Activities and Achievements towards Environmental Sustainabilities

Kalinga Institute of Industrial Technology (KIIT)
Deemed to be University, Bhubaneswar

Major Activities and Achievements Related to Environmental Sustainability in 2024 2025

Overview

In an era defined by accelerating climate change, resource depletion, and environmental degradation, higher education institutions bear a profound responsibility to lead the transition toward a sustainable future. KIIT Deemed to be University (KIIT DU) has consistently embraced this responsibility, integrating environmental consciousness into its academic, research, and outreach endeavors. The period of 2024–2025 witnessed a remarkable array of activities and achievements that underscore KIIT's unwavering commitment to environmental sustainability across multiple dimensions—from global scientific congresses to campus level behavioral interventions.

The sustainability initiatives during this period were characterized by their remarkable diversity and strategic depth. At the global level, KIIT hosted the 9th International Congress & Exhibition on Arsenic in the Environment (As2024) , a landmark event that brought together international experts to address the pervasive crisis of arsenic contamination affecting over 100 million people worldwide. Similarly, the International Workshop on Dam Safety (IWDS 2025) , organized in partnership with IIT Guwahati, addressed critical challenges in water resource management and disaster resilience—issues of particular relevance to Odisha, a state highly vulnerable to flooding and cyclones.

Parallel to these large scale international engagements, KIIT demonstrated focused attention on India's national climate commitments. Events such as Driving Sustainability and Meeting Net Zero Emission Targets and Advancing the Energy Sector by Surge Supercapacitors directly contributed to building capacity around renewable energy, energy storage, electric vehicle adoption, and the nation's ambitious goal of achieving net zero emissions by 2070. These industry academia collaborations ensured that theoretical knowledge was complemented by practical, technological solutions.

The university also prioritized urban sustainability and green infrastructure. Seminars on Building Climate Resilient Sustainable Cities, Low Carbon Asphalt Mixtures, and the Workshop on Urban Mobility addressed the environmental footprint of urban development and transportation. Meanwhile, foundational awareness events—including Earth Day sensitization programs, the Move for Earth Symposium, and Swacchata Diwas cultivated a culture of environmental responsibility among students, faculty, and staff.

Furthermore, KIIT's sustainability agenda was inclusive and interdisciplinary. The National Workshop on Sustainable Development Goals addressed legal and policy frameworks, while the seminar on Utilization of Indigenous Knowledge of Particularly Vulnerable Tribal Groups recognized the value of traditional ecological knowledge in shaping an inclusive, sustainable Viksit Bharat.

Collectively, these events represent a comprehensive, multi layered approach to environmental sustainability—one that combines global scientific leadership, national policy alignment, technological innovation, campus level action, and community engagement. This report documents these activities and achievements as evidence of KIIT's enduring commitment to protecting the planet for future generations.

Activities and Achievements Related to Environmental Sustainability:

9th International Congress & Exhibition on Arsenic in the Environment: As2024

The 9th International Congress & Exhibition on Arsenic in the Environment was organized by KIIT's School of Applied Sciences from October 20 24, 2024, under the theme "Arsenic and other Pollutants, Water Security and One Health under Global Climate Change Scenario." This prestigious global event brought together international experts to address the critical issue of arsenic contamination, which affects over 100 million people worldwide through drinking water and food sources. The congress provided a platform for discussing the intersection of water security, public health, and climate change. Selected papers were published in high impact factor journals, with abstracts published in CRC Press proceedings, contributing significantly to global environmental research and policy discussions on water quality management.

URL: https://as2024.kiit.ac.in/registration/

International Workshop on Dam Safety (IWDS 2025)

The Second International Workshop on Dam Safety (IWDS 2025) was held at KIIT DU from February 21 23, 2025. The workshop was organized in partnership with IIT Guwahati's Technology Innovation Hub and addressed critical challenges in dam safety and resilience. Former Chief Secretary of Odisha, Shri P.K. Jena, emphasized the importance of disaster preparedness, noting Odisha's vulnerability to heavy monsoon inflows. Shri Bhopal Singh, Member (D&R) & Ex Officio Additional Secretary to the Government of India, highlighted that India ranks third globally with 6,615 large dams. The workshop focused on advanced

geophysical techniques, underwater remotely operated vehicles (ROVs) for dam health assessment, sedimentation management, and risk mitigation strategies, contributing to water resource management and climate resilience.

URL: https://news.kiit.ac.in/amp/kiit events/workshop/second international workshop on dam safety begins at kiit du/

Driving Sustainability and Meeting Net Zero Emission Targets: Impact of Energy Storage, Electric Vehicles and Renewable Energy

Dr. Dillip Kumar Mishra from Clemson University, USA, delivered this expert talk at KIIT's School of Electrical Engineering. The session provided valuable insights into the electric vehicle market, power system resiliency, power system stability, and energy storage technologies. Dr. Mishra highlighted advancements in electric vehicle technology and ongoing research to enhance battery performance. The talk addressed critical pathways for achieving net zero emission targets through the integration of renewable energy sources, energy storage solutions, and the adoption of electric vehicles. This event contributed to building capacity among students and faculty on sustainable energy transitions and India's commitment to achieving net zero emissions by 2070.

URL: https://electrical.kiit.ac.in/dr dillip mishras talk on net zero emissions energy advances/#content

Advancing the Energy Sector and achieving a Net Zero Future by Surge Supercapacitors

This industry focused seminar featured Surge Supercapacitors, India's leading ultracapacitor manufacturer, discussing advancements in energy storage technology. The event highlighted how supercapacitor technology can accelerate the transition to a net zero future by improving energy efficiency and enabling better integration of renewable energy sources. The session provided students and faculty with insights into cutting edge energy storage solutions and their applications in electric vehicles, grid stabilization, and industrial energy management. This industry academia collaboration strengthened KIIT's engagement with the renewable energy sector and promoted awareness of indigenous technological solutions for climate change mitigation.

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National Workshop on Sustainable Development Goals: Issues and Challenges

This national workshop was organized in hybrid mode by the KIIT Centre for Environmental Law. The workshop addressed the complexities of implementing the 17 Sustainable Development Goals across various sectors. Discussions focused on India's progress toward achieving the SDGs by 2030, with particular emphasis on Goal 6 (Clean Water and Sanitation), Goal 7 (Affordable and Clean Energy), Goal 11 (Sustainable Cities and Communities), Goal 13 (Climate Action), and Goal 15 (Life on Land). The hybrid format enabled wider participation from students, researchers, and policymakers across the country, facilitating knowledge exchange on sustainable development challenges and solutions in the Indian context.

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Building Climate Resilient Sustainable City using Multipurpose Infrastructures

This seminar focused on urban planning strategies for climate adaptation, addressing the critical need for resilient infrastructure in rapidly growing Indian cities. The event explored how multipurpose infrastructures—such as integrated stormwater management systems, green corridors, and climate responsive building designs—can enhance urban resilience to extreme weather events, sea level rise, and heat island effects. Experts discussed case studies from climate vulnerable regions and proposed actionable frameworks for integrating climate resilience into urban development policies, contributing to sustainable urban planning discourse in India.

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Green Tech for a Blue Planet: Innovations in Climate Resilience

This event focused on technological innovations for building climate resilience, emphasizing adaptation strategies alongside mitigation efforts. The seminar explored green technologies across sectors including water management, coastal protection, sustainable agriculture, and disaster risk reduction. Given Odisha's vulnerability to cyclones and flooding, the discussions were particularly relevant for regional climate action planning. The event highlighted how technological innovations can help vulnerable communities adapt to climate impacts while promoting sustainable development pathways.

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Low carbon Asphalt Mixtures and Sustainable Flexible Pavements

This technical seminar addressed carbon emission reduction in the construction sector, specifically targeting road infrastructure development. The event explored low carbon asphalt mixtures, recycling techniques for pavement materials, and sustainable flexible pavement design methodologies. Given that road construction contributes significantly to industrial carbon emissions, this seminar provided valuable insights into green construction practices. The technical discussions supported India's infrastructure development goals while aligning with national climate commitments under the Paris Agreement.

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Workshop on Urban Mobility: Evaluating Sustainable Campus Mobility for KIIT University Campus Users

This workshop focused on creating a campus level model for sustainable mobility that can be replicated across other institutions. Participants evaluated current transportation patterns on KIIT's campus and proposed interventions for promoting eco friendly commuting options including electric vehicles, bicycle infrastructure, pedestrian friendly pathways, and shared mobility services. The workshop demonstrated KIIT's commitment to leading by example in sustainable campus operations, contributing to Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action).

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The Mercury cycle: The Everglades as a model nutrient impacted wetland, with speculations for India

This scientific seminar used the Florida Everglades (USA) as an international case study to address mercury contamination in wetland ecosystems. The speaker discussed mercury cycling mechanisms, bioaccumulation pathways, and implications for human health through fish consumption. The seminar drew parallels between the Everglades and Indian wetlands, offering speculative insights for mercury contamination management in India's aquatic ecosystems. This event contributed to understanding heavy metal pollution dynamics and informed strategies for wetland conservation and water quality management.

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Move for Earth Symposium

The Move for Earth Symposium was a dedicated event focused on Earth sustainability, likely involving student led action plans and campus wide engagement activities. The symposium promoted awareness of environmental issues and encouraged behavioral change toward sustainable practices. Such events at KIIT contribute to building an environmentally conscious campus community and aligning university operations with sustainability principles. Student participation in symposium activities fosters leadership in environmental action.

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Seminar on Climate Action

This foundational seminar addressed the broad theme of climate action, covering topics such as greenhouse gas emission reduction, renewable energy transition, climate policy frameworks, and individual responsibility in climate mitigation. The seminar contributed to raising awareness among the KIIT community about the urgency of climate action and the role of educational institutions in driving sustainable change. Events like this help build a culture of environmental responsibility across campus.

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Swacchata Diwas Observation

Swacchata Diwas aligns with the national Swachh Bharat Mission (Clean India Mission), a flagship program of the Government of India. This observance at KIIT involved campus cleanliness drives, waste management awareness, and community engagement activities. The event demonstrated KIIT's commitment to national development priorities and promoted responsible waste disposal practices among students and staff. Such initiatives contribute to Goal 6 (Clean Water and Sanitation) and foster a culture of civic responsibility.

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Workshop on Wetlands

This workshop addressed the ecological importance of wetlands as "nature's kidneys,"

highlighting their role in water purification, flood control, biodiversity conservation, and climate regulation. Given that Odisha has significant wetland ecosystems including Chilika Lake (Asia's largest brackish water lagoon), the workshop was particularly relevant for regional environmental conservation. Experts discussed wetland conservation strategies, restoration techniques, and policy frameworks for protecting these vital ecosystems from degradation and encroachment.

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Climate Change and Abiotic Stress Management

This seminar addressed the intersection of climate change and agricultural sustainability, focusing on abiotic stresses such as drought, salinity, extreme temperatures, and flooding that affect crop productivity. The event explored management strategies including climate resilient crop varieties, water efficient irrigation techniques, and soil health management. Given agriculture's vulnerability to climate variability, this seminar contributed to food security discussions and supported Goal 2 (Zero Hunger) and Goal 13 (Climate Action).

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Sensitization on occasion of Earth Day

This event marked the annual global celebration of Earth Day (April 22) at KIIT. The sensitization program aimed to raise environmental awareness among the university community, focusing on themes such as plastic pollution reduction, biodiversity conservation, and sustainable consumption. Earth Day observances at KIIT typically involve pledge taking, awareness campaigns, and student engagement activities that reinforce the university's commitment to environmental stewardship and sustainability education.

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Orientation on sensitization of Earth Day

This orientation session prepared the KIIT community for Earth Day observances, providing foundational knowledge about environmental challenges and sustainable solutions. The session likely covered topics such as climate change science, waste management principles, energy conservation practices, and individual actions for environmental protection. Such preparatory events help maximize the impact of Earth Day activities and ensure meaningful

participation from students and staff across all KIIT campuses.

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Green Solutions in the Age of Disruption

This seminar was part of the 15th National Marketing Conclave at KIIT, focusing on how businesses can integrate environmental sustainability into their operations during times of technological and market disruption. The session explored green business models, sustainable supply chain management, eco friendly product innovation, and corporate social responsibility in environmental protection. This event demonstrated KIIT's commitment to promoting sustainable business practices among future management professionals.

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Utilization of Indigenous Knowledge of Particularly Vulnerable Tribal Groups for an Inclusive Viksit Bharat

This seminar explored how traditional ecological knowledge of Particularly Vulnerable Tribal Groups (PVTGs) can contribute to sustainable development and India's vision of a "Viksit Bharat" (Developed India). Indigenous communities have historically practiced sustainable resource management, biodiversity conservation, and climate adaptation strategies. The event highlighted the importance of integrating indigenous knowledge systems with modern sustainability science, promoting inclusive development that respects cultural heritage while addressing contemporary environmental challenges.

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International Conference on Emerging Trends in Physics (ICETP 2025)

This international conference, held jointly with the 41st Annual Convention of the Orissa Physical Society (OPS), included sessions on sustainable energy and environmental physics applications. The conference provided a platform for discussing physics based solutions to environmental challenges, including photovoltaic materials, energy storage systems, atmospheric physics for climate modeling, and radiation detection for environmental monitoring. This event contributed to advancing research in physics applications for environmental protection and sustainable energy.

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More events can be found in below links:

https://kiit.ac.in/events/

https://nss.kiit.ac.in/