



Democratic Republic of the Congo

Kinshasa

Kinshasa City, the capital of the Democratic Republic of the Congo (DRC), is situated on the left bank of the Congo River and has multiple functions, in particular administrative, industrial, commercial, cultural and touristic. It is a megalopolis with a population of 12 million. The population was 1,600 in 1920, but in 1959 just before independence it became about 400,000 people, after independence the population growth rate further increased, with an average population increase of 5% per annum.

The Sanitation Authority for Kinshasa (Régie d'Assainissement de Kinshasa, RASKIN), formerly known as the Sanitation and Public Works Department of Kinshasa (Régie d'Assainissement et des Travaux Publics de Kinshasa, RATPK) is the local government's technical body responsible for sanitation and waste services in Kinshasa City. It is under the supervision of the Provincial Ministry which is in charge of the environment. The waste services of Kinshasa City have been supported by the EU for many years, through the PARAU project (Projet d'Appui et de Réhabilitation des Infrastructures Routières en RDC et d'Amélioration de l'Assainissement Urbain de Kinshasa), but now the project is over, the situation has become serious due to lack of financial resources. To overcome this situation, the city began to introduce Sanitation Tax.

Information

Population	12 million (estimated in 2017 by the JICA study of the Transport Master Plan for Kinshasa)
Population growth (annual %)	5 (average after independence in 1960)
Area (km ²)	9,965 (City-province); 583 (Urban)
Climate	Humid tropical climate with clear dry season (mid-May to August) and rainy season (September to mid-May)
Main industries	Administration, commerce, transport, agriculture (market gardening), manufacturing (bread making, brewery, metalwork, cosmetics, pharmaceuticals, plastics...), tourism, culture, sport
Currency*	USD 1: CDF 1,640.31 (Congoese franc) (June 2019)

Source: * Oanda.com

Current SWM Situation

Item	Outline
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Institutional System

Legal system	<ul style="list-style-type: none"> ● By law, municipalities (counties) are obliged to collect, transport, and dispose of waste, and to construct treatment facilities. But in Kinshasa they don't have the financial means to deal with this problem. ● There is the 003/2013 Edict from 9 September 2013 regarding the sanitation and protection of the environment and a number of provincial by-laws that relate to waste management in the city of Kinshasa. ● There is also the Ordinance Law No 13/001 of 23 February 2013, fixing the provincial taxes, charges, levies, and fees and decentralised territorial entities as well as their terms and conditions for distribution, instituting a tax for sanitation, waste removal and household waste.
Policy/Plan	<ul style="list-style-type: none"> ● National Sanitation Policy (Politique Nationale d'Assainissement, PoNA) was formulated in 2013, solid waste is one of the sectors. A national sanitation strategy (draft) for its implementation is prepared in 2017, but it has not been enforced.
Implementation system	<ul style="list-style-type: none"> ● At a central level the Ministry of Environment and Sustainable Development (Ministère de l'Environnement et Développement Durable, MEDD) through the Department of Sanitation (Direction d'Assainissement, DAS) is responsible for waste management. In this way they're responsible for regulating the sub-sector of solid waste. ● In Kinshasa City, RASKIN is in charge of waste management. ● In the context of decentralisation, the communes deal with the operational aspects of SWM.

Technical System

Waste generation amount & characteristics	<ul style="list-style-type: none"> ● If the waste generation amount per person is 0.7 kg/person/day and the population is 12 million people, waste generation per day would be 8,400 tons. The organised collection rate is estimated to be 25%. ● Humidity level: 60-70% ● Municipal waste composition of Kinshasa City: <table border="1"> <caption>Municipal Waste Composition of Kinshasa City</caption> <thead> <tr> <th>Material</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Organic Materials</td> <td>65%</td> </tr> <tr> <td>Plastics</td> <td>15%</td> </tr> <tr> <td>Textiles</td> <td>6%</td> </tr> <tr> <td>Metals</td> <td>7%</td> </tr> <tr> <td>Glasses</td> <td>2%</td> </tr> <tr> <td>Inert</td> <td>4%</td> </tr> <tr> <td>Others</td> <td>1%</td> </tr> </tbody> </table>	Material	Percentage	Organic Materials	65%	Plastics	15%	Textiles	6%	Metals	7%	Glasses	2%	Inert	4%	Others	1%
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Storage and discharge/
Collection and transportation/
Road sweeping

- NGOs or MSEs (Micro and Small Enterprises) in exchange for payment collect household waste by push-carts, etc. and transport them to 61 transfer stations installed by the EU project.
- Waste at transfer stations is transported by RASKIN's skip loaders or dump trucks to final disposal site about 35 km (approximately 1 hour) away from the city centre (Gombe).
- Due to deterioration and breakdown, there is little equipment procured by EU that can still be used. Therefore, there is a shortage of equipment.
- The main road is kept usually clean by the sweepers. In addition to RASKIN, about 60 NGOs clean up the roads in five communes with expenditures from BCECO, a related agency of the Ministry of Finance.



Push-carts used for primary collection



Transfer station installed by EU



Collection of recyclable materials at the transfer station



Skip loaders donated by EU (container vehicles)



Road sweeper



Newly procured collection trucks (white ones)

Intermediate treatment/
Recycling

- Small-scale recyclers of plastics, e-waste and compost (often referred to as NGOs) are gradually being established. The city of Kinshasa supports them by lending the land free of charge.



Recycling of e-waste



Recycling of plastic materials

Final disposal

- The final disposal site constructed by EU is located 35 km east away from the centre of the city. Amount of collected waste by RASKIN is approximately 1,500 tons/day (estimate), and some waste is transported directly by waste generators to the landfill site.
- The disposal site is equipped with fences, gates, workshops with offices and minor equipment. However, weighing machines are not installed.
- There are no waste collectors active at the site but the city receives many requests from operators especially for energy production.



Disposal site



Heavy equipment (Bomag Sheepsfoot Compactor) at the disposal site (out of order)

Item	Outline
Financial system	<ul style="list-style-type: none"> ● Currently, waste generators such as households and shops pay directly to waste collectors. ● RASKIN is operated with general budget of the state government of Kinshasa. ● A regional organisation called FONAK has been set up to collect fees for the hygiene sector. They have now started to gather some funds on behalf of their partners.
Environmental and social considerations	<ul style="list-style-type: none"> ● Due to the dumping of garbage on roadsides and in drains, the sanitary environment of low income and poor residential areas is particularly bad.
Donor support	<ul style="list-style-type: none"> ● The European Union (EU) supported the improvement of dirt roads in the regions of the former Bandundu, Equateur and Kasai Occidental and the improvement of the urban sanitation sector from 2008 to 2015. It covered all the necessary expenses such as procurement of equipment, repairs and maintenance, roadworks, construction of collectors, dredging, the construction and operation of transfer stations, the construction and operation of CET (road access, compartments and reservoirs) and salaries for staff. RASKIN took over the solid waste management component of the project. ● The World Bank intends on implementing two projects in the hygiene sector. The first specialises in the pre-collection, collection, disposal and recycling of solid waste in the villages of Kimbanseke, Masina, N'djili, Kisenso, Matete, Lemba, Limete and Mont-Ngafula. The second one is the construction of a sludge treatment plant in Kinshasa city. ● The French Development Agency (AFD) also intends on implementing a project for pre-collection, collection, disposal and recycling of solid waste in two districts in Limete and one district in Masina.
Areas for improvement (in order of priority)	<ul style="list-style-type: none"> ● Regarding waste collection, equipment procured by the EU project is in short supply due to deterioration and so on, and waste accumulates in the community. Improvement might also be urgently needed to prevent the spread of waterborne infectious diseases from the viewpoint of public health. ● Regarding final disposal site, because the disposal site constructed by the EU is in operation, the need for emergency assistance is low. However, since the city has a population of over 10 million people and is expected to reach nearly 20 million in 2030, there seems a high need for a plan to construct multiple disposal sites. ● At the moment there are only some small recycling companies but considering the size of the city and the amount of waste, the necessity of reducing waste through intermediate treatment and recycling in the future seems high. ● In the future, it is anticipated that the economic activity will become active and the urbanisation will continue, and since the scale is also large, it might be important to develop a legal system for difficult-to-handle waste at an early stage. ● A series of programme type projects, such as assistance for master plan preparation, technical cooperation and financial cooperation for implementation of master plan, are recommended in Kinshasa City.

Waste Amount at Each Stage of Waste Flow*

Waste flow	Amount ** (ton/day)	Remarks
① Waste generation	8,400	Waste generated at houses, offices, shops, restaurants, etc.
② Discharge to collection	N/A	Waste discharged for collection services.
③ Self disposal	N/A	Disposal at generation sources, such as burning and burying.
④ Recycling at source	N/A	Reuse of materials, composting, sold to recyclers.
⑤ Collection and transport	2,100	Waste amount collected and transported.
⑥ Clandestine dumping	N/A	Waste illegally disposed of in unknown location.
⑦ Treatment	N/A	Material recycling, composting, incineration, etc.
⑧ Recycling/Reduction	N/A	Recycled and/or reduced waste amount by material recycling, composting, incineration, etc.
⑨ Residue	N/A	Residue from treatment facilities.
⑩ Final disposal site	N/A	Waste amount brought into disposal sites.
⑪ Recycling	N/A	Recycled at disposal sites.
⑫ Final disposal	N/A	Waste amount finally disposed of at disposal sites.

* Based on the waste flow chart on page.

** Figures include estimated value.

Location of Waste Management Facility and Related Photographs:



Final Disposal Site