ECOLOGIC

Recycle Demolition Debris

Considering that globally 50% of solid waste comes from construction and Demolition, it's time for Indian industries to adopt some of the best practices of waste recycling, and ensure it's followed in every city

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The global average contribution of construction and demolition (C&D) waste is a staggering 50% of total solid waste generated in major cities. The numbers in Indian metros are not tracked, but it is safe to assume that they are fairly close to this general worldwide statistic.

C&D waste can be broadly categorised based on the source of generation, such as excavated soil, road and infrastructure waste, demolition waste and other complex wastes generated from project sites. When added to the general state of landfills, the problem is further intensified. There is a pressing need for our building industry to recognise the global best practices in the area of C&D waste recycling.

It is usually the most land-scarce areas that are the first to innovate successfully. Hong Kong and Singapore are considered pioneers in this area and manage to divert between 60-90% of their C&D wastes from landfills. These high numbers are largely due to legal processes that are put in place along with the required incentives to ensure success in implementation. Their laws often describe step-wise processes for demolition, codes on the use of recycled aggregates and building standards that mandate inclusion of recycled C&D materials.

While waste management is one part of the concern, there is a larger worry about the availability of resources. We are all too familiar with the indiscriminate sand mining in our river beds and beaches that causes extensive damage to the environment. Strategies to recycle our C&D wastes would lower the demand on river sand and the reduced demand will in turn preserve our natural ecology.

The Indian Standards for Construction Project Management have some indications on the inclusion of recycled material in construction projects. However, these standards are not yet strictly enforced as a requirement in city level development rules and are thereby easily by-passed. Inclusion of recycled C&D can improve the ecology of the industry as a whole.

Carefully removed woodwork and door frames from demolished sites can be preserved for future use. Not necessarily as a door, but in a more creative way as an object d' art for a space installation. Another interesting addition can be through the usage of scrap from industry. Usually post-industrial wastes have the highest recycle value and can be easily turned around. But ever so often a type of scrap can be unearthed, whose aesthetic value is far more appealing than its scrap value!

An example from one of my recent projects was the use of a motorcycle chain scrap. The pattern formed by the punching out of the motor cycle chain material fitted perfectly with the requirement for the design of a recycling centre! The chain scrap was easily woven into segregated baskets — one each for paper, plastic, cardboard, glass and organic allowing users to separate and segregate their waste at source for easy recycling.

(The writer is an architect, urban designer, artist, dancer and chief designer at Shilpa Architects)