

Swachha Bharat Abhiyaan

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"Most of life's lessons are simple. We complicate them to sound knowledgeable. Finally, we fail and return to simple answers."
Anonymous

The announcement, by the Prime Minister, Shri Narendra Modi, of making 'Clean India' a priority agenda, has brought back the public debate on something that has concerned the country's citizens for a long time. '**Swachha Bharat Abhiyaan**', is a clarion call targeting year 2019 when hopefully, India will be a clean country - a much needed and laudable effort required, if India wants a larger share of the tourism footfalls in the region.

India loses 6 per cent of its GDP on account of poor sanitation facilities in the country. Considering that our current GDP is 1 trillion dollars, this is a large sum of money to lose out on for want of basic cleanliness in a resource constrained nation such as ours.

As per the WHO & UNICEF Program on Drinking Water and Sanitation Report, National Family Welfare Survey; 67 per cent of rural households have no toilets, 78 per cent of sewage is dumped in rivers, and 6000 tonnes of plastic waste is littered on a daily basis. Roughly 600 million Indians defecate in the open. Even poorer countries have a better record. This lack of toilets,

leads to malnourished children, on account of open defecation, tainted water, poor absorption of nutrients, bacteria and intestinal worms. Fewer toilets lead to more disease. Good sanitation can however boost per capita income by 6000 crores a year.

The above data reflects sanitation alone. In addition, we have challenges of waste management covering a large spectrum of different kinds of waste: wet, liquid, gaseous and often the untouched topic of the mining burden. This waste stream is not on the radar screen of the media because of the remoteness of mining areas.

According to the Ministry of Environment and Forest, India generates 150,000 tonnes of domestic waste every day of which only 13 per cent is treated. How do we address the vast quantum of waste generated every day, so that India remains a clean, vibrant and healthy country with a thriving population? If these principles are applied, then it will be possible to clean up the country's waste as housing of waste is another difficult challenge in a country with a density of 470 persons per sq km vis-à-vis China with a population density of 140 persons per sq km.

In my view, being frugal is the need of the day to handle waste and not by allocating costly scarce

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urban land for practices which we have followed for thousands of years, but have forgotten in the onslaught of modernisation and globalisation.

As a country, we have to move away from the linear production process, to a circular one. In a linear production process we extract, produce, use and then throw the waste which ends up being an eye sore in the landfill sites. On the other hand, in a circular process, the so called waste is redeployed productively. We have still not fully realised that the residual value of waste can be creatively deployed for another use, probably another industry. Good examples are the use of fly ash and slag in the cement industry as well as the use of discarded paper in paper manufacturing.

Spent cooking oil can also be converted into biodiesel for operating vehicles, as is the practice in London and some cities in Sweden. Two billion tonnes of agri-waste has the potential of being converted into power for rural use - this is still to be tapped on a grand scale. Co-processing of plastic and old tyres has commenced in the cement industry for the purpose of incineration.

While a lot of waste is informally recycled, the time has come to develop clusters where the waste of one can be a resource for another. Due to many reasons, this concept is difficult to implement, hence attempts should be made to have complementary industries in a particular geographical region, for co processing. For example if power plants can be located near the mines, the fly ash of the power plant can be used to fill the abandoned mines and reclaim the land for natural regeneration. In the bargain we will reduce the transport intensity of coal which is

carried to great distances by railways with an embedded hidden subsidy.

In the sanitation domain for public toilets, we need to breakdown the subject into three segments:

Hardware: Considering the huge numbers of toilets required, we will need different materials depending on the five agro climatic conditions and its impact on natural resources.

Software: How are we going to handle the waste for productive purposes in farming through use of the waterless pan design- a product called eco san is already in use in the State of Kerala.

The pan design lends itself to segregation of urine and faeces. While the urine can be used for farming, the faeces can be composted. Needless to mention, introduction of attitude shifts and developing systems which are clean and user friendly need to be introduced.

Heartware : It is of paramount importance that the people who work in this field are given dignity and respect as opposed to the caste system of the country which keeps them ostracised for performing cleaning services. The tourism industry by virtue of its diverse internal skills has a great role to play in lending its hands in training people with dignity.

A hotel group that I am familiar with started the 'Andaman & Nicobar Tourism Guild' in Port Blair consisting of hoteliers, boat operators and transport providers. In the island, sight-seeing takes tourists to different islands. The food packets, carried by them for the day's picnic,

were left back on the islands resulting in huge amounts of garbage on islands which were pristine and clean.

The Guild trained boat operators to inform tourists that litter was to be taken back to the boat, something invariably resisted by most tourists. Instead of getting into a confrontation, the boat operator would refrain from starting the engine of the boat until the best practice was complied with!

Similarly, The Basant Lok Jagriti Association was started in Vasant Vihar in 1993 to clean up the complex which was in a state of disarray. Staff were recruited and given uniforms, shoes and the complex was cleaned and cleared of all debris and garbage. Dust bins with the message "**Thank you for not littering**" were placed all over the complex but were ignored by many due to the lackadaisical civic sense which pervades the country.

WHAT ARE THE STEPS THAT THE TOURISM INDUSTRY CAN TAKE THAT CAN BE GEOGRAPHICALLY DISPERSED ACROSS THE COUNTRY?

- Learn to engage with locals and sensitise them to adopt best practices for their own long term health and business interest.
- Depending on the size of the hotel set up, run clean toilets which can be gradually handed over to locals to run as a means of livelihood. Tourists do not mind paying for a clean service facility.
- Design the toilets such that they have natural ventilation and lighting and good views.

- Look at the opportunity of urinals only for men, but also consider unisex toilets where there is space / other constraints not foreseen.
- Develop a nice patch around this facility with flowering plants/ shrubs or even fruit trees to make the place attractive. Hopefully, the ambience will create good habits over a period of time.
- Use solar devices to lift water to overhead tanks for washing purposes, or provide a charging facility for solar lights and mobiles. The idea is to try and weave new revenue earning opportunities that have not been thought of before.

THE ROLE OF THE GOVERNMENT

Just as extended producer responsibility has been implemented for car batteries with a small price embedded in the cost of product for recovery and responsible reuse of the same. This concept of product stewardship needs to be extended to host of other products to make Swach Bharat a reality in the shortest span of time. A regulatory nudge will result in industries to think through their current practices in driving out waste from their production processes through innovative ways that they have not thought of due to lax regulatory regime in most developing countries.

One foresees principles of bio mimicry taking roots on a grand scale, leading to elimination of land fill sites, which can be converted into city forests, for cities which are choking with its excessive wasteful consumption of poorly priced natural resources. Mahatma Gandhi's dream

would be realised if different stakeholders attempt their own experiments in a country with five diverse agri climatic conditions dove tailed with the diversity of thinking and visualising a vibrant India.

"Chalo Swach Bharat Abhiyan shuru kare"

PRINCIPLES OF WASTE MANAGEMENT

Do not create waste as far as possible: it is unfortunate that people have stopped carrying cloth bags when shopping. In the bargain each one comes back with innumerable plastic bags which litter the entire country and harm cows, birds and other creatures. As per one of the leading newspapers, 200 cows in Delhi are being operated upon to remove 50 kgs of plastic from their stomachs. If we revere the cow, then should we not bring about this basic change in our attitudes and carry cloth bags vis-à-vis the convenience of plastic bags? It is important to educate the vast population of the

intergenerational negative consequences of plastics.

Reduce wherever possible: while buying vegetables the leaves can be left in the mandi/ market, so that the same is not disposed of at the residential level, only to be collected and dumped at the land fill sites of a few cities. Aggregation of vegetable leaves at source can be deployed for manure making, or gas generation through the bio- methanation process.

Cook potatoes along with their jackets, chop apples with the skin for fruit salad, dry orange peel for pickling - some very simple examples which we seem to be forgetting.

Use whatever is possible: To extend the example of vegetable plants, many such leaves/parts of a plant can be eaten-for example the leaves of the drumstick tree and the stem of the banana plant, are used as delicacies in the southern states of India.



QUOTES

*It's almost always harder to raise capital than you thought it would be, and it always takes longer.
So plan for that.*

Richard Harroch, Venture Capitalist and Author

*Don't worry about failure; you only have to be right once.
Drew Houston, Dropbox Co-Founder and CEO*