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Report on expert talk on, "Case studies on rain water harvesting and leak detection technology for water loss reduction in water distribution system".

Location: Saraswati college of Engineering, Kharghar

Date of seminar: 22/3/2024

Time: 10:00 am

Participants: Second, third and final year Students of Civil Engineering Department, Saraswati College of Engineering, Kharghar.

Number of students: 217

Resource Persons: Mr. Neerav Saraiya (Rain water harvesting expert) &
Mr. Sunil Vaidya (Retd. Executive Engineer, BMC)

POs attained: PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1 & PSO2.

Introduction

In celebration of World Water Day, the Indian Water Works Association (IWWA) organized a series of expert talks at our college to address critical issues related to water management. The sessions aimed to enhance understanding and awareness of rainwater harvesting and leak detection technologies, both vital for sustainable water use and conservation. The talks were delivered by esteemed experts Mr. Neerav Saraiya and Mr. Sunil Vaidya.

Objectives of the expert talk

- To explore effective rainwater harvesting practices
- To evaluate leak detection technologies
- To demonstrate impact on water loss reduction
- To identify future trends and innovations in rain water harvesting
- To promote sustainable water management practices

Expert talk 1

Topic: Case studies on rain water harvesting

Resource person :Mr.Neerav Saraiya

Mr. Neerav Saraiya, a renowned expert in water resource management, delivered an engaging and informative talk on the topic of rainwater harvesting. His presentation provided valuable insights into the techniques and benefits of harvesting rainwater, a practice crucial for managing water resources effectively in both urban and rural settings.

Key Points discussed:

1. Introduction to Rainwater Harvesting:

- Definition and importance of rainwater harvesting.
- Historical context and traditional practices.

2. Techniques and Methods:

- Various rainwater harvesting methods: rooftop harvesting, surface runoff collection, and subsurface storage.
- Comparative analysis of different techniques and their suitability for various environments.

3. Design and Implementation:

- Key components of a rainwater harvesting system: catchment area, conveyance system, storage tanks, and filtration.
- Steps for designing and implementing an efficient rainwater harvesting system.

4. Benefits and Challenges:

- Environmental benefits: reducing groundwater depletion, mitigating flooding, and conserving water.
- Challenges: initial cost, maintenance, and public awareness.

5. Case Studies and Success Stories:

- Examples of successful rainwater harvesting projects from different regions.
- Impact assessments and lessons learned from these projects.

Conclusion of expert talk 1:

Mr. Saraiya's talk emphasized the necessity of adopting rainwater harvesting practices to address water scarcity issues. His insights encouraged the audience to consider integrating these practices into their communities and personal lives to contribute to water conservation efforts.

Expert talk 2

Topic: Leak detection technology for water loss reduction in water distribution system .

Resource person: Mr. Sunil Vaidya

Mr. Sunil Vaidya, a leading expert in water distribution systems, provided an in-depth presentation on leak detection technology. His talk focused on innovative technologies designed to minimize water loss in distribution networks, a critical aspect of maintaining efficient and sustainable water systems.

Key Points discussed:

1. Introduction to Water Loss in Distribution Systems:

- Overview of common causes of water loss in distribution networks.
- Impact of leaks on water resources and financial implications.

2. Technologies for Leak Detection:

- Advanced methods for leak detection: acoustic sensors, thermal imaging, and smart meters.
- How these technologies work and their effectiveness in identifying leaks.

3. Implementation and Maintenance:

- Best practices for deploying leak detection systems.
- Maintenance and calibration of detection equipment to ensure accuracy.

4. Discussion of case studies:

- Examples of successful leak detection implementations in various cities.
- Results and benefits observed from these implementations.

5. Future Trends and Innovations:

- Emerging technologies and research in leak detection.
- Potential advancements and their implications for future water management.

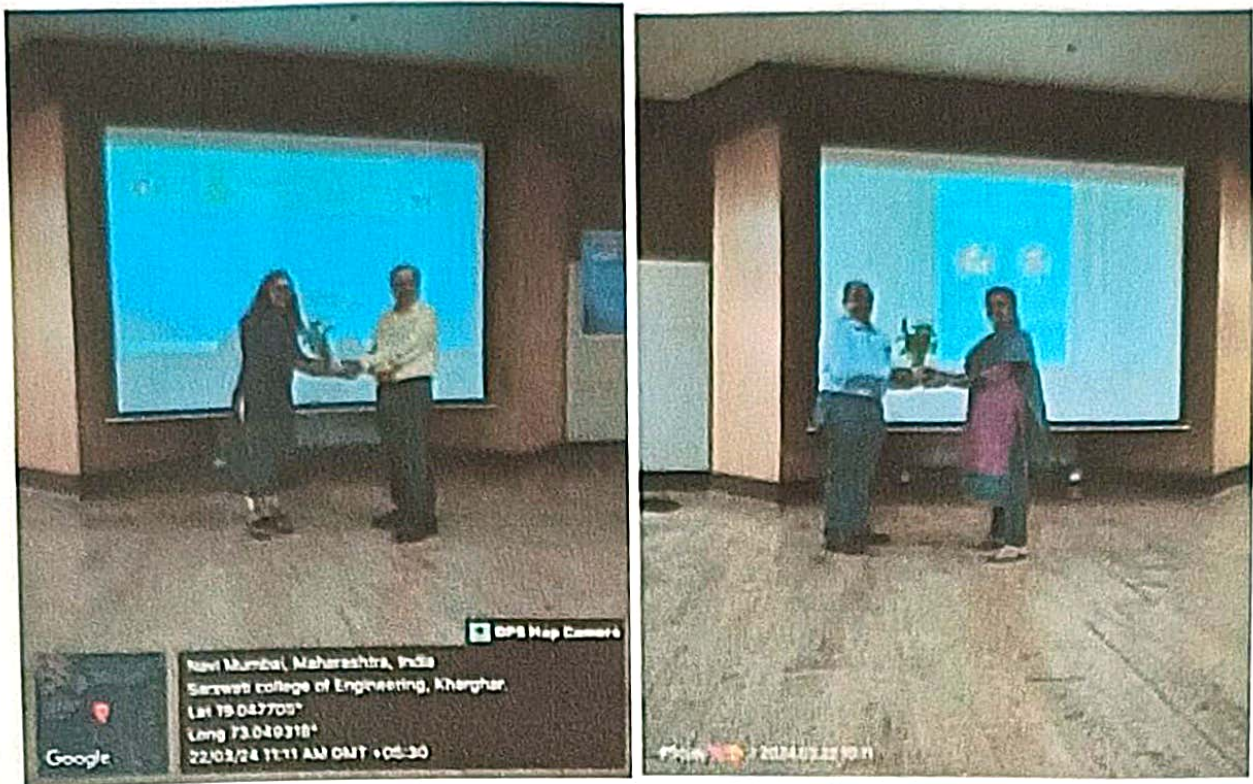
Conclusion of expert talk 2:

Mr. Vaidya's presentation highlighted the critical role of leak detection technology in reducing water loss and improving the efficiency of water distribution systems. His talk underscored the importance of investing in such technologies to enhance water conservation efforts and ensure the sustainability of water resources.

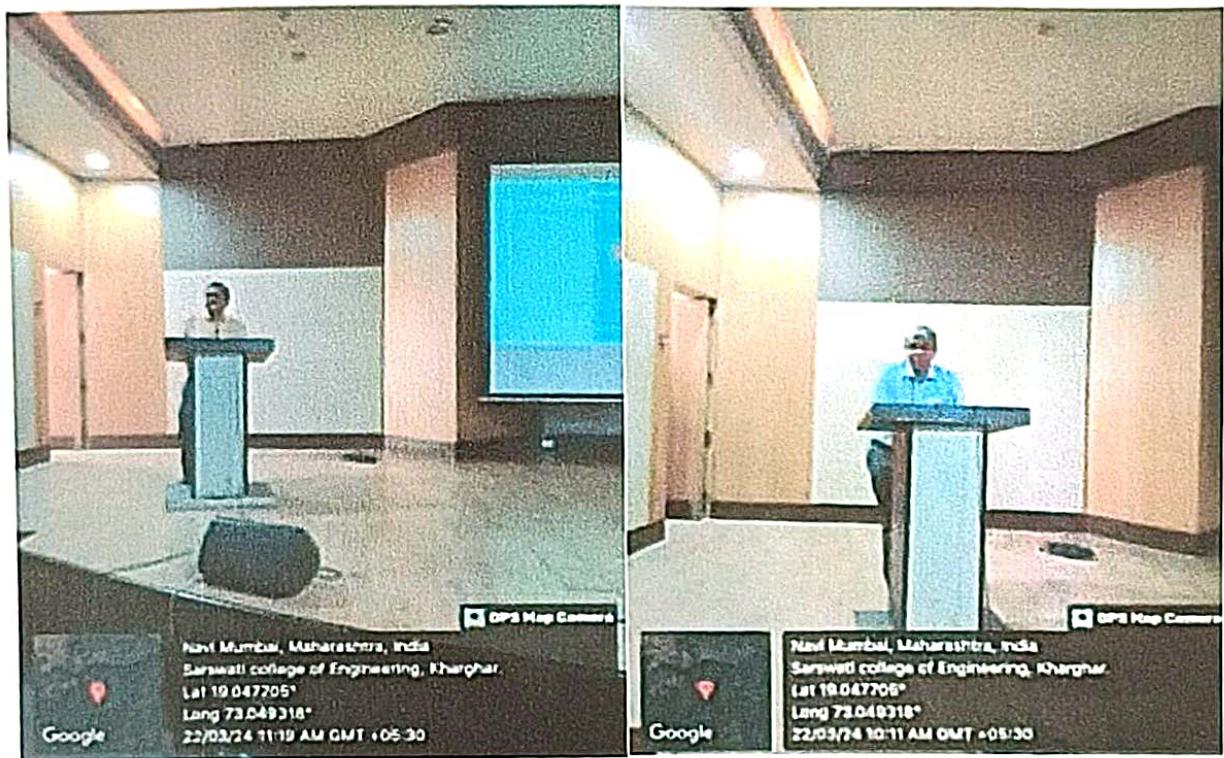
Activity conducted: An online quiz competition was conducted on this day. Participants from various colleges have participated in the same. Participants were also awarded with e certificates after the competition.

to apply these concepts to address water-related challenges.

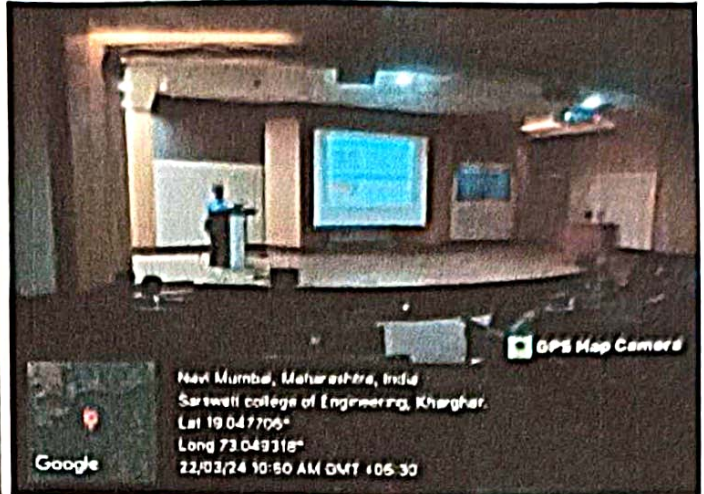
Photographs of the event:



From left Civil dept HoD Prof.Pooja Somani mam felicitating Mr.Sunil Vaidya sir and Dean, Prof.Roshni John mam felicitating Mr.Neerav Saraiya sir



From left Mr.Sunil Vaidya sir and Mr.Neerav Saraiya sir delivering an expert talk.



Students and faculties attending the expert talk

Overall impact: The expert talks conducted by Mr. Neerav Saraiya and Mr. Sunil Vaidya provided the students with valuable knowledge and practical insights into water management practices. The sessions fostered greater awareness about rainwater harvesting and leak detection technologies, encouraging attendees to apply these concepts to address water-related challenges.

IWWA Faculty Coordinator
Civil Engineering

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