

Workshop with Bulk Waste Generators

GNIDA Policy of SWM

July 2019

GINDA CITY POLICY ON
DECENTRALISED
COMPOSTING - 2019

Benefits of Composting

Turning waste into a value-added resource for the locality and the city.

Extending the life of the region's only landfill.

Preventing greenhouse emissions and leachate caused by decomposing organic landfill waste.

Producing valuable products, such as compost and fertilizer that enhance soil and aids in plant growth.

Saving Environment

- The greenhouse gas emissions related to fertilizer production are avoided.
- Less fuel consumption to carry the garbage to landfill sites
- There is significant reduction in the use of pesticides
- Improves health and workability of soils,
- Helps soils hold or sequester carbon dioxide.
- Compost replenishes and revitalizes exhausted farm soils by replacing trace minerals and organic material, reduces soil erosion and helps prevent storm water runoff.

Objective of the Policy

To ensure 100% decentralized composting at all identified land-uses/ building-uses (as described in Vision)

To improve the environment and reduce the filth on the road, parks, markets, water bodies etc.

To reduce the burden of the landfill sites and to reduce the transportation of the waste.

To ensure that the compost produced is used for meaningful purpose in horticulture, gardening or cultivation

100 percent segregation of the waste into organic, inorganic and hazardous waste

To ensure only inorganic waste is collected at the local level and the dry waste to be further segregated and sold.

Hazardous waste to be handled separately as per the norms laid out in the rules

E-waste to be handed over or sold to only the recognized agency by the RWA/ associations/industries etc. on their own

Sanitary napkins, adult and baby diapers to be handled separately and to be incinerated locally

Segregation of Waste at Source

All the waste generated will be segregated at the source by the User

The waste to be segregated into three major categories organic, inorganic and hazardous waste

Only inorganic waste is collected at the local level and the dry waste to be further segregated in Multiple Resource Facility (for GNIDA colonies only) by the involvement of rag pickers/SHGs and sold into market.

The dry waste collected will be segregated at the MRF which will be setup in a decentralized manner for GNIDA colonies. The segregation at these centers will be done by the Rag pickers or by the SHGs members. The dry waste only be to be sold to the empaneled kabari walas.

Hazardous waste to be handled separately as per the norms laid out in the rules

E-waste not to be mixed with the inorganic, organic or hazardous waste and to be kept separately. The e-waste is to be handed over or sold to only the recognized agency empaneled by GNIDA.

Sanitary napkins, adult and baby diapers to be handled separately and to be incinerated locally or handled as bio medical waste.

Plastic waste to be handled independently by the concerned bodies or to be handed over to the people as dry waste collectors only in case where the MRF is functional.

The bulk waste generators have to handle the plastic waste on their own and process it or dispose it to the empaneled kabari walas.

Segregation @ Source: Bulk Waste Generators

As per the Solid waste Management rules 2016, all the establishments generating more than 100 kgs of waste per day basis will have to compulsory compost their waste in their premises.

In failing to do so after three months of the notification of the policy the authority will stop picking up the wet and the dry waste from their respective localities.

If the respective bulk waste generators don't start to process their wet waste even after three months a heavy penalty will be imposed upon them as decided by the CEO of GNIDA or any officer authorised by him.

No waste will be collected from the bulk generators after three months of the release of the policy.

Bio-Degradable Waste



Examples:

- Human and animal waste
- Plant products, wood, paper, food waste, leaves, grass clippings
- vegetable and fruit waste of different types (fruit, vegetable, vegetable and fruit remains and peelings),
- eggshells and coffee sediments,
- tea and coffee filter bags,
- tainted food,
- non-liquid cooked food waste, bones,
- stale bread and biscuits,
- tissues, paper towels and paper sacks.

Non- Biodegradable Waste



Examples:

- Glass
- Metals
- Plastics
- Electronic devices
- Medical waste

Composting Technologies and Applicability

Name of the Technology	Suitability			
	Individual Households, Small Communities, Apartments etc. up to 10 Households	Medium Sized Communities, Apartments, RWAs - for 11 – 300 Households; medium sized Offices, medium Hotels, Resorts, medium Schools, Canteens, Marriage Halls	Large Communities, Apartments, RWAs, high rise buildings for 301 – 1000 Households; Large Offices, Large Hotels, Large Schools	Decentralized plants for above 1000 Households operated by ULBs / Institutions / Outsourced agencies
Pit Composting	✓	×	×	×
Pot Composting	✓	×	×	×
Tri Pot Composting	✓	×	×	×
Ring Composting	✓	×	×	×
Kitchen Bin Composting	✓	×	×	×
Drum Composting System	✓	×	×	×
Rotary drum composting	✓	×	×	×
Vermi Composting	×	✓	×	×
Biomethanization	×	✓	✓	✓
Organic Waste Composting Machine (fully automatic)	×	✓	✓	✓
Windrow Composting	×	×	×	✓
Garbage Enzyme	×	✓	✓	×

Decentralized Composting of the waste



Mechanized Organic Waste Composter



Pit Composting



Drum Composting



Sanitary Napkins & Dippers Incinerator



Bio-Methanation Plant



Vermi Composting



City
Sanitation
Policy 2019

Liquid Waste Management

- Toilet Construction completed for ODF
- FSSM policy drafted for Achieving ODF++

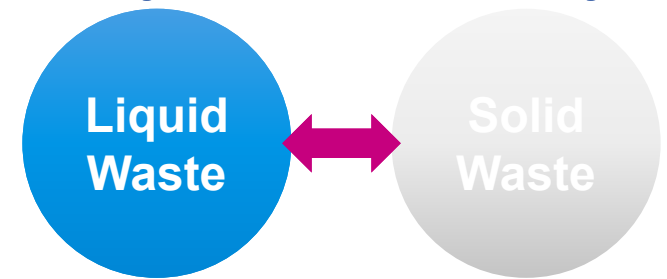
Reuse of Waste Water

- Waste Water to be treated in STP
- Treated Water shall be used along with Fresh Water
- Treated water should adhere to the criteria of EOD, BOD and suspended solids, failing so will attract penalties
- Possible Re-uses: Irrigation, Fish – farming, Industry, Non-potable Domestic Reuse

Re-use of Waste Water- Industrial

- Industrial reuse of reclaimed wastewater to be mandated
- Industrial uses for reclaimed water include: Evaporative cooling water, Boiler, Industrial process water

City Sanitation Policy



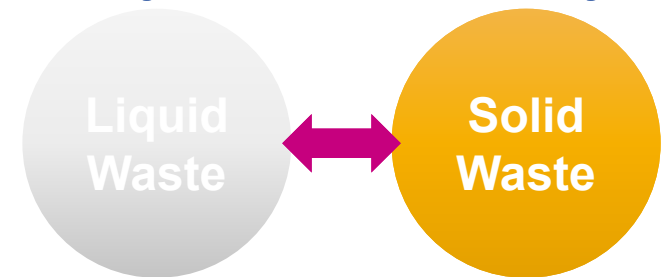
The river basin pollution abatement

- Setting up the overall limit on levels of contaminants within a water body based on the discharge going to the river or any water body.
- fixing water quality discharge parameters based on norms.
- control and reduction of pollution in inland surface waters
- The treated water should adhere to the criteria of EOD, BOD and suspended solids, failing so will attract penalties

Solid Waste Management

- Decentralized Compost Policy Drafted
- C&D Waste Policy Drafted

City Sanitation Policy



Plastic Waste Management

- Plastic waste shall be segregated and stored in accordance with the Municipal Solid Waste (Management and Handling) Rules, 2016
- Handover segregated wastes to authorized waste processing or disposal facilities or deposition centres either on its own or through the authorized waste collection agency

E-Waste

- To be disposed (in collaboration with Department of IT) on site and the authorized collector will collect the waste from the societies
- Segregation of the same has to be done by the societies themselves in case of the builders society, cooperative society for the societies developed by GNIDA

Hazardous Waste

- Greater Noida will follow the Hazardous Waste Management rules 2016
- GNIDA in collaboration with the Department of Industry ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilization

Health-care Waste

- 15% of health care waste is considered hazardous material that may be infectious, chemical or radioactive
- GNIDA shall work with Health Department to implement the policy

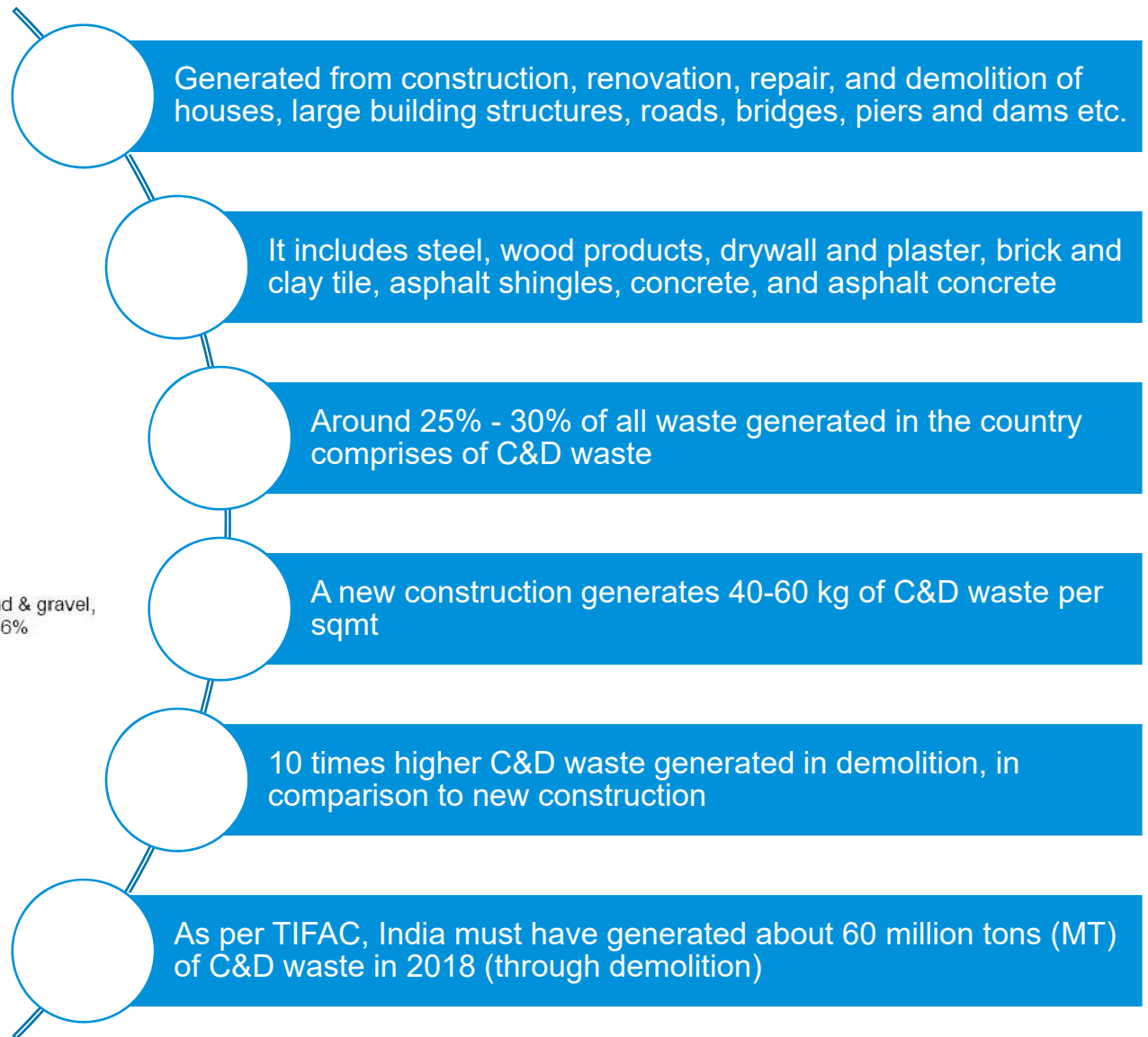
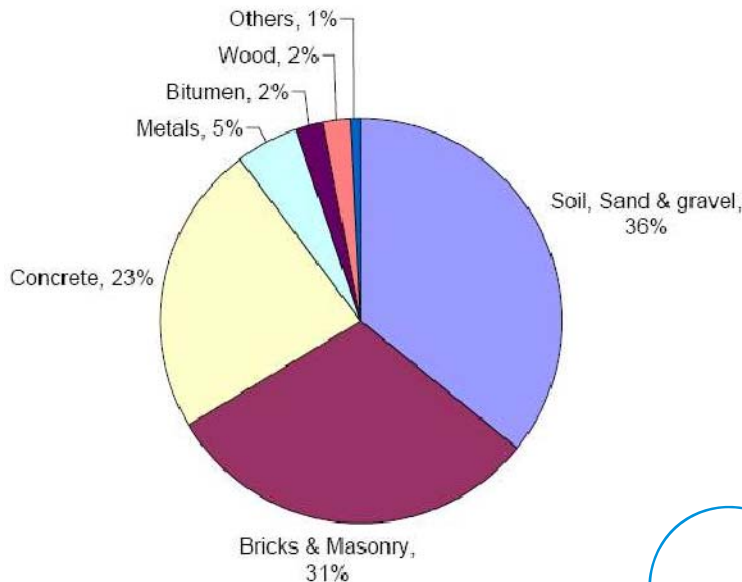
GINDA CITY POLICY ON CONSTRUCTION AND DEMOLITION WASTE - 2019

Prepared in compliance of Rule 9 sub-rule 1 of C & D Waste Management Rules, 2016, GoI

Construction & Demolition Waste: Background

#	Material	Composition
1	Soil, Sand & Gravel	36%
2	Brick & Masonry	31%
3	Concrete	23%
4	Metals	5%
5	Bitumen	2%
6	Wood	2%
7	Others	1%

Typical Composition of Indian C&D waste



Objective of the Policy

Reduction of C&D Waste

- Rehabilitate an existing structure in place of planned demolition.
- Use deconstruction techniques rather than demolition of a building.

Reuse of C&D Waste

- The usable items to be screened out from the debris and put into the possible use without further processing.

Recycling of C&D Waste

- Once the reusable items are segregated, the leftover will be recycled for next useful stage.

Re-buy of processed material

- Recycled content will be sold to authorized contractor.
- All new construction shall utilize recycled C&D waste materials (minimum 20%)

Activities to be followed to meet the Objective



Duties of the Waste Generator

Responsible for collection, segregation and storage of C&D waste, within the site/premise

Shall ensure that there is no littering or deposition of C&D waste which can obstruct traffic or the public or drains.

Shall ensure no other waste (such as solid waste) get mixed with C&D Waste.

Shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities;

Duties of the Waste Generator

Waste generators who generate more than 10 tons or more in one day or 300 tons per project in a month

- shall segregate the waste into appropriate streams such as concrete, soil, steel, wood and plastics, bricks and mortar
- shall submit waste management plan and get approvals from the local authority before starting construction or demolition or remodeling work
- shall have to pay additional for processing and disposal of construction and demolition waste generated by them,

Where the project cost is INR 500 Cr or above, the Waste Generators shall be

- The C&D waste should not be allowed to be taken out to any other recycling/dumping ground
- It is mandatory to set-up C&D waste processing plant at the site itself
- The recycled product shall be used within the site , as far as possible

Duties of Local Authority

Issue detailed directions on proper management of C&D waste in accordance with the rules

Transportation of C&D waste for processing and disposal through appointed operators; against tipping fees collected from the generators

shall give appropriate incentives to generator for salvaging, processing and or recycling preferably in-situ;

Tracking waste generation and establish a data base and update once in a year;

Shall provide incentives for use of material made out of C&D waste in the construction activity

Mandatory use of C&D Waste in Government/Private contracts (20%)

Standards, Regulations and Quality Assurance

Particular attention shall be focused on adopting and enforcing the C&D waste to be done at appropriate level.

Extensive and comprehensive monitoring programs shall be developed so that the C&D is collected and processed properly.

Data collected from the monitoring process shall be entered and stored, processed and analyzed through computer software, and results are to be published periodically by the local body

All the material produced through re-cycling will be certified by BIS

Government tender shall include compulsory use of re-cycled C&D waste in all projects

Tax Incentive

All the builders/contractors who will treat their C&D waste as per the norms laid will be eligible tax incentive after a year based on the evaluation of their performance.

All the new apartments which will be constructed and if they adhere to all C&D norms may get a rebate in construction permit fee.

All the new malls, big hotels, industries, clubs, colleges, universities, hospitals, sports stadiums etc. which will be constructed and if they adhere to all C&D norms may get a rebate in construction permit fee.

A separate head of the user fee and penalty namely called 'C&D User Fee and Penalty' will be created which may be levied as per the norms laid out.