



GSP WORKSHOP ON MANAGING SOLID WASTE, 2 JUNE 2021 EXPERT BRIEFING BY CSE'S SOLID WASTE MANAGEMENT TEAM Q&A

1. What is the best way to process sanitary waste generated in schools and households?

Awareness has to be the first step towards this initiative. The users need to be educated on how to handle and properly dispose of the sanitary waste. The process of education must also involve on-site handlers on how to dispose of the waste.

In schools, a separate, covered dustbin should be provided in all toilets just for disposing of the sanitary waste. Directions on how to dispose of the waste properly should be placed in the toilets, preferably in a pictorial manner. Dustbin liners should be placed inside all dustbins and toilet paper should be provided to wrap the napkins properly. Once the bin gets full, the waste should be transported to the on-site napkin incineration facility, which is generally a napkin incinerator installed in an isolated location in the school premises. While procuring the incinerator machine, the following crucial points should be kept in mind:

- A.** Machine should be NABL accredited
- B.** Operating temperature should be around 800°C and the flue gas should comply with all the discharge standards
- C.** It should be equipped with APC devices
- D.** The incineration capacity should be sufficient
- E.** All necessary approvals should be taken before installation
- F.** The ash should also be disposed of properly

As an alternative, the schools may tie-up with the nearest hospitals with biomedical waste incinerators or a common biomedical waste treatment facility (CBWTF) to handover the sanitary waste by paying charges.

Sanitary waste generated in households should be properly wrapped in newspaper before handing over to the waste collector. It must not be mixed with the organic waste, however, it can be disposed of along with inorganic waste. The best practice is to give it separately to the waste collector which makes the processing lot easier for the waste handlers.

Awareness drives promoting sustainable alternatives can also be organised in schools: reusable sanitary products; natural sanitary products made from materials such as banana fibre, bamboo fibre, sea sponges, water hyacinth, and so on.

Low-cost incinerators, such as Matka Incinerator, can also be used in open areas (open backyard or terrace). Get more information on Matka incinerators here:

<https://www.ecoideaz.com/innovative-green-ideas/ashudhinashak-clay-incinerators-for-sanitary-napkins>

2. Autoclaving is one of the ways to manage COVID-19 waste. However, the waste still remains after that. How should it be disposed of then?



Autoclaving pre-treats and sterilizes the COVID-19 waste which makes its handling much easier and increases the social acceptability of the waste. As per the guidelines issued by the Central Pollution Control Board (CPCB), schools and other institutions where no COVID-19 cases have been reported should shred the waste and store it in paper bags for 72 hours before handing it over to an authorized recycling facility. You may be able to locate authorized recyclers with the help of your urban local body (ULB).

3. How should the domestic hazardous waste generated in schools be disposed of?

The following measures can be adopted to dispose of domestic hazardous waste:

- A. Segregate, label and store all the waste generated in schools into three colour-coded bins: green for biodegradable/ wet waste; blue for non-biodegradable/ dry recyclable waste; and black for domestic hazardous waste
As per the Solid Waste Management Rules, 2016, 'Domestic Hazardous Waste' includes discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc. generated at the household level. Apart from the items mentioned above, any waste is considered hazardous if it shows one or more of the following characteristics: corrosive, reactive, ignitable, and/or toxic.
- B. Measure the quantity of domestic hazardous waste produced in the school and establish a storage facility accordingly
- C. Write to the city authorities as a single institution or a group of institutions for appropriate collection of the segregated waste
- D. Hand over the domestic hazardous waste only to authorised waste pickers/ collectors regularly

4. Which organisations can schools contact for e-waste management?

Some organisations with presence across India are:

- A. Karo Sambhav (www.karosambhav.com)
- B. Indian Pollution Control Association (IPCA) (<https://ipcaworld.co.in>)

5. Since the last academic year, very few students have been coming to school. Now, the need of the hour is to encourage students to segregate waste generated at home. However, in small towns and villages with panchayats, ULBs and other facilities are not available for proper disposal. We try to teach students proper ways of waste management, but then there is no system in place to implement those ways. How can this be justified?

In small towns and villages with panchayats and ULBs, the availability of a proper waste management system is rare. In schools, students can be taught about proper waste management in households and neighbourhoods. The 3 Rs of waste management should be emphasised:

Reduce the waste in households by not wasting food and composting organic waste.

Reuse and utilize the inorganic waste materials as much as possible before disposing of them finally

Recycle materials by segregating them and handing over to an authorised recycler. An important thing to keep in mind is that single-use plastic should never be sent for recycling.

Reduce the usage of single-use plastic in our home.



By training students on these principles, we can ensure that students know how they can reduce their contribution in waste generation and ensure a greener household.

In Panchayats and peri urban areas, a proper waste collection, transportation and treatment system is a necessity. The flagship Swachh Bharat Mission has provided funds, functions and functionaries to all the Panchayats and ULBs. It is also the duty of the citizens to engage with the local government and ensure that such a civic service value chain is created. Furthermore, it is also important to ensure that the economy meets the operational cost for such a system by enforcing user charges on all households, commercial establishments and institutions proportional to the quantity of waste generated to sustain the initiative. The value chain should also have a well designed mechanism for recovery of resources through home composting, selling of compost and recyclable dry waste to earn revenue.

6. Our school is located in a rural area, and we have a significant girl population. Therefore, a lot of sanitary waste is generated. We segregate the waste and put it in a pit. Is this the right way to manage the waste?

In such scenarios, home-made sanitary napkins made of natural tissues/ paper/ cloth/ cotton as well as reusable commercial cotton napkins can be used and disposed of in small burial pits more than 50 cm deep.

As mentioned above, low-cost solutions such as Matka Incinerators can also be used.

7. We segregate waste into different categories but waste collectors mix it all again while collecting. What can be done about this?

Most of the urban local bodies in metro cities like Delhi and Mumbai have a separate set of fleet for the collection of dry waste. You can get in touch with your urban local body by writing to them, informing them of your initiative to segregate waste and seeking their support in mobilizing collection vehicles to ensure that different waste streams are collected separately.

In cities where the local government does not have enough resources, it is best not to hand over all the waste together. You can start by composting in your premises and storing dry waste separately, which can eventually be sold to a local recycler. Simultaneously, you can reach out to your local government to inform them about your initiatives and seek their help to dispose of the domestic hazardous waste and sanitary waste.

8. Please suggest some activities that we can conduct for solid waste management.

The following activities can be conducted offline in schools or students can be encouraged online to follow these practices at home:

- A.** Hands-on composting in school or at home
- B.** Creating a plastic bank in school where children can collect all the plastic they use. It can then be sold and the funds can be used to set up green campaigns.
- C.** Conducting clean-up drives and plog runs to make the school/city litter-free with support from your local government and NGOs



9. When LED lights were introduced, we were told that the manufacturer would take it back after use, but nowadays, shopkeepers refuse to do so. What is the return policy around this?

The return policy was applicable to CFL bulbs, and it supported by MoEF&CC through extended producer responsibility (EPR) which makes the producer responsible for waste collection and appropriate processing. However, no such regulations have been notified around LED lights.

Since LED lights are made up of light-emitting diodes and plastics which act as the frame, these have to be discarded as domestic hazardous waste and given to the local government facilities. Ideally, it should be disposed of in a transfer, storage and disposal facility (TSDF).

10. Are bulk generators like Amazon and Flipkart bound by any regulations? Are there any charges that they could face for mismanagement of waste?

Amazon and Flipkart cannot be termed as bulk waste generators, but are rather producers who fall under the ambit of extended producer responsibility (EPR). There have been a few cases registered in the honorable national green tribunal against e-commerce sites, and the companies are issued directions from time to time.

Bulk waste generators are usually institutions and buildings that are generating more than 100 kg of solid waste per day or are spread over an area of more than 5000 square meters.