



Sri Eshwar
College of Engineering
Coimbatore | Tamilnadu
An Autonomous Institution
Affiliated to Anna University, Chennai



Sustainable water reclamation initiative [Event -1]

SDG 6 - Clean Water and Sanitation - Sustainable Development Goal






Every Wash Counts — Awareness in Action* ”


Every great change begins with awareness — and at Sri Eshwar Engineering College, we believe awareness should lead to action that transforms lives.

On this World Handwashing Day, our students came together to emphasize the power of a simple yet life-saving habit — handwashing. Through thoughtful initiatives and active participation, they spread the message that hygiene is not just a practice, but a culture of care and responsibility.

We are delighted to share that our campus is equipped with an advanced IoT-based water treatment system and a Reverse Osmosis (RO) purification unit, ensuring a continuous supply of clean, safe, and sanitized water for all. The TDS levels are regularly monitored through smart IoT sensors, maintaining the perfect balance for healthy and safe water quality. This awareness drive reflects our commitment to nurturing not only intellectual excellence but also social consciousness and collective well-being. Because education at Sri Eshwar isn't confined to classrooms — it's about building a

generation that leads with compassion, awareness, and responsibility.  

>  “Clean hands create a cleaner world.”

 “Awareness begins with one wash — change begins with you.”



Global Handwashing Day

World hand washing day



Kondampatty, Tamil Nadu, India 🇮🇳
Eswar College Rd, Kondampatty, Tamil Nadu 641202,
India
Lat 10.827553° Long 77.060822°
Wednesday, 15/10/2025 12:35 PM GMT +05:30

Sri Eshwar event on global hand washing day



Sri Eshwar event on global hand washing day



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Sustainable water reclamation initiative –students participated event in utilizing technology & creativity to generate fresh water [Event-2]



This presentation, entitled "Turning Air into Water," by Purusothman M, Dhanushkumar P, and Stevu Giftsen S, at Policy Conclave'25, organized by the Public Policy and Opinion Cell of the IndianInstitute of Technology, Kanpur addresses the critical global water crisis and proposes a solution using dew point harvesting. The crisis is driven by factors like climatechange, overpopulation, and unsustainable consumption, leading to depleting groundwater and water scarcity in many rural areas.

Solution: Atmospheric Water Generation

The proposed solution is an atmospheric water generation system, also known as a water generator or water maker, which harvests the moisture suspended in humid air. The principle is based on the fact that all air contains water, and on hot, muggy days, the air is saturated with moisture.

System Design and Process

The system is presented as a Breakthrough Innovation designed to produce fresh water from the atmosphere.

The process involves several key steps:

- **Air Intake & Filtration:** Fans draw in ambient air, which is then filtered to remove dust and pollutants, ensuring the collected water is clean. The system can reduce the "air index value" using components like activated carbon, a cyclone separator, and mesh filters.
- **Cooling Condensation:** The filtered air is cooled below its dew point, causing water droplets to condense.
- **Water Collection & Purification:** The collected water is filtered to remove sediments, then treated with carbon, UV, or ozone to eliminate impurities and pathogens.
- **Storage & Dispensing:** The purified water is stored in an insulated tank, often mineralized for better taste, and dispensed via taps or supply systems.

The presentation also emphasizes Energy Efficiency & Sustainability, noting that these systems can utilize solar power, AI, and IoT sensors to improve performance based on environmental conditions. However, it notes that these devices are energy-intensive and require specific environmental conditions, like minimum air temperature and humidity, to operate efficiently, making them less effective in colder or less humid climates.

Performance and Benefits

Based on a detailed calculation provided in the presentation, it's estimated that a system processing 2000 cubic meters of air could yield approximately 14.16 liters of water per hour. Over a 9-hour period, this could produce around 130 liters of water, with an estimated average of 135.4 liters per day in cubic meters of air.

Merits

The merits of this technology are highlighted for its potential in various applications:

- Scalability and Adaptability
- Purity and Quality Control
- Reduction of Water Transportation Costs
- Off-Grid and Renewable Water Source
- Military and Defense Applications
- Disaster Relief and Emergency Use
- Environmental Benefits

"Turning air into water" is a tangible reality and a crucial tool in addressing the global water crisis. Through the creative use of technology, atmospheric water generation is already providing clean water access in challenging environments. The future of water generation lies in harnessing the potential of our atmosphere to ensure a sustainable future for all.

The core objective of our students' participation in *Policy Conclave'25 (Ecocraft)* was to propose an innovative and practical policy solution that aligns with sustainable development goals. We presented our sustainable idea of Generating Fresh Water from Atmospheric Air.

Description of the event:

Policy Conclave'25, organized by the Public Policy and Opinion Cell of the Indian Institute of Technology, Kanpur, was a prestigious national-level Ideathon designed to bring young minds together to formulate and present policy-oriented solutions to real-world challenges.

The event was conducted in two phases:

- **Online Preliminary Rounds:** Teams across India submitted their ideas. Out of numerous entries, we were selected among the top 10 finalists.
- **Offline Grand Finale:** Held at IIT Kanpur, this round involved live presentations, expert interactions, and a series of knowledge-building sessions. The experience was rich in diversity and intellect, with teams from various institutions presenting impactful projects.

The conclave also featured:

- **Guest lectures by high-level government officials and policy experts**, particularly from departments related to sustainability and tourism.
- **Knowledge-sharing sessions**, fun interactive activities, and informal networking events, giving us insight into the culture of premier institutions like IIT Kanpur.

Benefit in terms of learning/Skill/Knowledge obtained:

Participating in the conclave provided immense benefits in multiple dimensions:

- **Knowledge:** Gained deep insights into sustainability policies, eco-friendly initiatives, and real-world government programs from experts and fellow participants.
- **Skills:**
 - **Presentation and Public Speaking:** Presenting our idea at a national level boosted our confidence.
 - **Critical Thinking:** Exposure to different perspectives helped refine our thought process and solution-building approach.
 - **Professionalism:** Observing the behaviour, communication style, and attire of students and professionals at IIT Kanpur inspired personal growth.
- **Networking:** Interacted with students, policy enthusiasts, and experts from diverse backgrounds.

Outcomes:

1. We were exposed to national-level competition standards, strengthening our future preparation strategies.
2. Gained inspiration and motivation by witnessing how an institution like IIT Kanpur organizes and executes such large-scale intellectual events.

- Built connections and expanded our perspective on how policies are shaped and the importance of technology in public welfare.

