THE GREAT QUEZON CITY CLEAN-UP

The Role of the Informal Sector in Solid Waste Management

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Outline of Presentation

› Quezon City Profile
› Quezon City Solid Waste Management Profile
› Legal Framework for Solid Waste Management
› Integration of the Informal Sector to the Formal Solid Waste Management System

Quezon City Profile

Location: Northern part of Metro Manila

- Land Area: 16,112.5420 hectares
- No. of Congressional Dist.: 4
- No. of Barangays: 142
- Population: 2,679,450 (as of August 2007)
- Annual Growth Rate: 2.92% (CPDO)

Business Establishments: 56,838 (CPDO)
- Schools (private/public): 578
- Hospitals (private/public): 61
- Health Care Centers: 60
- Major parks: 231
- Community parks: 3
- Markets (private/public): 84
- Slaughterhouses: 8

QC at a Glance
### QC SWM Profile

- **Per Capita Waste Generation**: 0.66 kg/day
- **Waste Generation**: 1,888 tons/day (2009)
- **Average Volume being disposed at PCDF**: 1,205 tons/day (2009)
- **Waste Density**: 210 kg./m³

**Waste Composition:**
- **Biodegradable**: 49%
- **Recyclable**: 39%
- **Plastic**: 16%
- **Paper**: 17%
- **Metal**: 3%
- **Glass**: 3%
- **Residual**: 13%

### Legal Framework for SWM


- **Article II, Section 15**: The State shall protect and promote the right to health of the people and instill health consciousness among them.
- **Article II, Section 16**: The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.

### Modernization of SWM in Quezon City

- **R.A. 9003**: The Ecological Solid Waste Management Act of 2000
  - The law provides for a systematic, comprehensive and ecological solid waste management program in the country.
  - Generally, the law promotes a way of thinking that waste is a resource that can be recovered.
  - Based on Section 10 of the said Act, the LGU shall be primarily responsible for the implementation and enforcement of the provisions of the Act within their respective jurisdictions. Segregation and collection of solid waste shall be conducted at the barangay level specifically for biodegradable, compostable and reusable wastes.

### Environmental Protection and Waste Management Department

- The EPWMD began as "Task Force Clean and Green".
- It was departmentalized in 2000 thru City Ordinance No. SP 982, S-2000.
- Its mandate include:
  - Implementation of an efficient garbage collection and disposal system
  - Implementation of a pollution control program
  - Monitoring and enforcement of all environmental laws and city ordinances
Implementation of Modernization Strategies

- Privatization of Solid Waste Collection
- Technological Advancement in the Disposal System
- Integration of the IS to the Formal SWMS

Implementation of Modernization Strategies

Privatization of Solid Waste Collection

Technological Advancement in the Disposal System

Integration of the IS to the Formal SWMS

Privatization of Solid Waste Collection through the Package Clean-Up System

A system wherein the service provider is given full responsibility to administer and directly carry out the management of solid waste from various sources and the total environmental impact of the designated service area.

Benefits derived from privatization:
1. Reduced the monthly cost of solid waste collection from PhP 704M or US $ 15,514 to PhP 479M or US $ 10,948.818, giving the City a total savings of PhP 225M or US $ 48,565.184 monthly.
2. Efficiency increased because of the following:
   - Complementary programs and massive BCI
   - Street Sweeping/Cleaning of Streets and Open Areas
   - Door-to-Door Collection System in Inaccessible Areas
   - Upgrading of Hauling Equipment
   - One Service Provider - One District Policy

Integration of the Informal Sector to the Formal Solid Waste Management System

- Improved Drainage System
- Maintenance of a greenhouse/ nurseries
Advantages of Incorporating the IS to the Formal SWM System

- Increases waste recovery & waste reduction.
- Cleaner community as the sector will be forced to comply with environmental standards.
- Provides annual savings in hauling costs amounting to Php 23M or US$ 487,806.00 monthly.
- Minimal operational adjustments as the phased transition is already in the work program of the City.
- Prolongs the lifespan of the disposal facility.
- Creates employment opportunities.
- Additional revenue to the City.

Junkshop Standardization Program

A collaborative effort between junkshops and the City towards waste reduction.

- To enjoin the active participation of Junkshop Operators to the City’s Waste Reduction Program;
- To regulate the operations of junkshops in accordance to existing environmental laws and regulations thru proper accreditation procedures; and,
- To establish a data base on the actual number of junkshops operating in the City as well as their waste diversion thru a uniformed and systematic recording of wastes that go to them.

Phased Transition of Integration

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<tr>
<th>Phase</th>
<th>Description</th>
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</table>
| Phase 1 | • Establishment of a data base on the total number of informal sector players to determine the scale of the program.  
  • Feasibility Study and Impact Assessment  
  • Strategy Formation  
  • Drafting/Preparation of City Ordinances to support the program  
  • Conduct of seminars and trainings on the waste reduction program of the City including proper solid waste management.  
  • Balik Probinsya Program for Scavengers  
  • Relocation of waste pickers from danger zones  
  • Increase salary of garbage crew |
| Phase 2 | • Cluster Barangay MRFs  
  • Organization of the waste pickers as workers in a Centralized Materials Recovery Facility (MRF) and/or to develop them into cooperatives.  
  • Accreditation and affiliation of Itinerant waste buyers with junkshops to legalize their operations and ensure that the health hazards of improperly handling solid waste is minimized.  
  • Junkshops will be made to serve as temporary non-composting Materials Recovery Facilities (MRFs). |
| Phase 3 | • A dry run of the system to determine deficiencies and make the necessary improvement. |
| Phase 4 | • Full implementation of the system |

Junkshop Standardization Program

A collaborative effort between junkshops and the City towards waste reduction.

- Education of junkshop operators on Environmental Laws and City Ordinances with emphasis on Cleanliness, accreditation of environmentally compliant junkshop businesses relative to City Ordinance No. SP-1711, S-2006
- Reinforcement of this sector as a legal entity thru the support of RA 7198 or the Barangay Micro Business Enterprises Act of 2000 and City Ordinance No. 1576, S-2003
- These Ordinances deal with the regulation of junkshop operations and the reduction of business taxes with the end in view of encouraging the “underground economy” to legalize their business.
Barangay Councils are encouraged to pass a Barangay resolution that will adopt the provisions of Ordinance no. SP-1711, S-2006 and give them legal authority to enforce the provisions of the said ordinance at their level and to monitor the compliance of junkshops within their jurisdiction.

A total of 630 junkshops were identified contributing a waste diversion of 32.51%.

As a result of the program, more junkshops whose livelihood depends on handling waste, are becoming more environmentally compliant.

Organizations of Waste Pickers
*empowering waste pickers as partners in the City’s Waste Diversion Program*

- BULAI (Buklod Lakas ng Scavengers Inc.)
- PARE (Payatas Alliance Recycling Exchange)
- AMPAT (Alyansang Maralita Payatas Estate)
- BSAI (Bagong Silangan Scavenger Inc.)
- PAJOSA (Payatas Junkshop Operator Scavenger Assn)
- PKR (Payatas Kabuhayan Recycling)
- PRM (Payatas Recycling Movement)
- PSAG (Payatas Scavenger Association)
- PSI-SAMPI (Samahang Mangangalabghig ng Payatas Inc.)
- SAMAMI (Samahang Mangangalabghig)
- UPC (Urban Poor Central)
- PARE Multi-purpose Cooperative (registered with the Cooperative Development Authority)

Livelihood Assistance

- Co-processing of Residual Plastics (Holidin Phil Inc.)
- DOSITAI Plastic Derivatives Technology

From the start of the program in 2009, waste pickers have recovered almost 450 MT of plastic waste residuals and earned more than PhP. 200 thousand or USD 4,348.
Livelihood Assistance
Free electricity, which provides for streetlights and ironing services thru the Gas-to-
Power Generation Project

Social Assistance
Through the coordination of the POG with other government
departments, offices and agencies, public and private business and
educational institutions, the scavengers have availed of financing and
skills training that have allowed them to go into minor business
ventures and prepare for alternative livelihood.

Social Assistance
Relocation of Families
City officials make sure families do not
reside near danger sites; relocation is
coordinated with Urban Poor Affairs:
Office, police and barangay officials

Dialogues and Consultations
...participation of the scavengers, local barangay, other LGU and national government
agencies and community members in the development of the disposal facility is
encouraged through regular dialogues and consultations on issues and concerns
on livelihood, health, safety and other community concerns
Informal Sector in SWM

<table>
<thead>
<tr>
<th>System Component</th>
<th>Type of Service</th>
<th>Client for Service</th>
<th>Tones Reaching Disposal</th>
<th>Tones Diverted to Recycling, Composting, etc.</th>
<th># of People Working In the Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Collection</strong></td>
<td>Itinerant Waste Collection</td>
<td>Household, establishments</td>
<td>8,553</td>
<td>3,666</td>
<td>392</td>
</tr>
<tr>
<td></td>
<td>Itinerant Waste Buying</td>
<td>Household, establishments</td>
<td>0</td>
<td>176,316</td>
<td>3,700</td>
</tr>
<tr>
<td></td>
<td>Itinerant Waste Picking</td>
<td></td>
<td>0</td>
<td>3,299</td>
<td>1,480</td>
</tr>
<tr>
<td></td>
<td>Direct Buying of Recyclables by Junkshops</td>
<td></td>
<td>0</td>
<td>40,044</td>
<td>1,116</td>
</tr>
<tr>
<td><strong>Secondary Collection</strong></td>
<td>City Collection Crew Waste Picking</td>
<td></td>
<td>0</td>
<td>7,622</td>
<td>926</td>
</tr>
<tr>
<td></td>
<td>Dumpsite Picking by PARE</td>
<td></td>
<td>0</td>
<td>10,956</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Processing</strong></td>
<td>Junkshop</td>
<td>Household, establishments</td>
<td>14,042</td>
<td>266,791</td>
<td>3,394</td>
</tr>
</tbody>
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Formal vs Informal (Parallel Systems)

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<tr>
<th>System Component</th>
<th>Process Step</th>
<th>Formal System</th>
<th>Informal System</th>
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<tbody>
<tr>
<td><strong>Collection</strong></td>
<td>Mixed Waste Collection</td>
<td>City Collection: 260,899</td>
<td>Barangay Mixed Collection: 10,219</td>
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<td></td>
<td></td>
<td>Barangay BC Collection: 10,737</td>
<td>Barangay Waste Buying: 176,316</td>
</tr>
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<td></td>
<td></td>
<td>Steel Tin Collection: 174</td>
<td>Direct Buying of Recycling by Junkshops: 40,044</td>
</tr>
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<td></td>
<td></td>
<td>MRF: 1 t/h</td>
<td>Dumpsite Recycling Waste Picking by PARE (Secondary Collection): 18,249</td>
</tr>
<tr>
<td></td>
<td>Pig shop Collection</td>
<td>City Kitchen Waste Collection: 3,560</td>
<td>City Collection Crew-Waste Picking (Secondary Collection): 7,622</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barangay O’ Collection: 3,144</td>
<td>Barangay D Collection: 6,740</td>
</tr>
<tr>
<td></td>
<td>Compostable Collection</td>
<td></td>
<td>Dumpsite Disposal Collection by PARE (Secondary): 987</td>
</tr>
<tr>
<td><strong>Processing</strong></td>
<td>Waste Processing</td>
<td>MRF: 12,831</td>
<td>Junktshop: 200,833</td>
</tr>
<tr>
<td><strong>Disposal</strong></td>
<td>Waste Disposal</td>
<td>Payzer Controlled Disposal Facility: 460,830</td>
<td></td>
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</table>

Quezon City is determined to modernize and upgrade its waste management system. In this endeavour, the integration of the Informal Sector to the Formal Solid Waste Management System of Quezon City is essential to success.
THANK YOU