Manav Rachna International Institute of Research and Studies

(Deemed to be University under section 3 of the UGC Act, 1956)

PROGRESS REPORT 2022-23

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

ENSURE SUSTAINABLE CONSUMPTION & PRODUCTION PATTERNS

Contents:

1. PREAMBLE

Sustainable Development Goal 12 (SDG 12) SDG 12 is dedicated to ensuring sustainable consumption and production patterns, which are essential for reducing the negative impacts of human activities on the environment and promoting economic and social well-being. It recognizes the need for more responsible and efficient use of resources to create a more sustainable and equitable world. SDG 12 addresses the urgent need to shift global consumption and production patterns toward sustainability. The current global patterns of overconsumption and inefficient resource use are contributing to environmental degradation, climate change, and social inequalities. Sustainable consumption and production aim to mitigate these issues by promoting responsible and efficient resource use.

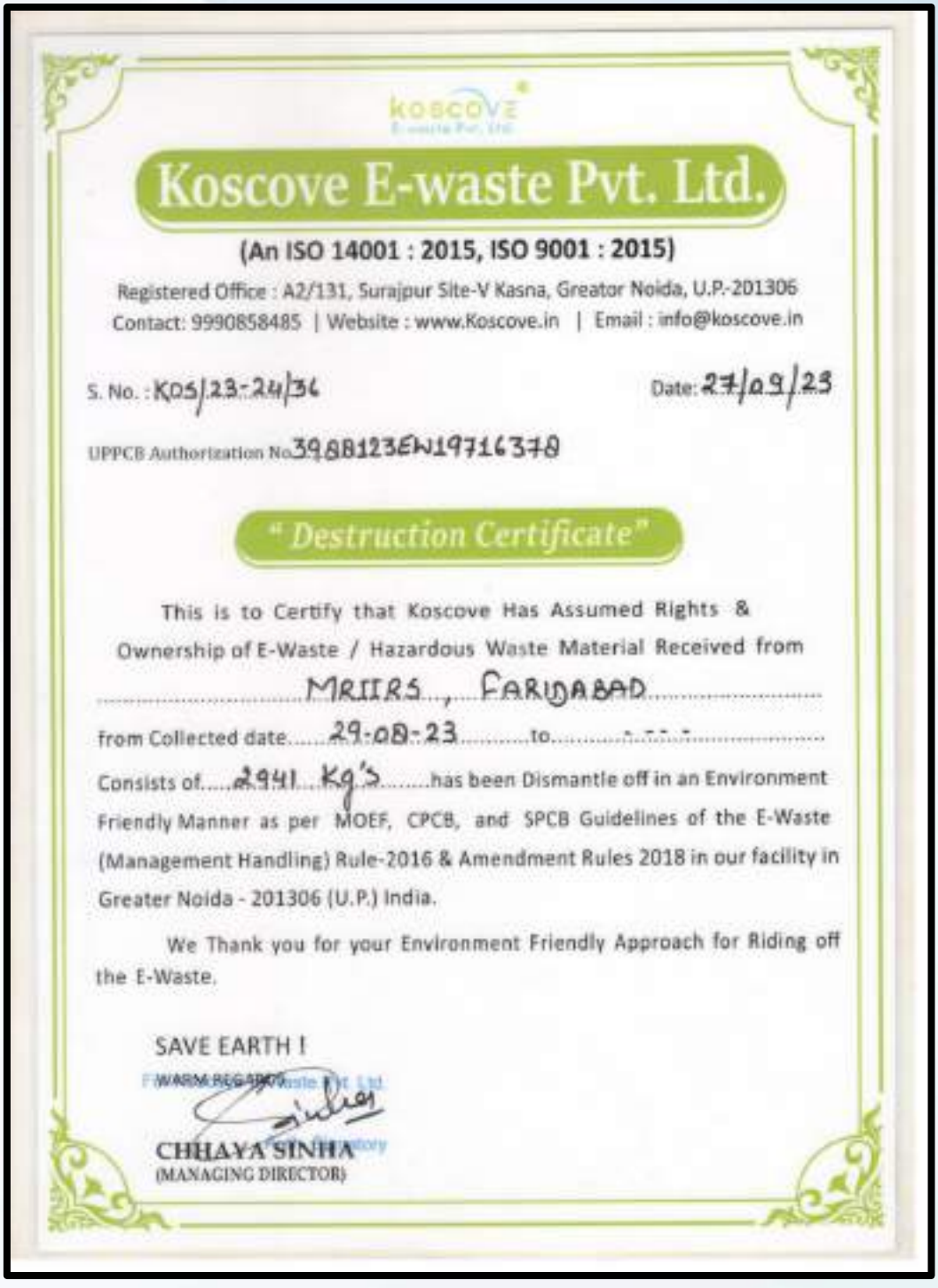
Manav Rachna International Institute of Research and Studies (MRIIRS) has implemented various tactics and programs to ensure the efficient utilization of existing resources. This includes the establishment of a policy for the safe disposal of e-waste to handle hazardous materials appropriately. Additionally, the institution is committed to a zero-plastic policy and encourages its staff and students to collect used plastic items at their homes and deposit them at the University for Proper Disposal.

2. DISPOSAL OF E-WASTE

Manav Rachna International Institute of Research and Studies (MRIIRS) has established a significant tie-up with Koscove E-waste Pvt. Ltd. to address the pressing global concern of electronic waste, aligning with Sustainable Development Goal 12 (SDG 12) - Responsible Consumption and Production. This collaboration exemplifies MRIIRS's dedication to promoting sustainable practices and reducing the environmental impact of e-waste.

Through this partnership, MRIIRS ensures that all electronic waste generated on its campus is collected, processed, and recycled in an environmentally responsible manner. The institution not only disposes of e-waste safely but also actively contributes to resource conservation by recycling valuable materials from electronic devices. By addressing e-waste in a sustainable manner, MRIIRS makes a tangible contribution to SDG 12's objectives of responsible consumption and production, ultimately reducing environmental pollution and promoting a more sustainable and circular economy. This initiative at MRIIRS serves as a

model for other educational institutions and organizations seeking to make a positive impact on SDG 12 by responsibly managing electronic waste.



KOSCOVE
E-waste Pvt. Ltd.

Koscove E-waste Pvt. Ltd.

(An ISO 14001 : 2015, ISO 9001 : 2015)

Registered Office : A2/131, Surajpur Site-V Kasna, Greator Noida, U.P.-201306
Contact: 9990858485 | Website : www.Koscove.in | Email : info@koscove.in

S. No. : KOS/23-24/36 Date: 27/09/23

UPPCB Authorization No. 39AB123EW19716378

" Destruction Certificate"

This is to Certify that Koscove Has Assumed Rights & Ownership of E-Waste / Hazardous Waste Material Received from MRIIRS, FARIDABAD from Collected date 29-08-23 to ..... Consists of 2941 Kg's has been Dismantle off in an Environment Friendly Manner as per MOEF, CPCB, and SPCB Guidelines of the E-Waste (Management Handling) Rule-2016 & Amendment Rules 2018 in our facility in Greater Noida - 201306 (U.P.) India.

We Thank you for your Environment Friendly Approach for Riding off the E-Waste.

SAVE EARTH !

WARM REGARDS

CHHAYA SINHA
(MANAGING DIRECTOR)

3. AWARENESS SESSIONS IN MRIIRS ON RESPONSIBLE CONSUMPTION AND PRODUCTION

- **Awareness Session on Minimization of Plastic Disposable**

To spread awareness amongst the students and faculty members about Responsible Consumption and Production (Sustainable Development Goal- SDG12) and minimize the usage of Plastic Disposables in food outlets around the campus an awareness session on minimization of plastic Disposables was organised by the School of Culinary and Hotel Management, ManavRachna International Institute of Research and Studies (MRIIRS) on August 25. Student champions have visited all the food outlets and restaurants inside the campus and imparted awareness among them about the minimising the usage of plastic disposable for food dispensing, also the students have pasted the slogans and visuals aiming at reducing usage of plastic disposables outside the seating areas of these food joints.

- **Awareness Program- Rethink, Reduce, Recycle: Empowering Communities for Change:**

An awareness programme on reduction of energy consumption through responsible waste management, and recycling habits, was organized by MRIIRS on 26th September, 2023.The Guests for this Awareness program were Mr.Sandeep Muni, CEO andMs. Luce Louise, Manager, of the School of Recycle: Wise Village respectively. During the program, Ms. Luce Louise mentioned that she has made significant strides in reducing waste, promoting sustainability, and engaging the community. However, challenges remain, necessitating ongoing efforts to improve recycling practices and community involvement. She mentioned that with continued dedication and strategic planning, we can achieve even greater success in the future. Mr.Sandeep Muni, CEO of Wise Village talked about various programs he organized in schools about Recycling and Reducing waste, the primary objective of these programs is to educate students about responsible waste management, promote recycling habits, and contribute to a sustainable future. Mr. Muni also talked about various activities such as Act Accidental Wrappers, Recycle Musical Chair, Tug of War, Recycle Raja Rani Chor Police, and Recycle ChidiyaUddi, which helped to play a pivotal role in instilling environmental consciousness among students, fostering sustainable behaviours, and reducing the environmental footprint of educational institutions.Mr. Muni gave various challenges to a Volunteer, Gurjot, he taught the specific significance of the activity. Mr. Muni also invited 8 volunteers, to be a part of the activity called Recycle Musical Chair. Mr. Muni talked about how recycling is an essential practice that addresses a range of environmental, economic, and social challenges. It helps conserve resources, reduce energy consumption, minimize pollution, and promote a more sustainable and resilient future for our planet. Individuals, businesses, and governments all play crucial roles in supporting recycling efforts and achieving these benefits.


Awareness Program
Rethink, Reduce, Recycle: Empowering communities for change
September 26, 2023
10:00 a.m. onwards
Venue: AT 19, A-Block, SET
Mr. Samdeep Muni - CEO
Ms. Luce Louise - Manager
School of Recycle: Wise Village
&
Molecular Biosciences Research Cluster
Department of Biotechnology
School of Engineering and Technology
Manav Rachna International Institute of Research and Studies


School Of Recycle
GPS Map Camera
Faridabad,HR,India
Sector 43, Faridabad, 121004, HR, India
Lat 28.451013, Long 77.283938
09/26/2023 11:34 AM GMT+05:30
Note : Captured by GPS Map Camera

- **Awareness Programme on "Guidelines for Disposal of e-waste"**

Internal Quality Assurance cell (IQAC), MRIIRS organized session on Awareness Programme on "Guidelines for Disposal of e-waste" on October 7,2023. The objective of this programme was to raise the awareness among the participants about the responsible disposal of electronic waste to reduce the environmental and health consequences due to improper e-waste management. The session also emphasized on the procedure adopted by the university to dispose of the e-waste.

- **Pledge on 'Say No to Plastics':**

The Internal Quality Assurance Cell, ManavRachna International Institute of Research and Studies (MRIIRS) organized a pledge on "Say No to Plastics", addressing SDG 12 – Responsible Consumption and Production on August 18, 2023. The aim of taking the pledge was to make students aware the detrimental effects of application of plastics to the society and well – beings.

- **Pledge on low Carbon Usage**

ManavRachna International Institute of Research and Studies, Organized Awareness Programme on "Pledge on low Carbon Usage on 31st August 2023. During the pledge, students were briefed about the benefits of the reduction of carbon usage. Renewable energy is an endless resource that never runs out. It will ultimately run out, unlike fossil fuels, which we have a finite supply of on Earth.

- **Radio Program on Responsible consumption of water**

Radio ManavRachna 107.8 FM created history in **Asia and India Book of Records** with **150 hours Non-stop Live Radio Program from June 29 to July 5, 2023 on UN's Sustainability Development Goals (https://indiabookofrecords.in/a-marathon-radio-broadcast/, https://www.asiabookofrecords.com/longest-non-stop-live-radio-show-on-sustainability/).** Following expert talks to educate local community on Water Management were delivered during this non-stop live radio program organized at MRIIRS. The details of these talks are as follows:

I. Ways of Water Conservation and its Need Resource Person: Dr. Arunangshu Mukherjee, Director MRCAWTM
II. Hygiene, Sanitation and Waste Management Resource Person: Mr. AshishJian, Founder and Director, Indian Pollution Control Association, Faridabad
III. Child Hygiene and Sanitation Resource Person: Ms. Varsha Daftuer, PRT Hindi, Manav Rachna Internationa School, Sec-14, Faridabad
IV. Concious Water Usage Resource Person: Ms.SnehaRai, Deputy Director MRCAWTM

4. MRIIRS POLICIES ON RESPONSIBLE CONSUMPTION AND PRODUCTION

- **Policy forE-waste management**

MRIIRS is committed to promoting sustainable consumption and production patterns as part of our contribution towards SDG 12. E-waste, a significant environmental concern, requires responsible management to minimize its adverse impacts. MRIIRS has a policy on E-Waste Management which comes under IT usage and maintenance policy. There is a standard operating procedure for the proper disposal of e-waste. This policy outlines our commitment to handling e-waste in an environmentally friendly and safe manner. To see the detailed policy **click here**

- **Policy on sustainable procurement**

To promote the business/products that help to eliminate/reduce carbon emissions and can be recycled/disposed-off with minimal adverse effects on environment and health, MRIIRS has a sustainable procurement policy. The policy applies to all the members of the MRIIRS community including all the staff, faculty members, students, researchers and others. All

products/services purchased on behalf of MRIIRS are under the scope of this policy. To see the detailed policy **click here**

5. PROMINENT RESEARCH PUBLICATIONS ADDRESSING SDG 12

The prominent research publications addressing SDG 12 are as listed below:

An explanatory study on defects in plastic moldingparts caused by machine parameters in injection molding process - https://doi.org/10.1016/j.matpr.2022.12.070)

In the InjectionMolding process, the output product quality is dependence on various attributes such as product geometry, the material used for manufacturing, and the machining parameters (process parameters). Here it is an exaggeration to say that theparameters associated with the molding process play a crucial role in the production of high-quality products. In the present study, the causal approach is used to recognize theproblems associated with the injection molding components to cause defects such as shrinkage, flow lines, sink marks, burn marks, short shots, warpage, etc. This study aimsto reveal the basic understanding of the injection molding process and the importance ofmachining parameters in moldings. This study will brief the type of defects and theircausing machining parameters to the industrial practitioners/researchers. In addition,the study will suggest the parameters to set out on the machine so that the final productwill be free from any defect.

The Design and Development of AdvancedBraking System with Microcontroller **- https://doi.org/10.1149/10701.2883ecst**

The Present embedded vehicle braking system is designed to offer the braking efforts through physical force operation by the operator. The sudden emergence of a blockade while driving is one of the most prevalent sources of Indian vehicle accidents. Most of the road accidents have been reported owing to delay in driver response to push the brake pedal and also due to wrongly calculating the distance and speed of the vehicle coming from the front. In addition, the vehicle braking responses ranges from individual to individual in a

panic situation. To combat with the existing braking issues of the present vehicle, a unique braking mechanism has been introduced to reduce the reaction time of the driver and stop the vehicle in case no braking efforts are being applied by the driver. The ultrasonic sensor technology has been employed for assessing the distance between the vehicle and the obstruction. Depending on the detecting pulse information, a microcontroller is used to regulate the speed of the vehicle, causing the driver to press the brake pedal and apply tremendous force to the brakes of the vehicle for safety reasons. For enhancing vehicle safety and performance, the employment of computers, also known as ECUs (electronic control units), is a significant step forward in this direction. This paper illustrates the design, development and was tested for sensor response and braking distance on different terrains. The observed and theoretical values are within the suggested safety limits.

6. REGULAR SKILL SET ENHANCEMENT AT MRIIRS- CERTIFICATIONS EARNED BY STUDENTS AND FACULTY MEMBERS

Skill set development and enhancement play a pivotal role in institutional development. The university is deeply committed to this cause and encourages both faculty and students to continuously refine their skills, particularly in alignment with recent and emerging technologies in the field of Responsible Consumption and Production. Additionally, the university fosters an environment of learning and growth by encouraging faculty members and students to actively participate in Seminars, Conferences, Workshops, Training Programs, and Short Term Courses, both within and outside the university. These opportunities not only enrich their knowledge but also empower them to remain at the forefront of advancements in their respective fields. As a testament to this commitment, numerous certifications have been earned by faculty members and students, underscoring their expertise in areas relevant to the United Nations Sustainable Development Goal 12 (SDG 12) and its objectives. These certifications reflect the university's dedication to equipping its academic community with the knowledge and skills necessary to drive progress in Responsible Consumption and Production.

Recent Developments in Renewable energy

AMITY UNIVERSITY

Amity School of Engineering and Technology, Noida
Department of Mechanical Engineering

Ref: PDP/RDFE/June- 2022/140

CERTIFICATE OF PARTICIPATION

presented to

Dr. Jimmy Mehta

From

(Manav Rachna International Institute of Research and Studies Faridabad)

For attending *One Week (Online) Professional Development Programme* on **"Recent Developments in Renewable Energy"** from 20th to 24th June 2022 at Department of Mechanical Engineering, Amity School of Engineering and Technology, Noida (India).

Dr. Sanjeev Kumar Sharma
Coordinator

Prof. (Dr.) Basant Singh Sikarwar
Head of Department (Mechanical Engineering)

Prof. (Dr.) Manoj K Pandey
Joint Head ASET

Plastic Waste Management

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

VIVEK BISHT

for successfully completing the course

Plastic Waste Management

with a consolidated score of 58 %

Online Assignments	23.29/25	Proctored Exam	34.5/75

Total number of candidates certified in this course: 3166

Aug-Oct 2022
(8 week course)

Prof. Debjani Chakraborty
Coordinator NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL22CE72S44771056

To validate the certificate

No. of credits recommended: 2 or 3

Plastic Waste Management

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

BHUSHAN

for successfully completing the course

Plastic Waste Management

with a consolidated score of 67 %

Online Assignments	23.42/25	Proctored Exam	44/75

Total number of candidates certified in this course: 3166

Aug-Oct 2022

(8 week course)

Prof. Debjani Chakraborty

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL22CE72544770746 To validate the certificate No. of credits recommended: 2 or 3

Plastic Waste Management

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

VEDANT KUMAR SINGH

for successfully completing the course

Plastic Waste Management

with a consolidated score of 71 %

Online Assignments	23.58/25	Proctored Exam	47.39/75

Total number of candidates certified in this course: 3166

Aug-Oct 2022

(8 week course)

Prof. Debjani Chakraborty

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL22CE72534761432 To validate the certificate No. of credits recommended: 2 or 3

MANAV RACHNA
vidyanatarlishq

A++ NAAC

Manav Rachna International Institute of Research and Studies

(Deemed to be University under section 3 of the UGC Act,1956)

Manav Rachna Campus Rd, Gadakhor Basti Village, Sector 43, Faridabad, Haryana 121004