



The Berar General Education Society's
Shri R. L. T. College of Science, Akola
DEPARTMENT OF BOTANY

Report on
Educational Visit
of
B. Sc. II and B. Sc. III (Botany)
To



National Environmental Engineering Research Institute
(CSIR-NEERI), Nagpur

on
22th February 2024

INTRODUCTION

The National Environmental Engineering Research Institute (NEERI), Nagpur was established in 1958 as Central Public Health Engineering Research Institute (CPHERI), when environmental concerns were limited to human health with a focus on water supply/sewage disposal/ communicable diseases and to some extent on industrial pollution and occupational diseases. The chemical and biological solutions to address these problems were simple, though challenging. However, slowly worldwide public awareness on the contamination of environment on regional to global scale started getting attention in 1970's. Shrimati Indira Gandhi, the then Prime Minister of India, rechristened the Institute as National Environmental Engineering Research Institute (NEERI) in the year 1974. National Environmental Engineering Research Institute (NEERI), Nagpur is devoted to research and innovations in environmental science and engineering besides solving a range of problems posed by industry, government and public.



Purpose of Visit

- ❖ To discuss with the Scientists on the research ideas pertaining to environmental and industrial pollution and their remedies.
- ❖ To understand the working of state-of-the-art instruments being used to study research problems.
- ❖ To understand the opportunities available in NEERI for Under Graduate students.
- ❖ To understand overall working of CSIR Laboratory.

Visit to CSIR-NEERI Audio Visual

The visit was started with the introduction of CSIR-NEERI at the Auditorium at 11.30 am by audio visual presentation. In that audio visual section, establishment of CSIR-NEERI, past and present research work of CSIR-NEERI was explained. CSIR-NEERI working on sewage water treatment, NEERDHUR, Green Crackers, WAYU, NEERI-ZAR'. CSIR-NEERI also helps to Government dream project such as Namami Gange, Swachh Bharat etc.

Green Crackers-CSIR-NEERI has been working since January 2018 for developing new and improved formulations for reducing emissions from fireworks. CSIR-NEERI developed new formulations for reduced emission light and sound emitting crackers (SWAS, SAFAL, STAR) with 30% reduction in particulate matter using Potassium Nitrate (KNO_3) as oxidant.



Visit to Harit Sangrahalaya

After informative presentation, we move to Harit Sangrahalaya at 12.00 pm. In Harit sangrahalaya models, charts and demonstration of various projects were seen and explained by Mr. Mohtaseen Ahmad (Researcher Scholar). Model, Charts, Demonstration of experiment and instruments present in Harit Sangrahalaya are

- Common effluent treatment plant
- Municipal solid waste plant
- Low cost automatic mechanical flusher
- Phytorid technology for sewage treatment
- Single pass photo catalytic reactor for de-colorization of textile effluents
- Solar electrode flouridation plant
- Iron removal plant
- Hydroplume –high rate secondary clarifier.
- NEERDHUR
- Green Crackers
- NEERJAR

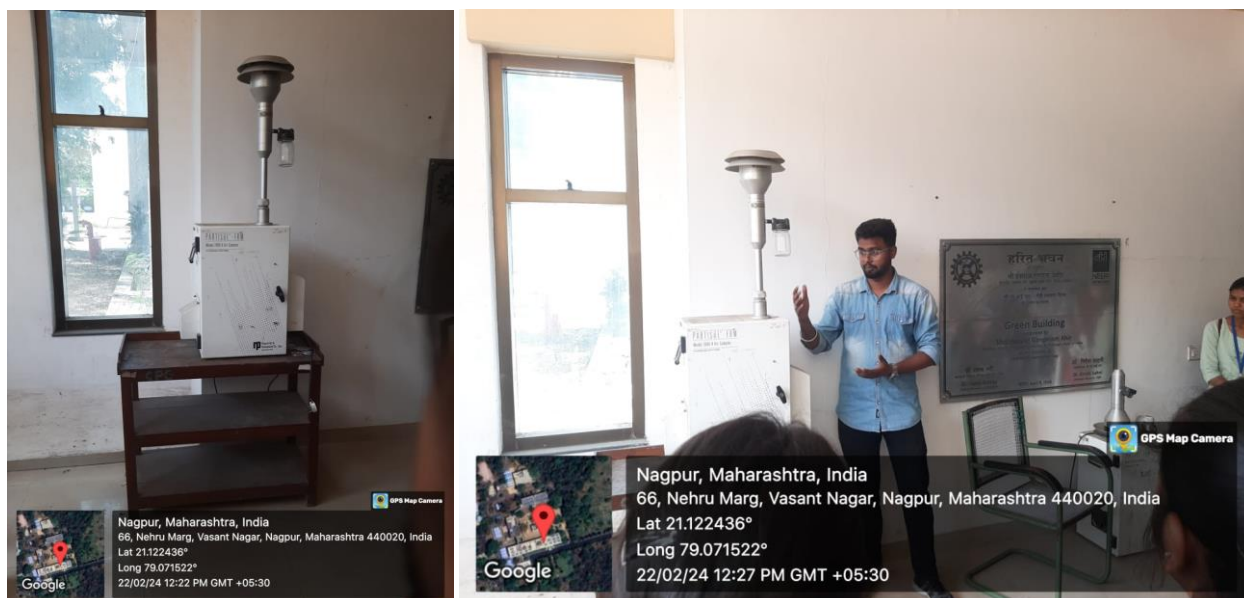


Visit to Harit Sangrahalaya

Air Pollution Control Division (APCD)

Then the students move towards Air Pollution Control Division (APCD). It is one of the major R & D division of CSIR-NEERI. Research in air quality management by inventory, monitoring, prediction, simulation, data analysis and control is within the domain. Emission inventory followed by dispersion modelling using state-of-the-art models like AERMOD and CALPUFF for impact identification.

Monitoring of pollutant is aimed towards regulatory compliance and receptor modelling objectives. This laboratory is well equipped with analysers for chemical speciation of particulate matter. Source apportionment studies using CMB of ambient air PM has helped reveal several challenging tasks particularly for coal mine area and industrial sectors. Here a research scholar demonstrated the air sampler with its working, principle and application.



Visit to Technology Park (SHWMD)

In Technology Park, we seen solid waste i.e. garden waste converted into powdered form, process of shrinking of waste thermocol, energy from red mud waste. Various research scholars explained the demo experiment about waste management i.e. converts various waste into energy and useful products. This section of waste management motivates our students to think about conversion of various waste into useful products.



Visit to Ecology and Biodiversity

Finally, at 01.30 pm students visited Ecology and Biodiversity Park. In this park Dr. Lalsingh, Sr. Scientist, CSIR-NEERI explained importance of plants for maintaining ecological balance. He also focused on scope of Botany for various industries and entrepreneurship etc.



After CSIR-NEERI, students also visited Maharaj Bagh Zoo and Biodiversity Park. There students observed flora and fauna conserved in captivity. Students observed many rare plants like *Couroupita guianensis*, *Guaiacum officinale*, *Adenonia digitata*, *Saraca indica* etc. Students also observed various animals like tiger, leopard, bear, otter, crocodile and many birds.

In this educational visit, total 54 students from B. Sc. II and B. Sc. III (Botany) participated. This visit was undertaken by the inspiration of Dr. V. D. Nanoty, Principal, Shri R. L. T. College of Science, Akola and under the supervision of Mrs. V. N. Badgujar, Head, Department of Botany. Dr. P. M. Khadse, Associate Professor, worked as an In-charge teacher of B. Sc. III and Dr. A. A. Sangole, Assistant Professor, as an in-charge teacher of B. Sc. II. Mr. Shailendra V. Madavi, Assistant Professor, worked as Co-ordinator of this tour. Mr. R.S. Dandnaik and Satish Shirsat and various teaching, non-teaching staff took efforts for the success of this visit.

Mr. S. V. Madavi

Tour Co-ordinator

Dr. A. A. Sangole

In-charge Teacher (B.Sc. II)

Dr. P. M. Khadse

In-charge Teacher
(B.Sc. III)

Mrs. V. N. Badgujar

Head,
Department of Botany

Shri R. L. T. College of Science, Akola
Department of Botany
Educational Tour to NEERI, Nagpur
List of Students and Staff

B.Sc. II

(22/02/2024)

Sr. No.	Name of Student	Mobile No.	Sign. (Depart)	Sign. (Arrival)
1.	Pradnya D. Belokar			
2.	Samruddhi S. Dande			
3.	Chanchal V. Rathi			
4.	Mayuri K. Sobhage			
5.	Madhuri S. Ambekar			
6.	Mokshada N. Sawarkar			
7.	Shubhangi S. Marbade			
8.	Samriddhi S. Deshmukh			
9.	Shreya G. Dongare			
10.	Sakshi N. Kawhale			
11.	Dnyaneshwari P. Bajad			
12.	Pranjali S. Thakare			
13.	Vaishnavi P. Bajad			
14.	Khushi S. Gupta			
15.	Dhanshree P. Bayaskar			
16.	Harshada S. Dange			
17.	Ankita S. Dhore			
18.	Sapna M. Navalkar			
19.	Punam K. Kakad			
20.	Pranjal K. Chaware			
21.	Gayatri R. Shelke			
22.	Bhagyashree S. Bahare			
23.	Rutuja M. Chaudhari			
24.	Roshani A. Rohankar			
25.	Pranali M. Hundiwale			
26.	Mamta G. Pawar			
27.	Ankita M. Yamgawali			
28.	Pallavi D. Damodar			
29.	Yash V. Nimbalkar			
30.	Priti H. Thakare			
31.	Ayushi A. Deshmukh			
32.	Samiksha S. Wankhade			
33.	Sejal U. Sawale			
34.	Dnyaneshwari S. Uprate			
35.	Dhanshree U. Chavhan			
36.	Ankita A. Khandare			

Shri R. L. T. College of Science, Akola
Department of Botany
Educational Tour to NEERI, Nagpur
List of Students and Staff

B.Sc. III

(22/02/2024)

Sr. No.	Name of Student	Mobile No.	Sign. (Depart)	Sign. (Arrival)
1.	Divyani D. Gawai			
2.	Ankita M. Sadanshiv			
3.	Tejaswini R. Sangekar			
4.	Shreya A. Gawande			
5.	Sakshi S. Ghuge			
6.	Trupti A. Topkar			
7.	Sakshri R. Deshmukh			
8.	Kirti G. Pillay			
9.	Trupti S. Panzade			
10.	Tisha M. Sharma			
11.	Anushree P. Deshmukh			
12.	Sharayu R. Deshmukh			
13.	Shruti V. Dhakite			
14.	Gayatri S. Donge			
15.	Ashwini M. Ghatole			
16.	Prachi S. Jawanjal			
17.	Rutika D. Bonde			
18.	Vaishnavi Wakode			

List of Staff

Sr. No.	Name of Student	Designation	Mobile No.	Sign.
1.	Mrs. V. N. Badgujar	Asst. Prof. & Head		
2.	Dr. P. M. Khadse	Assot. Professor		
3.	Dr. A. A. Sangole	Asst. Professor		
4.	Mr. S. V. Madavi	Asst. Professor		
5.	Mr. R. S. Dandnaik	Lab Attendant		
6.	Mr. S. Shirsat	Lab Assistant		