

## Dumping Waste into Sea will be Disastrous: Garbologist

The only solution to the city's mounting garbage problem is to dump it into the sea, creating a waste island as Singapore had done, an official of the Brihanmumbai Municipal Corporation (BMC) said recently. But Almitra Patel, 'garbologist' extraordinaire and a member of the supreme court committee on solid waste management, dismissed the idea as disastrous.

In garbage management, as in other things, we would be better off evolving home-grown solutions rather than emulating Singapore or Japan, said the MIT-educated scientist at a meeting organized by the Indian Merchants Chamber.

"A 100-page 'New York Times' goes straight to the dumping ground in New York, while here, a 20-page newspaper has monetary value. In a poor economy like ours, waste has value, it generates money and employment," she said, adding that Indian garbage solutions must regularise ragpickers and give concessions to the informal recycling industry.

Like any city resident, Ms. Patel was unconcerned with what happened to the rubbish after it left the house, till garbage began to be dumped near her house on the outskirts of Bangalore. Instead of indulging in some Nimbyism (not in my backyard behaviour), she set off across the country visiting 115 cities on a clean India campaign and finally filed a public interest litigation which has brought in the new solid waste management rules for the country.

Ms. Patel shared some solutions for Mumbai and knocked down quite a few of the BMC's policies:

- On the overflowing, highly polluting Deonar dumping ground: "There is no excuse for it to be the way it is," she says, adding that the short-term solution is to add bio-cultures to the garbage so it is digested quickly. In addition, this composted waste could be laid as a perimeter around the garbage heaps as a "green Laxman rekha" which will control fires and can be used as a garden.

Meanwhile, the BMC should find another site for garbage.

- On the BMC's obsession with waste-to-energy plants: Since the organic component of Indian garbage is small, this technology is expensive, unviable and the power produced exorbitantly priced. All waste-to-energy plants in India have failed, she said, rapping the BMC for clearing the project without cost benefit analyses or environment impact assessments.

- A zero waste city: Ms. Patel feels this is possible if the inert component of garbage like debris and road dust as well as plastics is dealt with separately. Almost 40 percent of Indian garbage is debris, while the plastic can be shredded and used in bitumen roads. Bangalore is already doing this, while Tamil Nadu has commissioned 1,000 kilometres of such roads.

- Garbage management: It should centre around minimising the waste that needs to be disposed or dumped. In Ms. Patel's book

and the supreme court rules, this includes separation of wet and dry garbage, doorstep collection of rubbish, composting of biodegradable garbage and recycling everything that can be recycled.

- Recycling: This, along with take back policies on the part of companies would also minimise waste. Take back should include potentially hazardous waste like tubelights, aerosol cans, glass, batteries, tyres, polystyrene cups. Ms. Patel is now also proposing take back systems for mobiles and computers as well as eco-friendly packaging.

- Good governance: Ms. Patel stresses on long tenures for government officers, a carrot-and-stick system for sweepers and cleaners, and if necessary, privatisation of services.

### City may not meet SC's deadline

Additional Municipal Commissioner, Subrato Ratho, admitted that the city is not likely to meet the December 31, 2003 deadline set by the apex court for cities to upgrade waste processing and disposal facilities.

However, Mr. Ratho said the BMC was hammering out a master plan for garbage management.

Already, the city has missed the 2001 deadline for upgrading existing land-fills. There are four dumping grounds in the city, but only two are in use now - Deonar and Mulund. Both of these are also fast filling up and also causing local pollution problems as Mumbai continues to produce a whopping 7,000 metric tons of garbage every day.

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It is estimated that 100 kgs of plastics have replaced 200-300 kgs of conventional materials in the typical car resulting in a 750-litre fuel consumption saving over a life span of 150,000 km. This translates into 12 million tons of oil saved annually across Europe whereas only about 3.25 million tons of oil is required every year to produce the plastics used in this sector.

The consequent effect on emissions from lighter vehicles and lighter goods

for transportation thanks to plastics is clear. It has been estimated, for example, that the fuel saving vehicles as cited above due to use of light-weight plastics in cars lead to a very significant reduction of CO<sub>2</sub> emissions in Europe.

The natural consequence of reduced material consumption and lighter thinner plastics now than ever before is that proportionally less waste is generated.

Use of liquid detergent refill pouches have reduced material use by 70%. It

has been calculated that the volume of packaging waste would increase by 158%\* if plastics did not exist (\*Gesellschaft fuer Verpackungsmarktforschung, 1991).

Car manufacturers have introduced a plastics air intake manifold reducing weight by 30-60 per cent and creating a production cost saving of 30 per cent. There is also an improvement in performance, especially when the engine is still cold.

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