

Waste Management Improved Public Health System



NGO Forum has its eyes set on the urban challenges. Water-logging condition has become an increasingly concern for the growing urban low-income communities & clustered settings in Bangladesh. A major challenge lies with improving the sewage and waste management. NGO Forum has conducted an urban resilience intervention in collaboration with Mymensingh Paurashava, one of the most populous towns of Bangladesh.

The objective is to draw desired changes in the waste management system of the selected wards/-settings that has been a disappointment with high amount of untreated waste being dumped into the open.

Alongside, NGO Forum has lent its expertise in serving the distressed humanity, living in the clustered settings, with WaSH and environmental hygiene intervention for the refugee population at Teknaf upazila in Cox's Bazar district. The intervention has contributed to improving the overall sanitation and hygiene situation along with improved waste management.



NGO Forum's intervention in solid waste management dates back to 2004 when the Forum along with its local partners successfully implemented community-based waste management system covering some wards of Chittagong City Corporation (CCC) in collaboration with CWASA, CCC and CDA. Both solid and liquid waste management was covered in the intervention. NGO Forum's collaborative research 'Value at the End of the Sanitation Value-Chain' also explored potential business opportunities for waste transporters and compost producers in a country where access to sanitation is now widespread but challenges of managing waste remain.

The Clean City Movement



With an approximately 5 lacs population, the daily production of solid waste in the Municipality area of Mymensingh is about 120-250 tons where about 30-40% wastes remain unmanaged by the Municipality itself due to its limited resources. To promote effective solid waste management in the municipality area a plan was adopted in collaboration with the Municipality. It has introduced house to house collection system for all the households of Ward no. 11 covering household waste collection to safe disposal under the "Clean City Movement". The existing disposal practice included open dumping at the main roads resulting in environmental and Public Health hazards of around 15,000 people of the Ward.

A number of new initiatives were introduced under the pilot scheme especially for primary and secondary collection of wastes, and its disposal. The Ward Council, Ward Disaster Management Committee members and Volunteers selected from the community played the key functions in bringing changes in conventional behavior of present waste management by the residents. The initial challenges lied in educating, motivating and mobilizing the mass towards that change. The Municipality Mayor led the cleaning campaign that set the ground for taking the Clean City Movement forward. Simultaneously they started replacing the prevailing road corner dustbin disposal system with improved and higher capacity of waste collection bins within the low-income and reluctant household premises. Each of the 75 waste bins placed have the capacity of containing 60-65 kgs of wastes covering 8-10 HHs. So far this has helped to avoid dumping household waste in the lanes and main roadsides. It has enabled primary waste collection in a more systematic manner bringing immediate effects to reducing blockage in the drains along the narrow lanes of the Ward. The secondary level waste transportation is done through the use of a 0.5 ton capacity Power Tiller Trolley that disposes the waste in a landfill away from the city area. Previously the Municipality workers typically used wheelbarrow, vans, etc to transfer wastes from the primary points to secondary bins, from where the Municipality trucks transferred those wastes to the final dumping place/landfill. These small sized masonry bins, made by the Municipality lacked the capacity to contain garbage resulting in overflowing and obstruction of drainage system. Water-logging was a constant problem during the monsoon due to this obstruction as well as lack of regular

cleaning by the Municipality cleaner. Through the billing system salary of the laborers and supervisors has been ensured. The households are paying a fee of Tk. 30 to 70 which is directly deposited at the Municipality.

The entire process is led by the Ward Councilor. A billing system for house to house waste collection has been introduced of which the Field Supervisor is in charge of. The process also carefully engaged other relevant government representatives and officials, local NGOs, CBOs and civil society which accelerated the whole initiative. Developing capacities of actors in the new method of waste collection and disposal, motivational activities, health and hygiene practices were carried out at different levels. The sustainability is being sought through facilitating the Municipality in increasing its revenue collection and investment in improved waste collection, treatment, recycling and disposal.

Waste Management Increased Councilor's Popularity

Md. Farhad Alam, Councilor at the Mymensingh Municipality has shouldered the responsibilities of changing his city through improving solid waste management. In his words, "For decades, waste management remained a permanent problem for the people of Mymensingh. With time flowing, the problem only grew tougher. I took the challenge after being elected as Municipality Councilor. To me, untreated waste is the biggest disaster for the Municipality. Along with the support of Urban Resilience Bangladesh project implemented by NGO Forum in collaboration with the Mymensingh Municipality, I made personal initiatives to form 9 committees to ensure repairing and use of waste collection vehicles." Mass awareness programmes were arranged by the Municipality under his lead; volunteers were developed. On behalf of the Municipality, a complaint mechanism has also been launched through which the people can directly interact. Alam exclaims the results to be as, "Around 70% of the households are now paying regular bills for waste management. The narrow lanes have been free of waste being dumped leading to reduced water-logging. This was contributed by repairing and reconstruction of drainage system. Considering the result to be a major success for the Paurashava, the process is now being observed by other Councilors with interest to replicate it in their respective Wards."



Fecal Sludge Management through Bio-gas Plant



Bio-gas provides a better solution to excreta management and ensures proper disposal of human generated liquid and solid wastes. The technology converts human excreta and wastes into fertilizer and generates gas as a by-product. This produced gas can be then used for cooking purpose using an appropriate burner.

Under its waste management initiative, NGO Forum has renovated and constructed 40 Bio-gas Plants as a safer and cheaper renewable energy plant to serve the distressed Rohingya population who has taken refuge in the Camps located in Teknaf, Cox's Bazar. Existing septic tanks and the Bio-gas Plants are under regular maintenance ensuring safe management of a huge amount of human excreta produced. 'Source separation method' is applied to ensure maximum reuse of organic and inorganic wastes at the very beginning by dropping their wastage at the mixture device of Bio-gas Plant and the separated dustbins. Using pumping method or manual dislodging, the sludge from slurry pit is covered in a drying bed. A dislodging team and a bio-gas team are assigned to maintain and keep the system functional. Furthermore, burners have been set up to provide the destitute refugee households with an alternative safer fuel for their daily food processing. A Bio-gas User Committee has been formed and members have been included from selected families that have maintained discipline among the users as well as ensured operation & maintenance of the kitchen tools and stuffs.

Bio-gas Plants bring Economic Benefits



Fatema Khatun (28) has nearly 300 taka per week being saved from having alternative to purchasing firewood.

The Bio-gas Plant fueled cooking facility covering around 640 families in the Leda Refugee Camp. The Bio-gas Plant run kitchen has saved fuel-cost for the population entrapped in extreme poverty and under-served living conditions. The amount spent for purchasing firewood is nearly Tk. 350 per week, a burden from which they are relieved now. Around 40 kgs of firewood was being purchased weekly for cooking purpose. Calculating the cost of firewood as minimum Tk. 50 per family, it implies that the intervention saved Tk. 32,000 per day in the Camp.

Benefits from Bio-gas Plant

- Monetary benefit through saving fuel cost;
- Contributes towards preserving environment;
- Contributes towards saving forestry;
- Women and children are relieved from search of firewood;
- Creates jobs locally;
- Makes energy production safer;
- Contributes towards better public health.



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