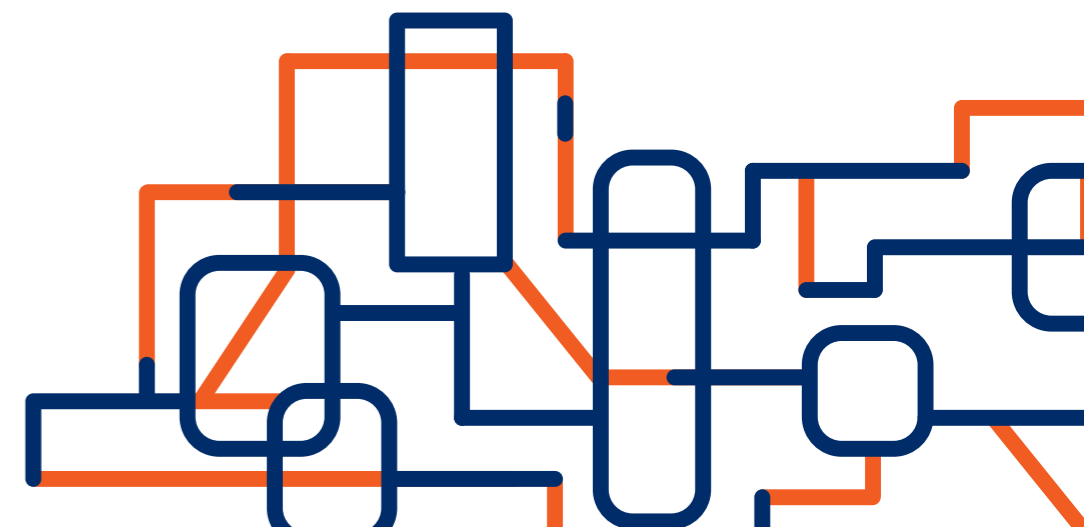

FRAMEWORK OF MUNICIPAL SOLID WASTE IN INDIA



WASTE CATEGORIES

MUNICIPAL SOLID WASTE

Commercial and residential wastes generated in a municipal or notified area, excluding industrial hazardous wastes but including treated bio-medical wastes.

Governed by the Municipal Solid Waste Management and Handling Rules, 2016

BIO-MEDICAL WASTE

Any waste which is generated during the diagnosis, treatment or immunization of human beings or animals or in related research activities or in the production or testing of biologicals.

Governed by the Bio-Medical Waste Management Rules, 2016

PLASTIC WASTE

Waste generated from indiscriminate use and disposal of plastic into the physical environment leading to water, soil and air pollution.

Governed by the Plastic Waste Management Rules 2016

HAZARDOUS WASTE

Waste either generated from residential, commercial or industrial activity.

Attributed to its qualities – ignitability, corrosively, reactivity, and toxicity.

Governed by the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

E-WASTE

E-waste means electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes.

Governed by the E-waste (Management), Rules 2016

INDUSTRIAL WASTE

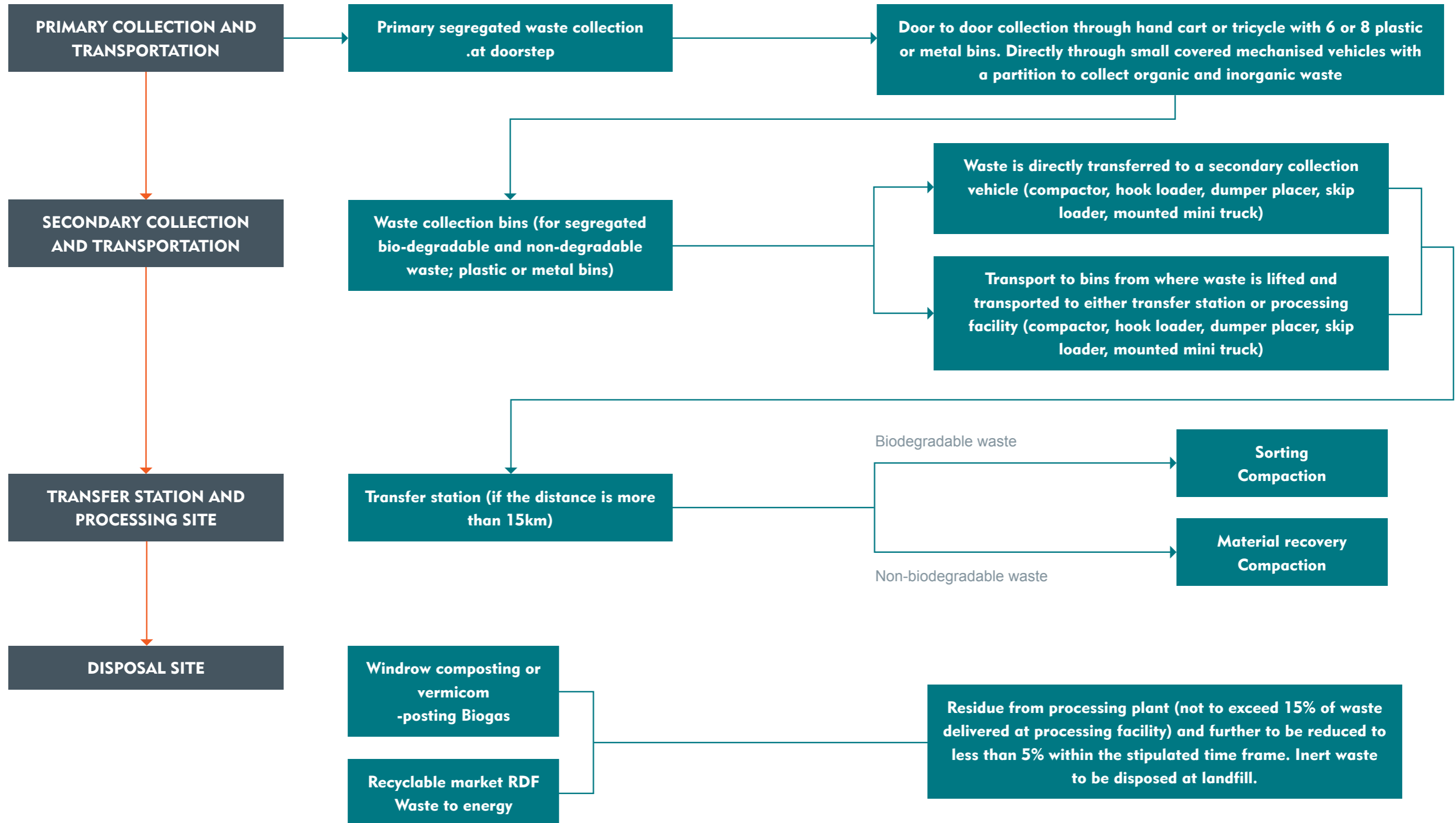
Attributes to waste material produced during an industrial activity.

Can be Hazardous or Non-Hazardous in nature.

Governed by various rules based on the type of waste.

Apart from the above waste categories, the construction and demolition waste generated from various means such as waste comprising building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure, has also been defined with the **regulatory framework under the Construction and Demolition Waste Management Rules, 2016, published by the Ministry of Environment, Forest and Climate Change in 2016.**

SUPPLY CHAIN



ROLE AND RESPONSIBILITIES

ACCORDING TO THE INDIAN CONSTITUTION, THE RESPONSIBILITY FOR SOLID WASTE MANAGEMENT IS UNDER THE PURVIEW OF THE STATE GOVERNMENT AND THE URBAN LOCAL BODIES (ULBS)

CENTRAL

Ministries involved: Ministry of Environment and Forests - overall guidance through rules regulations and guidance materials. Ministry of Urban Development:

- Funding through National Flagship Projects
 - Technical assistance through specialised teams imparting capacity to the State and ULBs.
- Ministry of New and Renewable Energy. Ministry of Finance through the Department of Economic Affairs.

STATE

Responsible for implementation of funding through State Finance Commissions.

- State Urban Development Departments as State Nodal body for channelising Central Funds, Co-ordination between various ULBs for central schemes, and imparting capacity to laggard ULBs with knowledge and manpower.

ULB

Implementation responsibility.

- Implement through a set of by-laws
- Responsible for manpower and staffing
- Responsible for preparing and implementing municipal rules
- Funding through ULB's own resource & Public Private Partnerships

PRIVATE/NGOS

- Assist ULBs to implement waste management activity in the capacity of advisors, execution agencies etc. guided by a pre-defined contract between the public entity
- Non-governmental organisations play an important role in collection and transportation and organising the informal sector. In some cases, NGOs have done good work in end-to-end waste management.

INFORMAL SECTOR

- Scavenging and rag picking
- Informal waste recycling.

INVOLVEMENT OF INSTITUTIONS

INSTITUTION

Government

- Niti Ayog: Plans and Financial Support
- Department of Economic Affairs: Structure, framework and financial Support
- NIUA: Capacity building
- BARC: Technology

Multi-lateral/bilateral funding agencies :
Capacity building and financing

Industry associations ASSOCHAM, CII, FICCI, NSWAI, etc.



INVOLVEMENT OF PRIVATE SECTOR

SOLID WASTE MANAGEMENT SUPPLY CHAIN	PRIVATE SECTOR INVOLVEMENT	CONTRACTUAL ARRANGEMENTS
Primary collection	Primary door-to-door collection of municipal solid waste	Service/management contract
	Service/management contract	Service contract
Secondary collection & transportation	Construction and management of community bins	BOT and its variance and/or separate EPC and O&M contract
	Transportation of waste	Management contract/O&M contract
Transfer station management & processing site	Setting up and running transfer station	Concession and/or O&M contract built operate own (BOO)
	Processing using composting/ RDF/ recoverable/ recycle projects	DBOT/ BOT (long term) EPC with 5–7 years O&M contract
	Waste to energy	Build Operate Transfer (BOT)
Waste disposal	Disposal in an engineered landfill site	Design Build Operate and Transfer (DBOT), EPC with O&M contract on renewal basis

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UK +44 0207 592 3040
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or
Email us at:
urbangatewayindia@ukibc.com

UK INDIA BUSINESS CENTRE GURGAON

16th Floor, Tower 9A, Cyber City, DLF City Phase II, Gurgaon Haryana – 122002
Tel: +91 124 4155700

WEBSITE

www.ukibc.com