

## Generating Biogas from Municipal Kitchen Waste: An Experience from Gaibandha, Bangladesh

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**Abstract :** With a rapid urbanisation in Bangladesh, waste management remains one of the core challenges. Turning municipal waste into biogas for mass usage is a solution that Bangladesh needs to adopt urgently. Practical Action with its commitment to challenging poverty with technological justice has piloted such idea in Gaibandha. The initiative received immense success and drew the attention of policy makers and practitioners. We believe, biogas from waste can highly contribute to meet the growing demand for energy in the country at present and in the future. Practical Action has field based experience in promoting small scale and innovative technologies. We have proven track record in integrated solid waste management. We further utilized this experience to promote waste to biogas at end users' level. In 2011, we have piloted a project on waste to biogas in Gaibandha, a northern secondary town of Bangladesh. With resource and support from UNICEF and with our own innovative funds we have established a complete chain of utilizing waste to the renewable energy source and organic fertilizer. Biogas is produced from municipal solid waste, which is properly collected, transported and segregated by private entrepreneurs. The project has two major focuses, diversification of biogas end use and establishing a public-private partnership business model. The project benefits include Recycling of Wastes, Improved institutional (municipal) capacity, Livelihood from improved services and Direct Income from the project. Project risks include Change of municipal leadership, Traditional mindset, Access to decision making, Land availability. We have observed several outcomes from the initiative. Up scaling such an initiative will certainly contribute for sustainable cleaner and healthier urban environment and urban poverty reduction. - It reduces the unsafe disposal of wastes which improve the cleanliness and environment of the town. -Make drainage system effective reducing the adverse impact of water logging or flooding. -Improve public health from better management of wastes. -Promotes usage of biogas replacing the use of firewood/coal which creates smoke and indoor air pollution in kitchens which have long term impact on health of women and children. -Reduce the greenhouse gas emission from the anaerobic recycling of wastes and contributes to sustainable urban environment. -Promote the concept of agroecology from the uses of bio slurry/compost which contributes to food security. -Creates green jobs from waste value chain which impacts on poverty alleviation of urban extreme poor. -Improve municipal governance from inclusive waste services and functional partnership with private sectors. -Contribute to the implementation of 3R (Reduce, Reuse, Recycle) Strategy and Employment Creation of extreme poor to achieve the target set in Vision 2021 by Government of Bangladesh.

**Keywords :** kitchen waste, secondary town, biogas, segregation

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