

Kumasi, Ghana

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 2,603 km²

Population: 3,490,000 | Growth rate: + 4.43%

Region capital city

GDP per capita: USD 4,700 (National)

Motorised Modal Share (Road Space Usage):

Formal public transport (Bus): 15%

Informal public transport (Trotro): 53%

Private cars: 14%

Taxis: 12%

Freight vehicles: 1%

Other (LDV): 4%

National GHG emissions per capita: 1.5 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

Since the 2010s, more than half of the population in Ghana lives in urban areas. Despite their rapid expansion in size and population, most cities remain small by world standards. In the last few years, institutions have been unable to cope with the rapid urban transition and Ghana has started to see the side effects of rapid urbanisation, including congestion, unregulated urban expansion, and limited access to services and affordable quality housing.

Kumasi is the second largest city in Ghana and the greater Kumasi Metropolitan Area (gKMA) is the result of multiple extensions of the city's perimeter, including inner Kumasi (KMA) and twelve additional municipalities and districts. It covers a total land area of 2,603km² with a total population of 3,190,473. Kumasi is set to more than double its population. The population density is expected to substantially increase from 159 people per hectare (in 2010) to 279 per hectare in 2033.

Transport system

Rapid urbanisation in Ghana has implications for urban mobility. Severe traffic congestion and road safety issues are the consequence of over-reliance on low-capacity passenger vehicles, inadequate traffic management, heavy dependence on informal public transport services, inadequate facilities for walking and cycling, occupation of roads by hawkers, and so on.

The predominant mode of transport in Kumasi are *trotros*, minibuses carrying between 14 and 23 passengers, and shared taxis which take four passengers. These vehicles do not provide scheduled services and they operate with the 'fill and go' principle, preventing passengers from planning their trips effectively.

The limited capacity of these vehicles is compensated for by their large number. Distribution of vehicles on routes depends on the preferences of the operators, usually linked with the conditions of the roads, leading to an uneven distribution of transport services.

A study carried out in 2011 found that 68% of users travel by *trotro*/buses, 12% by taxis. By contrast, *trotros* occupy less than 30% of road space usage, while private vehicles carrying only 14% of passengers account for 33%. The congestion level also affects the route choice for drivers.

The city has received 60 buses from the Ministry of Transport for the introduction of a mass transit service (pilot BRT), but only 20/25 are operated as the rest of the fleet waits for full study and implementation.

Institutional context

The different Metropolitan, Municipal, or District Assemblies (MMDAs), which are part of gKMA, are empowered by law with legislative responsibilities to make policies, including the enabling legislative instruments, to provide leadership for local transport policy and planning, pass common bye-laws on passenger transport and facilitate a fair and efficient regulatory environment, by providing priority for operators using traffic management measures.

There is an existing Greater Kumasi Urban Development Master Plan, sponsored by JICA and coordinated by the Spatial Planning Department of KMA in collaboration with the 6 adjoining Assemblies that formed the gKMA. Unfortunately, there has been neither formal coordination among them nor any higher-level authority to regulate inter-MMDA transport.

At the national level, the Ministry of Roads and Transport (MoRT) is responsible for road infrastructure, the Ministry of Port, Harbors, and Railway is in charge of the mass-transit railway.

The Local Counterpart does not have the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate and report on urban mobility.

Challenges and main aim of the SUMP

The main urban mobility challenges Kumasi is facing are described below:

- Poor integrated land use planning and control procedures, resulting in urban sprawl, traffic congestion on major roads and poor road safety
- Poor traffic management and poor condition of existing road network, connected with a low traffic capacity, misuse of road space and parking issues, and lack of continuity of pedestrian space
- Inadequate facilities and general inefficiency of the public transport system, which is unable to meet the demand
- Institutional framework not optimised for mobility operators and organisations, affecting profitability and preventing fleet renewal and enforcement of policies
- An excessive level of air pollution, because of the exhaust gas from a fleet of vehicles that is mainly old and poorly maintained

The main aims of the SUMP are to produce a high-quality document, ready for adoption by the different assemblies of the gKMA that identifies different measures to:

- Regulate public transport (incl. paratransit) for efficiency, safety and affordability;
- Improve traffic management and traffic safety measures, particularly reducing traffic congestion in the city center;
- Improve pedestrian/Non-Motorised Transport facilities for walkability and safety;
- Improve the institutional and financial framework in view of greater effectiveness for planning, designing, building, regulating and operating the mobility system in the city;
- Improve technical capacity of the professionals in the area of transport and GHG reduction;

- Build capacities of local experts and other mobility actors in Kumasi to implement, monitor and revise the Sustainable Urban Mobility Plan, serve as advocates of sustainable urban mobility planning, and transfer gained knowledge and experience with other cities in Ghana or subregion.

The technical assistance contributes to institutional strengthening by inter-alia and providing training sessions on selected topics.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 500,000

Implemented by: AFD and CODATU through the MobiliseYourCity Africa Program

Local counterpart: Kumasi Metropolitan Assembly (KMA)

Supported activities:

- SUMP for Kumasi (including support for inception, diagnosis, vision and strategic objectives, scenario development and action planning, financing requirements and public participation)
- Specific mission: Establishment of an Observatory on urban mobility data and GHG emissions

Status of the SUMP process

Project start: 2021 Q1

Expected project completion: 2023

Completed outputs:

- Signature of a Memorandum of Understanding between a delegate of Kumasi Metropolitan Assembly (KMA) – representing the different assemblies of the Greater Kumasi Metropolitan Area (GMA) and AFD
- Support for the tender and selection of consultants
- Inception phase and inception report
- MobiliseDays
- Diagnosis phase

Next expected outputs:

- Vision/scenario phase
- Action plan
- Final SUMP report

Core impact indicators

Indicator	Baseline - 2022
Annual transport related GHG emissions per capita (kg CO ₂ eq)	280 kg CO ₂ eq / capita (country wide average)
Road safety	9,61 fatalities / 100,000 hab
Decrease of traffic fatalities in the urban area, per 100,000 inhabitants	

Highlights in the past year

The SUMP diagnosis brings new insights on mobility in Kumasi current situation and future trends

After a thorough analysis of Kumasi's urban mobility system, several key takeaways emerged that provide insights into the strengths, weaknesses, opportunities, and threats of the city's transportation network.

- Kumasi is experiencing strong population growth, which is expected to increase housing demand and urban growth. This growth is likely to lead to more congestion, higher travel times, and saturation in the city centre.
- Car ownership rates are expected to rise in Kumasi, particularly as the gender gap between men and women gradually decreases. This will lead to even more competition for urban space and a decrease in space for public transport stations and terminals.
- The current public transport system in Kumasi is working well and is affordable for passengers, but it faces significant challenges. For example, there are conflicts between different modes of transport, and there is a lack of coordination between transport and urban planning.
- Kumasi's road network is relatively complete and logical, and the roads are of good quality where most urgent maintenance works have been done. However, there is a lack of alternatives to the road network, and the traffic conditions in the city center around Kejetia market are difficult.
- Kumasi faces both opportunities and threats in terms of its urban mobility. Some opportunities include the existence of DOTs and transport unions, the acceptance of public transport by the population, and interest in Kumasi from investors. Threats include inadequate space and pressure on land use for public transport terminals, the risk to the economic model of trotros and affordability, and fast unplanned growth of the metropolis.