



**Manav Rachna International Institute  
of Research and Studies**

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

**13** CLIMATE  
ACTION



**TAKE URGENT ACTION  
TO COMBAT CLIMATE  
CHANGE AND ITS IMPACTS**

# PROGRESS REPORT

**2022-23**

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## 1. PREAMBLE:

Dedication for society and environmental sustainability are integrated into the mission and vision of the Manav Rachna International Institute of Research & Studies in tune with the ideology of the founder. Manav Rachna seeks to empower youth to be at the forefront of this mission of environmental protection. Army of Green warriors is being raised in Manav Rachna who would be spearheading this movement to spread the message of saving environment and attaining carbon neutrality to masses. In order to make our campus carbon-neutral, green and to make students environmentally conscious citizen, we need to initiate the change from ourselves. Youth is the torch bearer to make changes in society. We, at ManavRachna believe in youth power and wish to use it in our effort to make the mother earth greener and sustainable. We need to change the mode of interaction at all levels – home, university, workplace and so on. To increase the outreach for creating an environment that fosters environmental sustainability, Manav Rachna envisages engagement of youth as GREEN WARRIORS. This is also an attempt to divert youth in productive, creative problem solving to make them true leaders of future India. This endeavor aims to prepare the youth of the nation to develop into leaders who will contribute in bringing progress to society through such actions and initiatives that promote Sustainability in the area of their chosen career.

## 2. MANAVRACHNA RESEARCH CLUSTER FOR ENVIRONMENTAL SUSTAINABILITY

Fostering Environmental Sustainability across all Stakeholders is one of the best practices implemented in MRIIRS. Manav Rachna Research Cluster for Environmental Sustainability has an important role in the integration of sustainable practices in academics and research. This cluster forms a pool of faculty members, scholars and professionals from the field of environmental chemistry, hydrology, hydrogeology, hydrochemistry, civil engineering, mathematics, eco-hydrology and environment management. Under this cluster following units have been established:

- I. Manav Rachna Centre for Advance Water Technology & Management (MRCAWTM)
- II. Sustainable Chemistry Centre (SCC)

## 3. MRIIRS COMMITMENT TOWARDS NET ZERO

ManavRachna International Institute of Research and Studies has committed in line with the goal of our Prime Minister Hon'bleNarendraModiJi to achieve net zero carbon by 2045 from all greenhouse gas emissions sources, as defined by the World Resources Institute Greenhouse Gas Protocol (GHG Protocol). This commitment is supported by a target to reduce gross Scope 1 and 2 emissions by 60-65% by 2035.



- **Following are the broad plan/strategy statements of MRIIRS for Enhanced Carbon Reduction in the coming years:**

- Progressive reduction in the amount of energy sourced from HSEB (Haryana State Electricity Board) by increasing installation of solar energy panels.
- DG sets to be converted/replaced with NG/Green Hydrogen in phased manner
- Strategize to reduce the congestion at entry and exit points to the campus
- Reduction in food waste generation
- Reducing paper consumption by technological interventions
- Generated biogas to be used in kitchen
- Re-evaluation of GHG emission inventory
- Exploring options for increasing the renewable sources of energy (solar etc) at campus
- Promoting pool transport amongst the stakeholders
- Promotion and procurement of biodegradable/recyclable products/materials
- Increase in natural light through technological intervention.
- Training of stakeholders for using eco-friendly products and reducing plastic waste generation.
- Promoting donation/reuse of unused items frequently.
- Sensitizing stakeholders for using local and in-season fruits and vegetables.
- Organizing health check-up for faculty and staff members. Encouraging faculty and staff members to register for organ and tissue donation.
- Organizing old book donation drives in campus and sending these to under privileged children of villages in adjoining areas.
- Organizing sensitising sessions to be vocal for local.
- Extending support in organizing campaigns for collection of relief material for combating disasters the country experiences from time to time.

**MRIIRS Report on carbon footprints for the year 2022-23: [Click to Read](#)**

- **CERTIFIED ENVIRONMENT MANAGEMENT SYSTEM AT MRIIRS**

Manav Rachna International Institute of Research and Studies (MRIIRS) demonstrates a steadfast commitment to environmental responsibility through its rigorous environmental management system. The institution places a strong emphasis on sustainability, and as part of its dedication to this cause, it regularly undergoes surveillance audits for its Environment Management System (EMS). The EMS of MRIIRS adheres to the ISO 14001:2015 standard, which is a globally recognized benchmark for environmental management practices. This system has been ISO 14001:2015 certified by KVQA Certification Services Private Limited since July 4, 2022.



The ISO 14001:2015 certification reflects MRIIRS's proactive efforts to minimize its environmental impact, ensure compliance with relevant environmental regulations, and continually improve its environmental performance. These regular surveillance audits serve as a testament to the institution's commitment to sustainable practices and its ongoing dedication to reducing its carbon footprint. MRIIRS stands as a shining example of an educational institution that not only imparts knowledge but also actively implements and upholds eco-friendly principles in its day-to-day operations.

### ISO 14001:2015 certification



## 4. PROMINENT WORKSHOPS/ SEMINARS/ TRAINING PROGRAMMES ORGANIZED FOR STUDENTS AND FACULTY MEMBERS

### **Rethink, Reduce, Recycle: Empowering Communities for Change:**

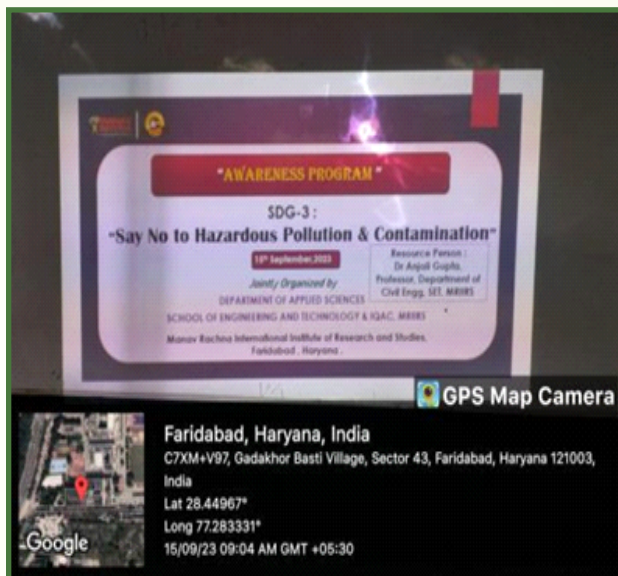
To spread awareness amongst students and faculty members of MRIIRS, an awareness programme on reduction of energy consumption through responsible waste management, and recycling habits, was organized by MRIIRS on 26th September, 2023. The Guests for this Awareness program were Mr. Sandeep Muni, CEO and Ms. Luce Louise, Manager, of the School of Recycle: Wise Village respectively. Mr. Sandeep Muni is a painter, musician, and independent researcher in the Environmental Engineering and Farming sectors. He is the founder and CEO of the School of Recycle (Conceptual School) and Wise Village Organisation. He has designed a comprehensive curriculum for educational institutes on Waste Management. He has been conducting certifications programs and workshops since 2021 at more than 40+ schools and several colleges in person on topics such as 'Basics of waste management' to 'Bio-Medical Waste Management'. Ms. Luce Louise is a professional Service Manager based in Paris. Most of her career is focused on IT management in different positions (trainer, consultant, Project Director.). She has served numerous international projects and organizations in different countries (Europe, Asia, and America). After a long and busy professional career, she has decided to resign and travel to give a better sense to her life, helping people in need, and being part of organizations as manager at Wise Village and project manager for School of Recycle. The Volunteers for the Awareness Program were Kritik Verma, Arpan Saroop, Vivek, Gurjot, Vishal Kumar, and Bishesh Kumar Pattnayak.





- **Awareness Programme on "Say No to Hazardous Pollution and Contamination"**

Department of Applied Sciences, School of Engineering, MRIIRS, Fbd. in association with IQAC, MRIIRS organized an Awareness Programme on " Say No to Hazardous Pollution and Contamination"held on 15th September 2023.The objective of programme was to develop a keen understanding among students on different kinds of hazardous waste materials and its adverse effects.The resource person for the event was Dr. Anjali Gupta, Professor, Department of Civil Engineering, MRIIRS, Fbd. Students were enlightened about hazardous waste that is improperly managed and poses a serious threat to human health and the environment. A clean environment ensures the elimination of harmful substances that can cause diseases and ecological imbalance.





- **Pledge on low Carbon Usage**

Manav Rachna 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. Dr. Rajeev Kumar the coordinator of the event started the Awareness Programme by taking pledge with students on low Carbon Usage. Further Dr. Rajeev Kumar presented the details of low



Carbon Usage. Low carbon only denotes a reduction in carbon dioxide (CO<sub>2</sub>). One of the main greenhouse gases responsible for the global warming is carbon dioxide. Numerous other sorts of activities, including deforestation, burning fossil fuels, and volcanic eruptions, emit it. Therefore, by reducing our CO<sub>2</sub> emissions, we are being more considerate of the environment. Wind, solar, hydroelectricity, and nuclear energy are the four primary categories of low-carbon energy. The first three are environmentally friendly because they use renewable resources like the sun and wind to generate electricity. 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. The Pledge was taken by 51 students on low Carbon Usage.



- **Pledge on Renewable Energy**

To spread awareness amongst the students and faculty members about Affordable and Clean Energy and promote a commitment to their integration into our lives, a pledge taking ceremony on Renewable Energy was organised by Internal Quality Assurance Cell, ManavRachna International Institute of Research and Studies (MRIIRS) on August 22 and 23, 2023. Students and faculty members at MRIIRS took pledge that they are going to use renewable energy sources and reduce dependence on the non-renewable energy resources

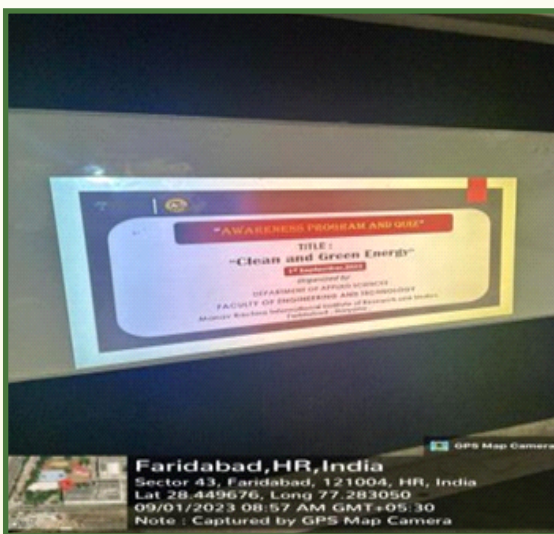
To spread awareness amongst the students and faculty members about Affordable and Clean Energy (Sustainable Development Goal- SDG7) and promote a commitment to their integration into our lives, a pledge taking ceremony on Renewable Energy was organised by Internal Quality Assurance Cell, ManavRachna International Institute of Research and Studies (MRIIRS) on August 22 and 23, 2023. Students and faculty members at MRIIRS took pledge that they are going to use renewable energy sources and reduce dependence on the non-renewable energy resources. The session was aimed to raise awareness about renewable energy sources. The session was organized in collaboration with various departments within MRIIRS. During the session, following pledge was taken by the students and faculty members: **"I wholeheartedly pledge to prioritize renewable energy in my life. I will diligently strive to reduce my reliance on fossil fuels by embracing solar and wind power, advocating for sustainable energy policies, and inspiring those around me to join the movement towards a greener and more sustainable future."**





- **Quiz Competition on "Clean and Green Environment"**

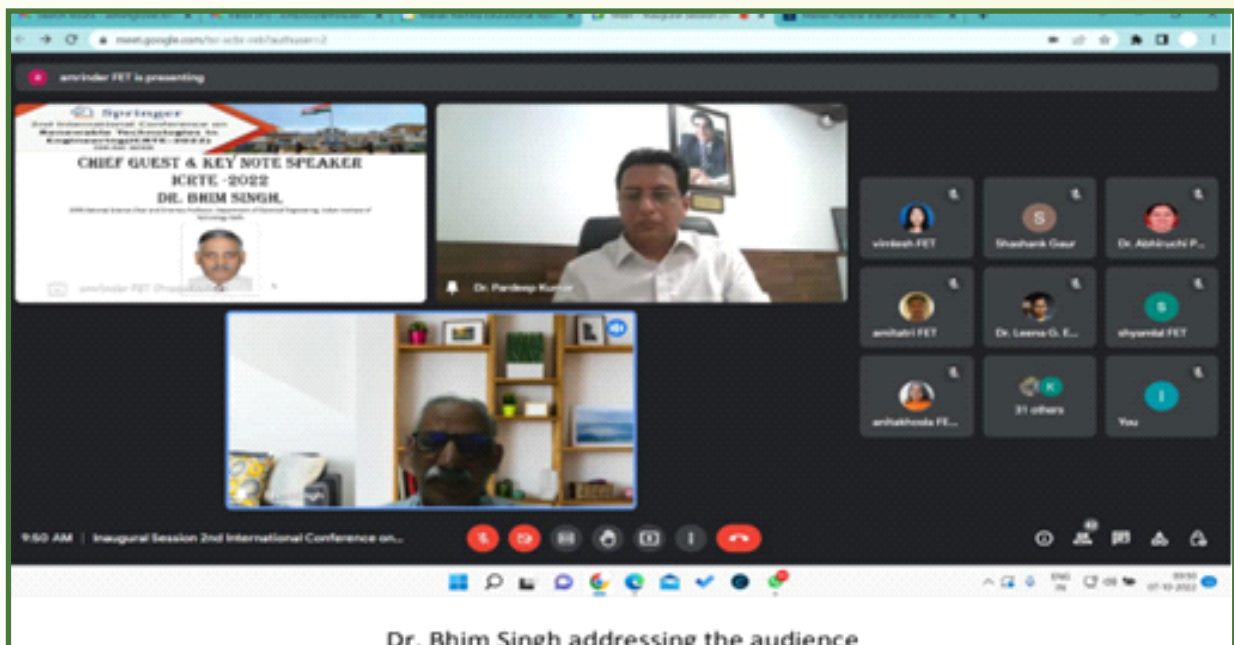
A clean environment ensures the elimination of harmful substances that can cause diseases and ecological imbalance. Green environment, on the other hand, play a significant role in absorbing carbon dioxide, reducing heat and providing habitats for various species. To promote appreciable knowledge among budding professionals regarding reducing carbon usage and increasing dependence on clean and affordable energy, a Quiz competition was organized at MRIIRS on September 01, 2023. The objective of " Quiz Competition" was to develop a keen understanding among students on "Clean and Green Environment". A clean environment ensures the elimination of harmful substances that can cause diseases and ecological imbalance. Green environment, on the other hand, play a significant role in absorbing carbon dioxide, reducing heat and providing habitats for various species. It was aimed to promote appreciable knowledge among budding professionals through Quiz competition. B.Tech first year students from Computer Science Engineering participated in Quiz competition. Students have been briefed about the importance of above topic before conduction of quiz. Total 40 students participated in Quiz. There were ten teams in total comprising of four students in each. The competition was conducted into six rounds having question-answer sessions and multiple choice questions round. All students participated in the competition with a lot of excitement and enthusiasm.



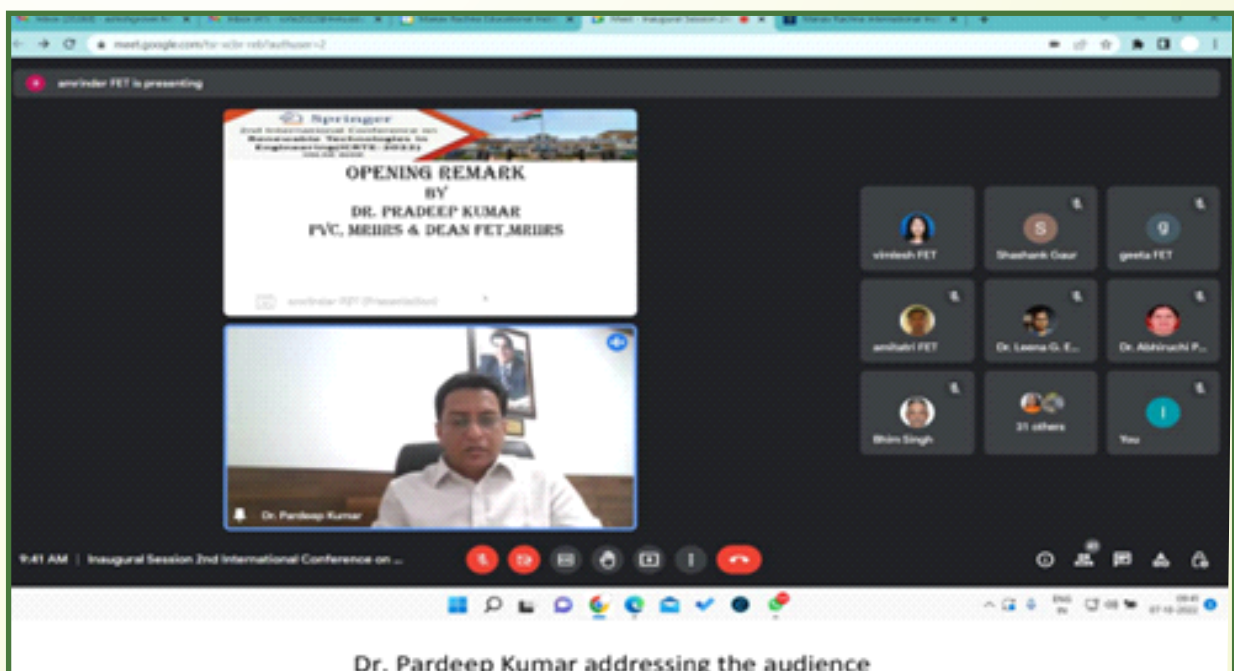


- **International Conference on "Renewable Technologies in Engineering**

Department of Electrical and Electronics Engineering, and Department of Electronics and Communication Engineering, FET, MRIIRS organized the prestigious International Conference on 'Renewable Technologies in Engineering (ICRTE 2022)' in association with Springer on 7 – 8 October 2022. This was the second International Conference organized in collaboration with Springer. The inaugural session witnessed the gracious presence of Chief Guest, Chair Professor CEA, IIT Delhi, Dr. Bhim Singh; key note speaker, Dr. Mohan Kolhe from the University of Agder, Norway; Dr. Dipankar Deb, Professor, IITRAM; and Pro Vice-Chancellor & Dean, FET Dr. Pradeep Kumar.



Dr. Bhim Singh addressing the audience



Dr. Pradeep Kumar addressing the audience

- **Energy Literacy Training on Energy Swaraj Portal-PAL (Portal for Action and Learning)**

Students Welfare, MRIIRS organised Energy Literacy Training on Energy Swaraj Portal- PAL (Portal for Action and Learning) supported by AICTE and NITI Aayog, which aims at disseminating awareness and encouraging masses to conserve the Environment and take steps towards Climate Correction. 927 registrations were done from MRIIRS, out of which 527 Students and Faculty Members completed the Energy Literacy Training. With the achieved target, Students Welfare became eligible for World Record Event of Global Climate Clock Assembly on the occasion of Mother Earth Day at IGI Stadium.

**Student certification on Energy Literacy Training on Energy Swaraj Portal-PAL (Portal for Action and Learning)**





- **Mega Tree Plantation Drive in Adopted Village:**

Tree plantation drives play a crucial role in energy conservation and the promotion of clean and green energy by reducing energy consumption, sequestering carbon, and contributing to a more sustainable and environmentally friendly community and world. MRIIRS organized a Mega Tree plantation drive at 10 adopted villages: Mohna, Maujpur, Hirapur, Nariyala, PanheraKhurd, Chainsa, Atali, Mothuka, Dayalpur, and Gadkheda in a single day (August 20, 2021). More than 3000 trees were distributed



**Tree plantation drive**



- **Energy Harvesting & Storage Materials & Devices**

To spread awareness regarding Energy Harvesting amongst students and faculty members, Department of Electrical & Electronics Engineering and Electronics & Communication Engineering, ManavRachna International Institute of Research and Studies, Faridabad organized a Short Term Course (STC) on '**Energy Harvesting & Storage Materials & Devices**' in Collaboration with NITTTR Chandigarh . During the STC, sessions were conducted on the topics including recent advancement in energy harvesting solutions, design aspects of solar cell, effectiveness of energy harvesting technologies in different applications, various funding agencies, sustainable power source and efficient battery solution.



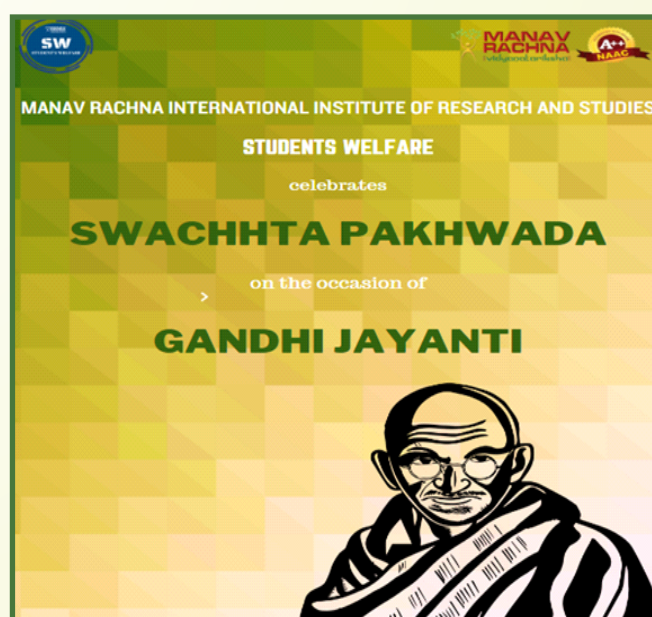
- **Rally on Say no to Plastic**

The Department of English, SMeH organized a rally on 'Say No to Plastic' on 28 September, 2023 in ManavRachna Campus. 23 students from B.A.(H) English 3rd semester & 5th semester carried the placards with messages on 'safe' environment and conducted a rally throughout the Campus. They were accompanied by Dr. TriptiTyagi, Assistant Professor. The students raised slogans "Say No to Plastics" and "Refuse Reuse –Recycle Plastic" with an echo of determination and motive to reduce the use of plastic thereby reducing the harmful impact of such materials on the climate of the Earth. Students and faculty members pledged that they would use a minimal amount of plastic to sustain the environment.



- **Observance of Swachhta Pakhwada**

Swachhta Pakhwada is a fortnight-long cleanliness campaign in India. Government departments, institutions, and communities participate in various activities to promote cleanliness, sanitation, and hygiene. It aims to foster a culture of cleanliness and inspire citizens to contribute to a cleaner and healthier environment.





- **World Environment Day**

World Environment Day is an occasion to promote awareness concerning Environmental issues and promote actions for Preservation and Conservation of Environment. Working in the same direction, Students Welfare, MRIIRS organised events on World Environment Day to engage Students and Faculty Members in meaningful conversation revolving around Mother Earth. Students Welfare took an initiative to ensure Students and Faculty Members pledge to consume only Raw Food for a day. The step was taken to disseminate information about the energy and resources that are used for manufacturing, processing and transportation of processed food. This initiative ensured a more conscious and mindful approach towards food consumption.



- **Three Days Online Workshop-Environmental Consciousness: Transforming Educational Institutions into "Green Campuses"**

Manav Rachna International Institute of Research and Studies, under Manav Rachna Life Skills Program, organised Three Days Online Workshop on Environmental Consciousness: Transforming Educational Institutions into "Green Campuses" (Haryana Region) under the aegis of Paryavaran Sanrakshan Gavividhi from 10.03.23-12.03.23. 92 students from all over haryana region participated in the workshop. During the workshop several sessions were conducted focusing on the Environmental Consciousness. There were sessions on team building session, Water Management was conducted. During these sessions students were encouraged to indulge in activities for the preservation of Environment.



Aishwarya Mahajan is presenting

Press Esc to exit full screen

## Paryavaran Sanrakshan Gatividhi

### #Ek\_ped\_desh\_ke\_naam

PLANTATION

- 1. To save the environment and to beautify our life
- 2. Provide plantation activities at schools and educational institutions
- 3. Promote local trees and growing varieties

<http://paryavarsanrakshan.org/>

18:40 | jtn-gafw-vpw

Participants: Nandini Dixit, Tannu Attri, vaibhav bhardwaj, Chetna Aggarwal..., Seema Rana, Amisha, 45 others, You

Aishwarya Mahajan is presenting

Press Esc to exit full screen

Dr. Apurva Shukla

19:29 | SIP Workshop Day 1

Participants: Raunak Soni, AYS WORKS, Thungdeno B Kikon, Seema Rana, Anam Fatima, vaibhav bhardwaj, 53 others, You



- **World's Largest Global Climate Clock Assembly and Display Event**

Manav Rachna International Institute of Research and Studies, Students Welfare participated in the World's Largest Global Climate Clock Assembly and Display Event held at IGI Stadium. The Event was a result of initiative by Energy Swaraj Foundation in association with Atal Innovation Mission, NITI Aayog and AICTE. The University became eligible for the event by completing more than 900 Registrations and more than 500 Certifications in Energy Literacy Training on Energy Swaraj Portal. The Event aimed at disseminating awareness regarding Climate Change and mitigating Climate Change Issues. Dr. Chetan Singh Solanki, Founder, Energy Swaraj Foundation addressed the participants and encouraged everyone to spread the word for taking action against the rising Global Temperature.





- **Visit of Solar Man of India to Manav Rachna International Institute of Research and Studies**

Prof. (Dr.) Chetan Singh Solanki, Founder, Energy Swaraj Foundation visited ManavRachna International Institute of Research and Studies on 27.04.23. Dr. Sanjay Srivastava, Vice Chancellor, MRIIRS welcomed Dr. Solanki and appreciated his initiative of making masses Energy Literate. Dr. Solanki addressed the students during the Innovation Summit' 23 organised by the Faculty of Dental Sciences. He shared about his initiative to fight Climate Change with the help of Solar Energy and enlightened the students how Climate Change has already started.

He emphasized on the Climate Change and the repercussions it will have on the future generations. He also encouraged Students to take action on their individual levels with the motive to promote Energy Conservation. During his visit, students also got an insight into the Solar Yatra bus.

Dr. Solanki discussed the possibilities in which the University can harness and utilize Solar Energy for supporting the initiative of Energy Conservation. He also mentioned the "Ek Kaksha Solar Ki" initiative and Credit Climate Change in his conversation. During his meeting with Sh. R.K Arora, Registrar, MRIIRS, Dr. Solanki shared about the strategies that can be adopted by the University to promote Environmental Sustainability.



- **Green Ghar Plastic Drive**

MRIIRS organizes Green Ghar Plastic Drive with its primary goal of collecting recyclable plastic materials from our community, which will be utilized to develop eco-friendly benches for public spaces in our neighbourhood. By participating in this drive, you not only contribute to reducing plastic waste but also actively support the creation of sustainable seating areas for everyone to enjoy.



The poster features a green background with scattered illustrations of plastic waste such as bottles, cans, and a cardboard box. At the top, there is a white banner with logos for MANAV RACHNA (vidyayatariksha), Ministry of Education, Government of India, 75th Anniversary (आज़ादी का अमृत महोत्सव), LIFE (Lifestyle for Environment), W, G<sup>2</sup>, and DR. O P BHALLA Foundation. The central text reads 'GREEN GHAR PLASTIC COLLECTION DRIVE' in large, bold, white letters with a black outline. Below this, a white rounded rectangle contains the text 'Monthly Collection Drive'. At the bottom, a white bench graphic has two horizontal bars containing the text '28th September, 2023 Time : 9am-5pm' and 'Location - B Block Foundation Office'.



- **Azadi Ka Amrit Mohatsav**

Manav Rachna International Institute of Research and Studies organized a glorious ceremony to spotlight the sacrifices made by the Freedom fighters, Cultural Strength and Unity in the Diversity of India. To honour the historical event of the day, the National Flag was hoisted at ManavRachnaCampus. The flag hoisting symbolizes the strength of India's Independence from any colonial domination. The Flag hoisting was followed by the National Anthem. Everyone present on the lawn stood up for the National Anthem to symbolize and evoke the national heritage and traditions of the country India.





- **Raddi -Waste Paper Collection Drive**

Raddi is a recycling initiative launched MRIIRS and Dr. O.P. Bhalla Foundation in collaboration with Rotaract Club Faridabad Aravalli. The team collects paper and cardboard from the ManavRachna Campus and recycle them. The waste material is converted into new notebooks and stationary items that are distributed among the underprivileged children. The initiative was launched in 2022.



- **University Level Competition - NEYP 2024**

Students Welfare, MRIIRS in collaboration with and the Eco Society "Idhika" organized a University Level "National Environment Youth Parliament". The National Environment Youth Parliament 2024- "Nurturing Environment leaders" is a collaborative effort by ParyavaranSanrakshanGatividhi (PSG) and Students for Development (SFD), involving Universities Nationwide. Its primary goal is to raise awareness among young people about the pressing Environmental challenges that pose a significant threat to human safety and well-being.

During this competition, participants from various Departments of the University were grouped for the preliminary round, which involved discussion on the topic "Alternate Sources of Energy and India's Energy Landscape." The discussion yielded valuable insights, with students presenting diverse viewpoints and ideas. Dr. GurjeetKaurChawla concluded the event with a Vote of Thanks, encouraging students to actively engage in environmental activities and contribute to addressing critical issues.





- **World Nature Conservation Day**

MRIIR celebrates the World Nature Conservation Day, on July 28th annually. It is a global initiative dedicated to raising awareness about the importance of protecting our natural environment. On this day, people around the world come together to celebrate and promote conservation efforts. Activities include tree planting, wildlife protection campaigns, and educational programs. It serves as a reminder of our responsibility to preserve Earth's biodiversity and safeguard our planet for future generations, fostering a deeper connection between humanity and nature.



- **Awareness Program on Managing Sustainable Commuting**

The Awareness Program on Managing Sustainable Commuting was held on 6 September 2023 for MBA First year students of Batch 2023-25. The resource person for the session was Dr. Nitin Kumar Waghmare, Assistant Professor, Automobile Engineering, School of Engineering and Technology. He has more than 11 years of Experience in this area and has published 23 Research Publication in Nation and International Journal. He is a Ph.D. from JamaiMilliaIslamia and M.Tech from IIT Delhi. In the session, Dr. Nitin Kumar Waghmare covered the benefits of Sustainable Commuting which includes benefits for environment, health and economic benefits in terms of cost savings. He sensitized the students towards the need for a holistic and balanced approach for achieving Environmentally Sustainable Transport. He emphasized that Environmentally Sustainable Transport System will meet today's needs for mobility, access and economic growth without compromising the ability of



future generations to meet their needs and environment protection. Adequate, efficient and effective transport systems are important for access to markets, employment, education and basic services critical to poverty alleviation. However, current patterns of transportation development are not sustainable and may compound both environmental and health problems.



## 5. POLICY ON ENERGY CONSUMPTION: GREEN POLICY

The Green Policy of MRIIRS, Faridabad aims to institutionalize best practices for environment protection, natural resource conservation and sustainable development through a human– environment co-existence model. The university is committed towards sustainability through effective participation and supervision of institutional resources with assurance of providing excellent teaching, learning and research environment.

The MRIIRS green policy ensures that the university works in a tenable manner by managing its water and energy consumption with a wise, responsible and efficient usage of water and energy.

**Link for the Green Policy of MRIIRS:** [Click to view](#)

## 6. PROMINENT RESEARCH PUBLICATIONS ADDRESSING SDG 13

The prominent research publication addressing SDG 13 is as listed below:

### **Understanding Climate Change and Its Impact on Myanmar**

**DOI -** <https://doi.org/10.4324/9781003367802>

The chapter attempts to understand the causes and effects of climate change and climate-induced migration in Myanmar. It argues that the fluctuations in Myanmar's natural ecosystems are laced with the fragile state of affairs and weak governance, which exacerbate the situational crises. By studying the nature of climate change in the agricultural sector, the central and coastal regions in Myanmar, the chapter discusses the impact of these variations in people's lives. One of the methods adopted to negotiate with the changes is migration to safer regions. People mostly migrate from rural to urban areas. It leads to disproportionate urbanisation, disturbing Myanmar's ecological balance. While those who possess resources and social capital somehow manage to assimilate, the vulnerabilities of marginalised sections come to the forefront as they are mainly employed in the informal sectors. Following this, the chapter probes into the various strategies taken by the Myanmar government to harness community resilience against climate change. By using Myanmar as a point of reference, the chapter argues that it is necessary to legally acknowledge the presence of climate-related migrants. The chapter foregrounds that the introduction of an adequate legal framework will bring about innovative strategies to mitigate and adapt to climate change.



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

Skill set development and enhancement are the important components of institutional development. The university is committed to conduct, through its competent constituent bodies, programs for the faculty and students for continuous skill set enhancement relevant to the recent technologies. Further, the faculty members and students are also encouraged to participate in Seminars/ Conferences/ Workshops/ Training Programs/ Short Term courses etc. within or outside the University. Sample certifications earned by faculty members and students in the relevant areas of SDG 13 are as appended below:

### FDP on Sustainable Environmental Management



**4th International Conference on Advances in Biological Research  
and Environmental Sustainability**





**International Conference on Reuse, Recycling, Upcycling,  
Sustainable Waste Management and Circular Economy (ICRSC – 2022)  
held at Mahatma Gandhi University, Kottayam, Kerala**

**CERTIFICATE**

*International Online Conference on Reuse, Recycling, Upcycling,  
Sustainable Waste Management and Circular Economy (ICRSC - 2022)*

*Mahatma Gandhi University, Kottayam, Kerala, India*

*09<sup>th</sup> to 11<sup>th</sup> September 2022*

This is to certify that **Mr. Yaman Hooda, Department of Civil Engineering, Faculty of Engineering and Technology, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India**, has presented a paper (**Invited Talk**) at the International Online Conference on Reuse, Recycling, Upcycling, Sustainable Waste Management and Circular Economy (ICRSC – 2022). held at Mahatma Gandhi University, Kottayam, Kerala, India. from 9<sup>th</sup> -11<sup>th</sup>, September 2022.

**Organized jointly by:**



**Prof. Dr. Sabu Thomas  
CHAIRMAN ICRSC 2022**

## Air pollution and Control



**Elite**

# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to  
**AMAN KUMAR**  
for successfully completing the course

**Air Pollution and Control**

with a consolidated score of **65** %

Online Assignments	24.06/25	Proctored Exam	41.33/75
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Total number of candidates certified in this course: 7382



**Prof. Sanjeev Manhas**  
Coordinator, Continuing Education Centre  
IIT Roorkee

Jan-Apr 2023  
(12 week course)



**Prof. Priti Maheshwari**  
NPTEL Coordinator  
IIT Roorkee




Indian Institute of Technology Roorkee



Roll No: NPTEL23CE14563660526

To validate the certificate 


No. of credits recommended: 3 or 4



**Elite**

# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



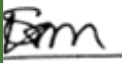
This certificate is awarded to  
**GAURAV KUMAR**  
for successfully completing the course

**Air Pollution and Control**

with a consolidated score of **60** %

Online Assignments	25/25	Proctored Exam	35.21/75
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Total number of candidates certified in this course: 7382




**Sanjeev Manhas**  
Continuing Education Centre  
IIT Roorkee

Jan-Apr 2023  
(12 week course)



**Prof. Priti Maheshwari**  
NPTEL Coordinator  
IIT Roorkee


Indian Institute of Technology Roorkee







## Environment and Development



**Elite**

# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to  
**MAULII KULSRESHTHA**  
for successfully completing the course

**Environment and Development**

with a consolidated score of **60** %

Online Assignments	23.75/25	Proctored Exam	36/75
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Total number of candidates certified in this course: **1867**


Jul-Oct 2022  
(12 week course)



**Prof. T. V. Bharat**  
Head, Centre for Educational Technology  
NPTEL Coordinator, IIT Guwahati

Indian Institute of Technology Guwahati



Roll No: NPTEL22HS126S34780022To validate the certificate No. of credits recommended: 3 or 4

## Rural Water Source Management



# NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to  
**RAHUL BHARTI**  
for successfully completing the course

**Rural Water Resources Management**

with a consolidated score of **56** %

Online Assignments	22.5/25	Proctored Exam	33/75
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Total number of candidates certified in this course: **480**

Jan-Apr 2023  
(12 week course)



**Prof. Sridhar Iyer**  
Head CDEEP & NPTEL Coordinator  
IIT Bombay

Indian Institute of Technology Bombay



Roll No: NPTEL23GE12533550784To validate the certificate No. of credits recommended: 3 or 4

## Environmental Impact Assessment



**Elite**  
**NPTEL Online Certification**  
(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**ANSHU PRIYA**  
for successfully completing the course

**Environmental Impact Assessment**

with a consolidated score of **65** %

Online Assignments	23.35/25	Proctored Exam	42/75
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Total number of candidates certified in this course: **876**

*Prof. Sanjiv Manhas*  
Prof. Sanjiv Manhas  
Coordinator, Continuing Education Centre  
IIT Roorkee

Jan-Apr 2023  
(12 week course)

*Prof. Priti Maheshwari*  
Prof. Priti Maheshwari  
NPTEL Coordinator  
IIT Roorkee

Indian Institute of Technology Roorkee

swayam

Roll No: NPTEL23AR04563552579 To validate the certificate No. of credits recommended: 3 or 4

## Plastic Waste Management\_/SWAYAM



**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
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Total number of candidates certified in this course: **3166**

Aug-Oct 2022  
(8 week course)

*Prof. Debjani Chakraborty*  
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



## Availability and Management of Groundwater Resources\_/SWAYAM



**Elite**

**NPTEL Online Certification**  
(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**PRINCE BANSAL**  
for successfully completing the course

**Availability and Management of Groundwater Resources**

with a consolidated score of **75** %

Online Assignments	22.81/25	Proctored Exam	52/75
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Total number of candidates certified in this course: **393**

Jul-Oct 2022  
(12 week course)

Prof. Debjani Chakraborty  
Coordinator, NPTEL  
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL22CE92534771352 To validate the certificate  No. of credits recommended: 3 or 4



