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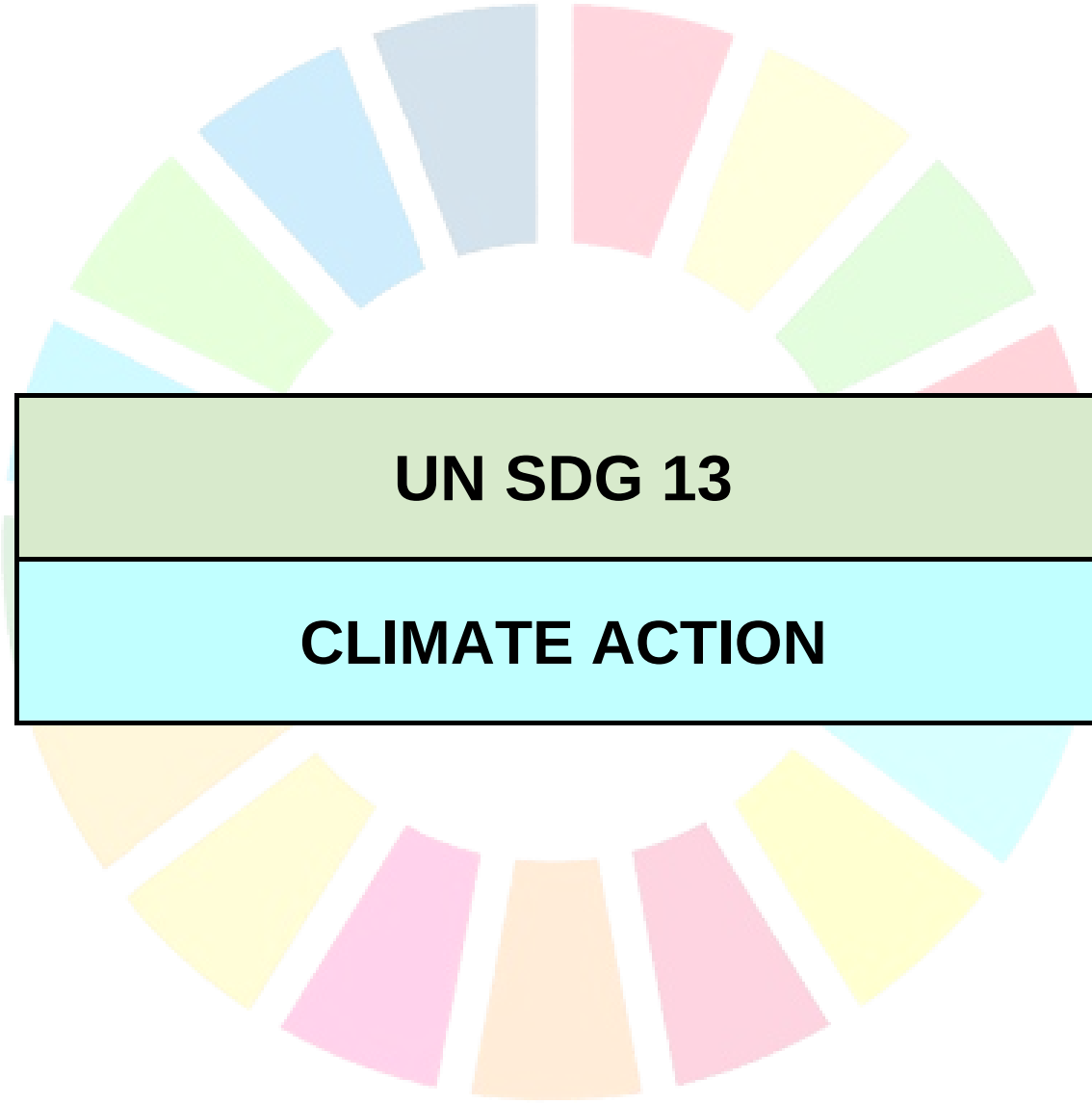
HINDUSTHAN EDUCATIONAL AND CHARITABLE TRUST

HICET

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

An Autonomous Institution

Valley Campus, Pollachi Highway, Coimbatore 641 032, Tamil Nadu, India | www.hicet.ac.in



UN SDG 13

CLIMATE ACTION

13.2 LOW CARBON ENERGY USE

13.2.1 Does your university as a body measure the amount of low carbon energy used across the university?

Yes. The institution measures and monitors the amount of low-carbon energy used across its campus through smart meters, energy management systems, and regular audits. Energy consumption data is collected to track the share of energy from renewable sources, such as solar power, compared to fossil fuels. This data is analyzed to identify trends and opportunities for reducing carbon emissions. The institution has set targets to increase the proportion of low-carbon energy in its overall usage, aligning with sustainability goals. At present, 15-20% of the total electricity demand is met through solar PV systems installed on campus, and solar thermal systems supply hot water in hostels. Excess energy is exported back to the grid. Annual reports are prepared to ensure transparency and inform stakeholders about progress in energy efficiency and environmental impact. This ongoing effort supports the commitment to sustainability and climate action.

Solar PV Plant

Solar Smart Meter Reading

Analysis of Annual Energy Consumption of all types of Fuels

S.No.	Month	Units Consumed (kWh)[1]	Energy from Solar PV System (kWh)	LPG Consumed (kg)[2]	Wood Consumed (in Tons)[3]	Diesel Consumed (in litres) (DG+Transport)
1	June 2023	36324	6800	418	4	1950
2	July 2023	31932	7550	475	4	5860
3	August 2023	29428	9500	1007	11	5710
4	September 2023	35765	8850	1425	11	6210
5	October 2023	40272	5600	1444	15	5820
6	November 2023	44041	4815	1425	16	6640
7	December 2023	45807	6268	1368	17	6380
8	January 2024	28181	6569	1425	16	6280
9	February 2024	39054	7290	1444	16	6370
10	March 2024	49420	8389	1501	17	5970
11	April 2024	27069	9869	1501	16	1550
12	May 2024	35782	9580	1292	17	2230
Avg.		**36923**	**7590**	**1227**	**13.3**	**5081**
Total		**443075**	**91080**	**14725**	**160**	**60970**

[1] Cumulative Energy Consumption of 2 LT Services

[2] Cumulative Consumption of 3 Hostels

[3] Cumulative Consumption of 2 Hostels

- The average cost of the Electricity is Rs. 12.20/kWh
- The average cost of LPG is Rs.108.70/kg
- The average cost of the Wood is Rs. 3,540/Ton

13.2.2.1 Total energy used

Total energy used is 7355 GJ.

13.2.2.2Total energy used from low-carbon sources

Total energy used from low-carbon sources is 328 GJ.

Analysis of Total, Electrical and Solar Energy Consumption

S.No.	Month & Year	Total Energy Consumed (kWh)	TNEB Energy (kWh)	Solar Energy (kWh)	Energy Exported (kWh)	Percentage of Solar Energy Utilized
1	June 2023	43124	36324	6800	1371	16
2	July 2023	39482	31932	7550	1267	19
3	August 2023	38928	29428	9500	2148	24
4	September 2023	44615	35765	8850	1526	20
5	October 2023	45872	40272	5600	1344	12
6	November 2023	48856	44041	4815	1192	10
7	December 2023	52075	45807	6268	728	12
8	January 2024	34749	28181	6569	2097	19
9	February 2024	46344	39054	7290	694	16
10	March 2024	57809	49420	8389	307	15
11	April 2024	36938	27069	9869	1912	27
12	May 2024	45363	35782	9580	618	21
Grand Total		**534155**	**443075**	**91080**	**15204**	**18**

CO_2 Balance Sheet

S.No.	Annual Energy Consumption & CO_2 Emission			Annual CO_2 Neutralization		
	Description	Annual Usage	CO_2 Emission (Tons)	Description	Annual Usage	CO_2 Neutralized (Tons)
1	Electrical	443075 kWh	363.3	Solar PV	91080 kWh	74.7
2	Wood	160 Tons	304.0	Matured Trees	1435 Nos.	31.3
3	Diesel	60970 Litres	161.0	Solar Thermal System*	18992 kWh	15.6
4	LPG	14725 kg	44.2	-	-	-
Total Emission			**812.5**	**Total-Neutralized**		**121.6**
Balance CO_2 to be Neutralized = 750.9 Tons/Annum						

* Equalled to Electrical Equivalent

Calculation Table:

- For Electricity = [kWh * (0.08 kg of CO2 Emission / kWh)]
- For Diesel = [Diesel Consumption (Litre) * (2.64 kg of CO_2 Emission / Litre of Fuel Consumption)]
- For LPG = [LPG Consumption (kg) * (3.0 kg of CO_2 Emission / kg of LPG Consumption)]
- For Wood = [Wood Consumption (Ton) * (1.9 Tons of CO_2 Emission / Ton of Wood Consumption)]
- A mature tree is able to absorb CO_2 at a rate of 48 lbs / year (Nearly 21.8 kg) hence total CO_2 to be neutralized is (2.8 * 1435) / 1000 = 3.13 Tons / Annum

RAM KALAM CENTRE FOR ENERGY CONSULTANCY & TRAINING

(An ISO 9001: 2015 Certified Company & Registered under MSME, GoI)

Coimbatore – 641 062, Tamilnadu, India

CERTIFICATE

RAM KALAM CENTRE FOR ENERGY CONSULTANCY & TRAINING

Certified that the Certification of Detailed Energy Audit Process

to

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Valley Campus, Pollachi Highway, Coimbatore - 641 032, Tamil Nadu, INDIA.

has been assessing all types of energy usage in the college and found that the college is now practicing various Energy Conservation Measures & utilizing all kind of energy in a Judicious manner

Certificate No. RAM KALAM/HiCET/EA/June/2024/01

Assessment Period: From June 2023 to May 2024

Validity: From June 2024 to May 2025 (One Year)

Date of Audit: 10 June 2024

Audited & Verified by

Dr. S.R. SIVARASU, M.E., Ph.D

BEE Certified Energy Auditor (EA-27299)

Lead Auditor – ISO 14001: EMS; IGBC AP, GRIHA CP

CII Certified Professional in SWM

ISO-14064: Implementor & Auditor - Carbon Footprint Management

Energy Audit Certificate

RAM KALAM CENTRE FOR ENERGY CONSULTANCY & TRAINING

(An ISO 9001: 2015 Certified Company & Registered under MSME, GoI)

Coimbatore – 641 062, Tamilnadu, India.

CERTIFICATE

RAM KALAM CENTRE FOR ENERGY CONSULTANCY & TRAINING

Certified that the Certification of Detailed Environment Audit Process to

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Valley Campus, Pollachi Highway, Coimbatore - 641 032, Tamil Nadu, INDIA.

has been maintaining the Green Environment, providing quality water, effective disposal of Chemicals/Salts/Acids and also educating the same to all the stakeholders

Certificate No. RAM KALAM/HiCET/ENA/June/2024/01

Assessment Period: From June 2023 to May 2024

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(An ISO 9001: 2015 Certified Company & Registered under MSME, GoI)

Coimbatore – 641 062, Tamilnadu, India.

CERTIFICATE

RAM KALAM CENTRE FOR ENERGY CONSULTANCY & TRAINING

Certified that the Certification of Detailed Green Campus Audit Process to

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Valley Campus, Pollachi Highway, Coimbatore - 641 032, Tamil Nadu, INDIA.

is operating the transportation system with Pollution Control Certificate, maintain effective solid and liquid waste management, exemplary greenery and rich collection of Flora & Fauna

Certificate No. RAM KALAM/HiCET/GA/June/2024/01

Assessment Period: From June 2023 to May 2024

Validity: From June 2024 to May 2025 (One Year)

Date of Audit: 10 June 2024

Audited & Verified by

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CII Certified Professional in SWM

ISO-14064: Implementer & Auditor - Carbon Footprint Management

Green Campus Audit Certificate

13.3 ENVIRONMENTAL EDUCATION MEASURES

13.3.1 - Does your university as a body provide local education programmes or campaigns on climate change risks, impacts, mitigation, adaptation, impact reduction and early warning?

Yes. The institution actively engages in educating the community on climate change through programs, workshops, and campaigns. These initiatives increase awareness of climate change risks, impacts, mitigation strategies, adaptation measures and early warning systems. The curriculum integrates environmental studies and climate science across disciplines, helping students understand environmental challenges. Specialized seminars and guest lectures by experts highlight real-world climate issues and discuss their implications on regional and national scales. The institution also conducts tree-planting drives, waste reduction campaigns, and energy-saving workshops to promote sustainable practices. Research initiatives focus on local environmental impacts, developing mitigation techniques, and creating early warning tools for natural disasters. Outreach activities extend to schools and communities, empowering them with knowledge on climate resilience on and beyond the campus.

13.3.2 - Does your university as a body have a university Climate Action plan, shared with local government and/or local community groups?

Yes. The institution has established a comprehensive Climate Action plan, collaboratively developed with input from local government and community groups. This plan outlines actionable strategies for reducing greenhouse gas emissions, promoting renewable energy, and enhancing resource efficiency across the campus. Key initiatives include sustainable waste management, water conservation programs, and transitioning to energy-efficient infrastructure. Regular workshops and public consultations ensure the plan remains relevant to evolving environmental challenges. Engagement with local government and NGOs helps extend its impact beyond the campus, fostering a shared commitment to climate resilience. This Climate Action plan underscores the institution’s dedication to sustainable development and environmental protection.

13.3.3 - Does your university as a body participate in co-operative planning for climate change disasters, that may include the displacement of people both within a country and across borders, working with government?

No

13.3.4 - Does your university as a body inform and support local or regional government in local climate change disaster/risk early warning and monitoring?

No

13.3.5 - Does your university as a body collaborate with NGOs on climate adaptation?

Yes. The institution actively collaborates with various NGOs on climate adaptation projects aimed at building resilience within the campus and local communities. These partnerships support initiatives such as sustainable agriculture workshops, afforestation programs, and water resource management to combat drought and soil erosion. NGOs bring valuable expertise and resources, enabling joint awareness campaigns and skill-building workshops on climate resilience practices. Through these collaborations, the university also engages students in practical adaptation efforts, enhancing their understanding of climate challenges. Together, the institution and its NGO partners are working to create adaptive strategies that support long-term environmental sustainability and community resilience.

13.4 COMMITMENT TO CARBON NEUTRAL UNIVERSITY

13.4.1 - Does your university as a body have a target date by which it will become carbon neutral according to the Greenhouse Gas Protocols?

Yes. The institution is committed to achieving carbon neutrality as part of its sustainability initiatives. The institution has set a target date of 2050 to become carbon neutral, specifically addressing Scope 1 and Scope 2 emissions in accordance with the Greenhouse Gas Protocols. This involves reducing direct emissions from on-campus activities, such as energy use and fuel consumption, as well as indirect emissions from purchased electricity. To achieve this target, HiCET has implemented measures like transitioning to renewable energy sources, enhancing energy efficiency in campus facilities, promoting sustainable commuting practices, and minimizing the use of fossil fuels. The campus also plans to expand green infrastructure, such as solar installations and energy-efficient buildings. Regular audits and tracking of emissions ensure adherence to milestones. HiCET aims to lead by example in sustainability, fostering a culture of environmental responsibility among its community.

13.4.2 - Achieve by

2050

The institution aims to achieve carbon neutrality by 2050, focusing on reducing Scope 1 and Scope 2 emissions. The climate action plan emphasizes energy efficiency through retrofitting

buildings and adopting green technologies, while transitioning to renewable energy sources like solar and wind. Sustainable transportation initiatives include promoting electric vehicles, carpooling, and cycling. A robust waste management system focuses on recycling and composting, alongside efforts to expand green cover and support afforestation projects for carbon offsetting. HiCET prioritizes community engagement through awareness campaigns, integrating sustainability into academics, and encouraging research on climate solutions. A dedicated task force will monitor progress, conduct regular audits, and publish reports. The institution plans to collaborate with government, NGOs, and industries, becoming a model for sustainability and fostering innovation to inspire broader environmental commitment.

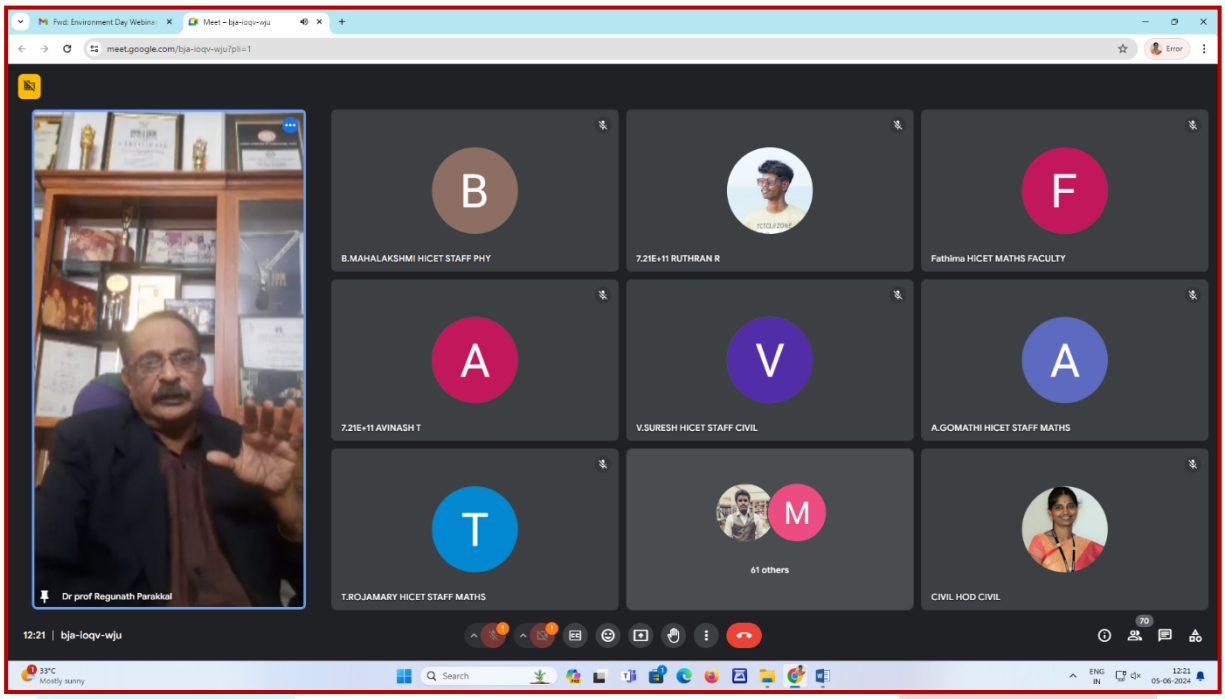
SAMPLE EVIDENCES

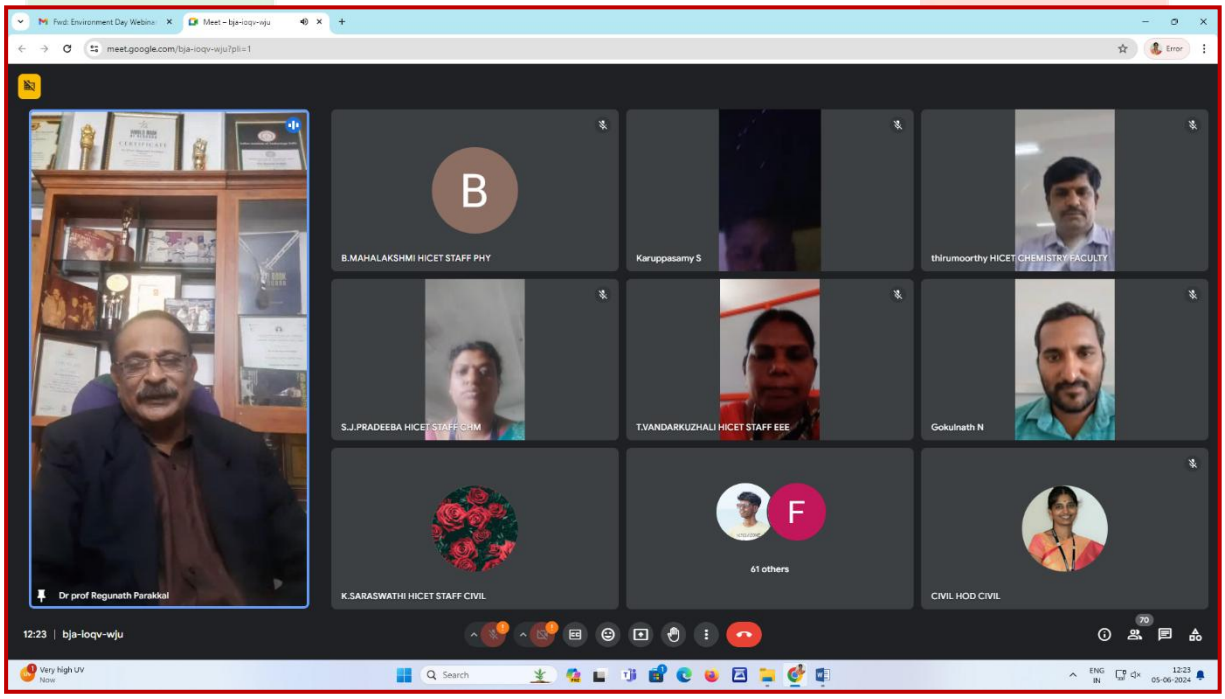
(a) National Webinar on Land Restoration, Desertification and Drought Resilience

The National Webinar on Land Restoration, Desertification and Drought Resilience was organized by the Department of Civil Engineering, HiCET, on 05.06.2024 through online mode via Google Meet. The event was conducted in association with the Institution's Innovation Council (IIC), Nature Club, and Green Thumbs. The session was facilitated by distinguished resource person Dr. Prof. Regunath Parakkal, Vice Chancellor, Brainae University, USA, who delivered comprehensive insights into the global challenges of land degradation and desertification.

The webinar provided participants with an understanding of the causes, impacts, and mitigation measures related to land degradation. It also emphasized various land restoration methods and strategies for enhancing drought resilience in vulnerable regions. A total of 133 participants actively engaged in the session, reflecting strong interest and awareness among students and faculty members.

Brochure / Invitation of the Event





Photographs of the Event

Sample Certificate of Participation

(b) National Seminar on Climate Change Impacts on Groundwater Resources

The 3 day national seminar on "Climate Change Impacts on Groundwater Resources: A Step towards Sustainable Development" was held from 28–30 August 2024 at Ganga Hall, HICET. Funded by Anusandhan National Research Foundation (Rs. 4,50,000/-) in association with the Ministry of Earth Sciences, New Delhi, and the Board of Research in Nuclear Sciences, Mumbai, the programme brought together 70 participants. Eminent experts from IIT Palakkad, Anna University, Tamilnadu Agricultural University (TNAU), Karunya University, PSG College of Technology, and other institutions addressed the effects of climate change on groundwater, sustainable management strategies, and community-based adaptation measures. Participants engaged in interactive sessions, discussions, and case studies to understand integrated water resource planning, climate resilience approaches, and sustainable solutions aligned with UN Sustainable Development Goals, enhancing their knowledge and practical understanding of groundwater sustainability.

Brochure of the Event

Jour. Geol. Soc. India (2024) 100 (11) : 1636-1637
https://doi.org/10.17491/jgsi/2024/174026

NEWS AND NOTES

National Level Seminar on Climate Change Impacts on Groundwater Resources: A Step towards Sustainable Development (CLIMWAT-2024)

D. Karunanidhi[1*], K. Akil[1] and T. Subramani[2]
[1]Department of Civil Engineering, Hindusthan College of Engineering and Technology (Autonomous), Coimbatore - 641 032, India.
[2]Department of Geology, College of Engineering Guindy (CEG), Anna University, Chennai - 600 025, India.
*E-mail: karunasamygis@gmail.com

Received: 11 September 2024 / Revised form Accepted: 26 September 2024

The Department of Civil Engineering, Hindusthan College of Engineering and Technology (HiCET), Coimbatore, Tamil Nadu organized a National Level Seminar on *"Climate Change Impacts on Groundwater Resources: A Step Towards Sustainable Development" (CLIMWAT-2024)* from 28th to 30th August, 2024. This National Seminar was funded by the Department of Science and Technology (DST) - Anusandhan National Research Foundation (ANRF), (Government of India, New Delhi), Ministry of Earth Sciences (MoES), (Government of India, New Delhi) and Board of Research in Nuclear Sciences (BRNS), (Government of India, Mumbai).

This national seminar brought together academicians, scholars, intellectuals, students, and responsible persons from the civil society involved in different aspects of the groundwater research and observation to assess the impact of global environmental change in local and regional scales for the better implementation of sustainable management strategies. Sixteen eminent speakers from various fields spoke about the climate change in their technical sessions.

The three day seminar commenced with an inaugural function (Fig.1) on 28.08.2024 at 10.00 a.m. in the Ganga Auditorium with Tamizhthai Vazhthu and lighting of lamp ceremony. Mr. R. Senthil Kumar, Assistant Professor of Civil Engineering welcomed the chief guest and other dignitaries. Dr. J. Jaya, Principal of Hindusthan College of Engineering and Technology, delivered the presidential address followed by a special address by Dr. P. N. Magudeswaran, Dean Academics of Hindusthan College of Engineering and Technology. The Chief Guest, Dr. S. Balachandran, Head, Regional Meteorological Centre, Chennai, inaugurated the seminar and Dr. D. Karunanidhi, the Convenor of CLIMWAT-2024 proposed the vote of thanks. The inaugural function concluded with a short break and high tea.

The first day technical session began with a thought-provoking lecture on the climate change over the last few years, the disasters associated with it, and the role of Indian Meteorological Department in monitoring the early warning system by Dr. S. Balachandran. Second lecture was presented by Dr. P. Athira on climate scale models and

Fig.1. *Inaugural Session:* Release of the soft copy of Seminar Proceedings (CD). From left to right: Mr. R. Senthil Kumar, Assistant Professor, Hindusthan College of Engineering and Technology, Coimbatore, Dr. J. Jaya, Principal, Hindusthan College of Engineering and Technology, Coimbatore, Dr. S. Balachandran, Head, Regional Meteorological Centre, Chennai, Dr. D. Karunanidhi, Professor & Convener (CLIMWAT-2024), Hindusthan College of Engineering and Technology, Coimbatore, Dr. P. N. Magudeswaran, Dean- Academics, Hindusthan College of Engineering and Technology, Coimbatore.

National Level Seminar on Climate Change Impacts on Groundwater Resources

Photograph of the Event

SAVE WATER

Sponsored By

SERB INDIA

Anusandhan National Research Foundation
(Erstwhile SERB)
(Government of India, New Delhi)

Ministry of Earth Sciences (MoES)
(Government of India, New Delhi)

&

BRNS

Board of Research in Nuclear Sciences
Department of Atomic Energy (DAE)
(Government of India, Mumbai)

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Valley Campus, Pollachi Highway, Coimbatore - 641 032, Tamil Nadu

DST - ANRF, MoES, BRNS Sponsored National Level Seminar on

CLIMATE CHANGE IMPACTS ON GROUNDWATER RESOURCES:
A STEP TOWARDS SUSTAINABLE DEVELOPMENT
(CLIMWAT - 2024)

Certificate

This is to certify that Mr.M.RHISHI HARI RAJ, Research Scholar of Civil Engg. Hindusthan College of Engineering and Technology. has participated in the DST - ANRF, MoES, BRNS Sponsored National Level Seminar on "CLIMATE CHANGE IMPACTS ON GROUNDWATER RESOURCES: A STEP TOWARDS SUSTAINABLE DEVELOPMENT" organized by Department of Civil Engineering, Hindusthan College of Engineering and Technology, Coimbatore from 28.08.2024 to 30.08.2024.

Dr. D. KARUNANIDHI
Convenor

Dr. K. AKIL
Organizing Chair and HoD

Dr. J. JAYA
Principal

Sample Certificate of Participation

(c). Field Visit to Krishi Vigyan Kendra (KVK), Karamadai

The field visit to Krishi Vigyan Kendra (KVK) on 04.09.2024, Karamadai provided 50 Agricultural Engineering students and faculty with hands-on exposure to modern agricultural practices and extension services. Participants engaged with KVK scientists and local farmers to learn about sustainable crop management, soil health improvement, integrated pest management, and the use of advanced equipment. Demonstrations on vermicomposting, drip irrigation, and other climate-resilient techniques offered practical insights into environmentally responsible farming. The visit emphasized climate-smart practices that enhance resilience to climate variability, reduce chemical dependency, and minimize agriculture's carbon footprint. Students gained awareness of how sustainable farming mitigates climate change impacts while ensuring long-term productivity. The initiative also fostered opportunities for future collaborations, internships, and knowledge-sharing to promote climate-resilient agricultural development.

Photographs of the Event

(d). Walkathon - Challenge of Walking 10,000 Steps in 90 Minutes

The Walkathon titled “Challenge of Walking 10,000 Steps in 90 Minutes” was held at the HiCET campus on 01.10.2024, engaging 184 students and 40 faculty members. The event aimed to promote physical fitness, wellness, and an active lifestyle by encouraging participants to incorporate walking into daily routines. Beyond health benefits, it highlighted walking as a zero-emission, eco-friendly mode of mobility that reduces carbon footprint and supports sustainable lifestyle choices. Participants reflected on how small behavioural changes, like opting to walk instead of using vehicles, can collectively mitigate climate change impacts. The initiative successfully raised awareness of physical, mental, and environmental well-being, fostering environmentally responsible habits among students and reinforcing the value of campus based sustainability centred wellness programs.

Photographs of the Event


HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

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Approved by NBA (AERO, AGRI, AUTO, CIVIL, CSE, ECE, EEE, FT, IT, MECH, MCT, MBA & MCA)
Valley Campus, Pollachi Highway, Coimbatore - 641 032. www.hicet.ac.in

DEPARTMENT OF CIVIL ENGINEERING
in association with
DEPARTMENT OF PHYSICAL EDUCATION

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. R. Senthil Kumar of Hindusthan College of Engineering and Technology, Coimbatore, has successfully completed the Challenge of Walking 10000 Steps in 90 Minutes on 01.10.2024.

Mr. A. Alex Livingston
Mr. R. Poomalai
Co-ordinators

WALKING

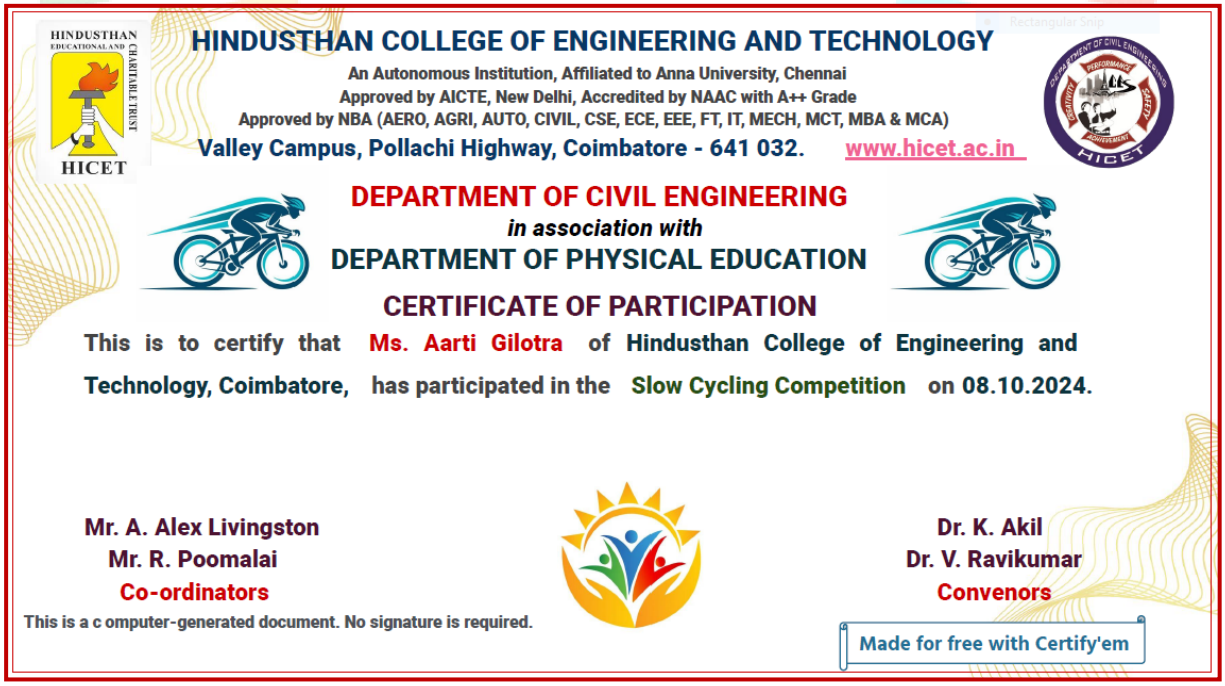
Dr. K. Akil
Dr. V. Ravikumar
Convenors

Sample Certificate of Participation

(e). Slow Cycling Competition

The Slow Cycling Competition held at HiCET on 08.10.2024 engaged around 50 participants to promote physical fitness, balance, and endurance. The skill-based event emphasized controlled slow cycling, highlighting mastery, focus, and active participation. Beyond physical benefits, it showcased cycling as a sustainable, eco-friendly mode of transportation that reduces greenhouse gas emissions from short-distance vehicular travel. By encouraging students to adopt cycling for daily commuting, the competition fostered climate-conscious attitudes, minimized campus carbon emissions, and supported cleaner air quality. The initiative reinforced the value of non-motorized mobility, combining fitness, environmental responsibility, and practical awareness of sustainable commuting options, inspiring participants to integrate cycling into their regular routines.

Photographs of the Event



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DEPARTMENT OF CIVIL ENGINEERING
in association with
DEPARTMENT OF PHYSICAL EDUCATION

CERTIFICATE OF PARTICIPATION

This is to certify that Ms. Aarti Gilotra of Hindusthan College of Engineering and Technology, Coimbatore, has participated in the Slow Cycling Competition on 08.10.2024.

Mr. A. Alex Livingston
Mr. R. Poomalai
Co-ordinators

Dr. K. Akil
Dr. V. Ravikumar
Convenors

This is a c omputer-generated document. No signature is required.

Made for free with Certify'em

Sample Certificate of Participation

(f). AIMS E-Kart Racing Championship

The Department of Mechanical Engineering organized the AIMS E-Kart Racing Championship at HiCET, Coimbatore, from 26.02.2024 to 29.02.2024, providing students a platform to apply theoretical knowledge in developing an electric kart. Participants were involved in all stages, including conceptual design, structural analysis, fabrication, system integration, and performance testing, gaining insights into battery management, power transmission, material selection, and safety. Demonstrating technical expertise and teamwork, the HiCET team secured the Overall Second Prize along with awards for Endurance, Female Participation, Business Plan, and Best Aesthetic. The event promoted clean mobility solutions, reduced reliance on fossil fuels, and emphasized sustainability in engineering design. It enhanced student skills in low-carbon vehicle technologies, fostering innovation, strategic planning, and environmentally responsible engineering practices.

Photograph of the Event

(g). CSRM SEVC Racing Championship

The Department of Mechanical Engineering participated in the CSRM SEVC Racing Championship at Manipal Institute of Technology from 26.03.2024 to 30.03.2024, focusing on the design and real-time evaluation of a solar-electric vehicle. Participants engaged in chassis design, solar panel integration, electrical system optimization, material selection, and performance analysis under varying conditions. The competition provided hands-on experience with renewable energy utilization, photovoltaic efficiency, electric motor control, aerodynamics, and energy conservation, while addressing challenges such as power limitations, battery management, and durability testing. Students enhanced problem-solving, teamwork, project planning, and technical communication skills. The event highlighted the role of solar vehicles in reducing greenhouse gas emissions and promoting sustainable transport, preparing participants for future contributions to clean mobility and eco-friendly engineering solutions.

Photographs of the Event

(h). Hi-Racing Lab

The Hi-Racing Lab at Hindusthan College of Engineering and Technology (HiCET) is a state-of-the-art facility promoting innovation, hands-on learning, and excellence in sustainable automotive engineering. It allows students to design, fabricate, assemble, and test vehicles for national-level competitions such as E-Kart, M-Kart, and solar-electric events. Equipped for chassis, powertrain, braking, steering, aerodynamics, and performance evaluation, the lab provides practical exposure to materials, manufacturing processes, safety standards, vehicle dynamics, and real-world constraints like cost, endurance, and sustainability. Guided by faculty mentors, students develop technical expertise, teamwork, problem-solving, leadership, and project management skills. By combining experiential learning with competitive projects, the lab prepares students for careers in automotive, motorsports, manufacturing, research, and emerging mobility sectors, strengthening practical engineering education at HiCET.

Hi-Racing Lab

Sustainable Vehicles Developed and Achievements of Students in Hi-Racing Lab

(i). Centre of Excellence for Electric Vehicles (EV)

The Centre of Excellence for Electric Vehicles at Hindusthan College of Engineering and Technology (HiCET), established with M/s Haritha Mobility, is a multidisciplinary facility dedicated to research, training, and innovation in sustainable mobility. It provides students access to modern tools for EV architecture, energy storage, battery management, motor control, power electronics, and renewable-energy integration. Equipped for hands-on work with lithium-ion batteries, BLDC motors, and controllers, the centre facilitates project-based learning, workshops, industry collaborations, and competitions. Students gain practical experience in designing and evaluating eco-friendly vehicles, exploring energy efficiency, alternative propulsion, and sustainable engineering. By promoting low-carbon technologies and climate-conscious innovations, the centre enhances technical competencies, research skills, and readiness for careers in the emerging electric mobility and green technology sectors.

Centre of Excellence for E-Vehicles established in association with M/s. Haritha Mobility to promote research & development and conduct training programmes

(j) Courses on Sustainability integrated into the curriculum

The institution has strategically embedded various courses on environment and sustainability that aligns with UN SDG 13 in different disciplines to develop environmentally responsible engineers.

Courses on Environment and Sustainability

S. No.	Course Code and Name	Semester	Credit
1.	22CY2102 Environmental Sciences and Sustainability	II	2
2.	22CE5316 Climate Change Adaptation and Mitigation	V	3
3.	21CE5602 Sustainable Infrastructure Development	V	3
4.	22EI5302 Industrial Pollution Control	V	3
5.	22EE5371 Energy Management and Energy Auditing	V	3
6.	22EE5471 Introduction to Environmental Studies	V	3
7.	22CY6101 Environmental Studies	VI	2
8.	22CE6309 Smart Cities	VI	3
9.	22CE6310 Intelligent Transport Systems	VI	3
10.	22CE6603 Sustainable Agriculture and Environmental Management	VI	3
11.	22EE6303 Utilization and Conservation of Electrical Energy	VI	3
12.	22AG6401 Urban Agriculture and Organic Farming	VI	3
13.	22AU6308 Environmental Sustainability and Impact Assessment	VI	3
14.	22CE6202 Green Buildings	VI	3
15.	22ME7372 Environmental Sustainability and Impact Assessment	VII	3
16.	22CE7376 Environmental Impact and Risk Assessment	VII	3