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From waste to compressed natural gas

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East Delhi Municipal Committee workers covering the garbage with geo grids and geo sheets at the Ghazipur landfill site near the Delhi-Uttar Pradesh border. Photo: Rajeev Bhatt

The Millennium Indraprastha Park is the longest park in Delhi. Lush green with trees, shrubs and plants, it has nothing to suggest that it came up on a huge sanitary landfill site which till the mid-80s was meeting the needs of the city. A scientific approach towards garbage disposal and land reclamation has created this beautiful park.

About 5 km away at Ghazipur, a similar story is now being scripted. The 30-acre garbage dump here has now risen nearly 50 metres high. Though Delhi Pollution Control Committee had long back ordered a halt to dumping of garbage here, in the absence of alternate sites it still draws municipal solid waste.

But while municipal trucks continue to chug their way up this mountain, throwing up dust as they move over tracks, on one side of this heap a team of workers is busy giving shape to what one day would become the largest breathing ground in East Delhi.

“I came here this month only but my team has been here for a few months now,” said Manoj Kumar, who is supervising the work of laying of geo-cells on the slopes of this dump. But his work is only a part of the mega exercise undertaken to reclaim the land.

“First a layer of mud is being laid and pressed on the slopes. Then a geo membrane, which looks like a plastic sheet, is laid. This is done to trap the gases emanating from this heap, which has a lot of organic material inside, and transporting them through pipes to a power plant coming up nearby.”

Over these sheets, a thin layer of fine gravel is being laid and then square hollow concrete blocks are being placed on them. These are again being covered by mud, geo grid (which is square mesh netting) and geo cells (which are wavy rubberised sheets). Over these another layer of mud is being placed for plantation of grass.

“The idea is to allow the gasses to be diverted and to hold the grass well on the slopes. The Chief Minister is expected to pay a visit to the site later this month and then the project might be expanded. One day we hope to make this entire mountain green,” said another engineer working at the site.

The Municipal Corporation of Delhi with World Bank assistance has carried out feasibility study for gas recovery from landfill sites and subsequently to use the same as fuel.

A memorandum of understanding has already been signed with GAIL in this regard and to begin with a part of the Ghazipur landfill site has been chosen for extraction of landfill gas to convert it into CNG for household uses and automobiles. Meanwhile, tenders in this regard have also been called for by GAIL for starting work at their end.

This is part of the reclamation process initiated by the civic body with the support of the Planning Commission. "Our focus should not only be on acquiring new areas for landfill sites but also on the reclamation process of the existing sites," said East Delhi Municipal Commissioner S. S. Yadav.

"We had requested for land to be allotted to us but were told there is no available land in East Delhi which is suitable for landfill," he said.

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