GOVT. HOLKAR (MODEL AUTONOMOUS) SCIENCE COLLEGE, INDORE

(An ISO 9001:2015 & ISO 14001:2015 Certified Instituion)

SSR DOCUMENT

2017-18 TO 2021-22

CRITERION –7

Institutional Values and Best Practices

Metric No. :7.1.3

Solid Waste Management

SURESH T SILAWAT

Digitally signed by SURESH T SILAWAT
Date: 2023.08.11 13:11:08 +05'30'

तमसो मा ज्योतिर्गमय

7.1.3 Solid Waste Management

The solid waste is kept in segregated bins. Organic Solid Waste Collected as dry leaves from different gardens is taken into the Bio-composter, where it is recycled into BioManure using Bio-composters, Vermicompost Units and used in our Gardens. **Solid (Wet) Food Waste** from the Indian Coffee House situated on the campus and **other & non-recyclable (dry – Blue) waste** is collected by a dedicated **Garbage Collection Vehicle (Door to Door Collection)** daily in their segregated compartments and carried away to designated Garbage Transfer Station (GTS). Our Institution has a dedicated From GTS it is carried to the Central Processing Unit or decentralized processing Units of Indore Municipal Corporation for further processing depending upon the nature of waste. The recyclable dry waste is converted into compost

The Institution puts its effort to produce minimal Plastic Waste. Empty Water Bottles from the ICH are used to make vertical Gardens by the Botany Department. Rest plastic items are given to the garbage collection Vehicle, and they are taken to Plastic Waste Collection Centre and sent to Cement Plants at Neemuch or used for making roads.

The wet waste is collected and finally taken to the **Biomethanation Plant and Bio-CNG gas** produced is used as a fuel to operate city buses. The remaining Slurry is converted into organic compost.

Sanitary waste and domestic hazardous waste is offloaded into dedicated drums and is transported to **Common Biomedical Waste Facility (CBWTF)** as per the rules covered under Biomedical Waste Rules 2016 only on a regular basis.

Effective Solid Waste Management and Its Impact

Our institution is committed to responsible waste management practices to minimize environmental impact and contribute to sustainable development. Through a well-structured waste management system, we focus on waste segregation, recycling, and proper disposal, resulting in a positive impact on our campus and the surrounding community.

Segregation and Recycling:

Organic Waste Recycling: Organic solid waste, such as dry leaves from various gardens, is directed to our Bio-composter. Through the utilization of Bio-composters and Vermiculture Units, this waste is transformed into nutrient-rich BioManure, enhancing the fertility of our gardens and also sold during udyamita Shivir.

Plastic Waste Utilization: Empty water bottles are creatively repurposed by the Botany Department to create vertical gardens. Other plastic items are responsibly sent to designated

collection centers for appropriate recycling or repurposing, contributing to the reduction of plastic waste.

Efficient Waste Collection and Disposal:

Food Waste Collection: Wet food waste from the Indian Coffee House and other sources is collected daily using a dedicated Garbage Collection Vehicle. It is then transported to a designated Garbage Transfer Station (GTS) and further processed, minimizing the environmental impact of organic waste.

Non-Recyclable Waste Disposal: Non-recyclable dry waste is systematically collected by the Garbage Collection Vehicle and sent to appropriate processing units. Depending on the nature of the waste, it is either converted into compost or utilized for other environmentally friendly purposes.

Resource Recovery and Environmental Benefits:

Bio-CNG Production: Wet waste is directed to the Biomethanation Plant, where Bio-CNG gas is produced. This Bio-CNG is utilized as fuel for operating city buses, contributing to reduced carbon emissions and promoting sustainable transportation.

Organic Compost Generation: The remaining slurry from the Biomethanation Plant is transformed into organic compost, which is utilized to enhance soil quality and promote sustainable gardening and landscaping practices.

Minimal Sanitary and Hazardous Waste Impact: Sanitary and departmental hazardous waste are carefully managed and transported to authorized facilities, adhering to Biomedical Waste Rules 2016, and ensuring the safe disposal of such waste.

Community and Environmental Impact:

Positive Environmental Footprint: Our waste management initiatives significantly reduce the amount of waste sent to landfills and promote resource recovery, leading to a reduced environmental footprint.

Community Engagement: By showcasing innovative practices and promoting responsible waste management, our institution engages the campus community and encourages them to adopt similar practices in their daily lives.

Sustainable Contribution: The utilization of waste for composting, Bio-CNG production, and other purposes demonstrates our commitment to sustainability, contributing to a greener and more eco-friendly environment.

Our institution's holistic approach to solid waste management encompasses segregation, recycling, resource recovery, and proper disposal. By adopting these practices, we minimize waste generation, reduce environmental impact, and actively contribute to the larger goal of creating a sustainable and greener future.

1. **Segregated Bins for Garbage**

2. **Biocomposters for Recycling Organic Waste from all the Gardens**

3. **IMC Door-to-Door Garbage Collection Vehicle**

4. **Automated Garbage Unloading Zone (Photograph from the IMC website)**

5. **Indore Municipal Corporation Solid Waste Management Facility (Staff & Students visit this facility regularly to understand the process as well as importance of segregated waste)**

6. **Students visualizing the Model of the Waste management Plant.**

7.1.3 & 7.1.5 Vertical Garden Developed of Used Plastic Bottles & Used Coconut Shells by the Students of Department of Botany


GPS Map Camera
Indore, Madhya Pradesh, India
MVV9+JPG, Janki Nagar, Indore, Madhya Pradesh 452001, India
Lat 22.694022°
Long 75.869518°
06/06/23 12:11 PM GMT +05:30
Google


REDMI NOTE 10 | SHOOT BY : AVI

Green Initiative: Vertical Garden from Recycled Plastic Bottles & Coconut Shells

In a remarkable display of innovation and environmental consciousness, students from the Department of Botany embarked on a transformative journey towards sustainability by creating a Vertical Garden. This eco-friendly project exemplifies our institution's commitment to green initiatives and waste management.

Vertical Garden Concept:

The Vertical Garden was ingeniously crafted using recycled plastic bottles and repurposed coconut shells, showcasing a harmonious blend of creativity and sustainability.

This unique gardening approach optimizes vertical spaces, making it an ideal solution for urban landscapes and limited areas.

Waste Management Triumph:

By repurposing used plastic bottles and coconut shells, the project successfully diverted waste from landfills, contributing to waste reduction and ecological preservation.

The initiative sheds light on the potential of waste materials to be transformed into valuable resources.

Environmental Impact:

The Vertical Garden not only adds aesthetic appeal but also enhances air quality and promotes biodiversity, reflecting the students' dedication to enhancing the environment.

The project exemplifies the role of botany students as stewards of nature, actively contributing to ecological balance.

Educational Value:

The project served as an invaluable learning experience for the students, fostering their understanding of sustainable practices, waste management, and horticultural techniques.

It showcased how academic pursuits can translate into practical, environmentally beneficial outcomes.

Community Inspiration:

The Vertical Garden stands as a living testament to the power of community engagement, inspiring others to adopt sustainable practices and creatively address environmental challenges.

By showcasing the possibilities of repurposed materials, the project serves as an inspiration to our campus and beyond.

Future Prospects:

The Vertical Garden serves as a model for further green initiatives and waste management projects, encouraging students to explore new avenues of sustainable innovation.

It sets a precedent for future botany enthusiasts to contribute positively to the environment through their expertise.

Impact:

The development of the Vertical Garden using recycled plastic bottles and coconut shells highlights the visionary spirit of our botany students. By seamlessly blending sustainable practices, waste management, and botanical knowledge, they have created a living testament to the potential of responsible innovation.

We extend our heartfelt appreciation to the students of the Department of Botany for their exemplary initiative and dedication to creating a greener, more sustainable future.

HoD

Department of Botany