Criterion 7.1.2 Policy Document on the Green campus/plastic free campus

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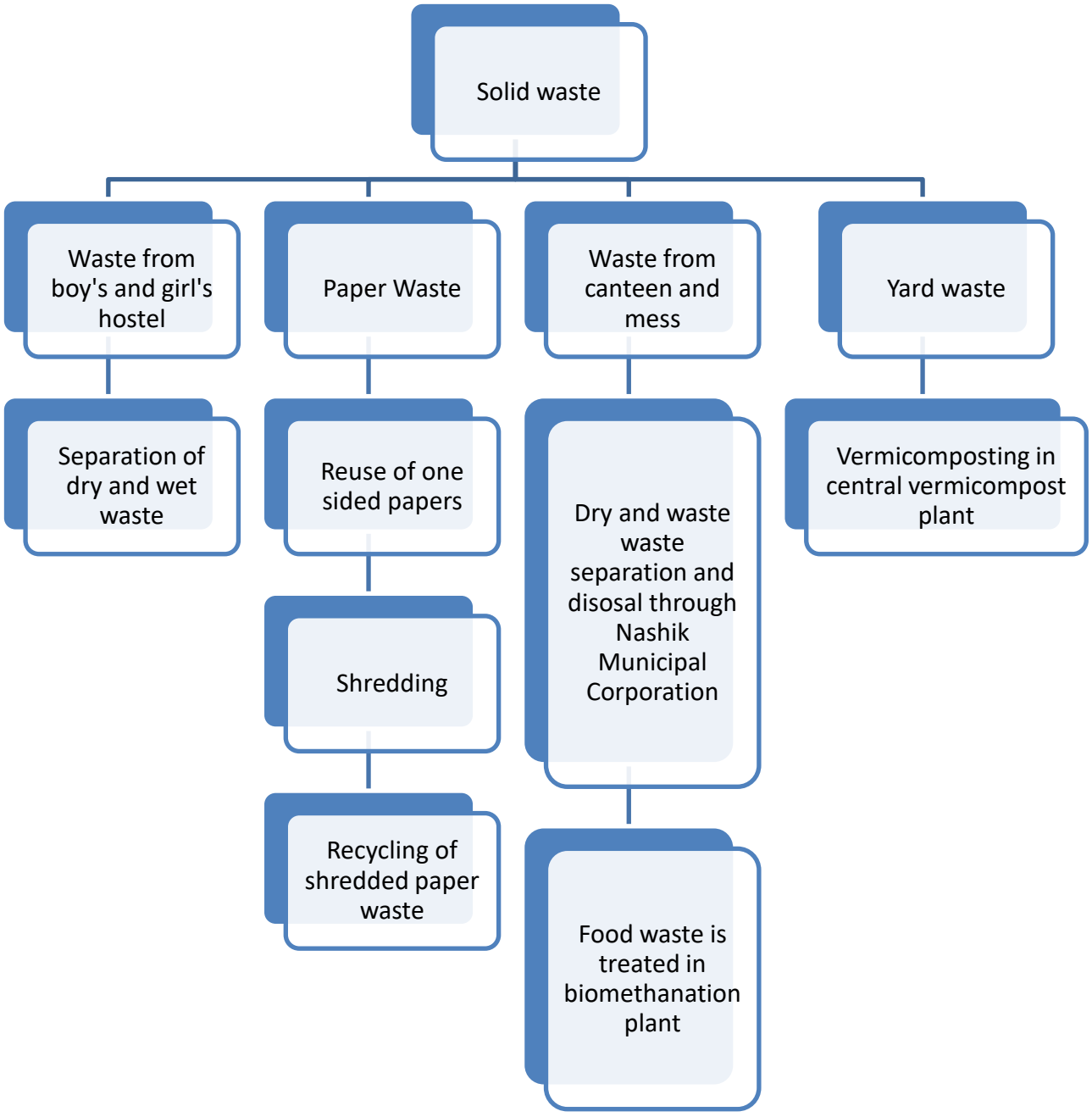
1. Solid waste management:

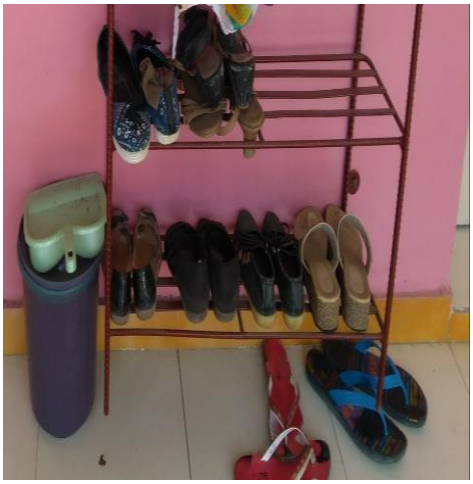
The key to solid waste management in the college campus is onsite segregation of waste generated from various sources. Following strategies are followed for the proper solid waste management in the institute premises.



2. Dry and Wet Waste management

Dry and wet wastes from canteen, mess and hostel are collected separately and hand over to municipal solid waste handling facility regularly. A biogas plant has been installed to treat the food waste generated from college mess and canteen.

Waste collection and separation at source (Girls's Hostel)



Waste collection

Temporary storage

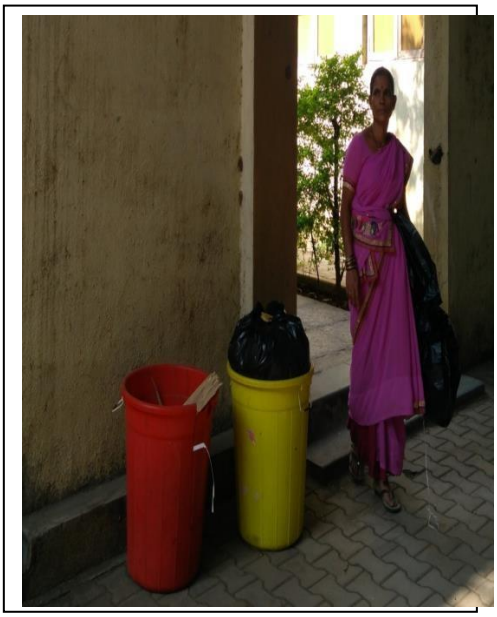
Separate collection of dry and wet waste

Waste disposal as municipal solid waste

3. Waste collection and separation at source (Boy's Hostel);

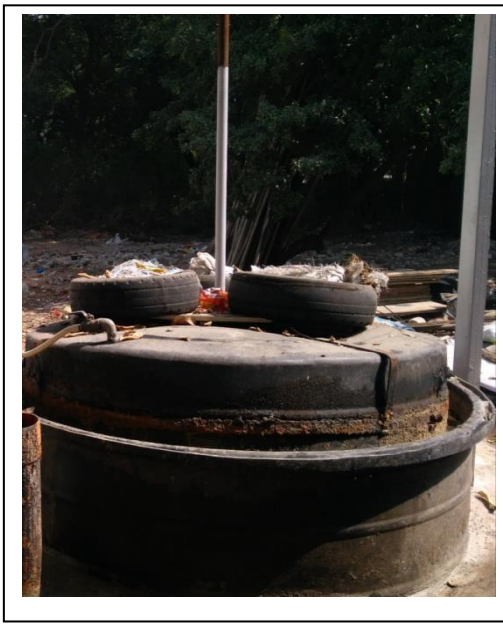
The separate dust bins are provided to collect dry and wet waste which are placed at various location in Hostel as well as in institute building. The collected dry waste then hand over to corporation for disposal.

Waste collection



Separate collection of dry and wet waste

Food Waste collection



Bio-Methanation Plant Near Boy's hostel

4. **Disposal of sanitary napkins has always been a crucial issue in institutional buildings. There are two incinerators for proper onsite disposal of sanitary napkins.**

Incinerator at Ladies hostel

Incinerator in the Ladies washroom (main building)

5. Paper Waste management

The paper waste shares the major portion of the solid waste. Paper waste is reducedat source by reuse of one sided papers. Class tests/unit tests are conducted in the form of online/ offline e-quiz. The paper waste is collected from all departments regularly, stored for temporary period and handed over for recycling. A heavy dutyshredder helps in reducing volume of paper waste significantly.

Collection of paper waste

Heavy Duty shredder

Shredded material to be recycled

6. Yard Waste Management

The garden waste from the premises is used to prepare compost. The yard waste from all the colleges in the Vidyanagar campus is collected and a good quality compost is prepared using aerobic composting method. The compost plant is located at Shram Chintan Bag in Science College campus.

Aerobic compost plant at Shram Chintan Bag

7. Optimum mix of waste for best manure using composter

Composter is college campus to reduce and convert the solid waste generated by trees to convert into manure.

		
ECOMAN Composter	**Controll Panel**	**Motor Box**

			
Food waste	**Vegetable waste**	**Dried grass**	**Dried leaves**
			
Collection of leaves	**Shredding of leaves**	**Waste input**	**Compost output**

Input output Details

Sr. No	Date	Dry Leaves (kg)	Grass (kg)	Vegetable Waste(kg)	Food Waste (kg)	Water (Lit.)	Compost (kg)
1	11-3-19	20	-	-	93	-	85
2	12-3-19	4	-	47	23	-	60
3	13-3-19	5	-	-	40	-	40
4	14-3-19	10	-	-	186	-	120
5	18-3-19	-	36	-	37	-	60
6	19-3-19	10	10	27	-	-	35
7	21-3-19	25	-	-	-	-	15
8	22-3-19	20	-	-	-	-	20
9	28-3-19	25	-	-	30	-	50
10	29-3-19	30	-	-	25	-	50
11	30-3-19	35	5	-	20	2	55
12	1-4-19	40	10	-	15	-	60
13	3-4-19	20	15	-	25	-	50
14	4-4-19	20	15	-	25	-	50
15	5-4-19	10	-	15	30	-	40
16	8-4-19	15	-	10	35	-	50
17	13-4-19	30	-	20	30	-	70
18	15-4-19	15	10	-	20	-	30
19	17-4-19	20	20	-	20	-	50
20	18-4-19	50	-	-	-	-	40

Results

Sample	Available N (%)	Available P (%)	Available K (%)	Organic C (%)	C/N Ratio
GES 1	3.39	2.60	3.92	56.3	16.6
GES 2	**3.53**	**2.72**	**3.00**	**51.2**	**14.62**
GES 3	**3.11**	**2.44**	**5.01**	**49.3**	**15.85**
GES 4	**4.57**	**2.92**	**3.34**	**20.3**	**4.44**
GES 5	3.55	2.44	3.91	31.4	8.84
GES 6	1.41	3.16	2.20	33.3	23.61
GES 7	**1.75**	**2.80**	**2.76**	**15.3**	**8.74**
GES 8	1.55	2.80	2.04	22.1	14.73
GES 9	**0.66**	**1.96**	**2.47**	**18.9**	**28.63**
GES 10	1.60	2.96	3.41	36.1	22.56

GES 11	**1.43**	**1.72**	**3.77**	**40.2**	**28.11**
GES 12	1.88	3.96	5.46	19.3	10.26
GES 13	2.01	1.43	5.33	43.8	21.77
GES 14	**1.03**	**2.1**	**3.8**	**36.1**	**35.04**
GES 15	**2.4**	**2.9**	**4.36**	**40.23**	**16.76**
GES 16	2.3	2.73	3.12	38.02	16.53
GES 17	**3.32**	**1.2**	**2.93**	**34.2**	**10.3**
GES 18	2.28	3.32	4.96	20.1	8.815
GES 19	3.28	2.98	4.02	38.2	11.67
GES 20	1.89	3.0	2.9	20.1	10.63

- Available nitrogen (1-5%): The compost samples can be stated as good quality except sample no.9 which shows lower amount of nitrogen content.
- Available phosphorous (1-5%): The compost sample can be stated as good quality.
- Available Potassium (1-5%): The compost samples can be stated as good quality. The sample no.3 12 and 13 shows higher amount of potassium as compared to standards but it can be stated to be considerable as good quality compost.
- Organic Carbon (1-5%): As the carbon content is very high thus the quality of compost can be used to cure the low quality of soil. Only the C/N ratio should be verified (25-35).

CONCLUSION

Sample No.	C/N ratio	Dry leaves (kg)	Vegetable waste (kg)	Dried grass (kg)	Food waste (kg)	Water (lit.)	Compost (kg)
Best quality manure							
9	28.63	25	-	-	30	-	50
11	28.11	35	-	5	20	2	55
14	35.04	20	-	15	25	-	50
Medium quality manure							
2	14.62	4	47	-	23	-	60
3	15.85	5	-	-	40	-	40
15	16.76	10	15	-	30	-	40
Poor quality manure							
4	4.44	10	-	-	186	-	120
7	8.74	25	-	-	-	-	15
17	10.3	30	20	-	30	-	70

1.

- The best quality manure samples are sample no. 14; 9 and 11 according to C/N ratio 35.04, 28.63 and 28.11 respectively.
- The medium quality manure samples are sample no. 2, 3 and 15 according to C/N ratio 14.62, 15.85 and 16.76 respectively.
- The poor quality manure samples are sample no. 4, 7 and 17 according to C/N ratio 4.44, 8.74 and 10.3 respectively.

Ms Shirsath Srushti Sanjay got selected in TCS due to her project

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