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REPUBLIC OF Guinea

Planning, Connecting, Financing in Conakry

URBAN SECTOR REVIEW



REPUBLIC OF Guinea

Planning, Connecting, Financing in Conakry

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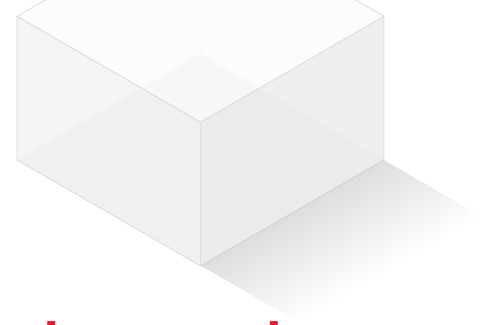


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Introduction and Summary

This study looks into the challenges and opportunities posed by urbanization in Guinea, reviewing briefly the trends at the national level but focusing on the urban area of Conakry. The main reasons for focusing on the urban area of Conakry are the following. While secondary cities in Guinea are growing economically and in population, Conakry already represents close to 50% of the urban population and its demographic growth outpaces that of other urban areas. This creates a sense of urgency to solving the country's capital problems. Secondly, Conakry remains the country's main interface for international trade through its port facility. Failure to address Conakry's issues, including congestion levels, would likely weaken its (and Guinea's) attractiveness in the long run. Follow-up studies could however look into Guinea's system of cities, including how they are connected to each other within the country and with their neighbors¹.

This study builds on a recent and growing body of work focusing on various aspects of urbanization in Guinea ("Habitat Vision 2021", "Grand Conakry – Vision 2040", "Plan de Déplacements Urbain (PDU) de Conakry",...) much of it initiated by the European Union. The Urbanization Review draws from this stock of knowledge but also seeks to add to it, including through some analyses that consider space as an integral part of Guinea's economic performance.

The analysis presented in this review shows that urban areas in Guinea, and Conakry in particular are currently not acting as engines of growth and competitiveness and are failing at providing public services and quality living standards for their residents. It argues that the reasons are to be found i) in the business environment which, recent progress aside, stymies private sector job creation and economic diversification, ii) in Conakry's deficient connectivity system which acts as a bottleneck for residents to have access to economic opportunities, iii) in its obsolete and unenforced planning strategies and its rigid land markets and iv) in the lack of institutional clarity and financial resources which leads to underinvestment in public services.

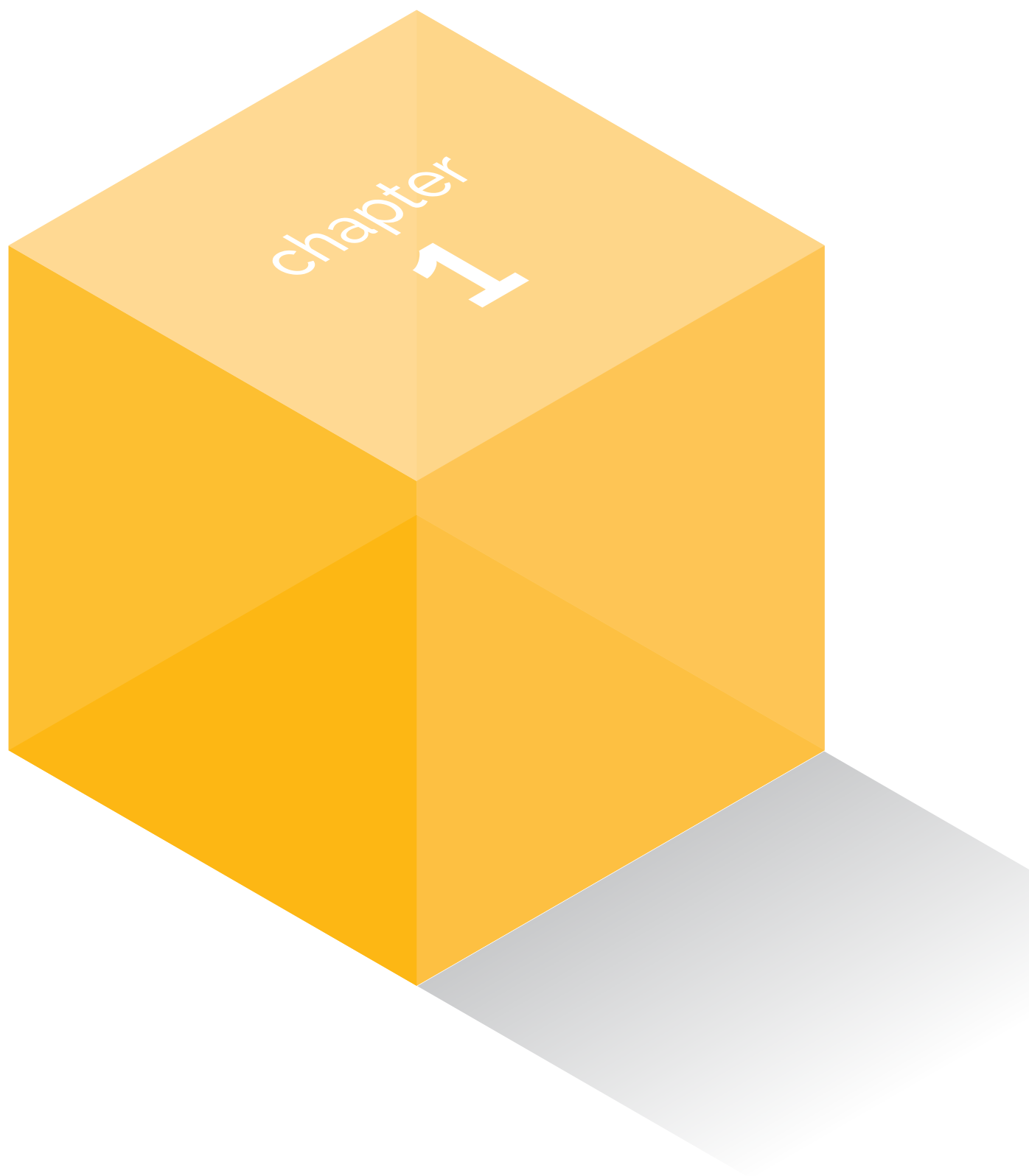
¹ In particular the opportunity to carry out an analytical study focusing on trade corridors in West Africa, the improvement of transport infrastructure and the link with urban areas' spatial development (including Guinean secondary cities) under different scenarios of urban investment and management is being discussed.

Concerted actions are needed for Conakry to deliver on livability and competitiveness. These actions deal with how Conakry is built and organized (Planning), how people are connected to opportunities (Connecting) and how it is managed and financed (Financing). Investing in one of these areas but not in the others, can probably deliver some short term gains, but will fail to unleash Conakry's potential to act as an engine of growth and living condition improvement. For example, interventions aiming at upgrading slums in one area of the city will only be partially successful if there are no investments in connective infrastructure for local residents to access the more numerous but more distant job opportunities. In other words, interventions on Planning, Connecting and Financing are a suite, not a menu. The main recommendations are identified below:

- The largely organic urban growth experienced by Conakry over the last decades has resulted in poor housing conditions, lack of access to public services, apparent scarcity of available land for productive activities and vulnerability to natural hazards. Actions are needed to ensure that urban land is used efficiently, that populations have access to basic services, and can be housed decently and safely. In order to do so, obsolete planning documents should be updated but starting with local development plans as a first step rather than masterplans. In parallel, effective implementation of these plans will require the strengthening of local capacity through staff training. Given geographical constraints in Conakry, it is essential that land use is optimized. This means that it is used intensively and at its best value. This could also contribute to lessen the business environment constraints reported by firms. In order to do so, the functioning of land markets should be improved through simplified registration procedures, and improved land registries and tenure security. Guinea has made progress on land registration over the past few years and these efforts should be pursued. Good practices from abroad, leveraging GIS technologies, can also be capitalized on for the difficult problem of building land registries. Finally, slum upgrading operations should be piloted with an important focus on building the resilience of the community in the face of natural hazards.
- Owing to its geography, the concentration of jobs at the end of the peninsula, the lack of a mass transport system and the poor condition and lack of road infrastructure, residents of Conakry are largely disconnected from job opportunities and face high externalities in the form of congestion and pollution. To remedy this situation, the most obvious recommendation is to invest in a mass transport option in segregated space (bus or rail), as a backbone for passenger transport, that would shorten the commute to work and lower congestion levels. But complementary actions are also needed to develop urban road infrastructure and explore ways in which the use of the rail infrastructure could be further mutualized between passenger and goods transport. Finally the regulation and professionalization of the informal collective transport operators could help better serve the public through structuration of feeder routes around the mass transport option.
- Improvements in livability in Conakry hinge on more and better public service delivery. But investments in these infrastructure are constrained by the low resources available to local governments. To overcome this situation, it is important to first clarify the responsibilities of the various actors of urban development in Conakry (Ministries, Ville and Communes) as superposition of similar mandates blurs accountability and leads to inaction. Second, for the ongoing process of decentral-

ization to bear its fruits, it is indispensable that local governments are equipped with financial resources. A number of avenues could help achieve these goals and have been successfully applied outside Guinea. Clarifying and reforming revenue sharing arrangement between central and local governments can increase fiscal space predictability for communes and incentivize better revenue collection. A more efficient tax administration, backed by the training of staff, could also improve local governments' own source revenues. Finally, transfers from the state, through transparent mechanisms, to share the wealth from natural resources could allow for more and better spending from local governments.

	Objectives	How?
Planning	• Optimize urban land use • Increase access to basic urban services • Increase access to decent, affordable and safe housing	• Update and implement planning documents starting with local development plans that promote resilience through land use and infrastructure coordination • Build capacity to implement and enforce planning regulations • Improve the functioning of land markets through simplified land registration procedures, improved land registries and tenure security • Pilot slum upgrading operations and explore efficient ways of providing social housing for the poorest
Connecting	• Connect people to opportunities • Open up isolated neighborhoods	• Develop and optimize urban road infrastructure and mutualize railroad infrastructure • Organize the public transport around segregated transport corridors • Regulate and professionalize the public transport sector • Organize the transport of goods and separate the flows from passenger transport
Financing	• Promote effective decentralization • Increase revenues for basic service delivery	• Clarify the respective mandates of central and local governments as well as those of the Ville of Conakry and of its communes (including for Solid Waste Management). • Align mandates with capabilities: revenues and staff (including capacity building for national agencies such as ANASP) • Reform revenue sharing arrangements to steady and clarify local governments' resources and incentivize tax collection • Increase local governments' own source revenues through a more efficient tax administration • Increase transfers from the central government through the operationalization of FNDL and ANAFIC





Urbanization is Not Delivering on Livability and Competitiveness

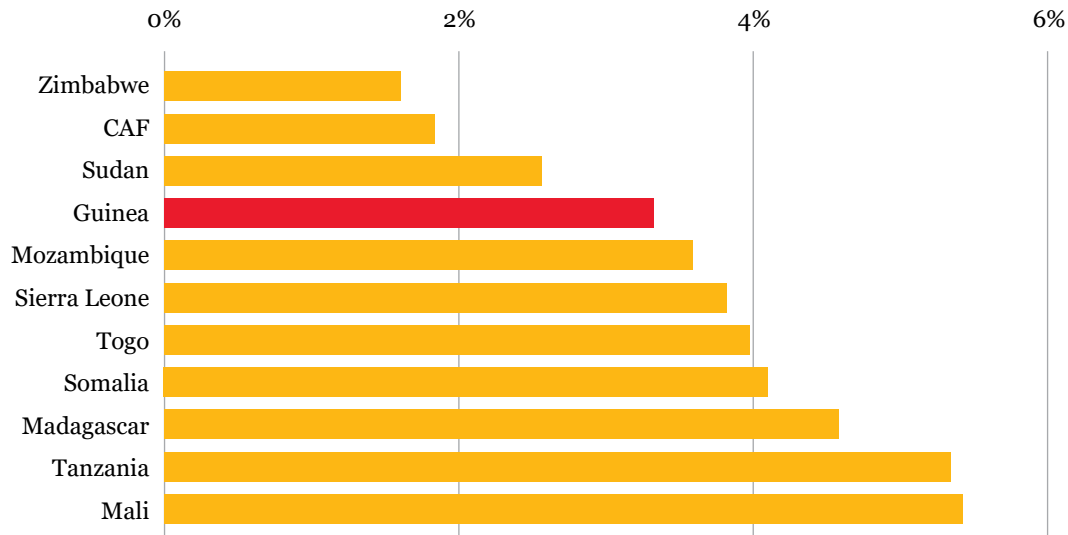
Urbanization Trends in Guinea and Conakry

Guinea has been urbanizing rapidly in the last decades, reaching an urbanization rate of 37% in 2015. The steady urban growth over the 2000-2015 period added 150,000 extra people every year in urban areas. Such growth is in line and even slightly lower than the average for comparator countries in the region (African countries with an urbanization rate between 34% and 44%) – see Figure 1. This growth in urban population has been stronger in Conakry which experienced an annual growth rate of 4.58% compared to 2.56% for secondary cities on the 2000-2015 period – see Figure 2. While steady growth in urban areas puts new levels of stress on urban management, it also provides fresh opportunities for sustained economic development if the right policies are adopted.

Urbanization has led to further economic concentration in urban areas and especially Conakry, which must not however conceal the significant contributions of a few secondary cities. While a little more than a third of Guinea's GDP comes from agriculture and mining (35.2%), urban areas contribute to 64% of national GDP, despite only housing 37% of the total population, divided between the Conakry-Coyah urban area² with 38.4% and other urban areas with 26.4% of national GDP – see Figure 3. While Conakry alone contributes to more than half of total urban GDP, a few other cities contribute significantly to national GDP such as Fria (9% of urban GDP), or Port Kamsar, Labé, Kindia and N'zérékoré (each of them contributing to 3% of urban GDP or above) – see Figure 4. It is worth noting that, while mining activ-

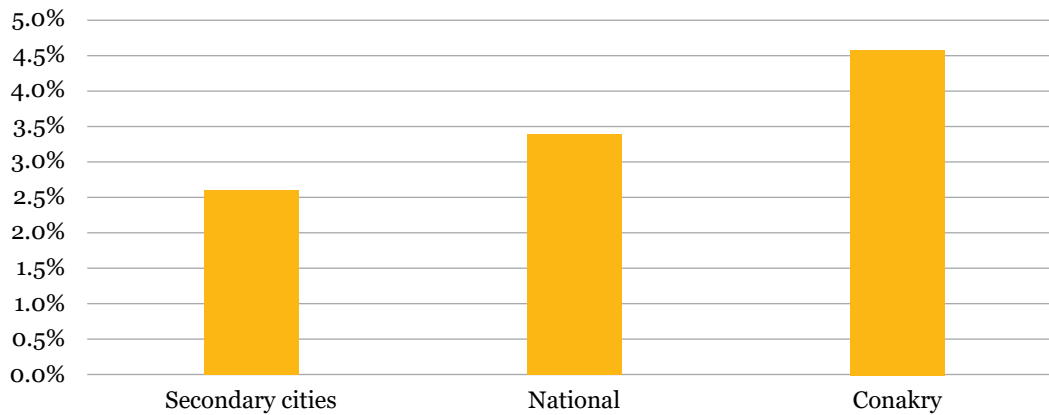
² As Conakry and Coyah expanded in the past, conurbation happened resulting today in a single continuous urban area gathering the two municipalities.

Figure 1: Urban population growth annual growth on the 2000-2015 period.



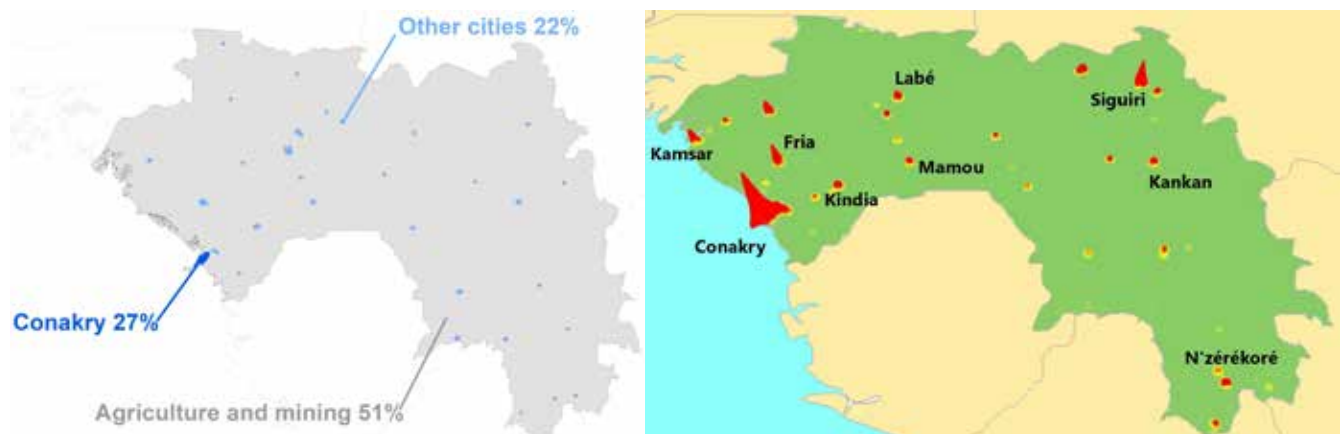
Data: WDI Indicators

Figure 2: Decomposition of Urban annual growth on the 2000-2015 period.



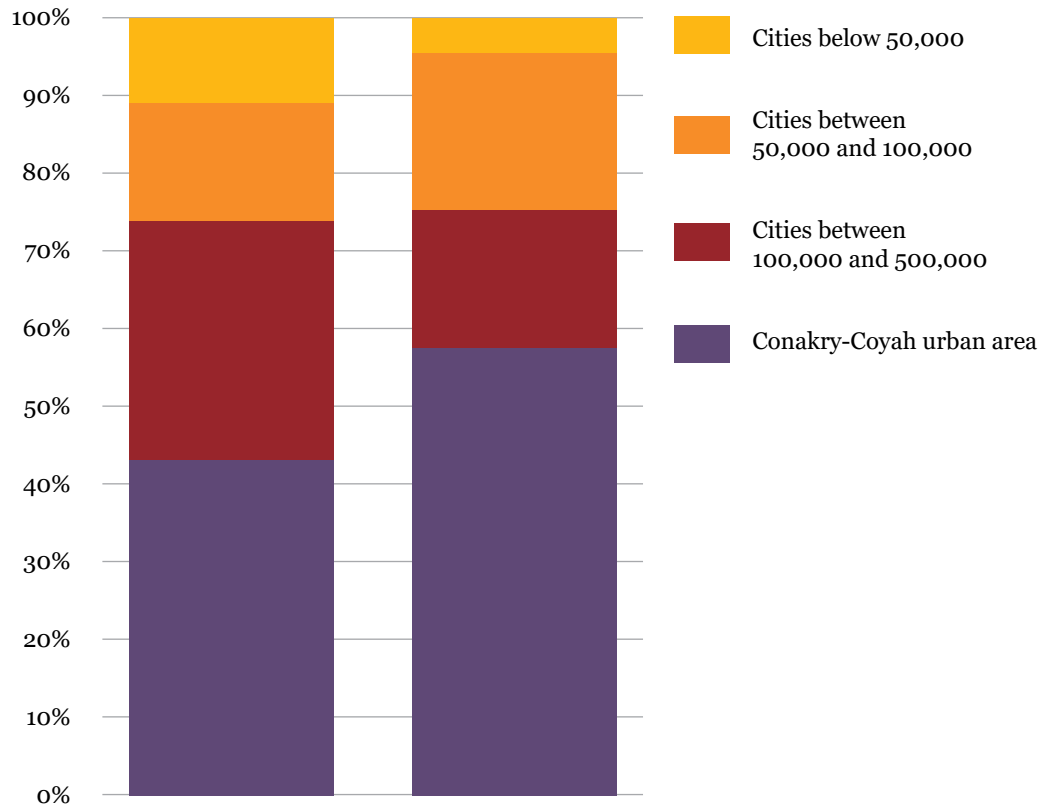
Data: GHSL 2015.

Figure 3: Guinea's GDP breakdown (left) and 3D mapping (right).



Data: RGPH 2014 and GHSL 2015.

Figure 4: Decomposition of urban GDP (left) and Urban Population (right) per city.



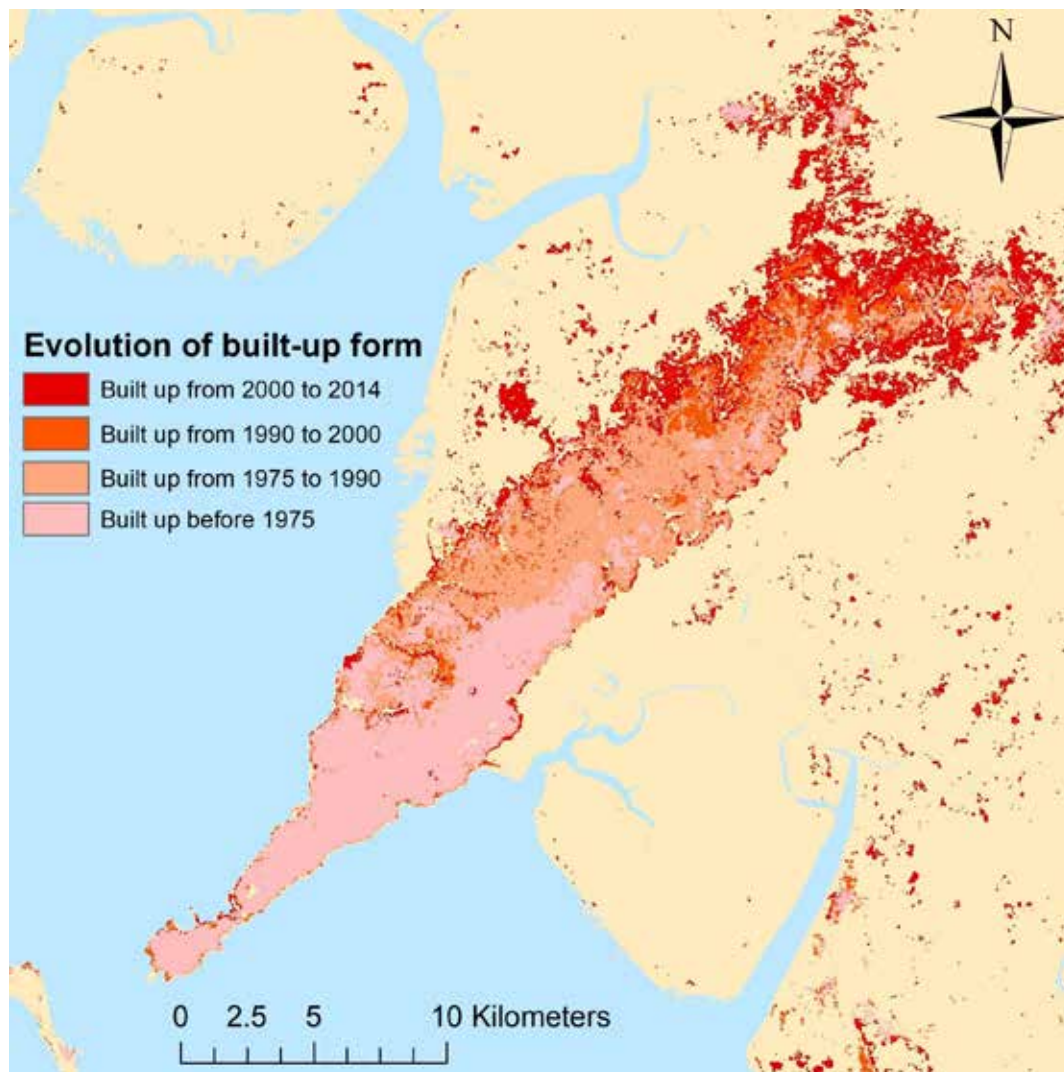
Data: RGPH 2014 and GHSL 2015.

ity is not included in urban GDP in the analysis, the importance of several cities such as Port Kamsar, Fria and Siguiri are very much linked to nearby bauxite or gold mines and include transformation activities such as the alumina refinery of Fria.

As population is added in large numbers to urban areas, they consume land and in the process modify the physical form of urban areas. The striking result in Conakry is a pattern of linear urbanization away from the port.

Due to its natural geography (Conakry being located on a peninsula, constrained by mangroves to the North and South), the city has been expanding rapidly in a linear fashion, with a growing number of people settling in the further inland suburb, far from the city center (Kaloum peninsula) – see Figure 5. From 2000 to 2010, 75% of Conakry's urban built up growth consisted predominantly in either extensions (62%), or leapfrog development (13%), while only 25% was infill development – see Figure 6. Expansion refers to new construction at the edge of the consolidated urban area, leapfrog refers to parcels of newly built land that do not border on existing development, and infill refers to construction on unbuilt parcels surrounded by existing development. This layout is generating important problems of connectivity and urban mobility which hinder the economic development of the city.

Figure 5: Evolution of Urban built up form from 1975 to 2015.



Data: GHSL data 1975-2015

The continued urban expansion, the natural constraints of Conakry and the persistence of the location of most employment opportunities in the Kaloum peninsula are fueling a spatial mismatch between people and job opportunities. This situation means that people are increasingly far from jobs on average and need to travel over longer distances to reach employment opportunities – see Figure 7.

Figure 6: Decomposition of urban new areas 2000-2010

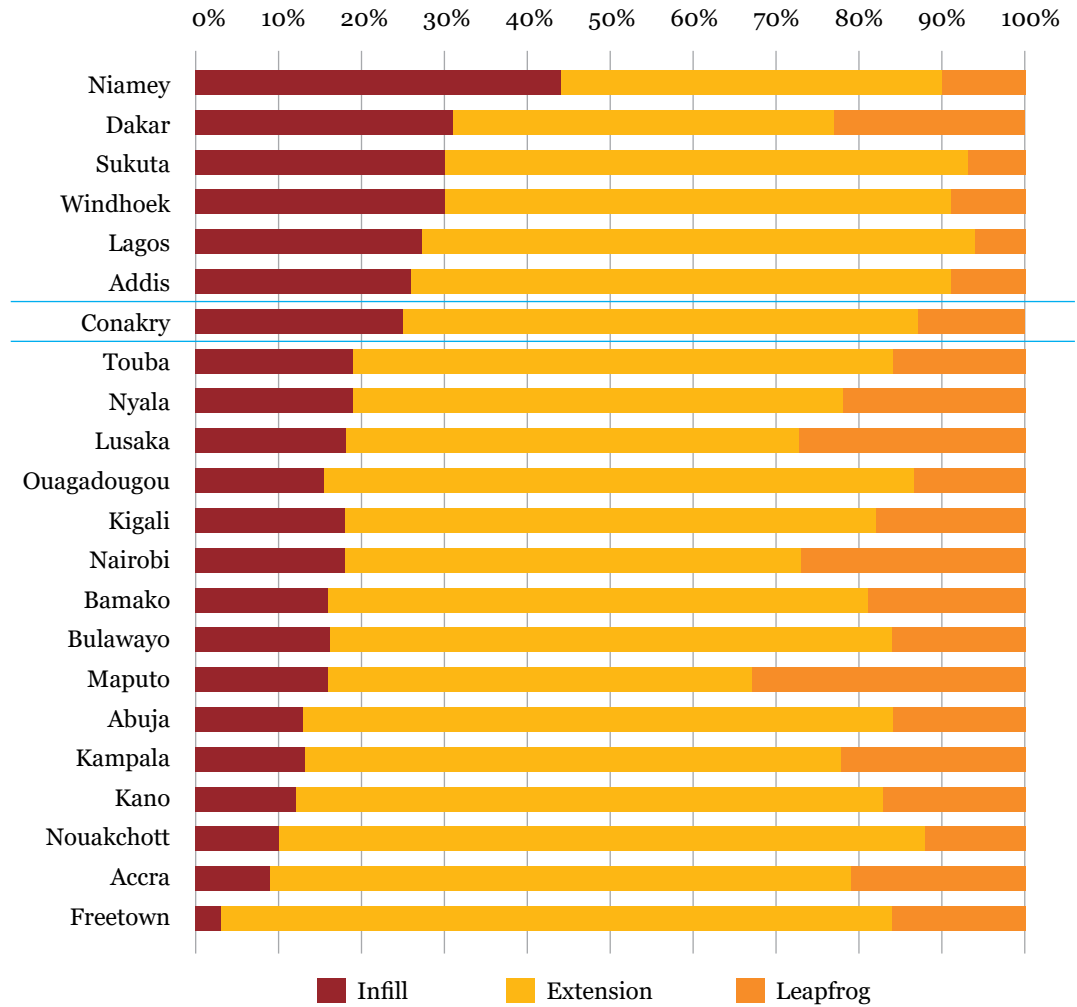
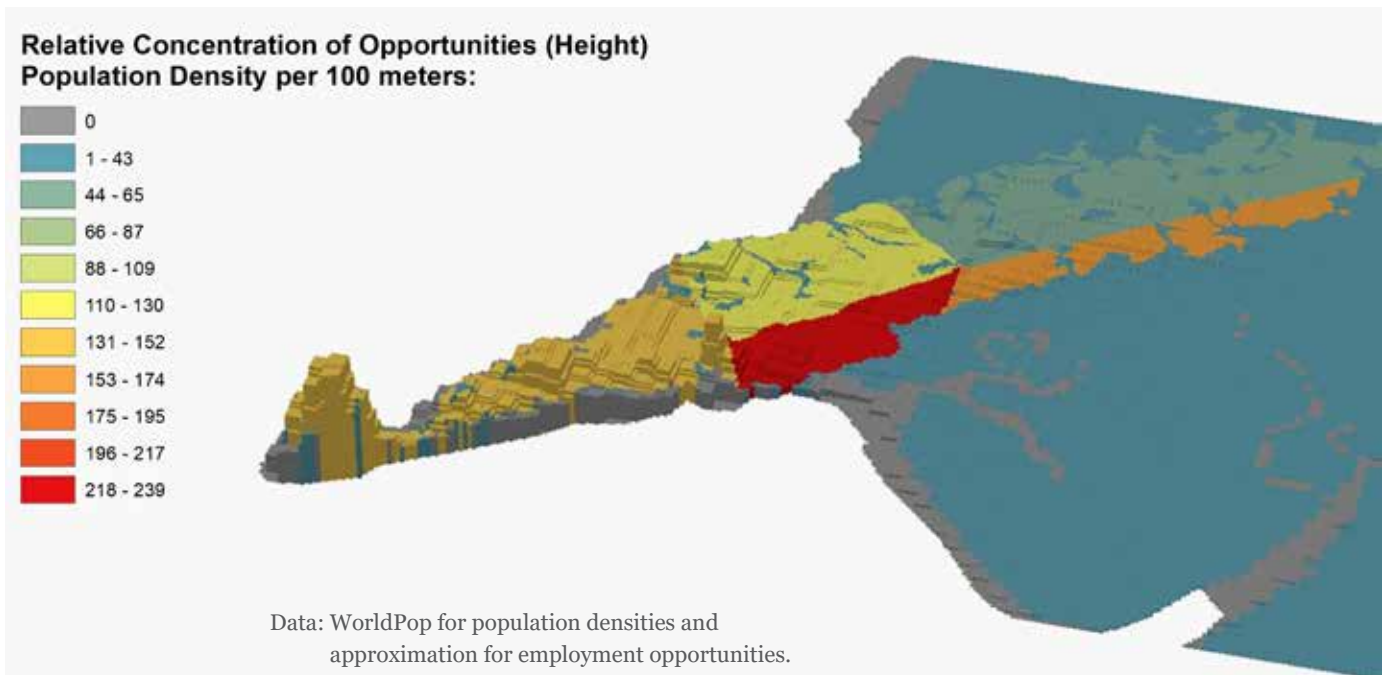


Figure 7: The distribution of employment opportunities – captured through the height of grid blocks – and of people – captured through color codes – in Conakry.

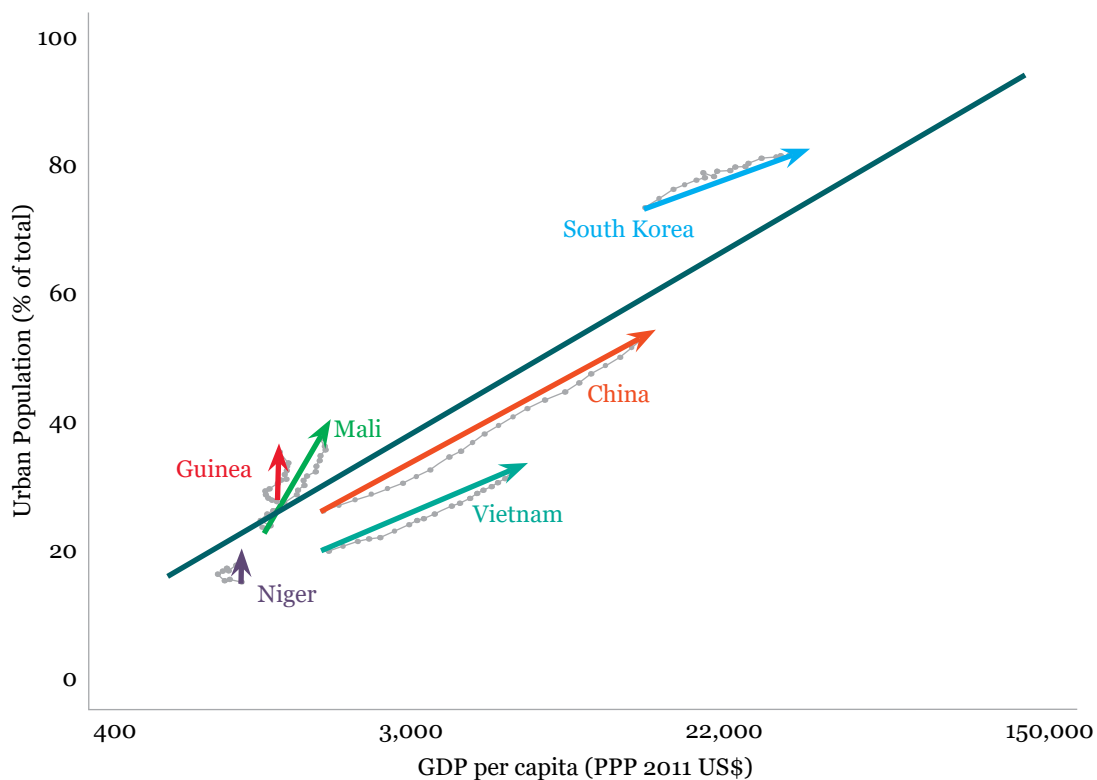


Urbanization is Not Reaching Its Potential for Growth and Diversification

THE LACK OF STRUCTURAL TRANSFORMATION

Urbanization, in Guinea, has been accompanied by very limited economic growth compared to other developing economies. Cities allow workers to be closer to jobs, increasing opportunities and fueling productivity. They bring people together physically, facilitating the exchange of ideas and bringing about innovations. As such urbanization has usually gone hand in hand with sustained economic growth as measured by GDP per capita. However, when compared to international standards and more specifically countries with similar urbanization levels, it appears that Guinea's GDP has not kept pace with urban growth – see Figure 8.

Figure 8: Evolution of GDP per capita (PPP) in relation to urbanization rate.

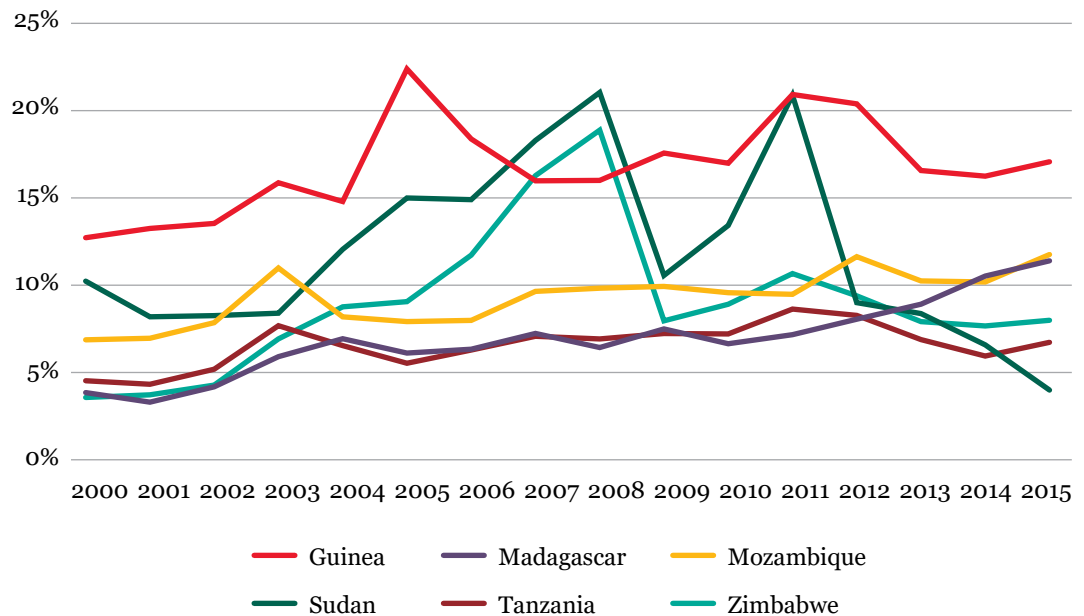


Data: Henderson and Nigmatulina (2016)

Most developing countries followed a standard pattern where urbanization is either the result of agricultural productivity growth or industrial productivity growth. Urbanization is usually the consequence of economic development through structural transformation creating “production cities” that developed consistent industrial activity and concentrated tradable services (Jedwab et al., 2016).

But the structure of Guinean economy remains oriented towards agricultural and extractive industries. Between 2004 and 2014, the country’s trade as a percentage of national GDP has increased from 50% to 80% with the bulk of Guinea’s exports constituted of outputs from the extractives industry. In 2015 Guinea’s top ten exports were all in mining or primary resources. This also reflects the nature of FDI inflows which have been concentrating in the mining sector until now (DG Trésor, 2014). As can be seen in Figure 9, the total natural resources rent (calculated as percentage of GDP) have been consistently and significantly higher in Guinea compared to similarly urbanized countries such as Mozambique, Sudan or Tanzania.

Figure 9: Total natural resources rent as % of GDP.

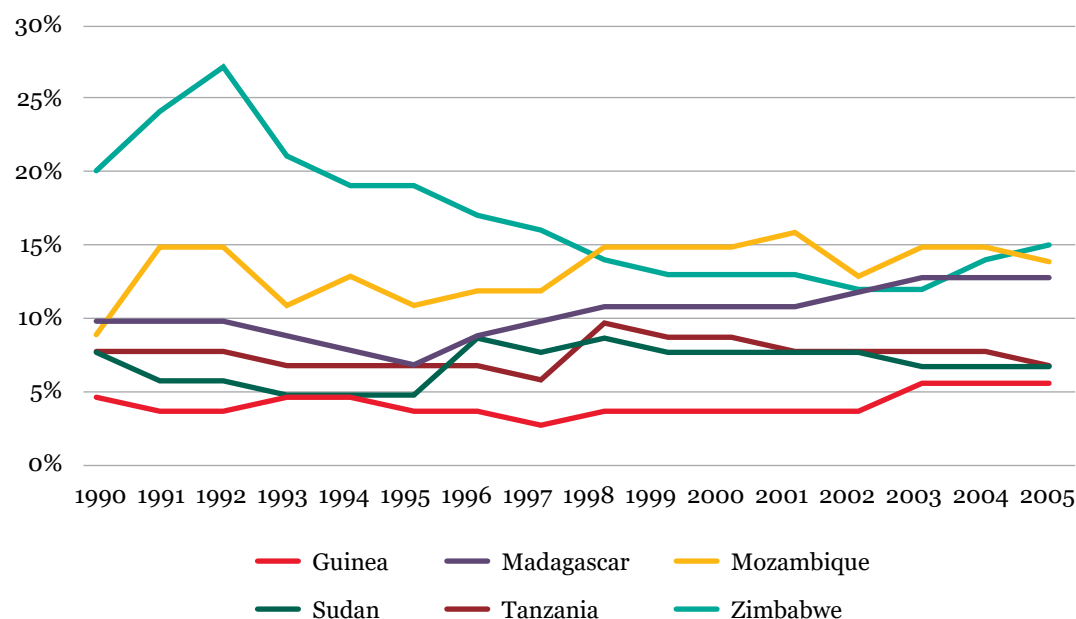


Data: World Bank national accounts data

High resource revenues might have led to an overvalued exchange rate making other exports un-competitive, lowering incentives and ability to invest in tradable sectors such as manufacturing and business services, especially in urban areas. Manufacturing’s share in GDP has been stagnating around 5% in the last decades which is considerably lower than most comparator countries (Figure 10). Even compared to resource rich countries (Figure 11), Guinea displays one of the lowest shares of manufacturing activities in GDP (Gollin et al., 2013)³. Therefore, the country had to rely more and more on importation in these sectors. While in

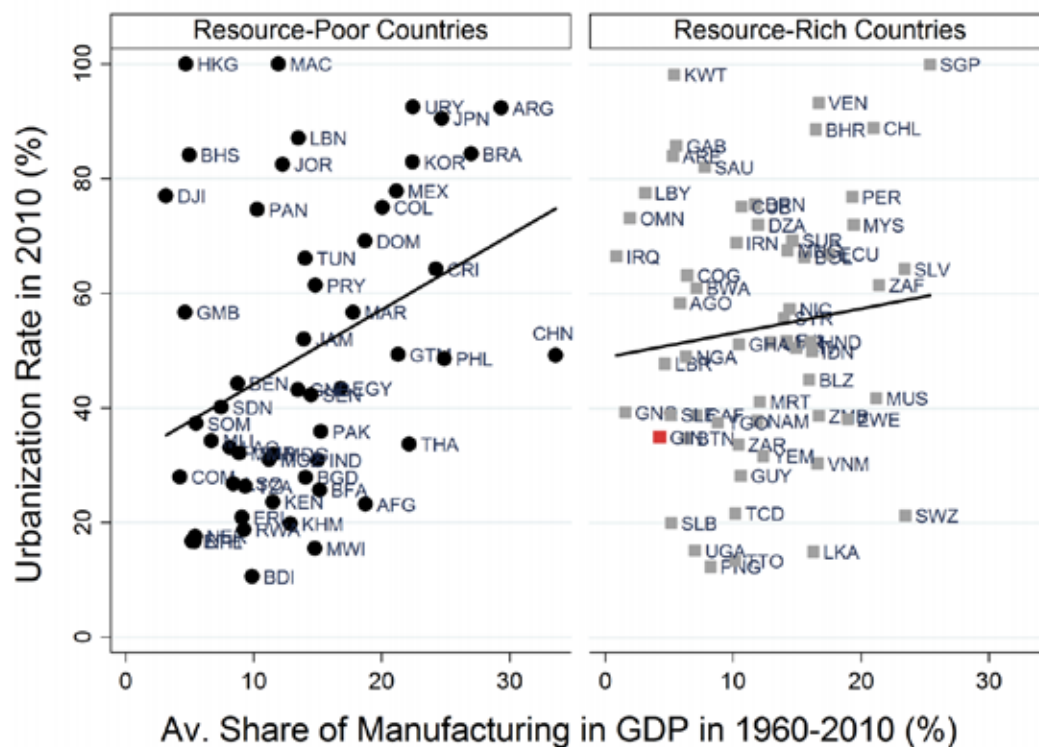
³ This study used the 1996 census for Guinea. However, calculations were made with the 2014 census and it produced similar figures.

Figure 10: Share of manufacturing added value in GDP.



Data: World Bank national accounts data

Figure 11: Average share of manufacturing in GDP depending on urbanization rate (Guinea in red).



Source: Gollin et al., 2013

Sub-Saharan Africa the average firm imports 37.5% of its inputs, the average firm in Guinea imports 77% of its inputs (Enterprise Survey 2016).

As resource rents were spent on urban goods and services, it contributed to the rise of “consumption cities” which are locked into the production of non-tradable goods and services (Jedwab et al., 2016) and have to rely highly on importation. According to census data, the share of urban employment in the tradable sector has been stagnating around 30% from 1996 to 2014 (RGPH 1996 and 2014). This would point to the possibility that wealth created in cities is a sign not of productive activities but of consumption. However, it is important to highlight that while the employment’s share in manufacturing remains very low, it has been increasing significantly in the last two decades (Table 1).

Table 1: Share of each economic sector in urban, rural and national employment.

	1996			2014		
	Urban	Rural	National	Urban	Rural	National
Agriculture	10.2%	91.0%	74.7%	4.2%	75.0%	52.0%
Mining	1.4%	1.0%	1.1%	1.6%	3.1%	2.6%
Manufacturing	8.4%	1.3%	2.7%	15.8%	4.6%	8.2%
Electric/water/gas	6.3%	0.7%	1.8%	0.9%	0.1%	0.3%
Retail, hotels etc.	40.5%	3.7%	11.1%	43.1%	11.1%	21.5%
Business services	9.0%	0.5%	2.2%	5.0%	0.1%	1.7%
Social services	21.4%	1.5%	5.5%	12.8%	2%	5.2%
Construction	0.5%	0%	0.2%	5.0%	1.4%	2.6%

Data: RGPH 1996, 2014

The consumption city argument is also supported by observed high prices⁴, Conakry being the 9th most expensive city in Africa (UNECA, 2017). As highlighted in Jedwab (2013), this economic and urban pattern could be seen as an example of “premature urbanization”. Whether this constitutes a resource curse is not clear. The high urbanization rates in resource exporters are driven by high incomes; so, in that sense, there is no evidence for a resource curse. Yet the “consumption cities” of resource exporters may not offer all the welfare advantages of “production cities”.

However, attributing the low economic benefits of urbanization in Guinea to the pattern of “consumption city” could be simplistic as many other constraints (i.e. transportation, access to land) are directly affecting the development of urban areas. As Guinea needs to diversify outside of extractives and non-tradable services, there needs to be a well-functioning urban system to encourage investment and growth in tradable sectors like manufacturing. Irrespective of the importance of consumption in urban GDP, there is a lot of room for increasing

4 Luanda is the typical case study for consumption cities. As it was highlighted in The Economist (2012) “Prices are wildly inflated, virtually everything has to be imported”.

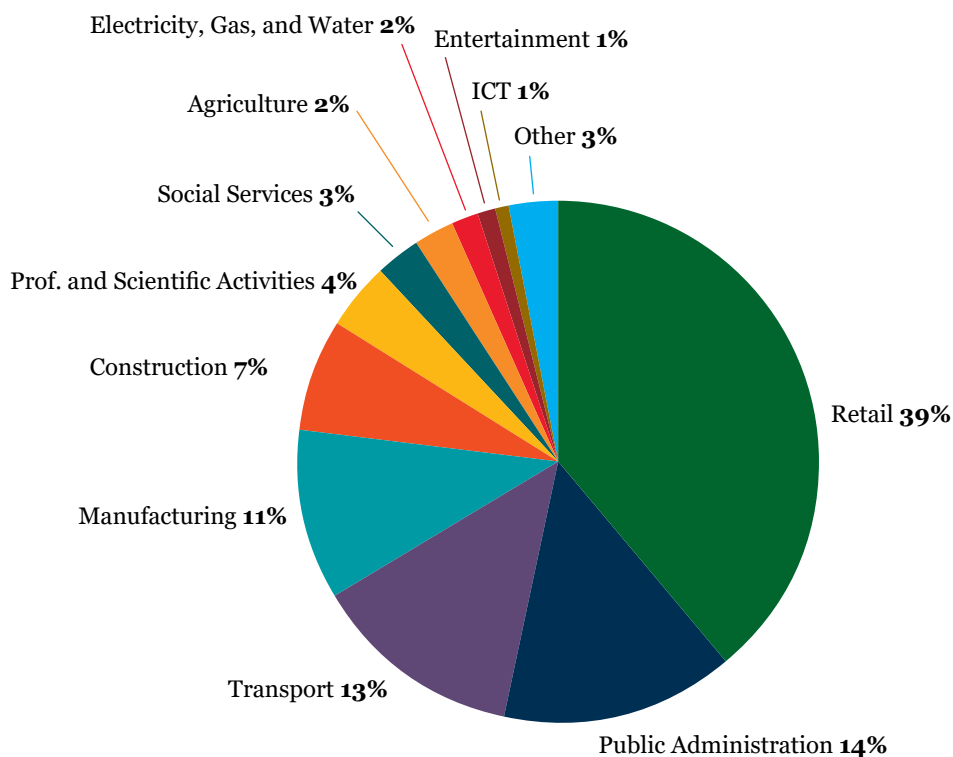
economic activity by having the cities, particularly Conakry, function better. African cities broadly suffer from poor infrastructure and low connectivity which considerably hinders the efficiency of the urban system. Conakry, as we will see in the next sections, is unfortunately no exception to this rule.

Private sector development in Conakry

According to 2014 census data, employment in Conakry is dominated by non-tradable services, the retail sector constituting almost 40% of total employment (Figure 12). The following most important sectors in terms of employment are: public administration (14%), transport (13%), manufacturing (11%), and construction (7%). While manufacturing constitutes only around 6% of GDP at national level, it represents a significant share of employment in Conakry.

In the last twenty years, significant changes have occurred in the share of employment that each sector represents (Figure 13), however the sectors

Figure 12: Share of employment per sector in Conakry.

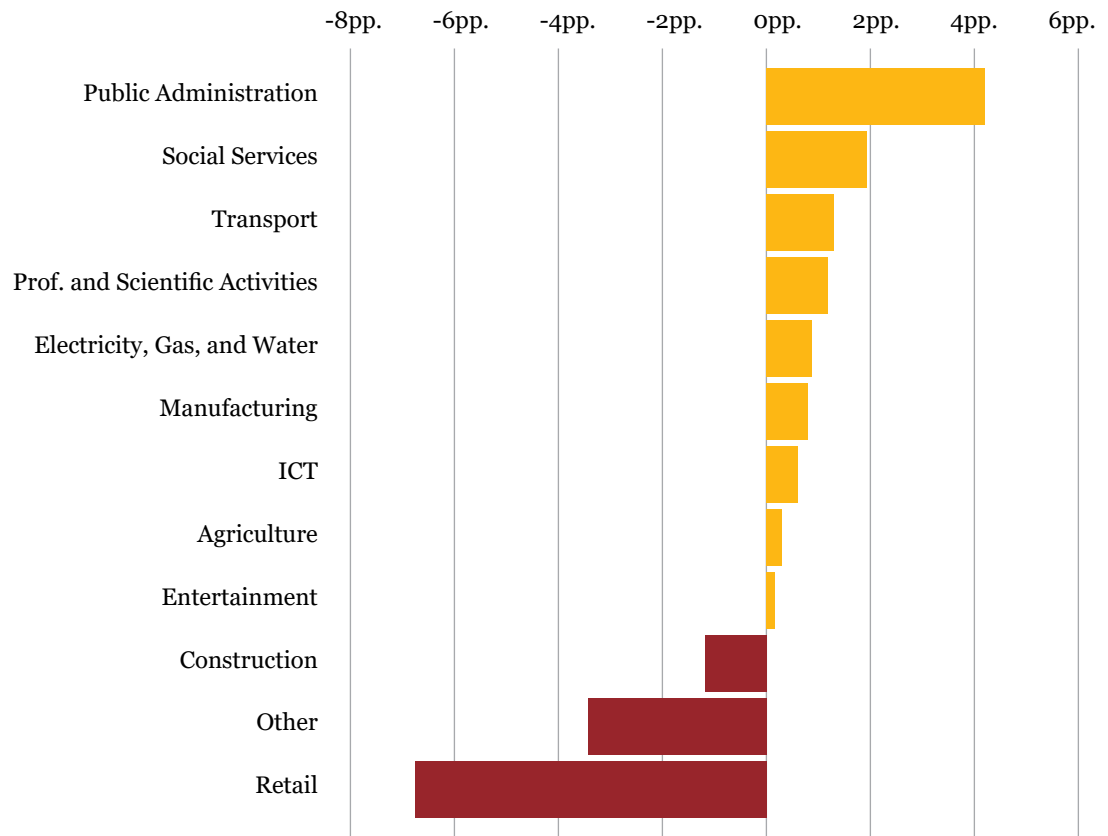


Data: RGPH 2014

that grew the most are not the most conducive to urban economic growth.

Firstly, the sectors of public administration (+4pp.), social services (+1.9 pp.) and transport (+1pp.) have grown significantly. On the other hand, some sectors, such as construction (-1pp.), retail (-6.5pp.) and other small sectors have experienced a significant decrease in their relative share of employment.

*Figure 13: Change in the sectorial share of employment between 1996 and 2014
(in percentage points).*



Data: RGPH 2014, 1996

However, in recent years (2013 to 2016), trends have been more positive and many sectors of the formal economy experienced a strong increase in employment, including tradable activities – see Table 2. According to 2016 enterprise survey data, the private sector grew by 11% annually on the 2013-2016 period. Companies in some of the manufacturing sectors (such as chemicals, metal production and furniture, wood) and others services sector (IT/retail/wholesale) have experienced a significant increase in number of people they employ.

Table 2: Average of firms' employment change per sector on the 2013-2016 period.

Sector	Average change in number of employees
Chemicals	27%
Construction	-17%
Fabricated metal products	14%
Food	0%
Furniture	64%
Garments	0%
Hotel and restaurants	0%
IT	36%
Publishing, printing, and Recorded media	50%
Retail	29%
Services of motor vehicles	37%
Transport	114%
Wholesale	16%
Wood	28%

Data: Enterprise survey 2016

Note: Data on firms' performance on the 2013-2016 period and about firms' constraints is from the Enterprise surveys which only cover the formal economy. Besides, the results of the employment and performance comparison between the 2006 and 2016 enterprise survey data were not displayed due to a change in the methodology between both surveys which produced unrealistic results.



Leapfrogging industrialization – a possible path for Conakry?

Leapfrogging means skipping the industrial stage traditionally associated with structural transformation and going directly from a predominantly agricultural economy to one dominated by ICT and services with high technological content. The prospect of leapfrogging is appealing but is it realistic in Guinea and in Conakry in particular?

Historically, three stages have been identified in the development of cities. First, urban centers with a GDP per capita below 2500 USD grow as consumption cities through the concentration of retail and other non-tradable services. Then, as GDP per capita increases, cities progressively become centers of industrial production. Finally, once the cities reach a level around 20,000 USD per capita, economic activities start gearing toward innovative, creative and financial sectors (Kilroy et al., 2015). Considering Conakry's very low level of industrial activities and its GDP per capita (around 1200 USD), Conakry can be characterized as a consumption city⁵ according to this typology. The question is whether the city has the capacity to carry out technological leapfrogging and start developing high value tradable services without going through the industrialization step. A service-oriented economy might make urban compaction and concentration more feasible than in industrial cities, as less large land plots are needed

for factories and the exchanges of ideas are valued more, implying proximity. It is indeed found that, in service-oriented cities, workplaces and homes are often in close proximity, shortening travelling time and distances (République de Guinée, 2016).

However whether Conakry has the capacity to adopt such path remains very uncertain.

Regarding the supply of skilled labor, the workforce in Conakry is characterized by relatively high education attainment with 38% of workers having completed university level education. This translates in 29% of formal employees working either as senior managers or engineers⁶. However, of the total amount of jobs in the city, only 15.7% are part of the tradable sector and 56% consist in self-employment⁷. This illustrates the weakness of the private sector firms which translates into an insufficient demand for high skills. Private firms struggle to develop due to the numerous constraints they face, such as political instability, customs, taxes, crime, transportation, access to finance and corruption, amongst others. In such conditions, it is very uncertain whether Conakry will have the capacity to develop high-value services through technological leapfrogging. Nevertheless, Conakry has the possibility to use new technologies in order to improve urban planning and policy implementation.

5 Oxford Economics data

6 Labor Survey 2012

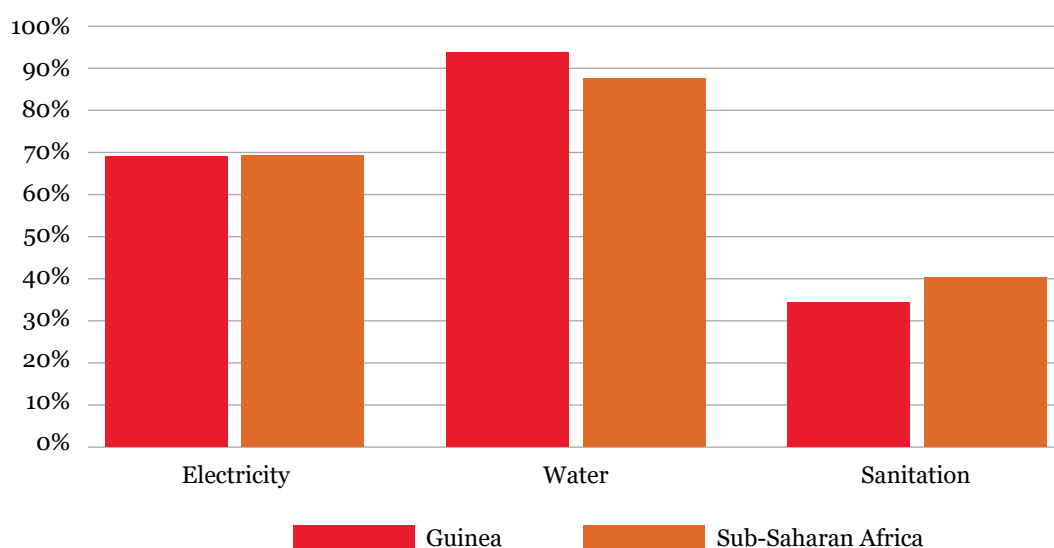
7 Census 2014

Urban Areas in Guinea Are Failing on Service Delivery

NATIONAL LEVEL

Apart from access to sanitation, Guinea performs relatively well in terms of access to electricity and improved source of water compared to other Sub-Saharan African countries (Figure 14). As could be expected for Guinea, commonly called the “water tower of West Africa”, access to improved water sources (93%) is significantly higher than the regional average (87%). While access to electricity is along the regional average, improved sanitation⁸ seems to be problematic as only 34% of households benefit from it, compared to 40% for the whole region. This greatly contributes to the high incidence of water-borne diseases (such as cholera and diarrhoea).

Figure 14: Access to public services.



Data: WHO/UNICEF joint monitoring program, World sustainability for all database

Public services provision is characterized by high spatial disparity when comparing Conakry to the following five most important cities. An index of public services accessibility was built (Table 3), based on the accessibility to electricity, water and waste management. Conakry systematically ranks twice as high (or more) than the other cities for the index. While water accessibility and waste management are the dimensions where the gap between Conakry and the other cities is the biggest, the difference depends on each city considered. For example, while Kankan has very low accessibility to electricity, Nzérékoré suffers from very low water accessibility and Labé from almost inexistent waste management.

⁸ WHO and UNICEF define improved sanitation as either a flush toilet, connection to a piped sewer system, Connection to a septic system, flush pit latrine, pit latrine with slab, ventilated improved pit latrine or composting toilet. Shared facilities are not considered to be improved.

While households access to electricity in Guinea is in the average (around 27%) compared to neighboring countries, it still has one of the least exploited hydropower potential. Electricity generation and distribution is managed by Electricité de Guinée (EDG), currently managing around 400 MW of hydropower production, which represents only 0.5% of the country's potential (Figure 15)⁹. Insufficient supply has been a major obstacle to the country's economic development. Besides, access to electric power, characterized by high costs and repeated shortages have led to important and violent street unrests in the past.

Table 3: Public services index.

Cities	Electricity	Water	Waste	Index
Conakry	73.4%	80.3%	38.8%	64.1
Kindia	54.8%	48.4%	9.6%	37.6
Kankan	9.8%	42.5%	14.8%	20.6
Labé	47.5%	30.1%	3.1%	26.9
Nzérékoré	17.1%	16.1%	10.5%	14.5
Siguiri	53.7%	30.9%	18.5%	34.3

Data RGPH 2014.

Despite water distribution mismanagement and the chronical lack of resources invested in the distribution network throughout the years, scarcity is not the most pressing issue in Guinea. The system is characterized by a large number of illegal connections, most private connections in Conakry consisting in a single tap providing for many people as only a small wealthy minority of household can afford paying the fees required to install the pipes. Still, 77% of the population has access to an improved source of water which is relatively high compared to countries of the region.

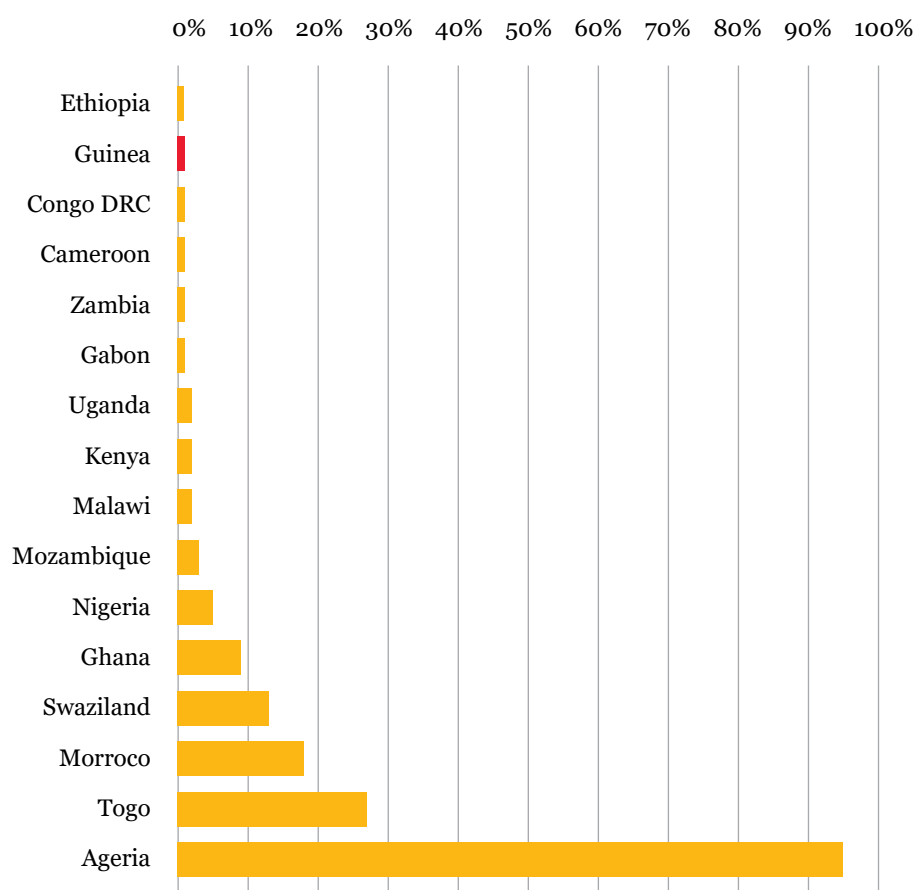
Conakry level analysis

When analysing public services accessibility at the scale of neighbourhoods in Conakry, we can also observe a strong spatial divide between the centre (Kalum Peninsula) and the suburb, which also reflects the divide in urban density and households' income (Figure 16). The index was based on access to electricity, water, waste management and also flush toilets¹⁰. There is a consistent relationship between public services quality, population density, household incomes and proximity with the city centre at the extreme South-West (Kalum peninsula).

⁹ This figure was obtained by combining the Afeikhena's (2011) estimate and the theoretical supply provided by the inauguration of the dam of Kaleta in 2015.

¹⁰ Factor analysis was used in order to apply weights to each dimension and then regression was used in order to display results

Figure 16: Installed hydropower capacity as percentage of known exploitable potential.



Source: calculations of the author based on the figures of Afeikhena, 2011



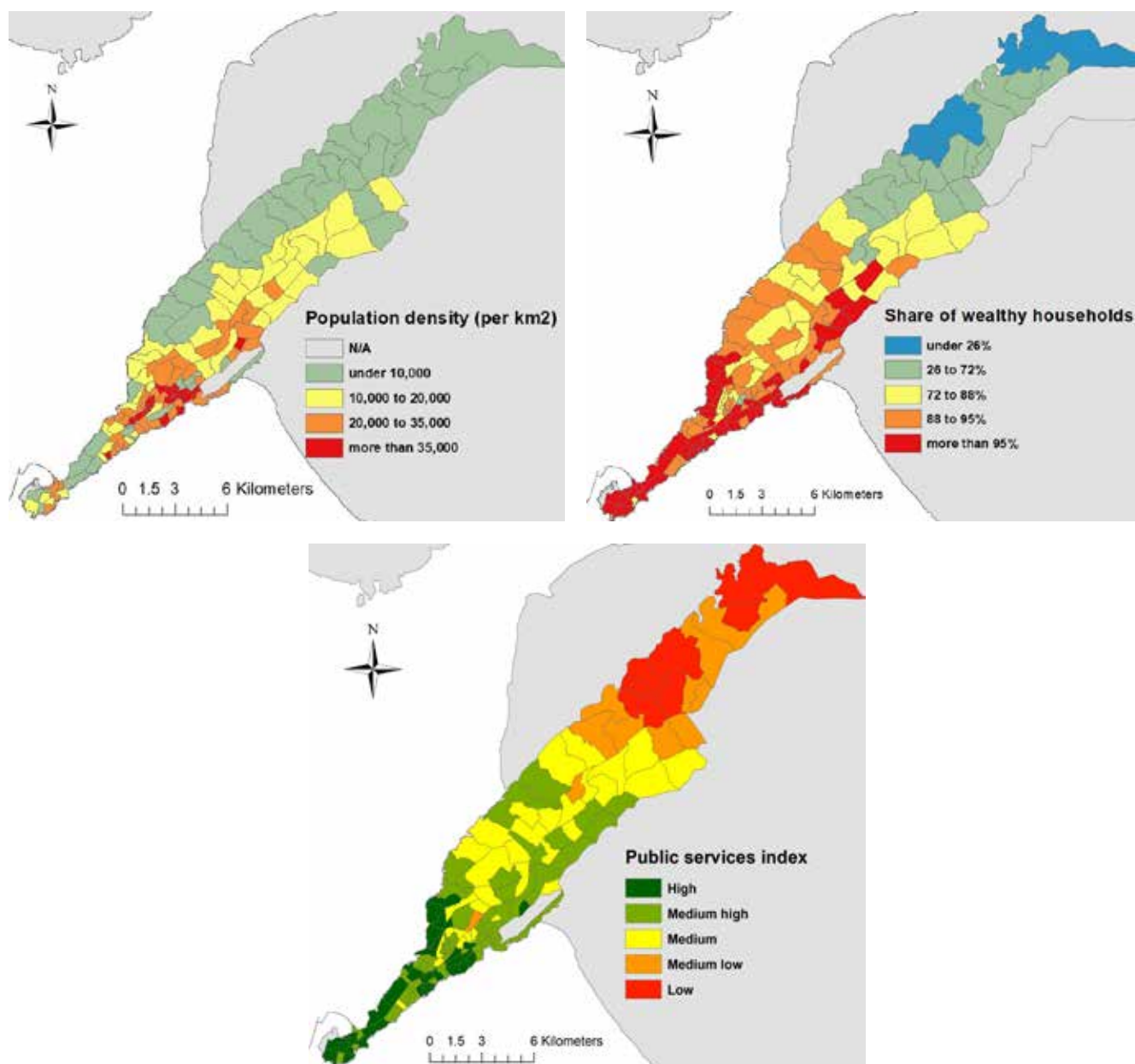
Calculation of the Public services index

The public services index was computed by combining estimates of access to electricity, access to improved water source, waste collection, and access to improved toilets. Each variable is defined as follows:

- Access to electricity: “1” if the household is connected to the grid, “0” if other
- Access to improved water source: “1” if the household has access to piped water or a public tap, “0” if other
- Waste collection: “1” if household’s waste is collected by either a public or private entity, “0” if other
- Access to improved toilets: “1” if the household has access to flush toilet, ventilated pit latrine or public toilets, “0” if other

Giving the dichotomous nature of the variables analysed, the methodology used to build the index was Multiple Correspondence Analysis (MCA).

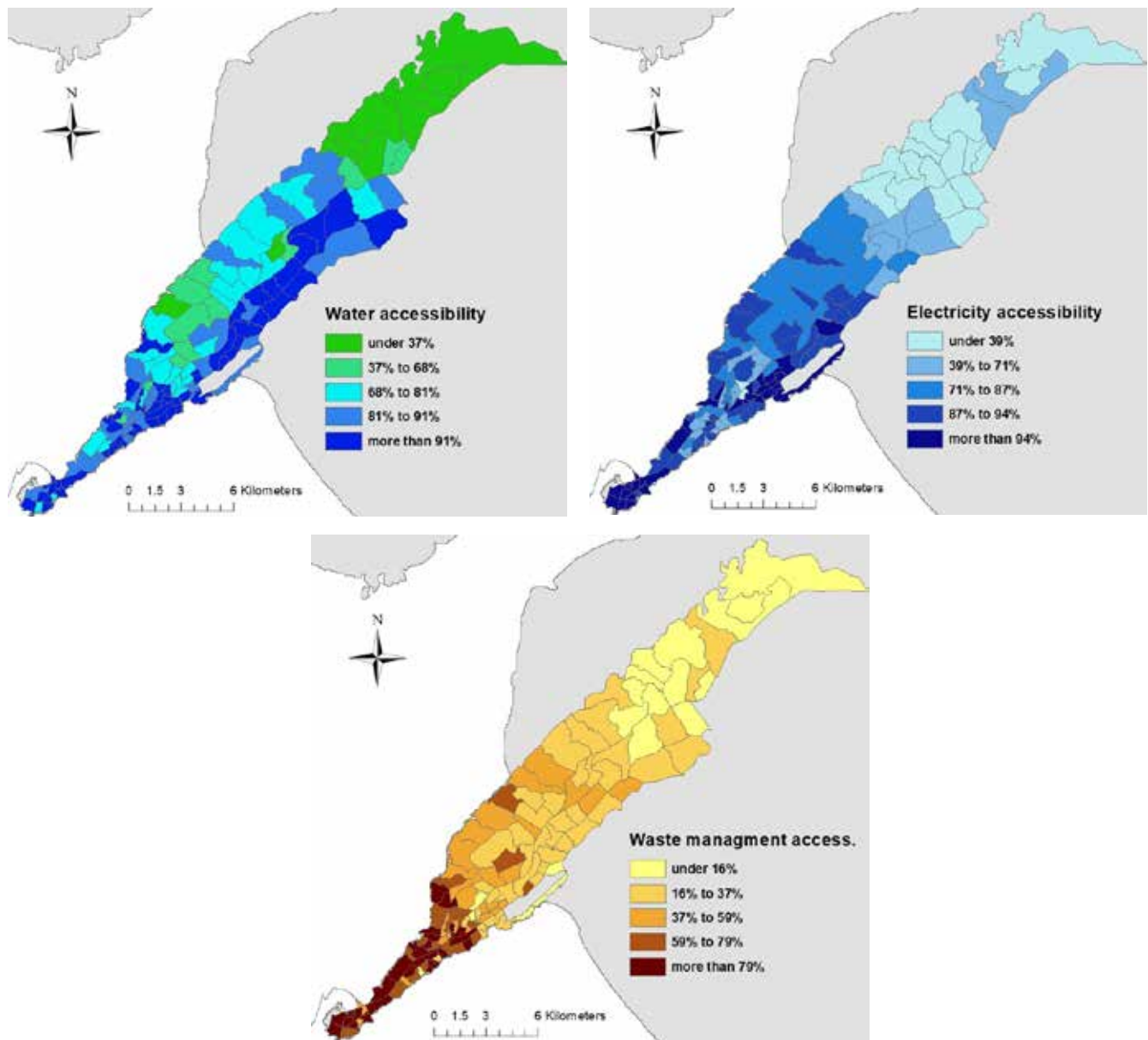
Figure 16: Population density (top-left), share of fifth income quintile households (top-right) and public services index (bottom).



Data: RGPH, 2014

Besides, the coverage of each public service is not homogeneous (Figure 17). Waste management services, for example, are very much concentrated on the end of the peninsula. Water accessibility on the contrary is better distributed spatially with a relatively good accessibility along the south-east border of the city. Finally, electricity accessibility displays an in-between pattern.

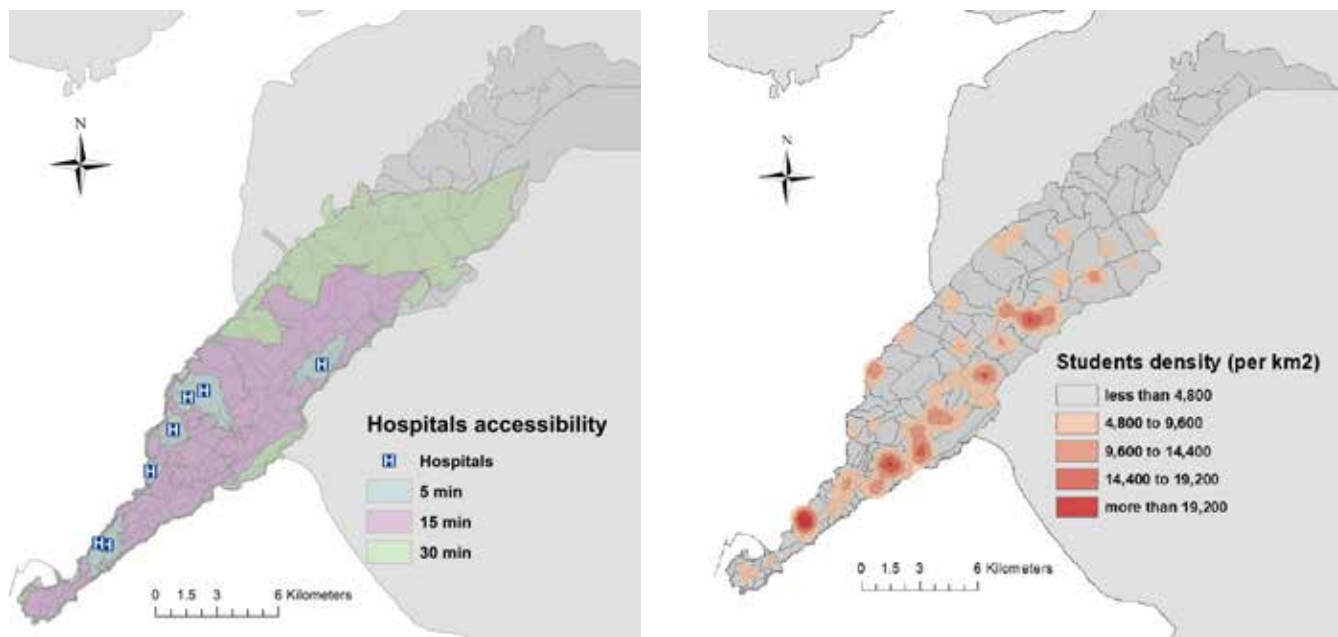
Figure 17: Water accessibility (top-left), electricity accessibility (top-right), waste management accessibility (bottom).



Data: RGPH, 2014

Similarly, health infrastructure's coverage is better and education infrastructures are more densely concentrated in the centre of the city (Figure 18). The coverage of hospitals was analysed by computing service areas based on the urban road network¹¹, while the education infrastructure density was displayed by computing the Kernel density of infrastructures per square kilometres weighted according to the number of students in each institution. We can observe that in both cases, the infrastructures are more accessible in denser and wealthier areas, close to the city centre. Besides, the network analysis that was ran for hospitals accessibility highlights that the road network increases accessibility in a rather linear way. More precisely, it is easier to access hospitals for people living close to one of the radial roads going from the suburb to the city centre.

Figure 18: Hospitals coverage and students' density in Conakry.



Data: OSM and national authorities

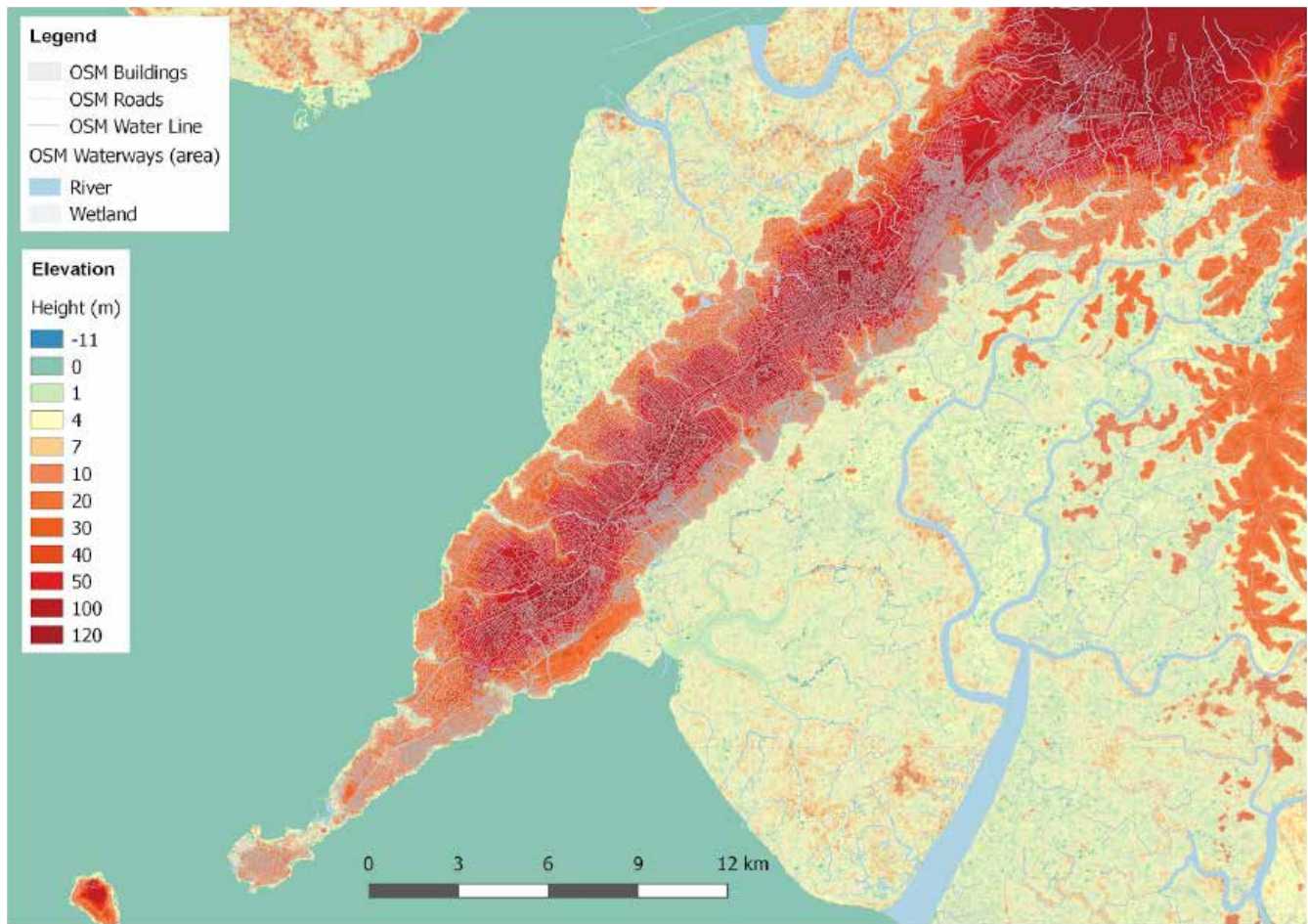
In Conakry, extreme precipitations have resulted in the degradation of urban infrastructure and spread water-borne disease. Risks are amplified by the lack of effective water drainage and houses flooded with sewage-infested wastewater, particularly in poor neighborhoods. The lateritic composition of the soil, combined with the tropical climate characterized by a heavy rainy season poses specific drainage and sanitation challenges (low infiltration, heavy runoffs and floods). Slums, which account for 44 per cent of the urban population, have spread with increased urbanization and migration, further constraining Conakry's already weak basic services deliv-

¹¹ Different cost attributes were attributed to each road segment depending on the class of road considered. The following corresponding speeds were applied: primary/trunk = 30km/h; secondary = 16km/h; tertiary = 12km/h.

ery. The lack of access to basic services (from safe drinking water to electricity, from basic health care to police services, from sanitation sewer to paved roads) coupled with overcrowding and promiscuity, further expose slums to the outbreak of water-borne diseases and epidemics. Besides a lack of investment, this is very much linked to poor construction standards, poor skills and lack of monitoring. In July of 2015, flooding from extreme precipitations have also resulted in severe economic and infrastructure destruction in Conakry. Over 2,400 houses and 600 water points were destroyed in the five communes. Inadequate water management and waste practices, when paired with infrastructural damage from floods, has been linked to the proliferation of diseases in urban areas of the country.

Conakry's low-lying peninsular geography on the Kaloum peninsula exposes the city to important climate risks, including storm surge and extreme precipitation. Furthermore, the vegetation, which mainly consists of mangroves, is threatened by the combined effects of rapid urbanization and variations in rainfall and sea level rise, and aggravates the city's exposure to the negative effects of climate change. Lastly, frequent flooding and rising sea levels could displace approximately 30 per cent of the coastal population, while also destroying infrastructure and reducing the supply of potable water, which contributes to the rapid spread of diseases.

Figure 19: Hazard overview of the city of Conakry – elevation compared to sea level.



Data: Shuttle Radar Topography Mission (30m resolution), and the OpenStreetMap Buildings, Roads, and Hydrological layers.

Note: This map illustrates the open source elevation layer from the Shuttle Radar Topography Mission (30m resolution), and the OpenStreetMap Buildings, Roads, and Hydrological.

chapter
2



What Factors Underlie Conakry's Challenge

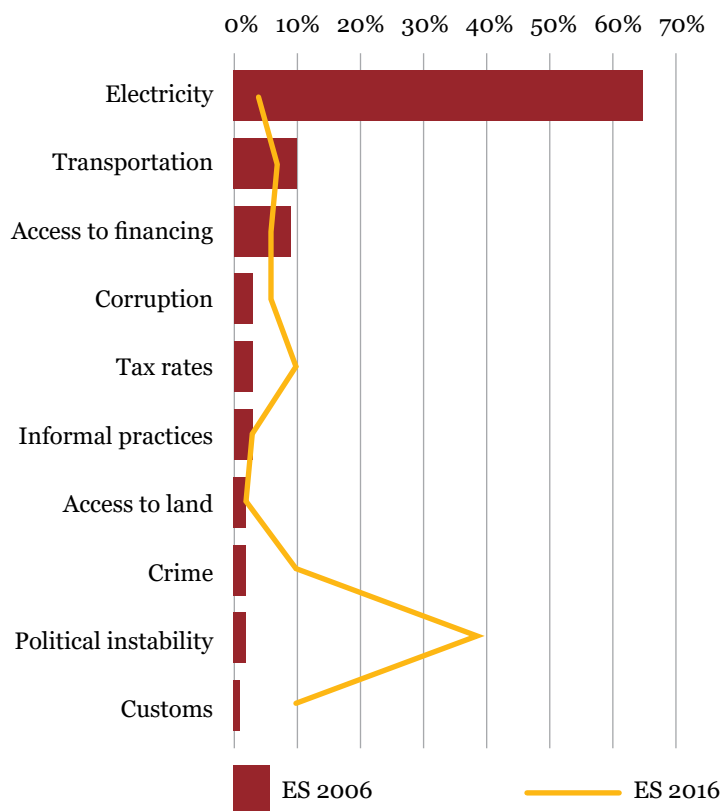
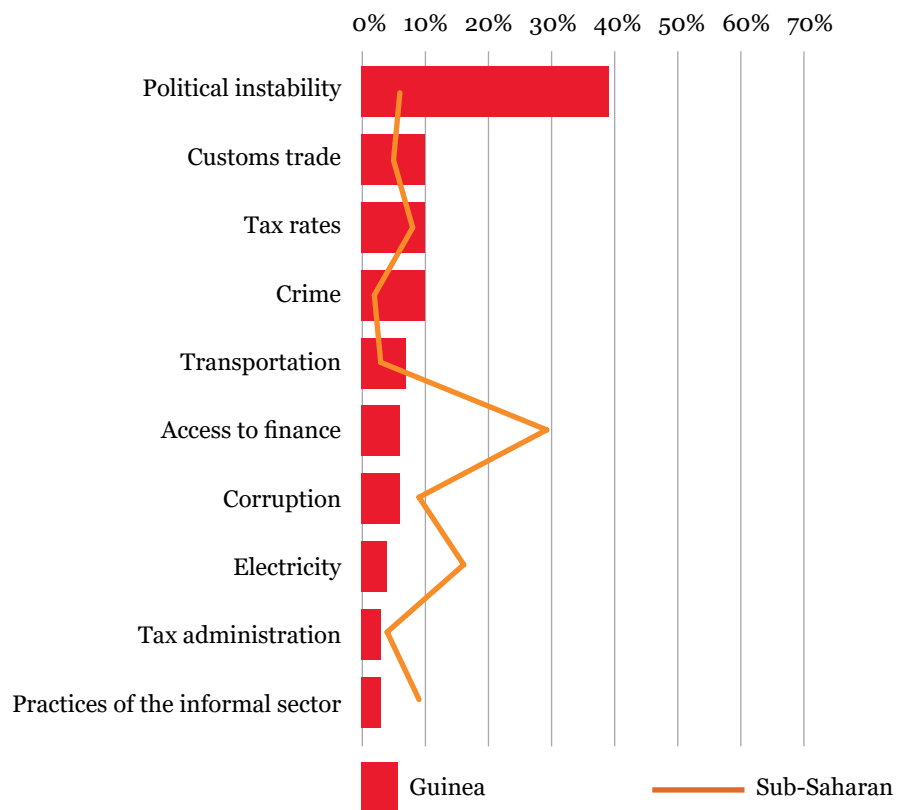
Business Environment

The obstacles that were cited as biggest constraints to enterprises in Conakry changed significantly over the 2006-2016 period with political instability being overwhelmingly designated as the most important constraint in 2016 while in 2006 electricity had been cited by 65% of the firms (Figure 20). While the three biggest obstacles recorded by firms for the whole sub-region were access to finance, electricity and the informal sector, Guinean firms are insisting primarily on political instability, customs trade and tax rates. The preoccupations of the firms have changed significantly over time, as electricity, transportation and access to financing were the biggest obstacles designated in 2006.

However, the fact that political instability is now cited as the biggest obstacle does not mean that other dimensions have become less problematic (Figure 21). When assessing each dimension separately, the percentage of firms designating each dimension as a “major issue” is significantly higher than the Sub-Saharan on several topics. In particular, the topics of transportation, crime, trade/customs, access to land and tax administration register higher rates of discontent in Guinea than for the whole sub-region.

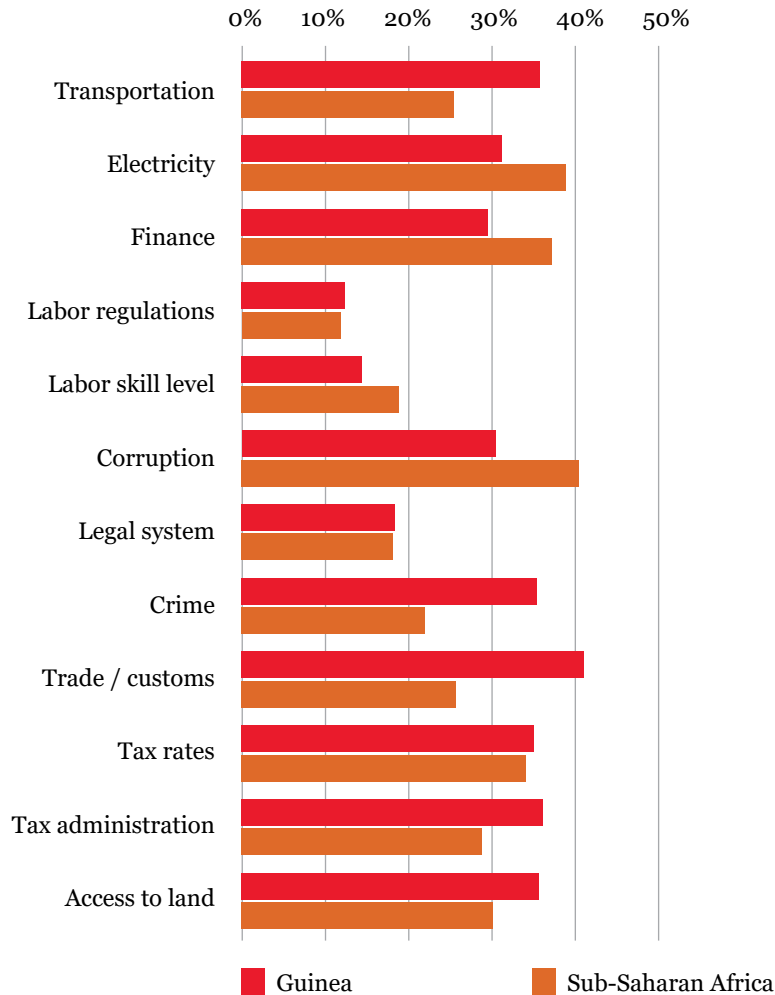
Besides, according to Guinean firms, while progress has been made in several dimensions on the 2006-2016 period (such as electricity), the situation has worsened over time on other topics (i.e. access to land, trade, legal system) which have become increasingly heavier burdens (Figure 22). Huge progress has been made regarding access to electricity. While companies were reporting almost 14% of sales losses due to power outages in 2006, this figure went down to 2.3% in 2006 (considerably lower than the Sub-Saharan average, 6.20%). On the other hand, the situation seems to have worsened significantly regarding customs

Figure 20: Biggest obstacle cited by firms in 2016 (top) and 2006 (bottom) in Conakry.



Data: Enterprise Survey 2006 and 2016.

Figure 21: Percentage of firms in Conakry that identified each category as a major constraint.

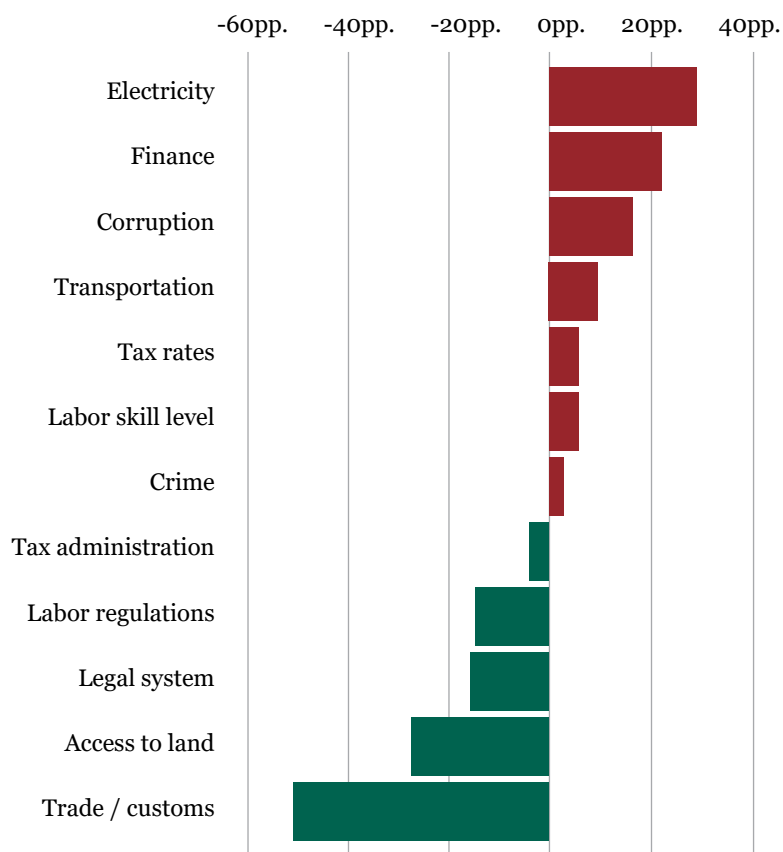


Data: Enterprise Survey 2016

processes, access to land, legal processes and labour regulations and tax administration. For example, Guinean firms need an average of 26 days to clear exports whereas the average is around 16 days in Sub-Saharan Africa.

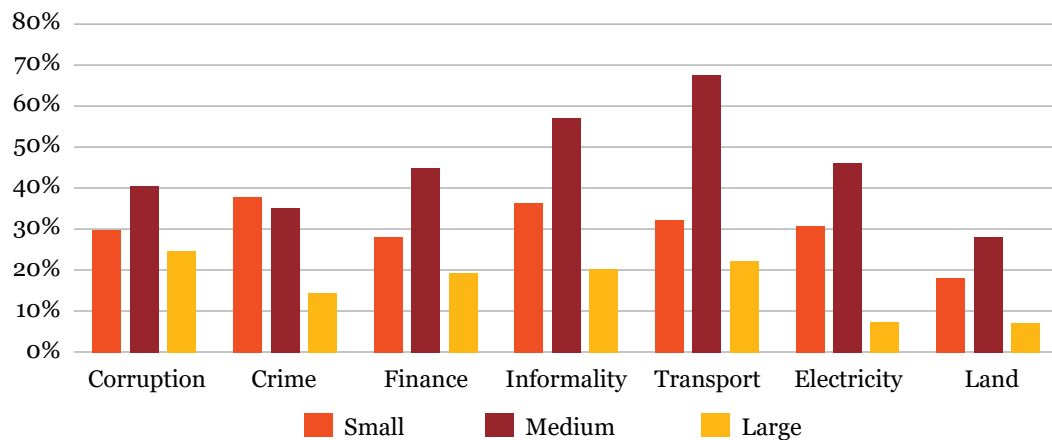
Medium-size firms suffer significantly more of the constraints inherent to the business environment (especially regarding transportation) than small firms and especially large firms (Figure 23). Apart from crime, a systematically larger share of medium-size companies highlights each dimension as a major constraint compared to small and large companies. The gap is especially spectacular concerning transportation which was designated as a major constraint by 67% of medium-size firms compared to only 32% of small and 22% of large companies. On the contrary, a systematically smaller share of large companies highlights each dimension as being a major constraint compared to either medium or small companies.

Figure 22: Percentage point change in the designation of each dimension as a “major constraint” between 2006 and 2016.



Data: Enterprise Survey 2006 and 2016.

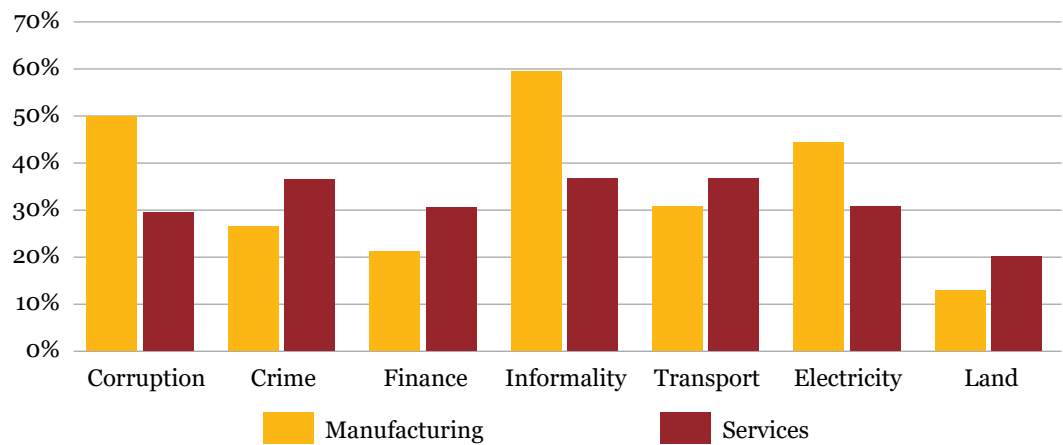
Figure 23: Percentage of firms in Conakry designating a dimension as major constraint depending on firm size.



Data: Enterprise Survey 2016.

The differences between the major constraints that affect the manufacturing and the service sector is more heterogeneous. While manufacturing firms suffer significantly more from corruption, informality, and electricity provision, firms from the service sector are more affected by crime, financing constraints, transportation and access to land.

Figure 24: Percentage of firms designating a dimension as major constraint depending on sector.



Data: Enterprise Survey 2016.

Some constraints, such as transportation, are associated with lower employment growth, especially in the case of larger firms. First, using regression analysis, a positive relationship was observed between the size of companies and their employment growth¹² in the last three years which implies that larger firms have been experiencing higher growth than smaller firms. When analysing the interaction between firm size and constraints, it was also found that, in the case of large firms, higher constraints on transportation, customs, informal sector practices and finance are associated with a significantly negative impact on employment growth. For medium firms, the only constraints that were found to be associated with a significant negative impact on employment growth are corruption, tax administration, and practices of the informal sector. No significant relationships were found in the case of small firms.

Age is also one of the determinants which influences the impact of constraints on employment growth. In general, young age was significantly associated with stronger constraints about access to land and corruption. On the contrary, the older the firm the higher the constraint associated with electricity, crime and tax rates. Regarding the link with employment growth, it was found that the older the firm, the more transportation and tax administration constraints were associated with lower employment growth. This implies that incumbent firms' employment growth is potentially more affected by transportation and tax administration constraints than younger firms.

¹² Employment growth was computed using Davis and Haltiwanger (1992) methodology.

The weight that those constraints represent on the private sector activity could justify different types of interventions at the scale of Conakry which have to be explored. Firstly, regarding transportation, it is urgent to take action. As highlighted in the next section of this report, the poor condition of the road network, disorganized public transport and the linear expansion of the city are causing enormous problems of urban mobility at the scale of Conakry. Measures have to be taken in order to improve public transport supply and improve the road network. Secondly, national and local governments have to take action for simplifying access to land. In Conakry, demand for land is much larger than supply (USAID, 2008), therefore measures have to be taken in order to open the market. Thirdly, concerning the constraint represented by criminal activities, the local government would also be able to intervene at his own scale choosing within a large set of measures (i.e. police coverage, public lighting). A deeper analysis would be needed in order to determine which measures would be the most appropriate. Finally, customs processes seem to be one of the biggest constraints considering that formal firms in Conakry import 77% of their inputs (considerably higher than the Sub-Saharan average, 46%). While customs administration does not depend on the local government directly, the main port of Guinea is located on the Kaloum peninsula (Conakry city centre) which would allow the local government to have a certain weight in negotiating for reforms/measures to be taken.

Connectivity

Geographical and environmental limits have created a linear city with constrained spatial development along a South-West – North-East axis.

Conakry has a unique geographic configuration in the form of a peninsula at the extremity of which the port and the first urbanization footprint is located. From 1850, the colonial city center progressively extended toward the continent. As discussed, previously, presence of mangrove on the Northern and Southern part of the city and mountains on the North-East, further constrain the urbanization of Conakry. The adopted strategy for Conakry 2040 (Grand Conakry Vision 2040) aims also to limit urban sprawl to minimize its ecological footprint.

Conakry, because of land scarcity, displays high population densities that are expected to further increase along the 40 km long urban corridor.

However this high average density hides some spatial variations. As a result of history, the density is average in Kaloum and higher at the limit between Dixinn and Ratoma and Matam and Matoto, and along the railway going East. Forecast shows that this situation might be exacerbated in the future as these densest areas should accommodate the highest number of incoming people.

Kaloum, the historical city center at the point of the peninsula hosts the port which is a high traffic generator, and concentrates many of economic activities.

The peninsula concentrates also most of the industrial plants and of the urban area's health care facilities. Kaloum shelters most of hotels and touristic sites and nearly all the government buildings while civil servants live in other municipalities¹³. A non-negligible share of jobs can be found in the other municipalities further from downtown, around the main markets.

This spatial mismatch between population and employment generates high traffic on the main arterial roads in the peninsula, from the suburbs to the city center and places strain on transport services and infrastructures.

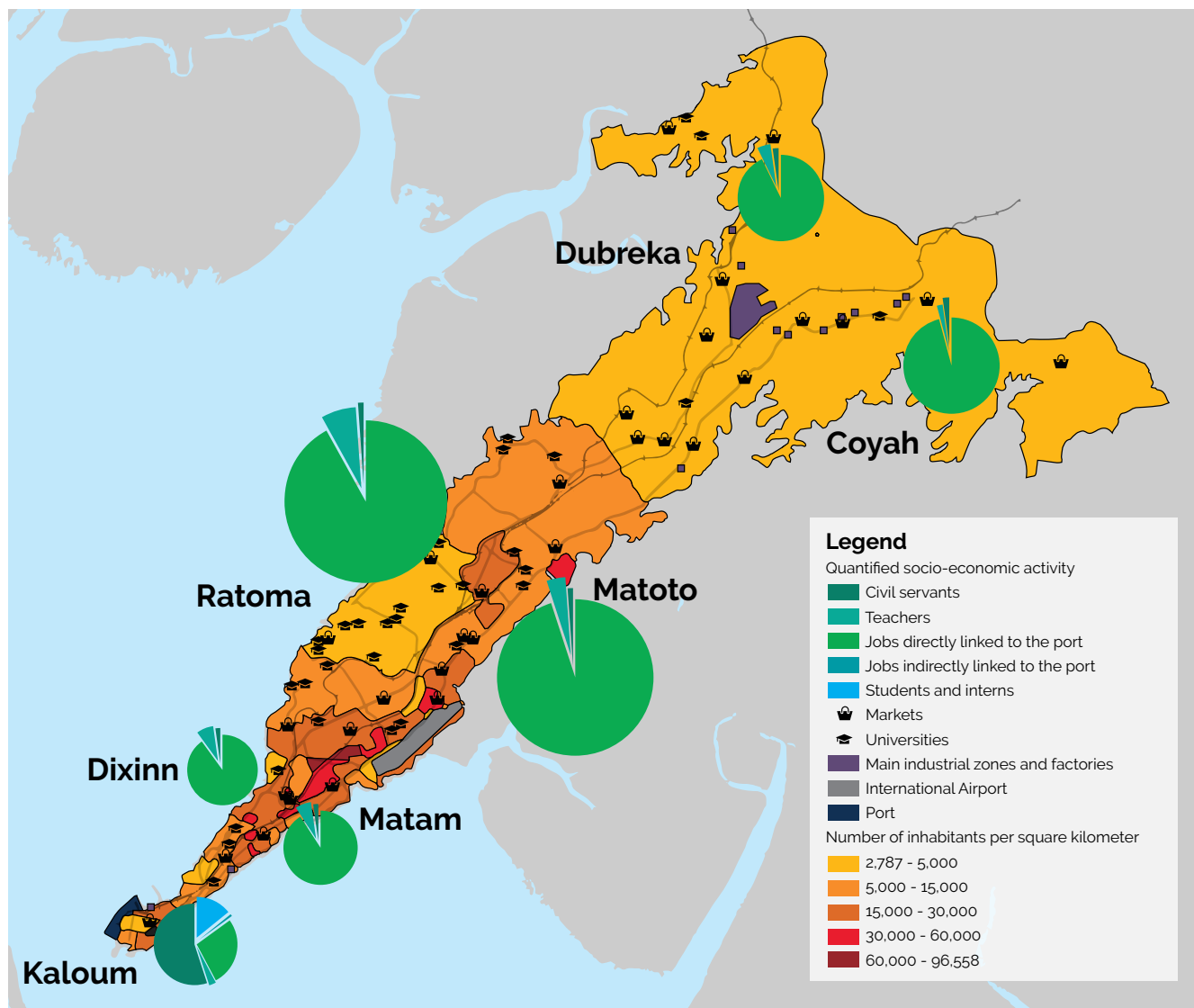
The N1 freeway and the Prince road carry the heaviest traffic with around 60 000 vehicles per day while the northern coastal access "Corniche Nord" bears 30 000 vehicles per day.

The urban area of Conakry is under equipped in roads and their quality is poor.

Outside of Kaloum that has a structured road network, paved road coverage is poor. Paved road density is low compared to other capital cities of the region with only 174 meters of paved road per 1,000 inhabitants (Table 4). The network's quality also decreases as one moves away from the city center. Indeed, the poverty household survey (2004) highlights that living far away from the city center reduces the chances of being close to paved roads by 47 percentage points. For example it was reported that in 2004, a resident living in an outer suburb had to walk 18 minutes to reach a paved road against 5 minutes in a central district (SSATP, 2004).

¹³ Authorities plan to move the administrations buildings closer to the most populated areas and to give the historical center a cultural function, beside the port activities, to prevent this trend.

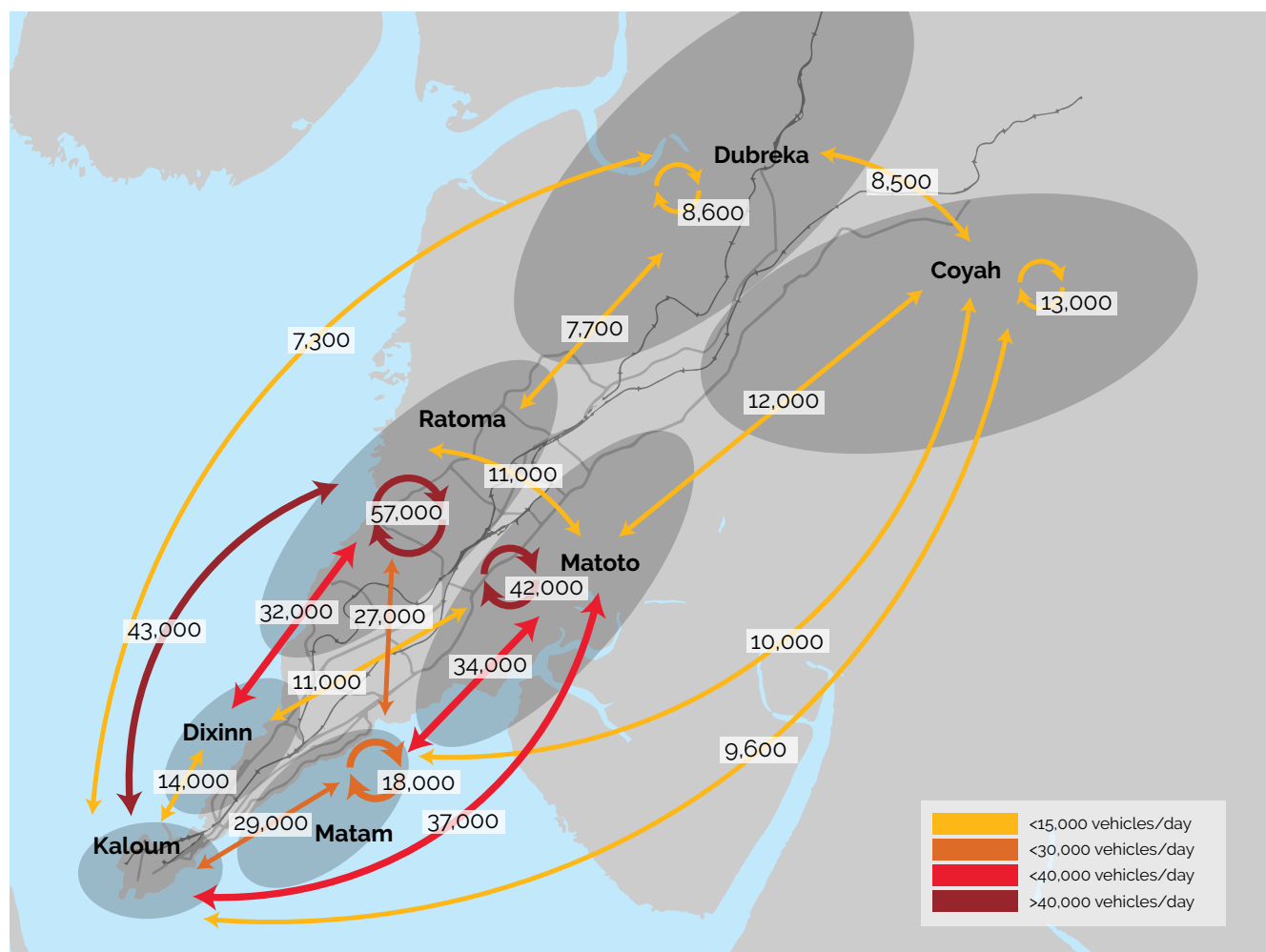
Figure 25: Population densities and employment in the Greater Conakry urban area.



Source: Plan de Déplacement Urbain (PDU), draft, Egis-Louis Berger.

The road network and in particular primary roads are unevenly distributed around the city and suffer from the segmentation due to the abundance of waterways (Figure 27). The road network is structured by three major radial trunk roads converging to the center of the city (Kaloum peninsula) and only a few transverse roads hardly serving the outlying areas. The three main road arterials in good condition with Rights Of Way (ROW) of more than 2x2 lanes are: the N1 freeway, the Donka-Prince road and the northern coastal access “Corniche Nord”. The rest of the network and in particular, trans-sectional and inter-neighborhood roads, is scarce, prone to flooding and in bad condition. Around 60% of the main road network surveyed in 2017 was in bad condition. In addition, the city is penetrated by many waterways which create natural segmentations. These transverse waterways can however not serve as transport means to solve the radial congestion and inter-neighborhood connectivity issues. While many bridges were built in the center of the city in order to improve connectivity and overcome those natural obstacles (circle in black on the figure), it is much less the case in the rest of the city and as one moves away from the city center.

Figure 26: Vehicle flows in Conakry.



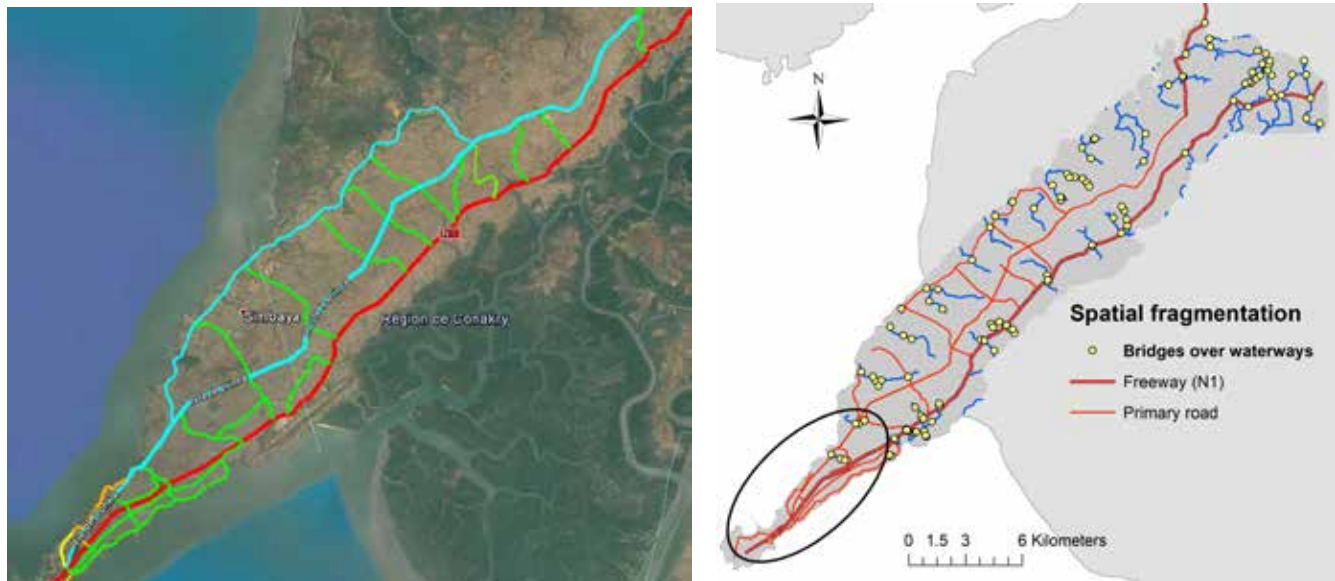
Source: Plan de Déplacement Urbain (PDU), draft, Egis-Louis Berger.

Table 4: Paved roads density per city.

City	Paved roads (m. per 1,000 pop.)
Abidjan	346
Conakry	174
Dakar	467
Dar Es Salaam	150
Kampala	225
Kinshasa	63
Lagos	400
Average, sample	318
Average, developing countries	1,000

Data: Kumar and Barrett, 2008

Figure 27: Main arterial roads (left) - the highway is in red and the two other main urban arterials are in blue. Main transverse roads appear in green. Natural fragmentation due to waterways (right).



Data: OSM and NASA

There is no functioning centralized traffic management system and congested intersections are true bottlenecks to traffic flows. 75% of the intersections investigated for the PDU are heavily congested with a crossing speed that can be as low as 6km/h. The congestion at intersections stems from their use for multiple purposes such as commerce and boarding alighting areas for public transport. Lack of physical installations to guide movements adds to the dysfunction. Main intersections are roundabouts or open space with heavy traffic in all directions. Traffic lights are not always maintained and there is no centralized traffic regulation. The competition for public space between street vendors, parked vehicles, transit and moving vehicles is not limited to intersections and crucially reduces travel speeds. Average speed for workers going to Kaloum can reach an average low speed of 7.5 km/h down town.

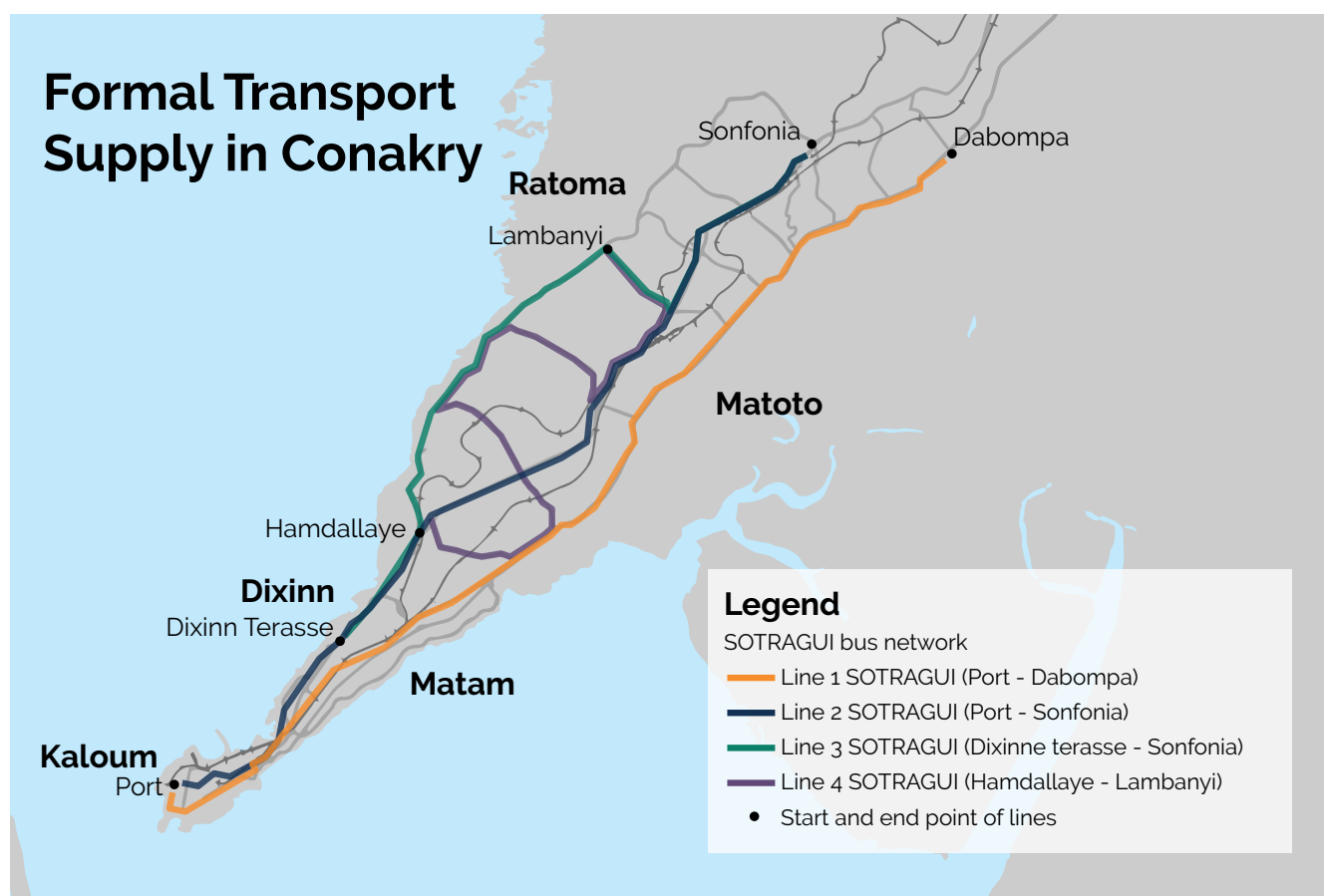
In Conakry like in many African cities, walking is the main mode of transport. Absence of, or poorly maintained and crowded sidewalks however makes walking unsafe and inconvenient. As in many African cities, walking represent more than 70% of the total number of travel (source: SSATP 2004). There is almost no dedicated space for pedestrian who generally walk on the roads as lateral public space is used by vendors, parked cars, car spare pieces sellers and unformal garages, waste or gravel storage from a nearby worksite. Crossing roads is also unsafe for pedestrians as the main arterials have no footbridges and very heavy traffic. Pedestrian are not respected by cars or motorcycles even at formalized crossroads.

A weak institutional framework for urban mobility with low capacity leads to a weak regulation of transport services and informal operators. Despite a recent decentralization reform implementation, the Governor of the city, president of the council made of the 5 municipalities, has very few transport related attributions:

parking, waste and public space management. Main transport competencies are in hands of different central ministries and public agencies as well as unions and private sector. Public stakeholders are not properly staffed to carry out planning, operational or even the basic regulatory missions. As an example, there is an estimated 60% of false driving license in circulation. As a result, public services deteriorated and reached a financial breakpoint, unable to adapt the poor infrastructure and unregulated competitive environment. In the meanwhile, individual informal operators flourish.

The main public bus operator is close to bankrupt. Private informal licensed enterprise replaced buses with collective taxi and minibuses. The 100 buses of the SOTRAGUI public enterprise created in 2012, stopped their service in May 2017 along the 4 routes after a slow deterioration of the buses due to a shortage of technical equipment for maintenance. The overstaffed company could not stand private sector competition despite public subsidies. (Source: Sotragui 2016).

Figure 28: The 4 former bus routes operated by SOTRAGUI.



Source: PDU

The railways represent real opportunities for urban passenger mobility. They are however currently under used and the current concession scheme further restrains their use for passenger mobility. The rail infrastructure currently in use in Conakry is composed of two railways¹⁴ coming from inland and merging in Matam. It is mostly used for freight, especially bauxite. A new passenger service “Conakry Express”¹⁵ started in 2017 and can move 2504 people at once but covers only 0.3% of the transport demand due to a single service on each way per day. The service is indeed limited by another concessionaire, the Kinda Bauxite Company which has exclusivity on railways usage. The infrastructure is still in a good condition.

Most of public transport is provided by informal operators: minibuses “Magbanas” and collective taxis. The exact number of minibuses and taxis in Conakry is unknown. There are now around 5 000 licenses for 15-seat minibuses “Magbanas” in Conakry (PDU) and there were around 5 000 collective taxis in 2006 (Systra 2006). With a total of 25 000 licenses issued for public transport between 2010 and 2017 (BRTT-Conakry, 2017), the right figure is probably more than 20 000 taxis operating now in Conakry. Most of them have a license for passenger transportation. Data from SYSTRA 2006 show that taxis and minibuses run mostly along the former SOTRAGUI routes. 95% of the bus owners who are also drivers declare they are making profit and would be willing to participate in a loans-based fleet renewal program.

Informal operators provide low quality transport services: vehicles are ageing and ill-maintained and competition for passengers on congested roads leads to unsafe driving behaviors. A survey conducted on a sample of 238 legal operators comprising taxi drivers (90%) and minibus drivers (10%), found that 76% of their vehicles were more than 10 years old. There is high rate of fake driving license, and a very thin proportion of the drivers were trained for public transport service delivery (only 4% of surveyed drivers). Open competition for clients on the main corridors leads to unsafe behaviors and contributes to difficult traffic conditions and low commercial speed.

Walking is predominant with a significantly higher share among the poor. Informal operators and taxis provide most of motorized trips. In 2004, the poor completed 78% of their trips by foot compared with only 61% among richer people. This exposes the poor to disproportionately higher road safety issues compared to the richer that choose to use more collective taxi – 20% for the non-poor instead of 6% for the poor – or private cars 3% for the non-poor, 1% for the poor (SSATP 2004).

In recent years, the modal share of two-wheelers has been drastically increasing and the exact place of moto-taxis in public transport is still mostly unknown. Recent counting suggests they would represent between 30% and 50% of vehicle flows on the main arterials of the city. This trend is worrying as the low-capacity two-wheels present generally worldwide a higher risk of accident, unsafe behaviors and a high road usage per passenger.

14 A deteriorated third railway stopped being operated in 1995. It would require a complete rehabilitation.

15 A Chinese concessionaire invested in the rolling stock and in 10 stations within the urban area.

*Table 5: Daily mobility indicators of poor and non-poor Conakrykas
(people aged 11 and more, weekday average).*

	Poor	Non-poor
Number of trips, all modes	3,8	3,9
• Including, walking	78 %	61 %
• Including 30mn or more walk	11 %	9 %
• Including magbanas	14 %	15 %
• Including collective taxis	6 %	20 %
• Including other Collective modes (bus, illegal...)	1 %	1 %
• Including personal vehicles	1 %	3 %
% of users walking more than 5 mn at the beginning or at the end of the travel	41 %	21 %
Travel time budget (total daily time spend in transportation)	1h20	1h45

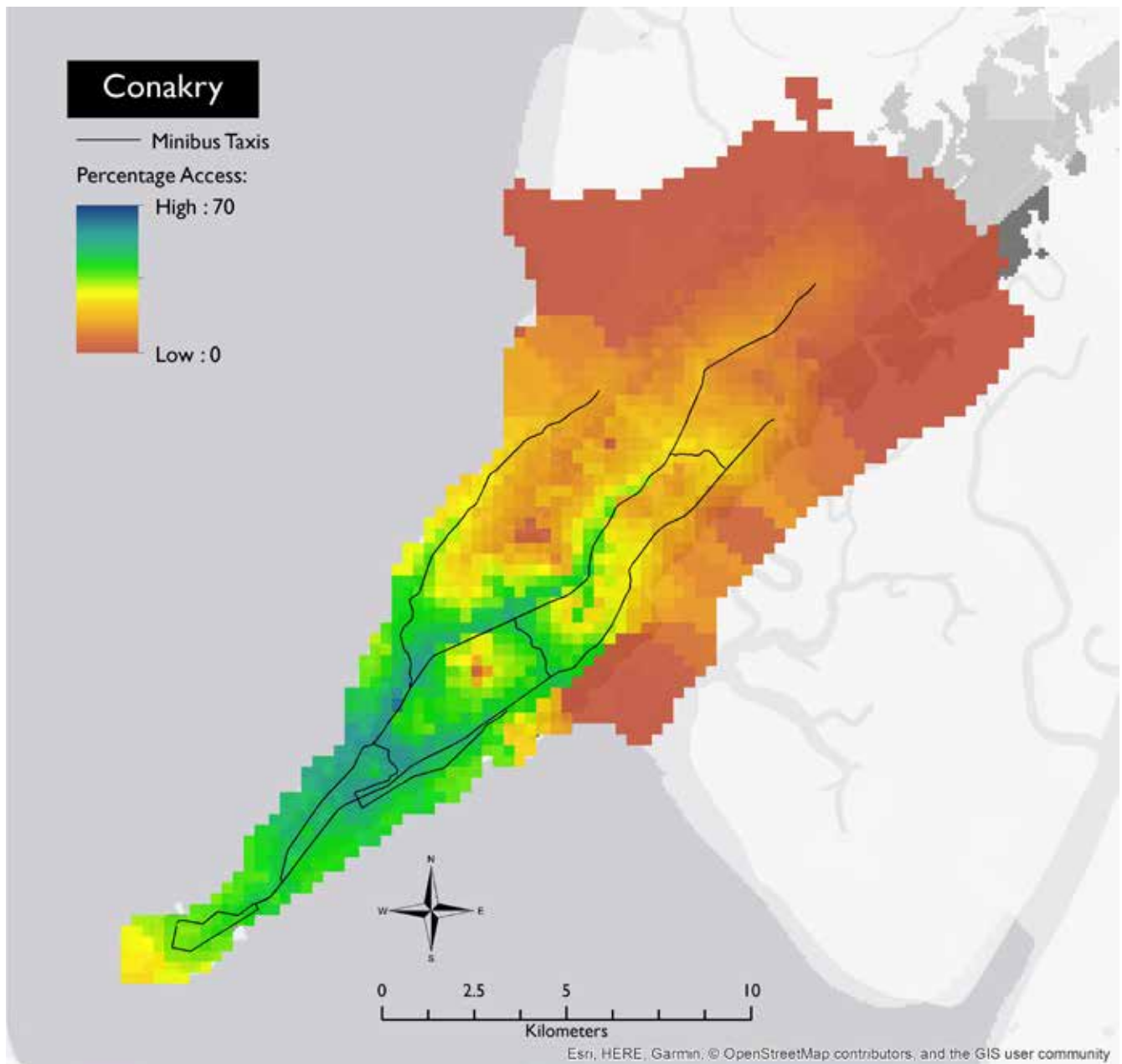
Data: SITRASS, 2004

The traffic of trucks generated by the port and dealer's activities impact mobility and generate traffic management issues in Kaloum, between the peninsula and the rest of the city and in Madina. The total traffic of the port averaged 5,8MT between 2003 and 2013 and reached 8,7MT in 2016, 7% more than in 2015. The destination of most of the freight is Conakry metropolitan area. In addition to the port, 63% of wholesale dealers are located in Kaloum while 83% of semi-wholesale dealers are located in Madina, the central city market in Matam. This situation generates a dense flow of more than 2200 trucks leaving Kaloum on the main roads each day and mainly the Corniche Nord. This traffic adds to the congestion and creates passenger's mobility and road use conflicts. It generates major parking issues in Kaloum and around the market in Madina and impact pedestrian mobility.

In total, the combination of a spatial mismatch between job and population location – creating large mobility needs, lack of roads in good condition, and the collective transport needs being met by small vehicles (including moto-taxis) – saturating the limited road space, contribute to very high congestion levels that limit the population's access to jobs and services. As a result average speeds are as low as 14km/h at AM peak hour and 11km/h at PM peak hour. This also considerably limits the benefits of the port as transporting goods through the city represents a high cost in terms of time and fuel.

People are disconnected from employment opportunities and Conakry fails to reap the benefits of large labor markets. Accessibility to employment is low, with people only being able to reach a fraction of the job opportunities in Conakry using the minibuss and shared taxi system. Within one hour an urban resident has access to 23% of the employment opportunities in the city. This is significantly less than in Dakar, Senegal where an urban resident can reach 52% of the job opportunities using the collective transport systems within 60 minutes. And the comparison with Dakar is striking as the capital of Senegal is also located on a peninsula with a high concentration of the employment opportunities at one end of the city. This further points to the role of the transport infrastructure in connecting residents to opportunities.

Figure 29: Share of jobs accessible within a 60 minute commute using the minibus and shared taxis.



Data: own calculations.

Land and Housing

Planning documents are either obsolete or poorly enforced. While initiatives such as “Habitat vision 2021” and “Conakry Vision 2040” are a testament of a renewed interest in urban planning, the Government still lacks an overarching policy to govern and regulate urban and land development. Most urban plans are outdated: the most recent urban master plan (*schéma national d'aménagement du territoire*) dates to 1986. The country counts four regional and planning documents (*schémas régionaux d'aménagement et de développement*), master plans for 12 secondary cities, an urban development plan for Conakry, urban reference plans, among others. Despite having been mandated, most cities have failed to implement such plans, and when they do exist, they are poorly enforced, and not well known by local authorities. With respect to land management, the different projects of reforms that were adopted were not fully implemented. For example, the land code and town-planning code have not been disseminated around national and local administrations which results in multiple interpretations of the law depending on each institution/actor.

... resulting in massive urban sprawl. Conakry has experienced the highest population growth in the country, averaging 6.1% annually according to the Government between 2002 and 2012 (République de Guinée, 2016) and 4.6% according to GHSL data between 2000 and 2015. Almost half of the country's urban population resides in Conakry, which has approximately 7 times the population of Kankan, the second-largest city in the country. Conakry's small land area and relative isolation from the mainland have created an infrastructural burden since independence, showing a great imbalance in the urban network. The authorities in charge of urban planning and management have faced increasing difficulties to plan for spatial expansion and land development, to identify, coordinate and carry out the most critically needed investments in basic infrastructure and services, and to ensure proper maintenance of existing assets. Inadequate urban planning and management have led to massive, uncontrolled urban expansion. The city has become critically overcrowded, creating considerable pressure on scarce basic urban services and resulting in drastic degradation of the environment.

Poor planning drives urbanization into slums¹⁶, and poor tenure security discourages the poorest to invest in safer housing, thus exacerbating their vulnerabilities. In Conakry, it is estimated that two thirds of the urban population reside on illegal settlements (MVAT/DATU). The rapid proliferation of slums is underscored by the reluctance of the urban poor to invest in permanent and safe housing due to poor security of tenure. While some urban slum communities may afford improvements to their living environments, lack of political leveraging and the risk of eviction often make the expenditure too risky. In Conakry, such lack of planning and level of risks then push the poorest urban residents to settle in disaster prone areas. The poor-

16 UN-HABITAT defines a slum household as a group of individuals living under the same roof in an urban area who lack one or more of the following: (i) durable housing of a permanent nature that protects against extreme climate conditions, (ii) Sufficient living space, which means not more than three people sharing the same room, (iii) Easy access to safe water in sufficient amounts at an affordable price, (iv) access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people, (v) security of tenure that prevents forced evictions.

est urban dwellers reside in informal and unplanned settlements, often built in high-risk locations, such as slopes or floodplains, and lack basic risk-reducing infrastructure. Conakry's five communes are contained within a set of small islands, the narrow Kaloum peninsula -seven kilometers in diameter at its widest point- and a larger inland area flanked by mangroves. Like most Guinea's coastline, Conakry rests on a flat coastal plain, leaving homes and infrastructure exposed to water-related hazards.

Today, failures in infrastructure and land use coordination has deepened Conakry's vulnerability to natural disasters. Making Conakry more resilient in face of such disasters requires thinking about the externalities that planning and management decisions may bring. If these challenges are ignored, they could undermine hard-won gains in quality of life. Extreme precipitations have resulted in the degradation of urban infrastructure and spread water-borne disease. Threats to urban livability are amplified by the lack of effective water drainage and houses flooded with sewage-infested wastewater, particularly in poor neighborhoods. Informal settlements have spread with increased urbanization and migration, further constraining Conakry's already weak basic services delivery. The lack of access to basic services (from safe drinking water to electricity, from basic health care to police services, from sanitation sewer to paved roads) coupled with overcrowding and promiscuity, further expose precarious settlements to the outbreak of water-borne diseases and epidemics. In July of 2015, flooding from extreme precipitations have also resulted in severe economic and infrastructure in Conakry. Over 2,400 houses and 600 water points were destroyed in the five communes. Inadequate water management and waste practices, when paired with infrastructural damage from floods, has been linked to the proliferation of diseases in urban areas of the country.

Enforcement of ownership and land tenure are not fully implemented. The 1992 Guinea land code (*Code Foncier et Domanial*) outlines the general principles and laws towards property rights, ownership and land ownership and tenure in Guinea. It advises that land must be registered as to enable owners to exercise their right over the property. In practice, however, state land administration institutions lack capacity and resources to support registration. Despite Government's efforts through the computerization of land registry, the implementation of these rules has been limited.

Expensive land titling discourages the population to formalize land holdings... While the time to register a property is lower than in neighboring countries, the cost of registration is significantly higher than regional average. Besides, the country also achieves poorly in the quality of its land administration (as measured by the index below) compared to the Sub-Saharan average. The quality of land administration index has five dimensions: reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution, and equal access to property rights.



Main features of land tenure in Guinea

The Land Code provides that ownership rights under customary law may be registered and granted status under formal law provided that the landholder has occupied the holding for a statutory period of time and has made a sufficient level of investment in the land. The Land Commissions determine the requisite level of investment, which can include creation of structures and infrastructure or the development of plantations, irrigation, and cultivation. Registration requires a public process to confirm the occupant's rights and the lack of competing claims to the land. Few rural people have the knowledge and resources to register land, and the state has limited capacity to register land. The Land Code stipulates that unregistered land in rural areas (the vast majority of rural land) is owned by the state (USAID 2008; USAID 2007). Land rights can be secured through purchase, inheritance, lease, loan, borrowing, sharecropping and appropriation.

While this formal land tenure system with transferable ownership rights exists in some parts of the country, most of Guinea's tenure systems and types are based on informal and customary law. The customary tenure structures include a range of tenure forms, including individual and communal ownership, use rights, and pastoralist rights. Customary tenure

systems vary by region, but are characterized by the following general attributes:

- (1) land and resources are inalienable,
- (2) access to land is secured by social identity and kin-group membership; and
- (3) different use-rights may be granted for the same land.

As the population increases, customary rights have increasingly focused on families and individuals, rather than on lineage and tribe (World Bank, 2006).

Statutory vs customary. Land tenure in Guinea can be classified into statutory and customary and falls along a rural-urban divide. Land tenure legislation is more oriented toward urban areas. The Land Code recognizes private ownership of land, and the formal law grants owners' rights to use and alienate land held in ownership. Land rights must be registered with the national land registry and be included within a local land tenure plan. Once established, land rights registered under formal law are enforceable against competing claims. In urban areas, especially Conakry, demand for land is greater than supply, and residents rely on legal titles to determine land ownership.

*Table 6: Property registration: performances in Guinea and comparing countries
(Doing Business, 2018)*

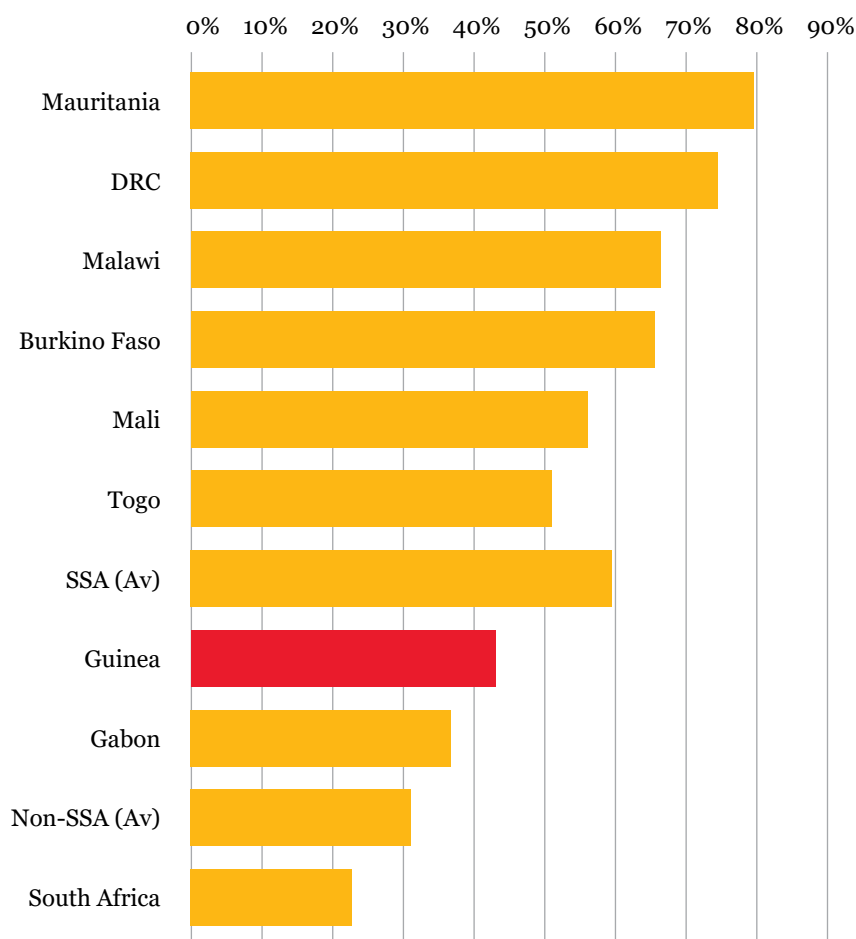
Indicators	Guinea	Mali	Cote d'Ivoire	Mauritius	Sub Saharan Africa	Overall top performer
Procedures (number of)	6	5	6	5	6.2	1 (3 economies)
Time (days)	44	29	30	17	59.3	1 (4 economies)
Cost (% of property value)	8.9	11.8	7.4	6	78	0 (5 economies)
Quality of the land administration index (0-30)	6.5	8	10.4	17	8.6	29 (Singapore)
Rank (out of 190)	140	137	113	35		

High land prices exclude women, displaced and low-income people. Registration of land requires a public process to confirm the occupant's rights and the lack of competing claims to the land. Few rural people have the knowledge and resources to register land, and the state has limited capacity to register land. Furthermore, large parts of the population, including displaced persons, refugees, and migrants to urban areas, have limited access to land. Despite women being responsible for nearly 80% of the country's food production, only a small percentage of women own land in Guinea. Instead, they can obtain use-rights to agricultural land through their husbands and sons, and they are usually dependent on those relationships to maintain their rights of access to land.

The plurality of tenure systems complicates access to land. In general, customary property rights remain dominant in rural areas. Customary rights are secured by the person who initially cleared the piece of land. Management and use rights of the land fall to the land founder's family or descendants, but the ownership of land remains with the state. Usufruct land rights are recognized within the formal legal system as well as the customary system. The legal regime in Guinea is further complicated by the fact that, for the large Muslim population (80% of the total population), a blend of formal law, Islamic (Shari'a) law and customary law governs property transactions, especially those related to marital property and inheritance. For example, although formal law may provide equal rights of inheritance to men and women, any disputes arising from inheritance may be resolved outside the formal court system at the village or local administrative level. In settling such cases, local communities may give precedence to customary law, Shari'a law or some combination of the two.

The lack of fluidity in the land market in Guinea directly impacts the housing finance market. In a market economy, land is less liquid than other assets as it has a fixed location and plots are imperfect substitutes. The existence of customary tenure contributes to reduce the liquidity of land. In Guinea where most of the country's land is unregistered and governed by customary law, the housing market is distorted: although customary law may provide secure tenure, the land could not be accepted as collateral by a bank because its repossession would be difficult. This would further extend the time and increase the cost necessary for the bank to dispose of the land in order to recover the loss of the loan.

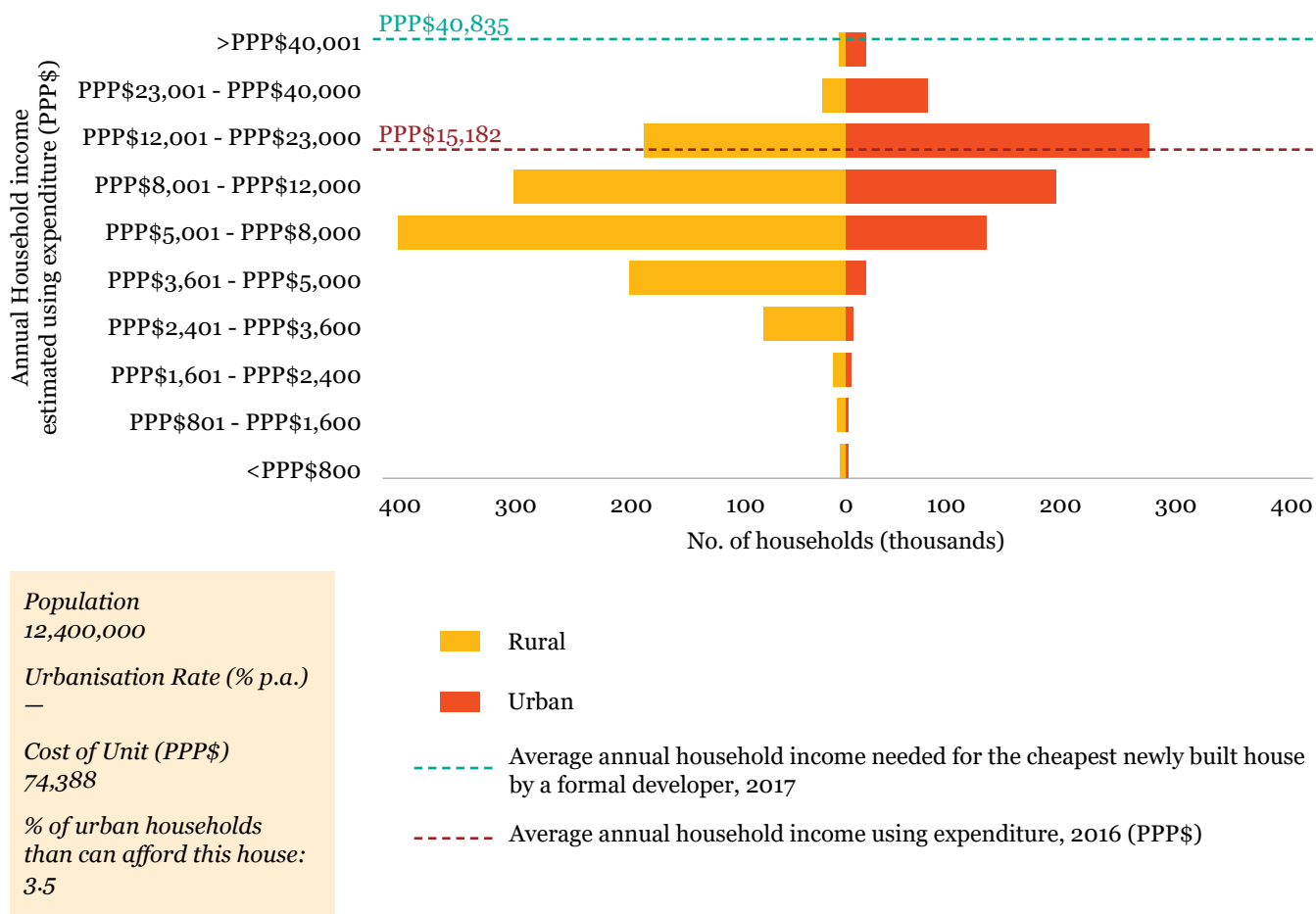
Figure 30: Share of slums in urban population.



Data: World Urbanization Prospects, 2014.

Sticky land markets, where land transactions are difficult because of unclear property rights for example, create large transactions costs in trading land plots and in modifying their use which increase the price of housing while potentially limiting public revenues. These transaction costs would imply that either the buyer has to purchase the land at a price which is higher than its value or the seller must be willing to sell at a discounted price. Because of these frictions, transactions are rare which in turn means that land plots are used sub optimally, not at their best and highest value, as their purchase or rental is usually much higher than their intrinsic value, preventing the sale from taking place. This mechanism limits the intensity in the use of land and specifically would tend to discourage increases in building densities (or number of floors) which could potentially lower housing costs through the provision of more numerous housing units and improve living conditions through more space per household. Similarly, sticky land markets would equally limit public revenue collection from property taxes for example and would prevent significant land value capture from public land conversion.

Figure 31: Housing affordability in Guinea.



Data: Center for Affordable Housing (CAHF), 2017.

Note: The housing affordability calculations make use of the average costs of an affordable housing unit in each country, prevailing minimum down-payment requirements and mortgage rates, typical mortgage terms and the distribution of household incomes in both urban and rural areas. The house costs, down payment and household incomes are all valued in PPP dollars using exchange rates calculated by the International Monetary Fund.

At least in partial response to sticky land markets, the formal housing market is unaffordable to many and only serves a very small minority.

The affordability graph in Figure 31 uses C-GIDD (Canback Global Income Distribution Database) 2016 consumption data for households (in PPP\$) and applies various assumptions relating to house price and mortgage affordability. Plotting the number of households by annual household income, in rural and urban areas, the graph offers an indication of housing affordability and suggest where investors and developers might target their efforts. In Guinea, the cost of a unit built by a formal developer is estimated at 74 388 (PPP\$) and is affordable to only 3.5 per cent of the urban population. While the factors behind housing unaffordability in Guinea, and Conakry in particular, deserve more analysis focusing both on the demand and the supply side, complex and costly land markets are certainly a factor.

Very high housing prices and difficult access to credit drive the poorest out of the formal housing market. Prices in new up-market development in the district of Kipé, on the north coast of the capital are estimated at US\$ 2000 per square meter (CAHF, 2017). Access to housing is even more difficult due to very high interest rates. The overall lending interest rate in Guinea stood at 17.26 percent from 2006 until 2017. The mortgage rate at Ecobank, one of the leading commercial banks in Guinea stands as high as at 16.5 per cent.

The Government's response to housing informality is limited. Policy to address informal housing is not integrated, vacillating between a laissez-faire approach – with informal land allocation in parallel to formal land systems- and a forcible slum-clearing approach, where residents are not necessarily granted compensation. Furthermore, any action is constrained by the pervasive lack of data on the issue. The supply and quality of informal housing stock is not well-documented or understood. National construction statistics only include information on formal construction, as self-builders do not belong to any association, nor do they pay company or income tax. In this way, investment and labor activity involved in formal housing construction is not systematically included in national accounts records.

Institutions and Finances

Superimposition of competences between Ministries weakens any cohesive and long-term vision of urban planning. In the particular case of waste and urban networks management, the Ministry of Decentralization and Territorial Planning and the Ministry of Environment present overlapping responsibilities (see p47). Responsibilities in urban transport regulation are not clearly defined either. Although road building and maintenance responsibilities seem to be clearly divided - central government is responsible for trunk roads whereas secondary and local roads fall under the responsibility of local authorities – lack of resources and coordination in practice hinder any coordination. Responsibility for planning and regulating public transport also seems clearly divided. Nevertheless, the human and financial resources devoted to the tasks are inadequate, and insufficient consultation and coordination between institutions can sometimes lead to major problems. One consequence of the institutional weaknesses and lack of resources is the absence of reliable statistics on urban transport.

Table 7: Responsibilities of local governments in public service delivery under the current Local Government Code.

Infrastructure and Transport	• Construction and maintenance of communitarian/secondary/tertiary roads • Construction and maintenance of public building and spaces
Urban Management	• Cleaning of public streets • Automobile and pedestrian traffic, public parking, and other uses of public roads • Maintenance and modification of cemeteries
Local Development and Urban Planning	• Development planning • Technical management of architecture and urban planning • Implementation of operations related to city planning

The purpose of decentralization is to place responsibilities to deliver services to people in the hands of those that are ultimately accountable in front of their constituency and also more knowledgeable about local challenges and opportunities. Decentralization has however progressed slowly over time in Guinea and, despite recent progress remains largely theoretical.



Decentralization in Guinea

Contemporary decentralization policies and local government processes in Guinea date back to 1985, when the then Head of State, Lansana Conté, articulated a radical break from authoritarian-socialist centralization and a move towards pluralist democratization, economic liberalization and (to a lesser extent) towards decentralization. Since then, decentralization has been on Guinea's national political agenda, albeit with ups and downs and – importantly – despite “co-habiting” with a dominant and deeply-rooted paradigm of centralized government and public administration.

Between 1985 and 2006, Guinea's decentralization policy moved forwards in a largely piecemeal way, underpinned by constitutional commitments but implemented through a series of ad hoc legislative and regulatory instruments. The 2006 Local Government Code marks a watershed: Guinea's first systematic legislative instrument to spell out a broad and over-arching institutional framework for decentralized governance. The 2010 Constitution re-affirms decentralization as a key principle underlying territorial administration, spelling out that elected local government is made up of regions and communes.

Since 2010, decentralization in Guinea has moved forward in a number of ways:

- In 2011, the Government published its “white paper” on decentralization and local development (Lettre de Politique Nationale de Décentralisation et de Développement Local – LPN-DDL), setting out a broad reform agenda and identifying a range of ambitious objectives related to local government and its role in development;
- In 2016, the Government established (as a budget line item) the Fonds National de Développement Local (FNDL, National Local Development Fund), to be partly financed out of 15% of mining royalties. Related to this, in November 2017, the Agence Nationale de Financement des Collectivités Locales (ANAFIC, National Agency for Local Government Finance), intended to manage the FNDL and other funds, was established;

- Very recently, in February 2017, a revised and updated Local Government Code has been enacted, giving more flesh to the bare bones of constitutional provisions, and specifying that communes and regions are the two forms of local government. While there clearly are differences between the earlier law (2006) and the new one, these are not radical or fundamental;
- Most importantly, new local elections held in February 2018, after having been delayed for 8 years. Local elections for communes were first held in 1992, after which no further elections took place until 2005. For a variety of political and other reasons, new elections were not held in 2010-11, and elected councils were replaced by special delegations (appointed by the Government). From 1992 to 2018, then, properly elected commune councils have been the exception rather than the rule. This has almost certainly had a negative impact on accountability, deprived communes of much of their legitimacy and dis-incentivized commune management.

Decentralization in Guinea is now building up a degree of momentum – provided that the results of local elections are upheld, that commune councils and mayors take up their positions, and that indirect elections of regional councils go ahead. Assuming that the FNDL becomes operational, that ANAFIC gets going, and that other elements of the LPN-DDL are implemented, then decentralization in Guinea is likely to become more meaningful and more strongly entrenched.

But overall (1985-2018), decentralization in Guinea has been half-hearted and hesitant. It has certainly not been a prominent or major policy priority. The national Government, which has been pre-occupied by wider economic and public finance issues, does not appear to see decentralization as a flagship reform program. Compared to its peers in West Africa and other countries in Sub-Saharan Africa, Guinea has been much more cautious and much less committed in pushing forward decentralization as a reform agenda.

As in most francophone local government frameworks, ascribed commune functions are very generally defined: local planning and local development, vital and civil registration, social and economic infrastructure (including roads and streets), hygiene (including waste management), basic education, public health, social services, and security. Regions also have functions: support for economic activities and value chains, vocational training and secondary education, environmental management, road maintenance, etc. As with other francophone local government frameworks, local government functional assignments are implicitly “concurrent”, shared (in undefined ways) with the central government, and not exclusive to local government.

There is a general lack of clarity as to who is responsible for what between the central government and the local government. Local governments operate under the supervision (“tutelle”) of the State (as implemented by representatives of the State in each administrative unit) and alongside de-concentrated central government departments (which both deliver services on their own account and provide local government with technical and other support). Most central government departments have de-concentrated units at the regional and prefecture levels; some have sub-prefectural units. In all cases, these units are administratively accountable to Governors, Prefects or Sub-Prefects and technically accountable to their line ministries; they are also, where appropriate and necessary, expected to provide local governments in the same administrative jurisdiction with technical and other support. For example, the Public Works departments in regions and prefectures would not only ensure direct implementation of the Ministry’s programs but would also (in principle) assist communes in implementing local government public works programs (e.g. local road maintenance, construction, etc.). In return, communes might be expected to provide financial or logistical support to those de-concentrated units (e.g. office space, additional contract-engaged staffing, etc.).

Table 8: Administrative structures in Guinea

Level	Administrative unit	State representative	No.	Corresponding local government	No.
1	Regions (or Ville/Region)	Governor	8	Region (or Ville/Region)	8
2	Prefectures	Prefect	33	No equivalent	-
3	Sub-prefectures	Sub-Prefect	337	Communes (rural)	304
				Communes (urban)	33
		No Sub-Prefect		Communes (Conakry)	5

In Conakry, attribution of responsibilities in terms of service provision is further complicated by existence of a two-tiered system. Administratively, Conakry’s entire urban area makes up a Region, headed by a Governor. Unlike other Guinean regions, however, Conakry is not broken down into prefectures or sub-prefectures. Its territorial sub-divisions are its five communes.

- The lower tier is made up of five communes, of very different sizes, populations and urban characteristics. Table 9 provides some basic information on the five

communes. Each of the five communes is functionally equivalent, has its own elected mayor and council, and its own commune administration. The communes are directly supervised (through administrative “tutelle” by the Governor of Conakry (rather than by a prefect, as is the case with other Guinean communes). Conakry’s communal arrangements are similar to those that apply to other communes in the country as a whole – with the one major difference being in the status of each commune’s Secretary General, who also seems to function as a sub-prefect with respect to the de-concentrated line departments that operate within the jurisdictions of each commune.

- Conakry’s upper tier local government is the Ville (or city), encompassing (but not controlling) all five communes. The Ville has a council, headed by the Regional Governor, made up of representatives from each of the five communes and representatives of social and economic organizations (appointed by the President and numbering fewer than 25% of the council’s commune representatives). State supervision (“tutelle”) of the Ville is the responsibility of the Ministry of the Interior. Conakry is thus both an administrative unit and, at the same time, a local government unit, both being headed by the Governor (appointed by the President).

These Conakry-specific institutional arrangements are far from clear. It is not clear how the Governor is able to act as both the head of the Region and as *de facto* “mayor” of the Ville, how de-concentrated line departments inter-act with or support the Ville and the communes,¹⁷ and how the functions (and revenue-collecting powers) of the Ville and the communes are differentiated. In practice, there is a generally high level of confusion.

There is no clear distinction between the service delivery functions of the Ville and those of the communes. The Ville’s mandated functions as spelled out in Ordinance No. 002/PRG/SGG (5 January 1989) are very similar to those of the

Table 9: The five communes of Conakry

Commune	Population	Area (km ²)	Population density (persons/ km ²)	Characteristics
Kaloum	72,725	3.9*	18,647	Location of most national government ministries and agencies, headquarters of large firms, port, industry; high density
Dixinn	162,862	8.1	20,106	Commercial and formal residential; high density
Matam	168,238	5.2	32,353	Commercial and formal residential; high density
Matoto	774,415	208.6	3,712	Mainly formal and informal residential; lower density
Ratoma	796,419	184.3	4,321	Mainly formal and informal residential; lower density

¹⁷ Although this problem of the relationship between local government and de-concentrated line departments is common to all areas of Guinea.

communes: urban roads and transport, management of markets, cemeteries, public spaces, etc.. Predictably, this lack of clarity leads to a degree of confusion and duplication.

There is a mismatch between the responsibilities of communes in principle and what services they actually provide in practice. In principle, the five communes are responsible for providing a range of “classic” municipal services and local infrastructure: planning and development control, management of public markets and bus/transport depots, management of cemeteries, running emergency services, collecting and managing solid waste, building and maintaining streets and pavements, ensuring vital/civil registration for local citizens, contributing to basic education and primary health, keeping public order, and the like. In practice, while there are differences between the five communes in terms of the services they actually provide, it is clear that Conakry’s communes do not “do” a great deal – and certainly very little in terms of urban management.

Commune involvement in the construction and maintenance of urban roads and drainage (another key municipal public good) appears to be all but non-existent. No commune has an annual road and drain management plan and none of them have well-resourced and properly-staffed departments for this. The Road Maintenance Fund (FER)¹⁸ has never made any funding available to the Ville de Conakry or the five urban communes – partly because resources are scarce and spread out, but also because Conakry’s secondary roads are (for the most part) beyond maintenance and require complete rehabilitation. It is not the case that the Ville and the communes do not know which roads or drainage networks they are responsible for¹⁹ – they either do not have the resources to meet their responsibilities or have little incentive or inclination to prioritize road/drain maintenance or upkeep in their limited budgets.

The Ville’s involvement in the maintenance and construction of urban roads and drainage is minimal. Even if the Ville did engage in road/drain maintenance in any significant way, it is entirely unclear which parts of the urban road/drainage network would fall within its remit and which parts would be the (notional) responsibility of the communes. While it does appear to make sporadic investments in a few road upgrading sub-projects, the Ville does not plan road/drainage maintenance. FER does not provide it with any funding for road maintenance in Conakry.

Insofar as Conakry’s urban local governments are responsible for providing public goods and services, their ability to actually deliver them is shaped by (a) the availability of finance (revenues) and (b) the ways in which they allocate financial resources (expenditure). The communes and the Ville are hamstrung as service delivery units by their low levels of revenues and by the limited extent to which they are able (or incentivized) to spend on the provision of urban public goods and services.

¹⁸ The “Fonds d’Entretien Routier” (FER) is the national agency which funds a share of road maintenance expenditures in Guinea.

¹⁹ The assignment of responsibility for different types of urban roads (primary, secondary, tertiary) have been clarified by Decree D/2017/331/PRG/SGG (“Portant classification des routes et attributions des maîtrises d’ouvrage”). The Ministry of Public Works is responsible for primary urban roads in Conakry, while the Ville and communes are responsible for secondary and tertiary urban roads.

Arrangements for local revenue administration²⁰ in Guinea are complicated. Important taxes and revenues are collected by the DNI (Direction Nationale des Impôts) and then shared out to the Ville and communes in a variety of ways (with central government retaining its share in some cases), depending on the type of tax/revenue. The following table provides an indication (for a sub-set of all revenue sources) of the complexity of local revenue administration and shared revenue arrangements.

Table 10: Revenue sharing arrangements in Conakry.

Revenue source and revenue administration		Sharing arrangements		
Tax/charge	Responsibility for revenue collection	Ville	Communes	Central Gov't
Property tax (CFU): individuals	DNI and commune	40%	60%	0
Property tax (CFU): organizations/firms	DNI and commune	40%	40%	20%
Business licenses	Commune	100% for firms and companies	100% for individuals	0
Professional tax (TPU)	DNI and commune	100% for taxes levied in Madina, Niger and Keniero markets	100% for taxes levied in other markets	0
Vehicle tax	DNI and commune	25%	25%	50%
Construction permits	Ministry of Housing and Urban Development	30%	30%	40%
Quality assurance tax	National Commerce Directorate	50%	50%	0
Mining royalties	National Mining Directorate	Not known	Not known	Not known
Rents and occupation licenses	Cadastral service and commune	0	60%	40%

Data: PASDD, 2018

Revenue sharing arrangements in Guinea blur accountability, in the sense that taxpayers are unlikely to know which level of government receives shares (and how large a share), and are thus unable to hold them to account for services. Taxpayers in Kaloum, for example, are very unlikely to know that their commune, the Ville and the central government receive different shares of the property tax that is collected by the DNI. This provides few incentives for Kaloum to deliver better services (given that citizens will not be able to link the taxes they pay with what they receive as services from the commune, as opposed to the Ville or central government) and makes it difficult for taxpayers to hold their commune (as opposed to the Ville or central government) to account.

²⁰ PASDD (Programme d'Appui Sectoriel à la Décentralisation et à la Déconcentration) has recently commissioned invaluable and detailed technical assessments of local government revenues in Guinea, as well as training materials and guidelines on local revenue collection. These PASDD reports and documents are included in the bibliography. Readers interested in gaining a detailed understanding of local revenues, revenue sharing and revenue administration should consult the PASDD reports and materials.

Complex revenue-sharing arrangements of the kind practiced in Guinea are problematic for local government in two ways: (a) the amounts to be received (as revenue shares) in the coming year are usually not known by local governments, thus making any planning/budgeting almost meaningless; and (b) actually getting the national tax office to disburse revenue shares to local government treasury accounts is a constant struggle, in part because commune and Ville officials have little idea of what has actually been collected and what is due to them.

Overall, the Ville and communes have limited revenues – around GNF 25,000 per capita in 2015 and GNF 28,000 per capita in 2016. By international standards, these are low, as illustrated in Table 11. In per capita (US\$) terms, Conakry's local governments have nine to ten times less revenue than Bamako's District and communes and five times less revenue than does the Ville de Niamey.

Table 11: Local government revenues in Conakry, Niamey and Bamako

	Bamako (District & 6 communes combined)		Niamey (Ville)		Conakry (Ville & 5 communes)	
	2015	2016	2015	2016	2015	2016
OSR as % of total revenues	36%	23%	45%	44%	99%	93%
OSR per capita	3,716	3,970	4,094	3,791	25,096	26,074
F CFA or GNF						
US\$	\$6.97	\$7.45	\$7.68	\$7.11	\$2.79	\$2.90
Total revenues per capita						
F CFA or GNF	10,198	17,393	9,007	8,640	25,349	28,163
US\$	\$19.13	\$32.63	\$16.90	\$16.21	\$2.81	\$3.13

Notes:

OSR = Own Source Revenue

F CFA = African Financial Community Francs

GNF = Guinean Francs

Direct transfers or grants from central government represent a very small proportion of total revenues. Grants or transfers amount to between only 3-9% of total commune revenues; the Ville, on the other hand, receives no such grants at all. Central government transfers (“dotations”, provided out of the MATD budget) to communes began in 2015 – starting with GNF 300 million per annum for each of the five communes and now (in 2017) amounting to GNF 350 million. While these grants are expected to increase over time, they are nonetheless very modest – amounting to around GNF 570 per capita in 2016. To the extent that the State provides local government with direct fiscal support, it does so in very limited ways. Although comparisons with local governments in other countries are complicated by a variety of factors, it remains clear that Guinea's central government makes a much less important fiscal contribution to local governments than many other countries.

Conakry's local governments are weak performers in terms of tax collection. When looking at own-source revenues alone (and setting aside central government grants), Conakry's local governments are weak performers. As shown in Table 11, not only do Bamako's and Niamey's local governments have much larger overall revenues, they also raise over twice as much (per capita) in own-source revenues than do Conakry's.

Total annual spending per capita for Conakry's local governments is extremely low – taking total expenditure for all 5 communes and the Ville, per capita spending in 2015 was around GNF 25,000 (or US\$ 2.8) and in 2016 was around GNF 28,000 (or US\$ 3.1). In comparison, total national public expenditure in Guinea amounted to GNF 1.15 million (or US\$ 128) per capita in 2015 and to GNF 0.97 million (or US\$ 108) per capita in 2016.

And overall, Conakry's local governments spend a large proportion of their budgets on recurrent expenditures and remarkably little on capital, thereby limiting investment in service provision. Annual spending by the Ville and the communes is dominated by recurrent expenditure, which accounts for between 75-85% of all spending in 2015/2016. In contrast, recurrent expenditure accounted for between 60-65% of total national public expenditure in the same period. Annual capital expenditure levels are low, accounting for between 20-25% of total spending and amounting to GNF 4,000 -5,500 (or US\$ 0.5-0.8) per capita. This compares to national-level public capital expenditure levels of GNF 300-400,000 per capita.

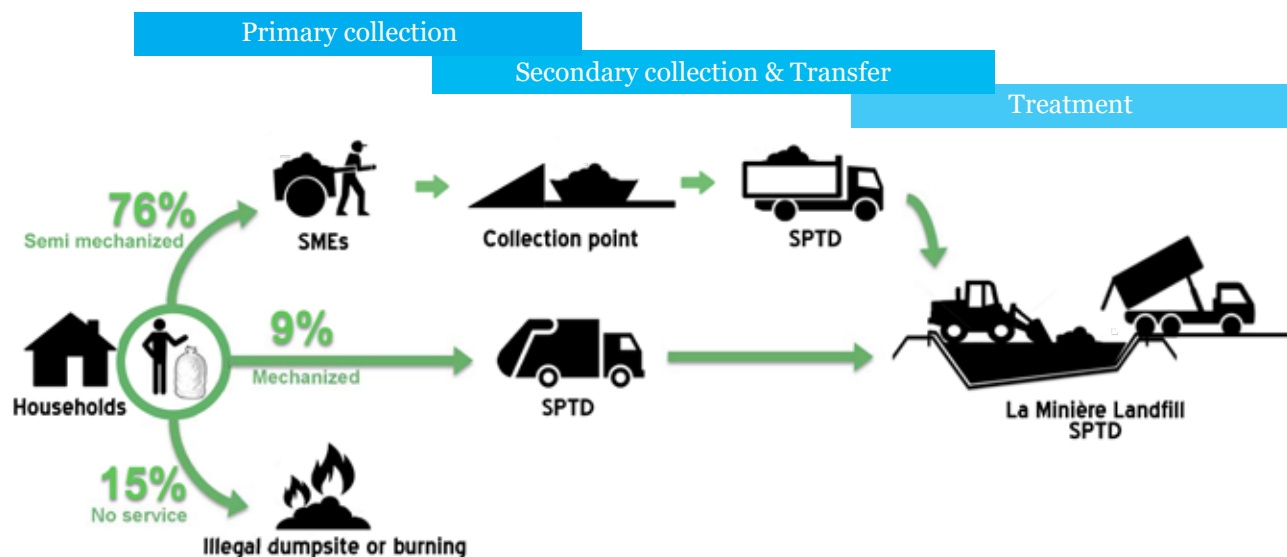
Spotlight on Solid Waste Management - *Looking in the Rearview Mirror*

The Solid Waste Management system in Conakry has degraded over the years from one of the best to one of worst performers in West Africa. The system was largely built and structured through the three Urban Development Projects (UDP) financed by the World Bank from 1985 to 2013 (see Box 5). From 2000 to 2006 approximately, authorities had managed to structure the relationship between private and public entities and it arguably became the most successful SWM system in West Africa. The *Service Public de Transfert des Déchets* (SPTD), a public entity created in 1997, specialized in secondary (mass) collection and transfer from collection points to the landfill. And, upstream, primary collection was ensured by 35 competitively selected Small and Medium Enterprises (SMEs), which were each in charge of one or more collection areas. Fee recovery rates for the SMEs reached 70% for households and 90% for businesses. Today however, the system has largely collapsed. And while it was considered in 2006 that only 15% of the solid waste volume was illegally dumped, this proportion has climbed to 55% in recent years.

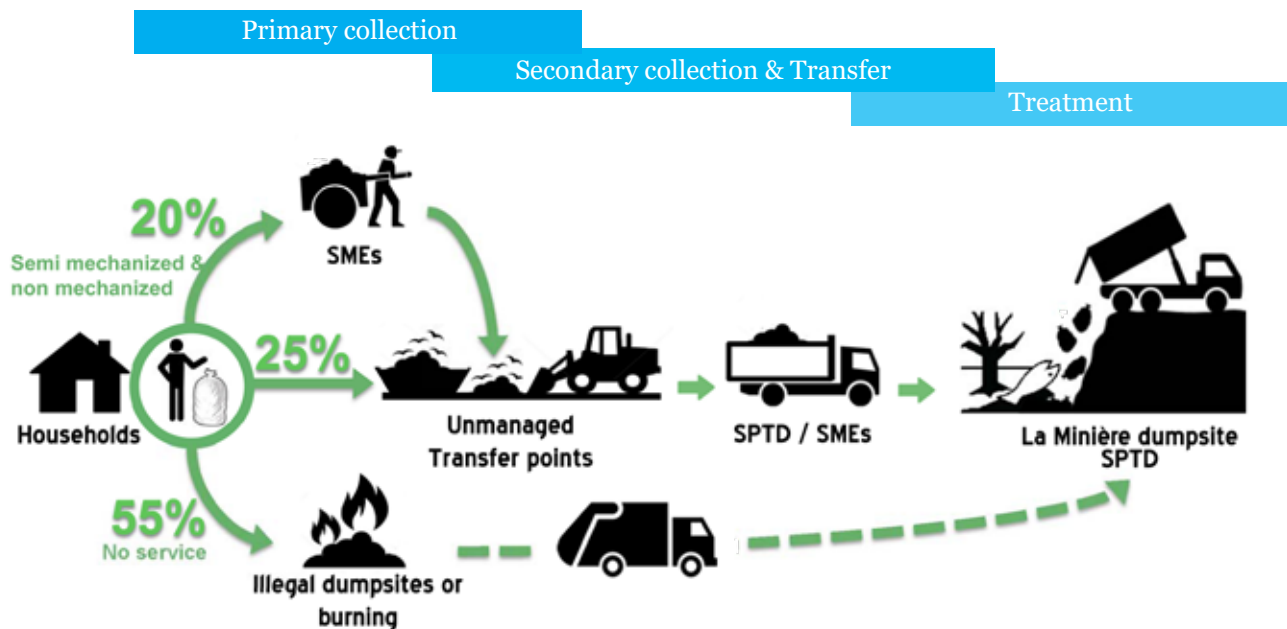
Currently, solid waste management in Conakry is deficient and imposes high externalities on residents. Collection rates are as low as 20%, much lower than in Dakar (75%), Ouagadougou (55%) or Accra (80%), with virtually nonexistent recycling, meaning that the large majority of waste is illegally dumped or burnt. In parallel, the only official dumpsite, La Minière, has largely exceeded its capacity. This excess of waste and mismanagement resulted in the collapse of one side of the dump in August 17, onto neighboring houses, killing 10 people. Discussions about closing La Minière dumpsite have been on the political agenda since the 1990s. Heavy contamination has been observed in surrounding areas, through groundwater contamination but also due to constant uncontrolled waste combustion, generating a large plume of acrid smoke. Externalities imposed by waste mismanagement go far beyond the immediate vicinity of the current dumpsite (Table 12), and are a key factor in flooding as drainage is obstructed by loose waste.

Figure 32: Operation structure of the Solid Waste Management system between 2000 and 2006 (top) and in 2018 (bottom)

2000 - 2006



2008





Three bumpy decades of Solid Waste Management through three Urban Development Projects (UDP)

Prior to UDP1: Before the first Urban Development Project, waste management was organized around street cleaning services (agent voyer) and followed no specific structure. In 1985, decentralization led to transfer the responsibility of SWM to the five municipalities forming the agglomeration of Conakry.

UDP1 (1985-1990): UDP1 was designed to address the important needs in the urban sector, inherited from years of lack of investments with a focus on capacity strengthening at the central and local levels for infrastructure programming, setting up financing mechanisms for basic service management through the improvement of the business tax and improvement of drainage and solid waste management (SWM) services. In 1987, the UDP1, seeking better coordination, created the UPSU (Unité de Pilotage des Services Urbains). This entity was in charge of collecting and transporting Conakry's waste to La Minière dumpsite. At the time, the total volume was estimated to be 600 tons per day - of which UPSU collected 30% - and La Minière dumpsite was outside of the urban area. From 1987 to 1992, UPSU collected up to 70% of the city's waste. In 1993, the situation rapidly deteriorated when direct funding of

operating expenses by IDA stopped. The collection rate collapsed to less than 20% from 1994 to 1996, and UPSU had to cut costs and staff from 418 to 353. At the same time, small scale private initiatives took place with three entities: Poubelles de Conakry, Lavenet and Inacav.

UDP2 (1990-1998): As part of UDP 2, the Government decided to reform the system through the Programme Transitoire de Gestion des Déchets (PTGD) in 1996, implemented in January 1997 with the help of UDP 2. This PTGD program was based on a structuration of the sector in three segments: pre-collection, collection/transfer and treatment while subdividing the city in 44 collection areas of 4,000 to 5,000 households, serviced by a total of 35 SMEs. These SMEs were selected through competitive bidding and were awarded the pre-collection services of one or several collection areas under a concession arrangement. Under this arrangement, each SME was granted the right to freely contract with clients and collect fees directly, making service transparent and traceable. Concurrently, a capacity building program was designed to capacitate SMEs. The program consisted of technical training,

Table 12: Consequences to health, natural resources and living conditions of waste mismanagement

Sectors potentially affected by poor management of the waste stream	Description of impacts
Water quality	Degradation of water quality due to physical and chemical contamination
Air Quality	Degradation of air quality due to waste burning
Drainage and flooding	Obstruction of drainage channels (natural network and channels and culverts), heightened risk of flooding
Health	Increased prevalence of water-borne and vector-borne diseases.
Natural resources	Pollution of coastal areas and loss of fish resources and tourism
Living Conditions	Loss of amenities due to odors, visual impacts and destruction of natural areas

accounting and reporting, study tours, guarantee fund, supervision, etc. The Guarantee Fund ran from 2000 to 2006, providing SMEs with access to banking services such as credit lines, concessional loans and factoring, in order to finance growth and ease access to working capital. The system was successful in attracting young entrepreneurs into the SWM business, leading to the creation of 3,000 formal jobs. The 120,000 households who subscribed were serviced twice a week for a fee ranging from GNF 1500 to GNF 4500 per month depending on an affordability criteria. Fee recovery reached 76% for households and 90% for businesses. In 1997, a new entity was created to replace UPSU: the Service Public de Transfert des Déchets (SPTD).

UDP3 (1999-2013): UDP 3 was originally conceived as a two-phase operation.

UDP3 – 1st phase (1999-2005): This first phase capitalized on lessons learned in the two previous projects and two components were dedicated to SWM: converting La Minière dumpsite into a controlled landfill and providing institutional reinforcement. Collection points were equipped with bins and a public awareness campaign was launched. The program showed a real improvement in the quality of service, raising collection from a mere 10% in 1996

to 64% in December 2001. Overall the cost per ton for transfer and landfilling was estimated to be US\$ 3.00. However, the system was based on the assumption that SMEs would progressively professionalize, increasing in performance and quality of service through integration, mechanization and economies of scale. This professionalization did not happen as expected, performance did not improve leading to a lack of general motivation to maintain support for the system. In conjunction with the growing institutional instability during the early 2000s, the Government of Guinea dropped the support mechanism to SMEs including the guarantee fund in 2007, and the situation quickly reverted to its pre-reform state with collection rates plummeting to 10% to 20%.

UDP3 – 2nd phase (2008-2013): Phase 2 of UDP 3 was relaunched in May 2008, hoping to kick start the system through new investments, but following the December 23, 2008 coup d'état, the Bank suspended all activities, including the UDP3 phase II. UDP3 activities resumed in February 2011 and the closing date was extended to June 30, 2013. But the SWM related activities were dropped because of instability in the SWM governance structure, in particular, the decision of the government to privatize the whole solid waste management chain and the change in vocation of the site identified for the new landfill.

Complex institutional arrangements blur accountability and lead to inaction. This complexity exists on a horizontal level (between ministries) and on a vertical level (between the central government, Ville de Conakry and the five communes of Conakry). Three ministries play a role in the governance of the sector, if medical waste is excluded. They are the Ministère de l'Environnement, des Eaux et Forêts (MEEF), the Ministère de l'Administration Territoriale et de la Décentralisation (MATD) and the Ministère de la Ville et de l'Aménagement du Territoire (MVAT).

- Within MEEF, one division²¹ is specifically in charge of defining, implementing and monitoring policies that pertain to Solid Waste Management with the goal of improving living conditions of urban and rural populations.

21 Division Assainissement et Valorisation des Déchets Domestiques et Assimilés.

- MATD, in accordance with the Code des Collectivités, is in charge of implementing the decentralization process and supporting regional and local entities in effective implementation of the decentralized duties and responsibilities, including SWM services. The Ministry has no operational role in relation to waste management but contributes to the transfer of human and financial resources to local authorities, including for the fulfillment of their waste-management functions. MATD is also the ministry in charge of the newly created national sanitation and public health agency (ANASP²²). ANASP mission is to implement and supervise the national SWM policy. Its role is mostly linked to the development of adequate regulation and the support of public entities regarding Solid Waste. The absence of operational mandate as well as adequate funding leaves the agency with very few means to effectively improve the situation in Conakry.
- MVAT is in charge of establishing regulations on urban development and construction, oversee improvements of living conditions, and support Local Authorities. Its role includes planning, preparation and implementation of primary waste management systems for cities in collaboration with local authorities.

And, as is the case for many public services (documented above), responsibilities are further blurred because of overlap of mandates between the central government, the Ville and the five communes of Conakry. These complex institutional arrangement never allowed for proper sector governance which led to degradation of the sector's performance.

22 Agence Nationale d'Assainissement et de Salubrité Publique.

Lack of funding and the removal of guarantees to the SMEs led to a general degradation of the sector's performance. In 2007, the system was heavily impacted by the decision of Government to cancel the SME guarantee fund that was instrumental in keeping SMEs activities sustainable. Concurrently, insufficient funding to SPTD triggered a general degradation along the entire value chain. Allocation of financial resources or capacity to control technical and financial performance remained below the required levels and sector performance fell back to pre-Urban Development Project levels.

Attempts to privatize the sector (2009 – 2018) have so far been unsuccessful. They were supposed to increase performance of the system but instead entailed a significant increase in operating expenses and the sector plunged into chaos for lack of adequate financial resources. STDP, under the responsibility of the Gouvernorat, became the sole professional operator in 2015 after the departure of all private entities. Among the various attempts, one can list the following:

- Zoomlion (March 2009 – June 2011)
- IC Transport (Nov. 2011 – April 2012)
- SATAREM-EGIS (Nov 2012 – Early 2014)
- SATAREM-SOGUA (2014)

Since 2012, development agencies, mainly the European Union are working with the Government of Guinea on Solid Waste Management strategies and operations.





Recommendations

Concerted actions are needed for Conakry to deliver on livability and competitiveness. These actions deal with how Conakry is built and organized (Planning), how people are connected to opportunities (Connecting) and how it is managed and financed (Financing). Investing in one of these areas but not in the others, can probably deliver some short term gains, but will fail to unleash Conakry's potential to act as an engine of growth and living condition improvement. For example, interventions aiming at upgrading slums in one area of the city will only be partially successful if there are no investments in connective infrastructure for local residents to access the more numerous but more distant job opportunities. In other words, interventions on Planning, Connecting and Financing are a suite, not a menu. The main recommendations are identified below:

- **Planning:** The largely organic urban growth experienced by Conakry over the last decades has resulted in poor housing conditions, lack of access to public services, apparent scarcity of available land for productive activities and vulnerability to natural hazards. Actions are needed to ensure that urban land is used efficiently, that populations have access to basic services, and can be housed decently and safely. In order to do so, obsolete planning documents should be updated but starting with local development plans as a first step rather than masterplans. In parallel, effective implementation of these plans will require the strengthening of local capacity through staff training. Given geographical constraints in Conakry, it is essential that land use is optimized. This means that it is used intensively and at its best value. This could also contribute to lessen the business environment constraints reported by firms. In order to do so, the functioning of land markets should be improved through simplified registration procedures, and improved land registries and tenure security. Guinea has made progress on land registration over the past few years and these efforts should be pursued. Good practices from abroad, leveraging GIS technologies, can also be capitalized on for the difficult problem of building land registries. Finally, slum upgrading operations should be piloted with an important focus on building the resilience of the community in the face of natural hazards.

- **Connecting:** Owing to its geography, the concentration of jobs at the end of the peninsula, the lack of a mass transport system and the poor condition and lack of supply of road infrastructure, residents of Conakry are largely disconnected from job opportunities and face high externalities in the form of congestion and pollution. To remedy this situation, the most obvious recommendation is to invest in a mass transport option in segregated space (bus or rail), as a backbone for passenger transport, that would shorten the commute to work and lower congestion levels. But complementary actions are also needed to develop urban road infrastructure and explore ways in which the use of the rail infrastructure could be further mutualized between passenger and goods transport. Finally the regulation and professionalization of the informal collective transport operators could help better serve the public through structuration of feeder routes around the mass transport option.
- **Financing:** Improvements in livability in Conakry hinge on more and better public service delivery. But investments in these infrastructure are constrained by the low resources available to local governments. To overcome this situation, it is important to first clarify the responsibilities of the various actors of urban development in Conakry (Ministries, Ville and Communes) as superposition of similar mandates blurs accountability and leads to inaction. Second, for the ongoing process of decentralization to bear its fruits, it is indispensable that local governments are equipped with financial resources. A number of avenues could help achieve these goals and have been successfully applied outside Guinea. Clarifying and reforming revenue sharing arrangement between central and local governments can increase fiscal space predictability for communes and incentivize better revenue collection. A more efficient tax administration, backed by the training of staff, could also improve local governments' own source revenues. Finally, transfers from the state, through transparent mechanisms, to share the wealth from natural resources could allow for more and better spending from local governments.

	Objectives	How?
Planning	• Optimize urban land use • Increase access to basic urban services • Increase access to decent, affordable and safe housing	• Update and implement planning documents starting with local development plans that promote resilience through land use and infrastructure coordination • Build capacity to implement planning regulations • Improve the functioning of land markets through simplified land registration procedures, improved land registries and tenure security • Pilot slum upgrading operations and explore efficient ways of providing social housing for the poorest
Connecting	• Connect people to opportunities • Open up isolated neighborhoods	• Develop and optimize urban road infrastructure and mutualize railroad infrastructure • Organize the public transport around segregated transport corridors • Regulate and professionalize the public transport sector • Organize the transport of goods and separate the flows from passenger transport
Financing	• Promote effective decentralization • Increase revenues for basic service delivery	• Clarify the respective mandates of central and local governments as well as those of the Ville of Conakry and of its communes (including for Solid Waste Management). • Align mandates with capabilities: revenues and staff (including capacity building for national agencies such as ANASP) • Reform revenue sharing arrangements to steady and clarify local governments' resources and incentivize tax collection • Increase local governments' own source revenues through a more efficient tax administration • Increase transfers from the central government through the operationalization of FNDL and ANAFIC

Planning

UPDATING AND ENFORCING PLANNING INSTRUMENTS.

Start with local development plans to pave the way for urban master plans.

Most planning documents in Guinea are either out dated or not enforced. While master plans play a key role as they lay out the city's spatial structure along with definitions of land uses and city expansion, governments could, in the short term, invest in local development plans that constitute simple first steps towards developing urban master plans. They outline both a perspective and a vision for the future development of a city. More particularly, they have the advantage to (i) present the current stage of the city's development—where are we now? (ii) set out the directions of change—where do we want to go? and (iii) identify the thrust areas—what do we need to address on a priority basis? Such plans also suggest alternative routes, strategies, and interventions for bringing about the change— what interventions do we make in order to attain the vision? They provide a framework and vision within which projects need to be identified and implemented. It establishes a logical and consistent framework for evaluation of investment decisions. The development of these plans is also a good occasion to foster community participation in decision making. These plans also constitute a formidable opportunity to engage with citizens and understand the constraints that they face. In fact, engaging citizens is paramount to ensuring that plans are effective and can be enforced. Planning should not constitute an exercise conducted in a closed room.

Adequate trainings and ownership from local authorities are critical to ensure that urban plans are enforced.

In Guinea, the land code and town-planning code have not been disseminated around national and local administrations, thus resulting in multiple interpretations of the law depending on each institution/actor, and therefore hampering enforcement. Therefore, it is instrumental that local authorities are properly trained on how to use and implement such plans: this will not only ensure their enforcement but also foster local authorities' ownership. Furthermore, they could be key actors in gathering data on land use, land values, basic infrastructure, service provision, connectivity to social and economic centers (jobs), and informal settlements which are needed to inform any plans. More importantly, this would help them serve their constituents and enforce plans and regulations.

Simple land use plans can help city authorities ensure compliance with planning guidelines and building codes, guide development by allocating budgets to different zones, and develop zoning regulations.

The current land code is obsolete (1986) and no longer reflects Conakry's urban challenges. Preparing land use plans can ensure that public and private developments in various zones are developed harmoniously, and that developments provide mixed economic and residential activities as well as green and protected areas. Another advantage of simple and understandable plans is that they can guide urban development without imposing high development costs which come with unrealistic or too numerous regulations (such as minimal plot sizes for example).

Coordinate land use planning and infrastructure for increased resilience by integrating the assessment of flooding and climate change risks into urban plans. As urban population grows in Conakry and vulnerability increases, it becomes urgent to manage such growth in a way that fosters cities' resilience to natural hazards and the impacts of climate change. Addressing this challenge requires innovative, open, and dynamic data collection and mapping processes that support management of urban growth and disaster risk. Success is often contingent on: local capacities and networks to maintain and utilize risk information, enabling policy environments to support effective data management and sharing, and targeted tools that can help translate data into meaningful action.



Supporting cities in risk data collection

The national government could support cities in participating in emerging data-collection efforts led by international cities. As the World Council on City Data (WCCD) highlights, there may be advantages in aligning data collection with international indicators, including that participation creates opportunities for cross-city learning and knowledge exchanges with other cities on cost-effective policy. There may also be other benefits: WCCD argues that participating in a transparent and independently verified

international data collection initiative can improve a city's investment attractiveness and can become a means for cities to leverage funding. One example is the WCCD's ISO 37120 Sustainable Development of Communities: Indicators for City Services and Quality of Life. This set of 100 standardized indicators and data collection methodologies was developed by cities, for cities, and offers flexibility, so that it is up to each participating city to set targets according to their own priorities.

SIMPLE STEPS TOWARDS IMPROVING LAND MARKETS' FLUIDITY

Simplifying procedures can be a first step to reduce barriers to formally developing land. Improving the registration rate of rural and peri-urban lands and clarifying their ownership can also increase the rate of formal conversion from rural to urban land, as well as the registration of new urban subdivisions that reduce informal developments. Likewise, improved coordination between local and national officers in the approval of building permits is vital to encouraging formal urbanization. Better engagement of local actors in urban expansion decisions can prevent invalid authorization and subsequent demolition and relocation costs incurred by the national government. Actions and decisions at the local and national levels must be synchronized and only one message sent to people and developers.



Using Blockchain to administer and manage land

Blockchain technology has the potential to revolutionize the way records or value, such as a land plot, are stored and transferred. Blockchain, as the name suggests, is a “chain of blocks”, where each block represents a record. This record could represent an asset like a land plot, an identity, or even a cryptocurrency. Blockchain is useful since it is – decentralized (processing takes place on several “nodes” or computers connected to the blockchain network decreases the transaction processing time and possibly, cost²³), distributed (the data is spread across different nodes, increasing transparency and reliability and improving disaster recovery) and an immutable ledger (blocks are connected through a complex mathematical formula that is cryptographically secure, making it almost impossible to change a record in the past).

Evidence from pilots indicates that blockchain can help to register land titles and transactions in a tamper-proof way. This can be seen in the cases of the Bitfury pilot in Georgia²⁴ and the Consensus pilot with the Dubai Land Department²⁵ which register land titles and transactions respectively on a private blockchain. Blockchain can be very useful in low governance environments as time-stamped, tamper-proof trans-

actions can be stored on a blockchain. This could be used as a pilot to increase trust and transparency. The simplest application would be virtual notarization on a public blockchain accessible to all on the network. Instead of requiring a notary to certify previous ownership while transferring an asset, the blockchain can process the virtual notarization at a lower cost. While the public blockchain is more transparent and tamper-proof, a private blockchain pilot can also be useful if it comes with a stamp of approval of the government that would uphold the legality of transactions on the blockchain platform.

However, blockchain requires certain “off-chain” conditions to function well. For a blockchain-based solution for land administration to work effectively, accurate, digitized records are required²⁶. This is what is behind the success of BenBen, a private company, in Ghana, that uses surveying and mapping techniques to obtain accurate field information before digitizing it on their platform. Once accurate, digital information is available, it is used for transactions²⁷, which in turn has helped galvanize the use of land in commercial markets. It should be noted, however, that leapfrogging technology has much potential but only if major underlying legal problems are properly addressed.

23 The Internet of Value-Exchange, Deloitte Report: <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Innovation/deloitte-uk-internet-of-value-exchange.pdf>

24 The First Government To Secure Land Titles On The Bitcoin Blockchain Expands Project: <https://www.forbes.com/sites/laurashin/2017/02/07/the-first-government-to-secure-land-titles-on-the-bitcoin-blockchain-expands-project/#4feddb424dcd>

25 Blockchain Virtual GovHack video: <https://www.youtube.com/watch?v=-yOWGwzKaxI>

26 Other constraints to be considered include the privacy of data, capacity related to understanding blockchain advantages and disadvantages, data storage, the recognition of customary ownership, and the legal recognition of transactions done on the blockchain.

27 World Bank Interview with BenBen team (April 2017).



Successful and simple experiences in land management in African countries

Improving land registries

- Rwanda's comprehensive land-tenure reform has shown early successes. Over 2005-12 it implemented a nationwide program to issue land titles based on photomapping technology at a cost of less than \$10 per parcel. Madagascar, Namibia, and Tanzania are undertaking similar efforts.
- Tanzania surveyed all communal land and registered 60 percent of them at a cost of \$500 per village. Ghana and Mozambique have begun to follow Tanzania's example.
- Ethiopia issued certificates for 20 million parcels of land at less than \$1 per parcel and mapped them onto a cadastral index map at less than \$5 per parcel in 2003-05.

Streamlining registration procedures

- In 2009, Kenya adopted a new land policy that strives to streamline land administration processes by reducing the stamp duty from 25 to 5 percent of the principal amount; by providing VAT exemptions for developments with more than 20 low cost units; and by reducing the tax on mortgages from 0.2 to 0.1 percent.
- The introduction of Lesotho's Land Administration Authority in 2012 has significantly improved land registration in the country by reducing wait times and improving application turnaround. It also has gained general support from land-holding communities.

- Computerizing land records and registration systems helped significantly cut the number of days to transfer property for Ghana (169 to 34) and Uganda (227 to 48).

Improving tenure security

- In 2012, Namibia passed the Flexible Land Tenure Act, which allows communities to obtain blocks of multiple plots and a "starter title" that grants perpetual occupancy and transfer rights. This Act is aimed at the 30 percent of Namibian residents that live in informal settlements (CAHF, 2013). Residents can also apply for full, "mortgageable" land titles. Upon receipt of title, the communities are responsible for upgrading the site infrastructure. The legislation has been regarded as innovative in its methodology of recognition of incremental tenure and building.
- In 2011, Senegal passed a new Land Tenure Act under which those with temporary occupancy permits in urban areas can convert the permits into permanent title deeds at no cost. Improved tenure security further helps increase housing investment and improvement, access to housing finance, and the activity of the formal land market.
- Kenya, Lesotho, and Tanzania were utilizing bulk surveying and land use planning approaches to regularize tenure in slums.

Source: World Bank 2015, Stocktaking of the Housing Sector in Sub-Saharan Africa.

Clearly defined tenure and property rights are the first requirement for building solid and transparent valuation systems. Meeting this need will also provide city planners with the necessary tools and information to plan future urban expansion. Adapting legal frameworks and expanding the formally recognized definitions of property rights are critical tasks for land management and planning. In Guinea, the absence of an inclusive definition of property rights and tenure status restricts land use and is at the root of land insecurity and conflicts, as seen. That customary practices (urban and rural) are more widely used than the law is a fact that calls for more inclusive definitions of property rights. Other countries with diversity of tenure types have adopted similar approaches, allowing left-out groups to invest and eventually access finance through their land. Clear and transparent land valuation supports effective functioning of land markets. Thus solid valuation methods that more sensitively reflect market prices and institutions that systematically collect this information are essential.

ADDRESS SLUM FORMATION AND INVEST IN MORE AFFORDABLE HOUSING

Another advantage of coordinating land use and infrastructure is the ability to manage informal settlements and make Conakry more inclusive. The large share of urban population in Conakry living in informal settlements (two thirds) calls for urgent actions to upgrade precarious dwellings. This applies particularly as settlements in Conakry evolve in inner city areas where some infrastructure already exists, but does not meet the needs of the population. In Tunisia, for instance, an upgrading program implemented between 1975 and 1995 reduced slum housing. National utilities made massive investments in water and sewage infrastructure and upgraded informal settlements. Post-development provision of infrastructure and services is more expensive than planning land use and infrastructure in advance, and less efficient than taking advantage of existing urban infrastructure in low-density areas and improving it.

The Government has a strong role to play in ensuring housing affordability, through targeted investments in infrastructure for low income groups and through regulatory measures to improve the function of value chains. In the national report drafted after Habitat III, the Government pledged to “include the financing of affordable housing in budget priorities. This unfortunately has not been followed with act and Guinea does not have any policy to promote affordable housing. The Government should prioritize the scarce resources available for housing and invest them in the expansion of basic services (land and infrastructure) for low-income households. Complementary to this, it should seek to address core bottlenecks in regulatory framework for formal and informal housing and introduce initiatives to improve the markets for housing inputs (land, building materials, and finance), thereby enabling households in all income segments to improve their own housing and move up the housing continuum. Experience shows that governments across the Africa region have had difficulty promoting sustainable, broadly affordable housing through direct supply of units due to targeting problems and cost constraints. The key challenges for improving the quality of existing housing stock and expanding new housing at affordable levels are to lower the costs of inputs for housing across the entire sector, while at the same time expanding access to different types of credit needed, including commercial mortgages, and developer and secondary finance. Informal housing delivery channels will require incremental and parallel improvements in expanding access to savings, small loans and

construction materials. Supporting institutional and regulatory frameworks must also evolve to ensure that construction and development standards provide a level of safety and security, but are not so restrictive or costly that they are ignored. Governments have a role in enabling housing markets and engaging the private sector to expand access to adequate shelter and to be a vehicle for economic growth.

Coordination is key. Coordination is a critical ingredient for the sustainable development and growth of Conakry. If transport investment decisions are not taken in close coordination with land use planning, Conakry will continue to grow into forms that set back its development and affect its livability for decades if not centuries. The physical structure of a city, once established, can remain in place for over 150 years (Hallegatte, 2009). Coordinated land use and infrastructure planning involves bringing together decisions of infrastructure investments with the development of productive and other logistical infrastructure, as well as accompanying investments in connectivity with flood protection investments and efforts to enhance structural drainage to increase resilience. By bringing together the different pieces of the puzzle, coordination between land use management and connectivity has the potential for enhancing a city's efficiency.

Connecting

There is an urgent need to set up a transport authority or a coordination mechanism between all services involved in urban mobility and for endorsing a comprehensive urban mobility strategy. As recommended in the Grand Conakry vision 2040, setting up a transport authority or at least a coordination mechanism is a priority to improve transport services regulation, traffic management, Public Transport services, parking management, non-motorized modes, etc. The geographical scale and competencies scope should be determined for the future Transport Authority to fully embrace all mobility elements. The ongoing “PDU” could represent a first diagnosis and action plan and could provide the future Authority with a reliable strategy framework. However, the risk that the document remains an academic work, unused and uncommunicated is high. Ownership of the action plan among institution and citizen will only be won with public consultation and political endorsement. This could be one of the first missions of the future Authority.

There is an urgent need for expansion and improvement of road networks (inter-neighborhood), traffic management systems, intersections, sidewalks and pedestrian equipment to meet mobility needs. Road infrastructures are scarce and limited, restraining the mobility of the population. There is an urgent need to expand the paved and all-weather road network, mainly the secondary and tertiary roads to increase accessibility of the population to transport services and opportunities. These programs provide also major opportunities for labor intensive operations suited for low-skilled local workforce as experienced worldwide. In the Democratic Republic of Congo, Gabon or Côte d’Ivoire, employment of low-skilled people is highly encouraged in urban slum upgrading projects to foster community participation, and enhance and social and economic inclusion. Tasks usually consist of tertiary road upgrading which rely on labor-intensive construction techniques (fabrication of interlocking pavers). Improved traffic management system would further facilitate the flows of vehicles in intersections and reduce congestion. Expanding sidewalks would increase city walkability and improve pedestrian safety in a metropolitan area where walking remains the first mean of transport for the population and notably the poor.

There is a strong rationale for a mass-transit corridor. Conakry is indeed a linear shaped dense city with a strong bipolar urbanization pattern, creating unidirectional and linear traffic flows concentrated on the 3 main arterial road. The motorization rate is still low, the population has a high dependence to public transport services and the main national roads are in good condition with a relatively large Right Of Way. Some preliminary studies (SYTRA 2006) have assessed the pertinence and cost of such mass-transit solution. With an expected assessed ridership of 230,000 pass/day, this mass-transit solution along with restructuring of public transport services and additional roads constructed could be a first step to meet the needs of the population. This Mass transit would give more accessibility to the tight Kaloum peninsula and would also give space for a redistribution of activities toward the inland, providing poor income populations living in the suburbs a chance to access jobs and services anywhere in the metropolitan area. The density of employment in Kaloum and of transport demand in the rest of the urban area could become an asset for a cost effective and efficient

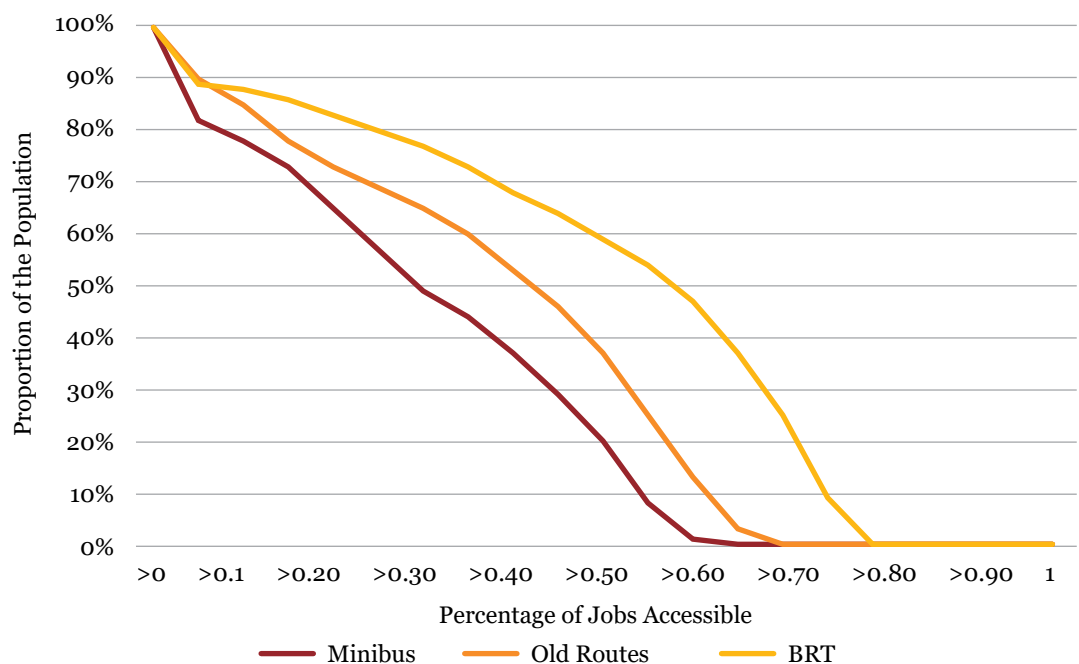
mass transport option to connect people to opportunities. A mass transit system would also importantly shift transport demand away from individual motorized solutions and could thus alleviate congestion and other linked negative externalities.

Simulations conducted for this report show that investments in transport options could yield significant accessibility gains to employment opportunities that would benefit the whole of the urban area of Conakry. Three scenarios were considered:

- Current situation: the collective transport system is dominated by magbanas and shared taxis that mainly operate on 10 main routes at an average current speed of 11.725 km/hour. Frequencies would range from one vehicle every 5, 10 or 30 minutes depending on the line.
- Re-instating formal bus lines: Operating on 4 main routes, as in the past, these buses would circulate at an average speed of 15km/hour and would have a frequency of one bus every 11-13 minutes.
- Mass transport option: For the purpose of the scenario we look into the introduction of a BRT system which would run on a separated lane at a speed of 27km/hour in combination to 3 formal bus routes running at a speed of 15 km/hour.

On average, the share of accessible employment opportunities within one hour would jump from 23%, to 29% and 40% for the minibus, the formal bus routes and the mass transport scenario. With a mass transport option, accessibility could increase by 17%, nearly double its current level.

Figure 33: Distribution of accessibility to employment in 3 transport scenarios



The potential of railway for mixed freight and passengers should be further investigated to lower road traffic and reduce the impact on congestion. The two railways are currently used mainly for bauxite traffic. They represent however major opportunities and rare infrastructure for the transport of goods and passengers within the city. Negotiations should be started with the mining concessionaires to broaden the use of the railways to the transport of mixed freight and to more regular and frequent passenger services.

There is a need to renew the current public transport ageing bus fleet and to increase the number of mid-size and higher capacity buses structured along a hierarchical and organized network. This fleet renewal scheme would allow to organize a bus public transport network around a future mass-transit corridor considered as a backbone. It would also serve better the population with less congestion and reduced externalities (congestion, pollution, safety) thanks to new and higher capacity buses. Local informal operators are ready to engage in such a scheme that could be based on the experience of Dakar where a leasing mechanism enabled to renew the fleet with marginal public subsidy while formalizing the sector and assigning routes to informal operators. Road network improvement are however critical first to envisage this restructuring, along with basic services enhancement such as waste management and drainage, as poor road condition impact operating costs and damage the fleet.

In the short term, there is a need to organize the traffic in Kaloum where mobility is heavily hampered by conflicts between traffic of goods and of passengers. Given the concentration of flows in Kaloum (passengers and freight), it is important to focus on truck itineraries to improve circulations plans within the peninsula. Truck parking is also an issue as idle trucks occupy the space dedicated to pedestrian transit. The proposal from the “PDU” to include truck transit and parking inside the port could be a first step towards a solution. A specific attention should also be paid to limit oil truck circulation into the city.

In the longer term, the possibility of a dry Port in Kagbelen should be explored along with a complete reorganization of the logistics chain. The implementation of a dry port in Kagbelen (km 36) along with the use of railway to transport freight from the port could be a good opportunity to reduce the flow of trucks within the city. This should however be done along with relocation of part of the wholesale dealers currently located in Kaloum and in Madiba to avoid inefficient counter flows of trucks from Kagbelen.



Example of a successful renewal fleet scheme: the case of Dakar (2000-...)

The International Development Association (IDA) approved in May 2000 an urban mobility project including the implementation of a leasing mechanism for the renewal of an aging mini-bus fleet. Once the initially informal and independent operators consolidated into 13 Economic Interest Groups (EIG) following action from the Executive Council for Urban Transport in Dakar (Conseil executive des transports urbains de Dakar – CETUD), the mechanism took off in November 2003 with a leasing to the Urban Transport Financing Group (Association de financement des professionnels du transport urbain de Dakar – AFTU). In September 2008, 505 new mini-buses were in operation, leading to a partial renewal of the fleet, as well as the improving of operations and passenger comfort.

This scheme was the first in the Africa Region and enabled to replace about one-fifth of the existing fleet. It is widely considered as a major success and

as stated in the post-analysis made by SSATP (Kumar and Diou, 2010) in 2010, “acquisition of these new mini-buses has dramatically changed the face of the urban transport industry in Dakar. Minibus routes and stops have been formalized and passengers are satisfied with the quality of transport services. As a result of the new business model implemented for the new vehicles, revenues for owners have increased while fare increases have been kept to a minimum through negotiations. Surveys show that the leasing scheme is sustainable and the reimbursement rate is 100 percent.”

A second phase was implemented between 2010 and 2013; it included changes in the vehicle make and in the financial setup for the CETUD and it concerned 1 102 vehicles. Finally, the third phase, expected to begin in 2018, targets the remaining 900 vehicles.

Finance and Institutions

The virtues of local government in urban development and urban management are well-known: compared to most central governments, urban local government is more likely to work actively to create a better and more livable and competitive city for its constituency, is more likely to take a city-wide approach to urban development, and is probably better placed to raise revenues and finance for those purposes. However, not all States choose to empower urban local governments.

A first step that needs to be taken by the Government, then, is deciding on whether it wishes to draw on local government as a mechanism for city management. That is clearly a sovereign decision, with wide ramifications. In the event that the Government does opt for local government as part of its institutional response to the challenge of urban development, then a number of important issues need to be “resolved” in order to make local government in Conakry “work”:

- (a) “Jack of all trades ... master of none”? Firstly, there needs to be some serious thinking done about what it is that urban local governments would or could be expected to do. At the moment, the local government code provides urban local governments with a very broad mandate, a good deal of which either overlaps with the functions of de-concentrated line departments or overlaps with other local governments (Ville vs. communes, in the case of Conakry). Are urban local governments – as things stand – in a position to meet such broad functional mandates? Given the current situation, a broad functional mandate would seem inappropriate. Communes and their residents would probably be better served by limited local government mandates, with a focus on a number of key (and doable) municipal functions – such as participation in city-wide planning processes (to ensure local input), intermediate-level waste management, roads and drainage, together with minor municipal management functions (such as public markets, cemeteries, and vital/civil registration). A limited, but clear, mandate is likely to be well within the reach of urban local governments in Conakry; a wide and vague functional mandate, on the other hand, would encourage distraction, lead to dispersal of effort, and over-stretch the management capabilities of elected and other officials.
- (b) Clarity and consistency: in identifying doable functions for Conakry’s local government, it will be important to ensure that these be assigned in an unambiguous way. If communes are to be responsible for secondary and tertiary urban roads (and related drainage), then other institutions should not share that responsibility and thus duplicate or compete. This would be especially important when it comes to distinguishing between the functions of communes and the functions of the Ville. It would be equally important to make sure that the responsibilities of de-concentrated line departments are clearly demarcated. Clarifying functional mandates is fundamental for accountability and thus for incentivizing institutional actors to perform. None of this will be easy: Conakry is a large metropolitan city, which needs some kind of supra-communal metropolitan authority for certain purposes (but not for all purposes); the constitution and current legislative framework make it clear

that communes are a “given” and must therefore play a role in urban management; and central government line departments will inevitably (and necessarily) need to play an important part in Conakry’s urban development.²⁸

- (c) Capacitating local government: once their functional mandates and role in the management and development of Conakry are clear, local governments will need to be capacitated. There is little point in assigning specific functions to communes and to the Ville if they are able to take them on. This will mean increasing their revenues. Own-source revenue assignments and arrangements need to be reformed – to clearly distinguish between Ville and commune, to think through and simplify shared revenue arrangements, to increase the extent to which local governments can be pro-active, and to strengthen local revenue administrations. In addition, and very importantly given that own-source revenues will be insufficient compared to functions/needs, central government should ensure that local governments are provided with much larger transfers than is currently the case.

None of the above is short term or immediate. Conakry, however, faces some big and immediate challenges. Meeting these should not be held hostage to medium or longer term reforms – although short term responses should be shaped so as to avoid compromising longer term perspectives or creating “quick-fix” and expedient institutions. That will mean working with status quo arrangements – which are largely anchored in central government institutions.

A first step in strengthening local government revenue mobilization is in reforming revenue assignments. At the moment, many “local” taxes are collected by the National Tax Directorate (DNI) and by other central government agencies, and then shared between central government and local governments. These revenue sharing arrangements, as practiced in Guinea, are profoundly sub-optimal. Reforming these, in one way or another, would be a sound first step towards increasing revenues or (at the very least) making their collection more effective.

One way of dealing with this would be to eliminate revenue-sharing as much as possible – and to fully assign taxes/fees/charges to either central government or to local government and then to make the recipient of those revenues fully responsible for their collection and administration. When revenue collection for certain items is a national function (especially revenues which are of minor importance in overall national revenues) but revenues are shared (or even wholly passed on to local government), the result is often weak collection and lax enforcement (World Bank, 2007). In the case of Guinea (as in most francophone countries), for example, property taxes (CFU) are collected by the DNI but shared with local governments. The DNI has few incentives to improve CFU collection (as it is a relatively minor source of revenue and only a small share accrues to central government) and local governments have little idea of how much is being collected as property tax and what should be shared with them.

²⁸ The PASDD technical support mission (September 2017) made a number of recommendations concerning institutional arrangements for Conakry. These should be discussed and debated by the Government.



The history of World Bank engagement in support to decentralization in Guinea through three Urban Development Projects (UDP)

UDP1 - (US\$ 15 million, 1985-1990) was designed to address the important needs in the urban sector, inherited from years of lack of investments. It aimed to improve the living conditions of the population in Conakry by a selection of infrastructure investments and activities that would have an impact on economic development and job creation in the capital city. It included: strengthening capacity at the central and local level for infrastructure programming, setting up financing mechanisms for the management of basic services through the improvement of the business tax and improvement of drainage and waste management services.

UDP2 - (US\$ 66 million, 1990-1998) continued UDP1 efforts on infrastructure in Conakry and selected secondary cities. The project focused on: infrastructure (primary roads in Conakry and infrastructure rehabilitation, priority investment in 4 regional centers), assets maintenance (mainly secondary roads in Conakry), institutional strengthening and

local revenue mobilization. It introduced new tools (such as street addressing) for the management of cities and the improvement of local revenues, paving the way to UDP3 design.

UDP3 phase I (US\$ 18 million - 2005) has been instrumental in the implementation of the following activities: (a) a solid waste management system based on clear distribution of the financial and technical burden through a public-private partnership; (b) a locally programmed and financed secondary road maintenance program which provided access to densely populated neighborhoods in Conakry; (c) a sustained effort on primary road network on the basis of the existing master plan and in coordination with the technical departments of the government; (d) the introduction of municipal contracts in secondary cities, thereby providing baseline information on the spatial, organizational and financial attributes of Guinean municipalities and helping implement municipal investment programs based

Property tax (or CFU) revenues, for example, could be made into a 100% local tax and then administered entirely by local government – thus providing incentives to those that benefit from property tax revenues to collect them. Conakry Ville and the communes rely on property taxes for about a third of their fiscal and non-fiscal revenues. In many Anglophone countries, property taxes are 100% local taxes and, in most cases, administered by local governments. This is not the case in Guinea or, for that matter, in most francophone countries (McCluskey and Franzsen, 2017). Some would argue that this goes “against the grain” in a country with a franco-phone fiscal paradigm and that – in any case – the DNI is more capable of administering property tax than local government. However, when it comes to the specific case of property taxes, it is by no means clear that central tax administrations are any better than local governments in collecting them.

on priority needs set in local realities and expressed at the local level; and (e) the financial sustainability of municipalities through improved mobilization of local revenues.

UDP3 phase II (US\$ 16 million, 2008-2013) built on the achievements of the first phase and pursued the following activities: (a) a Municipal Contract for the city of Conakry to support the solid waste management system, improve secondary roads and prioritize investments identified in Priority Investment Plans; (b) Municipal Contracts for secondary cities to improve mobilization of local revenues and improve administrative and technical capacity of municipal staff; (c) Institutional strengthening through project management support and the deployment of a tools to better monitor and enhance city level revenue collection (street addressing, computerization of municipal financial statements,...); and (d) an emergency labor-intensive public works program that comprised road maintenance, drainage clearing, and urban works programs to provide employment and

income to households in the poorest areas of Conakry. The project was interrupted in 2008 following the Coup d'état and reactivated in a restructured form in 2011. The main changes from the restructuring was to drop all activities related to solid waste management and the decrease from 40 to 20 municipal contracts for secondary cities.

A key aspect of the third Urban Development Project was the introduction of Municipal Contracts that provided clarity as to the programs to be conducted within a period of five years. These were based on two parallel and complementary audits on (a) a spatially detailed Priority Investment Program for physical infrastructure and (b) the financial and institutional audit that sought to increase revenue mobilization, clarify responsibilities and improve local capacity.

Sources: World Bank, 2007. Project Appraisal Document (World Bank, 2015) and World Bank, 2015. Implementation Completion Report Review (McCluskey and Franzsen, 2017).

If there is no choice in the matter, and many “local” revenues are to remain shared and be collected by the DNI, then the next-best options would be to reform sharing arrangements. This could be done by: (a) simplify sharing arrangements, making it much easier for local governments to understand what shares of which revenues are theirs; (b) greatly increase and clearly define the involvement of urban local governments in revenue administration, thus giving them the opportunity to improve collection and increase revenues; and (c) ensure much greater transparency and predictability in revenue estimates, thus giving local governments a much better idea of what they can expect as shares. The equivocal results of centralizing property tax collection in Tanzania provide a sense of what needs to happen when tax collection is a national function but revenues are shared.

Whatever decision is taken about revenue-sharing arrangements, there are ways of increasing revenues. These are briefly discussed below.



National tax authorities and property tax collection

There are obstacles to consider when the national revenue authority is saddled with the responsibility for collecting the property tax on behalf of local governments. **First**, the property tax is very different in structure from most central-government taxes, and its administrative burden can be significant. The revenue authority needs to realize this and act accordingly. **Second**, the important national taxes (the personal income tax, the corporate tax, and the value-added tax) are likely to remain the central government's priority, especially if administrative resources are scarce. Unless the national agency is properly motivated (possibly through a specific collection fee or a percentage of the amount collected), it is unlikely that collection of the property tax will receive sufficient attention. **Third**, the national agency can perform only the tasks and use only the enforcement mechanisms allowed under the property tax laws, and

these may be quite different from the mechanisms they are accustomed to. **Fourth**, national taxes are taxpayer focused, but the property tax is very much property focused and requires very different maintenance of property and taxpayer databases. **Last**, the national agency will need to cooperate closely with all relevant local authorities on data gathering and maintenance, as well as with other agencies or ministries responsible for property-related data. All these factors will be crucial to the success of the process. **An alternative solution could be for national revenue authorities to assist with the proper training and skills development of local tax administrators and tax collectors concerning processes such as data management, billing, enforcement, and auditing.**

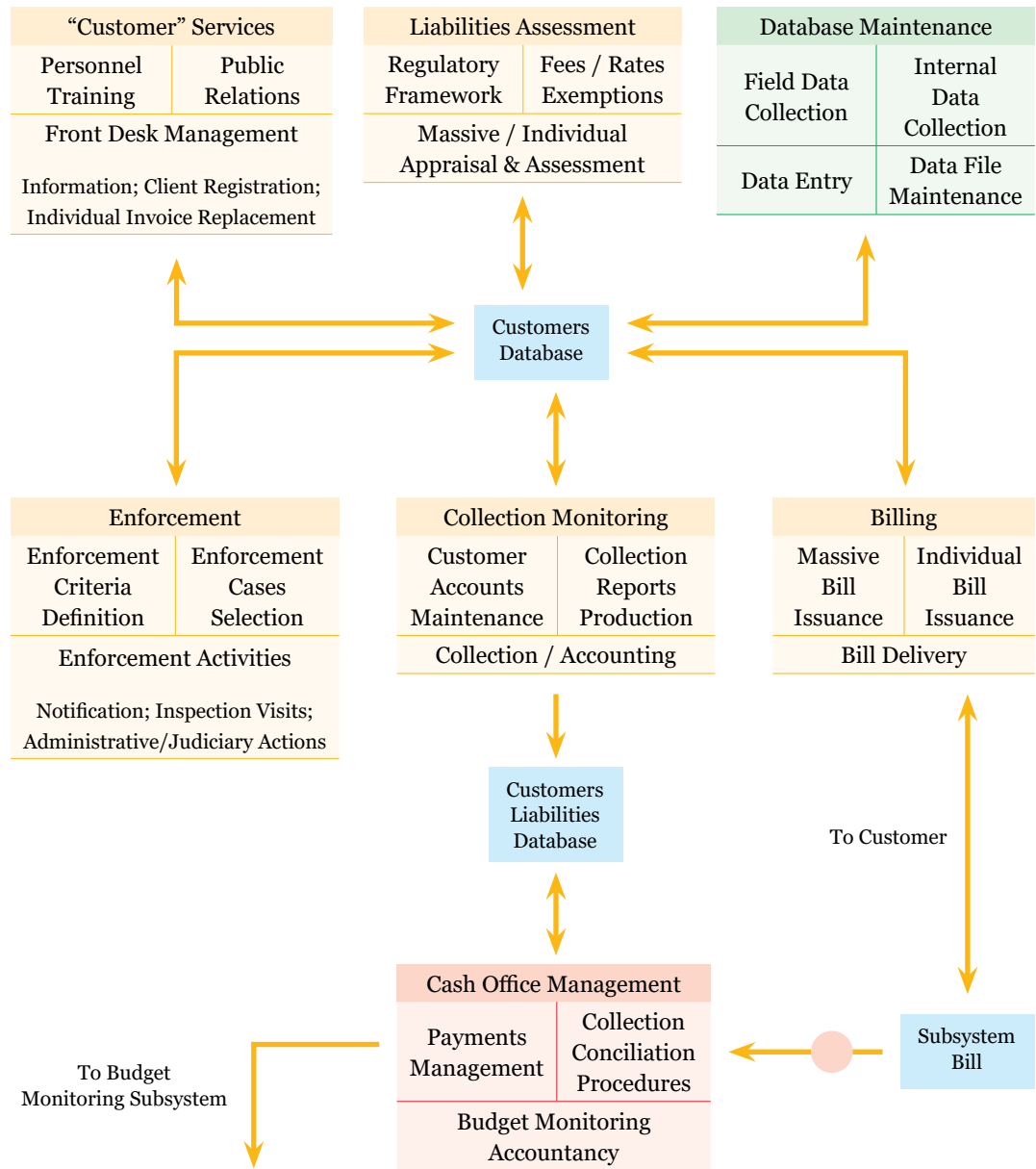
Source: Franzsen & McCluskey (2017: 90-91)

Conducting a detailed analysis of the taxation environment to assess the potential for expanding the size of the tax base and/or increasing the tax rate. This would require a thorough and detailed analysis of the current bases and rates that apply to local taxes in Conakry, followed by an assessment of the potential outcomes of any changes. Municipal contracts, as were established during the third Urban Development Project (see box 10), based on a thorough institutional and financial audit could provide a blueprint for assessing such taxation potential.

Improving revenue administration: in practice and on the basis of experience in most countries, the biggest increases in local “own-source” revenues usually result from improved revenue administration: the primary obstacle to successful mobilization of local revenues is weak administration (Kelly, 2003). Revenue administration²⁹ includes tax base identification, tax base valuation, tax liability assessment, tax billing and collection, tax enforcement, and taxpayer service and dispute resolution. Figure 34 below illustrates the main components in revenue administration.

29 This applies specifically to property taxation, but also to other taxes.

Figure 34: local (property) tax administration system.



Source: Kelly 2003.

There are a number of examples for ways of improving these different aspects of revenue administration (see text boxes below).

Other more basic steps could also be taken to increase local government revenues in Conakry:

- Streamlining the list of local revenue sources and concentrating on the ones that yield significant revenues. Eliminating minor revenue sources would serve to focus attention on key revenues and thus avoid costly distraction;
- Providing local government officials (and others) with basic orientation and training on local revenue sources and their collection.

Conakry's local governments, as we have seen, receive very little in the way of direct grants or transfers from central government. Recently, however, the Government has established: (a) the FNDL, a line item in the national budget; and (b) ANAFIC, which will manage the FNDL. Of equal importance, the Government has also decided to allocate 15% of national mineral royalties to the FNDL, thus ensuring that the latter is provided with regular funding from the national purse. How long it will take to operationalize the FNDL and ANAFIC is not known; nor is it yet clear what a 15% share of mineral royalties will amount to and when those funds will come on stream. Nonetheless, any increase in funding for local government would be helpful.

Sierra Leone: reforming municipal property tax administration

In 2006-07, a set of reforms and improvements to the administration of property tax were introduced in several municipalities in Sierra Leone. These reforms were explicitly designed to be simple, transparent and low cost. The first set of reforms concerned “discovery and assessment”: the process of identifying properties, assessing their value, establishing a property database and then estimating tax liabilities. The process relied on a simplified valuation system, using both simple and more sophisticated proxies to establish property valuations:

- simple proxies (such as property type (commercial or residential), land area and the number of rooms in the structure); and
- more sophisticated proxies (dimensions of the structure, the construction type [timber, mud, corrugated iron sheets or brick], location and accessibility [access to roads, hospitals, water, electricity, etc.] and the facilities on the property)

Properties were located using simple and low-cost GPS devices and assessments were made by a small team of 5-10 local valuers. The process took about 3 months for each municipality.

Following the identification and valuation of all relevant properties, municipalities were assisted in establishing an automated billing system which generated property tax demand notices for each property owner, based on a formula, updated annually by the city councils, linking observable property characteristics to tax liabilities. An IT system made the production of bills relatively straightforward, with each element of the tax liability printed for inspection by taxpayers.

The new system of property tax administration was rolled out alongside extensive sensitization efforts designed to communicate to taxpayers the basis for their tax liabilities, the ultimate purpose of the taxes collected, procedures and timelines for tax payment, and available options for appealing tax assessments.

The final phase of the reform – collection – was focused on putting in place procedures for pursuing delinquent taxpayers. Predictably, this was the most challenging aspect of the system.

The reform program was thus comprehensive, running from the simple identification of properties to the highly politicized task of generating political will to enforce compliance. At every stage, the design of the program was premised on developing a system that was as administratively simple as possible, while ensuring horizontal and vertical equity and the establishment of clear lines of communication between the council and taxpayers. Underpinning all of these goals was a reliance on the implementation of a simple and transparent IT system that was designed locally as part of the reform effort.

The results of these reforms to property tax administration have been impressive. In 2005 property tax was relatively insignificant in absolute terms, and was dwarfed by other taxes (and particularly market dues) as a share of local government revenue. After the introduction of reforms, property tax increased by between 300 per cent and 500 per cent in each of the city councils between 2007 and 2010, and has become an increasingly important source of local government revenue.

Source: Jibao & Prichard (2013)

Spotlight on Solid Waste Management - *Looking Ahead*

A study commissioned by the Government of Guinea in 2017 and presented by Louis Berger identified several strategic aspects for the SWM sector, as shown below. The strategy will be rolled out over a period of 4 years for a cost of USD 100 million of which 90% would be financed by International Development Institutions:

- Improve legal, institutional, social and economic capacity and performance of the SWM sector;
- Modernize pre-collection, collection, transfer and disposal infrastructure and equipment and develop PPPs ;
- Strengthen operational capacity across the sector, develop awareness, training and promote actions toward a better quality of life in Conakry
- Set up sustainable finance mechanism for the sector

In line with the proposed strategy and in the light of recent sector history, a series of activities appear as essential for the successful transformation of the sector. These activities are presented below.

1. FILL KNOWLEDGE GAP THROUGH SECTORAL STUDIES

Sectoral studies could shed light on some important aspects of the solid waste management sector and should be encouraged. Among these are:

- Estimating the cost of environmental degradation caused by solid waste mismanagement. The cost of environmental degradation due to current waste management practices provides a monetized indication of the burden imposed by current sector practices on the country's environment. Given the very low collection rate (20 to 25%), the cost may likely approach 1% of GDP, as seen in other countries of the Region. This figure will put in perspective the substantial impact of waste on the country's economy and provide a base for adequate design and funding of support to the sector.
- Prioritize waste management interventions using a risk based approach. In the implementation of waste management activities, the definition of priorities areas for intervention is almost always based on technical or economic criteria. But in the context of climate change, addressing risks is key to improve urban resilience. Recent studies in Nigeria have shown that waste dumping is the second cause of urban floods in sub-Saharan cities, after insufficient network capacity. Using advanced GIS technology coupled with risk assessment software, can provide a simple risk evaluation of flood hazards across the city that can easily be combined with other factors such as population exposure. When used in conjunction with the drainage network, risk maps provide a good indication of the most vulnerable areas where interventions will maximize flood risk reduction.
- Support the development of primary infrastructure (landfill). The situation of the landfill at La Minière is not compatible with operation. The recent collapse in August

2017, is a demonstration that the site has to be closed and reclaimed. At this stage, it is expected that no new landfill capacity will be available before 5 years. This delay is not compatible with the urgency of the situation at La Minière and further support will be needed to speed up the landfill relocation process. Support could be provided under the form of a TA to assist in the design, procurement and works for the reclamation of La Minière as well as the development of the new landfill.

- Institutional study to streamline responsibilities and develop clear and binding regulatory corpus. The study would help achieve a coherent and efficient institutional structure of the sector, preventing competing roles and responsibilities as well as resources.

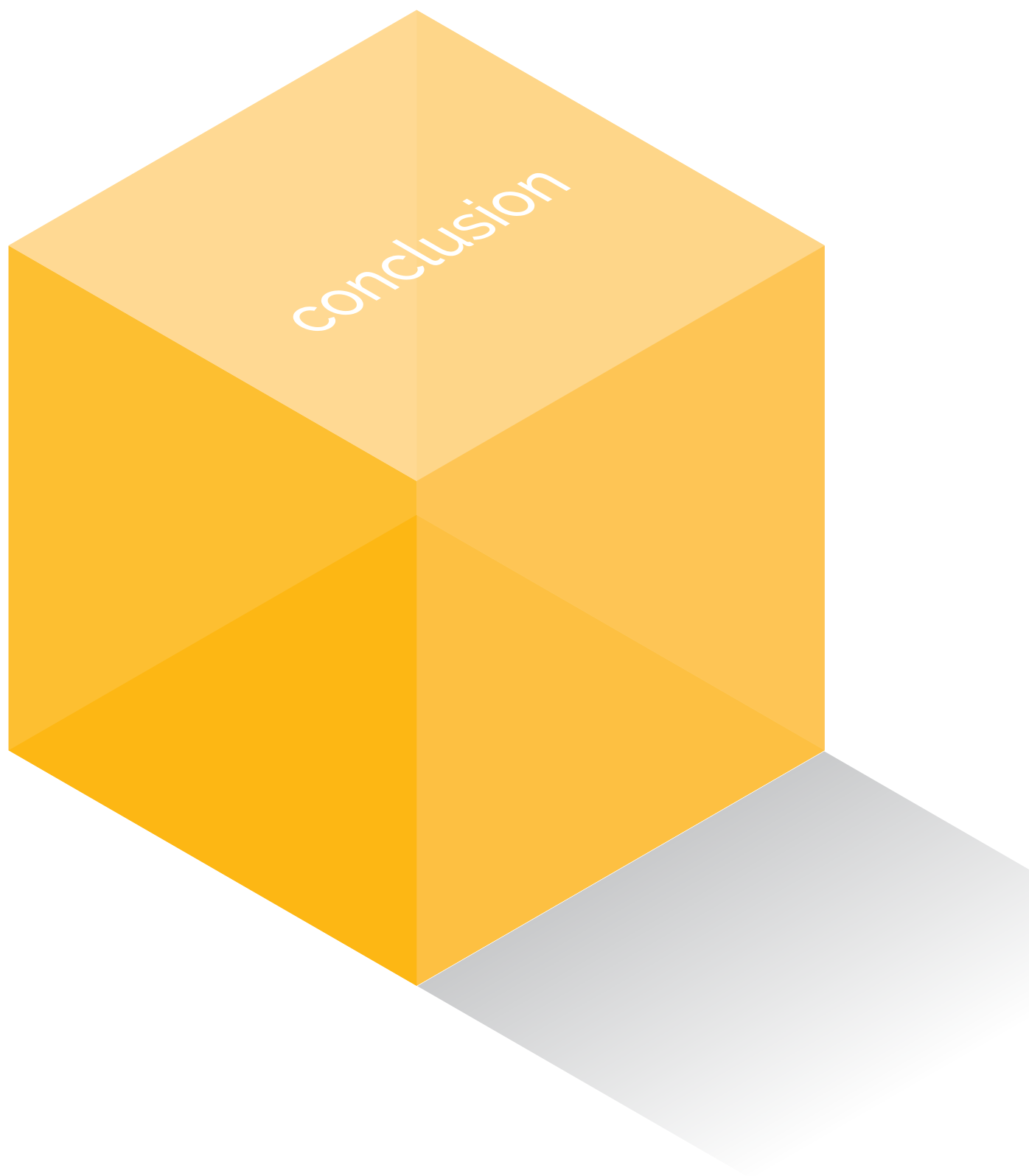
2. CAPACITY REINFORCEMENT FOR ANASP, INCLUDING FOR PUBLIC-PRIVATE PARTNERSHIP CONTRACT MANAGEMENT

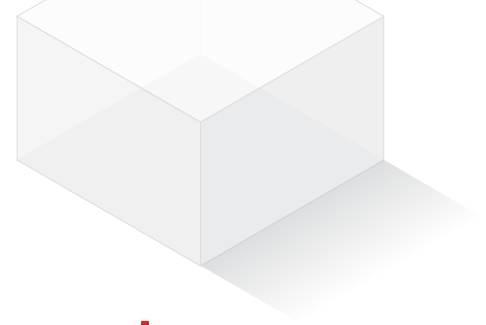
The recently proposed strategy makes the case for full professionalization of the sector through small enterprises for pre-collection and a single private operator for transfer and disposal. Such a structure implies increased responsibilities for ANASP, involving contract management, environmental and technical monitoring, performance management and communication. Given the actual limited capacity of ANASP, capacity building will be key to provide a robust articulation between private and public entities. Activities could include formal training, on the job training and the provision of tools such as computerized performance management system including fleet tracking and financial and technical activity reporting, vehicle routing and real time job requests.

3. JOB CREATION AND PROFESSIONALIZATION IN THE WASTE SECTOR

Training sessions for young entrepreneurs in the waste sector to promote professionalization. Such sessions are designed to help the youth look beyond pre-collection when considering the waste sector. The development of actual human capacity is the base for long term professionalization. The sessions aim at providing trainees with a broader view of solid waste, looking at opportunities such as environmental communication, facility management (transfer station, landfill), recycling and upcycling, small energy-from-waste processes, service supervision, vehicle maintenance (because of the rapid degradation of equipment). The sessions are divided into several modules, including accounting and reporting requirements for small businesses, basics of SWM, Zero capital entrepreneurship, cash management, health and safety, etc.

Support the development of revenue generating activities. Recycling of plastics to manufacture pavement or waste containers have the potential to generate revenues while simultaneously reducing waste. The process is very basic, but allows for the production of commercial grade concrete blocks that can be used for pavement. The production process simply involves sand and melted recycled plastics (films and/or bottles). Likewise, a slightly more elaborated process could be used to produce waste bins locally that could be sold to the population as part of the new strategy. Another possibility is to promote the development of small Energy from Waste (EfW) units. Small EfW can be developed, using the biodegradable fraction of the municipal waste to produce energy. Small units have been developed by Bekon (Germany) and Greenlane (UK) using the principle of batch dry methanization. Such processes are simple to operate and have demonstrated high biogas yield. In Conakry, tests could even be carried out using unsorted waste given the high organic content.

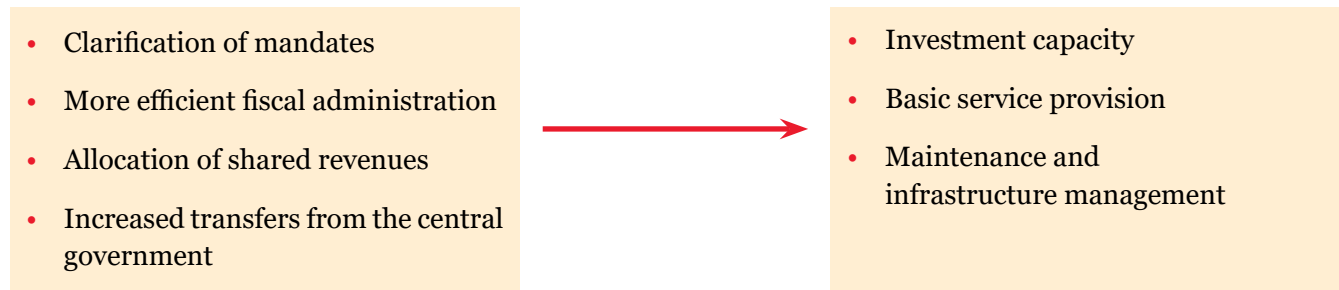




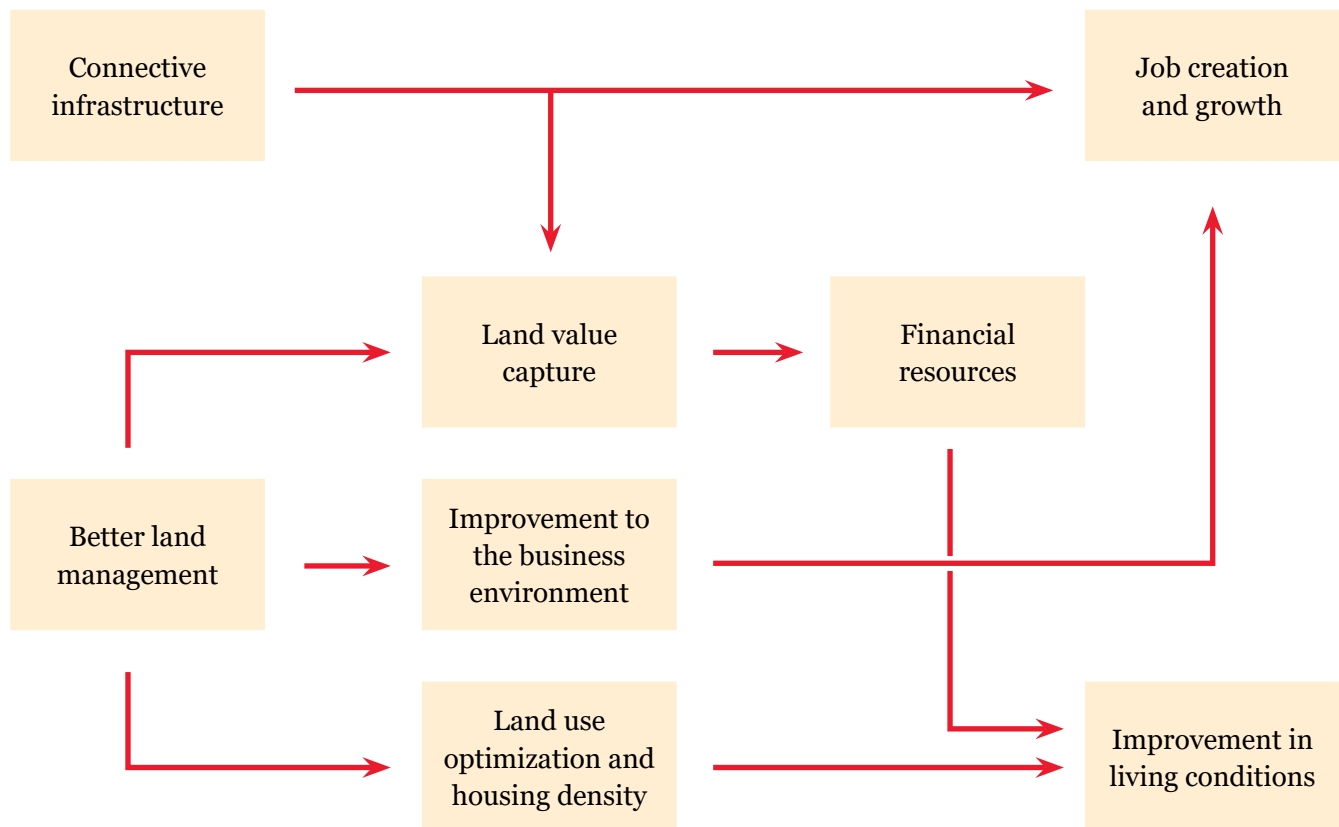
Where to Start and What Sequence of Actions?

For Conakry to reach its potential for growth and living standards' improvement, this study argues that coordinated interventions are required on the Planning, Connecting, Financing and institutional fronts. However, because of resource constraints (financial, qualified staff, political capital), not everything can be done at the same time. The logic retained for prioritization is to first adopt a *linear vision*; this is to identify the main bottleneck which, once removed, would allow for subsequent successful reforms and investments. In Guinea, this is a reform of institutions and municipal finances. It is neither the easiest reform, nor the one with the most immediate payoffs. But it is a prerequisite. Indeed, how can one increase basic service provision if sustainable financing mechanisms are not available? How to ensure infrastructure maintenance if the agency responsible for it is not clearly identified? As a second step the logic for prioritization is to identify *packages of options* where reforms and investments display natural synergies, the impact of one being increased by the success of the other.

1/ Institutions and municipal finances as a prerequisite



2/ Packages of options that have synergies



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GUINEA

Planning, Connecting, Financing in Conakry

The Guinea Urban Sector Review looks into the challenges and opportunities posed by urbanization in Guinea, reviewing briefly the trends at the national level but focusing on the capital city - Conakry. The analysis shows that urban areas in Guinea, and Conakry in particular, do not contribute to growth and competitiveness and are struggling to provide adequate public services and quality living standards for their residents. The reasons are to be found i) in the business environment which, recent progress aside, stymies private sector job creation and economic diversification, ii) in Conakry's deficient connectivity system which acts as a bottleneck for residents to have access to economic opportunities, iii) in the city's obsolete and unenforced planning strategies and its rigid land markets and, finally, iv) in the lack of institutional clarity and financial resources which leads to underinvestment in public services.

Concerted actions are needed for Conakry to deliver on livability and competitiveness. These actions deal with how Conakry is built and organized (Planning), how people are connected to opportunities (Connecting) and how it is managed and financed (Financing). Investing in one of these areas but not in the others, can probably deliver some short term gains, but will fail to unleash Conakry's potential to act as an engine of growth and living condition improvement. Thus, interventions on planning, connecting and financing are a suite, not a menu, for Conakry's future success.

