

NIGERIA

PRIVATE SECTOR PARTICIPATION IN SOLID WASTE MANAGEMENT ACTIVITIES IN IBADAN

SYNTHESIS NOTE



World Bank and the Public-Private Infrastructure Advisory Facility (PPIAF) for the Oyo State Government
February 2017



WORLD BANK GROUP



PPIAF
Enabling Infrastructure Investment



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WITH SUPPORT FROM EY & EGIPE SARL



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ACKNOWLEDGMENTS

This synthesis note acts as a condensed version of the full report which is also available to download or in physical format. This report was commissioned by the Public, Private Infrastructure Advisory Facility (PPIAF) at the World Bank Group, in collaboration with the World Bank's Social, Urban, Rural & Resilience Global Practice. This project was led by Salim Rouhana (Senior Urban Specialist) and benefited from contributions from experts and specialists in Solid Waste Management and support from staff focused on Disaster Risk Management from the World Bank Group. The report was supported from a team from Ernst & Young and Egipe SARL under the guidance of Adrian Tan (Senior Manager Ernst & Young) and a core team of comprised of Alexis Gazzo (EY), Ayodeji Ogunyemi (EY), Gina Anderson (EY), John Okoronkwo (EY), Omonye Akhigbe (EY), Oyindamola Oluyombo (EY), Raoul Grela (Egipe SARL), Florentin Bulot (Egipe SARL), Salma Sabour (Egipe SARL). The report was supported by training workshops, and research that was undertaken by Emmanuel Badejo, Mussa Dankwah.

The report benefited from legal guidance from legal firms Ajumogobia & Okeke, and Pinsent Masons.

The study benefitted from guidance from numerous World Bank colleagues, in particular Farouk Banna (Urban Specialist Solid Waste Management), Claire Markgraf (Solid Waste Management Consultant), Thierry Martin (Senior Solid Waste Management Expert), Dina Ranarifidy (Urban Specialist), and Ivan Bruce (Urban Development Consultant).

The team gratefully acknowledges the comments and support provided by Oyo State Government, under the guidance and leadership of Governor Abiola Ajimobi, and in particular Professor Ademola Ariyo, (Chief Technical Adviser to the Governor on the IUFMP), Dayo Ayorinde (Project Coordinator, IUFMP), and the support staff of the project implementing unit of the IUFMP. In addition the team thanks Joseph Alabi, (General Manager, OYOWMA) and his team for their engagement and openness that heavily informed this report.

The study gained valuable inputs from World Bank colleagues that provided peer reviews from variety of offices and experts including Paul Kriss (Lead Urban Specialist), Frank Van Woerden (Lead Environment Engineer) and Cesar Vargas (Investment Officer, IFC).

This report was sponsored by PPIAF of the World Bank Group and supported by the PPIAF team Bailo Diallo (Regional Program Coordinator) and Fatouma Toure Ibrahima (Senior Program Officer) and Sathesh Kumar Sundararajan (Senior Infrastructure Finance Specialist)

Thanks also to Amani Dargham for her editorial and graphic design inputs to finalize the report.

ABBREVIATIONS AND ACRONYMS

CBO – Community Based Organization	MPPUD – Ministry of Physical Planning & Urban Design
CDM – Clean Development Mechanism	MRF – Materials Recovery Facility
CWG – Collaborative Working Group on Solid Waste Management in Low- and Middle-income Countries	MSW – Municipal Solid Waste
DBFO – Design, Build, Finance and Operate	NESREA – National Environmental Standards & Regulations Enforcement Agency
DBO – Design, Build and Operate	NAIF – Nigeria Infrastructure Advisory Facility
EHOs – Environmental Health Officers	OSEPA – Oyo State Environmental Protection Agency
EIA – Environmental Impact Assessment	OSG – Oyo State Government
EPC – Environmental Pollution Control	OYOWMA - Oyo State Solid Waste Management Authority
ESEA – Environmental Sanitation Enforcement Agency	PAYT – Pay-As-You-Throw
ESL – Environmental Sanitation Law	PPE – Personal Protective Equipment
EY – Ernst & Young	PPIAF – Public Private Infrastructure Advisory Facility
GDP – Gross Domestic Product	PPP – Public-Private Partnerships
GIS – Geographical Information System	PSP – Private Sector Participation
GPS – Global Positioning Service	RDF – Refuse Derived Fuel
GTZ – German Agency for Technical Cooperation	SIP – Sustainable Ibadan Project
HSE – Health, Safety and Environment	SWM – Solid Waste Management
IUFMP – Ibadan Urban Flood Management Project	WB – World Bank Group
IWMA – Ibadan Waste Management Authority	WSA – Waste Service Agreement
LASEPA – Lagos State Environmental Protection Agency	TLS – Transfer Loading Stations
LAWMA – Lagos Waste Management Authority	UCODEA – Urban Community Development
LGAs – Local Government Areas	UN – United Nations
LG – Local Government	UNEP – United Nations Environment Program
MEH – Ministry of Environment & Habitat	UNFCCC – United Nations Framework Convention on Climate Change
MEHL – Ministry of Environment and Habitat Law	
MPPL – Ministry of Physical Planning and Urban Development Law	

All monetary amounts are Naira unless otherwise indicated.



INTRODUCTION

Ibadan is the capital of Oyo State and the third largest city in Nigeria. The population of the metropolitan area of Ibadan is estimated at close to 3,5 million (IUFMP, 2014).

The management of solid waste in Ibadan has been a challenge for decades. A large portion of the solid waste generated in the city is dumped on available plots of land, sidewalks, roads, streams, channels and drains – the collection rate is estimated at around 40% (Ogungbuyi, 2013). The clogging of drainage systems is an particular issue as Ibadan is highly exposed to flooding. The city has a history of deaths from floods caused by water channels being blocked with waste, and outbreaks of infectious diseases from human contact with improperly disposed and untreated waste.

Improving solid waste management (SWM) is a priority for the Oyo State Government, alongside reducing the burden of publicly funded waste management on the State's finances. The State has recognized the need to improve the level of private sector participation (PSP) in order to overcome the technical and financial deficiencies currently associated with solid waste management in Ibadan, and agrees that private investment in the sector can help increase efficiency, lower costs and improve the quality of service. The level of PSP in waste management in Ibadan is currently limited to waste collection and transportation, and therefore, the Governor of Oyo State requested support from the World Bank to conduct a study on how the private sector can help improve solid waste management in Ibadan.

The scope of the report was undertaken with the following objectives:

- Assess the existing practices, challenges and current performances of the private sector in SWM in Ibadan;
- Collect and validate the baseline information on the SWM sector to provide critical inputs to be actioned within the Ibadan Urban Flood Management Project;
- Identify challenges and opportunities in terms of institutions and financing; and

- Provide the Oyo State Government with policy recommendations to improve the SWM in terms of short, medium and long term.

This report will further support the ongoing World Bank supported activities namely the Ibadan Urban Flood Management Project (IUFMP) – a response to the floods of 2011 which caused significant human and economic losses of Ibadan. The IUFMP project has several components which include improving and repairing damaged infrastructure assets, as well as undertaking a series of strategic studies – urban, drainage and solid waste masterplans – which will better enable Oyo State to identify additional areas for investment to improve Ibadan's ability to better manage floods and build long-term resilience.

In this regard this report aims to outline the challenges faced in the solid waste management sector in Ibadan, and to provide a set of recommendations to guide Oyo State Government, and other key stakeholders to improve efficiency and to provide policy guidelines that will better enable private sector participation.

The outputs of this study will complement the solid waste masterplan to be implemented under the IUFMP, the masterplan will provide Ibadan with a 20-year vision on improving the entire value chain for SWM in the city, this activity will therefore use this study to as a baseline of engaging with OSG and other key stakeholders.

The private sector has been involved in solid waste collection in Ibadan for over 40 several years (Ogungbuyi, 2013). There are 317 registered private contractors collecting waste in the 11 Local Government Areas of Ibadan metropolis. They collect waste from residential, commercial and industrial zones that are ready to pay for their services (OYOWMA, 2016). Some of the private contractors have been involved in solid waste collection for over 20 years in Ibadan. The waste collection operating permits granted by OYOWMA to private refuse collectors determine the designated service areas that each operator is permitted to service. The private contractors pay a registration fee for the operating permits, and the permits are only valid for a year at a time. The private contractors collect waste collection fees directly from waste producers (i.e. households, commercial businesses and industrial companies) based on standard tariffs, with minimum and maximum charge rates set by the Oyo State

Solid Waste Management Authority (OYOWMA).

OYOWMA sets the tariffs according to levels of income in each area, and the type of waste (residential, commercial or industrial). The private contractors are to pay 20% of their monthly collections to

OYOWMA to defray its administrative costs, and for the maintenance of the dumpsites and other facilities. The collection of fees from waste producers is a particular challenge for private sector operators, and it causes a major risk to their income and business viability.

THE LEGAL AND INSTITUTIONAL FRAMEWORK FOR SOLID WASTE MANAGEMENT IN IBADAN

At the national level, the legal framework for solid waste management forms a part of Nigeria's laws and regulations that are focused on the protection and development of the environment, and this framework is set out within the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act of 2007. The National Environmental (Sanitation and Wastes Control) Regulations of 2009 further provides the legal framework for environmental sanitation and waste management in Nigeria. These regulations provide general guidelines on the management of solid waste, and include a requirement that the waste is handled by a person licensed to transport and dispose of solid waste in a designated waste management facility. Policy Guidelines on Solid Waste Management (2005) developed by the Federal Ministry of the Environment also set out the roles and responsibilities of Government at the Federal level, at the State level and at Local Government level. The following four solid waste management options are recommended within the Policy guidelines:

1. By Local Government/Municipal Agencies;
2. By Private Companies on contract with the LGA/Municipality;
3. By Private Companies on contract with Home Owners;
4. By public-private partnership (PPP).

The responsibility for overseeing SWM in Ibadan currently lies with the following three institutions, each with different roles and responsibilities:

- the **Oyo State Ministry of Environment and Habitat** has overall responsibility for the protection, maintenance and development of the environment in the State, including solid waste management.

- the **Oyo State Solid Waste Management Authority (OYOWMA)** has the direct and operational responsibility for solid waste management in the Ibadan metropolitan area. The Authority oversees waste collection, street cleaning, transport, the management of dumpsites, and the granting of operating permits to private waste contractors. OYOWMA also monitors the activities of these private waste contractors. OYOWMA has the authority to charge fees for the registration and subsequent renewal of private refuse collection licenses. The Authority is also able to charge dumping fees per truck for access to the dumpsites. The Authority further has the power to revoke licenses and impose fines on waste collectors for a range of possible malfeasance, for example, collecting waste outside of their designated areas or using unapproved waste disposal sites.

- the **Local Governments** are to support the implementation of good practices in solid waste management, and are to make annual budgetary provisions for solid waste management. Previously, the Local Governments did not have adequate means to undertake waste management in their areas effectively, and OYOWMA was charged to collect waste around major roads, markets, inner city areas and other areas not covered by private waste contractors. Due to change in policy, from October 2015, Local Governments once again became responsible for waste collection within their individual jurisdictions.

The Ministry of Environment and Habitat oversees the activities of the OYOWMA and is responsible for weekly Environmental Sanitation Exercises, which monitor the state of waste in the Local Government Areas of the state. The State Governor is the final decision maker on solid waste management and on private sector participation.

EXISTING PRACTICE, CHALLENGES AND CURRENT PRACTICES OF THE PRIVATE SECTOR

During the study period it was identified that private contractors have been involved in solid waste collection in Ibadan for over 20 years. About 40% of

the total waste collected is currently done by private refuse collectors, an increase from about 30% in 2014. There are 317 registered private contrac-



tors collecting waste in the 11 Local Government Areas of Ibadan metropolis, and they collect waste from residential, commercial and industrial zones that are ready to pay for their services (OYOWMA, 2016). Many of the private contractors are small – the biggest contractors have up to 5 trucks with about 5 staff per truck, and most of them are members of the Private Refuse Contractors Association. Members that do not own operational trucks can rent them from other contractors who have more than one truck. The Association is also able to lend money to its members at low interest rates to finance the purchase of trucks.

The private contractors use all kind of trucks, but they do not use trucks designed specifically for waste collection. There are no packer trucks, no big capacity vehicles, and most of the vehicles in use are about 5 to 10 tons, i.e. generally smaller than the vehicles in use by OYOWMA. The trucks are also acquired second-hand. They have only one drive axle and therefore they encounter difficulties when driving in wet and muddy conditions. There are also no transfer stations in Ibadan, so all waste collection trucks must drive out to one of the four dumpsites once the trucks are fully loaded. This means that the trucks can only make up to two collection rounds per day.

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fee for the operating permits, and the permits are only valid for a year at a time. The private contractors collect waste collection fees directly from waste producers (i.e. households, commercial businesses and industrial companies) based on standard tariffs, with minimum and maximum charge rates set by OYOWMA. OYOWMA sets the tariffs according to the level of income in each area, and the type of waste (residential, commercial or industrial). The private contractors are to pay 20% of their monthly collections to OYOWMA to defray its administrative costs, and for the maintenance of the dumpsites and other facilities. The collection of fees from waste producers is a particular challenge for these private sector operators, and it causes a major risk to their income and business viability.

In addition to the above, there is also an informal sector that is active in recovering recyclable materials from solid waste in Ibadan. This material recovery activity happens at the point of waste generation in households or companies, or at trash cans, skips bins and at dump sites. There are so-called “scavengers” that sort and recover valuable materials from the waste. These actors are typically poorly equipped or not equipped at all, and although not formally a part of the private waste management sector in Ibadan, they recover significant amounts of waste and sustain a market in recyclable materials.

AREAS TO IMPROVE THE QUALITY AND LEVEL OF PRIVATE SECTOR PARTICIPATION

Several areas where there is scope to improve the involvement of the private sector in solid waste management in Ibadan were identified. These areas are interdependent and a multi-faceted plan is required to achieve success. The key areas to improve private sector participation in solid waste management in Ibadan are as follows:

1. Revenue collection of waste management fees

- Firstly, there is a need to address the perceptions among waste producers regarding the waste collection fees. In order to maximize the levels of compliance or patronage, there is a need for consultation and transparency in the setting of the collection fees. This will help mitigate the view held by some waste producers (i.e. households) that the waste collection fees they pay are too high.
- In order to ensure a wider provision of collection services to all households, and a reduction in the level of resistance to fee payments, the setting of the fees should be better regulated and better enforced. It is also necessary to demonstrate to waste producers that the fees are reasonable and they are the most cost-effective possible. This can be achieved through a transparent process for the determination of fees, and rigorous enforcement of the fixed rates.
- The selective application of fees within areas of the city and the lack of a transparency around the fees being charged in each area are clear obstacles to the sustainability of existing PSP in waste collection, and to the expansion of waste collection services to cover the entire metropolitan area.

2. Cost recovery and financial model for solid waste management

- Certain areas allocated to licensed waste collectors are more lucrative or commercially viable than others, leading to some licensed waste collectors not being able to re-

cover adequate revenues to enable them to invest in performance improvement. There is a need to ensure each licensed collector is allocated a 'commercially viable' area if they are to be able to deliver an effective service.

- Separately, the report noted that as licenses for waste collection must be renewed each year, there is not much incentive for private contractors to make long-term investments to improve the efficiency of their operations. The short contract duration also limits the ability of the collection companies to raise finance for new equipment. In essence, they are unable to demonstrate to financial institutions that they will be viable beyond a one year horizon.

3. Transport infrastructure and waste facilities

- Packer-trucks cannot be used in every part of the city because of the poor state of many of the roads. The private collectors have already customized some of their trucks in order to be able to reach inner city areas with narrow or otherwise inadequate roads. The majority of the trucks are however old and they breakdown very often, which reduces the reliability and the quality of the service. This is not helped by the fact that spare parts for the old trucks are difficult to obtain. There is a need for significant public investment in better road networks.
- There is also a need for solutions for bringing waste from the innermost areas where motorable roads are non-existent to waste collection points that can be easily reached by waste removal trucks. The productivity of the collection teams relies on the state of the roads on which the trucks are used, and smaller motorized and non-motorized vehicles have been discussed as options to deal with difficult terrain. However, the aforementioned challenge of raising finance limits the ability of the private sector to acquire new and better adapted equipment.

- Facilities such as Transfer Loading Stations (TLS) are also non-existent. The use of TLSs will significantly reduce the distance travelled by each waste truck from their collection point to their offload point (currently one of four dumpsites outside the city). The waste truck would then have a much reduced rotation time, less operating costs and higher productivity.

4. Public attitudes and behaviors regarding waste disposal

- Ibadan has a firmly entrenched culture of resistance to paying for the waste management. The World Bank team discovered during hosting stakeholder engagement that this view is slowly changing, partly as a result of efforts by the State Government to raise awareness through various forms of media. The entrenched attitude has a direct impact on the viability of PSP, as a general trend not to pay for waste disposal has an impact on the levels of revenue that can be achieved by private collectors. Thus impacting upon the private sectors' willingness to invest.
- Furthermore, a significant deficit in the number of enforcement officers, limits the capacity to enforce existing waste regulations. The World Bank team discovered the legal framework to be adequate for the involvement of the private sector. The laws are also clear on the proper handling of waste by waste producers, as well as the attendant

sanctions for non-compliance. For example, all households are legally required to have appropriate containers for the storage of waste on premises, and arrangements for the regular removal of the waste by paid service providers. The lack of proper enforcement of these legal requirements reinforces existing attitudes to waste management and is a missed opportunity to drive up behaviors that can boost revenues and increase the commercial viability of private operators.

5. Resource recovery (e.g. energy recovery and material recycling)

- From the engagement with relevant stakeholders, it emerged that there is a need for greater coherence in arrangements for involving the private sector in the waste processing and material recovery end of the waste management chain. Several interested private sector operators expressed difficulties in moving a range of proposed waste-to-wealth (e.g. material recycling and composting) and waste-to-energy (e.g. incineration and biogas plants) projects forward.

The existing capacity to grant and manage contracts at this end of the chain is weak, and Oyo State will require expert transaction advice to ensure it achieves the most effective performance based contracts. There is also a need to build capacity within the relevant oversight agencies in order to ensure any achievements in this area are sustained.



RECOMMENDATIONS

Improving private sector participation is a comprehensive process that requires extensive interventions, consultations and strong regulation of both the waste producers and private operators in the waste management chain. It requires the reliable collection of waste management data for decisions to be based on actual performance. It also requires significant investment to build infrastructure and human capacity that will improve productivity to create a viable and sustainable waste management system. If implemented correctly with gradual increases in the transfer of costs to the waste producers, the level of public investment required will reduce over time, as the private sector demonstrates viability and delivers better services.

This report contains a range of specific recommendations towards achieving a high level of private sector involvement in the Ibadan waste management chain, and to develop a sustainable solid waste management framework for the entire Ibadan metropolitan area. The recommendations outlined in the full report to Oyo State Government are:

- **Analyze and verify the current performance of waste collection and transportation, and its costs.** In order to attract the private sector and encourage investments, Oyo State must be able to report detailed waste management performance data reliably and be transparent regarding the costs and opportunities for revenue in relation to waste management activities. The analysis can be done as part of the preparation of Ibadan's Solid Waste Management Plan, however, a sustainable and longer term mechanism for gathering and analyzing data on costs and on performance will be required. Such a mechanism will enable the determination of the right balance between subsidy and the level of costs to be borne by the waste producer on a year-on-year basis.

- **Ensure better recovery of waste collection costs by compelling all waste generators (households and businesses) to pay waste management fees.** This could be done by further and wider communications to businesses and the general public (e.g. through contact with community leaders and information campaigns that explain the importance of paying for waste management and how the money is being used). It was noted

that Oyo State is already increasing its communications effort toward the tail end of the study.

To complement the improvement in communications and awareness raising, there is also the need to properly enforce the setting and collection of fees. Proper enforcement will depend partly on having an effective workforce of Environmental Health Officers. Alternative revenue collection mechanisms should also be considered in due course, for example charging for waste collection via utility (water or electricity) bills or property taxes, and introducing 'Pay-As-You Throw' schemes. A further option would be to encourage waste producers to sort their waste and separate reusable or recyclable materials, and involving the private sector to pre-collect sorted waste in return for some form of recompense to the waste producer.

- **Develop performance based concession contracts for key aspects of the waste management chain (collection and transfer, processing, material recovery, waste-to-energy).**

These contracts should be of adequate duration, ranging from 3-4 years for waste collection (2-3 years could be applied during a transition phase) to between 8 and 25 years for waste processing such as material and energy recovery and landfill management. The contracts with private contractors should clearly define the scope of services and responsibilities, and should be performance-based with agreed incentives and sanctions. Oyo State should also ensure it develops the necessary competencies and resources to manage the procurement process and resulting public-private partnerships (PPPs), including monitoring the performance of the private contractors to ensure they fulfill their duties.

- **Develop better and more transparent procurement processes.** The private waste management sector can be made more competitive through open tender processes based on strict and clearly defined technical, administrative and financial requirements. By providing reliable information about the current opportunities and ensuring procurement tenders are as widely published as possible, Oyo State will be in a better position to attract larger waste management companies (domestic or international). The State will also be in a position to



CONTRACTUAL ASPECTS

Service providers do not have methods to evaluate the performance, quality and productivity

Develop methods and build the service providers' capacity in financing and management

Contractual framework not supportive of the professionalization of the waste collectors

- Develop investment commitment in the contract
- Ensure the allocation of budget for guaranteed payment of the service providers
- Allow processes to renegotiate the contracts with the service providers

Contracts for the private contractors are only renewed every year – too short to encourage long-term investments and attract financing

Develop concession contracts lasting several years, the contracts may first be extended to 2 or 3 years' as a transition and then the contract duration should be preferably at least 7 to 8 years

COST RECOVERY

Waste operators have trouble getting paid in some areas

- Compel all households to pay fees for waste collection
- To foster community led collection and empowering community associations to enforce the collection of waste into waste collection points
- Inform the waste producers about the benefits they can expect from the services provided

Currently there is no financial model to estimate the cost of solid waste management in Ibadan

- The financial model for investments and operation of waste management activities in Ibadan should be established.
- The fees/taxes collected should depend on the affluence of the waste collection areas.
- To provide information required to establish the financial model in the contract.

Exclusion of informal workers such as scavengers in resource recovery

- Identify the informal workers in Ibadan
- The waste pickers collect directly from the waste producers in areas difficult to access: the waste producers pay less if they sort the waste

While the economic feasibility of resource recovery is very uncertain, some companies have already proposed to develop waste-to-energy and material recovery facilities in Ibadan

- Monitor closely the private companies willingness to invest in resource recovery activities
- Improve the management of the landfill to reduce the area covered by waste and free space for waste-to-energy activities.
- Initiate a first negotiation with these companies to elaborate the requirements in order to prepare an open tender and write the terms of reference

Table 1: A synthesized table of identified challenges and proposed actions for Oyo State Governments

Expected Benefits/ Objective	Principal Stakeholder	Supporting Stakeholders	Time Horizon
<ul style="list-style-type: none"> • Improve the quality and the productivity of the services to build trust with the public • Help the professionalization of the waste management 	Service providers / OYOWMA	LGA / Oyo State	1 year
<ul style="list-style-type: none"> • Improve the quality and the productivity of the services • Improve the relationship between the private and public sector • Prove the capacity to repay loans, give credence to the operators 	OYOWMA / Service providers	LGA / Oyo State	2 to 3 years
<ul style="list-style-type: none"> • Bigger investments for the collection means • Access to loans for the private sector • Improvement of the quality of the services at a fixed price 	OYOWMA / Private contractors	Banks / OYO State/LGA	2 to 5 years
<ul style="list-style-type: none"> • Improve the security of the payment • Reduce the fees for the waste producers • Enable to enforce high quality and productivity standards • Enable collectors to access to bank loans to buy better equipment 	OYOWMA / Oyo State / LGA / Private contractors / Community leaders	OYOWMA / Service providers	1 to 2 years
<ul style="list-style-type: none"> • More precise concession agreements • More accurate knowledge about the costs and revenues • Price of the service justified by the open tender process 	OYOWMA / Private contractors	LGA / Oyo State	2 to 5 years
<ul style="list-style-type: none"> • Streets cleaner in the areas covered by the informal sector • Improvement of the income • Sorting of the waste • Formalization of the informal sector 	OYOWMA / Recycling industrials / Informal stakeholders	OYO State	3 years
<ul style="list-style-type: none"> • Reduction of the quantity of waste arriving to the landfills • Cost reduction 	OYOWMA / Industrial already identified by OYOWMA	Oyo State / Ministry of Environment and Habitat/ Ministry of Trade, Investment and Cooperatives	5 to 10 years

INFRASTRUCTURE GAPS

The poor state of the roads hinder the performance of the waste management services and productivity

Continuously improve the state of the roads and traffic

There are no normalized measurements of the quantity of waste delivered to the dumpsites

Install a weighbridge in each dumpsite with a computer system with 3G to transfer in real time the results of the weighing to OYOWMA

Trucks not adapted to the roads in Ibadan

Mobilize advanced technical expertise to produce designs, manufacturing templates, mounting and maintenance instructions required to equip four-wheeled medium size trucks according to the private collectors

There are no transfer stations in Ibadan

Oyo State should establish transfer stations around the metropolitan area as they are the most efficient solution to quickly improve the current performance of waste collection and transport

Dumpsites poorly laid out creating truck traffic issues and leachate issues

- Improve the quality of the inner tracks of the dumpsites
- Higher levelling of the waste
- Use of covering soils
- Have a network to collect leachate and rain water
- Have leachate storage pounds
- Have enclosure wall of at least 3m high around the sites

ROLES AND RESPONSIBILITIES

OYOWMA charges dumping fees for each dumpsite used by an operator. In addition, OYOWMA also levies an annual licensing fee, however, this fee varies, depending on the areas and categories of operations.

Standardization of these fees and clear communication on them will help to foster PSP

The current rules and regulations regarding solid waste management are not adequately enforced

OYOWMA and the Ministry of Environment and Habitat, adequately enforce the laws which would protect all stakeholders

Areas allocated to Private Collectors

Develop a zoning of the city providing balanced collection areas (between low/ middle/high income) and leading to a daily tonnage corresponding to at least five collection trucks

There is limited resource recovery such as waste-to-energy and composting

- Develop the whole waste management value chain to support resource recovery activities
- Have a characterization of the waste conducted according to a standard method

Expected Benefits/ Objective	Principal Stakeholder	Supporting Stakeholders	Time Horizon
<ul style="list-style-type: none"> • Enable the use of bigger capacity trucks • Reduce the number of break downs • Improve the productivity of the teams • Improve the coverage of the collection services 	OYOWMA Service Providers		Continuous efforts
<p>Reliable statistical data:</p> <ul style="list-style-type: none"> • New possibilities to pay the waste collection services • Possibility to correlate this data with other available data (demographic, cost recovery, etc.) to produce management indicators 	OYOWMA / Potential Dumpsite operator	Company specialized in weighing systems / Universities	6 months for the implementation (continuous efforts)
Develop local expertise adapted to the local constraints and enabling to use vehicles simple to maintain and repair	OYOWMA / Private contractors	Oyo State / Universities	2 years
The transfer stations would enable the collection vehicles to remain longer in the collection areas every day and to reduce the risks of damage to the collection vehicles.	OYOWMA / Private contractors / LGA	Oyo State	2 to 5 years
<ul style="list-style-type: none"> • Dumpsites with a longer life cycle • Reduce the disturbances for the surroundings • Reduce the risk of truck break-downs in the dumpsites • The inner tracks can be used by packer trucks • Reduce the impact on the environment 	OYOWMA / Oyo State	LGA / Private contractors	6 months for the improvement inner tracks 3 to 10 years
<ul style="list-style-type: none"> • Improvement of the operation of the dumpsites • More transparency in the cost recovery (better governing) 	OYOWMA / Private contractors	Oyo State/LGA	2 to 5 years
<ul style="list-style-type: none"> • Eliminate illegal dumping of waste both by waste producers and waste collectors • Productivity of the collection team improved 	Oyo State	OYOWMA / LGA	3 to 10 years
<ul style="list-style-type: none"> • Cover all the territory • Structure future delegation markets • Improve professionalism in the SWM sector for private operators 	OYOWMA / LGA / Private contractors	Oyo State	4 years
			3 to 10 years

achieve the most cost effective deals based on the level of competition from interested private sector operators. It was noted that Oyo State was moving in this direction towards the final stages of the study but will require a much greater concentrated effort

- **Implement measures that would improve the productivity of waste management activities including investing in transport infrastructure and waste facilities.** Oyo State should explore a range of options to improve the productivity of waste management activities, for example, restructuring the waste collection system to make each designated area more viable; improving the quality of roads; establishing Transfer Loading Stations (TLS) across the metropolitan to reduce the distance and time for trucks to travel to the dumpsites; the use of dedicated and 'prepaid' bins or plastic bags for the collection of waste; working with the private sector to establish recycling centers to recover resources and reduce the need for landfill etc. Many of these improvements can be done in collaboration with the private sector and through PPPs, but Oyo State will need to ensure the investment conditions are attractive, e.g. by ensuring land identification and acquisition; guaranteeing construction permits for facilities; clearly defining the revenue model and construction, maintenance and ownership; etc.

- **Clearly define the roles and responsibilities of the public institutions involved in regulating the waste chain and ensure that they**

have adequate capacity to perform their responsibilities. At the moment there are three different public institutions in Ibadan that are involved in solid waste management. In particular, there should be a clearer distinction between the regulator and operator of waste management activities. Oyo State should ensure that the appropriate public institution that is acting as the client to private contractors has the competencies and resources needed to successfully initiate, develop, negotiate, award and manage private sector participation engagements. Likewise, Oyo State should ensure that there are adequate resources to enforce the existing waste legislation, particularly related to indiscriminate dumping of waste and proper disposal of waste through authorized (private) waste collectors.



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