



MAK MSMS™

Municipal Solid Waste Management System



Patent Applied / Patented Technology

Two Bins. One Planet. Zero Dump Yards.

A Scientific National Mission for
Clean Cities, Healthy People and Pollution-Free India



A complete solution for:



Municipal Waste



Food Waste



Fish & Meat Waste



RDF Waste



Biomedical Waste



Hospitals



Universities



Smart Cities



Industrial Townships



Municipalities



CSR Projects

MAK INDIA LIMITED

We Have Solution for All Pollution

THE NATIONAL PROBLEM

India Does Not Have a Waste Problem.
India Has a Mixed-Waste Problem.



Every day, cities, towns, institutions and communities generate huge quantities of waste.

When waste is not separated at source, it travels from homes and institutions to dump yards.



House /
Institution



Collection
Vehicle



Transfer
Station



Dump Yard

THE RESULT



Methane Emission



Air Pollution



Bad Smell



Leachate Formation



Fire Accidents



Public Complaints



Loss of
Recyclable Value



Groundwater Pollution



Open Burning



Health Issues

Dump Yards Are Not The Solution.
Dump Yards Are The Result Of Failed Segregation.

THE ROOT CAUSE

Pollution Begins at the Point of Disposal

The real problem starts when different types of waste are mixed together at the source.



Once Mixed:



Food waste cannot become fertilizer.



Plastic cannot be recycled properly.



Dry waste loses value.



Transportation cost increases.



Dump yard burden increases.



Pollution becomes unavoidable.

Mixed Waste Creates Dump Yards.



Segregated Waste Creates Value.



**Mixed Waste Is The Root Cause.
Source Segregation Is The First Solution.**

THE MAK SOLUTION

RED BIN REVOLUTION™

Two Bins at Source. Complete Recovery at System Level.



Every household, institution, campus and public facility can begin with a simple two-bin system.



CLEAN CAMPUS
CLEAN CITY
BETTER INDIA



RED BIN

For biodegradable and organic waste:



Food waste



Fruit waste



Vegetable waste



Fish waste



Meat waste



Chicken waste



Other wet biodegradable waste



Source
Segregation



System-Level
Recovery



Zero
Dump Yard



GREEN BIN

For dry and non-biodegradable waste:



Plastic



Paper



Metal



Glass



Cloth



Packaging material



Dry waste



Recyclable materials



RED BIN

Collected Daily



GREEN BIN

Collected Weekly / When Full



Reduces Pollution
Stops waste from becoming a problem.



Creates Value from Waste
Organic waste becomes resources. Dry waste becomes recyclables.



Saves Cost
Lower transportation and processing costs.



Protects Health and Environment
Cleaner surroundings, healthier citizens, stronger India.



Supports National Mission Goals
Clean Cities, Healthy People, Pollution-Free India.

One Simple Habit Can Eliminate Dump Yards.



WHAT HAPPENS TO RED BIN WASTE?

Red Waste Becomes **Energy, Fertilizer and Food Security**

Organic waste is not garbage.
 ——— It is a resource. ———



SLURRY PREPARATION

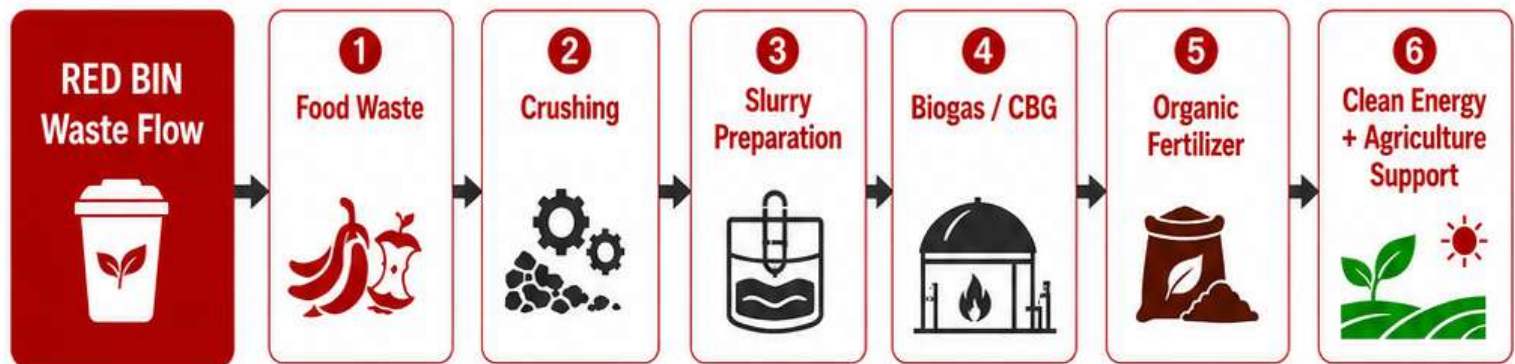
Crushed waste is conditioned into a pumpable slurry for digestion.

BIOGAS / CBG PLANT

Slurry is digested in anaerobic digesters to produce biogas.

FERTILIZER & FARM USE

Digestate becomes organic manure for healthy soil.



OUTCOMES



Cooking gas generation

Provides clean cooking fuel for households and institutions.



Biogas / CBG production

Generates renewable energy for kitchens, industries and vehicles.



Organic manure production

Produces nutrient-rich manure that improves soil health and fertility.



Reduced methane emission

Prevents methane release from dump yards and landfills.



Reduced dump yard load

Diverts organic waste from dumps, extending landfill life.



Support for farmers

Provides low-cost organic manure, reducing input costs and increasing yield.



Circular economy

Closes the loop by turning waste into continuous value for society.

**Food waste should not reach dump yards.
 Food waste must become value on the same day.**

SPECIAL **RED** WASTE STREAMS

Fish Waste and Chicken Waste Are **Also Resources**

Many cities generate large quantities of fish waste and chicken waste every day.

If unmanaged, they create smell, disease risk and public complaints.

If scientifically processed, they become valuable resources.



FISH WASTE



Collected separately



Handled hygienically



Processed through mature technology



Converted into high-quality organic manure



CHICKEN / POULTRY WASTE



Collected from meat shops and slaughter points



Processed using proven technology



Converted into cooking gas / CBG



Converted into organic manure



**SPECIAL
RED WASTE**



**SCIENTIFIC
HANDLING**



**RESOURCE
RECOVERY**



**ORGANIC MANURE /
COOKING GAS / CBG**

**Difficult waste needs scientific handling.
MAK MSMS™ converts problem waste into productive value.**



WHAT HAPPENS TO GREEN BIN WASTE?

Green Waste Becomes **Recyclables, RDF, Biochar and Energy**

— Dry waste has value when it is kept separate. —



GREEN BIN Waste Flow



OUTCOMES



**Dry waste is not a burden.
Dry waste is a recoverable resource.**

MAK KILN 1000+°C

Scientific Thermal Treatment, Resource Recovery and Energy Recovery

MAK KILN 1000+°C is designed for controlled high-temperature processing of suitable waste streams.



KEY FEATURES



High-temperature operation



Controlled combustion



RDF utilization



Heat recovery



APCD system



Continuous monitoring



Biomedical waste handling



Reduced open burning dependency



Scientific destruction of difficult waste

APPLICATIONS



Municipalities



Hospitals



Universities



Industrial townships



Smart cities



Large institutions



Defence establishments

PROCESS / TECHNOLOGY FLOW



Suitable Waste Streams



Controlled High-Temperature Processing



APCD + Monitoring



Heat / Energy Recovery



Safe Useful Output

**Unsafe disposal must end.
Scientific treatment must begin.**

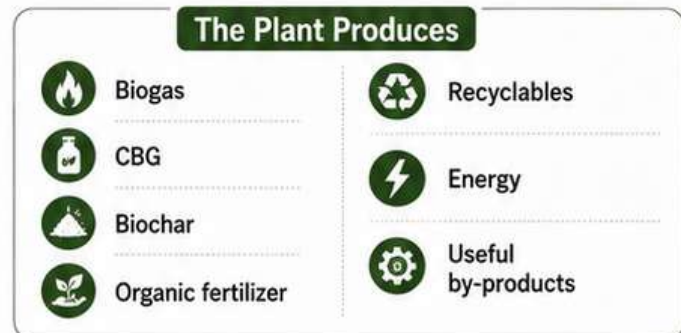
MAK MSMS™ INTEGRATED PLANT

Integrated Waste-to-Wealth System

MAK MSMS™ is not only a bin system.
 It is an integrated municipal solid waste management system designed
 to recover maximum value and reduce dump yard dependency.



One Integrated Plant



One system. Multiple waste streams.
 One mission. Zero dump yards.

BENEFITS

Outcomes That Matter



TYPICAL BENEFITS

Per 100 TPD Waste

- Actual benefits depend on waste composition and local operating conditions.

- ✓ Reduced Dump Yard Requirement
- ✓ Reduced Transportation Cost

- ✓ Reduced Methane Emission

- ✓ Resource Recovery
- ✓ Energy Recovery



ENVIRONMENTAL BENEFITS

- ✓ No dump yard dependency
- ✓ No open burning
- ✓ Reduced methane
- ✓ Reduced leachate
- ✓ Reduced groundwater pollution
- ✓ Reduced air pollution
- ✓ Carbon reduction
- ✓ Cleaner water bodies



ECONOMIC BENEFITS

- ✓ Lower transportation cost
- ✓ Reduced dump yard maintenance
- ✓ Recyclable revenue
- ✓ Resource recovery
- ✓ Energy recovery
- ✓ Organic fertilizer production
- ✓ CSR implementation opportunity
- ✓ Carbon credit potential



SOCIAL BENEFITS

- ✓ Cleaner cities
- ✓ Better public health
- ✓ Reduced complaints
- ✓ Green campuses
- ✓ Responsible citizens
- ✓ Public participation
- ✓ Improved city image



**MSMS is not waste disposal.
MSMS is pollution prevention.**

IDEAL FOR NATIONAL IMPLEMENTATION

— One Model. Many Applications. —

MAK MSMS™ can be implemented across multiple sectors and public systems.



Suitable For



National Vision

- ✓ Every Ward
- ✓ Every Village
- ✓ Every Municipality
- ✓ Every University
- ✓ Every Hospital
- ✓ Every Campus
- ✓ Every Smart City

Should move towards

**ZERO
DUMP YARD**

NATIONAL MISSION

- ✓ Every Ward
- ✓ Every Village
- ✓ Every Municipality
- ✓ Every University
- ✓ Every Hospital

**ZERO
DUMP YARD INDIA**



This can become a movement.

Implementation Concept



**From every ward to every smart city —
India can move towards Zero Dump Yards.**



MAK INDIA LIMITED

Solution To All Pollution

TECHNOLOGIES

- | | |
|------------------------|-------------------------------|
| ✓ MSMS™ | ✓ Biomedical Waste Management |
| ✓ KILN 1000+°C | ✓ Pollution Control Systems |
| ✓ HBR-STP | ✓ Organic Waste to Fertilizer |
| ✓ Biochar Systems | ✓ Waste-to-Energy Solutions |
| ✓ Poultry Waste to CBG | |

THERE IS NO 'AWAY'

When we throw waste away, it still **remains on Earth**.

When waste is mixed, it becomes **pollution**.

When waste is separated, it becomes **value**.

Pollution is not created at the **dump yard**.

Pollution is created when **waste is mixed**.

Scan To
Learn More



Separate Today. Save Tomorrow.

RED BIN REVOLUTION™

Two Bins. One Planet. Zero Dump Yards.



Red Bin for
Wet Waste.



Green Bin for
Dry Waste.



Our Waste.
Our Responsibility.



Technology Is Ready.
Implementation Is
the Mission.



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