IMPLEMENTATION OF SDG-13: TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS IN SHOOLINI UNIVERSITY, HIMACHAL PRADESH, INDIA

STATUS REPORT 2025



SUSTAINABLE DEVELOPMENT GOALS

Shoolini University

CEEST
Centre of Excellence in Energy Science and Technology

Centre of Excellence in Energy Science and Technology
Shoolini University, Bahjol, Solan, Himachal Pradesh-173229
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Executive Summary

Shoolini University continues to make efforts to contribute towards SDG-13 to combat global climate change. The University conducts research as well as many programmes and campaigns to contribute towards SDG-13 and has also prepared a well-researched National Document on the Implementation of United Nations Sustainable Development Goals (UNSDGs) in Higher Education Institutions in collaboration with Association of Indian Universities (AIU). Under this initiative a number of steps in awareness, education, research and transfer of technology have been taken to combat climate change and its impact by 2030. The use of renewable energy sources, reduction in the use of fossil fuels in transportation, community cooking, building design and construction have been taken. As per THE Global Impact Rankings announced in 2025 Shoolini University has bagged a global ranking No.38 in SDG 13. This report presents the status of implementation of SDG-13 and governing policy at Shoolini University, Solan, Himachal Pradesh, India during 2025.

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1. Introduction

As per the UN SDG-13 the main task is to take urgent action to combat Climate change and its impacts. The climate change has resulted in warmest decade, forest fires, droughts, floods, changed weather patterns, droughts, floods, changing sea levels and a number of other climate disasters affecting agriculture, food security, economy and lives of people all over the world. Thus, there is need for higher education institutions (HEIs) to combat the climate change by creating awareness, imparting education, action-oriented research and policy initiatives. In this context, Shoolini University has taken a number of steps to combat climate change and its impact by a number of measures like utilising renewable energy sources, reduction in the use of fossil fuels in transportation, community cooking, agriculture practices in developing appropriate drought resistant plant varieties.

1.1 Education

The global thrust for climate change mitigation calls for all organizations and higher education institutions to take immediate measures to lower their carbon footprint. Shoolini University has established a Centre of Excellence in Energy Science & Technology (CEEST) in 2019 which is led by Prof. Shyam Singh Chandel who comes under the global top 2% scientists according to research conducted by Stanford University.

(Stanford Research Link: https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw)

The Centre is spearheading the action on various UN SDGs in the University. Shoolini University was ranked 9th in India for Energy Research by SCIMAGO Institutes Rankings 2025. The CEEST's Scientists have a large number of publications in quality research journals. A large number of patents have already been filed through the same.

SCIMAGO Institutional Ranking (Energy Subject)

• World: 508th

• India: 9th

• Asiatic Region: 191st

• BRICS: 144th

Link:

https://www.scimagoir.com/institution.php?idp=90167

1.2 Research in Energy and Climate Action

A large number of research papers in these areas have been published in top ranking Journals that contributed to high THE Rank in 2025. List of research publications related to SDG-13 is given in Annexure-I.

Evidence:

SDG-13 Rank (2025): https://www.timeshighereducation.com/rankings/impact/climate-action/2025

Research in Energy, FWCI metrics related to SDG-13 of Shoolini University (Source SCIVAL):

Name	Scholarly Output	Field-Weighted Citation Impact	Citation Count
SDG 7: Affordable and Clean Energy (2025)	102	1.77	1563
SDG 13: Climate Action (2025)	54	2.57	1060

Already a governing 'Energy and Environment Policy' has been formulated in 2019 to set the roadmap and required actions to make the University carbon neutral by 2030. The scientists are working in priority research areas on Climate change in Energy, especially use of renewable energy applications in Agriculture, Sciences, Engineering, Biotechnology, Food technology and Pharmacy. The main objective of these initiatives is to develop the University as a sustainable education and research hub and township to be model for the higher education Institutions in India.

2 Combating Climate Change Impact

According to International Energy Agency, the total energy-related CO2 emissions increased by 0.8% in 2024, hitting an all-time high of 37.8 Gt CO_2 (figure-1). This rise contributed to record atmospheric CO_2 concentrations of 422.5 ppm in 2024, around 3 ppm higher than 2023 and 50% higher than pre-industrial levels. Climate funding fell short by USD 100 billion, indicating that not enough action is being taken in-spite-of commitment towards the same. It is estimated that over 700 million people will be displaced by 2030 due to droughts and sea levels are expected to rise 30-60 cm by 2100. The United Nations Sustainable Development Goal - 13 aims to combat climate change and urges a global effort to take urgent action to lower the environmental impact and switch to sustainable technologies and practices.

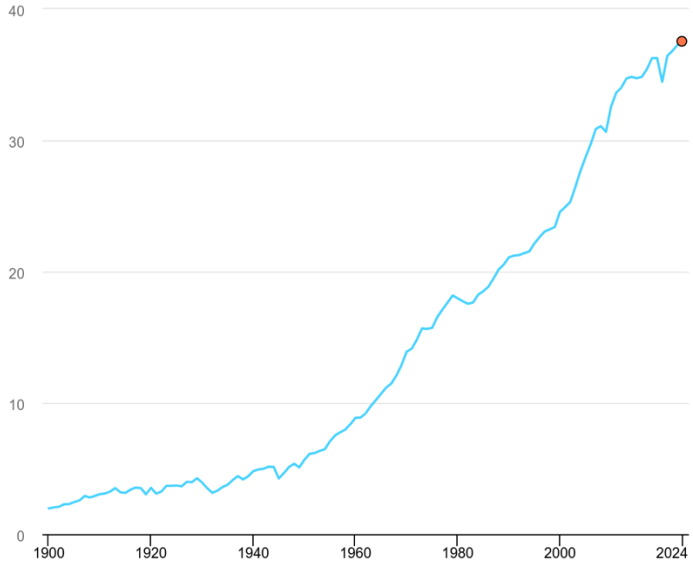


Figure 1: Global CO2 emissions in Gt CO_2 from 1900 till 2024

Shoolini University has been one of the early movers in adoption and implementation of SDGs in campus and had created the Energy and Environment policy in 2019 and set targets to be fully carbon neutral by 2030 through various measures like use of photovoltaic power, biogas, sustainable building materials, use of passive solar architecture, waste recycling, waste water recycling and purification, waste to energy, tree plantation in the campus, protecting adjoining Cir Pine forest from forest fires thus protecting the environment. Several measures have already been undertaken by the university which are highlighted in this report.

3 Towards Carbon Neutral Sustainable Campus through Mandatory Energy and Environment Policies

The Energy and Environment Policies align Shoolini University to achieve carbon neutral sustainable Campus and main highlights of the policy are as follows:

Action plan:

- Installation of solar PV on grid and standalone power generation system in the university premises.
- Installation of solar water heating systems in the university premises.
- Installation of Concentrated Solar Technology based community Steam Cooking Systems for Hostels to save conventional fuels and building integrated cooking system.
- Installation of Solar Street lights for saving conventional electricity in the university campus.
- Installation of Bio-gas plants to generate power from the bio-residues like kitchen waste, cow dung or other wastes generated in the campus premises. Focus will be given to implementation of Biomass Gasification, Pyrolysis in the campus.
- Installation all energy efficient electrical or electronic devices/equipment/masonries in other to save energy in the campus.
- Measures to reduce vehicular pollution in the Campus. Restriction of heavy vehicles inside the campus during day time. For night movement of heavy vehicles necessary permission required from the competent authority.
- Promotion of shared Cab/Taxi and personal cars during office hours. Encourages faculty and students to use public transport.
- Promotion of electric vehicles/Carts in the university campus or not allowed to buy 1200 CC above cars for official uses.
- Initiation of regular annual tree plantation during ***Van Mahotsav*** (Forest Festival) in the campus and surrounding areas for CO_2 emission reduction.
- Installation of bamboo based and regular waste collection dustbins instead of plastic dustbins in the university campus. This generates income to local bamboo basket makers artisans also.
- Implementation of waste recycling and waste treatment plant in the campus.

Other policies related to sustainability: Several other policies have been drafted to guide the university's sustainability initiatives which are listed as follows:

- *Divestment Policy*
- *Sustainable Procurement Policy*
- *Sustainable Investment Policy*
- *Hazardous Wastes Disposal Policy*
- *Minimized use of Plastics Policy*
- *Policy on Ethical Sourcing of Food and Supplies*
- *Waste Disposal to Landfills and Recycling Policy*
- *E-Waste Policy*

4 Disaster Management Policy

The university has an official Disaster Management Policy which is publicly available and directs all concerned activities of the university to take into account sustainable practices, energy efficiency and climate change mitigation. The university has been conducting awareness activities on disaster management since 2019. The university also has a dedicated Centre for disaster management research.

Related links are as follows:

https://www.facebook.com/people/Disaster-Management-and-Climate-Change-Shoolini-University/100066612164487/?ref=page_internal&mt_nav=0

https://shooliniuniversity.com/research-centre-in-disaster-management

5 Lowering GHG Emissions by Solar Energy Production and Consumption

Under its Energy policy, Shoolini university has installed a 400 kWp rooftop photovoltaic power plant in the campus to partially meet its energy requirements. As an follow up, all the new buildings are planned to be constructed as energy efficient and solar PV grid integrated plants are planned. The electrical energy used by the university was 19,31,579 kWh or 6,954 GJ and that generated by solar PV plant was 3,61,577 kWh or 1,302 GJ for 2025.
New projects to lower dependence on conventional electricity supply are being planned.



Figure 2: 400 kWp PV power plant installed in the university

6 Designing and constructing Low carbon footprint buildings-use of environment friendly Building materials

Under the mandatory Net Zero Energy and Passive Solar housing Policy, the university has developed a Yogananda Ville with a number of solar huts in the campus using sustainable building materials like wood, bamboo, slate, stone, mud, stabilized mud blocks etc. shown in the following figures.



Figure 3: Wooden huts /houses in Yogananda Ville at Shoolini University.



Figure 4: Bamboo and slate Roof E-Studio for online lectures constructed during Covid times



Figure 5: Living with Nature-Eco friendly Bamboo Tree Houses in the campus for student interaction



Figure 6: Use of Traditional and Climate responsive Building Materials -Two storeyed houses constructed by using mud and wood.



Figure 7: Sustainable building of Tagore School of Design at Shoolini University.



Figure 8: Sustainable Building and Electric Vehicle for transportation in Yognanda Ville in Shoolini University



Figure 9: Solar Trombe Wall constructed by CEEST in the new Animal House Building to reduce air-conditioning requirements and natural space heating by use of solar energy. This also helps in climate control by reducing the use of air conditioners that use ozone depleting refrigerant gases which also have high global warming potential.

7 Climate Responsive - Green Campus with Vegetation Coverage

The university has ensured that adequate area is kept under trees, plants, and flowery plantation cover for an environment friendly green campus. As a measure of maintaining a clean and green campus separate dustbins for biodegradable and non-biodegradable wastes have been fixed in every part of the university campus. The University has been declared as "zero single use plastic" campus as per the policy initiative taken in 2021.



Figure 10: A view of Green Campus of various academic blocks of Shoolini University with visible tree plantations and photovoltaic power plants installed that reduce the carbon footprint of the university.

8 Reducing Carbon emissions and fossil fuel consumption for transportation in the campus -use of electric carts

Non-polluting electric vehicles are used for in-campus transport as shown in figure-11.



Figure 11: Electric vehicles used for transport within the university campus to reduce carbon emissions.

9 Use of non-polluting biogas and solar thermal cooking system : An alternative to LPG

As a step from divestment from use of liquid petroleum gas (LPG) for cooking the university has installed a solar thermal cooking system that provides for cooking food for 500 students. Also, a 1.5 m^3 biogas plant is installed in the agricultural farm in the university that is used for cooking food by the employees working in the farm.

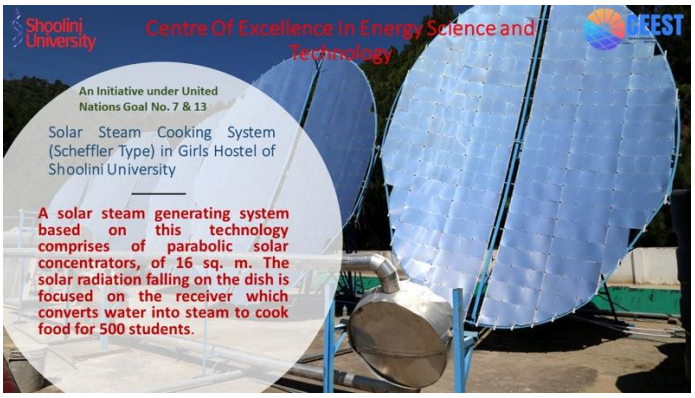


Figure 12: Steam cooking system for 500 students at Girls' hostel rooftop at Shoolini University



Figure 13: Biogas system installed in agricultural farm at Shoolini University

10 Reducing conventional electricity consumption by installing solar streetlights and LED lights in the campus

Solar streetlights are installed throughout the campus for lowering the dependence on conventional electricity and utilising clean energy sources. Also 95% of the university lights have been replaced with energy efficient LED lights.



Figure 14: Utilizing clean Solar energy -Solar street lights installed in the university Campus(left) and use of energy efficient LED lights inside the university buildings (right)

11 Wastewater Treatment and Recycling Plant

A Sewage Treatment Plant of capacity 3,50,000 lpd and Effluent Treatment Plant of 50,000 lpd capacity, are installed in the campus for the treatment of sewage water and waste water coming from the hostels and research laboratories respectively (figure-15). Recycled water is used for irrigation of gardens, fields and lawns.



Figure 15: Sewage and water treatment plant at Shoolini University

12 Conferences, Webinars and other activities related to the promotion of SDG-13

Beyond research and innovation, Shoolini University remains deeply committed to grassroots education and local outreach. Through CEEST and collaborative programmes, the University conducts training sessions, field demonstrations, and awareness workshops that integrate scientific knowledge with hands-on learning. Activities include solar energy demonstrations (cookers, PV systems), waste-to-energy projects, rainwater harvesting, sustainability marathons, and tree plantation drives. Shoolini University conducts conferences, webinars and awareness programmes throughout the year to contribute for the fulfilment of SDGs. The university also works with **ICFRE Himalayan Forest Research Institute**, Shimla (https://hfri.icfre.gov.in/) which is an autonomous institute under the ministry of forest, environment and climate change, govt. of India and NGOs like '**Healing Himalayas**' https://healinghimalayas.org/, **Integrated Mountain Initiative (**https://www.mountaininitiative.in/), New Delhi, to carry out various activities for environment action and sustainability.

Conferences and Events

1 International Conference on Applied Artificial Intelligence and Innovation (AAIIC 2025)

Organising Institution: Yogananda School of AI, Computers, and Data Science (YSAICDS), Shoolini University, Solan, Himachal Pradesh, India

Date: 11–12 July 2025

Duration: Two Days International Conference

Participants: Academicians, researchers, faculty members, students, and industry

professionals
Conference Theme: Applied Artificial Intelligence and Innovation

The Yogananda School of AI, Computers, and Data Science (YSAICDS) at Shoolini University organised the International Conference on Applied Artificial Intelligence and Innovation (AAIIC 2025), a two-day academic and research event bringing together experts, researchers, academicians, and industry professionals to discuss emerging developments and practical applications of artificial intelligence (AI). The conference provided a platform for knowledge-sharing, interdisciplinary research, international academic interaction, and industry engagement. Various academic and industry fields participated in the event, contributing to discussions on the growing role of AI in education, **energy**, ethics, intelligent systems, automation, manufacturing, and enterprise solutions.

The conference featured international speakers who shared research insights and expertise in emerging AI technologies and their practical applications. Speakers included:

- **Sanjay Misra** – Universidad de Alcalá, as listed in the conference announcement.
- **Shailendra Rathore** – Abertay University, United Kingdom.
- **Yerzhan Kerimbekov** – Zhanibekov University, Kazakhstan.
- **Laura Baitokayeva** – Nazarbayev Intellectual School, Kazakhstan.
- **Tomáš Čech** – Palacký University, Czech Republic.

The conference also involved Prof. Manju Khari of Jawaharlal Nehru University and Prof. K. K. Patel of Charotar University of Science and Technology as Conference Theme Chairs. They emphasised the importance of collective learning, teamwork, and research collaboration in advancing the field of artificial intelligence.
The participation of speakers from different institutions and countries strengthened the conference's international academic character and provided opportunities for exchanging research knowledge and perspectives.

Industry Participation and Practical Applications

An important component of AAIIC 2025 was the involvement of industry professionals. Senior professionals from Tata Consultancy Services (TCS), Apoorv Aggarwal and Rajit Sikka, shared insights into the practical application of AI across automation, manufacturing, and enterprise solutions.
Their sessions highlighted how businesses are integrating AI technologies into operational processes, developing intelligent systems, and improving the application of digital technologies in industrial environments.
This academic–industry interaction helped connect theoretical research with practical requirements and demonstrated the value of cooperation between universities and industry in technological innovation.

Major Themes and Areas of Discussion

The conference explored a range of themes related to the development and application of AI, including:

Artificial Intelligence in Energy: Examination of AI applications in energy-related systems and technological innovation.

AI in Education: Discussion of emerging AI applications that can support educational practices, research, and learning processes.

Ethics and Responsible AI: Consideration of ethical questions and the responsible development and application of artificial intelligence.

Intelligent Systems: Exploration of emerging research and applications in intelligent computing and AI-driven systems.

AI in Industry: Discussion of applications in automation, manufacturing, enterprise systems, and industrial operations.

These themes encouraged interdisciplinary dialogue and highlighted the potential of artificial intelligence to address challenges across academic, industrial, and societal contexts.

Relevance to Sustainable Development Goals

SDG 7: Affordable and Clean Energy

The conference included discussions on AI in energy, providing a thematic connection with SDG 7 – Affordable and Clean Energy. AI technologies have potential applications in energy-system optimisation, energy-demand analysis, operational efficiency, and the integration of emerging energy technologies.

The conference's energy-related discussions therefore offered a platform for exploring the role of AI in energy innovation. However, any claim that specific renewable-energy or energy-efficiency outcomes were achieved would require additional evidence from the conference programme, presentation materials, or proceedings.

SDG 13: Climate Action

Artificial intelligence can contribute to climate-related research through environmental data analysis, climate modelling, monitoring systems, and the development of technology-based approaches to environmental challenges.

AAIIC 2025 promoted discussion and collaboration around applied AI and innovation, creating a potential connection with technology-driven approaches to sustainability. Nevertheless, the available conference description does not establish a dedicated climate-action session or a measured climate impact. A direct SDG 13 claim should therefore be supported by relevant presentation titles, abstracts, or session documentation.

Outcomes and Significance

The conference brought together 72 participants from academic and industry fields and provided opportunities to:

1. Exchange research knowledge and perspectives on emerging artificial intelligence technologies.
2. Encourage international academic interaction and interdisciplinary collaboration.
3. Connect academic research with industry applications in automation, manufacturing, and enterprise solutions.
4. Explore AI applications across energy, education, ethics, and intelligent systems.
5. Highlight opportunities for collaboration between researchers, students, and industry professionals.

Suggested Supporting Evidence

News link; https://shooliniuniversity.com/news/shoolini-hosts-global-conference-on-applied-ai-and-innovation

Photographs:







2 Clean Trails, Clear Minds: Healing Himalayas Drive to Jakhu Temple

SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 13: Climate Action & SDG 17: Partnerships for the Goals
Date: 6th February 2025

Shoolini University, in collaboration with the Healing Himalayas Foundation, organized a powerful cleanliness drive to the revered Jakhu Temple in Shimla, reinforcing the values of sustainability, environmental stewardship, and community service. The initiative brought together passionate student volunteers and faculty members committed to preserving the natural beauty and sanctity of the Himalayas.

The day began with an early morning departure, filled with enthusiasm and a shared mission. Upon reaching Jakhu, the team conducted a thorough cleanliness campaign along the temple path and surrounding forest area—collecting plastic waste, discarded items, and educating locals and tourists on the importance of responsible tourism.

Volunteers carried placards and chanted slogans urging visitors to “Leave Only Footprints” and “Keep the Himalayas Green.” The drive wasn’t just about picking up litter—it was a hands-

on lesson in climate responsibility and sustainable living. The collected waste was later segregated, and efforts were made to recycle where possible.

This impactful initiative not only cleaned a sacred space but also ignited a deeper connection with nature among the participants. The experience served as a reminder that true devotion includes caring for the land that nourishes our spirit. The drive embodied Shoolini's mission to educate change-makers who lead with purpose and protect the planet.



Figure 16: Volunteers during the cleaning drive

3 Eco-Innovation at Moksh: A Showcase of Sustainable Living

SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production & SDG 13: Climate Action
Date: March 28 to 30, 2025
Venue: Badminton Court, Shoolini University

From March 28th to 30th, 2025, Shoolini University's annual fest, Moksh, featured a dedicated Sustainability Stall located at the Badminton Court. This special corner was designed to promote awareness about sustainable living, showcasing eco-friendly practices, and encouraging individuals to make environmentally responsible choices. The stall was entirely built using handmade materials, reflecting the university's commitment to sustainability.

The Sustainability Stall featured a variety of exhibits and activities that emphasized the importance of sustainable living in today's world. The materials used to set up the stall were entirely handcrafted, and sourced from recycled or natural resources, ensuring that the stall itself was a demonstration of sustainability. From upcycled furniture to handmade decorations, every element of the stall showcased creativity and innovation while promoting eco-friendly alternatives to conventional practices.

The stall included interactive displays, such as DIY workshops, where visitors could learn how to create their own sustainable products, like reusable bags, biodegradable items, and natural cleaning solutions. Additionally, there were informational boards that provided tips on how to reduce carbon footprints, conserve resources, and adopt a sustainable lifestyle. Throughout the event, the Sustainability Stall engaged visitors in discussions about the impact of everyday

choices on the environment and the importance of reducing waste, recycling, and reusing materials. By featuring handmade, eco-friendly products, the stall encouraged attendees to explore alternatives to single-use plastics and disposable items, thereby inspiring them to take small yet impactful steps toward sustainability.

Visitors were also introduced to various local sustainable brands and initiatives that focus on creating a greener future, offering an opportunity to connect with people who share the same passion for environmental consciousness. The Sustainability Stalls at Moksh were not just about showcasing eco-friendly products—it was a symbol of the university's commitment to making sustainability an integral part of campus life. By organizing this corner, Shoolini University provided a platform for students to actively engage in sustainability efforts and learn more about living in harmony with the environment. This stall was a perfect example of how sustainability can be creatively incorporated into university events, leaving a lasting impact on students, staff, and visitors. It reminded everyone that each small effort counts, and by coming together, we can make a significant difference in protecting the planet for future generations.



Figure 17: Event Poster



Figure 18: Event photos

4 Bisleri's Bottles for Change: Campus Cleaning Drive at Shoolini University

SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 13: Climate Action & SDG 11: Sustainable Cities and Communities
Date: 22 nd, April, 2025

On this special Earth Day, Shoolini University joined hands with Bisleri's "Bottles for Change" initiative to take a bold step towards a cleaner, greener campus. The drive was a powerful reminder that small actions, when taken together, can spark big changes.

"Bottles for Change" is more than just a cleanup—it's a movement that transforms how we think about plastic waste. Instead of discarding PET bottles and plastic waste, the initiative encourages us to collect, segregate, and recycle responsibly, turning what was once trash into valuable resources. This circular approach to plastic is vital for protecting our environment and reducing pollution.

On April 22, a dedicated group of students and volunteers scoured the campus grounds, collecting plastic waste with energy and enthusiasm. Each bottle picked up was a step towards breaking the cycle of plastic pollution and building awareness about sustainable living.

The drive not only cleared the campus but also instilled a deep sense of responsibility and environmental consciousness in every participant. It was a beautiful collaboration of youth passion, community spirit, and corporate commitment, perfectly aligned with global efforts to promote responsible consumption and climate action.

As we walked through the campus, collecting plastic and sharing smiles, we became part of a larger story—one where every bottle collected is a bottle for change.



Figure 19: Event photos

5 International Earth Day Celebration

SDG 4: Quality Education, SDG 7: Affordable and Clean Energy, SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production & SDG 13: Climate Action.

Venue: Covered Parking, Shoolini University
On April 24th, 2025, Shoolini University came alive with the spirit of Earth Day through a vibrant, purpose-driven celebration that united sustainability, innovation, and artistic expression. At the heart of the event was the Inter-School Eco-Challenge, where nine schools competed passionately across four dynamic categories: Clean Energy Live Demo, Waste-to-Wonder DIY Challenge, Green Bazaar Exhibition, and Poster Making. Each school brought forward incredible creativity and collaboration—demonstrating working models of clean energy, repurposing waste into functional and beautiful products, setting up stalls that embodied the 3Rs (Reduce, Reuse, Recycle), and crafting thought-provoking posters under the theme "Our Power, Our Planet." This spirited challenge ignited both friendly competition and a deeper commitment to environmental stewardship.



Figure 20: International Earth Day Event Poster 2025.



Figure 21: Prof. P.K. Khosla at the International Earth Day Event interacting with students



Figure 22: Various sustainable handicrafts made by the students at display during the earth day.

6 Beating Plastic, Building Futures: Shoolini's Commitment to a Greener Tomorrow: World Environment Day 2025

SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 12: Responsible Consumption and Production, SDG 13: Climate Action, SDG 4: Quality Education and SDG 14: Life Below Water.
Theme: Beat Plastic Pollution #ISwitchIDitch
Date: June 5, 2025
Mode: Online (Zoom)

On June 5, 2025, Shoolini University celebrated World Environment Day with an impactful online session hosted on Zoom. Aligning with this year's global theme, Beat Plastic Pollution, the event aimed to raise awareness about the growing environmental crisis caused by plastic waste and inspire participants to adopt sustainable alternatives in their daily lives.

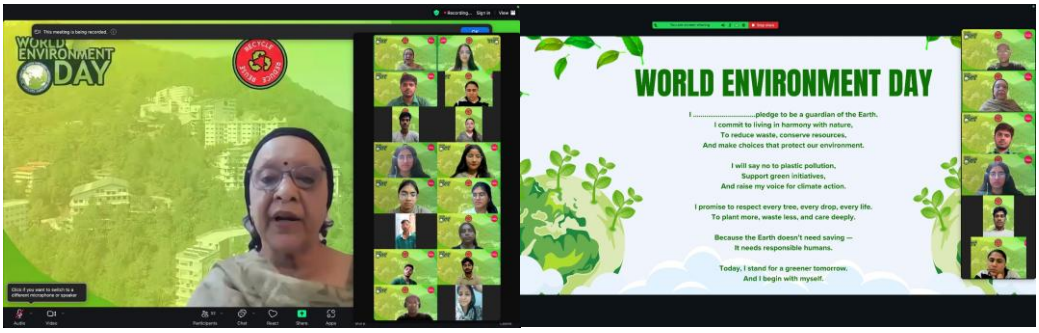


Figure 23: Online Awareness Programme on World Environment Day

7 Walking into a Greener Tomorrow: Campus Tour (Induction 2025)

SDG 7 Affordable and Clean Energy, SDG 3: Good Health & Well-being, SDG 4: Quality Education SDG 6: Clean Water and Sanitation, SDG 7: Affordable and Clean Energy, SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production, SDG 13: Climate Action & SDG 15: Life on Land
Date: August 21-23, 2025
The Campus Tour organized during Induction 2025 between 21st and 23rd August was carefully designed to introduce freshers to their new academic home while embedding within

them a sense of responsibility towards the environment. More than just an orientation walk, it was a guided journey into the sustainable heartbeat of the university, where every building, pathway, and practice reflects the institution's green commitment.

One of the most memorable stops on the tour was the Yogananda Library—a symbol of both learning and sustainability. Students were welcomed by colorful, student-friendly posters placed throughout the library, each carrying engaging messages on themes such as energy conservation, water management, and responsible consumption. Walking through the aisles, freshers were not only introduced to academic resources but also to the green principles guiding the campus. Beyond the library, the tour covered a series of sustainability-rich spaces across campus. At the solar rooftops, students learned how clean energy powers classrooms and laboratories.
Adding a fun and interactive element, the orientation also included classic campus games such as tug-of-war and sack races. These activities fostered team spirit, encouraged collaboration among students, and offered a lighthearted way to reinforce the values of participation, fairness, and community engagement.

The impact of the tour was both immediate and lasting. Over 400 students actively participated on each day, with sustainability-themed photographs uploaded during the event. Nearly all participants pledged to adopt eco-friendly practices in their daily routines. The library posters, in particular, received special appreciation for making sustainability messaging both visually appealing and academically relevant, turning the library into not just a space of knowledge, but also of environmental awareness.

In conclusion, the Campus Tour of Induction 2025 successfully oriented students not just to the university's infrastructure but to its values. By highlighting spaces like the library, and green zones, and by making sustainability fun through creative posters and interactive activities, the tour helped freshers recognize that they are part of a campus community where environmental consciousness is a shared responsibility.



Figure 24: Organizers posing SDG posters for campus tour event.



Figure 25: Students participating in games organized during campus tour event.

8 Daan Utsav 2025: Celebrating the Spirit of Giving at Shoolini University
SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 3 – Good Health and Well-being | SDG 4 – Quality Education | SDG 10 – Reduced Inequalities | SDG 11 – Sustainable Cities and Communities | SDG 12 – Responsible Consumption and Production | SDG 13 – Climate Action | SDG 17 – Partnerships for the Goals
Dates: 1st–7th October 2025
No. of Volunteers: 100+ | No. of Participants: 750+

Daan Utsav 2025 at Shoolini University was a week-long celebration of empathy, creativity, and community engagement. The initiative encouraged students, faculty, and volunteers to contribute their time, skills, and resources toward meaningful causes, blending education, social responsibility, and sustainability in innovative ways.

The week began on 1st October with a Free Medical Camp, in collaboration with MMU, offering services including Cardiology, ECG, Gynaecology , Orthopaedics , and Ophthalmology. Students assisted in organizing participants and facilitating smooth operations, emphasizing preventive healthcare and awareness.

On 3rd October, the campus hosted the World Smile Day Stall at Pine Court, featuring Happy Dares like push-ups, dialogue challenges, and the Smile Ball Juggle Game, engaging participants in fun, interactive activities that promoted joy and positivity. The same day included the Walk in the Shoes initiative, where students volunteered in 2-hour slots to understand the roles of campus staff, fostering empathy and appreciation.

4th October highlighted Sandwich Sewa and Brownie Sewa, with students preparing and serving food to all university staff, including guards, housekeeping, and support teams. Creative contributions continued with Pink October Poster Making and Animal Day, where volunteers, alongside the Animal Lovers Club, crafted crochet neckbands for local dogs, combining compassion with awareness.

On 5th October, students engaged in sorting donated clothes, preparing them for Goonj NGO, Solan, and participated in lantern-making and mat-making workshops using old fabrics, promoting sustainability and creativity. The day also featured the first offline Pink October volunteer meeting, handled by the student core team, and the SFY induction, introducing new members to university community initiatives.

6th October extended the celebrations beyond campus with a visit to the Government School in Majholi , where volunteers conducted interactive games, dance sessions, and activities to teach leadership and personality development to students from Nursery to Class 5, inspiring confidence and teamwork among young learners.

Through these activities, Daan Utsav 2025 exemplified giving beyond material contributions — highlighting empathy, service, and responsible action. The week-long initiative successfully combined creativity, learning, and social awareness, reinforcing Shoolini University's commitment to community engagement, sustainability, and holistic education.

Daan Utsav 2025 demonstrated that meaningful change begins with collective effort, compassion, and creativity, leaving a lasting impact on both students and the community.



Figure 26: Event Poster of Daan Utsav 2025

9 Roots of Change: Shoolini's Plantation and Cleaning Drive
SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 13 – Climate Action | SDG 15 – Life on Land | SDG 11 – Sustainable Cities and Communities
Date: 2nd October 2025
Venue: Surrounding Areas of Shoolini University Campus
No. of Volunteers: 170

As part of Daan Utsav 2025, a week dedicated to the spirit of giving and service, NSS, NCC, and SFY (Shoolinians for You) at Shoolini University organized a vibrant Plantation and Cleaning Drive titled "Roots of Change." The initiative embodied the values of care, compassion, and responsibility — reminding everyone that giving back to the Earth is one of the purest forms of contribution.

The day began with a tree plantation activity, where volunteers planted a diverse range of saplings around the campus and nearby areas. Each plant symbolized growth, hope, and the

university's vision for a greener tomorrow. Students pledged to nurture these saplings, ensuring that their act of giving would continue to flourish for years to come. The plantation drive reflected Shoolini's long-term commitment to sustainability and environmental protection, while also fostering a sense of ownership among participants.

Following the plantation, volunteers actively participated in a cleaning drive, covering the roads and surroundings of the university. With gloves, eco-bags, and an unbreakable spirit, the teams collected plastic waste, cleaned pathways, and segregated recyclable materials. The coordinated efforts of NSS volunteers, NCC cadets, and SFY members made the drive efficient and impactful.

The event served as a living example of how collective action can lead to visible change. By combining plantation and cleanliness initiatives, the drive not only enhanced the aesthetic appeal of the campus but also strengthened awareness about sustainable living and responsible waste management.

Through this initiative, Shoolini University once again showcased its commitment to community service, environmental stewardship, and student engagement. The "Roots of Change" drive beautifully captured the essence of Daan Utsav — giving back selflessly, working together for a cleaner and greener future, and planting seeds of hope that will continue to grow with time.



Figure 27: Volunteers at work during cleaning drive

10 Threads of Kindness – Weaving Sustainability and Compassion Together
SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 12 – Responsible Consumption and Production | SDG 13 – Climate Action | SDG 11 – Sustainable Cities and Communities
Date: 5th October 2025
Venue: Milkha Singh Complex, Shoolini University
No. of Volunteers: 120

As part of Daan Utsav 2025, Shoolini University organized a vibrant and heartfelt initiative titled "Threads of Kindness", focusing on creative recycling and mindful giving. The day was filled with enthusiasm, collaboration, and purpose as students participated in three meaningful activities - the sorting of donated clothes, a lantern-making workshop, and a mat-making workshop using old fabrics and recycled materials.

The event began with volunteers gathering to sort through hundreds of clothes donated by students, faculty, and staff during the week-long Daan Utsav collection drive. Each item was carefully examined, folded, and categorized based on its condition to ensure it could be distributed responsibly. The sorted clothes were later prepared for donation to the Goonj NGO, Delhi, which supports underprivileged communities and promotes circular use of resources.

Alongside the sorting activity, two creative sustainability workshops were held. In the lantern-making workshop, students used discarded fabrics and paper waste to create beautiful, eco-friendly lanterns that symbolized light, hope, and joy. The mat-making workshop encouraged participants to weave old clothes and fabric scraps into colorful, functional mats, showcasing how waste can be transformed into something useful through creativity and teamwork.

The day was not only about art and action but also about awareness. Students engaged in discussions about sustainable consumption and the importance of mindful giving, understanding how small efforts contribute to larger environmental goals.

The initiative beautifully captured the spirit of Daan Utsav - giving with purpose, compassion, and creativity. It reminded everyone that acts of kindness can go hand in hand with sustainability, making the world a little brighter and more responsible, one thoughtful gesture at a time.



Figure 28: Volunteers sorting and weaving clothes for donation to the NGO

11 Kal Aaj Kal – A Flashmob Connecting AI, Art, and Sustainability
SDG 13 Climate Action
Shoolini University | Event report 2025
SDG 9 – Industry, Innovation and Infrastructure | SDG 12 – Responsible Consumption and Production | SDG 13 – Climate Action
Date: 6th October 2025
Venue: Basketball Court, Shoolini University
No. of participants: 240

As a dynamic pre-event to Manchtantra 2025, Shoolini University's annual inter-departmental cultural competition, students organized a captivating flashmob titled "Kal Aaj Kal", exploring the powerful intersection of Artificial Intelligence (AI) and Sustainability. The performance reflected the evolution of society from the past to the future, emphasizing how technology and environmental consciousness can progress hand in hand.

The flashmob lit up the campus with music, color, and coordinated energy. Students from six departments - representing diverse academic backgrounds - collaborated to bring this concept to life. Each department contributed creatively, from choreography and costume design to prop creation and concept visualization, showcasing teamwork, unity, and innovation.

The performance unfolded in three acts: "Kal" (the past) portrayed a simpler, harmonious existence close to nature; "Aaj" (the present) highlighted the rise of technology and its double-edged impact on lifestyle and ecology; and "Kal" (the future) envisioned a balanced world where AI innovation supports sustainable living. The seamless blend of expressive dance and thoughtful storytelling kept the audience captivated throughout.

"Kal Aaj Kal" was more than just a performance—it was a message. It reminded everyone that while the world continues to evolve with technology, sustainability must remain at its core. The flashmob perfectly embodied the spirit of Manchtantra 2025, combining art, intellect, and awareness to inspire responsible creativity among students.

The event concluded with cheers, applause, and a shared sense of excitement for the cultural festivities ahead, reaffirming Shoolini University's commitment to learning, innovation, and sustainability.



Figure 29: Event photos

12 Clean Today, Green Tomorrow – An Empathetic Cleaning Drive at Ashwini Khad

SDG 13 Climate Action
Shoolini University | Event report 2025
Date: 22 November, 2025 Venue: Ashwini Khad Aligned with Sustainable Development Goals (SDGs): SDG 6 – Clean Water and Sanitation | SDG 11 – Sustainable Cities and Communities | SDG 13 – Climate Action
No. of Volunteers: 40

On 22nd November, volunteers of the National Service Scheme (NSS) undertook a meaningful cleaning drive at Ashwini Khad, driven by a shared sense of responsibility toward nature and the local community. The initiative aimed not only to clean the area but also to foster empathy toward the environment by highlighting the impact of human actions on natural ecosystems.

The volunteers actively engaged in the collection and segregation of waste, with a strong focus on removing plastic and other non-biodegradable materials that threaten water quality and harm aquatic life. As the drive progressed, participants observed firsthand how careless disposal of waste affects natural water bodies, reinforcing the importance of mindful and sustainable practices.

Beyond physical cleaning, the activity encouraged reflection and dialogue among volunteers about environmental degradation, water conservation, and the need for collective action. The drive served as a learning experience, reminding participants that protecting nature begins with awareness, care, and everyday choices. The shared effort strengthened teamwork and instilled a deeper sense of connection with the surroundings.

Local passersby and community members were also sensitized during the drive, as volunteers informally communicated the importance of maintaining cleanliness and respecting natural spaces. This interaction helped extend the message beyond the activity itself, encouraging broader community participation in environmental stewardship.

The cleaning drive at Ashwini Khad stood as a heartfelt reminder that environmental care is an act of compassion —for nature, for communities, and for future generations. Through this initiative, NSS reaffirmed its commitment to sustainable development, civic responsibility, and youth-led action, demonstrating how empathy and service can come together to create lasting positive change.



Figure 30: Volunteers during cleaning drive at Aswani Khad

13 Shoolini Marathon 2025: Climate Change Awareness and Environmental Sustainability

Event: Shoolini Marathon 2025

Date: 20 September 2025

Organising Institution: Shoolini University, Solan, Himachal Pradesh, India

Theme: Climate Change Awareness, Environmental Conservation, and Community Engagement

Participation: More than 550 students, faculty members, and regional participants

Relevant Sustainable Development Goal: SDG 13 – Climate Action

Participants: 550

Shoolini University organised the Shoolini Marathon on 20 September 2025 as a platform to promote climate change awareness, environmental conservation, physical well-being, and community participation. The annual marathon brings together students, faculty members, and members of the regional community to encourage collective action towards a healthier planet and a more sustainable future.

The event provides an opportunity to communicate important environmental messages beyond the university campus and encourages participants to recognise the importance of addressing global warming, protecting natural ecosystems, and adopting environmentally responsible practices.



Figure 31: Event Poster

Annexure-I: Research publications related to SDG-13

Title	Authors	Year	Scopus Source title	Publisher	CiteScore	DOI	Publication type
Novel hydrogen-bonded organic framework (HOF) for highly efficient photocatalysis: From structural designs to multifunctional applications	Chauhan, A.| Kumar, R.| Raizada, P.| Thakur, S.| Nguyen, V.-H.| Singh, A.| Van Le, Q.| Singh, P.| Sudhaik, A.	2025	Coordination Chemistry Reviews	Elsevier B.V.	39.9	10.1016/j.ccr.2025.216634	Review
MOFs-based S-scheme heterojunction photocatalysts: Challenges and prospects to break the selectivity limitation for intensified C1 products in CO2 photoreduction	Malhotra, M.| Soni, V.| Kumar, R.| Tarannum| Singh, P.| Thakur, S.| Le, Q.V.| Nguyen, L.H.| Nguyen, V.-H.| Raizada, P.	2025	Chemical Engineering Journal	Elsevier B.V.	19.6	10.1016/j.cej.2025.160238	Review
Designing tandem S-scheme photo-catalytic systems: Mechanistic insights, characterization techniques, and applications	Kumar, R.| Sudhaik, A.| Pawaz Khan, A.A.| Nguyen, V.-H.| Singh, A.| Singh, P.| Thakur, S.| Raizada, P.	2025	Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica	Elsevier B.V.	20	10.1016/j.actphy.2025.100150	Review
Recent updates on cadmium indium sulfide (CdIn2S4 or CIS) photo-catalyst: Synthesis, enhancement strategies and applications	Sambyal, S.| Sudhaik, A.| Sonu, S.| Raizada, P.| Chaudhary, V.| Nguyen, V.-H.| Khan, A.A.P.| Hussain, C.M.| Singh, P.	2025	Coordination Chemistry Reviews	Elsevier B.V.	39.9	10.1016/j.ccr.2025.216653	Review
Unveiling cutting-edge developments in defective BiOI nanomaterials: Precise manipulation and improved functionalities towards bolstered photocatalysis	Soni, V.| Malhotra, M.| Singh, A.| Khan, A.A.P.| Kaya, S.| Katin, K.| Van Le, Q.| Nguyen, V.-H.| Ahamad, T.| Singh, P.| Raizada, P.	2025	Advances in Colloid and Interface Science	Elsevier B.V.	33.5	10.1016/j.cis.2025.103467	Review
Recent updates on a Cs3Bi2Br9-based heterojunction photocatalyst for selective CO2 conversion into (CO/CH4) products	Sharma, S.| Dhull, P.| Kumar, R.| Sudhaik, A.| Raizada, P.| Le, Q.V.| Parwaz Khan, A.A.| Singh, P.| Kamal, T.| Alzahrani, K.A.	2025	Journal of Industrial and Engineering Chemistry	Korean Society of Industrial Engineering Chemistry	12	10.1016/j.jiec.2025.01.029	Article
Influence of silica fume and alccofine on the mechanical performance of GGBS-based geopolymer concrete under varying curing temperatures	Paruthi, S.| Khan, A.H.| Isleem, H.F.| Alyaseen, A.| Mohammed, A.S.	2025	Journal of Structural Integrity and Maintenance	Taylor and Francis Ltd.	6	10.1080/24705314.2024.2447661	Article
Wildfires under changing climate, and their environmental and health impacts	Bolan, S.| Sharma, S.| Mukherjee, S.| Isaza, D.F.G.| Rodgers, E.M.| Zhou, P.| Hou, D.| Scordo, F.| Chandra, S.| Siddique, K.H.M.| Bolan, N.	2025	Journal of Soils and Sediments	Springer Science and Business Media Deutschland GmbH	6.5	10.1007/s11368-025-04020-y	Article
Recent advances in lead-free carbon supported perovskites based on Z-scheme and S-scheme heterojunctions for photocatalytic energy conversion	Soni, R.| Soni, V.| Lokhande, P.E.| Kumar, D.| Mubarak, N.M.| Praveenkumar, S.| Kumar, R.| Singh, K.| Rednam, U.| Aepuru, R.| Shanmugaraj, K.	2025	Materials Horizons	Royal Society of Chemistry	15.3	10.1039/d4mh01516a	Review
Artificial intelligence in sustainable food design: Technological, ethical consideration, and future	Harikrishnan, S.| Kaushik, D.| Rasane, P.| Kumar, A.| Kaur, N.| Reddy, C.K.| Proestos, C.| Oz, F.| Kumar, M.	2025	Trends in Food Science and Technology	Elsevier Ltd	27.3	10.1016/j.tifs.2025.105152	Review
Emergence of single atom catalyst and metallic organic frameworks (MOF) derived	Panwar, A.| Soni, V.| Sambyal, S.| Raizada, P.| Singh, P.| Kaya, S.| Katin,	2025	Journal of Environmenta	Elsevier Ltd	10.2	10.1016/j.jece.2025.118786	Review

photocatalytic systems for CO2 conversion into C1 value added products	K.P.| Chaudhary, V.| Khan, A.A.P.| Hussain, C.M.| Sonu, S.		l Chemical Engineering				
Recent advances in rare earth metal ferrites-based heterojunctions for photocatalytic water treatment, hydrogen production and CO2 conversion	Rana, S.| Kumar, A.| Dhiman, P.| Sharma, G.| Wang, T.	2025	Journal of Rare Earths	Editorial Office of Chinese Rare Earths	13.5	10.1016/j.jre.2024.09.022	Review
Nickel substituted cobalt nanoferrites for advanced photocatalytic and electrocatalytic green hydrogen generation	Prakash, J.| Jasrotia, R.| Suman| Ahmed, J.| Alshehri, S.M.| Ahmad, T.| Fazil, M.| Sillanpää, M.| Lakshmaiya, N.| Raja, V.	2025	Journal of Molecular Structure	Elsevier B.V.	8.4	10.1016/j.molstruc.2024.140162	Article
Exploring complex silver sulfide nano-systems as efficient photocatalysts for wastewater remediation and clean energy production: Toward sustainable and circular economy	Abhimanyu| Singh, K.| Sable, H.| Sonu, S.| Kumar, V.| Singh, P.| Kaushik, A.| Thakur, P.| Chaudhary, V.	2025	Materials Today	Elsevier B.V.	27	10.1016/j.mattod.2025.09.004	Article
Catalytic performance of graphdiyne for CO2 reduction and charge dynamics progress	Kaur, B.| Singh, P.| Singh, A.| Van Le, Q.| Chaudhary, V.| Nguyen, V.-H.| Asad, M.| Khan, A.A.P.| Marwani, H.M.| Raizada, P.	2025	Journal of Environmental Chemical Engineering	Elsevier Ltd	10.2	10.1016/j.jece.2025.116904	Review
Advancements in metal-organic frameworks based photocatalysts for efficient photocatalytic hydrogen generation	Jasrotia, R.| Himanshi| Lal, B.| Suman| Ramya, M.| Katoch, G.| Singh, S.| Kit, C.C.	2025	Results in Engineering	Elsevier B.V.	8.8	10.1016/j.rineng.2025.106844	Review
Flat meets functional: face-to-face 2D/2D S-scheme photocatalysts for efficient CO2-to-fuel conversion	Rana, P.| Singh, P.| Puri, V.| Le, Q.V.| Ahamad, T.| Le, T.T.| Nguyen, V.-H.| Raizada, P.	2025	Sustainable Energy and Fuels	Royal Society of Chemistry	8	10.1039/d5se00754b	Review
Advanced CeO2-Based Heterojunctions: Aspects of Structure–Function Relationships for Sustainable CO2 Conversion and H2 Production	Panwar, A.| Sambyal, S.| Raizada, P.| Singh, P.| Thakur, P.| Thakur, S.| Nguyen, V.-H.| Sonu, S.	2025	Transactions of Tianjin University	Tianjin University	13	10.1007/s12209-025-00452-2	Review
Recent advances and perspective in Boron Carbon Nitride and Boron Nitride based materials for photocatalytic energy and environmental applications	Sharma, P.| Kumar, A.| Dhiman, P.| Sharma, G.| Wang, T.| García-Penas, A.| Lai, C.W.	2025	Journal of Water Process Engineering	Elsevier Ltd	9.6	10.1016/j.jwpe.2024.106896	Review
Mechanistic understanding of GABA and trehalose in modulating plant response to drought stress	Choudhary, A.| Nepovimova, E.| Rajput, V.D.| Malik, T.| Choudhary, M.| Bhardwaj, N.| Peter, L.| Puri, S.| Kimta, N.	2025	Plant Stress	Elsevier B.V.	9.8	10.1016/j.stress.2025.100838	Review
Mathematical Modelling for Fixed-Bed Column and Batch Adsorption Studies of Antibiotic and CO2 Capture Using Soybean Stover Biochar	Rathi, T.A.| Gomase, V.| Saravanan, D.| Pandey, S.| Jugade, R.	2025	BioNanoScience	Springer	4.9	10.1007/s12668-024-01694-5	Article
Alginate-based magnetic adsorbents for the adsorption of organic and inorganic pollutants	Verma, A.| Dhiman, P.| Kumar, A.| Maria, H.J.| Thomas, S.| Sharma, G.	2025	Sustainable Materials and Technologies	Elsevier B.V.	12.4	10.1016/j.susmat.2025.e01634	Review
In Vitro Mutagenesis: A Non-invasive Technology for Effective Crop Improvement to Assure Food and Nutritional Security—Current Trends, Advancements and Future Perspectives	Sharma, V.| Thakur, M.| Maan, S.S.| Verma, K.| Thakur, A.| Penna, S.	2025	Journal of Plant Growth Regulation	Springer	9.9	10.1007/s00344-024-11484-8	Article

Population assessment and habitat suitability modelling of endangered medicinal plant, Aconitum heterophyllum Wall. ex Royle in the western Himalaya	Tomar, S.| Thakur, S.| Kanwal, K.S.| Bhatt, I.D.| Puri, S.	2025	Scientific Reports	Nature Research	6.4	10.1038/s41598-025-03324-w	Article
Analysis of solar thermal collector with S-shaped ribs via energy, exergy, economic, and environmental (4E) approaches	Kumar, K.| Thapa, S.| Kumar, S.| Prajapati, D.| Samir, S.| Lee, D.| Kumar, R.| Singh, T.	2025	Solar Energy Materials and Solar Cells	Elsevier B.V.	12.1	10.1016/j.solmat.2025.113743	Article
Recent advancements in sustainable CO2 conversion utilizing black TiO2-based photocatalysts	Sambyal, S.| Sudhaik, A.| Sonu| Raizada, P.| Singh, A.| Nguyen, V.-H.| Kaya, S.| Parwaz Khan, A.A.| Singh, P.| Alzahrani, K.A.	2025	Journal of Materials Science	Springer	7	10.1007/s10853-025-11321-7	Review
Applications of Solid Waste-Derived Carbon Nanomaterials in Solar Cell	Kumar, S.| Kumari, N.| Thakur, R.| Kainthla, I.| Shandilya, M.	2025	ACS Symposium Series	American Chemical Society	2.2	10.1021/bk-2025-1495.ch007	Article
Recent updates on controlled vacancies formation in defect-engineered in BiOCl: strategies, characterization techniques and enhanced photocatalytic activity	Chauhan, R.| Sambyal, S.| Tarannum| Poonia, K.| Raizada, P.| Ahamad, T.| Hussain, C.M.| Singh, P.	2025	Inorganic Chemistry Communications	Elsevier B.V.	8.5	10.1016/j.inoche.2025.115403	Review
Recent advances in photoelectrochemical potential improvement of CuBi2O4: Energy applications	Kumar, H.| Nike, T.| Kumar, A.| Kaushal, D.| Chauhan, V.| Kumar, M.	2025	Inorganic Chemistry Communications	Elsevier B.V.	8.5	10.1016/j.inoche.2025.114584	Review
Recent advances, materials resources and mechanism insight for designing of renewable photocatalysts and green photocatalytic processes for energy production	Sharma, P.| Rana, S.| Dhiman, P.| Wang, T.| Mola, G.T.| Sharma, G.	2025	Journal of Environmental Chemical Engineering	Elsevier Ltd	10.2	10.1016/j.jece.2025.120153	Article
Recent Trends in Perovskite Quantum Dots-Based S-Scheme Photocatalysis for CO2 Photoreduction	Soni, V.| Rana, P.| Chauhan, R.| Singh, P.| Singh, A.| Chaudhary, V.| Parwaz Khan, A.A.| Raizada, P.	2025	ChemNanoMat	John Wiley and Sons Inc	4.4	10.1002/cnma.202500016	Review
Growth and yield responses of common bean (Phaseolus vulgaris L.) to tree lopping and organic manure under Morus-based agri-silvicultural system	Saakshi| Thakur, C.L.| Bhardwaj, D.R.| Sharma, U.| Bhatia, A.K.| Sharma, S.| Sharma, S.| Gudeta, K.| AlNadhari, S.| Alansi, S.	2025	Trees, Forests and People	Elsevier B.V.	5.4	10.1016/j.tfp.2024.100745	Article
Metal-Free Himalayan Cone-Derived Activated Carbon with a Competitive Catalytic Performance for a CO2-Assisted Soft Oxidative Dehydrogenation of Ethylbenzene to Styrene	Nikam, R.R.| Hemavathi, N.J.| Manikanta, P.| Kainthla, I.| Sahoo, S.K.| Patil, S.A.| Nagaraja, B.M.	2025	ACS Sustainable Chemistry and Engineering	American Chemical Society	12	10.1021/acssuschemeng.5c05674	Article
Phytohormonal Crosstalk with Flowering Genes Regulating Drought Stress Response in Citrus: A Systematic Review	Thakur, G.| Singh, P.| Sharma, V.| Sharma, A.| Singh, J.| Kumar, S.	2025	Journal of Plant Growth Regulation	Springer	9.9	10.1007/s00344-025-11838-w	Article
Gossypium arboreum (L.): A review on its agronomic and industrial potential for sustainable cotton production	Gogari, S.| Radha	2025	Physiological and Molecular Plant Pathology	Academic Press	5.3	10.1016/j.pmpp.2025.102797	Review
Sustainability of Plant Communities in the Himalayas: Issues and Prospects	Rana, B.| Thakur, M.| Jamwal, K.	2025	Plant Tissue Culture Technology: An Innovative Tool for the Propagation,	Apple Academic Press	-	10.1201/9781779643445-2	Chapter

			Management, and Conservation of Himalayan Biodiversity				
A Novel Approach to Mitigating Air Pollution and Climate Change with Graph Convolutional RNN Models	Rede, G.D.| Dongre, S.| Ramesh Kumar, C.| Kant, R.| Venkata Ramana, V.| Rathnamma, M.V.	2025	Proceedings of 5th International Conference on Trends in Material Science and Inventive Materials, ICTMIM 2025	Institute of Electrical and Electronics Engineers Inc.	-	10.1109/ICTMIM65579.2025.10988109	Conference Paper
Marine Bioresources and Blue Economy	Rai, N.| Sehgal, A.| Sambyal, D.| Julka, J.M.| Yadav, S.| Mishra, S.| Jaiswal, K.	2025	Biotechnological Innovations for Sustainable Biodiversity and Development	CRC Press	-	10.1201/9781032697550-13	Chapter
Waste Biomass to Bioenergy with Regulatory Framework for a Sustainable Economy	Bose, D.| Bhattacharya, R.| Raj, R.| Ganti, L.S.P.| Sarkar, A.| Gopinath, M.	2025	Digital Twins and ESG	wiley	-	10.1002/9781394303243.ch9	Chapter
Dietary antioxidants in mitigating carbon tetrachloride-induced hepatoxicity: An integrative review of preclinical insights	Kumar, H.| Kimta, N.| Kapoor, S.| Nepovimova, E.| Chopra, C.| Suthar, T.| Ungai, D.| Béla, K.| Harsanyi, E.| Shaikh, A.M.	2025	Journal of Functional Foods	Elsevier Ltd	7.2	10.1016/j.jff.2025.107020	Review
Sustainable Solution: Harnessing Artificial Intelligence, Internet of Things and Design Thinking for Climate Action	Sharma, R.| Thakur, V.	2025	Proceedings of the 2025 12th International Conference on Computing for Sustainable Global Development, INDIACom 2025	Institute of Electrical and Electronics Engineers Inc.	-	10.23919/INDIACom66777.2025.11115488	Conference Paper
Spatial distribution of exotic lumbricid earthworm Octolasion tyrtaeum in endangered Taxus contorta stands across Northwest Himalayan moist temperate forests	Negi, D.| Ahmed, S.| Julka, J.M.| Alotaibi, M.O.| Gudeta, K.| Sharma, U.| Sharma, S.	2025	Scientific Reports	Nature Research	6.4	10.1038/s41598-025-11982-z	Article
Impact of Biochar addition for odor emission reduction and compost quality enhancement	Van Tung, T.| Kim, H.T.| Mai, L.T.T.| Tri, N.T.| Linh, D.T.T.| Duy, N.H.| My, P.L.| Mukherjee, S.| Tran, H.-T.	2025	Proceedings of the Indian National Science Academy	Springer Nature	3.8	10.1007/s43538-025-00620-x	Article
Synthetic Biology and Its Application in Biodiversity Conservation	Radha| Sharma, N.| Kumari, N.| Prakash, S.| Pundir, A.| Puri, S.	2025	Biotechnological Innovations for Sustainable Biodiversity and Development	CRC Press	-	10.1201/9781032697550-8	Chapter
Invasive Species and Biodiversity: A Global Challenge for Conservation	Dadhwal, R.| Yadav, P.| Banerjee, R.	2025	Biotechnological Innovations for Sustainable Biodiversity and Development	CRC Press	-	10.1201/9781032697550-19	Chapter

A Comprehensive Review of Machine Learning Techniques for Smart Grid Optimization	Gupta, G.| Tomar, A.| Pamulaparthyvenkata, S.| Balakrishnan, A.	2025	Secure Energy Optimization: Leveraging Internet of Things and Artificial Intelligence for Enhanced Efficiency	wiley	-	10.1002/9781394271849.ch2	Chapter
Challenges of water remediation, waste-water treatment, and its future direction	Saruchi| Kumar, V.| Muskan| Dhiman, J.| Pandey, S.	2025	Water Remediation Methods and Wastewater Treatment	Elsevier	-	10.1016/B978-0-443-33038-4.00029-5	Chapter
Retraction notice to "Boosting light-driven CO2 reduction into solar fuels: Mainstream avenues for engineering ZnO-based photocatalysts" [Environ. Res. 197 (2021) 111134] (Environmental Research (2021) 197, (S0013935121004280X), (10.1016/j.envres.2021.111134))	Patial, S.| Kumar, R.| Raizada, P.| Singh, P.| Van Le, Q.| Lichtfouse, E.| Le Tri Nguyen, D.| Nguyen, V.-H.	2025	Environmental Research	Academic Press Inc.	16.5	10.1016/j.envres.2025.122657	Erratum
Approach to Agrobiodiversity Preservation and Sustainable Agriculture in a Changing World	Barsola, B.| Kumari, P.| Yadav, S.| Mishra, S.| Jaiswal, K.	2025	Biotechnological Innovations for Sustainable Biodiversity and Development	CRC Press	-	10.1201/9781032697550-22	Chapter
The Role of Green Information Systems in India's Environmental Sustainability: A Review-Based Perspective	Ranjan, R.| Singh, R.| Tripathi, S.	2025	Communications in Computer and Information Science	Springer Science and Business Media Deutschland GmbH	1.1	10.1007/978-3-032-04225-5_26	Conference Paper
Climate action: Impact of precision farming technologies on the sustainable conservation and management of its resources and nature preservation	Manikanta, L.| Sougandhika, G.| Singh, A.| Sarkar, S.| Thakur, S.	2025	Plant Science Today	Horizon e-Publishing Group	0.9	10.14719/PST.10025	Article
The Role of Forensic Science in Disaster Management: Advancing Preparedness and Resilience	Kumar, V.	2025	Fundamentals of Forensic Victimology: Insights into Crime, Trauma, and Justice	Springer Science+Business Media	-	10.1007/978-3-031-95987-5_11	Chapter
Advanced Mutagenesis Techniques for Climate Resilient Crops	Maan, S.S.| Aayesha| Roushan, P.| Sharma, S.| Sharma, V.| Sharma, A.	2025	Innovations in Climate Resilient Agriculture	Springer Science+Business Media	-	10.1007/978-3-031-84802-5_4	Chapter
BUBMO-based Bi-GRU-CNN model for crop classification with improved feature set: A bigdata perspective	Sharma, S.| Sharma, D.D.| Sharma, A.| Manas, M.	2025	Network: Computation in Neural Systems	Taylor and Francis Ltd.	-	10.1080/0954898X.2025.2503791	Article

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