

## MANAGING HOUSEHOLD SANITARY WASTE

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Keeping wastes unmixed can help to minimize wastes needing final disposal to just 10-15% of the total produced in a city. That is why the MSW Rules 2000 recommend biological stabilization like composting for “wet” food wastes and recycling of “dry” wastes. Many citizens who care about the environment and the ill effects of dumping mountains of mixed waste are already doing their bit to keep wet and dry wastes unmixed, even where cities are not very helpful in this mandatory effort.

Bangalore has been forced, by village protests in 2012 over its badly mismanaged waste dumps, to take waste segregation seriously. But unlike most cities it has attempted to go beyond just “wet” and “dry”. A Notification dated 15 September 2012 has the following good features for its contractors to follow:

“Wet” wastes will be collected daily for composting.

“Dry” wastes will be separately collected weekly, for transfer to one Dry Waste Collection Centre (DWCC) planned in each of Bangalore’s 198 Wards.

Garden waste and fallen leaves will be collected weekly to be composted in local parks, in a ‘No-Leaf-To-Landfill’ drive.

E-waste and household hazardous waste will be collected at least once every three months or can be dropped off at a DWCC.

Household sanitary waste like used sanitary napkins, soiled baby diapers and adult diapers are now an urban problem countrywide. They used to go unthinkingly into “mixed waste”, but cannot be mixed with “dry waste” for recycling nor composted with “wet” waste as their outer coverings are so far all non-biodegradable. So Bangalore is planning to take responsibility for this Household Sanitary Waste. It is to be separately collected on a daily basis, separately transported in bags and separately dropped off by the contractors at the Biomedical Waste collection points of designated Government or Municipal Hospitals and Clinics in each ward. Private hospitals have also come forward to cooperate in this effort.

The two Biomedical Waste Facilities (for North and for South Bangalore) have also agreed to pick up this collected Household Sani-Waste brought to the existing pickup points along their daily route. For the first month, till quantities are known, their collection will be free. Thereafter they will demand a charge for this service. It is expected that the Municipality will pay this per-kg charge for individual residences, but large group-housing apartments and estates will have to make their own arrangements for delivery to the designated pickup points in their area and pay them for acceptance and delivery to the biomed facilities.

Since all biomedical waste collection firms have to file reports with their respective State Pollution Control Boards, data for the previous year or two are available with them, of total charges per bed for hospitals and of total quantities of waste in each category (for autoclaving, incineration, etc). This will form the basis of negotiations for the proposed Sani-Waste Collection charge. In the case of Bangalore, both firms are currently utilizing less than 40% of their incinerator capacity and pickup will be at their existing collection points, so it is expected that negotiations will result in a very affordable marginal-costing charge per kg for the additional power and fuel costs of longer incinerator hours only.

Once this system is established and runs smoothly, by year-end 2013 Bangalore hopes to become the first city that treats domestic sanitary waste like the biomedical waste that it is, and set a management example for cities countrywide.

It is important to note that no special bags are required for collection of biomedical or sanitary waste for incineration. Even ordinary polythene bags will do. Some firms promote various types of “degradable” bags as mandatory in order to increase their business. The only benefit of special bags is of fully-compostable (not degradable or oxo-degradable) bags for disposal of ‘wet’ food wastes for composting, and for sanitary napkins.

### **COMPOSTABLE SANIPADS**

More and more States, perhaps beginning with Tamil Nadu, are now distributing millions of free sanitary napkins to adolescent girls in rural areas which have not had a waste-management problem or plan. They are often sourced in bulk through Hindustan Latex Corporation. This has already begun to cause a huge waste-disposal problem in rural India. As all these sanipads are currently non-compostable, burial in a corner of a field is not an option and open burning is being resorted to. This is unhygienic and polluting.

Household saniwaste disposal is also a problem for door-to-door collectors who do not know how to handle and transport or dispose of this and are met with total indifference to the problem by producers of such hygiene products. This problem recently boiled over in Pune in a protest dumping of soiled saniwaste at the doorsteps of major sanipad marketers, bringing long-overdue attention to its post-consumer disposal.

Two years of effort have just resulted in test production of fully-compostable sanipads. The lower leakproof barrier film (usually a blue plastic polythene layer) is very easily and immediately replaceable by affordable and fully-compostable films readily available in India since years. (See [www.earthsoulindia.com](http://www.earthsoulindia.com) or the BASF website). The difficulty has been in affordably replacing the non-woven polypropylene outer wrapping layer. Birla’s cellulosic non-wovens are produced in India (for their Kara tissues etc) but are costly and not yet available in sufficiently thin GSM.

The breakthrough has come through imported compostable non-wovens via China. These experiments are currently confined to cottage-industry-producer level. See [www.aakarinnovations.com](http://www.aakarinnovations.com) . But once field trials confirm their usability and acceptance, if they can do it, technically so can all the major players. Compostable sanipads and diapers must become the national norm.

It is the duty of national biomedical waste conferences like this one to push for change. The Govt of India should set a time-table for the 3-4 major producers with maximum market share to switch to fully-compostable sanipads and diapers within a year or so. Economic incentives can also be recommended as a policy to drive the change-over, such as a lower sales-tax on compostable products for a two or three-year window, and an enhanced eco-tax on non-compostable models thereafter.