

## Evidence against indicator 17.2.5

17.2.5	Collaboration with NGOs for SDGs Collaborate with NGOs to tackle the SDGs through: student volunteering programmes, research programmes, or development of educational resources				
	student volunteering programmes		Yes		Yes
	research programmes		Yes		
	development of educational resources		Yes		

The NCC cadets perform a few activities that support the achievement of the SDGs: for instance, blood donation camp, tree plantation drive, conservation of water and water harvesting, waste management, cleanliness of water bodies, Social Service and Community Development, etc.

<https://www.juit.ac.in/ncc-events>



## **The Research on The Field of Sustainable Developmet Goals in JUIT**

The University departments are involved in the field of sustainable energy and applications . Primiraly the department of Biotechnology, Civil Engineeering and Physics and Materials Science are involved in the work.

The research details can be accessed at the following links

<https://www.juit.ac.in/biotechnology-and-bioinformatics-rd>

<https://www.juit.ac.in/research-and-development-ce>

<https://www.juit.ac.in/physics-and-materials-science-projects>

## **Details of PhD Thesis awarded by University in the field of sustainable energy and applications**

Name	Enrollment No.	Department	Title
SARITA	126903	PMS	"SYNTHESIS OF MAGNETITE NANOPARTICLES ON SUBSTRATE FOR WATER PURIFICATION"
BANDNA BHARTI	136951	PMS	SURFACE MODIFICATION OF TITANIUM DIOXIDE (TiO <sub>2</sub> ) THIN FILMS AND THEIR APPLICATIONS
ANKUR CHOUDHARY	176605	CE	BIOGAS PRODUCTION FOR SUSTAINABLE ENERGY GENERATION IN RURAL HIMACHAL PRADESH USING ONE STAGE PORTABLE DIGESTER
KANCHAN KUMARI	176901	PMS	EFFECT OF MAGNETIC FIELD ON THE GROWTH OF CoFe <sub>2</sub> O <sub>4</sub> AND NiFe <sub>2</sub> O <sub>4</sub> FILMS.
PANKAJ SHARMA	176606	CE	BEHAVIOR OF HELICAL SOIL NAILS: AN EXPERIMENTAL AND THEORETICAL STUDY
PRACHI VASISTHA	186605	CE	WATER QUALITY DETERMINATION AND MODELLING OF NATURAL LAKES
NIRAJ SINGH PARIHAR	166607	CE	STABILIZATION OF EXPANSIVE SOIL USING LEATHER INDUSTRY WASTE ASH



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SUDHEER KUMAR JALA	186602	CE	PERFORMANCE OF HIGH CONFINED STONE COLUMNS IN POND ASH FILLS: AN EXPERIMENTAL AND NUMERICAL STUDY
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## 17.2.5 Educational Resources

### Publications

1. Anchal Sharma, Rajiv Ganguly, Ashok Kumar Gupta (2023). Life cycle assessment of municipal solid waste generated from hilly cities in India : a case study. *Heliyon*, 9 (11), pp. e21575- e21575, DOI: <https://doi.org/10.1016/j.heliyon.2023.e21575> [SCOPUS , SCI , UGC Care ].  
<https://www.juit.ac.in/faculty.php?id=143&dep=civil&page=0&year1=2023>
2. Saurabh Rawat, Ashok Kumar Gupta, Pankaj Sharma (2023). Sustainable remediation of failed slope using helical soil nails. *Journal of Mountain Science*, 20 (), pp. 1742-1758, DOI: <https://doi.org/10.1007/s11629-023-7913-0> [SCOPUS , SCI , UGC Care ].  
<https://www.juit.ac.in/faculty.php?id=143&dep=civil&page=0&year1=2023>
3. Rishi Rana , Rajiv Ganguly, Ashok Kumar Gupta (2023). Toxicity analysis and behavior of nano-particles in leachate from non-engineered landfill sites of Chandigarh, Mohali, and Panchkula cities-Tricity. *Nanotechnology for Environmental Engineering*, Online (2023), pp. 1-12, DOI: <https://doi.org/10.1007/s41204-023-00322-z> [SCOPUS , UGC Care ].  
<https://www.juit.ac.in/faculty.php?id=143&dep=civil&page=0&year1=2023>
4. Preetpal Singh, Amardeep Boora, Ashok Kumar Gupta (2023). Effect of Industrial Waste and Polyester Fiber on Geotechnical Characteristics of Local Clay. *IOP Conference Series: Earth and Environmental Science* , 1110 (2023), pp. 1-8, DOI: 10.1088/1755-1315/1110/1/012043 [SCOPUS ]  
<https://www.juit.ac.in/faculty.php?id=143&dep=civil&page=0&year1=2023>
5. Preetpal Singh, Amardeep Boora, Ashok Kumar Gupta (2023). A Review on Utilizing Municipal Solid Waste Incineration (MSWIA) in Construction Activates. *IOP Conference Series: Earth and Environmental Science* , 1110 (2023), pp. 1-7, DOI: 10.1088/1755-1315/1110/1/012042 [SCOPUS ].  
<https://www.juit.ac.in/faculty.php?id=143&dep=civil&page=0&year1=2023>
6. Rishi Rana , Anshul Kalia, Amardeep Boora, Faisal M. Alfaisal, Raied Saad Alharbi, Parveen Berwal, Shamshad Alam, Mohammad Amir Khan, Obaid Qamar (2023). Artificial Intelligence for Surface Water Quality Evaluation, Monitoring and Assessment. *Water*, 15 (22), pp. 1-12, DOI: <https://doi.org/10.3390/w15223919>[SCOPUS].  
<https://www.juit.ac.in/faculty.php?id=397&dep=civil&page=0&year1=2023>
7. Amardeep Boora, Kavita Rani, Manju Suthar, Rishi Rana , Parveen Berwal, Abdullah Faiz Saeed Al Asmari, Mohammad Amir khan, Saiful Islam (2023). Slag and Bagasse Ash: Potential Binders for Sustainable Rigid Pavement. *ACS Omega*, 8 (36), pp. 32867-32876, DOI: 10.1021/acsomega.3c04089[SCOPUS,SCI,UGCCare]  
<https://www.juit.ac.in/faculty.php?id=397&dep=civil&page=0&year1=2023>

**Patents** (<https://www.juit.ac.in/research-and-development-ce>)

<b>S.No</b>	<b>Patent No. and Date of Grant</b>	<b>Application No.</b>	<b>Title</b>	<b>Department and Inventors</b>
1.	Granted: 12.01.23	124895/319983- 001 CBR No.: 14079	Movable Biogas Reactor	Civil Engineering; Biotechnology & Bioinformatics <b>Inventors</b> Mr Karam Dass, Ankur Choudhary, Dr. Ashish Kumar, Dr. Sudhir Kumar
2.	Published: 26.05.2023	202311029769	Use of waste plastic glass as an anti – glare component to avoid road accidents	Civil Engineering, CSE, ECE and BT/BI <b>Inventors</b> Archit Kaushal, Shruti Jain, Sudhir Kumar, Aman Sharma, Saurabh Rawat

**Research Projects/Grants** (<https://www.juit.ac.in/research-and-development-ce>)

<b>S. No.</b>	<b>Project Coordinator/ Principal Investigator(s)</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Duration</b>	<b>Grant (in Lakhs)</b>
1.	Dr. Sudhir Kumar (PI) Dr. Ashish Kumar (Co-PI)	Pine Needles conversion to Biofuels for Rural Empowerment	Directorate of Innovation, Research and Development (DRID)	2022-24	7.0
2.	Dr. Sudhir Kumar (PI) Dr Garlapati Vijay Kumar (Co-PI) Dr. Ashish Kumar (Co-PI)	Production and Phyco-upgradation of Biogas from pine straw co-digested with food waste.	Directorate of Innovation, Research and Development (DRID)	2023-ongoing	0.5
3.	Akash Bhardwaj	Exploration Of Ground Water Potential Zones For Shimla District Using Remote Sensing And Geographic Information System	Directorate of Innovation, Research and Development (DRID)	2023-2024	0.09

## B.Tech Projects

S.No	Title	Name of Students	Name of Supervisor
1.	Utilization of waste material in construction	Suksham Sharma	Dr. Rishi Rana
2.	Sustainable Treatment of Industrial waste water and reuse it for agricultural purposes	Shubham Sharma, Ayush Thakur, Naman Bhardwaj	Prof. Ashok Kr. Gupta and Mr. Akash Bhardwaj
3.	Efficacy of IoT in Sewage Treatment Plant	Harish Singh Kanwar, Avinash	Prof. Ashish Kumar and Dr. Rishi Rana
4.	Artificial Intelligence for surface water quality monitoring	Ujjwal Sharma, Manan Sharma	Dr. Rishi Rana
5.	Utilization of Plastic Waste in Manufacturing of Bricks	Lakshay Sharma	Mr. Chandrapal Gautam
6.	Assesment and analysis of H2 Buiding of JUIT for Green features	Devendra Ahlay, Pem Dorji	Mr. Akash Bhardwaj and Mr. Niraj Singh Parihar