Eighth Regional 3R Forum in Asia and the Pacific
"*Achieving Clean Water, Clean Land and Clean Air through 3R and Resource Efficiency- A 21st Century Vision for Asia-Pacific Communities*"
Indore, Madhya Pradesh, India, 9-12 April 2018

City Report

(Draft)

< Quezon, Philippines>

This city report was prepared by Quezon, Philippines as an input for the Eighth Regional 3R Forum in Asia and the Pacific. The views expressed herein do not necessarily reflect the views of the United Nations.

EIGHTH REGIONAL 3R FORUM IN ASIA AND THE PACIFIC
9-12 April 2018, Indore, Madhya Pradesh, India

CITY REPORT: [City Name: Quezon City, Philippines]

Guideline for City Reporting on Major Initiatives/Achievements in 3R areas

The main objective of the City Reporting is to share among international community the progress, achievements and best practices, including various challenges faced, in the areas of **3R (Reduce, Reuse, Recycle)** and sustainable waste management. This would help development agencies, donors, including development banks, in assessing the needs and challenges of cities to better plan their existing and future capacity building programmes and operations in the field of 3Rs and sustainable waste management.

It would be appreciated if a consolidated city report could kindly be prepared by answering the following questions and submit to the **Secretariat of the Regional 3R Forum in Asia and the Pacific** by email to 3R@uncrd.or.jp

Timeline for submission: **31 January 2018**
Secretariat of the Regional 3R Forum in Asia and the Pacific
United Nations Centre for Regional Development

CITY REPORT: [City Name: QUEZON CITY, PHILIPPINES]	
Q 1	**What are the roles of local government stipulated in the 3R-related policies, acts, laws, or regulations?**
	In the City's Environment Code under Chapter II Section 2, it is stipulated that the Quezon City Environmental Protection and Waste Management Department (EPWMD) shall develop and directly administer a Comprehensive Environmental Protection Program, which shall specifically cover a garbage collection system and pollution control. As such, the following are the mandates of the Department related to Solid Waste Management: a. Maintain and operate a garbage collection and disposal system which conforms to the requirements of RA 8749 (Clean Air Act of 1999), RA 9003 (Ecological Solid Waste Management Act of 2000) and RA 9275 (An Act Providing for a Comprehensive Water Quality Management). b. Institute a standard monitoring system in the delivery of garbage collection services in the City c. Formulate civic consciousness programs geared towards environmental sanitation (cleanliness, proper waste disposal and waste recycling to be implemented in coordination with the barangays and Non-Government Organizations (NGOs). d. Establish linkages and coordinate with proper offices of the City Government and other national and

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	local government agencies for the promotion of environmental management programs and projects in Quezon City. e. Implementing and supervision of the segregation at source, segregated collection, composting. f. Monitoring and reporting system to collate data or records of penalized residents, commercial, industrial, etc.
Q 2	**Are 3R policies integrated in your city development strategy or master plan?** (Please attach photo(s) of your city's waste management facility if available.)
	In the Quezon City Comprehensive Development Plan (2010-2016), it is stated under the City's Environment Plan that it seeks to "**create a clean, green and resilient environment that is conducive to city living…"** Moreover, the aforementioned goal's strategy is to reduce the volume of solid waste reaching the final disposal site to 50% of the amount generated through development strategies such as city-wide implementation of waste segregation for all stakeholders, integration of the informal waste dealers into the formal SWM system to maximize the potential for waste recycling, more establishment of MRFs, among others. The City also has a 10-year Solid Waste Management (SWM) Plan which was approved by the National Solid Waste Management Commission (NSWMC) on October 22, 2010. The main purpose of the plan is to provide the City's overall direction in its SWM system and its strategy in complying with the provisions set out in the Ecological Solid Waste Management Act of 2001. It was updated in 2017 an implementation period for 2018 to 2027. The updated plan framework includes the following: • Covers all sectors and addresses problems especially in the implementation of enhanced Programs, Projects and Activities (PPAs). • Ensure overall compliance to pertinent laws while promoting a comprehensive and sustainable solid waste management. • Reliable waste reduction /diversion through segregation, recycling, composting, and processing activities • Active participation of environmentally-conscious stakeholders at the barangay and community levels. • Waste reduction and diversion • Forming partnerships with other cities and municipalities, both national and international • Harmonization with NGOs, academes, and other concerned stakeholders • Incentives and awards program
Q 3	**What are the major challenges and constraints faced by your city in implementing 3R policies and programmes?** (Please answer only if your answer to Q2 is "Yes")
	Financial constraints: — The sudden closure of the Quezon City Sanitary Landfill located in Payatas greatly affected the operation of the City's Solid Waste Cleaning, Collection, and Disposal Services due to the increase in distance. The City's new designated disposal facility is the Rizal Provincial Sanitary

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		Landfill which is thirty-two (32) kilometers (two-way) farther resulting to significant increase in the garbage hauling cost.
	Institutional/governance challenges:	The length of service of the LGU and barangay officials are short-term. Therefore, project continuity is a concern. The procurement law prohibits the prolonged contracts, thereby limiting the quality of service by the contractors since they cannot fully invest on modern/updated equipment if their contracts in only for one year with no guarantee of extension and/or winning in the next bidding.
	Policy gaps:	Pursuant to RA 9003, the incineration of waste is prohibited. Thus, there is a hindrance in the establishment of technology-based disposal facilities such as Waste-to-Energy (WTE).
	Other challenges such as technical capacity, human resources etc.:	The City Government has limited personnel with technical capacity and those that were trained tend to shift workplace.
Q 4	**What programme is in place in your city in support of NGOs activities towards promotion of 3Rs?**	
	Civil Society/Non-Government/Private Sector Organizations are expected to support and participate in SWM activities of the City as well as comply with existing rules and regulations of the City on solid waste management. They are also expected and encouraged to play an important role in the overall solid waste management of the City through active participation in decision making processes, planning, system implementation and operation. This will be made possible by creating opportunities and avenues for expression of ideas thru annual summits, forums and conferences.	
Q 5	**Is there any collaborative 3R activities/projects/partnerships involving cities (e.g., city-to-city cooperation) and organizations at international level?**	
	Yes, the Quezon City is actively participating in the **C40 Cities Climate Leadership Group** which focuses on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens. C40 convenes networks of cities providing a suite of services in support of their efforts, including: direct technical assistance; facilitation of peer-to-peer exchange; and research, knowledge management & communications. C40 positions cities as a leading force for climate action around the world, defining and amplifying their call to national governments for greater support and autonomy in creating a sustainable future. Quezon City is part of the Solid Waste Management Network, among others.	
Q 6	**What major future prospects or opportunities does your city have in 3R areas?**	
	• **Recyclers' Integration Program -** recognizing the important role of the informal waste sector in the over-all solid waste management system of the City, this new program seeks to organize the junkshop operators, recyclers, waste pickers and independent haulers and integrate them in the City's Solid Waste Management System by linking them with the barangays, schools, and other sectors who also have very limited resources to set up their own Materials Recovery Facilities.	

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- **Collection, Transport, Treatment and Disposal of Busted Fluorescent Lights (BFL) and Used Household Batteries -** the project aims to ensure that busted fluorescent lamps (BFL) and spent household batteries are handled properly and separately from other non-toxic/non-hazardous household, commercial, industrial and institutional wastes for proper treatment and stabilization before their final disposal.
- **Centralized Collection and Treatment of Hazardous Wastes from Printing Establishments** - this aims to have a centralized collection and safe disposal of ink formulation/inorganic pigments and contaminated wastes generated by printing establishments, especially small generators.
- **Centralized Collection of Used Oil and Grease Trap Wastes from Food Establishments** – this aims to ensure the proper collection, transport, treatment and disposal of used oil and grease trap wastes from food establishments and strategic areas in the City.
- **Disaster Waste Management –** the Quezon City was chosen to implement a pilot project on disaster waste management during the Symposium and Scoping Workshop organized by the United Nations Environment Programme – International Environmental Technology Centre.

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<tr><td>Q 7</td><td>What type of 3R infrastructure and facilities your city is equipped with? Please tick the appropriate.
<table>
<tr><th>Type of 3R infrastructure and facilities</th><th>Adequate/ Significant</th><th>If adequate, how many treatment facilities (in number)</th><th>Not-adequate / Non-significant</th></tr>
<tr><td>☐ waste collection facility</td><td>✓</td><td></td><td></td></tr>
<tr><td>☐ waste segregation facility</td><td>✓</td><td></td><td></td></tr>
<tr><td>☐ waste storage facility</td><td>✓</td><td></td><td></td></tr>
<tr><td>☐ waste processing & treatment facility</td><td></td><td></td><td>✓</td></tr>
<tr><td>☐ resource recovery facility</td><td>✓</td><td></td><td></td></tr>
<tr><td>☐ waste recycling facility</td><td></td><td></td><td>✓</td></tr>
<tr><td>☐ waste to energy facility</td><td></td><td></td><td>✓</td></tr>
<tr><td>☐ eco-industrial zones</td><td></td><td></td><td>✓</td></tr>
<tr><td>☐ science parks/theme parks relevant to 3R</td><td></td><td></td><td>✓</td></tr>
<tr><td>☐ others (please specify:)</td><td>☐</td><td></td><td>☐</td></tr>
</table></td></tr>
<tr><td>Q 8</td><td>Kindly provide the important 3R policies/programmes/projects/master plans that your City Government plans to undertake within next five years (2017-2022).</td></tr>
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	Future plans as indicated in the updated Quezon City 10-year Solid Waste Management Plan include the following: Phase 1 (Year 1 to 3) ➢ Establish more barangay-based Materials Recovery Facility (MRF), Solid Waste Management Committee and Solid Waste Management Plan ➢ Implement strategic Information, Education and Communication (IEC) Campaign ➢ Strict implementation of no segregation, no collection scheme ➢ Strict implementation of dedicated collection ➢ Proper documentation of waste volume and waste diversion ➢ Modification/adjustment of cell collection areas ➢ Establishment of a central command center and automated-based monitoring system ➢ Expand collection and treatment of Household Hazardous Wastes (HHW) ➢ Implement financing reserves for SWM projects ➢ Continuous Post Closure and Maintenance Care of Payatas Controlled Dump Facility and Quezon City Sanitary Landfill Phase 2 (Year 4 to 6) ➢ Establishment of technology-based facilities for composting and recycling as well as Waste-to-Energy Facility ➢ Solid waste management collection fleet modernization ➢ Rehabilitation and Land Use Conversion of the Payatas Controlled Disposal Facility
Q 9	**In response to the 2030 Agenda for Sustainable Development, in particular *SDG 6* (*Water and Sanitation*), *SDG 11* (*Make cities and human settlements inclusive, safe, resilient and sustainable*) and *SDG 12* (*Ensure sustainable consumption and production patterns*), how your City is planning to advance 3R and resource efficiency related measures?**
	As provided in RA 9003, the plan should be focused on waste segregation at source, waste avoidance and waste reduction. Thus, the City's SWM System is divided into programs for Biodegradable, Non-Biodegradable and Residual Wastes. • Waste Reduction / Avoidance Initiatives **"Aims to instil an understanding and support within the community of waste management principles"** ✓ **Legislation** such as: Container Deposit Legislation (CDL) Packaging and Plastic Bag Legislation Disposable Plastic Straw, Spoons, Forks and Knives Legislation

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- ✓ **Education**

  National and local government initiatives are required to support education with respect to waste management.

- ✓ **Pricing**

  Garbage by Volume

  Garbage by Weight

- ✓ **"Pay as You Throw" Charging Policy**

  A method of introducing a financial incentive to dispose of less waste, by having the City charging the household/business/industry on the basis of the amount of waste actually given over for collection and disposal.

- Recycling Program

Biodegradable Wastes	▪ Facilitate more segregated collection services to obtain the domestic and commercial waste for conversion into compost soil conditioner/organic fertiliser for use in the area. ▪ Encourage further source segregation so food scraps are used for animal feed at the household level.
Non-biodegradable Wastes	▪ Manufacturers to set-up 'Buy-back/redemption centres' for these wastes. ▪ Promote the use of post-consumer recyclable materials in production (material cycling. ▪ Educate the junkshop operators to better coordinate their eco-aides to improve collection efficiencies at the household level. ▪ Focus recycling on products presently not recycled in large quantities. ▪ Processing of materials into products that can be reintroduced into the market (i.e. tin cans can be re-sized into smaller units for consumer use, polystyrene can be moulded to produce new products like mouldings and frames). ▪ For materials that the City does not have any technology for recycling, the City will coordinate with agencies and academic institutions dealing with R&D on this area. One possible item is Construction and Demolition waste which could be crushed

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		and used as aggregate in non-structural concrete or asphalt, and reinforcing steel recovered for normal metals recycling.

- Composting

Household level	• Information Campaign on Household level Waste segregation: (bio and non-bio waste, etc.) • Appropriate containers or bins (Compost bins can be shared among a number of households to maximise resources. Also basic designs using used tyres or in-ground trench system can be developed at low cost) • Distribution of free mulch/compost for use in home composting • Introduction of new systems and technologies on composting.
Community level	• "Eco-Sheds" strategically located in urban communes. Common Eco-Sheds can be shared among a cluster of communities, wherever applicable. • This system may not be appropriate now, but may be developed at a later date if required to supplement the household facilities. • Introduction of new systems and technologies on composting.
City level	• Composting Centre designed to handle the consolidated volume of pre-segregated wastes to its final conversion to compost. • Coordination of compost sales and marketing activities within and outside the City. • Transport system that can facilitate the transport of final product or pre-processed compost to its destination. • Not appropriate at this time since full compliance to waste segregation is not yet achieved and little established market for compost, but this may be considered in the future. • Introduction of new systems and technologies on composting

Q 10	**What are the main challenges in your city concerning clean water, clean land and clean air? (Please answer the below points)**			
		Yes	**If yes, kindly write frequency**	**No**

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			of analyzing (number per month)	
	Do you regularly analyze the air pollution in laboratories (NOx, air particles and other pollutants)?			✓
	Do you regularly analyze the water contamination through chemically and biologically test (DO, heavy metal and microbial water quality)?			✓
	Do you regularly analyze the soil pollution (disposal of hazardous and chemical waste)?			✓
Q 11	**In response to the New Urban Agenda, in particular *Sustainable and inclusive urban prosperity and opportunities for all* and *Environmentally sustainable and resilient urban development*, how your City is planning to contribute to safe, inclusive and resilient city building related to 3R and sustainable waste management areas?**			
	Quezon City has a vision towards a Low Carbon and Sustainable City in the hope of becoming a model for other local government units to emulate. In order to achieve this, the City Government's objectives are aimed towards "Building a Resilient City" through resource management and utilization, "Nurture and Sustain a Green Environment" through conservation and protection, and "Create a Clean Environment" through waste management and pollution control. In terms of Solid Waste Management, the City envisions itself to be: "A model City for efficient, modernized and world-class solid waste management that utilizes innovative and cutting-edge systems and technologies to effectuate reliable waste reduction, segregation, recycling, composting, processing, collection and disposal while promoting sustainable development and ensuring overall compliance to pertinent laws, achieved through the active participation of environmentally-conscious stakeholders."			
Q 12	**[For Indian cities only], how is your city linking 3R (Reduce, Reuse and Recycle) to the Swachh Bharat Mission (Clean India Mission)? Do you think circular economic utilization of all waste streams in India would accelerate faster achievement of Swachh Bharat Mission? If so, is your city equipped with required 3R policies, programmes and infrastructures towards circular economic utilization of the waste streams?**			

*Kindly submitted to the **Secretariat of the Regional 3R Forum in Asia and the Pacific** by email to 3R@uncrd.or.jp before **31 January 2018**.*
Thank you for your kind cooperation.