



## POST GRADUATE TEACHING DEPARTMENT OF LAW

RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY

RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY

(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Public Universities Act 2016 (Mah. Act No. VI of 2017))

### Office:

Post Graduate Teaching Department of Law  
Rashtrasant Tukadoji Maharaj  
Nagpur University  
D. Laxminarayan Permisses  
Amravati Road, Nagpur  
Tel.No. 0712-2521440

### Residence :

1104, Royal Crest Apartment  
Purushottam Sathe Marg  
Dhantoli, Nagpur- 440012  
payal.mundafale@gmail.com

**Dr. Payal Thaorey**

Mob.9527444476

Head of the Department

PGTD/LAW/

Date: 17/10/2024

### REPORT

### VISIT TO CSIR-NATIONAL ENVIRONMENTAL ENGINEERING RESEARCH INSTITUTE (CSIR-NEERI), Nagpur

04/10/2024

The Post Graduate Teaching Department of Law had organized NEERI Visit on 4<sup>th</sup> October, 2024 for Teachers and Students of First and Third Semester at 12:00noon. Around 75 students had participated in this visit.

The CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) is a research institute created and funded by Government of India. It was established in Nagpur in 1958 with focus on water supply, sewage disposal, communicable diseases and to some extent on industrial pollution and occupational diseases found common in post-independent India. NEERI is a pioneer laboratory in the field of environmental science and engineering and part of Council of Scientific and Industrial Research (CSIR). NEERI has five zonal laboratories at Chennai, Delhi, Hyderabad, Kolkata and Mumbai. NEERI falls under the Ministry of Science and Technology (India) of central government. The NEERI is an important partner organisation in India's POPs national implementation plan (NIP).

The visit had started with CSIR-NEERI showing the introduction of their overall working by audio visual presentation followed by visit to Harit Sangharalaya, Health & Toxicity cell and Technology Park and many more laboratories accompanied by their officials who were explaining the working. They also resolved the queries of our students.

Students observed the following;

- That the concept of NEERI is about engineering of environment and whole premises is surrounded with lot of trees which contribute to keep environment safe.
- That the students were first introduced to a drone like equipment that has the ability to fly upto 500 meters. However, they are only permitted to fly it up to 100 meters, as opposed to the legally permissible range of 50 meters. A bag is attached to the drone which collects air samples from upto 100 meters above ground. This sample is then tested for its quality, methane content, etc.
- That NEERI is moving on the concept of environment protection and sustainability hand in hand. Idea of waste water management is applied on canal in premises where this water can use after treatment for any regular chores except drinking.

- In the laboratory of Waste Management they had invented a Set up of dry toilet; a novel idea, where there is no need to use water for flush instead of it one kind of powder is used which flush out dirt as well as odour. Waste material is use as compost and motive of water wastage is also achieved.
- Nowadays metro cities have to face crisis of air pollution, even for basic need of life like inhaling oxygen is not possible in cities. One of department of NEERI is working on several problems like it and outcome of it is air purifier which makes air pure and remove hazardous components and molecule from air which is not good for human body. This equipment is also called as sampler which is still in process to get patent.
- In Harit Sangralaya students of various schools had displayed their science experiment models in encouraging sustainable development.
- Lastly, the students were introduced to a recycling process, where the recyclable material is put in a machine which separates the solid content and the water content. The water gets stored in a storage tank. The solid content is made into a slurry which is turned to cement like substance. This is used for making bricks that are used in pavements, and construction. The students were shown a sample of this brick.

NEERI is working on several problems for instance :- treating and recycling sewage, managing industrial waste water, environment assessment and many more. Overall, it was a very informative and enlightening visit. It taught the importance of recycling, and sustainable development.

### **Facilities and Departments Visited**

During the visit, we toured various departments and research labs, each focusing on different aspects of environmental science and engineering. The major areas of focus included:

**Air Pollution Control:** This department conducts research on monitoring, controlling, and reducing air pollutants. We learned about the development of advanced technologies for monitoring air quality and mitigating industrial emissions.

**Water and Wastewater Treatment:** The team here focuses on sustainable solutions for water purification and wastewater management. The department showcased methods like membrane filtration, bioremediation, and other eco-friendly techniques for treating wastewater.

**Solid and Hazardous Waste Management:** This section addresses the recycling, disposal, and treatment of various types of waste. The researchers shared information on innovative solutions for handling municipal solid waste, e-waste, and biomedical waste.

**Environmental Biotechnology:** We learned about ongoing projects in bioremediation, which involves using microorganisms to detoxify polluted environments. The department also works on phytoremediation, which uses plants to absorb contaminants.

**Climate Change Studies and Mitigation:** The focus here is on climate change research, with an emphasis on adaptation strategies, greenhouse gas inventories, and carbon footprint reduction technologies.

**Environmental Impact and Risk Assessment:** This department conducts assessments for various industrial projects to understand their impact on the environment. They provide consultancy for environmental clearance and suggest mitigation measures to minimize ecological damage.

### **Key Projects and Innovations**

Several projects and innovations that CSIR-NEERI has been working on were discussed, including:

**Mobile Air Quality Monitoring System:** An innovative solution for real-time air quality monitoring in urban and industrial areas.

**NEERI-Zar:** A water purification technology aimed at providing safe drinking water to rural areas using solar power. It is a cost-effective and sustainable solution designed specifically for communities with limited access to clean water.

**Eco-friendly Disinfectants:** NEERI has developed eco-friendly disinfectants that are effective against pathogens while minimizing harmful effects on the environment.

**Waste to Wealth:** This project focuses on converting municipal waste into valuable resources, such as compost and biogas, thus contributing to sustainable waste management practices

The visit to CSIR-NEERI provided a valuable opportunity to understand the role of scientific research in addressing environmental challenges. NEERI's work in areas such as pollution control, waste management, and water treatment showcases the importance of scientific solutions for sustainable development. The institute's emphasis on innovation and collaboration with industry and government stakeholders positions it as a key player in India's environmental research landscape.

The insights gained from this visit have reinforced the importance of interdisciplinary research and the need for sustainable solutions in protecting our environment. It also underlined the potential for emerging scientists and engineers to contribute to these vital areas of study and application.



 **GPS Map Camera**



**Nagpur, Maharashtra, India**  
**1, Forest Colony, Seminary Hills, Nagpur, Maharashtra 440001, India**  
**Lat 21.174044°**  
**Long 79.05937°**  
**04/10/24 01:59 PM GMT +05:30**





**Post Graduate Teaching Department Law**  
**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Session 2024-2025**

**NEERI VISIT Student List**

Date: 04/10/2024

Sr.No	Name of the Students	Sign
1	Pritinanda Gansir III <sup>sem</sup>	
2	Bhagyashree Gulbandhe III <sup>rd</sup>	
3	Anchal Patil 1 <sup>st</sup>	
4	Purva Pukhale 1 <sup>st</sup>	
5	Prerna Dhurma 1 <sup>st</sup>	
6	Ruchali Tembhare 1 <sup>st</sup>	
7	Riya O. Pendram 1 <sup>st</sup>	
8	Nidhi M. Bajpayee (G)	
9	<del>Zeba Ali</del>	<del></del>
10	Sonal N Bhat	
11	ojaswini S. Umbarkar	
12	Vaishnavi B. Sonawane	
13	Vaishnavi Ambarkar	
14	Prabhuti Pandharkar	
15	Nitu M. Sori (Group G)	
16	Nitin M. Ghoshale (Group G)	
17	Pratiksha Borkar Gr. C	
18	Aditi Palsodkar Gr. C	
19	Krutika Nedge Gr. C	
20	Sonal Narendran Gr. G	
21	Nikita Bhadkikar Gr.	
22	Anjali Sankar Gr. C	
23	Jyotsna Sharma Gr. G	
24	<del>Smita Patil Gr. C</del>	<del></del>
24	Nikita Bajpayee Gr. G	
25	Sneha V. Raut	
26	Swati Sherde	
27	JUHI CHOUDHARY	
28	MANJIRI GHAWDE	
29	Mohitkade Gokhad	
30	Annapurna Parate	
31	Renuka Akant	
32	Sakshi Dhangay	
33	Vikranta Raut	
34	Akanksha B. Wankar	

HEAD OF DEPARTMENT  
 DEPARTMENT OF LAW  
 RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY



35. Sonal Bhargava Sonal
36. Zainab Fatima Zainab
37. Sharmishtha Deshpande Sharmishtha
38. Tilottama Pandi Tilottama
39. Sukanya S. Fulzele Sukanya
40. Apurba A. Shankarwar Apurba
41. Mascera Firdous Mascera
42. Chinmayi Khedker Chinmayi

Head  
Post Graduate Teaching  
Department of Law  
Rameshwari Tukadoji Mahara  
Nagpur University Nagpur

**Post Graduate Teaching Department Law**  
**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Session 2024-2025**  
**NEERI VISIT Student List**

Date: 04/10/2024


Sr.No	Name of the Students	Sign
1	Mohan M. Athawale	
2)	Abhisit Janbardhu	
3)	Abhisit Chandhans	
4)	Sushit. Bhoke	
5)	Sury Bagade	
6)	Sangharsh Pawle	
7)	Kushal Kumar	
8)	Amol Ramteke	
9)	Aditya B. Gupta (1st Sem)	
10)	Vaibhav Phandke (1st Sem)	
11)	Lalit Awathale	
12)	Sushil Raut	
13)	Chandramani Pambhade	
14)	Narendra Pitale	
15)	Vinay S. Walekar (1st Sem)	
16)	Gaurav R. Gajbharate	
17)	Vaibhav Phandke (1st Sem)	
18)	Shubham Wanjare (1st Sem)	
19)	SWAPNIL D. WKEY (1st Sem)	
20)	Amol Lingayat (1st Sem)	
21)	Sachin Jagtap (1st Sem)	
22)	Priyesh Mook (1st Sem)	
23)	Himanshu Borse (1st Sem)	
24)	Prajwal A. Satekar (1st Sem)	
25)	Nitya N. Soni	
26)	Nitin M. Gharde	
27)	Sushil Hurdaco	
28)	Aniket Jayani	
29)	Raja Sankh	
30)	Anuj Pawar	
31)	Vijendra Gagne	
32)	<del>Amol</del>	
33)	Nikesh N. Dhoke	
33)	Pramodh Fulmali	
34)		

Head,  
Post Graduate Teaching  
Department of Law  
Rashtrasant Tukadoji




[illegible]

Post Graduate Teacher  
Department of Language  
Rashtrasant Tukadoji Maharaj  
Maharaja University



Date: 17/10/2024

  
**Dr. Payal S. Thaorey**  
Head  
Post Graduate Teaching  
Department of Law  
Rashttrasant Tukadoji Maharaj  
Nagpur University