

There's utter confusion on plastic waste regulation in the country

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India intends to move away entirely from single-use plastics by 2022. Prime Minister [Narendra Modi](#) even mentioned the goal of making India a plastic-free nation in his speech at the United Nations General Assembly last month. Yet the fact is India hasn't had much success with plastic waste regulation despite ambitious policy moves. Environmentalist Chandra Bhushan tells FE's Sarthak Ray what ails India when it comes to meaningful action on reducing plastic waste.

Excerpts:

What does India's plastic regulation provide for, and where does it fall short?

We have many regulations on plastics. The big one, of course, is the Plastic Waste Management (PWM) Rules, 2016, with specific obligations for every stakeholder in the plastic supply-chain, including the extended producer responsibility (EPR) for producers, importers, brand owners.

The Solid Waste Management Rules (SWM Rules), 2016, also have provisions for plastic waste, including EPR. But there is a difference in EPR provisions under SWM Rules and PWM Rules. SWM Rules say that manufacturers/brand-owners shall provide financial assistance to local authorities for establishing waste management systems to fulfil their EPR. PWM Rules, however, don't mention the financial contribution to local authorities. Instead, these direct manufacturers/brand-owners to collect waste through their distribution channel or the local body concerned.

The Biomedical Waste Management Rules, 2016, mandated phase-out of chlorinated plastic bags, gloves and blood bags within two years. This has not happened.

Then there are state regulations banning single-use plastics (SUP). Odisha has defined SUP as polythene carry-bags, bottled water of less than 200ml, disposable cutlery made of thermocol and plastics and decorative materials (flower and the likes) made of thermocol. UP has excluded 200ml plastic water bottles and decorative materials, and included disposable tumblers, in the definition of SUP. Tamil Nadu has defined SUP as "use and throw plastics," which include plastic carry-bags, flags, plastic sheets used for food wrapping and spreading on the dining table, plastic plates, plastic-coated cups, tumblers, water pouches and packets. So, states have a different definitions of what constitutes SUP.

Frankly, there is utter confusion on plastic regulation in the country. It's time we brought synergies in the rules and developed a national definition of SUP.

India has tried to regulate plastic pollution for at least two decades now. And yet nearly every stakeholder seems ill-prepared. Is regulation the problem, or is it industry and consumers who have simply failed to respond?

The problem is with regulations, and with consumer awareness and industry's status-quo approach. Consumer apathy is at the core of the problem. We all talk about plastic pollution, but end up using polythene bags. We crib about dumpsites, but litter ourselves, and waste segregation is still to take off meaningfully. The industry has not been very responsible either. Despite knowing the problem, it has kept waiting for the government to bring regulations. No company in India has shown leadership in dealing with plastic pollution.

We enact regulations, but don't plan for implementation. For example, we don't give enough time to the market or local governments to adapt to new rules. Also, our approach to rule-making is command-and-control or ruling with a stick, to be precise. The experience of the past 20 years should have made it clear that regulations and penalties are not sufficient to eliminate the use of SUP. We need a transformation in the market and the municipal services to achieve this. This will require both stick and carrots.

EPR has been part of Indian regulation for some years. Yet not much seems to have happened here...

Current EPR provisions are designed for failure. For instance, we can mandate and enforce EPR

on the formal sector, but they account for only 50% of multilayer plastic use. Small businesses and the informal sector use the remaining 50%. How do you enforce EPR on them?

Also, big companies outsource their EPRs to plastic recycling organisations (PROs), which are supposed to collect plastic wastes on behalf of the companies and send them for recycling. But there is evidence that PROs are involved in double-counting and data-fudging. I don't think the PRO model will be useful in fulfilling EPR obligations.

A fundamental mistake we are doing is by separating plastic waste management from the wider municipal waste management. Proper plastic waste management will only happen if there is good municipal waste management. EPR provisions will have to be designed for this reality.

Shouldn't we be more focused on recycling than bans, given almost 40% of the plastic waste generated in the country remains uncollected?

We will have to do both. Ban those products that are not required or have an alternative, and improve recycling. Today, all the valuable plastics are recycled in the country. In fact, India has one of the highest rates of plastic recycling. What is not recycled is multilayered plastics (MLPs) or plastics that are too contaminated with other wastes.

To increase recycling, we must improve segregation of waste at source and improve the collection and transportation of segregated wastes. Currently, the unsegregated waste contains a lot of contaminated plastics. If the plastic waste is dirty, smeared with food, it doesn't enter the recycling value-chain as it is not viable to invest effort and resources in cleaning up the plastic to retrieve recycling potential, if any.

Similarly, as MLPs contain several polymers, they can't be recycled. At best, they can be incinerated in cement plants, used as a refuse-derived fuel (RFD), used in road construction or for making down-cycled products. As they fetch a lower price, they are not collected. To deal with MLPs, waste segregation and collection becomes very important. That is why I have kept arguing plastic waste management can't be treated as separate from solid waste management.

The government has banned use of plastic carry-bags below a certain thickness (50 microns). Does this help in any way?

The argument in favour of thicker plastic is it makes plastic carry-bags costlier and discourages use-and-throw culture. Also, a thicker plastic waste fetches a higher price and hence is likely to have a higher recycling rate. But this argument ignores many ground realities. Firstly, recycling rate depends on segregation and collection, and not only price. Secondly, this is not likely to reduce the amount of plastic in the environment. If people completely shift from thin plastic carry-bags to thicker ones, total polymer consumption might increase. So, if the vision is a plastic-free India, then the first step should be "less plastics" and not more. Lastly, this regulation will only work if people had access to affordable alternatives. So, along with banning thin plastic carry-bags, the government should also promote options like textile or paper bags.

How is the lack of alternatives to plastic hindering plastic waste management?

Alternatives don't come about on their own; they require deliberate government action. In countries where alternatives have been developed, fiscal tools have been used to either make plastics very expensive or make alternatives cheaper. We have not used economic tools so far. The private sector will invest in developing and producing the replacement when they know the government is serious about enforcing the ban. A combination of economic and regulatory tools is required to incentivise quick entry of alternatives in a viable manner.

Are there any examples globally of meaningful plastic waste regulation?

Globally, plastic waste regulation is about better segregation, collection, and then disposal. The focus is not so much on the end-of-the-life reuse/recycling. This is the reason why, globally, more than 90% of the plastics are not recycled.

Take the case of Sweden, which is considered to have one of the best plastic waste management systems. Its plastic recycling rate is meagre, as it burns most of its plastic waste to generate electricity.

Other developed countries, like the US, have outsourced plastic pollution. They consume a lot and then ship the waste to developing countries. Earlier, China was their dump yard, but now, given China and India banned import of plastic waste, these countries are looking towards Africa.

As far as banning SUP is concerned, the discussion has started only a few years ago and few developed areas, like the EU and Canada, have regulations and timelines on the ban. But so has India and a few other developing countries. Frankly, developed countries are not exactly a guiding light on plastic waste management.

Some existing solutions, such as recycling plastics for road construction, incineration for energy generation, etc, come with their own set of problems. They are widely seen as a polluting bit in the plastics life cycle...

It is essential to understand that a plastic product cannot be recycled forever. As plastics are produced from hydrocarbons, at some point they have to be either incinerated in cement or power plants or used to recover oil or dumped in the landfill or used for producing some long-lasting products. Therefore, the plastic life cycle eventually is "from oil to oil" or "from oil to ash (incineration)." So, we will have to develop state-of-the-art facilities for energy recovery and conversion. There is no way out.

There are obvious environmental benefits of using plastics in road construction. Studies show that the life of the road is enhanced and the maintenance requirement is reduced. But, ultimately, plastic fibres, either as micro-plastics or in some other form, will eventually move out of the road into the environment. We do not yet understand the impact of this and hence must study this issue further.

How can industry course-correct? Packaging and logistics are a big part of the problem (packaging accounts for 43% of plastic manufacture in India).

The announcement by the PM to ban single-use plastics by 2022 has undoubtedly forced the industry to look for alternatives. I've been advising the industry to address this problem from four fronts:

- > Design for recycling. Instead of using multiple polymers in packaging like multilayered plastics, they should be shifting to single polymers that will aid recycling. This can be done quickly.
- > Reduce the weight of packaging and the need for packaging. There is a vast scope to reduce plastic consumption here. This is again a short- to medium-term goal.
- > Start developing, substituting plastic with alternatives. This is something that they need to start working immediately, but this is a medium- to long-term goal.
- > Start working closely with the local authorities to ensure littering is minimised and the collection of segregated plastics is maximised. This will reduce visible pollution, enhance recycling and end-of-life use.