प्लास्टिक वेस्ट मैनेजमेन्ट

झाँसी नगर निगम में प्लास्टिक वेस्ट मैनेजमेन्ट का कार्य गतिमान है जिसमें प्लास्टिक का कलैक्शन एवं प्रोसेसिंग का कार्य कराया जा रहा है। जिसका संक्षिप्त विवरण निम्नवत् है–

- प्लास्टिक वेस्ट मैनेजमेन्ट में 300 रैगपिकर्स पंजीकृत है।
- प्लास्टिक वेस्ट मैनेजमेन्ट में 35 स्क्रैप डीलर्स पंजीकृत है।
- नगर में 30 पोर्टाकेबिन स्थापित किये जा चुके है, यह 30 पोर्टाकेबिन शहर के विभिन्न क्षेत्रों में स्थापित है जिन्हें प्लास्टिक नेटवर्क के व्यापारी संचालित कर रहे है।
- प्लास्टिक वेस्ट मैनेजमेन्ट द्वारा 8500 से अधिक घरों एवं 9500 कामर्शियल प्रतिष्ठानों, 78 स्कूलों एवं 46 विवाहघरों 22 होटलों से से प्लास्टिक वेस्ट का कलैक्शन किया जा रहा है।
- प्लास्टिक वेस्ट मैनेजमेन्ट द्वारा 10,000 घरों में प्लास्टिक कचरा एकत्रित करने के लिये डोर–टू–डोर बैग वितरण किये गये है।
- प्लास्टिक वेस्ट का निस्तारण हेतु राजगढ़ क्षेत्र में मशीनों को स्थापित किया गया है।
- 15 अगस्त 2016 को परियोजना का शुभारम्भ किया गया है।
- वर्तमान में 5 टन प्लास्टिक प्रोसेस भी हो रहा है आर.डी.एफ. भी तैयार किया जा रहा है।
- 20 ई–रिक्शा एवं 05 टाटा ऐस से कलैक्शन किया जा रहा है।


कार्यालय
प्लास्टिक वेस्ट मैनेजमेन्ट परियोजना
नगर निगम-झाँसी M-7080430865

Bag Distributions

Door to Door Collection

Waste Exchange Center (WEC) as Portacabin

Way Bridge

PLASTIC WASTES TO RESOURCES

ABOUT US

- **Jain Hydraulics Private Limited (JHPL)** is well known in the field of scrap processing machines of ferrous and non-ferrous scrap, paper waste, cotton waste or any other waste material, Pressing and Bundling. JHPL has diversified and developed Bio-medical hazardous waste sterilization equipment. JHPL is also a distributor for Rexroth Bosch, Hydraulic Pumps, Valves & other products. They are also dealing in Parker brand Hydraulics. Rexroth Bosch and Parker are the world leaders in Hydraulics.
- JHPL working in Operation, Maintenance of **Plastic Waste Management Project(Collection, Transport & Processing)** in Jhansi City with **Municipal Corporation Jhansi** on **PPP Mode** for 5 years started from August 2016 .

DEFINITION OF WASTE

Waste: (of a material, substance, or by-product) eliminated or discarded as no longer useful or required after the completion of a process.

CLASSIFICATION OF WASTE

ORGANIC WASTE

Dry : Coconut shell, Agricultural Residues, wood, Fibrous Leaves, Stems, Seeds, paper and cartons

Wet :Vegetables & fruits, Food waste, Cow dung , slaughter house waste
Sewage Treatment Plant Sludge

INORGANIC WASTE

Rubber :
Tyres, Auto Parts

Plastic :
Carry Bags, Bottles, Electronic Parts

Metal :
Foil, Packing

Glass :
Bottles, Broken Glass

WASTE GENERATION SOURCES

FACTS OF PLASTIC WASTE GENERATION IN INDIA

- **40000 Tonnes** of Plastic waste generated per day in india.
- Since 2003 plastic waste generation increased by 160% (CPCB 2003 15,342 tonnes per day India)
- A survey 2010-2011 by CPCB plastic accounts **10**% of total waste generated in India.
- Only **60** % of plastic recycled and **40** %(16000 tonnes) per day remain to add to pollution.
- Constant increase in plastic waste generation because of 50 % of plastic waste is discarded after single use.

Reference : http://cpcb.nic.in/Plastic_waste.php//

PLASTIC WASTE

- **Plastic Waste** is non biodegradable material which can not decompose by micro-organisms.
- Accumulation of this plastic wastes in Earth's Environment create **Plastic Pollution**.

CURRENT SCENARIO OF WASTE MANAGEMENT : PLASTIC POLLUTION

DRAWBACKS OF MISMANAGEMENT OF PLASTIC WASTES

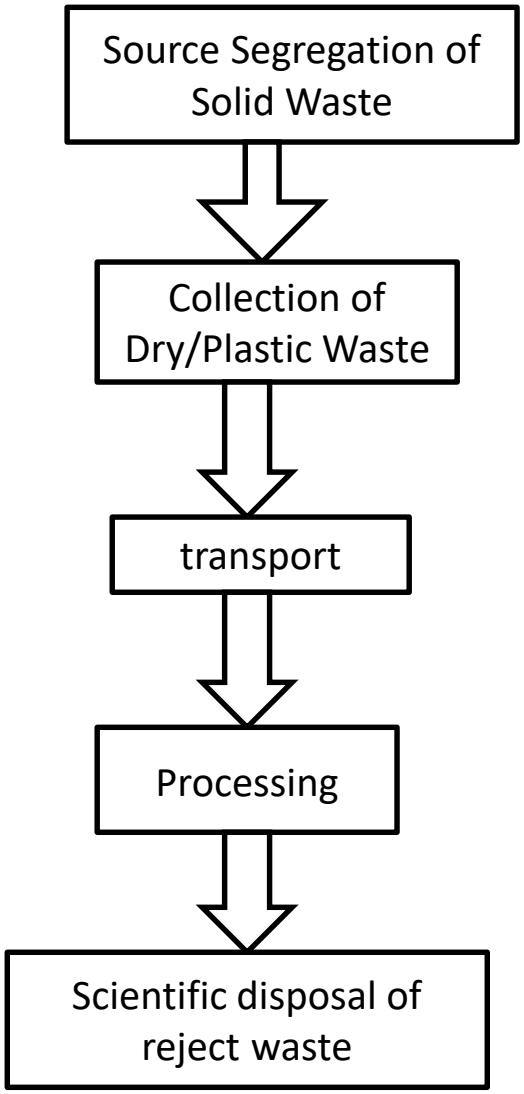
- Poisoning of food chain.
- Ground Water Pollution.
- Land Pollution.
- Air Pollution.
- Sea or ocean Pollution.
- Spoiled beauty.

EFFECT OF PLASTIC POLLUTION ON MARINE LIFE

- **Fish** in the North Pacific ingest 12,000 to 24,000 tons of plastic each year, which can cause intestinal injury and death.
- Hundreds of thousands of **seabirds** ingest plastic every year. Plastic ingestion reduces the storage volume of the stomach, causing starvation.

Reference : www.biologicaldiversity.org

SOLUTION : PLASTIC WASTE MANAGEMENT



AWARENESS/SURVEY

SEGREGATION IS THE

WASTE COLLECTION

SCHOOL

SHOP

EVENT

HOUSEHOLD

WASTE COLLECTION SERVICE AT JHANSI BY JHPL

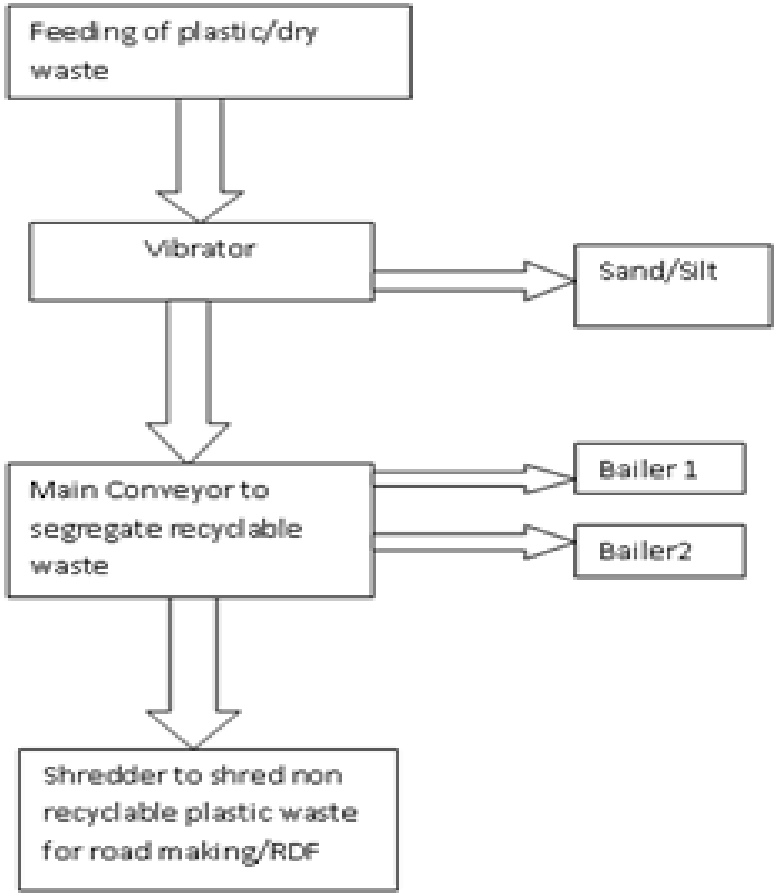
DESCRIPTION	NO.
HOUSEHOLD PER DAY	2000
SHOPS PER DAY	7000
HOTEL PER DAY	57
SCHOOL PER DAY	69
SERVICE CENTRE PER DAY	40
BANK/OFFICE PER DAY	28
MARRIAGE HALL PER DAY(ON SEASON)	30
MALL PER DAY(INCLUDING CINEMA)	18

TRANSPORTATION

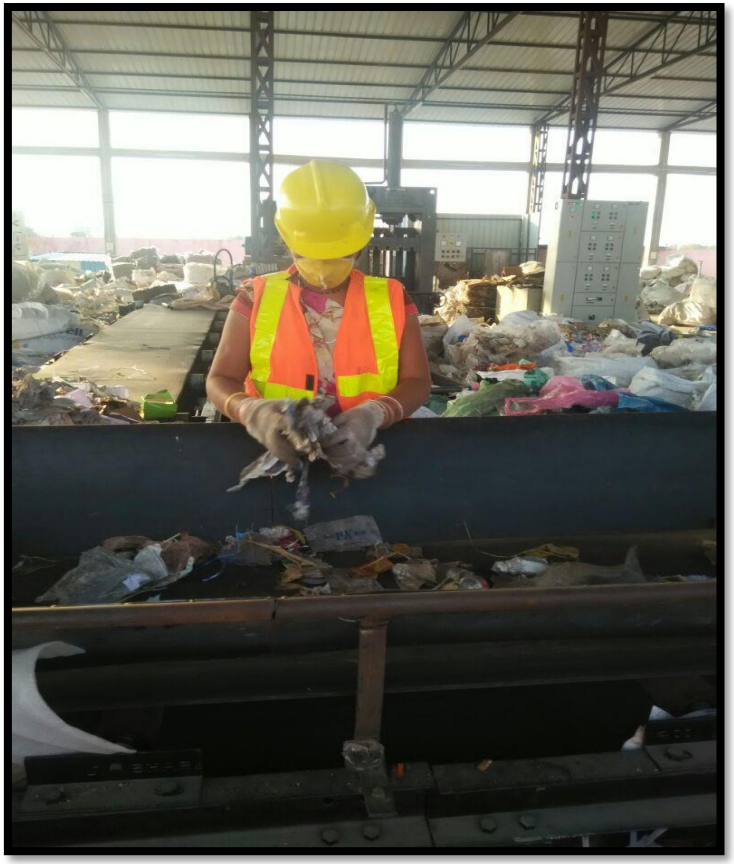
VEHICLE

E -RICKSHAW

PROCESSING OF WASTE



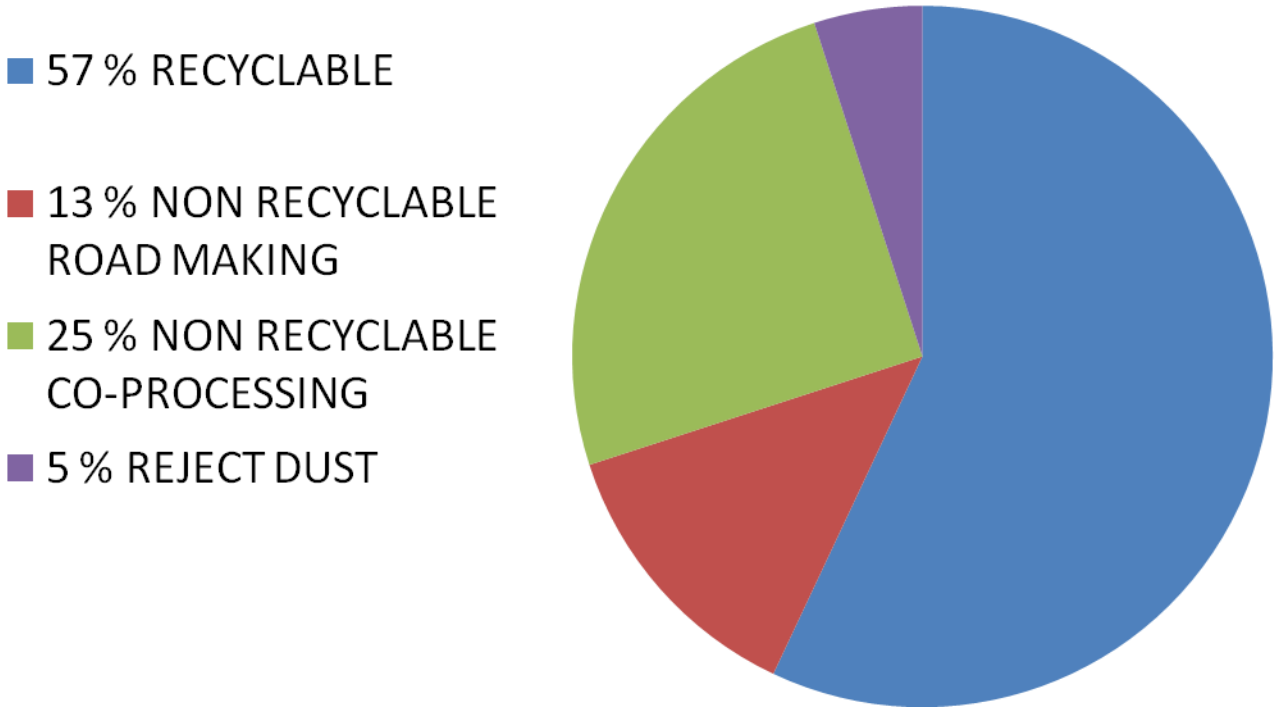
WASTE SEGREGATION AT PLANT



WASTE ITEM

RECYCLABLE	NON-RECYCLABLE	REJECT
Plastics	Multilayer & Laminated Plastics	Dust
Card board	Thermocol	
Glass	Album Cutting	
Metal	Cloth	
Paper	TetraPack	
Carry Bags	Leather/Raxin	
PET Bottle	Rubber Sole	
Disposal Glass	Foam	
Rope etc.	Mix Soiled Waste(after sorting)	

WASTE COMPOSITION AT PWM PLANT



PRODUCT OF WASTE

NON-RECYCLABLE SHREDDED PLASTICS (ROAD MAKING)

NON RECYCLABLE MIX SPOILED WASTE(CO-PROCESSED)

PLANT EQUIPMENT

SORTING CONVEYOR

SHREDDER

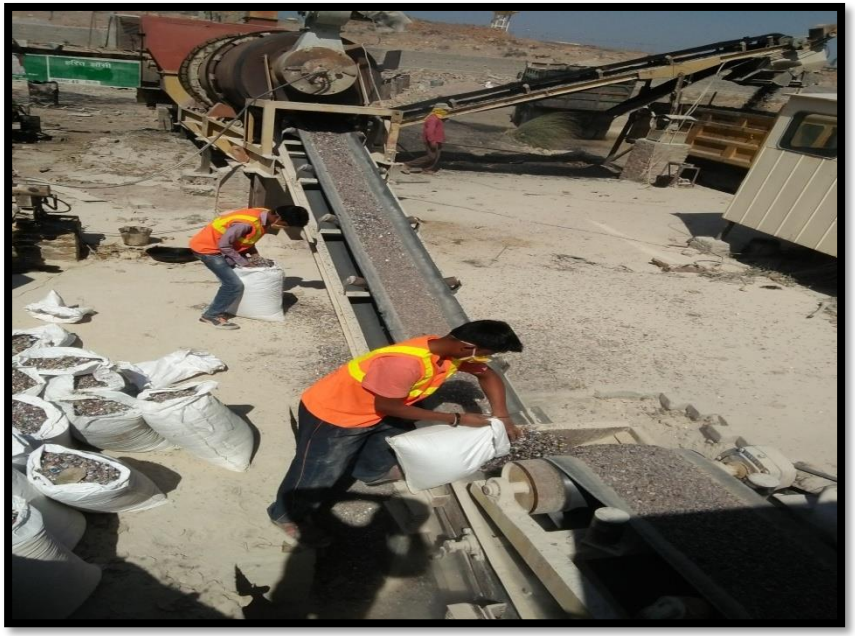
BAILER

VIBRATOR

PLASTIC WASTE IN ROAD MAKING

- Shredder to shred non recyclable plastic waste and percentage of it will be 8% in bitumen for road construction.
- The size of shredded plastic waste will be 2-3mm particle size.
- Strength of Road increased.
- Better resistance to water and water stagnation.
- Overall consumption of bitumen decrease.
- The life of road substantially increased.
- No stripping and have no patholes.
- Increase binding and better bonding of mix.

PLASTIC ROAD CONSTRUCTION



PLASTIC ROAD LIST IN UTTAR PRADESH

DETAILS OF ROADS MADE USING PLASTIC WASTE					
Name of the road	**Name Of Agency**	**Road Laid year**	**Type of Bitumen**	**Source of Plastics waste**	**Road Length(Kms)**
Shivaji Nagar	Jhansi Nagar Nigam	Feb-17	80/100	Jhansi Municipal Waste	1.2KM
Firojabad	PMGSY Firojabad	Nov-17	80/100	Jhansi Municipal Waste	5.5 KM
Bharda Gaon, Mauranipur	PMGSY Jhansi	Mar-18	BG 10	Jhansi Municipal Waste	5.8 KM
Pathar wale Hanuman ji, Jhansi	Jhansi Nagar Nigam	Feb-18	80/100	Jhansi Municipal Waste	1.1 KM
Hardoi	PMGSY	Apr-18	BG 10	Jhansi Municipal Waste	4.2 KM
Galla Mandi	Jhansi Nagar Nigam	Apr-18	80/100	Jhansi Municipal Waste	1.1 KM
Srinagar, Hansari	Jhansi Nagar Nigam	Jun-18	80/100	Jhansi Municipal Waste	0.8 KM
kachari Choraha -Sadar	Jhansi Nagar Nigam	Oct-18	80/100	Jhansi Municipal Waste	1.2 KM
kachari Choraha -Jail Choraha(4 Lane Main Road)	Jhansi Nagar Nigam	Oct-18	80/100	Jhansi Municipal Waste	0.6 KM
Kanpur Chungi-Bakra Mandi(4 Lane Main Road)	Jhansi Nagar Nigam	Oct-18	80/100	Jhansi Municipal Waste	1.2 kM
RTO Office-Medical Gate No. 3(4 Lane Main Road)	Jhansi Nagar Nigam	Oct-18	80/100	Jhansi Municipal Waste	1.5 KM
Sipri Bazar	Jhansi Nagar Nigam	Nov-18	80/100	Jhansi Municipal Waste	1 KM
Narayan Bagh - Laxmi Gate Road	Jhansi Nagar Nigam	Nov-18	80/100	Jhansi Municipal Waste	1 KM

CO-PROCESSING OF WASTE

- Co-processing leaves no residue as the incombustible, inorganic content of the waste materials are incorporated in the clinker matrix.
- Waste co-processing reduces overall CO2 emissions as compared to a case in which the waste material would have been burned or disposed.

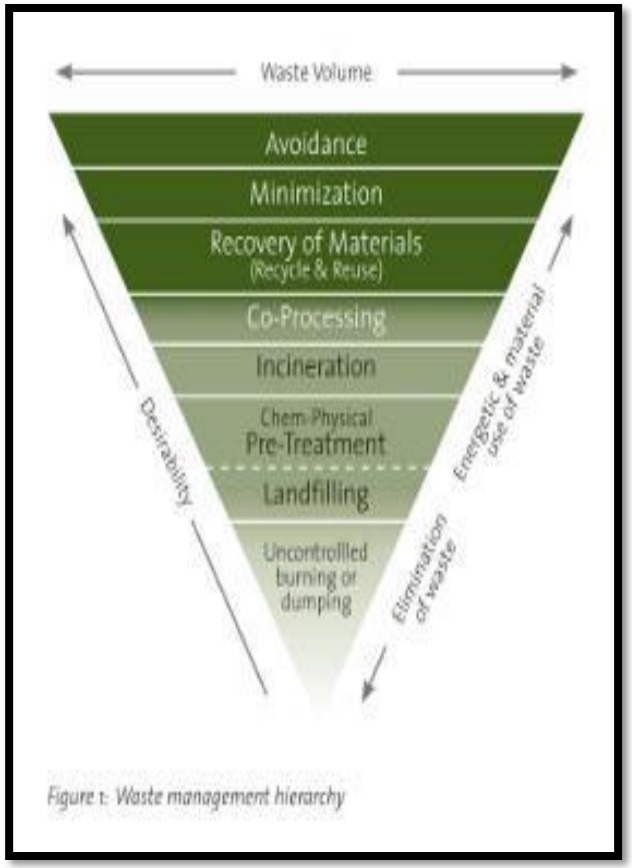
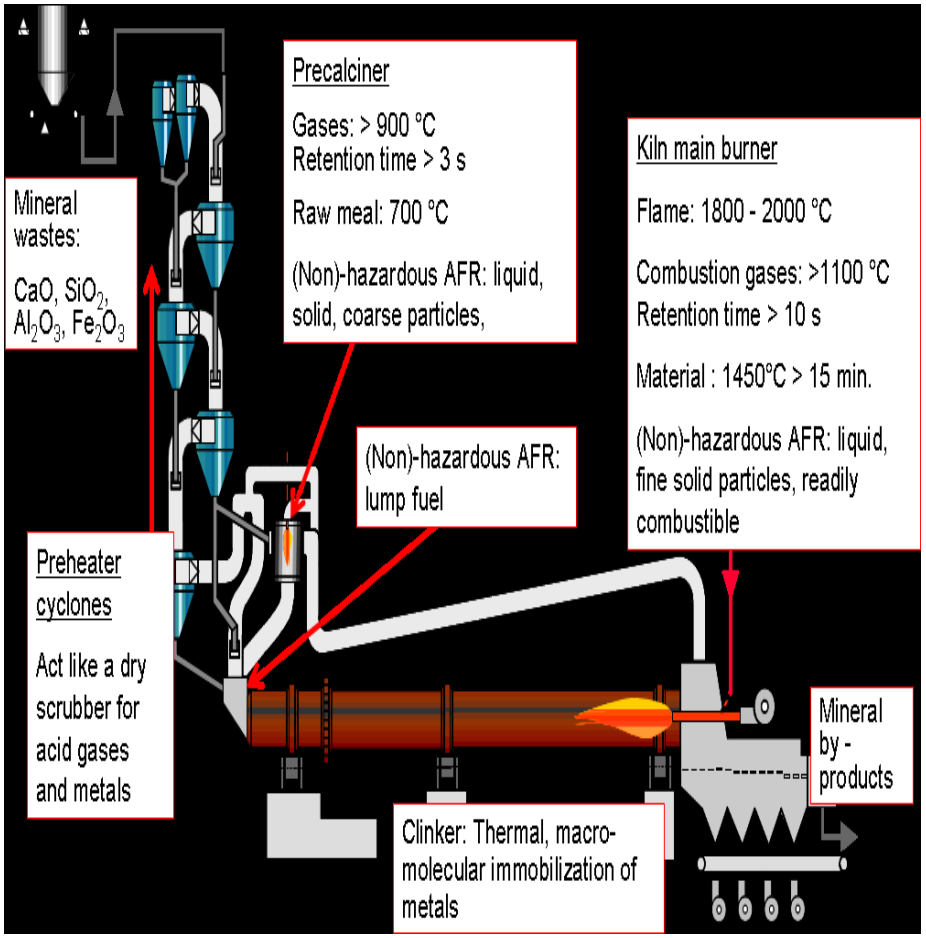


Figure 1: Waste management hierarchy

ZERO WASTE

- NO WASTE GOING TO LANDFILL.
- ALL NON RECYCLABLE WASTE(MIX SPOILED & ALBUM CUTTING ETC.) CO-PROCESSED AT **CEMENT KLIN OF ACC CEMENT PLANT**



ACHIEVEMENTS

DESCRIPTION	
WASTE COLLECTIED & PROCESSED(AS ON AUG 2016)	32900 TONNES
PLASTIC ROAD IN UTTARPRADESH	28 KMS
WASTE CO-PROCESSED	9000 TONNES
EMPLOYMENT GENERATION(MORE THAN)	300 PEOPLE
INFORMAL SECTOR(GROUP) TO BE ORGANSIED	30
SURVEYED PEOPLE(MORE THAN)	5000
WASTE GOING TO LANDFILL	0 (ZERO WASTE)

1 KG OF PLASTIC RECYCLING = REDUCE 1.5 KG OF CO2 (CARBON FOOTPRINT)
AS ON AVERAGE 49350 TONNES SAVING CO2

PRESS RELEASE

उत्तर प्रदेश

अमर उजाला

अब प्लास्टिक कचरे से बनेंगी सड़कें

राजगढ़ में वेस्ट मैनेजमेंट परियोजना का उद्घाटन, रोज पांच टन कचरा खपेगा प्लांट में

हिन्दुस्तान

झांसी

प्लास्टिक वेस्ट मैनेजमेंट प्लांट शुरू

खबर सत्य पायी गयी जिसका

पर्यावरण की रक्षा कराना हमारा कर्तव्य

झांसी। विश्व पर्यावरण दिवस पर प्लास्टिक वेस्ट मैनेजमेन्ट के कार्यकर्ताओ ने मेडिकल परिसर स्थित डॉक्टर कालौनी में डॉ. विध्या चौधरी की अगुवाई में विश्व पर्यावरण दिवस की जानकारी दी व सभी व्यक्तियों को पर्यावरण की रक्षा करने की शपथ दिलाई। साथ ही घर में सूखा कचरा एवं गीला कचरा अलग करके निर्धारित एजेंसी को देने की जानकारी दी, प्लास्टिक व सूखा कचरा रखने के लिये प्लास्टिक वेस्ट मैनेजमेन्ट द्वारा बैग बांटे गये।मैनेजमेन्ट के कार्यकर्ताओं ने ओमशान्ती नगर कालौनी में घर-घर जाकर विश्व पर्यावरण दिवस व प्लास्टिक वैस्ट मैनेजमेण्ट परियोजना की जानकारी दी, एवं प्लास्टिक व सूखे कचरे को अलग रखने के लिये बैग वितरित किये। इस अवसर पर दीपेन्द्र श्रीवास्तव, निशीकान्त राय, अरूण जोशी, मुखतार, रविन्द्र, नीता, राहुल मौजूद रहे।

बॉयो कम्पोस्ट प्लाण्ट

नगर निगम झाँसी में 02 बॉयो कम्पोस्ट प्लाण्ट संचालित है। जिसमें से एक मैनुअल बॉयो कम्पोस्ट प्लाण्ट है तथा दूसरा मैकेनिकल बॉयो कम्पोस्ट प्लाण्ट है। मैनुअल बॉयो कम्पोस्ट प्लाण्ट मुस्कान ज्योति समिति तथा मैकेनिकल बॉयो कम्पोस्ट प्लाण्ट मै. अर्वा एसोसियेट्स द्वारा चलाया जा रहा है

Waste To Compost

Join the Green Revolution

ARVA ASSOCIATES

Clean India, Green India

Garbage to Green

Our Principle

GARBAGE 2 GREEN

We follow the G2G principle to manage waste in an efficient, economical and eco-friendly manner with New Mechanical Technologies.

Garbage2Green is an idea for the planet. It's a way of putting waste to use and help create a greener world and also support to Reduce Pollution.

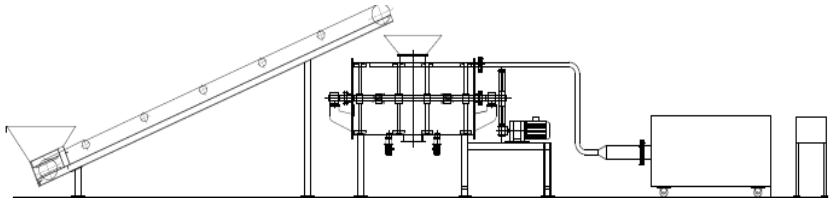
We take pride in creating a change in this segment of waste management by offering a decentralized process which is the need of the hour.

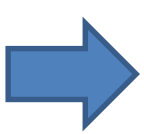
Our Purpose


Reduce waste at source
Recycle waste into compostable matter
Reuse compostable matter for plants

INSTA COMPOSTER MACHINE

- When organic waste is put into the machine, moisture content is sensed and the tank is heated if required
- The moisture content in the organic waste gets evaporated and is vented out of the device through the exhaust.
- As organic waste consists of 80% to 90% liquid, the moisture content gets evaporated and there is a considerable decrease in the quantity of waste
- Once the moisture content from the organic waste is removed, the micro organisms decompose the organic waste into compostable matter
- from 5 Ton of MSW we are producing 4 Tons of Compost on daily basis.





Input & Output of WTC

Input :-





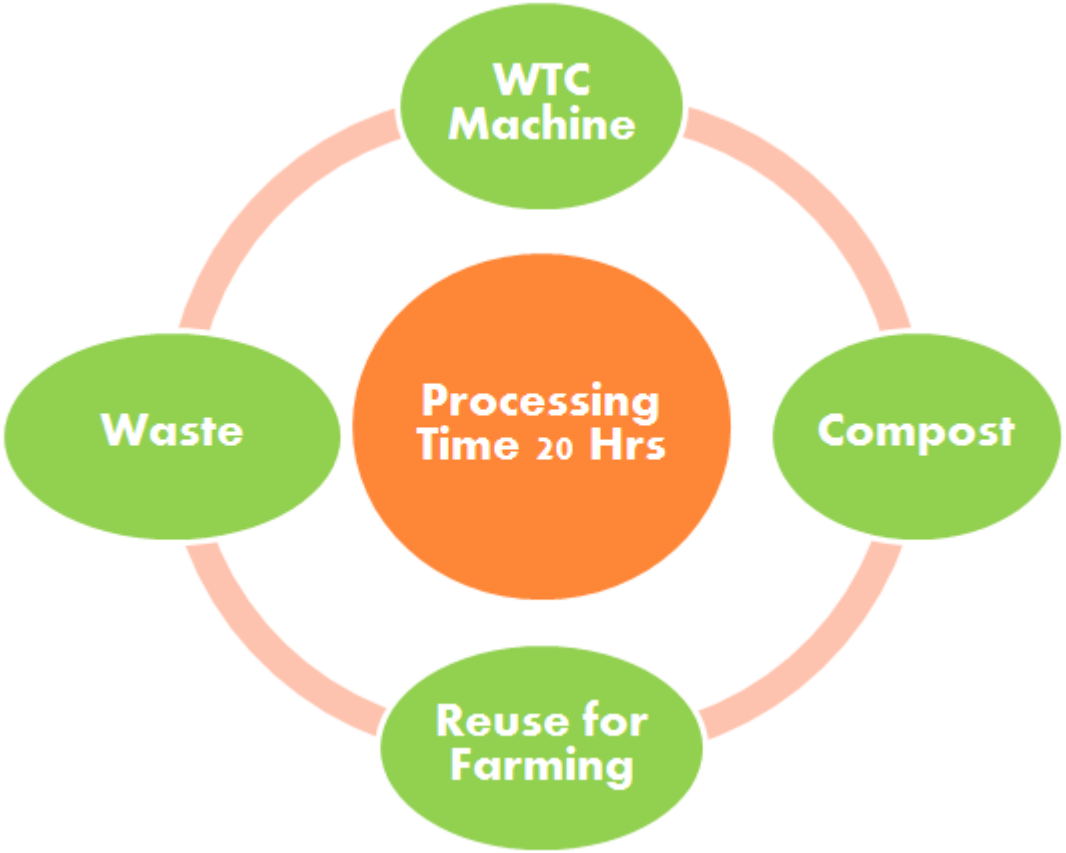
Any kind of Organic Waste

- **Fruits & Vegetables Peels.**
- **Poultry, Fish, Egg, Chicken, Meat & Crab Shells.**
- **Bakery Food, Fast Food, Meal Leftover.**
- **Garden Waste.**

Output :-

Only Dry Powder Formed Organic "Compost".

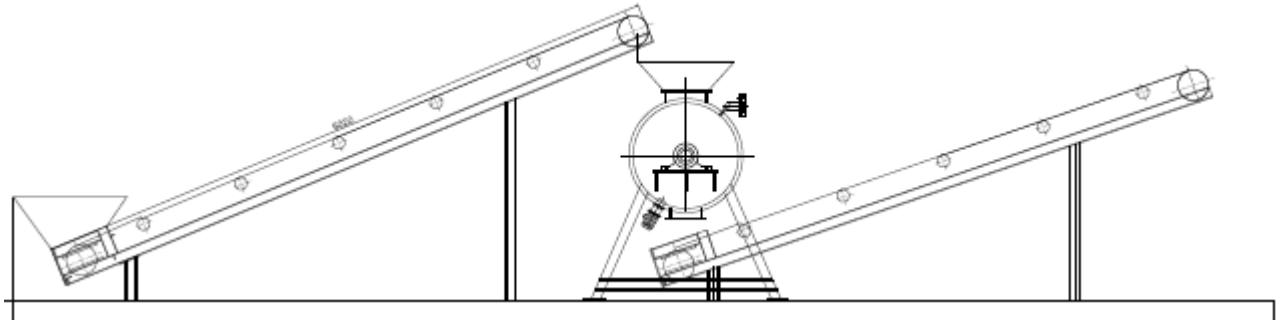
ADVANTAGES


WTC Machine
Waste
Processing Time 20 Hrs
Compost
Reuse for Farming

ADVANTAGES

- No labor or manual intervention needed
- No pungent or putrid odour
- Scalable from 25 kg to 10 Tons
- Noiseless, aerobic and eco-friendly process
- 80% to 90% volume reduction
- No recurring cost of bacteria refill
- Elegant compact design

Details of Insta Composter



1. Made up of SS Component hence long Life and durability
2. Consist of Automated Panel to control the temperature
3. Negligible loss of volume
4. Automated process and convert waste in to compost in 20Hrs
5. No incineration only processing through bacteria/ culture.

ENVIRONMENTAL BENIFITS

It benefits the environment by recycling the organic resources while conserving landfill space

Reduces the need of commercial soil conditioners and fertilizers

Saves water by helping the soil hold moisture and reduce water run off

Encourages healthy root structure and hence avoids the possibility of soil erosion

Moderates the soil temperature and reduces weeds when used as a mulch

Reduces the amount of green house gas release into atmosphere

Protects plants from drought

Mission towards zero garbage city

Balances pH level of soil

Save cost of collection, transportation and disposal of waste

REQUIREMENT FOR SUSTAINABILITY

1. Need Support of Nagar Nigam in Sale of Compost as JNN can Utilize the compost produced in plants in their various parks or can ask their contractor to use the compost produced in the plant from the municipal Solid Waste.

2. JNN can also procure the compost and sell it to farmers through Agriculture departments or government stores.

Plant Photograph

Bio Composting Plant

मे0 मुस्कान ज्योति द्वारा गीले कचरे से बायोकम्पोस्ट बनाई जा रही है।

Proposed Methodology for Municipal Solid Waste Management

1. Garbage Collection at Source [Door to door collection with primary segregation]

Door to door collection using TATA Ace with six garbage bag one is for bio degradable material and second is for other material

2. Transportation to Waste Processing Centre

Transportation of collected waste to processing centre using Rikha trolley [non-polluting waste transportation]

3. Final Segregation

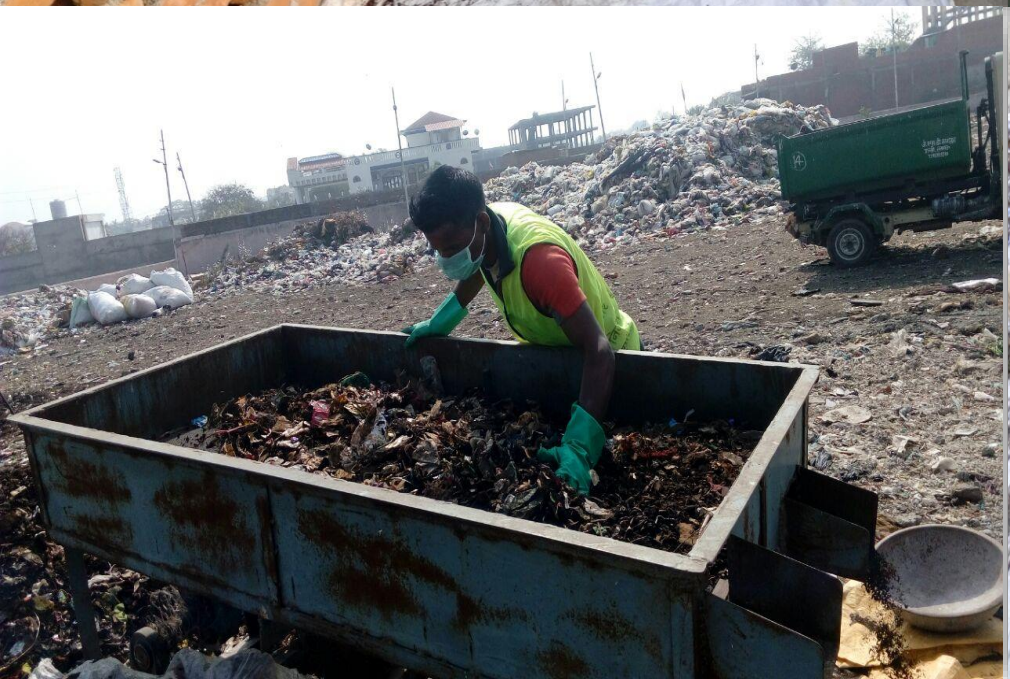
[Final segregation of degradable, recyclable and inert waste]

4. Recyclable waste for sale or recycling

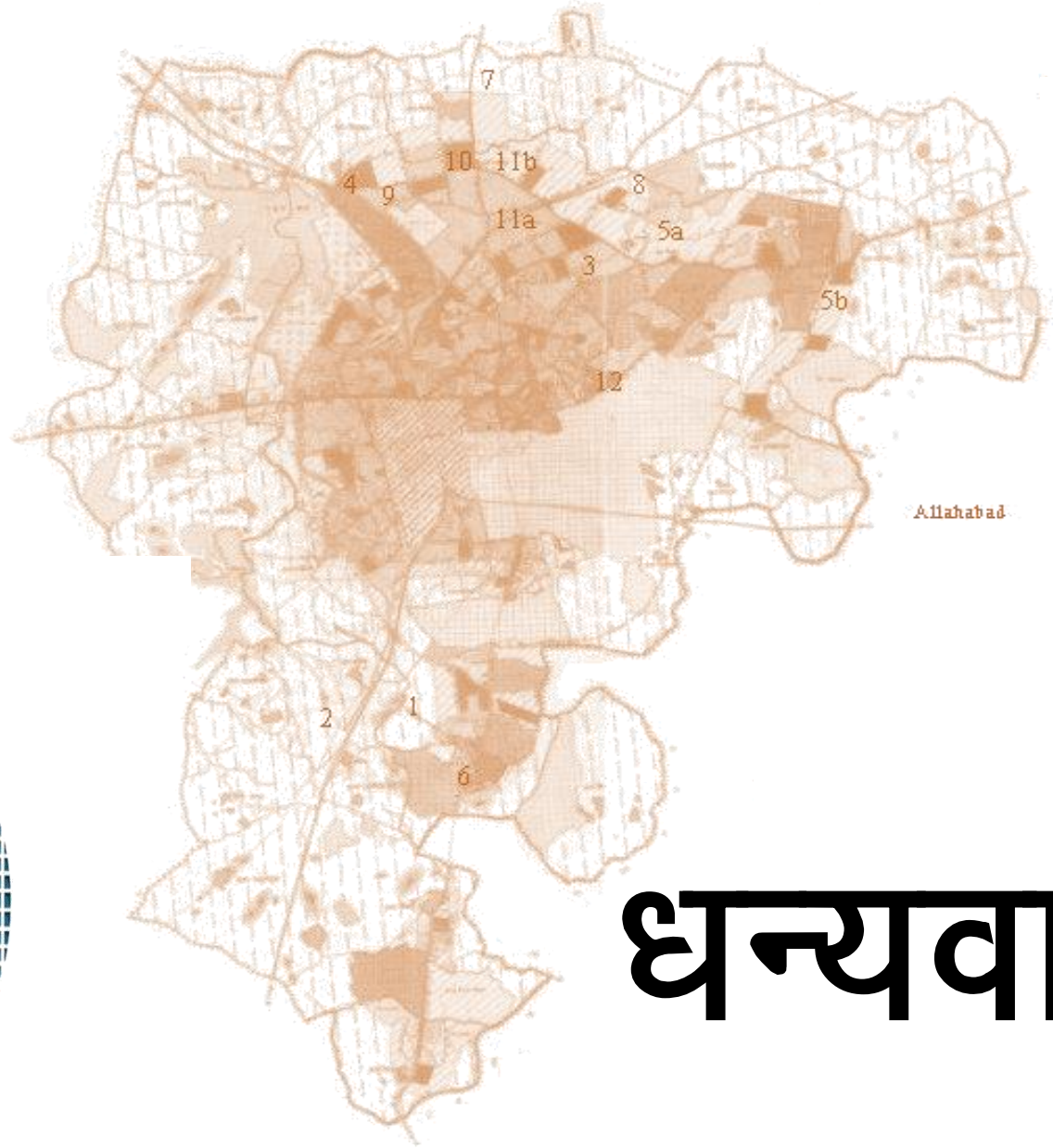
5. De-composting bad for biodegradable

[De-composting may take 30-50 days depending upon the season and technique. The above method is normal de-composting bad method, another method we are using aerobic method]

6. Drying Sieving



7. Packaging



धन्यवाद