PART I: GENERAL
• Population: 10,000,000 habitants (ONE – Sep 2015)
• Generation: 11,000 Ton/day, >50% OM
  (Estimation of Ministry of Environment - 2015)
• Collection coverage: 74.9% (ONE – 2010) / 80-90%
• Final disposal: >350 open dumping sites
  (Ministry of Environment - 2010)
OVERALL STRUCTURE FOR SWM

National Government

Ministry of Environment and Natural Resources

Vice-Ministry Of Environmental Management

Dirección de Calidad Ambiental
Dirección de Evaluación Ambiental
Dirección de Cambio Climático y Mecanismo de Desarrollo Limpio

Direction of Solid Waste and Municipal Affairs

Solid Waste Department
Municipal Management Department

Local Government

Mayor
Municipal Public Services Division

Waste Collection and Final Disposal

Mayor
Cleaning and Ornament

Local government capacity building

MAP
MEPyD
LMD
MUNICIPAL DEVELOPMENT PROJECT - PRODEM

IMPROVED DECISION MAKING AND INVESTMENTS
- Planning
- Design
- Investments

LOCAL GOVERNMENTS
- Mayor
- Counselors
- Other Councils
- Committees
- Citizens

HUMAN RESOURCES
- Planning officer
- Human Resources officer
- Finance officer
- Purchasing and contracting
- Municipal Service officer

IMPROVED MUNICIPAL SERVICES
- Design
- Budgeting
- Operating guidelines
- Ordinances
- Maintenance
- Citizen involvement

MUNICIPAL DEVELOPMENT PLAN
- Annual Operating Plan
- Physical-finance Programming, Participatory budgeting

Budget Allocation

Purchasing Plan
FOCIMIRS: Strengthening of Institutional Capacity on ISWM - JICA

**Overall Goal:**
- Situation of Nation-wide Solid Waste Management in Dominican Republic is improved.
- Information exchange with neighboring countries is promoted.

**Project Purpose:**
System of Integrated Solid Waste Management (ISWM) at central government and municipality level is established in Dominican Republic through Ministry of Environment and Natural Resources.

---

**Structure of the capacity development**

- **JICA Expert Team**
- **Counterpart of Ministry – Central**
- **Provincial Offices**
- **Municipality**

**Support on SWM planning:**
To Formulate ISWMP

---

**Output 1**
Ministry of Environment and Natural Resources clarifies the roles of Ministry of Environment and Natural Resources and its provincial office, municipalities, and other collaborating institutions.

**Output 2**
Ministry of Environment and Natural Resources makes "principles, guidelines and manuals for formulating ISWM plan by municipalities (draft)."

**Output 3**
Ministry of Environment and Natural Resources in collaborating with Cooperating Institutions supports model municipality(ies) and municipal association(s) formulating the ISWM plan by them while conducting the pilot project.

**Output 4**
Ministry of Environment and Natural Resources in collaborating with Cooperating Institutions reviews and improves the municipality(ies)' ISWM plan by sharing and exchanging experience with neighboring countries.

**Output 5**
Ministry of Environment and Natural Resources in collaborating with Cooperating Institutions finalizes the formulation of resolutions, regulations and "principles, guidelines and manuals" for making ISWM plan by municipality and municipal associations for implementation of nation-wide ISWM plan.
KEY CHALLENGES ON SWM

NATIONAL LEVEL

- **PLANNING** OF SW FINAL DISPOSAL: REGIONAL/PROVINCIAL LANDFILLS (Intermunicipal association)
- **FINANCING** OF SW INFRASTRUCTURES
- ENFORCEMENT

MUNICIPAL LEVEL

- **ISWM PLANNING**
- **FINANCIAL SUSTAINABILITY**: USER PAYMENT
- **CITIZEN ENGAGEMENT AND COMMUNITY INVOLVEMENT**

Costos e Ingresos en el manejo integral de residuos sólidos

<table>
<thead>
<tr>
<th>PARTIDAS</th>
<th>MONTO RD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>15.804.015,18</td>
</tr>
<tr>
<td>Equipo y transporte (Transportación)</td>
<td>4.739.308,05</td>
</tr>
<tr>
<td>Saneamiento de calles, plazas y parques</td>
<td>1.494.690,97</td>
</tr>
<tr>
<td>Manejo de residuos</td>
<td>9.570.007,16</td>
</tr>
<tr>
<td>Combustibles y lubricantes</td>
<td>8.500.000,00</td>
</tr>
<tr>
<td>Reparación y mantenimiento</td>
<td>6.152.216,05</td>
</tr>
<tr>
<td>Llantas y neumáticos</td>
<td>1.818.836,49</td>
</tr>
<tr>
<td>Automóviles y camiones</td>
<td>1.491.992,68</td>
</tr>
<tr>
<td>Herramientas y máquinas-herramientas</td>
<td>2.841.386,88</td>
</tr>
<tr>
<td>Seguro de bienes inmuebles</td>
<td>380.117,03</td>
</tr>
<tr>
<td>Costo total</td>
<td>30.836.348,26</td>
</tr>
</tbody>
</table>

Ingresos por concepto del servicio de recolección y transporte

- Pago del servicio de recolección a los comercios: 594.690,00
- Ingresos totales: 594.690,00

% recaudaciones en relación al costo: 1,93
PARTE II: SPECIFIC SESSION
Moving forward

• Continue the project - **PRODEM II** with performance based approach, incorporating:

  ➢ SWM planning for regional/provincial landfills.

  ➢ Institutional strengthening for cost recovery of SWM services.
Options for Planning

- **Municipal level**: ISWMP, Municipal Development Plan - MDP, Territorial Development Plan (land use planning).
- **Provincial level**: Territorial Development Plan - TDP
- **Regional level**: Integrated Regional Plan (Multisectorial)
- **National level**: Territorial Development Plan - TDP, ISWMP
Options for Improvement Cost Recovery

- Contracting out tariff collection (ongoing in Bani, PP, ADN, SPM)
- Billing SW with electricity (agreement in process of evaluation by national government)
- Establishing references prices for SW operations (project)
• Need and importance of planning, with all sectors involved, including citizens through organized groups.

• Need to transparent SWM operation cost.

• Need to establish tariffs, based on real costs, in order to assure sustainability.

• Very low capacity in local governments, in all aspects, so building capacity is essential.
THANK YOU!!
Technical Deep Dive on SWM, Kenya Delegation:
Sheila Kamunyori (WBTTL), John Wafula, Eng. Benjamin K. Njenga, Planner Sarah Gichanga
National SWM Strategy

National Agencies:
- Ministry of Environment & Natural Resources: Policy directions
- NEMA: Formulation of policies, regulations, economic instruments, develop national regulations and standards, public awareness, and enforcement

County Governments: Implementation of SWM strategies
- City and Municipal Boards – city and municipal services including solid waste management. (Yet to be formed under the new Urban Areas and Cities Act)
OVERVIEW OF WORLD BANK PROJECTS

1. Kenya Municipal Program (KMP):
   - The development objective: to strengthen local governance and improve urban service delivery in selected urban local authorities (LAs) through a combination of municipal reforms and infrastructure investment.
   - Focus on citywide trunk infrastructure including SWM

2. Kenya Informal Settlements Improvement Project (KISIP):
   - Project Development Objective: Improve living conditions in informal settlements in selected urban centers in selected counties in Kenya.

3. Nairobi Metropolitan Service Improvement Project (NaMSIP)
   - Development of a Framework for the Establishment of a Solid Waste Management Authority in selected Counties within the NMR
   - Sanitary Landfills in Muranga and Kajiado Counties
   - Consultancy Services to assist the Nairobi City County in developing and implementing a 3 “R” and Intermediate Treatment Plan, through promotion of Waste Reduction, Recovery of Resources, Reuse, Recycling and Intermediate Treatment
KEY CHALLENGES

A. Institutional:
- Lack of adequate & appropriate staff
- Lack of adequate enforcement
- Inadequate political goodwill
- Inadequate community awareness
- Residents’ attitude towards SWM
- Ineffective bylaws

Technical:
- Lack of adequate refuse trucks
- Inappropriate methods of SWM
- Lack of adequate technically trained staff
- Poor SWM infrastructure
- Lack of prevention for secondary environmental pollution at dump site

Financial:
- Inadequate funding of SWM
- Lack of revenue generated from SWM
- Lack of funding from Central Government
EXPERIENCES

• In the new constitutional order, waste management is a devolved function (Counties), but jurisdictional overlaps between National and County governments still exists (Policy and strategy making.)
  - e.g. National Solid Waste Management Strategy, National Environment Policy, County Solid Waste Management Strategy.
EXPERIENCES

- City/Municipal Boards have yet to be set up by most Counties.

- The current system of handling solid waste is; Storage, Collection, Transportation, Disposal then Segregation by the County, Community and private sector.
LESSONS

a) A clear definition of jurisdiction and appropriate distribution of roles is essential

b) Community participation and management is key for the success but enabling policy, infrastructure, technical capacity and financing is key.

c) Capacity building of county governments with enabling legislation is key as waste management is a devolved function.
THE END
WASTE to WEALTH
SOLID WASTE MANAGEMENT (SWM) IN OYO STATE, NIGERIA

A

PRESENTATION

AT

THE WORLD BANK SOLID WASTE MANAGEMENT TECHNICAL DEEP DIVE (TDD) TOKYO, JAPAN

MARCH 2017
Outlines

• Introduction
• Brief History of Ibadan
• Structure of Solid Waste Mgt in Ibadan
• Generation, Collection and Disposal of Solid Waste in Ibadan
• Forms of Waste Collection
• Solid Waste Disposal
• World Bank Project on Solid Waste Mgt
• Current Efforts of Oyo State Government to Improve Solid Waste Management
• Challenges
• Conclusion
**Introduction**

**WASTE**
Most unwanted materials, substances or objects which fall out of the commercial cycle or chain of utility (AYANGBILE, 2016)
SOLID WASTE MANAGEMENT (SWM)
Application of techniques for orderly execution of collection, transfer, processing, treatment and disposal of waste (Onu et al., 2012).
• Increasing global concern on environmental health demands that waste be properly managed, to minimize and where possible, eliminate its potential harm.
• Hence, the challenge of solid waste management a growing concern of Oyo State.
Outlines

- Brief History of Ibadan
- Structure of Solid Waste Management
- Generation, Collection, Disposal
- Forms of Waste Collection
- Solid Waste Disposal
- World Bank Project on Solid Waste Management
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- Challenges
- Conclusion
Brief History of Ibadan

- Capital of Oyo State
- 3rd largest city in Nigeria
- Eleven (11) local government councils.
- 3.5m population
- Traditional, uncontrolled urbanisation (Jaco, 2010)
- Naturally good drainage blocked by solid waste and construction
Outlines

• Brief History of Ibadan
• Structure of Solid Waste Management in Ibadan

Generation, Collection and Disposal of Solid Wastes in Ibadan

• Forms of Waste Collection
• Solid Waste Disposal
• World Bank Project on Solid Waste Management

• Current Efforts of Oyo State Government to Improve Solid Waste Management

• Challenges
• Conclusion
Structure of Solid Waste Management in Ibadan

- A key responsibility of Oyo State Government
- Operated along 3 layers

The State Government and the (State) Ministry of Environment and Water Resources

The 11 Local Governments

The Oyo State Solid Waste Management Authority (OYOWMA)
Outlines

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Generation of Solid Waste

- Tonnes generated daily in different forms and sources
- Management a big challenge to successive governments
- Prior to current administration in 2011, larger portion of solid waste generated usually dumped on available plots of land, sidewalks, roads, streams, channels and drains
- Clogging of drainage systems resulted to flooding disasters and deaths
- Past outbreaks of infectious diseases (cholera, lassa fever, diarrhea etc.) from human contact with improperly disposed and untreated waste.
Generation and Collection of Solid Wastes in Ibadan

Waste Generation
Improper Solid Waste Management traceable to:

- The people’s culture or attitude
- Poor public awareness
- Long distance to skip bin location
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Forms of Waste Collection

Oyo State Waste Management Authority (OYOWMA)

- OYOWMA collects 68% of Ibadan refuse and waste, day and night (between 9.00 p.m. and 6.00 a.m.) (EGIPE Sarl, 2015)
- Waste collection methods depend on the ease of accessibility by motorized vehicles.
Forms of Waste Collection

The following are the four (4) prevalent forms of waste collection in Ibadan:

- House-to-House
- Communal deposits
- Block system and Shop-to-shop
- The commercial and industrial waste collection
Forms of Waste Collection

OYOWMA employees collecting waste from the middle of the road

OYOWMA loading a truck with waste left at the side of the road
• Collects waste from residential, commercial and industrial premises that are ready to pay for their services (OYOWMA, 2016).

• Responsible for collection of about 40% of the volume of the waste reaching the dumpsites
Three (3) types of waste are collected by private sector operators:

1. Individual Waste (everyday)

2. Commercial waste (about three times a week; up to four complete loadings of one truck in a day for this kind of waste;)

3. Household waste (about twice a month; one or two complete loads for one truck in a day as there are many more stops than with commercial waste.)
When registering with OYOWMA. The private operators have to specify whether they are collecting from commercial facilities, from industrial facilities or from households. Each operator collects one type of waste; so there are contractors collecting only industrial, commercial or household waste. In addition, private contractors also collect waste from special events such as parties, or on special request.
Private contractors’ staff loading waste into their truck

Private contractors’ staff emptying the truck using a shovel
<table>
<thead>
<tr>
<th>Dump Sites</th>
<th>Area (approx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lapite</td>
<td>14.5 Acres</td>
</tr>
<tr>
<td>Aba Eku</td>
<td>14.0 Acres</td>
</tr>
<tr>
<td>Ajakanga</td>
<td>23.3 Acres</td>
</tr>
<tr>
<td>Awotan</td>
<td>31.7 Acres</td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td><strong>83.5 Acres / 33.7 Hctrs</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Ibadan</th>
<th>Chicago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>2.5 million</td>
<td>2.7 million</td>
</tr>
<tr>
<td>Land Area</td>
<td>3,080 km²</td>
<td>606.1 km²</td>
</tr>
</tbody>
</table>

Demographic:
- Ibadan: Population 2.5 million, Land Area 3,080 km²
- Chicago: Population 2.7 million, Land Area 606.1 km²
Average Weekly Waste Collection

- **Mon**: 18% Actual Waste Collection, 16% Targeted Collection
- **Tue**: 9% Actual Waste Collection, 16% Targeted Collection
- **Wed**: 6% Actual Waste Collection, 16% Targeted Collection
- **Thu**: 16% Actual Waste Collection, 16% Targeted Collection (Efficient Collection)
- **Fri**: 14% Actual Waste Collection, 16% Targeted Collection
- **Sat**: 6% Actual Waste Collection, 16% Targeted Collection
- **Sun**: 3% Actual Waste Collection, 5% Targeted Collection (Inefficient Collection)

- **Efficiency of Collection**:
  - Efficient: Thursday
  - Inefficient: Sunday

Legend:
- **Blue**: Actual Waste Collection
- **Green**: Targeted Collection
- **Red**: Efficiency of Collection
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The following are the basic forms of Solid Waste Disposal in Ibadan

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government Dumpsite Waste Disposal Point;</td>
</tr>
<tr>
<td>2</td>
<td>Private drums Barrels</td>
</tr>
<tr>
<td>3</td>
<td>Bury/burn by households themselves</td>
</tr>
<tr>
<td>4</td>
<td>Dumped into river/drainage and at roadsides</td>
</tr>
</tbody>
</table>
Solid Waste Disposal

Burning waste in Lapite

Truck tipping waste in Lapite
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The following WB Projects, though not directly linked to Solid Waste, complement Government efforts:

- **Ibadan Urban Flood Management Project (IUFMP)** – a response to the floods of 2011 which caused significant human and economic losses in Ibadan.

- **Urban drainage and solid waste masterplans** which when completed 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.
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• Challenges
• Conclusion
Current Efforts of Oyo State Government to Improve Solid Waste Management

- Giving bite to solid waste management policies and sanitation laws through the setting up of mobile courts to try offenders. Clear cut parameters for reprimanding anyone caught violating the laws on sanitation are clearly stated.
- Education and awareness for the citizens to discard long acquired habits of indiscriminate waste disposal.
- Increased mobilisation of public health educators/environmentalists to educate citizenry on the need for proper waste disposal and management.
- Relocation of skip bins to stop the placement on roads, in front of dwellings and commercial centres
- Partnership with Developmental Partners e.g. World Bank, UNICEF e.t.c
- Provision of more skip bins and increase in the frequency of waste collection by the contractors
- Improvements to city road networks to facilitate proper access, waste collection and management
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• Conclusion
Challenges

- Inadequate funds for Solid Waste Management
- Inadequate equipment
- Use of old/orthodox technology
- Need for modern SWM Technology
- Insufficient manpower
- Need for modern SWM Laboratories and Research Centres
- Attitude and behavior of the residents
- Incomplete mapping and enumeration
- Illiteracy, poverty and ignorance
Outlines

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• Conclusion
Conclusion

There is no doubt that solid waste management has been part of human activities right from time and specifically has been highly challenging to successive governments in Oyo State. However, if the efforts of the current Government in Oyo State in the provision of infrastructure and managing the solid waste in the State is complimented by a positive change of attitude by the people and a significant financial and technical support by the World Bank, then Tokyo, New York City, London and Paris will be replicated in Oyo State, Nigeria.
Thank you for listening to me.
WORLD BANK TECHNICAL DEEP DIVE ON SWM
TOKYO 21ST MARCH 2017

Solid Waste Management In Karachi

Khalid Mahmood Siddiqui
Senior Chief
Planning & Development Department Government Of Sindh
Karachi, Pakistan
Pakistan:
- Area: (881,913 km²)
- Capital: Islamabad
- Population: 182.1 million approx.
- Provinces: 4, FATA & GB

Sindh:
- Area: (140,914 km²)
  - Second largest Province
  - Population: 43.7 million
- Sindh has 29 Districts.
- Karachi (3600 km²) main Industrial Hub of Pakistan
National/Provincial/Municipal Legislation related to SWM

- Pakistan Environmental Protection Act 1997
- National Sanitation Policy 2006
- Sindh Local Government Act 2013
- Sindh Sanitation Policy And Strategy 2016
- Sindh Solid Waste Management Act 2014
INSTITUTIONS RESPONSIBLE FOR SWM IN KARACHI

- Karachi Metropolitan Corporation
- 6 District Municipal Corporations
- 6 Cantonment Boards
- Defence Housing Authority

Towards an effort to Consolidate: Sindh Solid Waste Management Board established in 2014
SOLID WASTE MANAGEMENT IN KARACHI

Existing System

Population: 20 Million+

Waste generation: 12-14,000 tons/day

Waste collection: only 40-60% of waste generated is collected

Waste transportation:
- Direct haul by collection vehicles to disposal
- Consolidation of waste into containers serving specific areas
- Informal transfer stations where waste is reloaded/recycled
- 6 new transfer sites proposed for development—locations identified to enhance collection efficiencies

Beneficial use of waste: <5-8% by informal sector

Disposal:
- Gond Pass site (Operational)
- Jam Charko site (Operational)
- New site at Dhabegi identified on Karachi outskirts (still to be approved/developed)
Multiplicity of SWM agencies
Coordination issues
Heaps of garbage
Burning waste in open
>60,000 families’ livelihood on recycling
Around 10,000 scavengers in Karachi only
Dangerous working conditions
Dumping of hazardous waste
**KEY CHALLENGES**

**Key Challenges**

1. Political commitment and inter-agencies co-ordination

2. Achieve 100% waste collection / 100% environmentally acceptable disposal

3. To formalize the informal sector engaged in SWM

4. Extract value from waste beyond pure financial return
   - Social Benefit – gender/livelihood improvement
   - Health Benefit – disease prevention
   - Environmental Benefit – air/water/soil quality improvement
   - Disaster Management Benefit – drainage canal clean up
Approach towards Improvement

Storage
- Objective: Optimize collection efficiency and service delivery
- Investment Opportunity:
  - Storage container standardization assessment and implementation study
  - Storage container capital purchase/distribution (based on above study)

Collection
- Objective: 100% collection of all solid waste generated in Karachi (up from 40 to 60%)
- Investment Opportunity:
  - Functional analysis of existing collection system (effectiveness/efficiency)
  - Model contract development for private sector
  - Collection vehicle specification, capital purchase to achieve 100% collection capability
Approach towards Improvement

**Transportation**

- **Objective:** Functioning transfer system to increase efficiency of waste movement to selected management option

- **Investment Opportunity:**
  - Design study for 6 proposed transfer stations (modular design, with beneficial use sorting stations incorporated)
  - Site selection confirmation, environment/social safeguard approval study
  - Capital investment to construct up to 6 transfer stations as currently proposed
  - Container and transfer vehicle capital investment for each transfer station
My city Needs

Beneficial use / Treatment

- Objective: Extract value from waste
- Investment Opportunity - one or all of the following:
  - RDF production facility for use in energy generation by utility, cement industry (current kwh price is attractive)
  - Compost facility for use in agriculture
  - Anaerobic digester facility for energy production and soil amendment manufacture

Disposal

- Objective: Stabilize existing two disposal sites, assess post closure use opportunities and confirm/develop newly identified site as sanitary landfill
- Investment Opportunity:
  - Short term Gond Pass and Jam Charko design and operation investment upgrade to protect environment
  - Site Investigation and sanitary landfill design for new site at Razzakabad
  - Closure plan development for Gond Pass and Jam Charko – including potential for site utilization for beneficial use facilities (Refuse Derived Fuel plant, compost plant, recycling plant)
TOURISM SERVICES
SOLID WASTE
DISASTER RISK MANAGEMENT
**SCOPE OF WORK**

- Collection, transport, recycling and final disposal
- Equipment (heavy equipment, vehicles, tools)
- Environmental monitoring
- Mechanisms ensuring sustainability of projects (e.g. ‘Fideicomiso’ for operation cost recovery)
- Plans for recyclers, social activities and communication plans

- Stakeholders: (i) Central level: Ministry of Economy and Finance, Ministry of Environment, Ministry of Public Health, (ii) Regional level: Regional Government of Cusco, PER PLAN COPESCO, (iii) Municipalities (provincial and district mayors) which have the competence over solid waste management.
- Legal agreement between WB and MEF/Region

- Sanitary landfill of Cusco (350 t/day): dropped
- Sanitary landfill of Calca (15-20 t/day; 3.7 Ha)
- Sanitary landfill of Urubamba (20-25 t/day; 4.7 Ha)

- Strong interinstitutional coordination work
- Capacity building mainly through professionalization services
- Communication work and relationship with the communities critical
First WB loan at the subnational level with the Region of Cusco, addressing issue of solid waste which is competence of Municipalities. Without the delegation of power from beneficiary Municipalities to the Region the projects cannot be implemented.

Ensuring sustainability of investments and of operation of the landfills: through application of social and environmental safeguards, capacity building, financial mechanisms for cost recovery

Participation and empowerment of local authorities and civil society throughout project cycle

Timeline of project preparation and execution should be as short as possible
OUR EXPECTATIONS FROM THE LEARNING EVENT

✓ Learn about solid waste management schemes in other countries
✓ Learn about street/public spaces cleaning in other countries
✓ Learn about others’ experience in building a relationship with the communities
✓ Learn about sustainability of services and cost recovery mechanisms in other countries
✓ Learn about the different technologies for solid waste management in other countries
SOLID WASTE MANAGEMENT IN SENEGAL

The senegalese approach
Pour une gestion collective et responsable
Pour une gestion collective et responsable
Overview WB project

Municipal infrastructure and implementation of full solid waste management value-chain

Inter-municipal infrastructures and development of waste management poles (PGD)

Enhancement of the integrated solid waste management system in the capital Dakar and closure of the large Mbeubeuss dumpside

Capacity building for stakeholders in the sector and strategic studies
Key Challenges

- The establishment of a sustainable financing mechanism that includes some level of cost recovery

- The professionalization and integration of informal actors in the recycling and primary collection

- Public involvement in the effort for waste management and prevention

- The effective governance of the sector with the capacity building of actors, the implementation of legal reforms and the deployment of an information system at the national level

Pour une gestion collective et responsable
Pour une gestion collective et responsable

Participatory and inclusive approach to strategy development

Planning by action

Structural transformation of the informal sector
Lessons learned

1. Engagement with local stakeholders and citizens for project acceptance

2. Good relationship between the national government and local governments

3. Integrated and stratified approaches
Ibrahima DIAGNE
National Coordinator of UCG,
Waste management Expert
Project and Urban Management Specialist

idiagne@pngd.org
PRESIDENT OFFICE,
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

Improvement of Solid Waste Management in Participating Local Government Authorities

PRESENTED IN TECHNICAL DEEP DIVE WORKSHOP HELD ON 21st MARCH, 2017 IN TOKYO JAPAN

' Eng. Kasulwa Omari Mvano
SWM – Expert TSCP
Contents of Presentation

- Background of Tanzania Strategic Project (TSCP)
- Overall Structure of City/Municipal SWM
- Project objectives and Implementation
- Achievements
- Challenges & Lesson learned
Tanzania Strategic Cities

Map showing the strategic cities of Tanzania.
Background of TSCP Project

The Tanzania Strategic Cities Project (TSCP)
- Prepared by the World Bank, beginning in 2008
- Implementation starts in 2010

The TSCP Development Objective was:-
- To improve the quality of and access to basic urban services in participating LGAs.

This is to be achieved
- By the rehabilitation and expansion of urban infrastructure
- Institutional strengthening activities aimed at improving the management capacities of the participating LGAs.
## Tanzania Strategic Cities

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2012 Census)</td>
<td>507903</td>
<td>363452</td>
<td>273332</td>
<td>385279</td>
<td>286134</td>
<td>108299</td>
<td>419956</td>
</tr>
<tr>
<td>Growth rate (%)</td>
<td>4.3</td>
<td>3</td>
<td>2.2</td>
<td>4</td>
<td>3.8</td>
<td>1.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Area Sq. Km</td>
<td>208</td>
<td>256</td>
<td>123.4</td>
<td>221</td>
<td>128</td>
<td>163</td>
<td>277</td>
</tr>
<tr>
<td>SW Generated T/day</td>
<td>550</td>
<td>414</td>
<td>350</td>
<td>350</td>
<td>250</td>
<td>150</td>
<td>440</td>
</tr>
<tr>
<td>SW Collected % of Generated</td>
<td>60</td>
<td>52</td>
<td>55</td>
<td>70</td>
<td>50</td>
<td>56</td>
<td>62</td>
</tr>
</tbody>
</table>

- Population served: 2,344,358
- Area covered in sg.km: 1,376.4
- Waste generated per day: 2,344,358(tones)
- Area covered in sg.km: 1,376.4
- Waste generated per day: 2,504
- Average Collection per day: 58%
PROJECT OBJECTIVES ON SOLID WASTE MANAGEMENT

1. **Better waste service**
   - To increase coverage of waste collection services in all Local Authorities under the project to a minimum of 90% of the population
   - To remediate, upgrade and construct new sanitary landfill with life span of at least 20 years
   - Provision of landfill equipment

2. **Optimized waste logistics**
   - To improve the collection and transport of MSW
   - To promote 3Rs in waste stream
   - To engage Private sector in management of waste
   - To create more incentives for increase private sector participation
   - Provision of transportation equipment

3. **Final Disposal**
   - To remediate, upgrade and construct new sanitary landfill with life span of at least 20 years
   - Provision of landfill equipment

4. **Cost coverage**
   - To strengthen user fee collection system on the basis of full cost recovery
   - To update existing By-Law and enforcement mechanism

5. **Institutional strengthening**
   - To equip knowledge and skills to Municipal staffs
   - To provide exposure to SW staff to Learn best practice where they have advanced in SW management

To develop solid waste strategic plans to Cities under the project
Achievements

1. SW-Strategic Plan
All Cities have their own solid waste strategic plan which guide service provision

2. Coverage
Up to 60% of population are now receiving service.

3. Capacity Building
All staff responsible for solid waste management have been trained within the Country and exposed to other Countries with best practice in SW and operation and management of landfill

4. Infrastructure Development
- All infrastructure for SW was improved/constructed. (collection system, Transportation system and Disposal system)
- O&M Budget was increased

5. Cost Recovery
- Community are now understand the importance of paying for service delivery
- Cost recovery plans was established to all Cities/Municipalities and are now operational
- By laws are enacted and enforced

6. Private sector involvement
Both Companies and community based groups are now working with Cities and Municipalities in SW at deferent stage of waste circle.
Main Challenges

- Priority setting by Cities//Municipalities to maintain the infrastructures provided/constructed through the project.

- Regular changes in management staff, technical staff

- Enforcement of Laws and by-laws governed the provision of solid waste management services.

- Increase of O&M budget for maintaining Infrastructures & equipment provided through the project.

- Political will to sensitize community in cleanliness and paying of user charges.
THANKS FOR YOUR ATTENTION
ZANZIBAR URBAN SOLID WASTE MANAGEMENT PRESENTED IN TECHNICAL DEEP DIVE WORKSHOP HELD ON 21st MARCH, 2017 IN TOKYO JAPAN

Presented by Eng Mzee Khamis Juma
Head of Division, Sewerage, Drainage & Solid wastes

Mobile: +255 777 413043
Email: mkju61@yahoo.com
Content

• Overall structure for SWM – at National / Municipality.

• Overview of World bank project.

• Key challenges.
1.1 Back Ground information

Location Map of Zanzibar

- Located in the Indian Ocean within East coast of Africa at latitude 5° 45’ S (south of Equator) & longitude 39° 15’ E.
- Part of Tanzania and 36 Km from Tanzania mainland cost with two Islands Unguja and Pemba
- Population : 1,303,569
- Urban population : 223,033
THE OLD STONE TOWN AS WORLD HERITAGE SITE
1.1 OVERALL STRUCTURE FOR SOLID WASTE MANAGEMENT

- Existing
Urban Municipal Council is responsible for Zanzibar town (1,600 hectares) including heritage site in Old stone town.

The waste capacity of 46% of total wastes generation of 280 tons/day equivalent to 126 tons per day. 86% biodegradable, Estimated 5.1% are non biodegradable for reuse and recycle.
1.2 Overview of World Bank Project

- Project Title: Zanzibar Urban Service Project (ZUSP)
- Project cost: USD 38 million.
- Project Main Objective: To improve access to urban services in Zanzibar and conserve the physical cultural heritage in Stone Town:
- Project Duration: 5 years (from 2011-2016) extension to 2018.

Three Main Components:

- Institutional Strengthening & Infrastructure Development in Urban Municipality (USD 31.2 mil) including Street lights, Drainage, Sea wall Constr etc
- Support Town council in Pemba. (USD 3.8 mill) including drainage, market, footpath etc
- Project Management (USD 3.0 mill).
- Overall progress of Project: 77.8%
Overview of World Bank – Project Additional Financing

Total Project Additional Financing: USD 55.0 million.

- The Additional Financing (AF) will scale up the impacts and capital investments of the Project, as well as enhance and sustain the institutional strengthening activities, and provide the enabling infrastructure to support local economic development and livelihoods.

Activities:
- Urban sanitation: solid waste collection, transport, transfer, disposal and septic sludge treatment
- Urban upgrading and cultural heritage preservation in Ng’ambo area
- Support for municipal finance
- (i) municipal own-source revenue enhancement system
- (ii) public-private partnership
- Completion of scale-up of the original project
- Resettlement cost for storm water drainage
- Scale-up of small investments in Pemba etc
The Key Challenges of Country /City

- Community Engagement and Participation in Solid wastes management.
- Limited resources for Solid Waste Management
Thanks for your Attention!!!

AHSANTE SANA