SUSTAINABLE DEVELOPMENT GOAL

14 Life Below Water

Progress Report

2025



Shoolini University

Shoolini University of Biotechnology and Management Sciences

Bajhol, Solan, Himachal Pradesh - 173229

Contents

SR No.	Contents	Page No.
1	1. Introduction	3
2	2. Research and Innovation for Aquatic Sustainability	4
3	3. Campus Initiatives to Prevent Water Pollution	7
4	3.1 Water-Efficient Fixtures	8
5	3.2 Rainwater Harvesting and Sustainable Construction	9
6	3.3 Groundwater Recharge and Runoff Management	10
7	3.4 Wastewater Treatment and Suitable Reuse	11
8	4. Regular Water Quality Audits	12
9	4.1 H.P. Pollution Control Board Test Report	13
10	4.2 Consent to Operate	15
11	5. Awareness, Education and Student Engagement	17
12	5.1 Bottles for Change: Campus Plastic Collection	18
13	5.2 Earth Day: Learning through Reuse	19
14	5.3 Beat Plastic Pollution: World Environment Day	20
15	6. Community Partnerships and Environmental Stewardship	21
16	7. Conferences, Workshops and Scientific Exchange	22
17	7.1 ICANN 2025: Nanomaterials for Pollution Remediation	23
18	7.1 ICANN 2025: Official Conference Brochure	24
19	7.2 RTESD 2025: Environmental Research and Water Treatment	25
20	7.3 Sustainable Photocatalysis and Campus Dialogue	26
21	8. Sustainable Water Management: Continuing Priorities	27

1. Introduction

Protecting life below water begins with responsible action on land. For Shoolini University, located in the Himalayan foothills, this responsibility centres on preventing pollution at its source, conserving freshwater and strengthening the scientific understanding of aquatic systems. Campus drainage, wastewater handling and everyday material choices all influence the quality of water moving through the surrounding environment.

SDG 14 calls for the conservation and sustainable use of oceans, seas and marine resources. An inland university contributes through research on aquatic biodiversity and pollution, and through practices that reduce the movement of land-based contaminants towards downstream waters. Water efficiency and wastewater management also support SDG 6; their connection to SDG 14 lies particularly in pollution prevention and aquatic ecosystem protection.

The University combines research with practical campus measures: water-efficient fixtures, rooftop rainwater collection, groundwater recharge, wastewater treatment and suitable non-potable reuse. Student engagement adds a behavioural dimension through plastic collection, recycling awareness and environmental education. Together, these activities connect institutional operations with a wider culture of care for water resources.

2025 priorities

This annual record brings together 17 publications dated 2025, campus water-management infrastructure and documented environmental activities. It also presents the Pollution Control Board documents with their original dates: the consent supplied is valid through 31 March 2025, while the laboratory test report was issued on 9 April 2026 and is included as subsequent monitoring evidence.

Public information and research links

University water security initiatives

Promoting conscious water usage

World Environment Day 2025: green choices

Official faculty record: water-remediation research and 2025 conference participation

2. Research and Innovation for Aquatic Sustainability

Research provides a foundation for understanding aquatic pressures and developing practical responses. Shoolini University's 2025 SDG 14 publication portfolio addresses microplastics, industrial wastewater treatment, sustainable aquaculture, aquatic nutrient management and marine bioresources.

The research spans both pollutant pathways and potential interventions. Studies examine microplastics in high-altitude ecosystems and urban surface waters, alongside approaches such as magnetic separation, biochar and advanced remediation. Aquaculture research explores biofloc systems, fish and shellfish nutrition, and disease-related challenges in shrimp production.

The following table contains all 17 records dated 2025 in the SDG 14 spreadsheet. The full export covers 56 publications across 2021-2025; Scopus data were updated on 18 October 2026 and exported on 27 October 2026. Publication counts describe research output, rather than measured reductions in campus water pollution.

SR No.	Publication title and authors	Source / type / year
1	A review of microplastic pollution and human health risk assessment: current knowledge and future outlook Hoang, H.G.; Nguyen, N.S.H.; Zhang, T.; Tran, H.-T.; Mukherjee, S.; Naidu, R.	Frontiers in Environmental Science Review | 2025
2	Advancement in Anaerobic Ammonia Oxidation Technologies for Industrial Wastewater Treatment and Resource Recovery: A Comprehensive Review and Perspectives Singh, P.; Bisen, M.; Kulshreshtha, S.; Kumar, L.; Choudhury, S.R.; Nath, M.J.; Mandal, M.; Kumar, A.; Patel, S.K.S.	Bioengineering Review | 2025
3	Symbiotic strategies: deciphering the role of gut microbiota in the nutrition and metabolism of fish and shellfish Rai, N.; Kachore, A.; Julka, J.M.; Panigrahi, A.; Das, S.P.; Nan, F.-H.	Frontiers in Cellular and Infection Microbiology Review | 2025

Publications published in 2025 (continued)

SR No.	Publication title and authors	Source / type / year
4	Synergistic carbon source utilization in Biofloc aquaculture of common carp (Cyprinus carpio): impacts on growth, health, and environmental parameters Rai, N.; Julka, J.M.; Panigrahi, A.; Das, S.P.	Frontiers in Marine Science Article | 2025
5	Barium distribution, dynamics and fate in terrestrial and aquatic environments Sharma, S.; Bolan, S.; Mukherjee, S.; Guimarães Guilherme, L.R.; Gomes Viana, D.; Duim Ferreira, A.; Bakke Myrvang, M.; Almås, Å.R.; Folven Gjengedal, E.L.; Cappuyns, V.; Bueno Guerra, M.B.; de Oliveira, C.; Lamb, D.; Siddique, K.H.M.; Bolan, N.	Environmental Research Review | 2025
6	MICROPLASTIC: FROM marine pollution to the human food chain Dulta, K.; Shankdhar, D.; Bhardwaj, V.; Bhardwaj, N.; Peter, L.; Aman, J.; Nagraik, R.; Ravi, K.; Sharma, A.	Food Bioscience Article | 2025
7	Biofloc technology for sustainable aquaculture: Microbial regulation, nutrient dynamics, and integrated system approaches Rai, N.; Panigrahi, A.; Julka, J.M.; Nan, F.-H.; Das, S.P.	Journal of Water Process Engineering Review | 2025
8	A Critical Review of Microplastic Contamination in High Altitude Ecosystems, Transport Pathways, Ecological Risks, And Imminent Solutions Chauhan, A.; Banerjee, R.	Water, Air, and Soil Pollution Article | 2025
9	Biochar-based technologies for sustainable aquaculture: A review of synthesis, properties, and application in water quality improvement and nutrient management Rai, N.; Kachore, A.; Julka, J.M.; Das, S.P.	Journal of Water Process Engineering Review | 2025
10	Advancements in Magnetic Nanoparticles for Microplastic Removal: A Magnetic Solution to Microplastic Pollution Goel, R.; Sharma, A.; James, A.; Kumar, D.; Dhir, Y.; Dhir, S.; Kaushal, A.; Gupta, S.; Kala, D.; Kaushik, N.K.; Noorani, M.S.; Nagraik, R.	Water, Air, and Soil Pollution Article | 2025

Publications published in 2025 (continued)

SR No.	Publication title and authors	Source / type / year
11	Exploring microplastic pollution from origin to environmental impact and remediation approaches Choudhary, A.; Thakur, D.; Kumar, R.; Kaushal, D.; Chauhan, V.; Shandilya, P.; Kumar, M.	Discover Environment Review | 2025
12	First evidence of microplastics in surface water of urban waterbodies in Bhopal city, India- abundance and their characteristics Gupta, D.K.; Giri, A.; Choudhary, D.; Vishwakarma, A.; Mudgal, M.; Raizada, P.; Singh, P.; Singh, A.	Journal of Contaminant Hydrology Article | 2025
13	Marine Bioresources and Blue Economy Rai, N.; Sehgal, A.; Sambyal, D.; Julka, J.M.; Yadav, S.; Mishra, S.; Jaiswal, K.	Biotechnological Innovations for Sustainable Biodiversity and Development Chapter | 2025
14	Challenges of water remediation, waste-water treatment, and its future direction Saruchi; Kumar, V.; Muskan; Dhiman, J.; Pandey, S.	Water Remediation Methods and Wastewater Treatment Chapter | 2025
15	From source to solution: Addressing microplastic pollution through advanced remediation strategies Koul, S.; James, A.; Suvedi, D.; Shard, S.; Nanda, R.R.; Verma, S.; Sharma, A.; Nagraik, R.	Journal of Applied Biology and Biotechnology Article | 2025
16	Screening of selected compounds against Enterocytozoon hepatopenaei (EHP) in shrimps: an in silico and in vitro approach Kamal, M.T.; Satheesh, N.; Sharma, S.; Parmar, A.	Aquaculture International Article | 2025
17	Geomicrobiological Interactions in the Frozen World: Potential for Exobiological Processes Dasila, K.; Shootha, D.; Pandey, A.	Interdisciplinary Biotechnological Advances Chapter | 2025

3. Campus Initiatives to Prevent Water Pollution

Shoolini University integrates water conservation into the design, operation and maintenance of campus infrastructure. Efficient fixtures reduce avoidable demand; rainwater systems capture a local resource; and wastewater treatment supports reuse for appropriate non-potable purposes. These measures help manage the pathways through which excessive runoff, untreated wastewater and discarded materials can affect surrounding water systems.

SR No.	Initiative	Campus application and contribution
1	Sensor-operated and low-flow taps	Automatic flow control and 609 low-flow taps reported across campus; reduced unnecessary water use.
2	Dual-flush toilets	Choice of flush volume in campus washrooms to limit avoidable consumption.
3	Rooftop rainwater harvesting	Roof collection, downpipes and storage chambers support irrigation, flushing and other non-potable uses.
4	Recharge and runoff management	Permeable surfaces, recharge structures and water storage help manage rainwater in hilly terrain.
5	Water-conscious landscaping	Planting and irrigation practices support efficient use of water in campus green areas.
6	Wastewater treatment and reuse	A 400 KLD STP is described in the campus infrastructure record; treated water supports suitable non-potable uses.

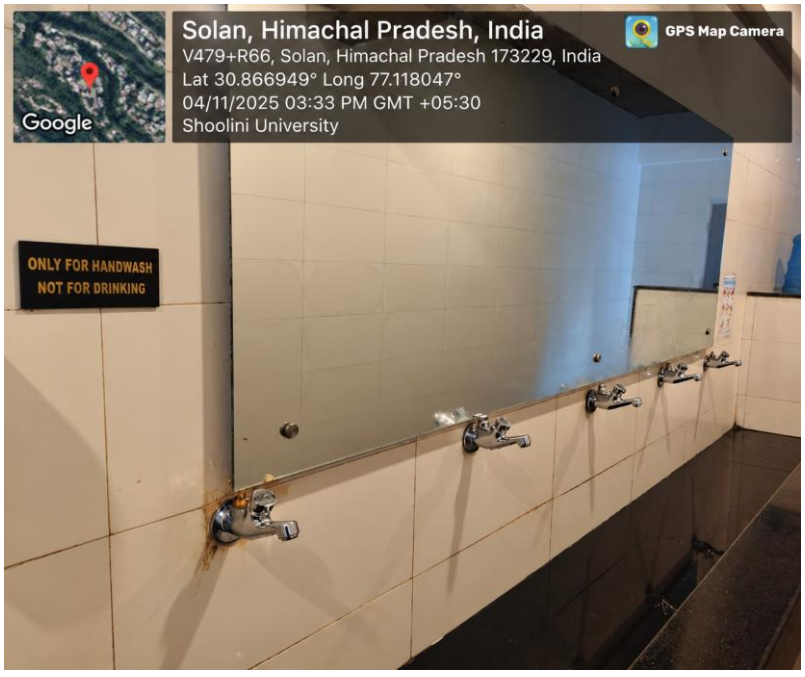
The water-conscious building record provides the infrastructure descriptions and photographs in this section. Fixture counts and treatment capacity are reported as infrastructure indicators.

3.1 Water-Efficient Fixtures

Sensor-based taps in A-Block help stop water flow when it is not needed. Low-flow fittings in washrooms and handwashing areas reduce unnecessary discharge, while dual-flush systems allow users to select an appropriate volume. The campus record identifies 609 low-flow taps across the University.



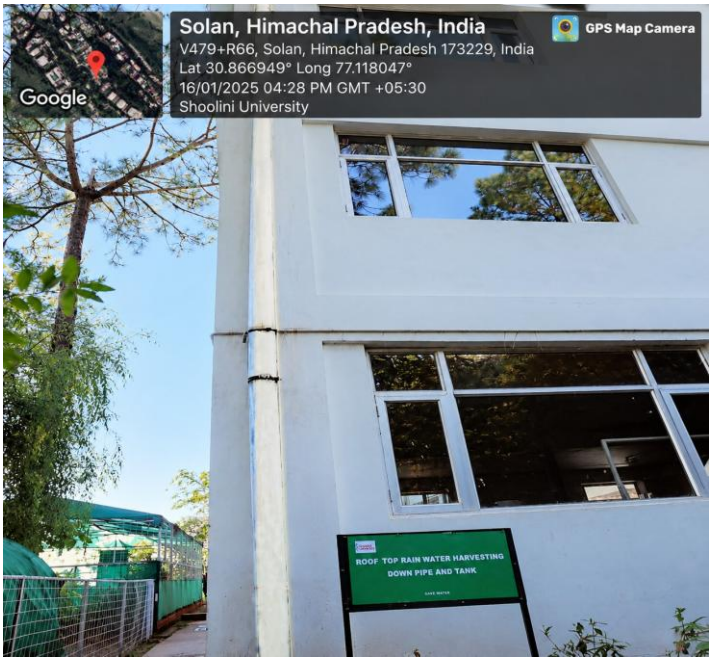
Sensor-based taps in A-Block



Low-flow taps in the hostel mess handwashing area

3.2 Rainwater Harvesting and Sustainable Construction

Rooftop collection systems convey rainwater through downpipes to dedicated chambers. Harvested water supports irrigation, flushing and construction where suitable, reducing demand on conventional freshwater supplies. Incorporating collection and drainage provisions into building design makes water management part of routine infrastructure planning.



Rooftop rainwater downpipe at the Pharmacy Block



Rooftop rainwater collection at A-Block

3.3 Groundwater Recharge and Runoff Management

Water management in a hill campus must account for seasonal rainfall and rapid surface flow. Storage, permeable areas and recharge structures help retain rainfall for later use and manage runoff. Maintenance of drains and collection structures is important for preventing blockages, erosion and the movement of litter towards nearby water bodies.



Water storage near the plant nursery for irrigation

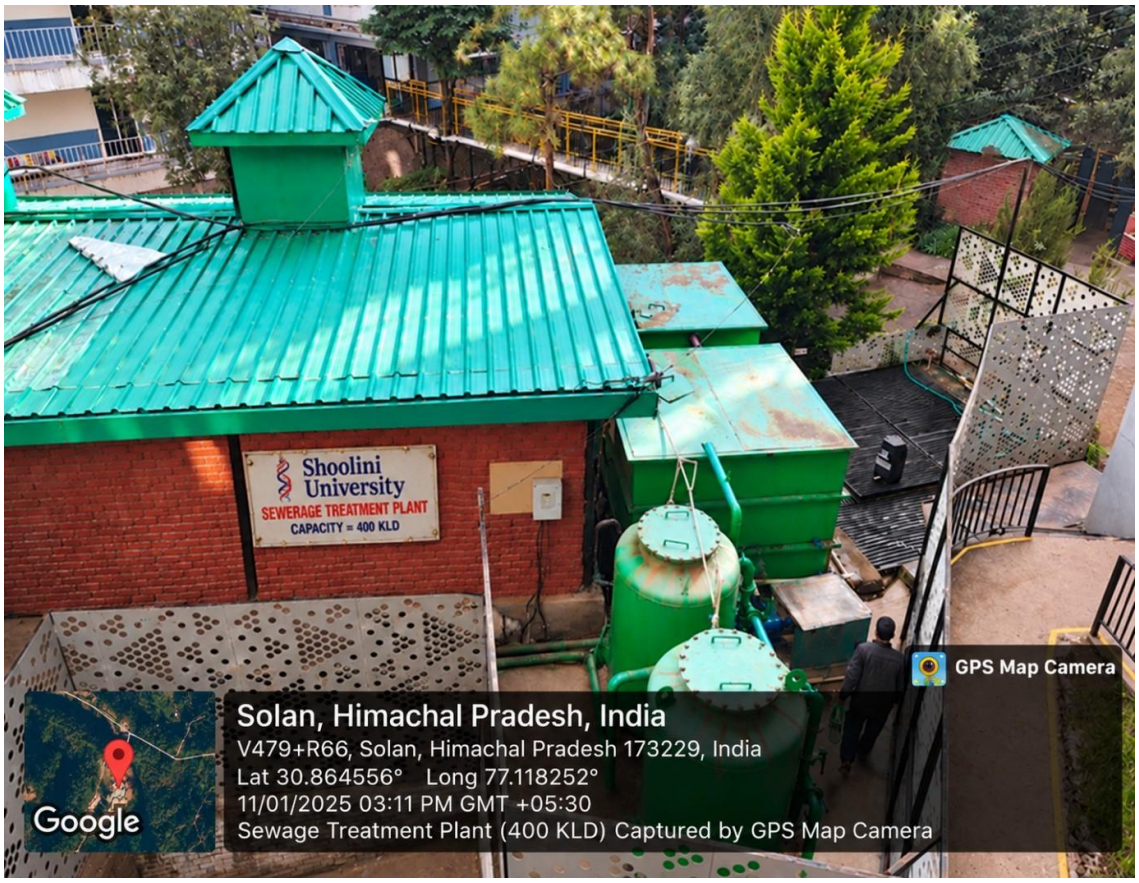


Recharge and surface-runoff management near Yogananda Villa

3.4 Wastewater Treatment and Suitable Reuse

The University's campus infrastructure record identifies a Sewage Treatment Plant with a capacity of 400 kilolitres per day. Treatment and appropriate reuse support the management of wastewater generated on campus while reducing demand for freshwater in landscaping and other non-potable applications.

Reliable operation depends on maintenance, process supervision and checks of treated-water quality. Storage and conveyance arrangements should keep treated wastewater separate from drinking-water supplies, and reuse decisions should reflect the quality required for each intended application.



Campus Sewage Treatment Plant: reported capacity 400 KLD

Capacity is a design measure and does not establish daily flow, treatment efficiency or full reuse. The laboratory and consent documents that follow provide their own sampling dates, conditions and scope. They are retained separately from the infrastructure narrative so that these distinctions remain clear.

4. Regular Water Quality Audits

Water-quality monitoring provides a check on treatment performance and supports decisions about operation and reuse. The H.P. State Pollution Control Board Central Laboratory, Parwanoo, analysed a grab sample collected at the final STP outlet on 16 March 2026. Analysis ran from 17 March to 9 April 2026; report CL/NABL/8291/W-22828 was issued on 9 April 2026.

SR No.	Parameter	Result	Limit printed in report
1	pH	8.48	5.5-9.0
2	BOD	Below detectable limit	30 mg/L
3	COD	16.0 mg/L	250 mg/L
4	TSS	6.0 mg/L	100 mg/L

The reported values fall within the corresponding limits printed in the test report. This is a subsequent 2026 sample result and does not establish water quality throughout 2025. The complete two-page test report is reproduced on the following pages.

Consent to operate

The attached consent letter is dated 11 March 2021 and states a validity period from 1 April 2020 to 31 March 2025. Its two pages are reproduced after the test report. It documents authorisation for the stated period; the supplied copy does not demonstrate renewal after 31 March 2025.

H.P. Pollution Control Board | Test report dated 9 April 2026

HPSPCB

HPSPCB

TC-16279

H.P.STATE POLLUTION CONTROL BOARD
CENTRAL LABORATORY PARWANOO

SCF -7-8, SECTOR IV, PARWANOO, TEHSIL KASAULIDistt Solan 173220

TEST REPORT

Test Report No: CL/NABL/8291/W-22828	Date:09/04/2026

1. Name of the Unit : **SHOOLINI UNIVERSITY**
2. Address : **599 Bhajol Distt Solan, Solan Distt. Solan Parwanoo, (H.P.)173229**
3. Nature of sample : **Grab**
4. Type of sample : **Legal Sample**
5. Sample collected by : **Punesh Kumar , JEE**
6. Quantity of sample received : **2 Ltr.**
7. Date & time of collection & In warding : **16/03/2026, 15:31:57**
8. Receiving Date : **17/03/2026**
9. Sampling Point : **Final Outlet of STP**
10. Period Of Analysis : **17/03/2026 to 09/04/2026**

SAMPLING PARAMETERS

Sr. No.	Parameter Name	Results	Units	Test Method	Specification/Standard Limits
1	pH	8.48	--	APHA 24th Edition-4500-H+: 2023	5.5-9.0
2	BOD	BDL	mg/L	IS 3025 (PART 44): 2023	30
3	COD	16.0	mg/L	IS 3025 (PART 58): 2023	250
4	TSS	6.0	mg/L	APHA 24th Edition- 2540-D	100

Remark:

BDL: Below Detectable Limit for BOD 4.0 mg/l.

Amit Pathania
SO
Technical Manager
(Reviewed/Authorized

Anup Vaidya
PSO
Quality Manager
(Authorized Signatory)

"This is computer generated document from HPOCMMS"

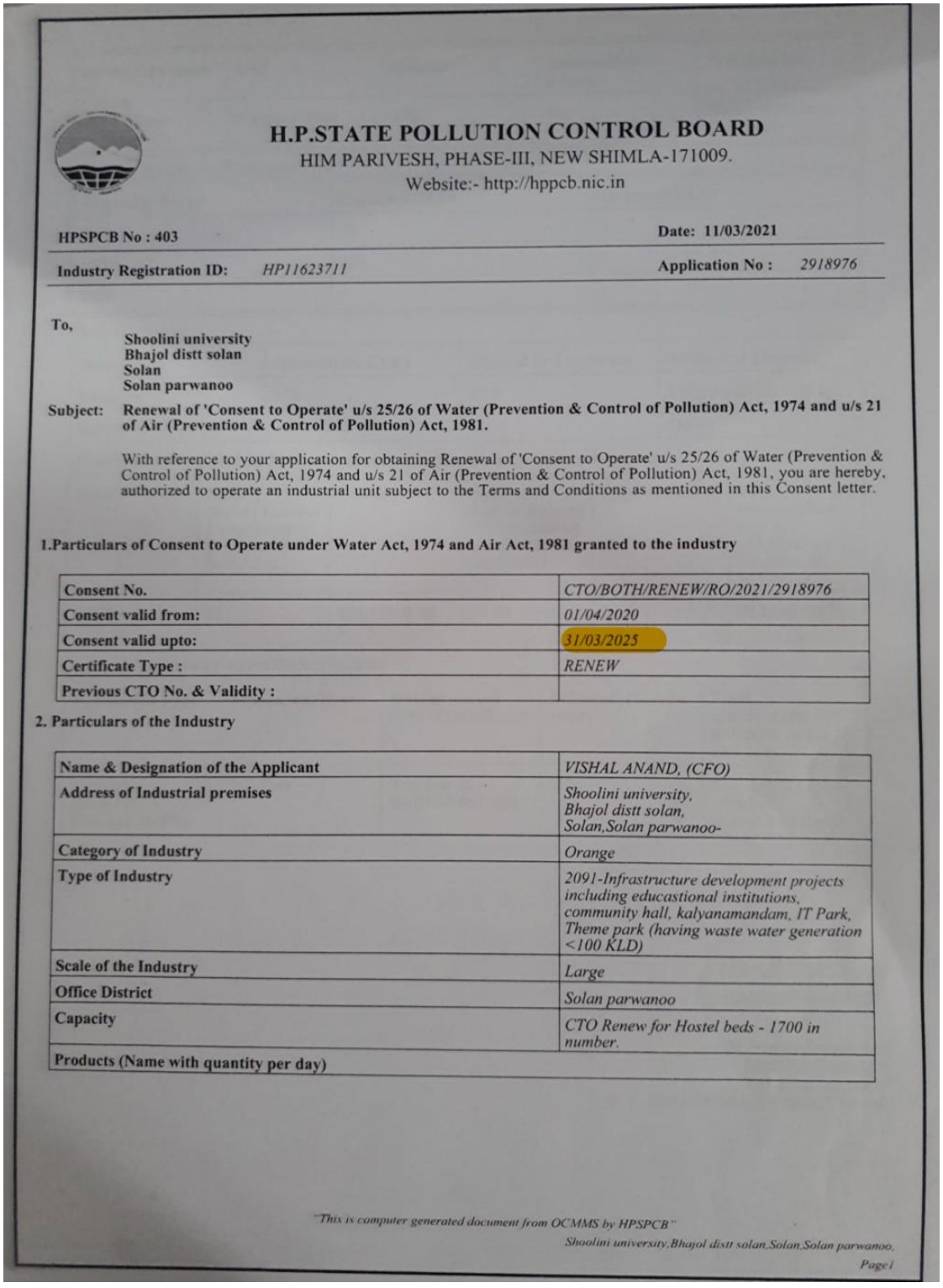
Signatory)

Note:

1. NABL Symbol is used in accordance with NABL policy formed with reference to NABL 133.
2. The results refer only to the tested samples, as received and applicable parameters.
3. Sample will be destroyed after 10 days from the date of issue of text report unless otherwise specified.
4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Himachal Pradesh jurisdiction only.
6. The information given in column 1 to 6 of Test Report is provided by, the customer, i.e. concerned Regional Office, HPSPCB.

***** End of the Report *****

Consent to Operate | Valid through 31 March 2025



H.P.STATE POLLUTION CONTROL BOARD
HIM PARIVESH, PHASE-III, NEW SHIMLA-171009.
Website:- http://hppcb.nic.in

HPSPCB No : 403 **Date: 11/03/2021**

Industry Registration ID: *HP11623711* **Application No :** *2918976*

To,
Shoolini university
Bhajol distt solan
Solan
Solan parwanoo

Subject: **Renewal of 'Consent to Operate' u/s 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and u/s 21 of Air (Prevention & Control of Pollution) Act, 1981.**

With reference to your application for obtaining Renewal of 'Consent to Operate' u/s 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and u/s 21 of Air (Prevention & Control of Pollution) Act, 1981, you are hereby, authorized to operate an industrial unit subject to the Terms and Conditions as mentioned in this Consent letter.

1.Particulars of Consent to Operate under Water Act, 1974 and Air Act, 1981 granted to the industry

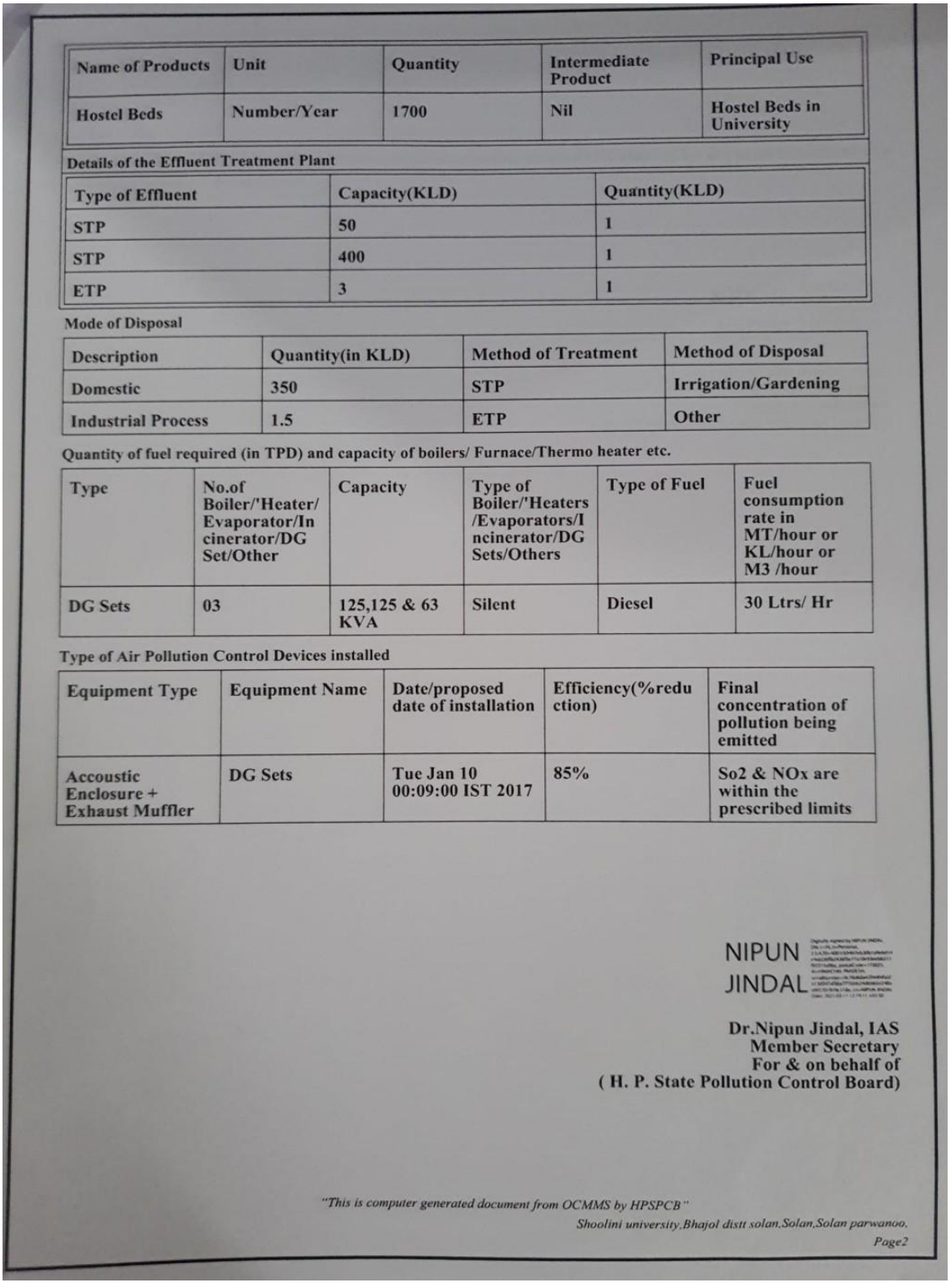
Consent No.	*CTO/BOTH/RENEW/RO/2021/2918976*
Consent valid from:	*01/04/2020*
Consent valid upto:	*31/03/2025*
Certificate Type :	*RENEW*
Previous CTO No. & Validity :	

2. Particulars of the Industry

Name & Designation of the Applicant	*VISHAL ANAND, (CFO)*
Address of Industrial premises	*Shoolini university, Bhajol distt solan, Solan,Solan parwanoo-*
Category of Industry	*Orange*
Type of Industry	*2091-Infrastructure development projects including educastional institutions, community hall, kalyanamandam, IT Park, Theme park (having waste water generation <100 KLD)*
Scale of the Industry	*Large*
Office District	*Solan parwanoo*
Capacity	*CTO Renew for Hostel beds - 1700 in number.*
Products (Name with quantity per day)	

"This is computer generated document from OCMMS by HPSPCB"
Shoolini university,Bhajol distt solan,Solan,Solan parwanoo,
Page1

Consent to Operate | Valid through 31 March 2025



Name of Products	Unit	Quantity	Intermediate Product	Principal Use
Hostel Beds	Number/Year	1700	Nil	Hostel Beds in University

Details of the Effluent Treatment Plant

Type of Effluent	Capacity(KLD)	Quantity(KLD)
STP	50	1
STP	400	1
ETP	3	1

Mode of Disposal

Description	Quantity(in KLD)	Method of Treatment	Method of Disposal
Domestic	350	STP	Irrigation/Gardening
Industrial Process	1.5	ETP	Other

Quantity of fuel required (in TPD) and capacity of boilers/ Furnace/Thermo heater etc.

Type	No.of Boiler/'Heater/ Evaporator/In cinerator/DG Set/Other	Capacity	Type of Boiler/'Heaters /Evaporators/I ncinerator/DG Sets/Others	Type of Fuel	Fuel consumption rate in MT/hour or KL/hour or M3 /hour
DG Sets	03	125,125 & 63 KVA	Silent	Diesel	30 Ltrs/ Hr

Type of Air Pollution Control Devices installed

Equipment Type	Equipment Name	Date/proposed date of installation	Efficiency(%reduction)	Final concentration of pollution being emitted
Accoustic Enclosure + Exhaust Muffler	DG Sets	Tue Jan 10 00:09:00 IST 2017	85%	So2 & NOx are within the prescribed limits

NIPUN JINDAL

Dr.Nipun Jindal, IAS
Member Secretary
For & on behalf of
(H. P. State Pollution Control Board)

"This is computer generated document from OCMMS by HPSPCB"

Shoolini university,Bhajol distt solan,Solan,Solan parwanoo.

Page2

5. Awareness, Education and Student Engagement

Awareness becomes more effective when students connect daily choices with the movement of pollutants through the environment. Reducing disposable plastics, separating waste and using water responsibly are practical ways to address pressures before they reach drains and water bodies. Shoolini University's 2025 programmes brought these ideas into student participation and school engagement.

SR No.	Activity	Date	Location
1	Bottles for Change: plastic collection	22 April 2025	Shoolini University campus
2	Earth Day Inter-School Eco-Challenge	24 April 2025	Covered Parking, Shoolini University
3	Beat Plastic Pollution: World Environment Day	5 June 2025	Online, Zoom
4	Roots of Change: plantation and cleaning	2 October 2025	Campus and nearby areas

The World Environment Day session is explicitly linked to SDG 14 in the Social Project Report. The collection, reuse and cleaning activities provide supporting contributions through land-based pollution prevention. Their inclusion does not imply that marine water quality or aquatic biodiversity outcomes were measured.

From participation to responsible practice

Student-led collection and recycling provide opportunities to understand how unmanaged waste can disperse into water systems. Inter-school activities introduce the principles of reduction, reuse and recycling through demonstrations and creative work. These programmes complement scientific research by encouraging habits that can be sustained beyond individual events.

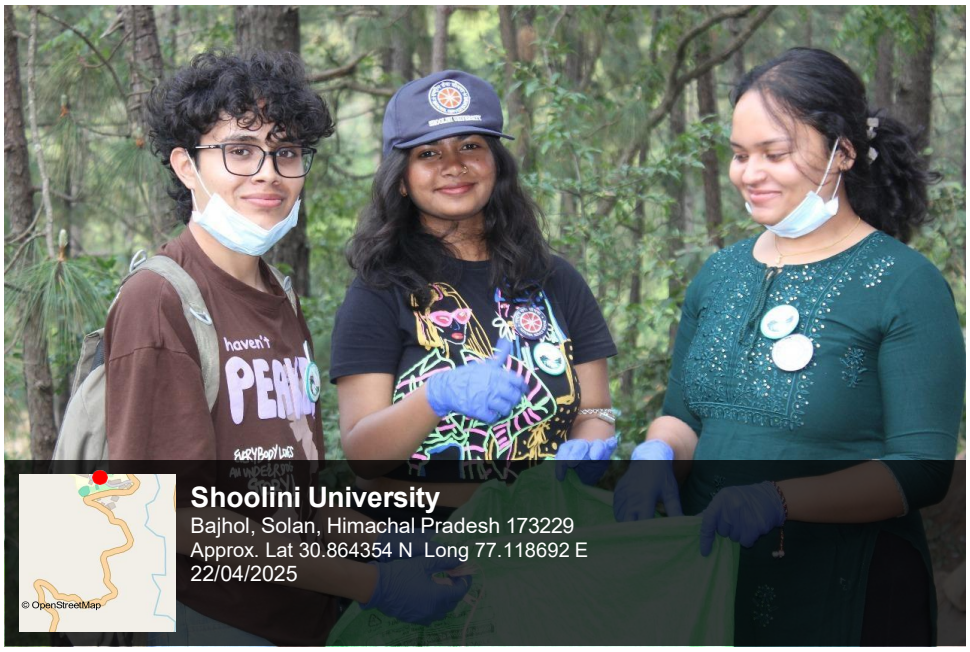
5.1 Bottles for Change: Campus Plastic Collection

22 April 2025 | Shoolini University campus

Students and volunteers joined Bisleri's Bottles for Change initiative to collect plastic waste across campus and promote segregation and recycling. The programme connected hands-on cleaning with more responsible material use. Removing litter from campus spaces helps reduce opportunities for plastic to be transported into drains and surrounding water systems.



Student volunteers during the plastic-collection drive



Plastic collection and segregation on campus

5.2 Earth Day: Learning through Reuse

24 April 2025 | Covered Parking, Shoolini University

Nine schools participated in an Inter-School Eco-Challenge featuring clean-energy demonstrations, waste-to-wonder projects, a green bazaar and poster-making. For aquatic sustainability, its supporting contribution lies in environmental literacy and the reduction, reuse and recycling of materials. The activities encouraged participants to consider how everyday waste choices affect the wider environment.



Earth Day exhibits on responsible resource use

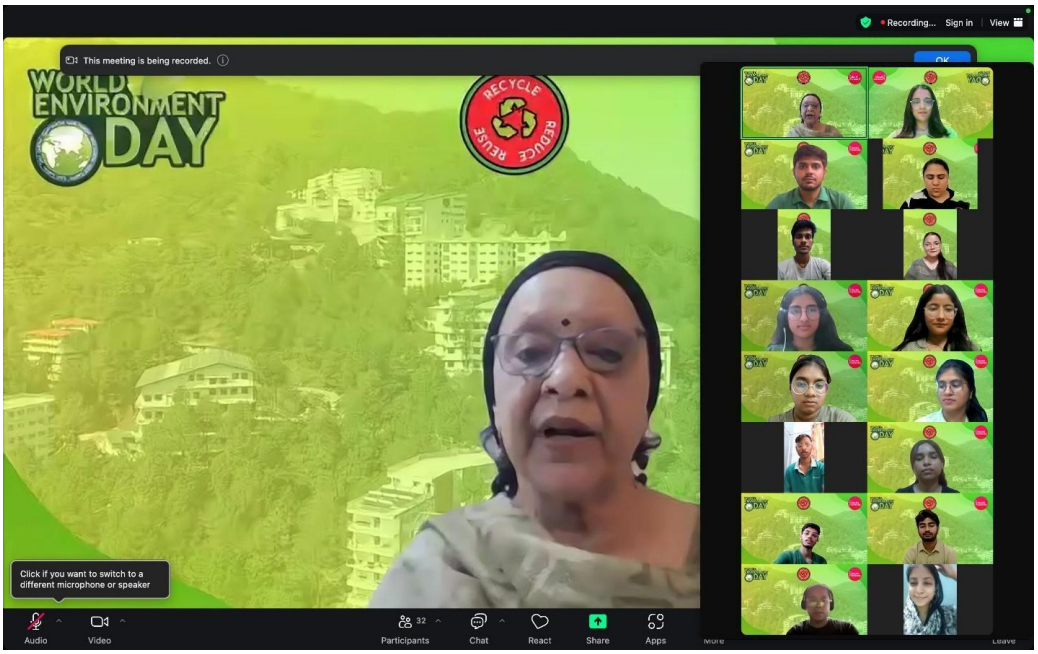


School participation in the Inter-School Eco-Challenge

5.3 Beat Plastic Pollution: World Environment Day

5 June 2025 | Online session on Zoom

The World Environment Day programme invited students to connect plastic pollution with daily choices. Poonam Nanda, Director of Sustainability and Community Projects, led the session, followed by personal experiences, an eco-quiz and the “I Switch, I Ditch” social-media challenge. The concluding pledge encouraged participants to reduce, reuse and refuse plastic, strengthening awareness of a major pressure on aquatic environments.



World Environment Day awareness session



Interactive discussion during the online programme

6. Community Partnerships and Environmental Stewardship

2 October 2025 | Campus and nearby areas

Under the Roots of Change programme, NSS, NCC and Shoolinians for You volunteers combined plantation with the cleaning of roads and surrounding areas during Daan Utsav. Collection and segregation of litter contributed to cleaner surroundings and supported the prevention of land-based pollution. The Unnat Bharat Abhiyan record connects this work with community participation and continuing environmental responsibility.



Plantation during the Roots of Change programme



Volunteers collecting litter in surrounding areas

7. Conferences, Workshops and Scientific Exchange

Scientific exchange strengthens the connection between water-pollution research and the wider community of environmental scientists. During 2025, Shoolini-associated research was presented at conferences addressing nanomaterials and sustainable development. Participation in specialist training complemented this work through engagement with photocatalytic materials and their applications.

SR No.	Event	Date and host	Research focus
1	ICANN 2025	5-6 March 2025 Rajdhani College, University of Delhi	Nanomaterials for antibiotic degradation
2	RTESD 2025	27-29 January 2025 Vivekananda Global University, Jaipur	Environmental remediation and sustainable development
3	Sustainable photocatalysis workshop	24 January 2025 Chandigarh University	Metal-based nanomaterials and photocatalysis

Connecting materials research with aquatic protection

The conference contributions focus on the treatment of antibiotic contaminants. Their connection to SDG 14 is the development of approaches that may reduce contaminant pressures on aquatic systems. Sharing research enables methods and findings to be discussed alongside related work, while bringing laboratory questions into a wider environmental context.

The following accounts distinguish Shoolini's documented contribution from the broader host programme. ICANN and RTESD were organised by external universities; the photographs record those conference events.

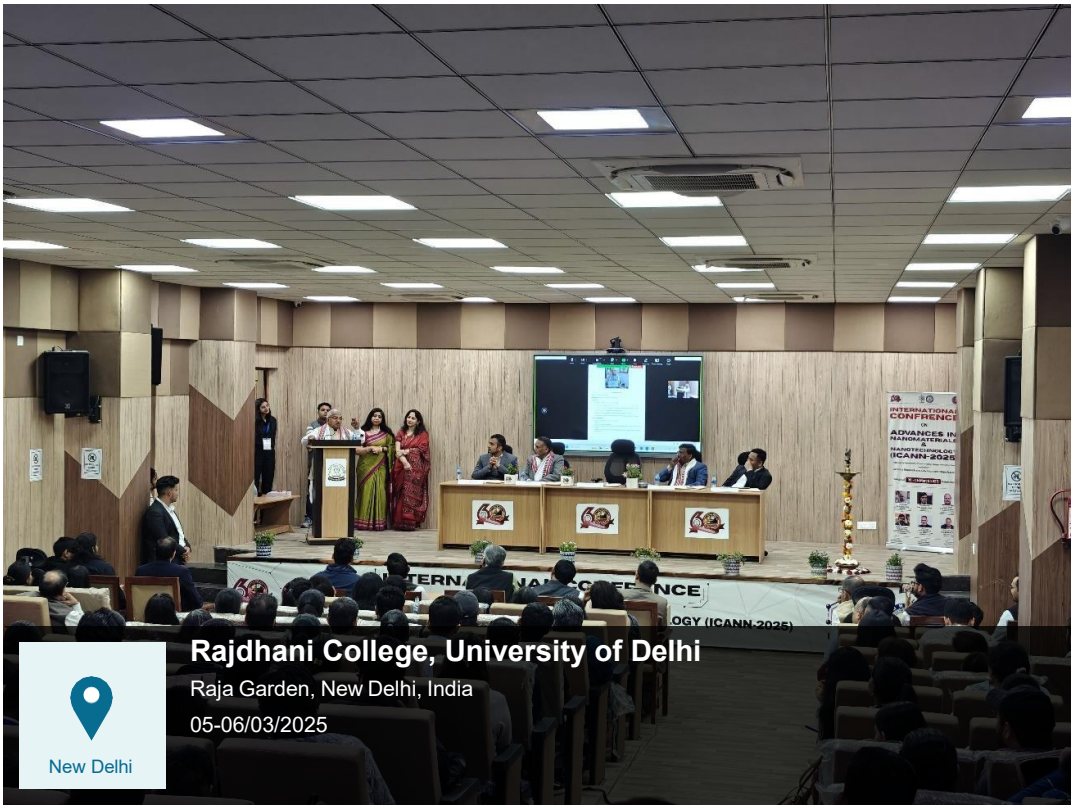
7.1 ICANN 2025: Nanomaterials for Pollution Remediation

5-6 March 2025 | Rajdhani College, University of Delhi | Hybrid conference

The Department of Physics at Rajdhani College organised ICANN 2025 as a forum for research on the processing, structure and applications of nanomaterials. The programme included environmental nanotechnology, sustainable materials and energy-related applications, bringing fundamental materials research into discussion with practical challenges.

Akshay Verma and Gaurav Sharma contributed a poster on a NiWO4/PANI/MXene composite for the photocatalytic degradation of norfloxacin. This contribution links materials design with the treatment of antibiotic contaminants, a relevant area of investigation for protecting water quality.

For Shoolini, the academic value lies in presenting research to a wider scientific audience and engaging with approaches to environmental remediation. The SDG 14 connection is to pollution-treatment research; conference participation is not presented as evidence of a measured improvement in water bodies.



ICANN 2025 conference session at Rajdhani College

Official ICANN 2025 programme and brochure

Organising Committee

- Dr. Sanjay Kumar, Department of Physics, Rajdhani College, Delhi
- Prof. S. K. Dhaka, Department of Physics, Rajdhani College, Delhi
- Dr. Y. S. Sharma, Department of Chemistry, Rajdhani College, Delhi
- Prof. Amit Jain, Department of Electronics, Rajdhani College, Delhi
- Dr. Pawan Kumar, Department of Chemistry, Rajdhani College, Delhi
- Dr. Amanjeet Panghal, Department of Physics, Ramjas College, Delhi
- Dr. Raghvendra Pandey, Department of Physics, ARSD College, Delhi
- Dr. Manish Kumar, Department of Electronics, Zakir Husain Delhi College, Delhi
- Dr. Naresh Verma, Department of Physics, Rajdhani College, Delhi
- Dr. Vishal Mishra, Department of Physics, Rajdhani College, Delhi
- Dr. Nitin, Department of Physics, Rajdhani College, Delhi
- Dr. Suresh Kumar, Department of Physics, Rajdhani College, Delhi
- Dr. Omveer Singh, Department of Physics, Rajdhani College, Delhi
- Dr. Akshta Ranjan, Department of Physics, Rajdhani College, Delhi
- Dr. Sumit, Department of Physics, Rajdhani College, Delhi
- Dr. Dheeraj Kumar, Department of Physics, Rajdhani College, Delhi
- Dr. Avinash Vishwakarma, Department of Physics, Rajdhani College
- Dr. Sanjeev Kumar, Department of Electronics, Rajdhani College
- Dr. Mukesh Kumar Saini, Department of Chemistry, Rajdhani College
- Dr. Gobind Ji Rai, Department of Chemistry Shraddhanand College
- Dr. Ravindra Kumar Upadhyay, Department of Chemistry, Sri Venkateswara College, Delhi

Advisory Committee

- Prof. Dinesh Kumar, Ex Vice Chancellor, Gurugram University and JC Bose UST Faridabad, Retired from Department of electronic, KUK, India
- Prof. Tankeshwar Kumar, Vice-Chancellor, Central University of Haryana, India
- Prof. C. C. Tirupathi, Director NITTTR, Bhopal , India
- Prof Ashutosh Bhardwaj Department of Physics & Astrophysics, University of Delhi, India
- Prof. Satish K. Awasthi, Department of Chemistry, University of Delhi, India
- Prof. Nian X. Sun, Electrical and Computer Engineering Department, Northeastern University, USA
- Prof. Alexandr Tovstolytking, Institute of Magnetism of the NAS of Ukraine and MES of Ukraine, Ukraine
- Prof. Gurmeet Singh Lotey, Department of Physics, Purdue University, 402 N Blackford St, Indianapolis, IN 46202, USA
- Prof R. C. Ramola, Professor of Physics, HNB Garhwal University
- Prof Rohit Mehra,Professor, Department of Physics, Dr BR Ambedkar National Institute of Technology, Jalandhar
- Prof. Shinji Tokonami,Professor and Director at Institute of Radiation Emergency Medicine, Hirosaki University, Japan.
- Dr Shravan Kumar Singh, Scientist E & Joint Director Department of Radiation Biotechnology, INMAS DRDO, Delhi 110054
- Prof. Dharamvir Ahlawat, Chaudhary Devi Lal University Sirsa, India
- Dr Alok K. Kushwaha, School of Electrical and Machanical Engineering, University of Adelaide, Australia.
- Dr Anoop Sunny, School of Physics, Chemistry and Earth Sciences, University of Adelaide, Australia.
- Prof. Satinder Sharma, Dean and Chairman of Department of Electronics, IIT Mandi, India
- Prof. Manoj Kumar Khanna, Department of Electronic Science, University of Delhi, India
- Dr. Vibhor Kumar, Department of Electrical engineering, Texas A&M University, College Station, Texas, USA

Abstract Submission Guidelines

- Presenting author name should be bold.
- Use Times New Roman 12-point font with 1.5 space.
- Abstract text – limited to 270 words
- Presenting author's contact details- Email address
- Keywords: 4-6

Publication

Selected full length paper after peer review will be published in Springer journal/ proceedings indexed in Scopus/ Web of Science.

Publication fee: nil

Paper submission details will shared after the conference

Scope of Conference

The conference aims to articulate metallurgical and technological advancement in ancient India along with the latest advances in this field. The conference is centered on the interdisciplinary research on processing, structure and various properties of nanomaterials along with their scope in various fields. This forum will open new horizons for discussing basic studies and applications related to nanomaterials. It will address topics of novel issues, difficulties, and breakthroughs in the field of nanomaterials. In the wake of enormous advancement and potential use in different applications of nanomaterials, this conference has been structured to assemble together scientists, researchers, faculty and experts to discuss the recent advancements in this field. The discussion will encompass basic studies and applications and also address the topics of novel issues, difficulties, and breakthroughs in the field of nanomaterials.

The "Advanced Nanomaterials and Nanotechnology" conference brings out together the innovations in advanced materials and nanotechnology through expected scientific presentations, networking as well as engagement of companies developing innovations in tools and technologies in this space. The conference organizing committee is providing a podium for all the budding young researchers, enthusiastic and curious investigators to showcase their research and innovation. Our participants will gather together to achieve collective priorities, including the dissemination of knowledge generated through research studies and strengthening the community of Theoretical and Applied Nanotechnology. Each session has been meticulously designed to help participants achieve these goals and enrich them scientifically. The conference provides an excellent opportunity for expert career guidance and research project advice.

Sub-Themes

- Advancement and Emerging Research in Nanomaterial and Nanotechnology in Defence sector
- Advanced Smart and Sustainable Nanostructured Materials
- Environmental Nanotechnology and Sustainable energy storage
- Nanobiotechnology: Nanomedicine, Environment Nanobiotechnology
- Nanomedicine and Healthcare applications
- Commercialization and Industrial Perspectives
- Nano Satellites, Nanosensors
- Advanced Material for Nanodevice Fabrication
- Nano Antenna
- Nanophotovoltaics and Nanoelectronics
- Metallurgical and technological Advancement in Ancient India
- Materials and Technologies for Sustainable Environment
- Advanced Materials Devices
- Nanotechnology: Insights and challenges
- Emerging Areas of Materials Science
- Polymers Science & Nano Engineering
- Carbon Nanostructures and Graphene
- Nuclear Radiation, Radiation Dosimetry
- Radiation Detection

Important Dates

- **Abstract Submission Ends: Feb. 20, 2025**
- **Acceptance Notification: Feb. 21, 2025**
- **Last Date of Registration: Feb. 21, 2025**

Registration Fee

Category	*Fee*
• Academician/Industrial Person	Rs. 1200 /-
• Research Scholar	Rs. 800 /-
• Students	Rs. 400/-

Account Details

- BANK DETAILS: PRINCIPAL, RAJDHANI COLLEGE
- (Rajdhani College Student Fund Account)
- ACCOUNT NO.: 1261900290
- NAME OF BANK: CENTRAL BANK OF INDIA
- BRANCH: RAJDHANI COLLEGE, RAJA GARDEN, NEW DELHI
- IFSC: CBIN0011414

Sponsored by DRDO

International Conference

on

"Advanced Nanomaterials and Nanotechnology"

(ICANN-2025)

in

Hybrid Mode

March 05-06, 2025

Organized by
Department of Physics,
Rajdhani College,
University of Delhi, New Delhi



About Rajdhani College

Rajdhani College, a constituent college of the University of Delhi, was established in 1964. The campus includes an air-conditioned Seminar Room, an Auditorium, and a well-stocked Library with computer and internet access to over one lakh scholarly books and eBooks. The college also features state-of-the-art Science, Math, and Computer Laboratories.

The Department of Physics was founded in 1966 and was the first off-campus college to offer a B.Sc. (H) Physics course. Later, the B.Sc. (Prog) Electronics course was introduced. The department has 29 highly qualified faculty members actively engaged in teaching and research. It houses five well-equipped labs with modern instruments like DSO and spectrometers, along with two dedicated research labs - Radio, Atmospheric, and Laser Plasma - to foster research and scientific curiosity. The student society, URJA, organizes various events, including national and international conferences.

Chairman of Conference

Prof. Rajesh Giri

Principal, Rajdhani College, University of Delhi

Convener

Dr. Jasvir

Department of Physics, Rajdhani College

Secretary

Dr. Smita Korpal

Department of Physics, Rajdhani College

Teacher In-charge

Dr. S. Santinath Singh

Department of Physics, Rajdhani College

Abstract submission & Contact us

Email: ann@rajdhani.du.ac.in

Registration Link

https://forms.gle/QR1fSHWaKFP8UnGs9

Website link

https://sites.google.com/view/ann2024/home

7.2 RTESD 2025: Environmental Research and Water Treatment

27-29 January 2025 | Vivekananda Global University, Jaipur

The fourth International Conference on Recent Trends in Environment and Sustainable Development brought together 191 registered participants, with 53 oral and 138 poster presentations. Its programme covered water and waste management, green chemistry, environmental nanotechnology and ecosystem restoration.

Water-related discussions included photocatalytic nanomaterials, catalytic electrodes for water purification and treatment technologies. The poster sessions created opportunities to exchange ideas across materials science and environmental applications.

Shoolini's official record lists a poster by Akshay Verma and Gaurav Sharma on a BiOBr/MoS2/graphene oxide composite for ciprofloxacin degradation. The contribution connects antibiotic-remediation research with the conference's wider emphasis on sustainable environmental solutions.



RTESD 2025 participants at Vivekananda Global University

Official RTESD 2025 report

7.3 Sustainable Photocatalysis and Campus Dialogue

Specialist workshop | 24 January 2025 | Chandigarh University

The University Centre for Research and Development at Chandigarh University organised a workshop on metal-based nanomaterials for sustainable photocatalysis, covering the connection between fundamentals and applications. Akshay Verma's official Shoolini profile records participation in this programme.

The subject complements the antibiotic-remediation contributions described above. Its relevance is to scientific capability in environmental treatment research, linking an understanding of materials with possible applications for pollutant removal.

World Environment Day dialogue | 5 June 2025 | Shoolini University

The Legal Aid Club and the District Legal Services Authority, Solan, brought students, faculty and staff together for a World Environment Day programme. Participants pledged to reduce plastic use, and more than 100 saplings were planted in and around campus. The programme connected environmental awareness with practical action, complementing research through attention to everyday waste choices.



World Environment Day engagement at Shoolini University

8. Sustainable Water Management: Continuing Priorities

Shoolini University's contribution to Life Below Water rests on a connected set of responsibilities: understanding aquatic pressures, preventing pollution at source, managing wastewater and supporting informed behaviour. The 2025 record includes 17 research publications, water-conscious campus infrastructure and student engagement around plastic reduction and environmental care.

Strengthening operational evidence

Regular monitoring should connect treatment-plant capacity with actual flows, water-quality results and volumes reused. Maintaining current regulatory records and a dated laboratory series will support clearer assessment across the reporting year. Water-saving fixtures and harvesting structures should be accompanied by maintenance records and consumption measurements so that their contribution can be quantified over time.

Deepening education and community participation

Future programmes can connect plastic collection with recorded waste quantities and verified recycling destinations. Water-literacy activities can combine scientific learning with local observations of drainage, litter and runoff. Such follow-up would make the relationship between participation and environmental improvement more visible.

Connecting research with practice

Research on microplastics, wastewater treatment and sustainable aquaculture offers opportunities for collaboration across disciplines. Carefully evaluated trials can help translate promising methods into appropriate applications, while continued study of aquatic systems can strengthen understanding of local and downstream pressures.

Through responsible water use, scientific inquiry and sustained engagement, Shoolini University continues to advance an upstream contribution to aquatic sustainability. Protecting water resources in the Himalayan setting remains a shared institutional responsibility, linking the quality of campus operations with the health of the wider environment.