

Seventh Regional 3R Forum in Asia and the Pacific

“Advancing 3R and Resource Efficiency for the 2030 Agenda for Sustainable Development”

Adelaide, SA, Australia, 2-4 November 2016

City Report

(Draft)

< Dhaka South >

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

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02-04 November 2016, Adelaide, SA, Australia

City Reporting on Major Initiatives/Achievements in 3R areas

Secretariat of the Regional 3R Forum in Asia and the Pacific
United Nations Centre for Regional Development (UNCRD)

City Report [City Name : Dhaka] Seventh Regional 3R forum in Asia and the Pacific 02-04 November 2016, Adelaide, SA, Australia	
Q 1	What are the roles of local government stipulated in the 3R-related policies, acts, laws, or regulations? National Environmental Policy 1992 , National Policy for Safe Water Supply and Sanitation 1998, Urban Management Policy Statement 1998, National Agriculture Policy 1999, National CDM strategy 2005 & National Urban Sector Policy 2006, Bangladesh Climate Change Strategy and Action Plan 2009, National 3R strategy highlights the need of Waste reduction and Recycling. Ministry of Local Government has endorsed the 3R strategy by preparing action plan with short-term, mid-term and long-term targets. Some of the guiding principle of the 3R related activities of local government are: (a) The local government authorities can promote and implement 3R strategies by initiating projects and activities in collaboration with international partners and donors. (b) Arrange required infrastructure facilities/ finances to implement the 3R strategy. (c) Take initiative for the market of recyclable products (d) Accommodate the informal sector in 3R activities
Q 2	Is 3R policy integrated in your city development strategy or master plan? (Please attach Photo(s) of your city's waste management if available.) <input checked="" type="checkbox"/> Yes=Please share goals/visions/major achievements/important lessons learnt that could be replicated elsewhere. <input type="checkbox"/> No=Please go to Q6 (Please also answer Q4, 5 and 7) Based on the National 3R Strategy, Department of Environment has taken a 3R Pilot project which includes source-segregation at households and composting of organic wastes. Under the Climate Change Trust Fund of Government of Bangladesh, Department of Environment has taken a programmatic CDM project in 64 districts where organic wastes will be composted. In first phase, four composting projects in Narayangonj, Mymensingh, Gazipur and Cox's Bazar are being implemented. In response to the National 3R Strategy, six City Corporations under the Urban Public Environmental Health Sector Development Project (UPEHSDP) funded by ADB, composting plants (20 tons/day) will be constructed as part of the Integrated Waste Management Project. In the Urban Governance Infrastructure Improvement Project (UGIIP-III), in 30 municipalities composting projects (1 to 5 tons/day) will be constructed. Under UNICEF funded

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	<p>Environmental, Sanitation and Hygiene and Water Supply Project in urban slums and fringes project, 11 compost plants have been constructed. In Baridhara residential area, with the technical support of Swiss Contact source segregation at household and composting of organic waste initiative has been taken. In a European Union supported project SUNYA-Towards Zero Waste in South Asia, a pilot project has been taken of closing the loop of organic material by rotary composter, rooftop gardening and rainwater harvesting.</p> <p>Moreover, informal sector has come forward in 3R activities. They collected 400-500 tons of recyclable waste. Thus they reduce waste and increase the landfill life span.</p> <p>Recently some recyclers collect bone of slaughtered cows & Buffalos and export in some Asian Countries as unpopular export item.</p> <p>Please attach photos with caption if available:</p>							
Q 3	<p>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”)</p> <table border="1" data-bbox="276 992 1457 2013"> <tr> <td data-bbox="276 992 662 1395">Financial constrains:</td> <td data-bbox="662 992 1457 1395"> <p>Capital and Operational cost is high</p> <p>Organic products to compete with highly subsidized chemical fertilizers</p> <p>Revenue and cost recovery is slow</p> <p>Weak market demand for compost and lack of awareness among farmers on benefits of using compost</p> </td> </tr> <tr> <td data-bbox="276 1395 662 1865">Institutional/governance hallenges:</td> <td data-bbox="662 1395 1457 1865"> <p>Land scarcity for waste processing and disposal in city areas</p> <p>People resistance to set up waste related facilities</p> <p>Municipal staff lacks knowledge and skill in waste reduction and recycling.</p> <p>Local Government priority is towards landfill as it is the cheap means of waste disposal.</p> <p>Complicated and time-consuming licensing procedure</p> </td> </tr> <tr> <td data-bbox="276 1865 662 2013">Policy gaps:</td> <td data-bbox="662 1865 1457 2013"> <p>Solid waste management is a neglected service in urban development.</p> <p>There is no legislative framework or rules for scientific management of municipal solid waste so far</p> </td> </tr> </table>		Financial constrains:	<p>Capital and Operational cost is high</p> <p>Organic products to compete with highly subsidized chemical fertilizers</p> <p>Revenue and cost recovery is slow</p> <p>Weak market demand for compost and lack of awareness among farmers on benefits of using compost</p>	Institutional/governance hallenges:	<p>Land scarcity for waste processing and disposal in city areas</p> <p>People resistance to set up waste related facilities</p> <p>Municipal staff lacks knowledge and skill in waste reduction and recycling.</p> <p>Local Government priority is towards landfill as it is the cheap means of waste disposal.</p> <p>Complicated and time-consuming licensing procedure</p>	Policy gaps:	<p>Solid waste management is a neglected service in urban development.</p> <p>There is no legislative framework or rules for scientific management of municipal solid waste so far</p>
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	<p>and it is left to the municipal authorities to manage their waste as they like.</p> <p>Targets in the 3R strategy are not realistic. Capacity of the municipality was not assessed; consultation with the stakeholders was not done adequately.</p> <p>Budgetary allocation was not considered in preparing the strategy.</p> <p>Weak regulatory enforcement systems with poor monitoring capabilities to ensure proper waste management system and standard.</p> <p>Community participation is confined to waste delivery from households and paying service charge. Community residents are not willing to take the responsibility of the 3R activities.</p>
Other challenges such as technical capacity, human resources etc.:	<p>Technological developments & innovations.</p> <p>Design, size and scale of operation.</p> <p>Cultural behavior, attitude and value.</p> <p>Lack of awareness on benefits of waste reduction and recycling.</p> <p>Source-segregation is not in practice yet.</p>

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Q 4	<p>What programme is in place in your city to support NGOs activities towards promotion of 3Rs?</p> <p>Kitchen Market waste supply to Composting plant of WWR & Waste Concern Bhulta, Narayangonj.</p>
Q 5	<p>Is there any collaborative 3R related activity/project/partnership with cities and organizations at international level?</p> <ul style="list-style-type: none"> ▪ √ Yes = Please brief the project(s) including objectives, project partners, target, period, budget etc. ▪ No <p>Please attach photos with caption, if available:</p> <p>Pilot project Name: Introduction of 3R (Reduce, Reuse and Recycle) principles in the Banani kitchen market</p>

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Project Name: **SUNYA-Towards Zero Waste in South Asia funded by European Union**

Budget for the pilot project: **US\$3000**

Objective of the pilot project: Closing the loop for organic material from the market and immediate surroundings

Approach: There is lot of organic wastes generated in the kitchen market. However, due to lack of organized collection of waste, waste has been found in the internal drains and walking spaces of the market. This clogs drains, obstructs movement of the customers and creates filthy environment in the market. The wastes are collected and disposed of in the nearby secondary storage containers. The organic wastes generated in the kitchen market could be utilized to make compost. With the idea of waste recycling, a concept was developed for making compost from the organic wastes by a rotary composter on the roof top of the market building. The components of the project are: (i) Organizing waste collection in the market area by providing bins ii) Producing compost from the organic wastes generated in the kitchen market and the surrounding areas on the rooftop of the building iii) Use the compost in the Roof-top garden iv) Arrangement of rainwater harvesting for watering the plant.

Implementation of the pilot project: Two rotary perforated drums with steel blades inside for cutting the wastes in small pieces and facilitating forced aeration are placed in a steel frame. After 7 days, the wastes are transferred into perforated vertical drums with passive aeration facilities. Wastes are kept in the drums for 20 days, mixing cow dung and water and turning the wastes by moving the plastics pipes. At the end of 20 days, when the composting process is completed, the composts take out from the drums and keep for maturation for 3 days. After that, compost is used in the garden. Roof top garden is prepared with fruit and flower plantation. Rainwater harvesting arrangement is made for watering the garden.

Results/Outcomes

- Market wastes are collected and taken up to roof top for composting
- Market place is found cleaner than before
- Establish a beautiful garden on the roof top for promoting greening the roof
- Roof of the top floor is cool.
- Rainwater is harvested and utilized to some extent.
- Fresh fruit and flower are harvested.

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Challenges

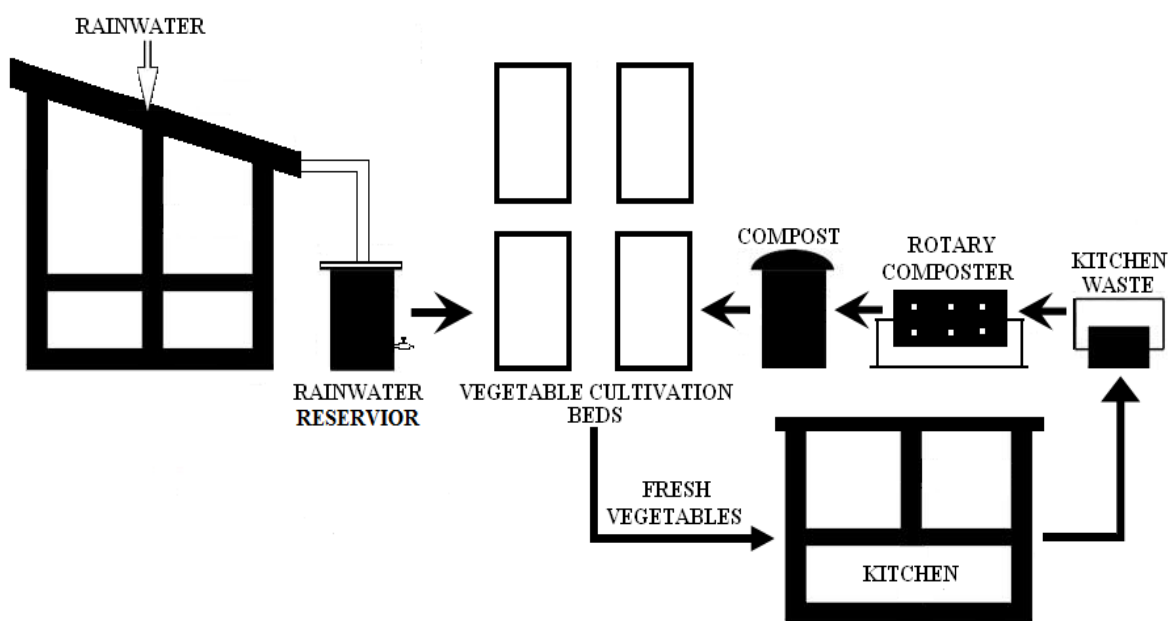
- Initial perception of the authority of making the roof dirty, put extra load on the roof and damage the roof etc.

Sustainability

One garden supervisor and a gardener of DNCC has been involved in the composting process and nursing the garden. They are paid by DNCC.

Replication

This concept is well accepted and can be replicated in the office and residential building.



Q 6 Even if your city doesn't have any dedicated 3R policies/programs/ activities, what future prospects or opportunities does your city have in 3R areas?

We have 3R policies

Q 7 What type of 3R infrastructure and facilities your city is equipped with? Please tick the appropriate.

Waste collection facility

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	<input type="checkbox"/> Waste segregation facility <input checked="" type="checkbox"/> Waste storage facility <input type="checkbox"/> waste processing & treatment facility <input type="checkbox"/> resource recovery facility <input type="checkbox"/> Waste recycling facility <input type="checkbox"/> Eco-industrial zones <input type="checkbox"/> Science parks & theme parks covering 3R areas <input type="checkbox"/> Others (please specify :)
Q 8	<p>Kindly provide the important 3R policies/programmes/projects/Master Plans that your City Government plants to undertake within next five years (2016-2021)</p> <p>Dhka South City Corporation has formulated a project for Waste to Resource Recovery by producing Refuse Derived Fuel (RDF), Bio-gas, Waste To Energy etc. One composting Plant will be setup very soon.</p>
Q 9	<p>In response to the 2030 Agenda for Sustainable Development, in particular SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable) and SDG 12 (Ensure sustainable consumption and production patterns), how is our City planning to advance 3R and resource efficiency related measures?</p> <p>Sustainable Development (SD) Goals & Targets</p> <p>11.6 By 2030 reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.</p> <p>11.6.1 Percentage of urban solid waste regularly collected and with adequate final discharge with regards to the total waste generated by the city.</p> <ul style="list-style-type: none"> - Collection and safe removal of house hold organic and inorganic waste. -95% - Collection and safe removal of hospital waste. -100% - Construction of Secondary Transfer Station (STS). -60% - Existing Landfill extension. – 1 no. - Construction of waste burning incinerator. -1 no. - Construction of residential bulding for Cleaners. -24 nos. - New Landfill Construction. -1 no.

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Q 2. Attached photos with caption :



Top View of Matuail Sanitary Landfill



Matuail Sanitary Landfill Extension Area

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Informal Recycling Plastic, Rubber & other item.



Informal Recycling Glass item.

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Unusual Export Item Bone of Cows & Buffalos-1



Unusual Export Item Bone of Cows & Buffalos-2