



# 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



National Capital Region (Metro Manila)



## QC at a Glance



- Location : Northern part of Metro Manila
- Land Area : 16,112.5620 hectares
- No. of Congressional Dist. : 4 Districts
- No. of Barangays : 142
- Population : 2,679,450 (as of August 2007)  
: 2,861,091 (projected - 2009)
- 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 : 4
- Community parks : 231
- Markets (private/public) : 84
- Slaughterhouses : 3

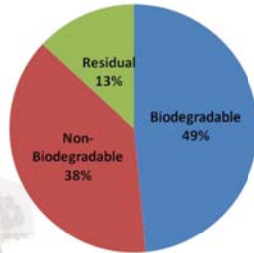


## QC SWM Profile

- ▶ Per Capita Waste Generation : 0.66 kgs/day
- ▶ Waste Generation : 1,888 tons/day (2009)
- ▶ Average Volume being disposed at PCDF : 1,205 tons/day (2009)
- ▶ Waste Density : 210 kgs./m<sup>3</sup>

### Waste Composition:

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



## Legal Framework for SWM

### Philippine Constitution

- ▶ 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.*

### R.A. 7160: The Local Government Code of 1991

- ▶ Section 17 – Basic Services and Facilities:
  - LGUs shall likewise exercise such other powers and discharge such other functions and responsibilities as are necessary, appropriate, or incidental to efficient and effective provision of the basic services and facilities enumerated in the LGC. Such basic services and facilities include: *Solid waste disposal system or environmental management system and services or facilities related to general hygiene and sanitation.*



## Legal Framework for SWM

### 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 jurisdiction. Segregation and collection of solid waste shall be conducted at the barangay level specifically for biodegradable, compostable and reusable wastes.



## Modernization of SWM in Quezon City

### 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 THRU THE PACKAGE CLEAN-UP SYSTEM

#### 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 upkeep of the assigned service area.

Benefits derived from privatization:

1. **Reduced the monthly cost** of solid waste collection from **Php 70M or US \$ 1.5 M to Php 47M or US \$ 996,818**, giving the City a **total savings of Php 23M or US \$ 487,804.00 monthly**.
2. Efficiency increased because of the following:
  - Complementary programs and massive IECs
  - 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



## Technological Advancement in the Disposal Facility

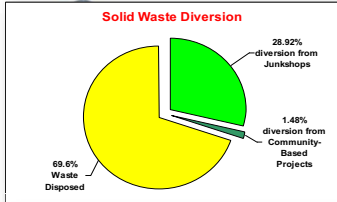


## Integration of the Informal Sector to the Formal Solid Waste Management System

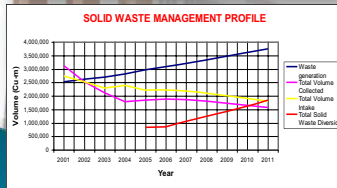




## Advantages of Incorporating the IS to the Formal SWM System



- **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\$ 487,804.00 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.**



## Phased Transition of Integration

<b>Phase 1</b>	<ul style="list-style-type: none"> <li>• Establishment of a data base on the total number of informal sector players to determine the scale of the program.</li> <li>• Feasibility Study and Impact Assessment</li> <li>• Strategy Formation</li> <li>• Drafting/ Preparation of City Ordinances to support the program</li> <li>• Conduct of seminars and trainings on the waste reduction program of the City including proper solid waste management.</li> <li>• Balik Probinsya Program for Scavengers</li> <li>• Relocation of waste pickers from danger zones</li> <li>• Increase salary of garbage crew</li> </ul>
<b>Phase 2</b>	<ul style="list-style-type: none"> <li>• Cluster Barangay MRFs</li> <li>• Organization of the waste pickers as workers in a Centralized Materials Recovery Facility (MRF) and/or to develop them into cooperatives.</li> <li>• 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.</li> <li>• Junkshops will be made to serve as temporary non-composting Materials Recovery Facilities (MRFs).</li> </ul>
<b>Phase 3</b>	<ul style="list-style-type: none"> <li>• A dry run of the system to determine deficiencies and make the necessary improvement.</li> </ul>
<b>Phase 4</b>	<ul style="list-style-type: none"> <li>• Full implementation of the system</li> </ul>



## 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.



## 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-2005.
- ▶ 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" legalize their business.



## Junkshop Standardization Program

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

- 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.



## Junkshop Standardization Program

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

- 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.



## Organization of Waste Pickers

*\*empowering waste pickers as partners in the City's Waste Diversion Program*



<b>BULASI</b>	(Buklod Lakas ng Scavengers Ini )
<b>PARE</b>	(Payatas Alliance Recycling Exchange)
<b>AMPAT</b>	(Alyansang Maralita Payatas Estate)
<b>BSSAI</b>	(Bagong Silangan Scavenger Inc.)
<b>PAJOSA</b>	(Payatas Junkshop Operator Scavenger Assn)
<b>PKR</b>	(Payatas Kabuhayan Recycling)
<b>PRM</b>	(Payatas Recycling Movement)
<b>PSAG</b>	(Payatas Scavenger Association)
<b>PSAI-SAMPI</b>	(Samahang Mangangalahig ng Payatas Inc.)
<b>SAMAMI</b>	(Samahang Mangangalahig)
<b>UPC</b>	(Urban Poor Central)
<b>PARE Multi-purpose Cooperative</b>	(registered with the Cooperative Development Authority)



## Livelihood Assistance

**Co-Processing of Residual Plastics (Holdim Phil. Inc.)**

**DOST-ITDI Plastic Densifier 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



### Gawad Kalinga Housing Project

This serves as a permanent housing for the displaced families. Also, the Gawad Kalinga Foundation is already giving orientation and value formation seminars to about 30 families living in the area.



## 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

System Component	Type of Service	Client for Service	Tonnes Reaching Disposal	Tonnes Diverted to Recycling, Composting, etc.	# of People Working in the Service
Primary Collection	Itinerant Waste Collection	Households, establishments	8,553	3,666	392
	Itinerant Waste Buying	Households, establishments	0	176,316	3,700
	Itinerant Waste Picking		0	3,299	1,480
	Direct Buying of Recyclables by Junkshops	Establishments	0	40,044	1,136
Secondary Collection	City Collection Crew Waste Picking		0	7,622	926
	Dumpsite Picking by PARE		0	10,956	3,000
Processing	Junkshop	Households, establishments	14,042	266,791	3,394

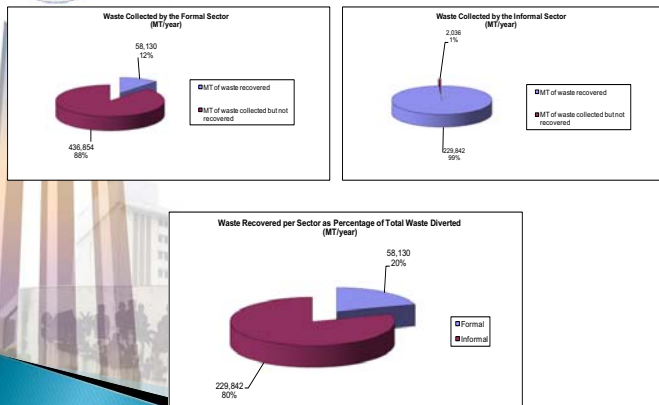


## Formal vs Informal (Parallel Systems)

System Component	Process Step	Parallel Systems	
		Formal System	Informal System
Collection	Mixed Waste Collection	City Collection: <b>380,899</b>	Itinerant Waste Collection: <b>12,219</b>
		Barangay Mixed Collection: <b>12,945</b>	
		Private Commercial Collection: <b>75,880</b>	
	Recyclables Collection	Barangay RC Collection: <b>10,737</b>	Itinerant Waste Buying: <b>176,316</b>
			Itinerant Waste Picking: <b>3,299</b>
		Private-Public Recyclables Collection: <b>21,927</b>	Direct Buying of Recyclables by Junkshops: <b>40,044</b>
		Used Tires Collection (Secondary Collection): <b>174</b>	Dumpsite Recyclables Waste Picking by PARE (Secondary Collection): <b>10,249</b>
			City Collection Crew Waste Picking (Secondary Collection): <b>7,622</b>
Processing	Pig slop Collection	City Kitchen Waste Collection: <b>2,160</b>	
		Barangay PS Collection: <b>2,762</b>	Dumpsite Pigslap Collection by PARE (Secondary): <b>707</b>
	Compostable Collection	Barangay CP Collection: <b>3,184</b>	
Processing	Waste Processing	MRF: <b>13,921</b>	Junkshop: <b>280,833</b>
Disposal	Waste Disposal	Payatas Controlled Disposal Facility: <b>450,020</b>	



## Formal vs Informal (Parallel Systems)



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

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