprising on the part of the corporation. The strategy is one of muzzling, bribing with small gifts and intimidating those who dare to rise up. This strategy is pursued directly by the trade unionists, who are now in collusion with the urban authorities, or indirectly by the latter, against anyone likely to carry the seeds of a mass uprising.

4.4.2.3 Conflicts at loading and parking points

The motorbike taximen group themselves together in parking camps that correspond to the various known crossroads. These are their meeting points for their weekly or emergency meetings. The motorbike taxi transporters in a camp are organised around a camp office

comprising a camp president, a vice-president, a treasurer, a secretary, a sensor and a security officer. The camps are affiliated either to the unions or to the association of motorcycle-taxi operators in the district concerned.

Trade unionists from the same union structure, then from the same camp, owe each other mutual help and solidarity. As a result, disputes or fights between 2 trade unionists who are members of different union structures very often degenerate into confrontations between members of several unions.

When a few small gifts are shared by union leaders or officials, hauliers who are members of the leaders' unions or those of the presidents' unions responsible for the sharing seem to be favoured by the other hauliers, whether or not they are also union members. Also, when there are consultations to be held with a view to taking decisions for a given situation, the trade unionists, depending on their relationship with the leaders or presidents, are more or less influenced by the latter and consequently give more or less subjective points of view, not favouring the interests of the majority. This creates discontent which sometimes degenerates into fights. An example of this kind of disagreement between hauliers was clearly seen after the announcement of the fuel price increase, when small groups orchestrated uprisings that were very quickly stopped by those who sided with union officials and leaders.

4.4.2.4 Motorcycle-taxi transporters, a real protector of the urban administration during the 2022 teachers' strike in Douala

The motorbike transporters are a real protective power for the urban administration, as the case may be. They are called upon to intervene whenever the need arises, to maintain peace and protect state institutions. During the strike by primary and secondary school teachers to demand improved working conditions, a peaceful march was planned by the strikers, starting in the Bonadjo district, the headquarters of state institutions for the Littoral region. The prefecture having been informed, with the help of the leaders and trade unionists, brought together the motor-taxi transporters who stormed the streets of the town from the prefecture to Bonajo, in order to intimidate the strikers and dissipate any gathering in view of this demand. The first people to arrive at the meeting place were beaten up by the benskeineurs who had set themselves up against the teachers, and the march never took place again. We wondered what the benskeineurs were up to, but in reality it was an invitation from the urban administration and a few crooked transporters, via the leaders and trade unionists, to counter the movement to prevent it from degenerating into a more massive uprising.

In Abidjan, analysis of the transactional relationships between the stakeholders highlights conflicts of competence in the governance of urban mobility. These conflicts, which constitute sources of blockage in official regulation, lead to poor co-ordination of actions and give rise to the spontaneous introduction of parallel regulation (led by transport operators' unions) in urban stations. Transactional relations, marked in particular by financial transactions and power relationships, lead to the co-production of urban transport governance in the district of Abidjan.

In order to regulate conflicts between transport stakeholders and the resulting vulnerability of livelihoods, and to achieve a balance of power in the competition for access to and management

of financial transactions, we note the social construction of transaction spaces between the various protagonists: State institutions, transport companies and urban transport artisans at the margins. The notion of transaction space in urban transport governance encourages all stakeholders to develop a participatory system. From this point of view, the transaction space is defined as the process by which practical compromises are worked out that enable cooperation, the permanent recreation of the social link and the search for compromise and institutional adjustment. In other words, the social transaction is a process of socialisation and learning to adjust to others.

In this case, the social transaction space is a social product (tangible and/or intangible) that legitimises the compromises and negotiations leading to joint regulation of urban transport. It manifests itself through the integration of formal and informal players who contribute to meeting the challenges of this sector of activity. In this sense, we can see the involvement of small-scale transport operators (or marginal transport players) in the state governance of urban mobility in order to achieve the co-production of urban transport.

In addition, the persistence of certain social determinants in the transport sector (economic crisis, growing demographics and unemployment, reduction in the number of buses on offer, laxity and the search for financial resources by local and central authorities, conflicts over competences and the recognition of the prerogatives associated with them, etc.), has encouraged the emergence of digital solutions. It's a win-win situation, with town councils reaping the rewards, transport operators retaining their habits and their customers, and the public continuing to find a means of transport in front of their homes.

It emerges from the professionalisation project described above (in the institutional framework section) that the CUD has already given its agreement in principle to the operation of motorbike transport, in view of its importance in the city. The urgent need is therefore to organise this sector of activity in such a way as to ensure that it is properly integrated into the urban space, while respecting the organisation of the said space and the safety of its users. To this end, the urban community is organising information and awareness-raising seminars on specific issues relating to this type of transport, such as the use of the public highway, the importance of having one's papers and all the official documents relating to one's activity when carrying it out, and the importance of being registered through membership of a drivers' union.

So the idea is not to take motorbike taxis off the road, but rather to organise their sector. The sub-department points out that motorbike taxis account for more than 51% of the modal share of transporters in the city of Douala. It's hard to imagine the city without these motorbike taxis, which, according to some, are nevertheless an obstacle to mobility in the city.

4.4.2.5 Formal consultation frameworks

Each Douala Arrondissement Town Hall (CAD) plays the formal role of relay for the implementation of decisions taken at the urban community level, through the offices of the municipal police and the presidents of the trade unions.

The Urban Transport and Mobility Observatory notes that "given the complexity of the problems, the proposed solutions are provisional. The final version of the Action Plan should

incorporate the observations and relevant proposals of the Mayors of the Douala Borough Councils, the judicial and administrative authorities, and members of civil society, and will be adopted during a validation workshop attended by the entire CUD steering team for the fight against urban disorder and insalubrity:

- The town's administrative and judicial authorities ;
- The mayors of the city's boroughs ;
- The heads of the city's Forces de Maintien de l'Ordre (FMO) ;
- The heads of the central and decentralised departments of the Ministry of Housing and Urban Development (MINHDU);
- The heads of the central and decentralised departments of the Ministry of Transport ;
- Members of civil society ;
- The heads of digital companies developing on-demand motorbike taxi transport applications in Douala (Bee,...)
- The leaders of the motorbike taximen in Douala.

The expected results of this Action Plan are (i) **modernisation**, (ii) **regulation** and **professionalisation** and (iii) **regulation** of the motorbike transport sector. These results will only be achieved thanks to a more or less coordinated synergy between the players.

- Case study 1

The members of the CUD's steering group for the fight against urban disorder and insalubrity do indeed have statutory consultation bodies for the planning of urban activities, but since each of them has activities related to urban mobility on its roadmap, the lack of concordance between certain decisions taken and the overlapping of roles sometimes harm other players who are ultimately vilified by the transporters.

By way of illustration, the prefecture is the competent administrative body that legalises transport syndicates once they have been set up. In collaboration with the departmental transport delegation, it also carries out monthly inspections of documents and road safety, which the municipal police control by statute or by abuse of power. The telescoping of roles in the field with a view to supervising urban transport activity is often a source of leadership conflict between the two players, while transport operators complain of being subjected to several controls by different players.

In addition, decentralised local authorities are complaining that the administration is "sabotaging" their authority over transporters (motorbike taximen). Indeed, demonstrations of discontent and strike notices by transporters against abuses by the municipal police, whether proven or not, are lodged with the prefecture, then relayed to the sub-prefectures and town halls, requiring the intervention of the administrative authorities who, according to the town halls, are indebted to transporters for the many requests they regularly receive in the context of mobilisations of political interest, when there is a need to gather a crowd for a meeting, to welcome and escort political figures, to give a standing ovation for a political or civic act, etc. In these circumstances, the presidents of the unions who have easy access to the prefecture are called in. From then on, transporters were mobilised in record time in exchange for a few

gadgets (CUD-stamped chasubles, helmets, agents, whisky in sachets, etc. were sometimes distributed during these meetings).

As far as the civilian population is concerned, the many forms of insecurity - robberies, banditry, violence, etc. - are attributed to motorbike taxi operators, who are accused of being delinquent, dishonest and irresponsible, and driven by the desire to make money at any price. Several offenders of this type have been caught red-handed in the neighbourhoods, and after numerous investigations, it has very often turned out that the perpetrator is a motorbike taxi driver.

- Case study 2

The transporters accuse the union leaders of colluding with the municipal police to extort money from workers who are not union members. Given that at least one union president is always part of the inspection teams, he or she takes it upon themselves to denounce non-union transporters as they pass by, so the municipal police go after them. In fact, wearing the chasuble, a remarkable indicator of membership of a trade union, is a free pass during unannounced checks, as obtaining it is proof of having fulfilled all duties in terms of documents and taxes to be paid. Presenting these documents to a union official gives you the right to join the group, provided you buy your chasuble. Those who do not join any union do not contribute to the presidents' highly prized kitty and are therefore excluded from their solidarity networks; hence their non-assistance by unionists in the event of a problem. Moreover, the agreements of principle between the municipalities and the unions mean that virtually all information relating to transport activities is channelled through the union leaders, who pass it on at meetings or forums.

Moreover, transporters show a great deal of solidarity within a group/union, and between different unions depending on the circumstances. Indeed, it has been observed that altercations between two hauliers belonging to different unions degenerate into full-blown riots between several union members in the name of corporate (group) assistance. In addition, more often than not, all the unions are up in arms against the administration for a treatment or a decision that has not been well received. When this happens, the authorities try to discuss the matter with the leaders. This is a form of corporate solidarity that comes and goes depending on whether the issues are individual or collective. However, their infiltration to control the corporation is skilfully created and maintained by the authorities.

4.4.2.6 Informal/circumstantial cooperation between municipalities and transport operators

Finally, in addition to the power and leadership relationships between the transport players described above, there are the channels for consultation that involve mediation and negotiation between the town councils and the motorcyclists via the unions.

This is the arbitration process, as the transport unions turn to the institution to settle disputes with municipalities whose decisions are deemed too troublesome.

4.5 What are the future challenges for informal transport on the fringes of the cities of Douala and Abidjan?

Douala and Abidjan need a new paradigm for their transport sector development. In this respect, new strategies or intervention programmes that reflect the realities of each city must be put in place to change the current transport development paradigm. Good governance is therefore imperative for the proper development and growth of these cities. This means taking stock of public policies in terms of urban planning and management of the transport sector, and ensuring that local authorities have the skills and resources required for the proper administration of these two major cities. The ambition to see the cities of Douala and Abidjan count among the emerging cities would justify many sacrifices in order to find these resources. In addition, the Mayors of each of the municipalities will have to mobilise additional resources to operationalise transport management actions in their municipality. Similarly, the government of each country in the cities covered by this study will have to mobilise financial resources, to be used to fund and co-manage the transport and services necessary for the growth and sustainable development of these cities.

4.5.1 Capacity building

Capacity building as part of this research involved training 06 Masters students, including 04 from Abidjan and 02 from Douala. These students were mainly trained in research methodology and communication. At the same time, these students received training in data collection using the Open Data Kit (ODK) application, which is a set of free open-source software tools that enable data to be collected using Android mobile devices and sent to an online server, even without an internet connection or cellular services at the time of data collection. They were trained mainly in configuring, manipulating and sending data via ODK. At the same time, the students also received training in how to use a handheld GPS to geo-reference certain informal transport hotspots and make it easier to get around town.

4.5.2 Communication activities

4.5.2.1 Conferences

- Meli Meli Vivien, Fokou Gilbert, Tanougong Armand (2024)- “Informalization of transport and efficiency of governance of sustainable and inclusive urban transport in West Africa: the need for co-production”, African Transport Research Conference, Cape Town, South Africa, 5-7 March 2024
- Meli Meli Vivien, Fokou Gilbert (2022), Virtual Research Forum 3: "Inclusive transport planning and governance for social equity and justice, 22 September 2022 (Meli & Fokou).

4.5.2.2 Master's thesis defence

- ***Student 1 : Nda Gnamien Aime Gislain***

Title: Spatial and temporal dynamics of unmarked taxis in the Cocody commune from 1990 to 2021

Abstract

The city of Abidjan is undergoing rapid spatial development with an accelerated change in land use, which makes it the largest Ivorian city. The direct corollary of this spatial expansion is the lengthening of the distance between residential areas and places of activity and imposes on city dwellers long distances for their professional and private travel. However, the spatial sprawl of the city precedes the construction of communication routes. This situation has favored the advent of a diversity of informal transport activities in all the communes of the city of Abidjan, including Cocody. The municipality of Cocody, which is the beneficiary of enhanced public planning, is the site of the daily operation of several old and even recent alternative transport services alongside formal transport. This article presents an analysis of the evolution of the activity of two-wheeled motorcycle cabs that have made their incursion into the transport system of the commune of Cocody. The working method used was based on documentary research and fieldwork carried out using several techniques, including direct observation, semi-structured interviews and geolocation with GPS. The investigations reveal the location of the station and the loading points for two-wheeled motorcycle cabs on the urban fringe of Cocody, precisely in areas without roads that can be used at all times by vehicles with four or more wheels. This activity, although located in a specific area, plays a considerable role in the daily transportation of the residents of the town of Cocody. Thus, the current asphaltting works and the rehabilitation of communication routes favoring the incursion of formal means of mass transportation and informal cabs in the areas served by two-wheeled motorcycles could jeopardize the execution of this clandestine and insecure activity.

- *Student 2 : DJIWA Patrick*

Title : Gouvernance des transports urbain informels sur les marges à Douala : état des lieux et perspectives de coproduction

Summary

This study, entitled 'Governance of informal urban transport on the margins of Douala: current situation and prospects for co-production', aims to understand the phenomenon of transport on the margins in the context of urban sprawl. The research problem is built around the realities of informal urban transport on the margins of the city of Douala. The high population density of the city of Douala has led to a significant expansion of the urban perimeter. This expansion of the urban perimeter has taken place without any real organisational or infrastructural support from the existing state apparatus. As a result, people living in the outskirts find it difficult to move from their homes to the city centre and vice versa due to the lack of transport links. As part of this study, we analysed the dynamics of peripheral transport in the context of Douala's urban dynamics in order to identify opportunities for sustainable service provision. To this end, 40 interviews were conducted with transport stakeholders and all those involved in the transport process on the margins.

From a theoretical point of view, the theory of social construction and that of co-production were used to analyse the empirical data collected. The results show that, firstly, the geographical urban margins in Douala are the result of strong urbanisation due to the demographic boom in the city. Secondly, several types and modes of transport have developed to serve the peripheral areas, most of which are informal and operated by a variety of actors. Finally, it has become clear that the legal, institutional and political framework, although it predates transport practices, does not really guarantee the conditions necessary for the sustainability and safety of this sector.

In Douala, as in many African cities, the connectivity between the city centre and the urban periphery remains a major problem that requires a joint effort between institutional and informal actors to ensure a better sustainable transport service.

This thesis was defended on 28 July 2021 at the University of Dschang in Cameroon. At the end of the defence, we were awarded a mark of 15/20 and a Master's degree in Sociology, Population and Development option.

- *Student 3 : Christian Brel Tani*

Title : Contribution of GIS to the management of informal transport in the city of Douala

Summary

Since the second half of the twentieth century, African cities, particularly large conurbations, have been characterised by accelerated demographic growth, with the consequences of urban poverty, underlying inequalities and poor access to basic social services (health, drinking water, decent housing). This urban growth is accompanied by the spatial expansion of the urban area and the remoteness of places. The result is a need for mobility to connect increasingly distant places. In Cameroon, the city of Douala in particular is facing urban sprawl as a result of very rapid demographic growth, leading to horizontal and anarchic urban growth. Douala's population grew from 1.560 million in 2001 to 2.255 million in 2009 (Douala, Cameroon population sat).



As a result, the uncontrolled spatial expansion of urbanisation following the rural exodus has led to a shortage of transport facilities and the rise of informal transport in the city of Douala. The main question is how informal transport activities on the outskirts of the city of Douala evolve over time and space. The overall aim is to contribute to better management of urban areas in developing countries, particularly the city of Douala on the outskirts of the city.

In this explanatory note, we focus on GIS-based mapping of informal transport activities and GPS-based travel surveys, which are our areas of expertise.

At the end of this work, the main expected results are The spatio-temporal dynamics of urban fringes and sprawl fronts are known, the different modes of informal transport and parking areas are known, and the informal transport circuit in the city of Douala is known.

At the end of our analysis, it was a question of applying the methods, techniques and sciences of geomatics to solve the concrete problem. For example, a good distribution of spatial objects such as land use, different modes of transport and control of the road network can help us solve the problem of population displacement, which is increasing day by day.

CONCLUSION

This study was a comparative analysis of the dynamics of peripheral actors of urban transport in two African cities (Abidjan and Douala) and their contribution to the urban governance from below. Focusing on shifting interactions among these multiple territorial and institutional scales as well as multi-level stakeholders in urban transport in Abidjan and Douala, the study aimed to contribute to formalizing informal politics in African cities comparing West to Central Africa. Building on a body of multidisciplinary and interdisciplinary, even transdisciplinary knowledge, the study mobilized expertise from human geography, geomatics, and sociology as well as non-scientific knowledge from technocrats and civil society organizations involved in urban mobility. The aim was to address the central question of co-production of governance in urban transport.

This study builds on the theoretical concept of governance coproduction. Coproduction is a form of participative transformation that implies bringing together multiple forms of expertise and knowledge, bringing new or additional perspectives to manage complex policy issues. New spaces of urban governance must be co-produced through a “participatory transformation” requiring innovation and creativity in the design of urban knowledge architectures. Urban governance should not always consider peripheral actors as marginal actors but as important stakeholders in the co-production of governance.

As this study uses a comparative approach, the research methodology was based on four main research activities:

- GIS-based mapping of informal transport activities: historical mapping of land use changes in peri-urban areas of cities; mapping of places of transport activities on the margins; characterization of the main hotspots of transport on the margins.
- Stakeholder mapping: identifying and characterizing interactions between actors of the informal urban transport
- GPS-based travel behaviour survey of city-dwellers: assessing the difference in travel behaviour patterns between scattered development areas and orderly development areas; assessing interactions and experiences of commuters with peripheral actors of urban transport. Findings from this survey are useful to assess the importance of informal sector in mobility and travel choices of city-dwellers to undertake their activities (work, study, leisure, shopping, etc.) in different places.

Defining the determinants of co-production of governance in urban transport: dialogue with various formal and informal actors of urban transport to discuss the modalities of implementation of a co-production of the urban governance of informal transport and strategies to qualitatively and quantitatively improve the mobility offer in African cities.

The main findings of this study are structured around the four research activities conducted with the framework of the project. Those activities include: the GIS-based mapping of informal transport activities, stakeholder interactions, GPS-based travel behavior survey of city-dwellers, and definition of determinants of co-production of governance in urban transport.

- **Distribution of urban informal mobility between residential areas and commercial spaces and workplaces.**

The spatial sprawl and the fragmentation of the urban fabric illustrate the difficulty of the authorities in channeling the anarchic urbanization of African cities. There is an increased development of informal transports on the margins due to the existence of grey areas of public transport characterized by an inadequate offer of public transport, lack of vision in the investment in infrastructures and equipment, poor urban planning, and poor governance. Observations from Abidjan and Douala give a glimpse of the significant spatial anchorage of informal transport means on the margins (unmarked taxis, tricycle taxis, motorcycle taxis, motorized boats) in all the municipalities, irrespective of socio-economic and residential status. The spatial distribution of informal transport sites shows that this type of transport participates in the mobility of urban populations. Some 227 informal transportation sites have been identified in Abidjan, while 252 were georeferenced in Douala. Those sites are identified in the peripheral area of the city as well as in the business centers.

- **Informal urban transport on the margins as a necessary evil**

The organization of informal transport is based on partnerships between different stakeholders whose mission is defined by a global mobility policy. In various cities, the coordination of informal transport on the margins is ensured by several actors whose roles are complementary but also overlapping and competing. Interactions between four types of actors of urban public transport have been mapped. Those stakeholders include the National government (Ministry of transport and its deconcentrated departments, local governments (municipalities), professional organizations such as trade unions representing operators of urban transport and, uninvited actors composed of illegal operators. Even though it is considered as an unpleasant activity that must be accepted or tolerated for a smooth functioning of the urban transport system, informal transport on the margins is viewed as operating in an “ordered anarchy”. Those actors are well organized groups operating according to well established roles and responsibilities, including regulations, security, finances, and operations. Thus, the dynamism of these “uninvited actors” could be interpreted as an attempt of restructuring the urban transport system from below.

- **Urban mobility highly tributary of transport means from the margins**

Findings from the GPS-based travel behavior survey revealed that half of the commuters travelling daily from working-class neighborhoods to business centers in Douala and Abidjan use a mean of transport considered as being in the margins. Motorcycles, motorized boats, tricycles and minibuses are the means used during informal mobility by populations in the city of Abidjan and Douala. Several combinations exist and depend on the destination of commuters. They combine formal and informal, legal and illegal means of transports. In general, unmarked taxis and pinnaces ensure travel over long distances and between different municipalities while the tricycles, and the motorcycle taxis cover short distances generally inside the same municipality.

- **Emerging transactional relations between urban mobility stakeholders**

There are increased platforms of mediation and negotiation between stakeholders of urban mobility, including unauthorized actors. This is possible through transactional relations that already exist between governmental authorities and municipalities on one side and formalized transport trade unions on the other side, to negotiate the rules and settle conflicts. Analysis of transactional relations between stakeholders highlights conflicts of competence in the governance of urban mobility. These conflicts, constitute sources of blockage in official regulation, leading to poor coordination of actions and giving rise to the spontaneous establishment of parallel regulation (by illegal transport unions) in the urban space.

The social construction of transaction spaces between the various protagonists of urban mobility (state institutions, municipalities, trade unions, the private sectors, illegal operators, etc.), contribute to the co-production of the governance of urban transport in African cities. Transactional relationships encourage all stakeholders to develop a participatory system. the space of transaction is defined as the process by which practical compromises are worked out which allow cooperation, the permanent recreation of the social bond as well as the search for compromise and institutional adjustment. The social transaction space is a social product (tangible and/or intangible) that legitimizes compromises and negotiations leading to joint regulation of urban transport. It is manifested by the integration of formal and informal actors who contribute to meeting the challenges of this sector of activity.

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