



SATHYABAMA INSTITUTE OF
SCIENCE AND TECHNOLOGY

SDG 6

CLEAN WATER AND SANITATION





SDG 6 - CLEAN WATER AND SANITATION



SDG 6 Clean Water and Sanitation emphasizes the availability and sustainable management of clean water and sanitation for all. According to United Nations statement, due to bad economics or poor infrastructure millions of people including children die every year from diseases associated with inadequate water supply, sanitation and hygiene. In alignment with this goal, the institution undertakes initiatives that promote safe water practices, efficient water management, hygiene awareness, and sustainable use of water resources. Through community outreach, infrastructure improvements, and awareness programmes, the institution contributes to strengthening water security and fostering responsible water stewardship within the campus and surrounding communities.

Sewage Treatment Plant - Sustainable Wastewater Management

The Sewage Treatment Plant (STP) was established in 2019 through a collaborative effort involving the in-house Department of Civil Engineering, the Department of Chemical Engineering, and the Centre for Waste Management, and Eco Care Engineering Systems Pvt. Ltd with a capacity of 1.5 MLD in the campus to treat waste water and Sequential Batch Reactor technology is adopted for this process. This joint initiative reflects Sathyabama commitment to sustainable wastewater management and environmental responsibility. The STP treats all campus wastewater through processes such as screening, aeration, sedimentation, and filtration, ensuring that the treated water meets quality standards. The recycled water is reused for gardening, landscaping, and flushing, significantly reducing dependence on freshwater sources. The STP stands as a key component of Sathyabama commitment to water conservation, pollution prevention, and sustainable infrastructure development.

The operational specifications of the Sewage Treatment Plant is given below:

Specifications	Details
Wastewater generated	7.5 lakhs litres
Sources of Water for treatment	Mess Kitchen and hostel toilet water
Capacity of water treatment facility per day	15 lakhs litres
Usage of treated water	Landscaping and gardening
Outcome	Reducing the freshwater consumption for secondary purposes.





<https://www.sathyabama.ac.in/campus-life/stp-plant>

Water-Efficient Landscaping

Our institute minimises water usage by using landscape drought-tolerant plants such as Orchid tree, Neem, Indian Almond, Rain tree etc.. and several palms that require less frequent watering are planted in the building entrances, student zones, and open areas across the campus. Lawns and garden areas are designed to minimize water usage and the treated waste water from the STP is used for gardening in order to avoid the use of fresh water.





Sathyabama Institute of Science and Technology uses drip irrigation and micro-sprinkler devices to distribute water to plant roots, reducing surface evaporation. The campus gardens with perforated piping systems guarantee soil hydration and responsible water use in align with SDG 6.





The treated water is used for irrigation and toilet flushing. This approach is in line with the "Water-Conscious Planting" philosophy and reduces the amount of potable water used for non-drinking uses. To ensure balanced irrigation schedules, new green spaces surrounding building entrances, student zone, and around campus are planned with native plants arranged by water-demand zones.

Off-Campus Water Conservation Support

An outreach program was organized by the Department of Clinical Nutrition and Dietetics at Government Higher Secondary School, Sholinganallur, on 11th August, 2023, focusing on the theme “Feeding the Future - Empowering Youth through Nutrition”. The program covered the importance of drinking water, hand washing, hygiene, and more. Teaching aids, mimes, and interactive games were used to enhance the learning experience. Additionally, nutritious snacks were provided, reinforcing the message of choosing healthier alternatives over unhealthy junk food. The students’ active participation made a lasting impact, contributing to a well-informed and conscious future generation.

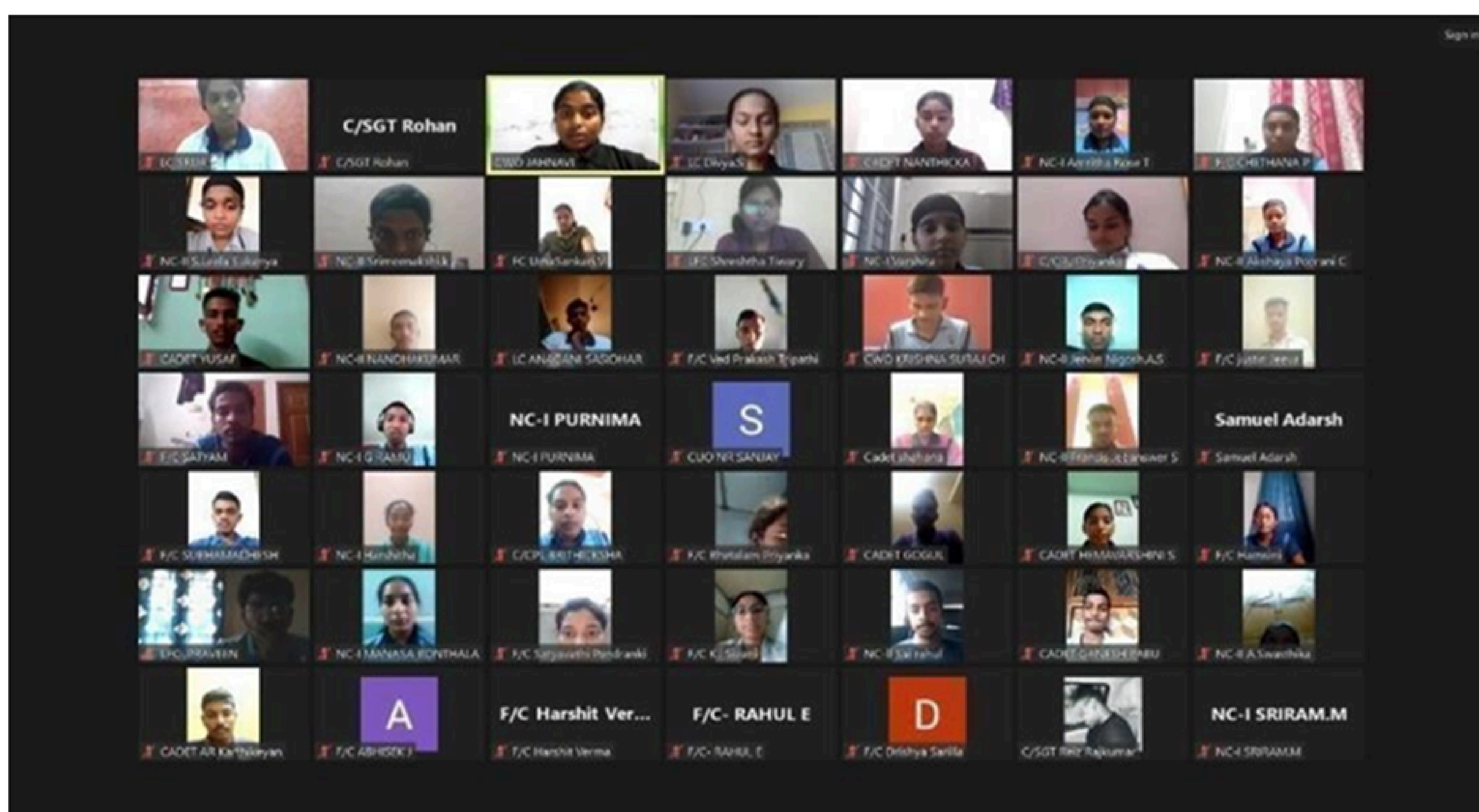


The NSS unit of Sathyabama Institute of Science and Technology hosted an "Awareness of Health and Hygiene" event on 29.08.2023, involving 200 volunteers at a special camp in Kumizhi. Through interactive sessions, demonstrations, and distribution of hygiene kits, participants educated the community on the importance of personal hygiene, sanitation practices, and preventive healthcare measures. The initiative aimed to foster a healthier environment and promote well-being among residents of Kumizhi and surrounding areas.



The NSS unit of Sathyabama Institute of Science and Technology orchestrated a Village Rally on promoting a plastic-free environment on 30.08.2023, rallying 200 volunteers at a special camp in Kumizhi. Participants marched through the village, raising awareness about the detrimental effects of plastic pollution and advocating for sustainable alternatives. Through informative banners, speeches, and community engagement, the event aimed to inspire collective action towards preserving the environment for future generations.



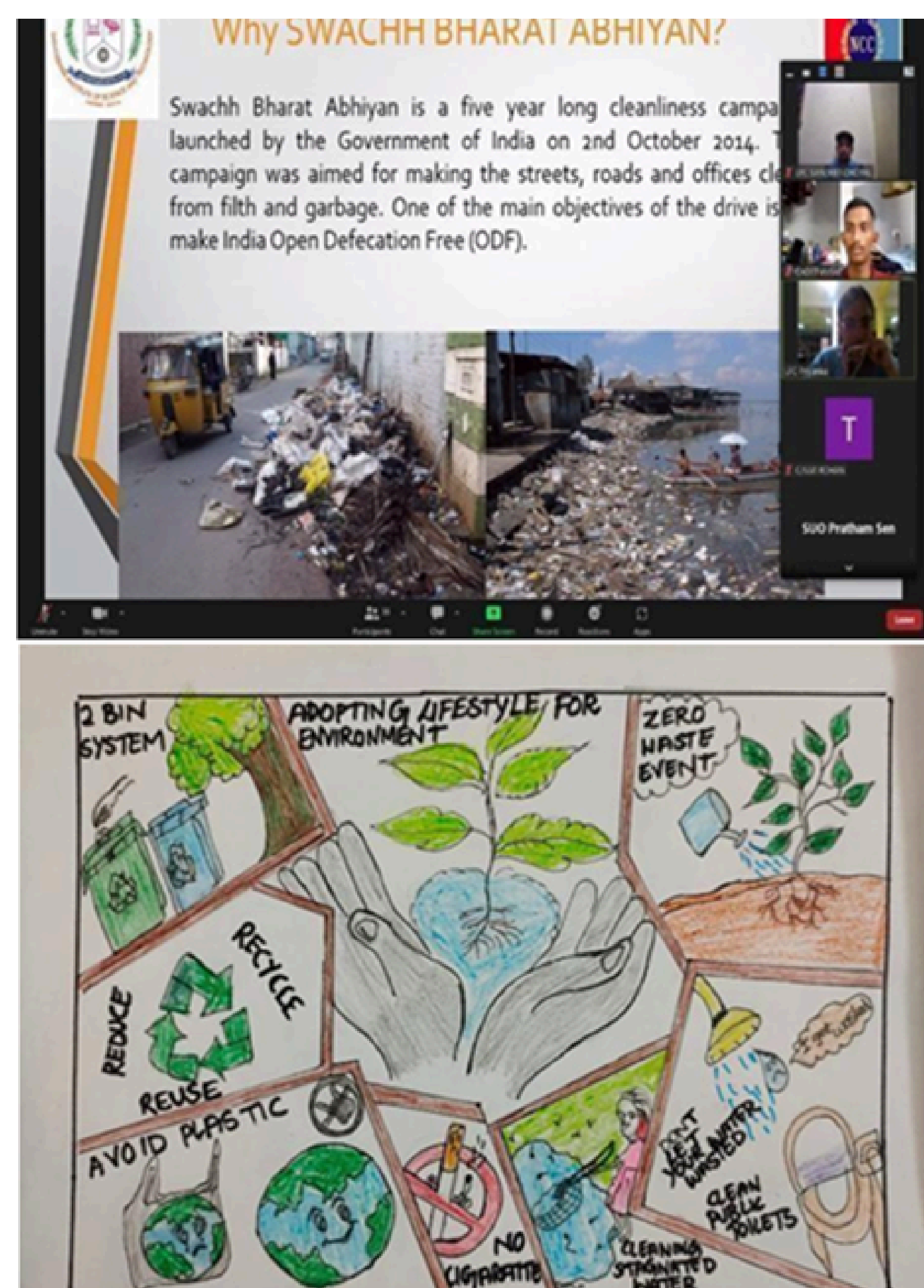
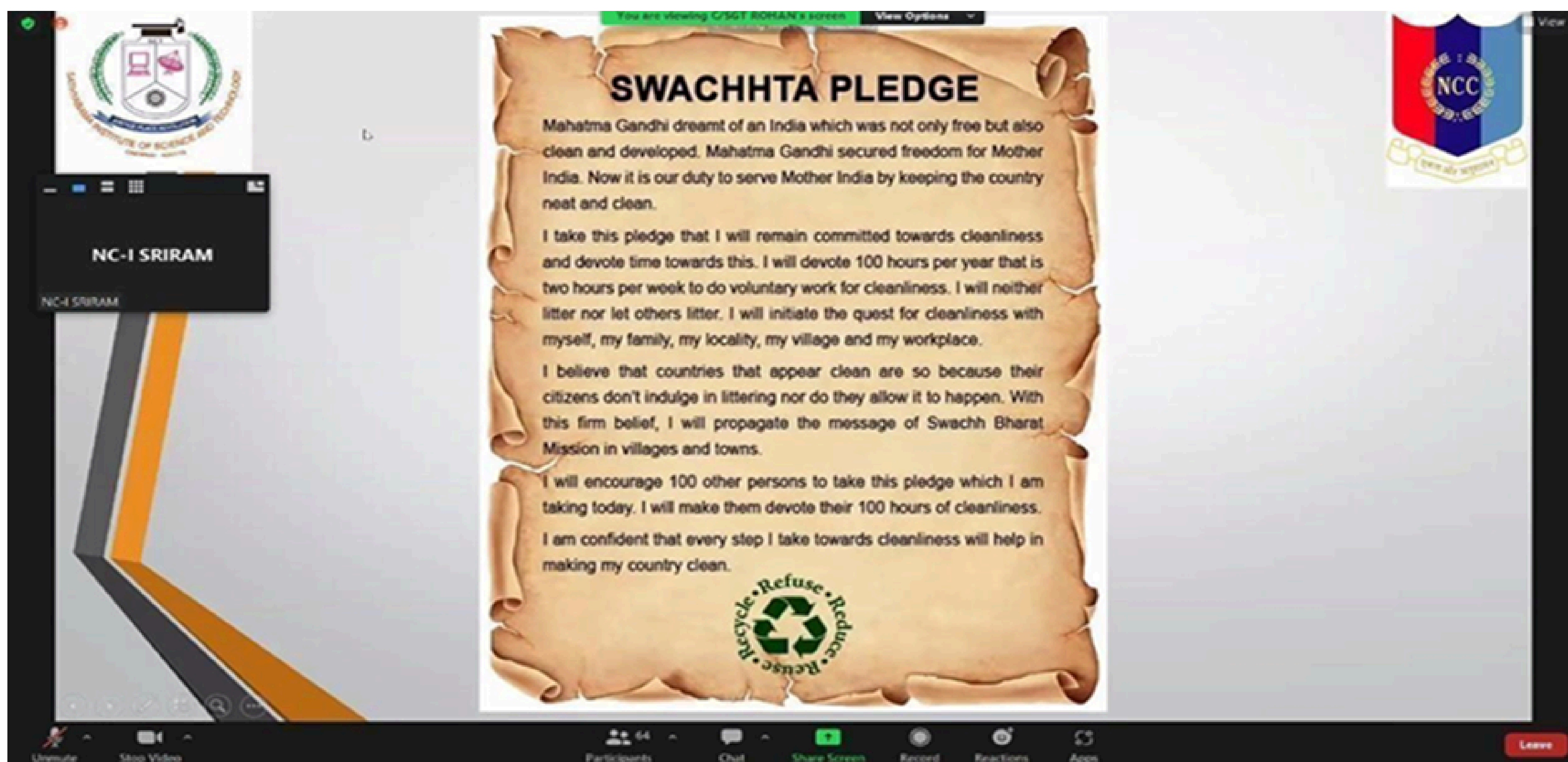


On the occasion of the Garbage Free India – Swachhata Hi Seva (SHS) Campaign, the NCC Cadets of Sathyabama University actively contributed to SDG 6 by promoting sanitation and hygiene. Cadets were educated about the history and objectives of the Swachh Bharat Abhiyan, followed by a webinar where they took the Swachhata Pledge and discussed challenges in maintaining cleanliness along with simple, practical solutions. Each cadet took initiatives to raise public awareness near their homes and ensured proper disposal of waste, maintaining cleanliness in their surroundings. This collective effort reinforced the importance of sanitation, responsible waste management, and community participation in achieving clean and healthy environments.





SDG 6 - CLEAN WATER AND SANITATION



The observance of World Food Day, World Forest Day, and World Water Day collectively emphasizes the critical interdependence between food systems, forest ecosystems, and sustainable water resources. These global days remind us that clean water is central to healthy forests, responsible agriculture, and resilient communities. By promoting efficient water use, protecting natural ecosystems, and reducing pollution, we advance the objectives of SDG 6—ensuring the availability and sustainable management of clean water and sanitation for all.

World Food Day 2023

On the eve of World Food Day, an awareness program on “Water is Food, Water is Life: Leave no one behind” was conducted on 16th October, 2023. The students participated in numerous competitions conducted and created awareness on the importance of water.



World Forest Day 2023

The NSS unit of Sathyabama Institute of Science and Technology observed World Forest Day on March 22, 2024, through activities that also supported SDG 6 by promoting ecosystem health and sustainable water resources. More than 100 volunteers participated in tree-planting drives, biodiversity awareness sessions, and clean-up activities. The increase in green cover helps enhance groundwater recharge, improve soil moisture retention, and protect watersheds—key components of clean water availability. Through these initiatives, the NSS unit encouraged students and the community to understand the link between forest conservation and sustainable water management, reinforcing the responsibility to safeguard natural resources for future generations.



World Water Day 2024

The NSS unit of Sathyabama Institute of Science and Technology commemorated World Water Day on March 22, 2024, with enthusiastic participation from approximately 100 volunteers. The day's activities highlighted the importance of water conservation and sustainable management practices. Volunteers engaged in various initiatives, including awareness campaigns, clean-up drives along water bodies, and distribution of water-saving tips. Through these endeavours, the NSS unit aimed to foster a greater understanding of the vital role water plays in our lives and inspire collective action toward ensuring its availability for future generations.




Through the DST supported Science, Technology & Innovation Hub, Sathyabama partners with government officers to implement rooftop rainwater-harvesting systems, recharge pits and pond-revival programs in rural villages. Faculty experts assist government stakeholders by conducting water-quality testing, preparing analytical reports and delivering technical recommendations for safe drinking-water access. The institute also participates in government campaigns on World Water Day, Jal Shakti Abhiyan and Swachh Bharat to raise public awareness on water conservation.

Renew intercollege competition organised by center for waste management to develop scientific solutions to address water and wastewater water problem.



Sathyabama Institute of Science and Technology
(Deemed to be University)
Chennai, Tamil Nadu
Centre for Waste Management (CWM)
Organizes



INTER COLLEGE PROJECT COMPETITION

RESEARCH EXPLORATION FOR NOVEL & ENERGY-EFFICIENT WATER MANAGEMENT TECHNIQUES (RENEW-2024)

About RENEW-24

To commemorate the “World Water day”, CWM organizes RENEW -2024 and the aim of this program is to encourage the development of innovative scientific solutions to address water and wastewater problems. Students and academicians who are interested may submit their unique, original project abstracts on or before 10th March 2024 to centreworkcwm@gmail.com

- Green Technologies for Crude Oil Processed Water Treatment
- Advancements in Membrane Technologies
- Emerging Contaminants in water and wastewater
- Novel Desalination Technologies
- GIS and Remote sensing in Water management

- Nanomaterials based Water Treatment
- Advanced oxidation processes
- Zero liquid discharge
- AI based water Management
- Sensors for pollutant monitoring
- Resource recovery
- Hydroponics and Smart Farming
- Socioeconomic issues concerning wastewater management
- Water Sanitation & Hygiene

Selection Process

Based on the following parameters, the top scoring teams will be selected:

- Originality, novelty, relevance of theme, scalability, potential of impact, cost/market value, acceptance, durability, usability, and implementation ability.

The finalist will exhibit their project during the “World Water Day” celebration on March 22nd 2024.

Registration

For Registration: [Click here](#) (only for selected participants)
 Fee: ₹ 150/- per participant or ₹ 400/-for team (Maximum of three participants)
 Account Details:
 Account Holder Name: Vice Chancellor, Sathyabama Institute of Science and Technology,
 Account No: **6500955039** IFSC: **IDIB000S201**
 (The same account can be used for GPay Transaction also.)

PATRONS
 Dr. Mariazeena Johnson, Chancellor
 Dr. Marie Johnson, President
 Mr. J. Arul Selvan, Vice President
 Mrs. Maria Bernadette Tamilarasi, Vice President
 Ms. Maria Catherine Jayapriya, Vice President
 Dr. T. Sasipraba, Vice Chancellor

Convener
 Dr.Dawn SS, Professor (Research)

Organizing Secretary
 Dr. Sathish Kumar R, Associate Professor (Research)

Co-ordinators
 Dr.J Arun, Assistant Professor (Research)
 Dr.N Nirmala, Assistant Professor (Research)
 Dr.Sivasakthi M, Assistant Professor (Research)
 Dr.P Priyadharsini, Scientific Assistant

Organizing committee members
 Mr. A. Santhosh, Project Coordinator (STI-HUB)
 Ms. A. Bhuvaneswari, Project Assistant (STI-HUB)
 Mr. J. Jayakanth, Project Assistant (STI-HUB)
 Ms. S.V. Sivashankari, Project Associate I (SERB)
 Mr. S. Sanjay Kumar, Project Assistant (STI-HUB)
 Mr. P. Mazhalaiselvan, Project Assistant (STI-HUB)
 Ms. J. Merlin, Research Scholar

ADDRESS FOR CORRESPONDENCE
 Centre for Waste Management-IRC, Sathyabama Institute of Science and Technology,
 Jeppiaar Nagar , Rajiv Gandhi Salai, Chennai- 600 119, Tamil Nadu, India.
 Mobile: +91 9715270393; +91 9385547308. (Dr Sathish Kumar R)
 Email: sathishkumar.ramachandran.irc@sathyabama.ac.in

Sustainable Water Extraction on Campus

The university utilises sustainable water extraction technologies on associated university grounds on and off campus .The water taken from private suppliers is carried in tanker lorry and poured in the percolation pit and purified in the RO plant which is installed in the campus.



Free Drinking Water

Our institution provides free drinking water for students, staff and visitors. The Reverse Osmosis Plant installed in the Sathyabama campus, caters to the drinking water needs of all the students, teachers, supporting staff and the visitors. The raw water with an average Total Dissolved Solids [TDS] of 750-1000 ppm is treated to reduce the TDS content to less than 100 ppm the generally acceptable upper limit of the TDS. The maximum capacity of the plant is 1500 litres per hour [at the rate of 250 lit per membrane]. The utilized capacity is 1000 lit/hr potable water. 66 filtered water stations and coolers are connected to this plant providing drinking water in every floor of class room blocks, administrative block, library, hostels and in common areas. The mineral water facility is documented on the institute's website.



<https://www.sathyabama.ac.in/about-us/infrastructure/mineral-water-facility>

Enhancing Sustainable Water Management on Campus

The NSS unit of Sathyabama Institute of Science and Technology conducted a Tree Plantation Drive on 27.03.2024 as part of its initiatives to promote conscious water usage on campus. In honour of the special day, our Vice Presidents inaugurated the activity by planting saplings within the campus. The drive emphasized the role of trees in improving groundwater recharge, reducing surface runoff, and supporting sustainable water management practices. As an effort to encourage natural regeneration and water-responsible landscaping, 100 saplings—preferably drought-tolerant species—were planted. Around 80 NSS volunteers actively participated and contributed to advancing SDG 6 through environmentally responsible and water-efficient greening efforts on campus.



The NSS Unit Sathyabama Institute of Science and Technology coordinated a Volunteer Task on Campus Cleaning from June 1, 2023, to May 31, 2024, with the active participation of around 100 volunteers. This initiative played a key role in enhancing sustainable water management on campus by ensuring that areas around water bodies, drainage pathways, and water storage zones were kept clean and free from waste. Regular clean-up drives focused on preventing litter and pollutants from entering storm water channels, thereby protecting groundwater quality and supporting efficient rainwater flow across the campus. Volunteers also promoted responsible waste disposal and segregation practices among students and staff to minimise water contamination risks. Through these efforts, the NSS unit strengthened campus water stewardship and contributed to SDG 6 by maintaining a clean environment that safeguards water resources.



The university actively promotes conscious water usage on campus by fixing water conscious posters near water coolers, installation of water-efficient fixtures such as low-flow taps, dual-flush toilets to reduce unnecessary water consumption and regular maintenance of water distribution systems to prevent leakage and wastage.



Water Reuse Measurement

Our institute measure the reuse of water across the university which is documented in the water quality standard and discharge policy.

https://sist.sathyabama.ac.in/download/Water_Quality.pdf