

Construction debris choking city

TIMESNEWSNETWORK

New Delhi: Construction debris in Delhi is choking roads, wetlands and green areas and the problem is becoming more acute every year. Dumped callously wherever there is space, it is rarely ever recycled on a large scale. Delhi's only pilot construction and demolition recycling plant in Burari that recycles about 500 tonnes per day (TPD) doesn't have many takers for its recycled products. Reasons are many — lack of standards, fears about quality and somewhat high costs.

At a conference organized by Centre for Science and Environment, 'Urbanscapes', on Thursday, researchers and architects voiced their concerns about the unmanageable situation of increasing C&D waste. On the other hand, there seems to be a massive building material crisis with a ban on sand mining and high costs of concrete and stone.

The C&D waste could have been a good alternative but most of the 4,000-5000 tonnes TPD that Delhi is generating is being dumped or landfilled. This is because Indian building laws permit only "naturally sourced" materials or materials mined directly from nature and there are no proper guidelines on what to do with C&D waste. Bureau of Indian Standards doesn't have specific standards for recycled materials and people are skeptical about using recycled products.

This is a stark contrast to places like Hong Kong where there is a C&D tax on waste generators, according to CSE. "This also shows that project management is equally important so that naturally sourced materials are used optimally," said Avikal Somvanshi, research associate at CSE. South Korea has building codes for recycled asphalt aggregates and concrete. New York forces the developers to segregate waste at site and dismantle, not demolish, in addition to other measures.

Use of recycled building material is at a very nascent stage, but there are a few creative examples like the Institute of Rural Research and Development in Gurgaon. It has used broken tiles to make a white "cooling roof" that radiates sunlight and helps in bringing temperatures down. It has used bricks made of the earth from its own construction excavation material and facades out of plywood shuttering waste. According to Somvanshi, scientific studies by National Council for Cement and Building Materials and Central Building Research Institute have proved that recycled building materials are as sturdy as naturally sourced materials.

Collection of waste for the Burari plant is carried out by the corporations. Big producers, like DMRC and PWD, also truck their bulk C&D waste material to this plant. The material is first inspected and then segregated. Whole bricks are resold or used for other projects. "Like any other waste management project, it is difficult to make recycling of C&D waste economically viable at this stage. The government will be coming out with the Construction and Demolition Waste (Management and Handling) Rules, 2014 which will lay down the procedure in detail. Recycling is

going to pick up,” said a representative of IL&FS Environmental Infrastructure and Services Ltd, the company that has set up the plant in Burari.

REUSE THAT RUBBLE



Indian buildings generated over **530 million tonnes** construction and demolition (C&D) waste in 2013

This is **44 times** official estimates according to CSE

Delhi generates **3,000-4,000 tonnes** per day of C&D waste

It's usually dumped illegally in desolate areas like the Ridge & Yamuna floodplains

IL&FS (Environmental Infrastructure & Services Ltd) in collaboration with corporations has set up a pilot C&D waste recycling plant in Burari

WHAT IS MADE AT BURARI PLANT?

Recycled concrete/stone/tiles of different sizes, recycled **manufactured sand**— coarse, medium and fine, ready mix concrete, **kerbstones, paving blocks & tiles, bricks** (solid, hollow)

CREATIVE STEPS BY ORGANIZATIONS

- A school in Rajkot was built from debris of Bhuj earthquake
- Institute of Rural Research and Development in Gurgaon utilized own construction waste
- Central Road Research Institute, Delhi, used C&D waste to build roads, embankments and pavements

A STUDY IN CONTRAST

India

Built-up area expected to swell five times from 21 billion sq feet in 2005 to approximately 104 billion sq feet by 2030

70% of buildings extant in 2030 are yet to come up

Developed countries

Very small addition is made to the building stock each year. In UK, at least 80% of homes to stand in 2050 have already been built

In France, buildings constructed before 1975 thermal regulations will represent over 50% of building stock in 2050