

# BIOGASIFICATION

-A SCIENTIFIC APPROACH TO  
PRODUCE CLEAN ENERGY

SHUSHANK VIII A1

ROSHAN

K.K ENGLISH HIGH SCHOOL

## **THE TIMES OF INDIA SAYS...**

**IT TOOK MORE THAN A DECADE AND CRORES OF RUPEES (APPROXIMATELY Rs.350CRORE A YEAR) FOR BBMP TO CREATE HIGHLY TOXIC GARBAGE HILLOCKS AT MAVALLIPURA AND MANDUR. NOW THE CIVIC AGENCY WILL SPEND ANOTHER DECADE AND CRORES OF RUPEES TO UNDO THE DAMAGE.**

# What is waste?

SOLID WASTE IS THE ORGANIC AND INORGANIC WASTE MATERIALS SUCH AS PRODUCT PACKAGING, GRASS CLIPPINGS, FURNITURE, CLOTHING, BOTTLES, KITCHEN REFUSE, PAPER, BATTERIES, PLASTIC, TIN CANS ETC.

# CLASSIFICATION OF SOLID WASTE

- SOURCE-BASED CLASSIFICATION
- TYPE -BASED CLASSIFICATION

# SOURCE-BASED CLASSIFICATION

- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL
- MUNICIPAL
- INDUSTRIAL
- AGRICULTURAL WASTE

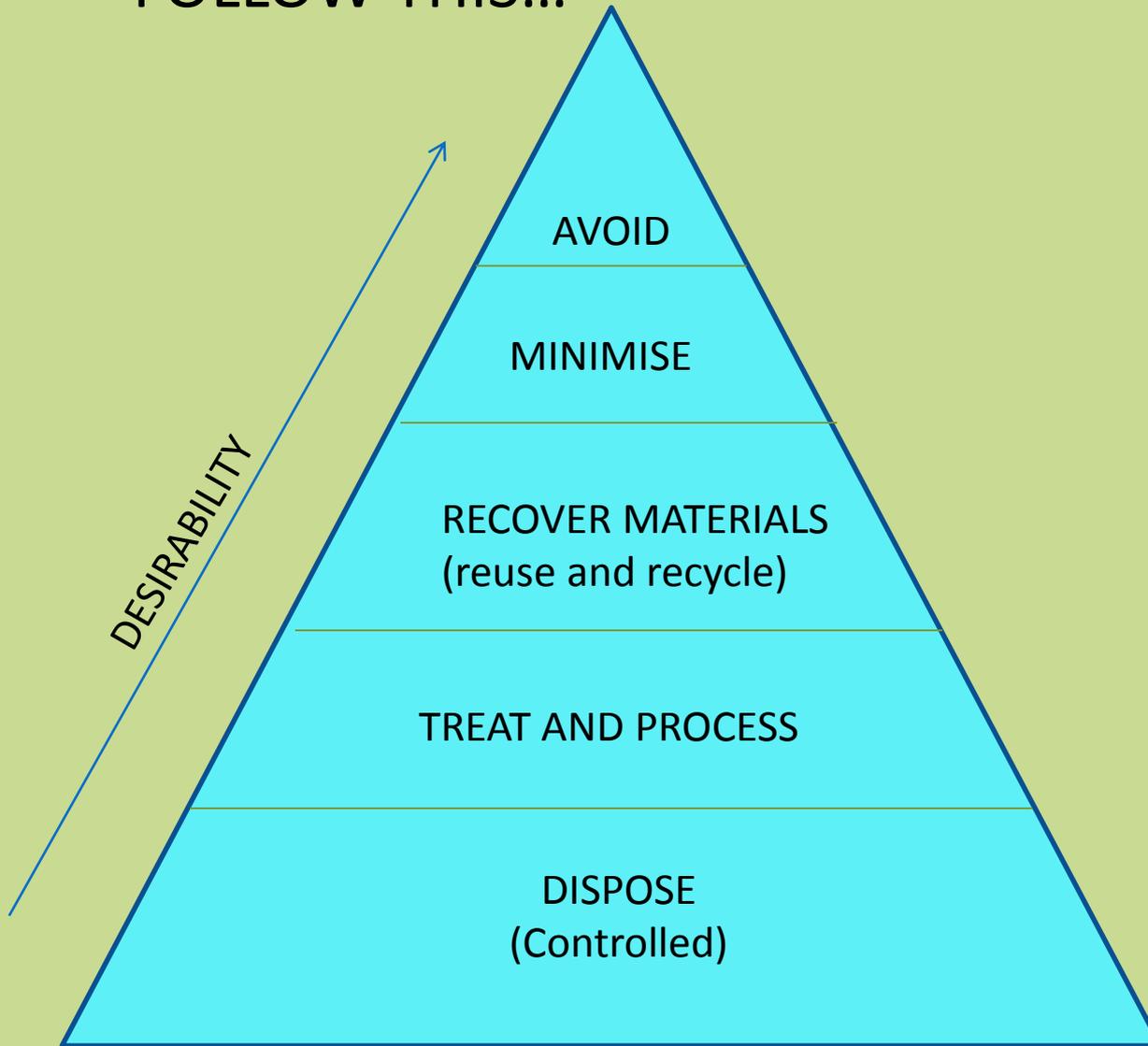
# TYPE BASED CLASSIFICATION

- GARBAGE
- ASHES AND RESIDUES
- COMBUSTIBLE AND NON-COMBUSTIBLE
- BULKY WASTE
- STREET WASTE
- BIODEGRADABLE AND NON-BIODEGRADABLE WASTE
- DEAD ANIMALS
- ABANDONED VEHICLES
- CONSTRUCTION AND DEMOLITION WASTE
- FARM WASTE
- HAZARDOUS WASTE
- SEWAGE WASTE

# DEGENERATION TIME

CATEGORY	TYPE OF WASTE	APPROXIMATE TIME TAKEN TO DEGENERATE
BIO—DEGRADABLE	ORGANIC WASTE SUCH AS VEGETABLE AND FRUIT PEELS, LEFTOVER FOOD STUFF, ETC.	A WEEK OR TWO
	PAPER	10-30 DAYS
	COTTON CLOTH	2-5 MONTHS
	WOOLLEN ITEMS	1 YEAR
	WOOD	10-15 YEARS
NON—BIODEGRADABLE	TIN, ALUMINIUM, AND OTHER METAL ITEMS SUCH AS CANS.	100-500 YEARS
	PLASTIC BAGS	1 MILLION YEARS
	GLASS BOTTLES	UNDETERMINED

FOLLOW THIS...



# Collection and weighing of waste



# HOUSE TO HOUSE SURVEY

HOUSE NO.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
DATE :-	7-10-2013	8-10-2013	9-10-2013	10-10-2013	11-10-2013
1	300 g	200 g	150 g	250 g	270 g
2	210 g	260 g	330 g	180 g	120 g
3	290 g	240 g	150 g	300 g	150 g
4	200 g	270 g	190 g	280 g	300 g
5	260 g	150 g	190 g	300 g	280 g
6	300 g	250 g	270 g	200 g	210 g
7	150 g	200 g	350 g	180 g	210 g
8	200 g	190 g	300 g	320 g	150 g
9	190 g	200 g	270 g	220 g	320 g
10	250 g	290 g	260 g	190 g	250 g

HOUSE NO.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
DATE :-	7-10-2013	8-10-2013	9-10-2013	10-10-2013	11-10-2013
11	250 g	260 g	290 g	280 g	150 g
12	300 g	330 g	150 g	170 g	280 g
13	290 g	270 g	250 g	260 g	300 g
14	300 g	260 g	150 g	330 g	250 g
15	350 g	260 g	290 g	190 g	270 g
16	290 g	250 g	330 g	150 g	190 g
17	240 g	350 g	150 g	330 g	190 g
18	260 g	180 g	220 g	270 g	290 g
19	270 g	250 g	360 g	170 g	260 g
20	180 g	150 g	200 g	250 g	170g

# PREPARATION OF BIOGAS PLANT











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ISO 9001  
SERV. COM.

# Feeding





# Bio- gas stove



# Bio-gas production

- Initial feed-6 buckets of cow dung.(anaerobic respiration for 40 days)
- From 41<sup>st</sup> day 2 kilos of wet waste was fed daily.
- Gas generated is used daily for boiling milk and cooking rice for a family of 4.

# Energy conserved

- 1 LPG cylinder = 2 1/2 months.
- LPG + Bio-gas = 3 months.
- LPG saved for 15 days.

# PROBLEMS

- PRESENCE OF WATER IN THE PIPE.
- BLOCKAGE – SLURRY BATH.
- INLET PIPE OPENED.



# AWARENESS

- AWARENESS IS OUR MAIN MOTTO.
- OUR SCHOOL STUDENTS AND PARENTS.
- NEIGHBOURING SCHOOLS.

# OUR SCHOOL STUDENTS



# JUBILEE SCHOOL STUDENTS' VISIT



# Impact of our awareness

- 5 of our school parents have set up bio-gas plants in their homes and are using them.
- **AWARENESS CAN MAKE A LOT OF DIFFERENCE.**

# CONCLUSION

- **HANDY MODEL.**
- **OVERCOME ENERGY CRISIS.**

WASTE IS NOT A WASTE,  
INSTEAD IT IS WEALTH AND  
INTURN SAVES THE  
ENVIRONMENT, IF MANAGED  
JUDICIOUSLY AND  
SCIENTIFICALLY.

**LET US TOGETHER  
MAKE A  
DIFFERENCE.**

**THANK YOU**